

Management for Professionals

Tobias Just
Wolfgang Maennig
Editors

Understanding German Real Estate Markets

Second Edition

 Springer

Management for Professionals

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Foreword

The German real estate markets are highly attractive to investors worldwide. With an estimated volume of over 50 billion euros in 2015, Germany represents one of the largest investment markets in the world. Many investors see the German real estate market as a “safe haven,” thanks to the stable economic outlook, the relatively low volatility of real estate yields and rents, and also thanks to the low interest rates. The German real estate industry in particular benefits from this reputation—with positive consequences for the entire German economy. The real estate industry’s gross value added increased by nearly 3 % from 2013 to 2014, compared to the total German GDP, which increased by only 1.6 % in the same period. The German real estate industry represents nearly 20 % of Germany’s GDP and provides 3.8 million jobs (10 %).

For all these reasons, it is important to integrate representatives of all segments of the real estate industry, and from the entire real estate value chain in the German Property Federation (ZIA), and to work together with them to create value and demonstrate the attractive real estate market every day to our investors.

The ZIA also focuses on improving real estate market transparency, in order to meet the demands of foreign investors. Germany ranked only 12th in the JLL Global Real Estate Transparency Index, not only because of a lack of data but also because of structural differences compared to other countries. One major difference is the lower home ownership rate, which is only about 50 % in Germany. Therefore, the volume of housing transactions is relatively low, and it is possible to gather only limited transaction data. But the relatively low home ownership rate also implies that the German rental market is well established and that no household needs to own a flat or a house. This fact also helped the German economy during the last financial crisis, when the German economy shrank significantly, while the real estate industry continued to grow by 2 %.

There are also differences regarding the German commercial real estate market (CRE), compared to other countries. The owner-occupier rate in this sector amounts to nearly 70 % and is more than twice as high as in the UK or in the USA. This high German ownership rate may imply challenges for real estate investors. But the sector is important, especially for small and medium-sized entities, because the commercial real estate investment industry provides a quasi-financial service to

other corporates, by offering premises on flexible terms that can accommodate changing needs. Without this industry, small and growing businesses in particular would face considerable challenges in securing appropriate premises. Businesses would be forced to build or buy commercial premises, and opportunities to adapt quickly to changing market environments would be far more limited. The CRE industry thus plays a vital role in supporting and enhancing productivity for small and medium-sized companies (SMEs).

In order to provide its quasi-financial services to the wider economy (including SMEs), the CRE investment industry needs a combination of equity and debt capital. This is particularly the case in regional and smaller ticket markets—which are key to SME growth.

In addition, the German real estate market not only includes the capital of Berlin but consists of several major cities—the so-called Big Seven A-Cities—as well as a set of interesting B-Cities with growing economies and positive population developments. These B-cities are often popular university cities. Therefore, the investment universe is very broad regarding the regional aspect and the different asset classes, e.g., multifamily houses, hotels, retail properties, offices, logistics, and light industrial buildings. Moreover, investors can choose from many ways to invest in German real estate—directly or indirectly—via open-end or closed-end funds or via the shares of public listed real estate companies. The coexistence of direct and indirect vehicles in fact helps to stabilize the real estate market; a recent report indicated that returns and equity collections of different German real estate vehicles do not move in sync.

One of the major challenges of the last 5 years has been to obtain the structural elements needed to stabilize the German real estate markets, e.g., different vehicles with a tailored product regulation. It has also been important to explain to the authorities the elements of the real estate financing system. Both the residential and the commercial sector are financed primarily by long-term mortgages with fixed interest rates, and they are refinanced via the well-established covered bonds—the Pfandbrief. It is of course important to design market regulations so that market volatility remains low without jeopardizing the efficiency of real estate markets. The ZIA facilitates an intensive discussion with all relevant parties, in order to achieve both efficient and effective real estate market regulation, e.g., the Alternative Investment Fund Managers Directive and its implementation as German national law via the “Kapitalanlagengesetzbuch.”

The real estate sector also plays an important role in achieving the ambitious aim of increasing energy efficiency. ZIA members are aware of their key role here and attempt to find ways to reduce the carbon emission of buildings. But again—an investor-friendly, i.e., an incentive-based, framework is crucial for achieving this goal cost-efficiently. More recently, the industry has started to respond to the digital revolution and advances in sustainability practices. Even more important is the need to provide affordable housing, and also here, the industry has reacted adequately to market developments and is ready to tackle the current challenges. This applies particularly to the need to provide sustainable shelter for refugees. I am

convinced that the German real estate industry will find reasonable solutions—a stable and reliable market environment is important, in order to promote market-oriented but socially relevant investment projects.

Today, the German real estate industry and its players are stronger than 10 or 20 years ago and are also more transparent and more professional. I doubt that this process will end any time soon. The German real estate market has woken up, and we look forward to closer cooperation with foreign players as well.

With this book, the authors' main aim is to describe the broader framework for investments in Germany. I wish you pleasant reading.

Zentraler Immobilien Ausschuss
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Andreas Mattner

Foreword (1st edition)

The German economy is the largest in Europe and ranks fourth in the world. Property values in Germany reflect that importance; net fixed assets currently amount to approximately 8 trillion euros, of which approximately 60 % is residential property, 25 % commercial, and 15 % public real estate and infrastructural construction. This market size ensures liquidity, market access, and importance to investors, analysts, and university graduates.

I am convinced that international investors, project developers, financial auditors, bankers, lawyers, tax experts, and, last but not least, scientists find it exciting to study German real estate markets, as they are unique in some respects and have changed considerably during the last two decades. At the forefront of this change was the German reunification, which led to investments in trillions of euros. Within 10 years, the real estate markets in the New Länder (the former East Germany) were integrated into the free market economy system of the Old Länder (West Germany). This rather difficult integration process is still continuing and will continue to have an impact on future developments, e.g., the ongoing decline in the number of residents in eastern Germany. The experiences gained from changes in the German real estate sector are of interest to various regions in Europe and throughout the world, where countries will be facing similar demographic problems in the next few decades.

It is important to point out that the property markets in Germany were able to escape the problems that affected many other markets in industrialized and nonindustrialized countries before and after the financial crisis. Many people within and beyond Germany wondered about the stability of the German real estate sector. Specifically, what were the reasons for this stability, and is it possible to derive conclusions for other property market regulations from them? Investors may ask whether the unique development of the German property markets could present a good opportunity to commit financially to this sector. As I have mentioned, it is indeed worthwhile to deal with and invest in German real estate markets.

I would like to draw your attention to another fact: many building standards in Germany are considered to be pioneering. Moreover, in terms of energy efficiency, German real estate is considered to be of the highest standard, not only for a small group at the top but also for a broad mass market segment. Such is the case, despite the fact that the German Certificate for Sustainable Construction was established

only recently. It is also true that properties in Germany still have huge potential for energy-efficient upgrading, which will result in billions of euros in investment in the hope that the renovation of buildings will be an appropriate response to the challenges of climate change. I believe we can also learn from the experiences that Germans have gained and will still gain in this area.

The characteristics of the German real estate markets, however, have yet to be fully described. Investors must deal with special tax regulations. A look at various asset classes can be surprising; although REITs were installed in Germany in 2007, this segment is still small. Open-ended and closed-ended property funds suffer from serious problems. The global convergence of investment vehicles is slower than expected, which is why specific national approaches still need to be taken seriously.

This book covers a wide range of topics, as there are economic as well as real estate, legal, and tax characteristics. To deal with all these properly, extensive expertise is required. The two editors have commissioned knowledgeable authors for the various topics. I do not know of another English-language publication that provides such a profound and simultaneously entertaining overview of German real estate markets.

The book, of course, is mainly addressed to readers abroad, especially to investors, finance and valuation companies, developers, and consulting firms. In addition, the book contains numerous new facts that domestic market players, and especially students, may find highly rewarding. Those looking for a quick introduction to German real estate market issues will find answers not only to important questions but also to questions that have not yet been raised.

Last but not least, I hope that all of you will enjoy reading the book.

HonRICS
Geisenheim, Germany

Karl-Werner Schulte

Acknowledgments

A second edition of a book calls for a justification. Has the world changed that rapidly since the first edition? Were there flaws in the first version? Did we omit important issues? In our case, the world has indeed changed quickly. The deep recession of 2009 forced interest rates in Europe to historical lows. Germany has gained importance as safe haven for many international investors, and what is more, many traditional bond investors feel compelled to invest in alternative investments. Real estate is seen as the biggest alternative asset class. Accordingly, this second volume also targets readers who are not yet familiar with real estate markets, but rather with capital markets. Finally, the legislator has changed the regulatory framework for direct and indirect investments since our first edition, and this required updates of many of our chapters.

We would like to thank our authors for having again dedicated themselves to the project, despite their enormous workload. The year 2015 has been one of the strongest real estate years ever in Germany. And still, both academics and professionals were happy to contribute—almost always just in time.

Furthermore, we would like to thank those who often remain unmentioned, even though they enable such projects in the first place: Philipp Schäfer, who reliably supported us and was in charge of formatting this edition. He mastered this task with accuracy and passion. We are also grateful to the colleagues at Springer, who again guided us professionally through the second round.

Finally, of course, we thank you, dear reader, now holding this book in your hands, for having been our real inspiration. Without you, we would have never have written it. We would be delighted if you find the book interesting and use it as a starting point for a study of German real estate markets. Perhaps the book will also allow for more rapid networking with market players. We look forward to new ideas and stimuli from you.

Tobias Just
Wolfgang Maennig

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secretary at the federal ministry of infrastructure. In 1993, he changed to ECE Projektmanagement, where he still works today as Managing Director. Furthermore, he also performs various mandates at supervisory boards and as chairman of the board. In addition to his professional work, he was a member of the Hamburg Parliament and he is engaged in various honorary posts in the Economic Council and the BDI (Federation of German Industry), foundations, and sports. In 2009, he was appointed President of the Zentraler Immobilien Ausschuss (German Property Federation).

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and business consultant, Mrs. Naismith has been involved in several research projects ranging from an analysis of the influence of international investments on the German “Baukultur” to the long-term effects and potential enhancement of the effectiveness of urban development grants in Germany and to life cycle cost assessments of energy-optimized buildings. Mrs. Naismith has also been leading the economic research on the potential of urban agriculture as an integrative factor of a climate-optimized urban development of the future megacity Casablanca in Morocco. As senior lecturer at the University of Applied Science Luzern, Switzerland, she was responsible for the development of the research division of the institute of real estate economy. The research strategy aimed at identifying the main megatrends influencing the Swiss real estate industry and led to the initiation of research concepts dealing with topics such as countermeasures against urban sprawl, the regional and spatial consequences of demographic change, as well as settlement patterns of the knowledge industry. Currently, Mrs. Naismith is focusing on real estate-related research projects such as the potential of building information modeling for a sustainable construction process as well as on the development of zero emission buildings.

Frank Nickel is CEO at CA Immobilien Anlagen AG in Austria. He has over 25 years’ experience in the real estate sector. Prior to CA Immo, Frank Nickel was Managing Partner/CEO at C&W Germany and Chairman Corporate Finance EMEA and before Head of Deutsche Bank’s Commercial Real Estate Group for 6 years. Moreover, he is a member of the Academy Advisory Board of IREIBS as well as a member of the Financing Committee of the ZIA, the German Property Federation.

Olaf Petersen is Managing Director of COMFORT Hamburg GmbH. After studying economics at the Christian-Albrechts-Universität, he became scientific employee at the Statistical office Schleswig-Holstein (1988–1990). Afterward, he went to the German retail association “Bundesarbeitsgemeinschaft der Mittel- und Großbetriebe des Einzelhandels” (BAG) where he worked a.o. as Chief economist and chief editor of the BAG Retail Magazine for 8 years. From 1998 to 2010 Mr. Petersen was Managing Director of GfK Prisma Institut and (as a result of a merger of different GfK subsidiaries) GfK GeoMarketing GmbH, respectively. Since 2011, he is working for COMFORT Hamburg GmbH, responsible for the Research & Consulting department. The field of expertise of Olaf Petersen lies in the analysis of private consumption with the focus on retail business. So site and market analysis, due diligence studies, and consulting for any retail business and retail property characterize his balance points. From 2002 to 2010, he was member of the “Council of the wise Men of Real Estate” which was constituted by the professional journal “Immobilien Zeitung” and the real estate association “Zentrale Immobilien Ausschuss” (ZIA). From 2008 to 2012, Olaf Petersen was member of the advisory board of the “German Council of Shopping Centres”(GCSC). Since 2012, he is member of the “Think Tank” of GCSC.

Daniel Piazolo is professor for real estate management and risk management at the THM Technische Hochschule Mittelhessen and is the scientific coordinator for the course Technical Asset Management. Daniel Piazolo has studied at the London School of Economics and at Yale University. From 1995 to 2002, he was researcher at the Institute of World Economics in Kiel and has published numerous articles about economic issues. From 2002 to 2005, he worked as Senior Economist and Project Manager at Feri EuroRating Services AG. From 2005 to 2014, Daniel Piazolo was managing director of IPD Investment Property Databank GmbH, Frankfurt, and also since 2008 member of the board of directors of IPD Ltd., London (now part of MSCI). Since 2011, he has additionally taught as a lecturer for portfolio management at the University of Stuttgart. Daniel Piazolo is member of the German Society of Property Researchers (gif), of the real estate committee of DVFA, and of the Royal Institution of Chartered Surveyors (RICS).

Eleonore Pöll is head of MCEP Management Consulting. The strategic management consultancy MCEP, Management Consulting Eleonore Pöll, was founded in 2006 by Dr. Pöll. At the beginning of the 1990s, she worked for the corporate and public sector focusing on real estate for prestigious consulting companies. In her last position, she was employed as a partner with Mercer Management Consulting and Mercer Oliver Wyman responsible for the public sector of the financial services dealing with strategic and organizational realignment of the real estate management of federal, states, and municipal governments. Dr. Pöll has a long-standing experience and comprehensive expertise in the areas of CREM, PREM, strategy, risk and asset management, as well as company restructuring and advises clients on a national and international level. She is also actively involved in real estate associations, a dedicated lecturer, and author of a broad range of literature for the real estate market. Dr. Pöll is coeditor of specialist publications like the “Handbuch Immobilienmanagement der öffentlichen Hand.” Since several years, she lectures on a regular basis “Real Estate Management” at Technical University in Ingolstadt. She is also a longtime member of the gif, Gesellschaft für Immobilienwirtschaftliche Forschung e. V., and for many years the leader of the national group of competence “Public Real Estate Management.”

Philipp Schäfer is a research assistant and Ph.D. candidate at the Chair of Prof. Dr. Tobias Just at the IRE|BS International Real Estate Business School, University of Regensburg. After finishing an apprenticeship as “Immobilienkaufmann” (IHK) in 2007, he studied business administration majoring in real estate at the University of Regensburg. In cooperation with IRE|BS, he spent 1 year at the University of Hong Kong (HKU) and finished his double Master’s degree (MSc, MScRE) in 2013. Afterward, he started working at the chair of Prof. Dr. Tobias Just. Philipp Schäfer is a member of the German Society of Property Researchers (gif).

Wolfgang Schäfers studied business administration at the University of Mannheim and earned his Ph.D. at the European Business School Schloß Reichartshausen (ebs). After working for Arthur Andersen (now Ernst & Young),

where he lastly was the responsible Partner for the Real Estate Corporate Finance unit in Frankfurt, he was appointed Head of Real Estate Investment Banking at Sal. Oppenheim in 2002. In October 2004, he accepted the Chair of Real Estate Management at the University of Regensburg. From 2009 to 2011, he has been a board member and CFO of IVG Immobilien AG. In November 2011 to March 2014, he was CEO of IVG Immobilien AG. Prof. Dr. Wolfgang Schäfers is author and (co-)editor of a broad range of real estate publications, like the “Handbuch Corporate Real Estate Management,” “Handbuch Immobilien-Banking,” and “Handbuch Real Estate Investment Trusts.” He is also a founding member of the Gesellschaft für Immobilienwirtschaftliche Forschung e. V. (gif), a member of the European Real Estate Society (ERES), and also a member of the editorial board of the journal “Zeitschrift für Immobilienökonomie.” Since May 2014, Prof. Dr. Wolfgang Schäfers is heading the ZIA-Committee “Human Resources.”

Jürgen Michael Schick is a Real Estate Economist (European Business School in Oestrich-Winkel) and has been active in the real estate industry for more than 20 years. In 1994, he established the investment house MICHAEL SCHICK IMMOBILIEN GmbH & Co. KG, a specialist real estate brokerage for residential and commercial properties, of which he is still Managing Director. Since 2002, Jürgen Michael Schick has been utilizing his real estate industry experience as Vice President and Spokesperson of the real estate association IVD, and in 2005, he qualified to join the Royal Institute of Chartered Surveyors as a Professional Member (MRICS). In 2007, he became principal partner of the nationally established property management company ATTIKA Verwaltungsgesellschaft mbH. In his role as Federal Spokesperson of the IVD and as a professional real estate broker, he often provides comments and opinions on real estate topics. In 2010, Jürgen Michael Schick became the first real estate agent in Germany to gain the new European standard DIN EN 15 733 for investment properties.

Christian Schmitt is a Vice President in the Deutsche Bank Real Estate Investment Banking team in Frankfurt. He has been focusing on the German real estate sector since 2006 and has a wealth of advisory experience especially within the real estate sector. Christian Schmitt is a Diplom-Kaufmann and studied at the European Business School (ebs) in Oestrich-Winkel.

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and presents on German tax issues relevant to international investors. Rainer is frequently recommended by Chambers Global and by JUVE Handbuch, a leading German legal directory.

Alexander Scholz Since June 2015, Dr. Alexander Scholz has been working for PATRIZIA Immobilien AG. As Executive Assistant to the COO, in addition to supporting the chairman with respect to operational daily business, his responsibilities include implementing the corporate strategies agreed to by the board, as well as working on M&A transactions. Prior to this, Dr. Scholz had already gathered practical experience in various enterprises in the financial and real estate sector. From 2012 to 2015, he was also a research assistant and doctoral student at the Institute for Real Estate Management of the IREIBS International Real Estate Business School, University of Regensburg. His doctoral dissertation “Essays in Real Estate Asset Pricing” was awarded Summa Cum Laude and received international acclaim. The focus of the research, which was supervised by Prof. Wolfgang Schäfers, was on the factors that drive the returns of listed real estate companies. Dr. Scholz originally studied Business Administration at the University of Regensburg and University College Dublin, majoring in real estate management and finance.

Kai-Magnus Schulte Diplom-Kaufmann, MScRE, is Associate at Hines in Berlin. His focus is on acquisitions of investment and development properties in Northern Germany. Prior to joining Hines, he was research assistant and Ph.D. student at the Chair of Real Estate Management of Prof. Schäfers at the IREIBS International Real Estate Business School, University of Regensburg. He finished his Ph.D. thesis in 2012 with grade Summa Cum Laude. From 2004 to 2009, he studied business administration focusing on real estate management, real estate finance, and statistics at the University of Regensburg. During his studies, he spent 1 year at the University of Reading, UK, and earned a Master of Science in Real Estate degree. His Ph.D. thesis as well as diploma thesis were awarded several prizes by the gif Gesellschaft für Immobilienwirtschaftliche Forschung as well as the Emerald Literati Network.

Karl-Werner Schulte was born in 1946 in Warstein (North Rhine-Westphalia, Germany). He was awarded a Doctoral Degree in 1974 at the University of Münster. In 1986, he was appointed Chair of Business Administration, in particular Investment and Finance, at the EUROPEAN BUSINESS SCHOOL International University Schloss Reichartshausen (ebs). In 1990, he founded the ebs REAL ESTATE ACADEMY and has been its academic and managing director until 2006. In 1994, he held the Endowed Chair of Real Estate at ebs, which became later the ebs Department of Real Estate by the appointment of further professors and was led by Professor Dr. Schulte for several years. In autumn 2006, he moved, together with most of his colleagues, to the International Real Estate Business School (IREIBS) at the University of Regensburg. Since then, Professor Dr. Schulte is the holder of the ECE Endowed Professorship and scientific director of the IREI

BS REAL ESTATE ACADEMY. Professor Dr. Karl-Werner Schulte is founding president of the gif (German Society of Property Researchers) and was president of the European Real Estate Society (ERES) and the International Real Estate Society (IRES). Currently, he is responsible for promoting Real Estate Education and Research in Africa as an IRES Director. Professor Dr. Schulte has been elected as an Honorary Member of the Royal Institution of Chartered Surveyors (HonRICS), the German Society of Property Researchers (gif), and the Real Estate Alumni Organisations (IMMOEBS). For his outstanding achievements in the academic field, he received the IRES Service Award in 1999, in 2001 the ERES Achievement Award, and in 2005 the Award of Excellence of the German Council of Shopping Centers e.V. as well as the ULI Germany Leadership Award in 2008 and the Immobilienmanager Lifetime Award in 2009. The American real estate institution CRE Counselors of Real Estate has accepted Professor Dr. Schulte as first German member. As a member of numerous advisory and editorial boards of renowned real estate companies and academic journals, Professor Dr. Schulte links practical and theoretical aspects of real estate.

Andreas Schulten has been working for bulwiengesa for more than 25 years and is the longest serving member on the Board of Directors. He is Head of Human Resources and Marketing and is also responsible for the housing and office real estate market. With his involvement in various associations and board tasks with the gif Society of Property Researchers, Germany, he is also engaged in much of bulwiengesa's communication with partners and the industry in general.

Steffen Sebastian is Professor of Real Estate Finance and Managing Director of IREIBS International Real Estate Business School, University of Regensburg, Germany. He is furthermore Director at the Center for Finance at the University of Regensburg and research associate at the Centre for European Economic Research (ZEW), Mannheim, one of Europe's leading economic research institutes. He is also a member of the managing board of the European Real Estate Society (ERES). Professor Sebastian holds graduate diplomas in Business Administration from the University of Mannheim (Germany) and from ESSEC (France). He has been conferred a doctoral degree by the University of Mannheim (Germany) and a postdoctoral degree (Habilitation) by the Goethe University of Frankfurt (Germany). Among indirect real estate investments, his research focuses are real estate indices, real estate derivatives, and asset allocation. He has contributed to a number of academic journals and is member of the Editorial Board of the European Journal of Real Estate Research and the German Journal of Property Research. In 2015, he was ranked among the leading German economists by the FAZ.

Guido Spars is the head of the Department "Economy of Planning and Building of the Bergische University of Wuppertal" (Faculty of Architecture) since 2006. Following his studies in economics and a short detour into the private sector (Urban Development Leipzig), Mr. Spars worked as a scientific assistant at the Technical University of Berlin (TUB) for 11 years, completing his doctorate in

2000 focusing on the subject of land market taxes. He received his habilitation in the year 2007, also from the TUB. Mr. Spars gained *venia legendi* for “urban and regional economics, in particular real estate economy.” Mr. Spars worked on numerous research projects at the interface between urban and real estate economy. His main research foci lie within the residential and office building market analysis, the urban and regional development, the green building topic, as well as the urban development policy. He is, *inter alia*, assistant director of the REM/CPM Master program at the University of Wuppertal, destined member of the DASL (German Academy for Urban and Regional Planning), member of the gif (society for real estate research), the scientific advisory board of the German Institute for Urbanistics (difu), the scientific advisory board of the Institute for Housing and the Environment (IWU), the advisory board of the German Property Federation (ZIA), and member of the Commission for building cost reduction of the Federal Ministry of the Environment, Nature Conservation, Building, and Nuclear Safety.

Till Strohsal is a postdoctoral researcher at Freie Universität Berlin, Chair of Econometrics. He is also a member of the Collaborative Research Center 649: Economic Risk at Humboldt-Universität zu Berlin. His main research interests are related to empirical time series econometrics. Currently, Till Strohsal analyzes cyclical properties of credit and house prices series.

Wolfgang Usinger is an attorney-at-law and partner of the law firm SammlerUsinger in Berlin. Wolfgang Usinger started his professional career in 1972 as an attorney-at-law at Pünder, Volhard, Weber & Axster, a firm of attorneys-at-law and notaries in Frankfurt am Main. He was a partner there since 1975. He made a significant contribution to the development of the real estate law practice at Pünder, Volhard, Weber & Axster and headed this department for many years. Following the merger of Pünder, Volhard, Weber & Axster with Clifford Chance with effect from 1 January 2000, Wolfgang Usinger was Global Head of Real Estate at Clifford Chance for several years. Since May 2009, he has been a partner of SammlerUsinger, a firm of attorneys-at-law and notaries based in Berlin. Wolfgang Usinger advises on all spheres of commercial real estate law, in particular in connection with real estate transactions (asset and share deals), project developments, commercial leases, and in the construction field. In addition to the publication of real estate law articles, he is coeditor and coauthor of the two books “Real Property in Germany” and “Immobilien—Recht und Steuern” (see literature references in Chap. 2.4).

Michael Voigtländer was born in 1975 in Leverkusen. He studied economics in Cologne and Münster. Between 2000 and 2005, he was a research assistant at the University of Cologne, where he received his doctorate in 2005. Since October 2005, he is a senior expert on real estate economics at the Cologne Institute for Economic Research. In 2008, he was appointed head of the research unit real estate economics; since 2015, he is head of the research unit financial and real estate markets. Since 2011, he is in addition an honorary professor at the Bonn-Rhine-

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Justus Vollrath is Executive Director at MSCI Inc. and Geschäftsführer of IPD Investment Property Databank GmbH, Frankfurt. Justus studied economics in Freiburg im Breisgau and graduated in 1993. He is working since 2011 for IPD which has been acquired by MSCI in 2012. At MSCI, he is responsible for real estate client coverage for the region DACH and CEE. Prior to his work at MSCI, he was lecturing for 4 years as a professor for Real Estate Portfolio and Asset Management at the University for Applied Sciences and Arts in Hildesheim/Holzminden/Göttingen. From 2001 to 2011, he has been serving the real estate industry as an independent consultant and expert with a focus on portfolio management, portfolio analysis, and corporate real estate management. Until 2000, Justus Vollrath was employed with Arthur Andersen Real Estate GmbH as a Senior Manager providing strategic, organizational, and IT consulting. Before that he was a senior consultant at Arthur Andersen Management Beratung GmbH where he directed consulting projects in the property real estate sector and for public authorities. He began his professional career as the team leader for budgeting and reporting at the Bundesanstalt für vereinigungsbedingte Sonderaufgaben (i.e., the “Treuhandanstalt,” which was responsible for selling the East German state-owned companies). Justus Vollrath is holding lectures at a number of academic institutions such as IREIBS Immobilienakademie, European Business School, University of Zurich, and University of Lucerne. He was member of the board of the German Society of Property Researchers (gif) from 2009 to 2013. He serves the industry in supervisory and advisory boards.

Thorsten Voss is a partner in the Funds & Asset Management/Regulatory Team of WTS Legal, Frankfurt. His practice focuses on the German and international regulation and supervision of banks, investment firms, asset managers, exchanges, payment service providers and other financial institutions, capital markets, and compliance matters. He regularly assists these institutions on a wide range of financial regulatory matters, including the analysis of license requirements, license and exemption applications, outsourcing projects, distribution, ownership control procedures, remuneration issues, regulatory compliance matters, audits and investigations, the communication with regulatory authorities, and the analysis of the impact and the implementation of new regulatory requirements (AIFMD/KAGB, MiFID II/MiFIR, MAD/MAR, EMIR, CRD IV/CRR, Banking Union, etc.). He has specific experience in capital markets transactions involving financial institutions and the regulatory aspects in connection herewith. Before joining WTS Legal in July 2014, Thorsten Voss worked in the Frankfurt office of another leading international law firm and before that time he was a member of the Federal Financial Supervisory Authority (Bundesanstalt für Finanzdienstleistungsaufsicht, BaFin). After finishing his law studies, he received his Dr. iur. (PhD) in comparative and copyright law in 2003. Since 2007, he was lecturing on regulatory law

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Nicolai Wendland works as a postdoc at Darmstadt University of Technology and is an associate of Centre for Metropolitan Studies, Berlin. In addition, he works as a lecturer at the private Touro College, Berlin. He also holds the position of CEO at URBANCONTEXT (Institute for Urban and Regional Research) and of CEO at the Internet start-up POTENTIALSPACES. Before, he worked and studied at several prestigious academic institutions, such as the London School of Economics and Political Science, the ETH Zurich, and the Boğaziçi Üniversitesi, Istanbul. Nicolai Wendland's expertise and skills lie, on the one hand, in the quantification of the economic effects of urban and regional planning actions. He specializes in particular in analyzing the spatial effects on cities of infrastructural development. On the other hand, he evaluates the determinants of the quality of urban life and the attractiveness of space. Corresponding results were published in leading economic and urban economic journals, such as the *Journal of Economic Geography* and *Economics Letters* for which Dr. Nicolai Wendland also works as a referee.

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Part I

Macro Environment

Real Estate Data Sources in Germany

Michael Voigtländer

Abstract

Market information is essential for rational property investment decisions. This chapter outlines the range of available data on the property market provided by official sources as well as private enterprises. Data on prices and rents in Germany not only captures different segments of the market but also relies on different calculation methods. Therefore, investors have to check price developments carefully. Fundamental market indicators like growth rate, employment development and demographic change are therefore important complements to price indicators.

Keywords

Official statistics • Data • Databanks • Price indices

1 Introduction

National and international property investors depend on information about the real estate market. Those active in the market naturally focus on current price and rent developments, but are also keenly aware that demographic change, economic growth and building completions have an important bearing on the prospects for their investments. In recent years, the supply of information about the German property market has improved markedly. While undoubtedly positive, this trend also makes it increasingly difficult to assess the quality and predictive power of the information on offer. The following chapter, which provides an annotated review of official and commercial real estate price statistics in Germany, is an attempt to remedy this.

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The review is intended to provide a brief introduction to, rather than a comprehensive synopsis of, this important field. The paper is structured as follows: First, general market sources, such as interest rates and population growth, are presented. Price data and rent data are then described. While general market data is mainly provided by government statistics obtainable from official sources, property prices are largely provided by private institutions like market researchers, banks and real estate agents. The quality of this information must therefore be carefully assessed. Major methodical differences in calculating price indices are thus discussed before the main indices are presented. The chapter concludes with the outlook for future developments.

2 General Market Data

Unsurprisingly, given its size and overall economic importance, the property market is not an isolated phenomenon but inextricably woven into the fabric of the economy (Voigtländer 2009a). For this reason, it needs to be analyzed in the light of the short- and long-term development of the overall economy. For this, it is possible to draw on a rich set of official statistics. Those most important for the purpose of general market analysis are outlined below. This is preceded, however, by a brief overview of the relevant authorities which provide official statistics.

2.1 Authorities Responsible for Official Statistics

Official statistics are collected, processed, presented and analyzed by the Federal Statistical Office (*Statistisches Bundesamt*), by the statistical offices of the 16 states (*Länder*) and by county and municipal administrations. Statistics are also produced by some government ministries, lower-level federal bureaux and other official institutions. These include the Federal Employment Agency (*Bundesagentur für Arbeit*), the Bundesbank, the Federal Institute for Research on Building, Urban Affairs and Spatial Development (*Bundesinstitut für Bau-, Stadt- und Raumforschung*, BBSR) and the Federal Institute of Demographic Research (*Bundesinstitut für Bevölkerungsforschung*, BiB).

Official statistics offer a number of advantages:

- The Federal Statistical Office publishes data with no financial or commercial objectives of its own and is bound by law to provide impartial information. This guarantees objective reporting.
- The mandatory disclosure of information to the Federal Statistical Office allows this body to obtain highly representative results for the overall statistical population.
- The Federal Statistical Office is required to apply appropriate statistical methods which are subject to ongoing academic and scientific discussion. The methods

and techniques applied, as well as definitions used, are documented in detail in all publications.

- The comparability of data over time is guaranteed by standardized definitions and classifications. Retrospective recalculations are usually performed in the event that definitions are changed.

These characteristics make official statistics highly reliable and credible. However, high quality standards are sometimes achieved at the cost of significant delays in the provision of data.

2.2 General Market Data in Official Statistics

Official statistics provide a plethora of data of relevance both for assessing the market and analyzing future trends. The following areas deserve particular attention.

2.2.1 Real Estate Stock and Building Activity

The official statistics, including the 2011 census, provide detailed information about the housing stock. The census is based on a ten sample of the housing stock, and data for all German municipalities is freely available at <http://zensus2011.org>.

Detailed data about the housing stock can also be found in the special publications of the microcensus (Statistisches Bundesamt 2012). The microcensus is based on a one sample of the housing stock, and this data is used to survey property structures and fittings and their users. This publication is produced by the Federal Statistical Office every 4 years and will next be updated in 2015.

Corresponding data sources are not available for the commercial property market, with detailed information only being provided on building activity. In addition to pure construction figures for residential and commercial properties, the relevant publications also include average estimated construction costs and building owners. The Federal Statistical Office also publishes monthly incoming orders in the commercial building, housing and public building sectors. The Federal Statistical Office's Genesis database is an additional important source of information and provides data on housing stock and building activity at the district level (www.regionalstatistik.de). The declared intention is to continually expand and improve the supply of data.

2.2.2 The Real Estate Industry

The national account system (*Volkswirtschaftliche Gesamtrechnung*, VGR) provides information about the real estate industry in terms of the companies operating in the real estate market. The VGR documents economic activity in the overall economy over a particular period of time. By quantifying the domestic product, i.e. the value added to the national economy, the VGR also serves to calculate the volume of labor and the distribution of income. As national accounts

are provided at the sector level, it is possible to compare economic trends in specific branches of industry with the performance of the economy as a whole or with other sectors. In the national accounts, real estate is included under 'service undertakings' and then under the generic heading of 'real estate activities'. The latter covers the whole field of renting and letting, the development of land and the buying, selling and management of real estate. Other areas of the real estate industry, such as financing or planning, are assigned to business sectors. The construction industry is listed separately. Service statistics provide a somewhat more detailed view of the real estate industry. In order to reflect the greater importance of the tertiary sector, since 2000 the Federal Statistical Office has published extensive data on service companies. This information includes, in particular, the legal form of companies, the number of employees, and sales and investment activity (Statistisches Bundesamt 2014).

2.2.3 Demographic Trends

The Federal Statistical Office intermittently publishes population projections for Germany as a whole as well as for the 16 federal states. Projections are also made for the number and structure of private households. Forecasts for specific municipalities are supplied by the Bertelsmann Foundation on its website at www.wegweiser-kommune.de. The Bertelsmann Foundation produces its projections in collaboration with the Institute for Development Planning and Structural Research (*Institut für Entwicklungsplanung und Strukturforschung*) at the University of Hannover. This information is not, therefore, part of the official statistics. Drawing on the population and household projections produced by the Federal Statistical Office, the BBSR also publishes forecasts of future residential space usage (BBSR 2010).

2.2.4 Labor Market Data

Labor market data is helpful for monitoring the office property market, since the amount of occupied office space can ultimately be derived from the number of office workers. On its website (www.statistik.arbeitsagentur.de), the Federal Employment Agency publishes extensive statistics which can be used to calculate office employment trends differentiated by region. Market researchers and research institutes such as the Cologne Institute for Economic Research (*Institut der deutschen Wirtschaft Köln IW*) use this data to produce their office indicators, which depict the development in the demand for office space for Germany as a whole and also for selected states (Voigtländer 2009b).

2.2.5 Interest Rates

The European Central Bank and the Bundesbank publish the key interest rates of the Eurozone, interest rates for government securities, *Pfandbriefe* and other bonds. This data is published in regular monthly reports. The Bundesbank website (www.bundesbank.de) is a further source of useful data, including interest rate time series.

3 Real Estate Prices and Rents

Information about rents and property prices is, of course, especially relevant for the assessment of the market. Before outlining the sources of data used in public and private statistics in this field, the following section begins by addressing specific problems relating to the measurement of property prices.

3.1 Methods of Calculating Property Price Indices

Professionals working in the field frequently complain about the fact that, despite their great significance for the economy, the Federal Statistical Office neglects property price trends. However, these critics overlook the fact that determining the price of real estate is a far more complex task than pricing other types of goods. Given that location, structures and fittings basically make every property unique, the property market is extremely heterogeneous. Even buildings constructed in exactly the same way may be bought and sold at considerably different prices simply owing to their locations. Structures and fittings vary considerably, while buildings may also differ in terms of size, age or energy efficiency. Property prices must therefore be adjusted for these factors before comparable data can be obtained, or, to put it differently, price changes should only be shown after adequate consideration has been given to quality differences. Figure 1 shows what happens if prices are not adjusted for quality differentials. By default, the Federal Statistical Office simply records average building land prices and fails to take account of different locations. As most land bought and sold between 2003 and 2006 was situated in

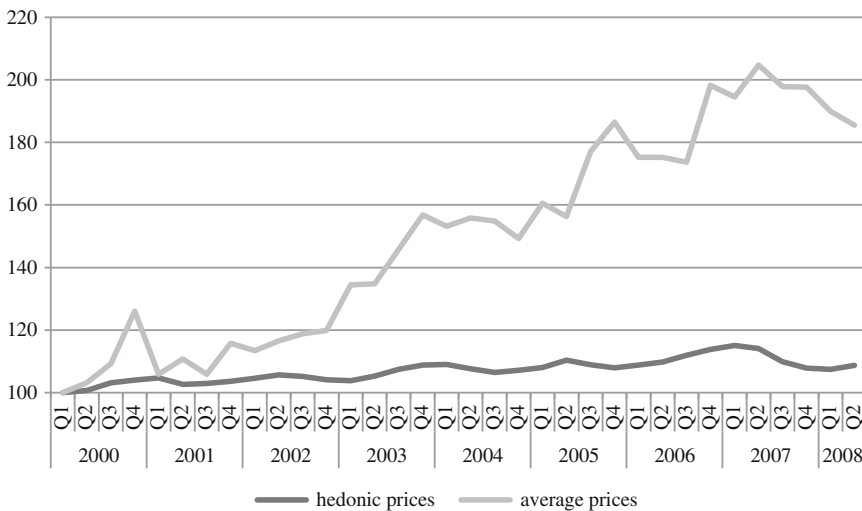


Fig. 1 Hedonic and average price development of building land. Source: Demary et al. (2009)

southern Germany, the prices given for building sites trended upwards simply because land in the rich south is more expensive than in the poorer east and north of Germany. A pilot project (Vorholt 2008) was carried out to adjust the data for the various locations and revealed that building land prices have actually risen at a much lower rate than previous publications suggested. To be fair, it should be noted that the Federal Statistical Office always stresses the difficulties of comparing data over time in its publications.

In general, there are three ways of adjusting the property price data for qualitative factors:

- The first method calculates the average square meter price of all property transactions over the relevant period, taking account only of typical buildings such as terraced houses or condominiums. The disadvantage of this relatively simple method is that it ignores the varying quality of property and very little account can be taken of different locations. Therefore, quality adjustments are rather incomplete. What is more, the focus on specific types of building can also distort the view of the overall market. Nonetheless, this method continues to be very popular in real estate market research.
- The second method is the so-called ‘repeated sales method’ which only takes account of properties that have been sold at least twice during the survey period. This method guarantees effective quality adjustment of property price data because account is only taken of changes in qualitatively identical properties. The problem, however, is that this selection of properties can be far too small to produce a representative sample for the property market. For this reason, this procedure has not yet been used in Germany. In the United States, however, the well-known house price index of the Federal Housing Finance Agency (FHFA) and the Case–Shiller indices are calculated in this way.
- The third possibility is to use a hedonic procedure in which the price of a property is broken down into individual price elements with the help of econometric procedures. Average prices can then be determined for specific structures and fittings (balcony, chimney, bathrooms), locations (distance from city er) or the age of the property. It is then possible to determine prices for typical properties over a period of time. The advantage of this method is that all available data can be used. Considerable research is currently underway in this area and the approach adopted by the Federal Statistical Office and the Association of German Pfandbrief Banks (*Verband deutscher Pfandbriefbanken*, vdp) for their property price indices are both already based on hedonic price indices for Germany.

3.2 Rents and Prices in the Official Statistics

As part of the process of measuring consumer prices, the Federal Statistical Office conducts surveys of changes in residential rents and running costs. Although these surveys distinguish between dwellings in old buildings and those in new buildings,

they do not provide any regional differentiation or quality adjustments. However, given the size of the sample, quality-based distortions are likely to be relatively small. For several years, the Federal Statistical Office has aimed to determine house prices using hedonic methods (Dechent and Ritzheim 2012), whereby new properties are differentiated according to the categories ‘owner built’, ‘system building construction’ and ‘turnkey construction’.

While quarterly results are available for the years 2000–2014, they are still only of limited value. The main problem is that information from the valuation committees is so far only available for nine states. Moreover, there is a considerable time-lag between transactions and the publication of price movements.

With regard to commercial property, the data situation is much more difficult. Until now there has been no official price indicator for commercial property, although the Federal Statistical Office has recently proposed a pilot project. However, the BBSR has conducted surveys for a couple of years. Extensive reports are already being produced on the development of commercial property markets, for example BBSR (2014). What is more, regular monitoring of commercial property markets is planned, and this should result in better information in the future. In addition, official statistics continue to provide data on building land prices, differentiated by state, and construction cost indices.

One particularly important data source for real estate appraisers is the land valuation committees (*Gutachterausschüsse*). Established under the Federal Building Code (*Baugesetzbuch*), these public institutions usually operate under the auspices of the counties and county boroughs, and their task is to ensure transparency in the real estate market. To this end, they collect prices from all notarized real estate purchase agreements. They determine and publish standard land values, provide other information needed for determining values and also commission market value reports.

The valuation committees are increasingly interested in working together at the national level and in communicating their findings more effectively. The Higher Valuation Committee in North Rhine-Westphalia, for example, runs an extensive internet portal which also offers electronic access to standard land value maps (www.boris.nrw.de). Since 2010, all higher valuation committees have issued a joint annual findings report (*Arbeitskreis der Gutachterausschüsse* 2014). Many committees regularly publish reports on developments in the property market in their areas. However, the reporting activities of the valuation committees differ widely in terms of both their scope and the detail of their presentation, making it very difficult to compare information. Some of the main advantages of public statistics mentioned above apply only to a limited degree to the valuation committees.

3.3 Rents and Prices from Private Sources

Relevant market information as well as information on rents and prices is available not only from official statistics but also from a number of real estate associations

and private data providers. The following overview does not claim to be comprehensive, especially given that the information offered on the market is constantly growing. It does, however, try to show some of the different data sources available and the types of data survey methods applied and to help users to find suitable ways of using the information available.

3.3.1 Association of German Pfandbrief Banks

The Association of German Pfandbrief Banks (*Verband deutscher Pfandbriefbanken e.V.*, vdp) has founded a subsidiary called vdp research that focuses on the quantitative survey and analysis of property markets from the perspective of the financial and banking industry (www.vdpresearch.de). As these market players are largely interested in assessing market and individual property-related risks, this is also the fundamental perspective adopted by the vdp subsidiary.

Of special importance for market participants are property price trends in Germany as a whole as well as price movements in specific regional markets. In particular, vdp research aims to provide property price indices for the following two purposes:

- meeting regulatory requirements in the banking industry, such as measuring market fluctuations under Section 20a (6) of the German Banking Act (KWG), and
- the calculation of long-term market values for the purpose of determining potential losses in the case of default.

Property price trends are largely determined by means of a transaction database—established in cooperation with the vdp’s members—and associated evaluation models. The database was set up in 2004 and by 2015 contained property information on more than 800,000 buildings derived from property valuation reports drawn up for property financing transactions. The data quality is generally very high and is thus of very high predictive power as it includes both current transaction prices and key value-related attributes. Quantitative hedonic models are used to analyze the transaction database, filtering out differences in quality in the specific properties included in the database and measuring pure rent or price trends. Currently, vdp research offers analyzes of rent and price trends in German residential and commercial property markets at the national and regional levels. With respect to commercial markets and condominiums, however, only the major office markets and city groups are surveyed. Data on the national level is generally freely available whereas access to regional data is restricted to those banks which supply data.

3.3.2 Association of Real Estate Agents

The Association of Real Estate Agents (IVD) in Germany (*Immobilienverband Deutschland IVD Bundesverband der Immobilienberater, Makler, Verwalter und Sachverständigen e.V.*, IVD) publishes annual property prices for the housing market based on information provided by real estate agents. At present, these

cover 390 towns and cities for the housing market and 370 towns and cities for the commercial property market (IVD 2014a, b). Prices are stated for different types of property on the housing market categorized according to size and housing quality (condominiums, detached and semi-detached family homes and terraced houses), for land (categorized by location) and for residential rents according to housing quality and multipliers for investment properties.

Land prices in trading estates and business parks, office rents for various location categories, and retail rents in two location categories are produced for the commercial property market. The data has a long history (albeit not for all towns and cities), going back as far as the 1970s in some cases. The data only takes account of estimates obtained from locally reporting IVD estate agents and, since these change over time, the data is occasionally impaired by structural discontinuities. For this reason, the IVD does not publish any time series.

3.3.3 Brokers and Banks

Almost all internationally or nationally active brokerage firms issue market reports on specific locations or classes of use. These market reports focus especially on newly let properties and often provide a very detailed picture of local markets. However, they often contain subjective statements and, since they do not always use the same definitions or make the same distinctions, it is difficult to compare the reports of different brokers. While their focus on metropolitan areas additionally limits their analysis, many nonetheless offer an extensive and up-to-date overview.

More and more reports are now being produced by banks. Deutsche Bank, HSH Nordbank, Dekabank and Deutsche Hypo all publish regular market assessments which are usually backed up by considerable statistical data. All these reports discuss the overall economic situation and often contain forecasts of future market trends. The reports issued by HypoVereinsbank are a special case. Covering 1300 towns, cities and local authorities, these reports detail average rents and prices for residential property in various locations and with a wide range of different structures and fittings. LBS (Landesbausparkassen) also publishes in-depth regional data on the market for detached family homes and condominiums.

3.3.4 bulwiengesa

The annual property rent and price indices published by bulwiengesa play a very important role in Germany and provide the basic information used since 2003 by the Bundesbank in its own property price surveys. According to bulwiengesa, the indices are based on expert appraisals prepared for location and market analyzes complemented by empirical surveys, local surveys, newspaper analyzes and test purchases. Data has recently been obtained from online platforms such as ImmobilienScout24.de. bulwiengesa maintains an extensive database of rent and property prices (RIWIS database, www.riwis.de) and publishes an overall indicator for the property market composed, since 1990, of nine equal subindicators which are surveyed in 127 towns and cities. The history of the indicator goes back to 1990 (and back to 1975 for 49 towns and cities in former West Germany). The overall indicator is an average, weighted according to the cities' populations in 2005. In

addition to the overall and individual indices, bulwiengesa also publishes summary indices for commercial and residential property as well as separate rent and price indices.

bulwiengesa additionally calculates a performance index for the German market (German Property Index—GPI) showing total returns for the office, retail, residential and logistics segments and differentiating between returns on capital growth and on cash flow. The advantage of the data provided by bulwiengesa is its breadth and the regional differentiation it offers. The disadvantage, however, is that it draws on mixed data sources which are not always clearly identified. Moreover, rather than adjusting prices, bulwiengesa states average prices for typical buildings. This means that the comparability of data from different locations and over time is limited.

3.3.5 GEWOS Institut für Stadt-, Regional- und Wohnforschung

The GEWOS Institute for Urban, Regional and Housing Research (*Institut für Stadt-, Regional- und Wohnforschung*) surveys price trends as they affect residential building land, condominiums and detached houses and publishes this information in annual property market analyzes. The data is obtained nationally from valuation committees and evaluated according to uniform criteria. Gaps are filled using data from property transfer tax statistics and from the company's own surveys and expert appraisals. Drawing on the GEWOS data, the Institute for Urban Planning, Housing Industry and Building Societies (*Institut für Städtebau, Wohnungswirtschaft und Bausparwesen*, ifs) publishes regional indices (the DEIX-Deutscher Eigentums-Immobilien-Index—German Ownership Property Index) on the price trends affecting condominiums and detached single-family homes. Data is available for western Germany since 1989 and for eastern Germany since 1995 in the form of average values which take no account of building age, location, property fittings, etc. The information produced is based on a comparatively large number of observations (184,400 detached homes and 186,800 condominiums in 2007). As a result, differences in the samples at the single property level are at least to some extent evened out. The regional weighting of national or regional indices is determined by the number of regional purchases. However, an average value method or a typical case method with a very rough definition of the underlying case is applied.

3.3.6 Hypoport

Hypoport runs an internet platform (EUROPACE) for brokering mortgage credits. According to Hypoport, EUROPACE processed more than 8 billion euros worth of new mortgages in the second quarter of 2014. This data is then used to compute hedonic indices for new and existing detached and semi-detached family homes and condominiums. The indices are based on sale prices according to the floor area estimated in loan applications.

The hedonic hpx indices are calculated using separate regression models for each index including variables for micro- and macro-locations (radial rings around urban regions subdivided by the four points of the compass), unit sizes and building

age (for existing detached family homes and condominiums) as well as the number of dwelling units per property (in the case of condominiums).

The rough classifications used in traditional property price indices restrict the usability of such indices. The idea of hedonic indices is to overcome these restrictions. However, the methods used are in many cases not made explicit and there is some doubt about whether the data sets available for a monthly index really are large enough.

3.3.7 Immobilienscout24.de

Immobilienscout24.de is Germany's most important website for private housing transactions. Since sellers have to provide detailed information about their property, the database contains enough information to calculate hedonic price indices on the regional level. In addition, Immobilienscout24.de has information not only on the supply but also on the demand side. For example, the number of requests and page views for specific real estate indicate the strength of demand in a distinct area. With the website now counting 150,000 new offers per month, so-called imx indices provided by Immobilienscout24.de have rapidly become popular. The imx measures the development of asking prices adjusted for quality differences using a hedonic approach. That the index is based on asking prices and not transaction prices, however, is a drawback. Depending on the market situation, the differences between the prices can be high. A pilot project for Hamburg conducted by Henger and Voigtländer (2014) revealed an average discount on asking prices of 6.7%. In an upswing, however, the discount is close to zero, while in a recession the discount can be close to 10%.

Since 2014, Immobilienscout24.de not only offers residential property indices, but also commercial property indices, the so-called gimx. Based on a hedonic approach, rental price developments are calculated for the 12 biggest metropolises in Germany (Deschermeier et al. 2014).

3.3.8 Investment Property Databank

The Investment Property Databank (IPD) from MSCI has been publishing annual indices of total return on direct property investments since 1995. In contrast to all other surveys, the data originates from institutional investors. The IPD determines the average total return derived from net revenues from rents and lets as well as capital growth returns for all portfolio investments made by the participating businesses, including separate results for the retail, office, residential, industrial and other/mixed-use segments. The 2014 IPD database was produced from information for 2235 properties: 772 office, 692 retail, 473 residential, 202 industrial and 96 other/mixed-use properties.112.

The IPD offers performance indices and a geocoded 'lease intelligence database', which provides information about lease agreements and thus enables rent markets and various types of use to be analyzed in highly circumscribed geographical areas. The database is used by the IPD to produce an annual DMX (German Office Potential Lease Index). This provides a comparison of average rents under

existing contracts and of professionally evaluated sustainable gross incomes from potentially rising or falling rents in the markets.

Thanks to the fact that IPD data is directly collected from the portfolio data of institutional investors and that rigorous standardization methods are applied, the data quality is very high. As the IPD also applies international standards, international comparisons are possible. The disadvantage, however, is that the data set for Germany is relatively small in contrast to that for the United Kingdom, where the IPD has become the benchmark for commercial property investors. A further drawback is that the IPD only has data from appraisals which are typically smoothed compared to transaction data (Fisher et al. 2004).

3.4 Differences Between the Price Indices

To illustrate the general differences between the various price indices presented above, Fig. 2 shows the price developments indicated by the various data providers.

For easier comparison, only the change in residential property prices has been calculated. For the IPD, the capital growth of residential property has been used.

In general, the graph illustrates the spectacular heterogeneity of the price indices. Remarkably, the indices differ not only concerning levels but also with respect to trends. In 2009, three of the indices reported a decrease in German property prices while two reported an increase. Since then, all indices have reported positive price increases, with a range between 2.9 % (hpx) and 7 % (bulwiengesa) in 2013. In addition, the indices vary concerning their trends. While price growth

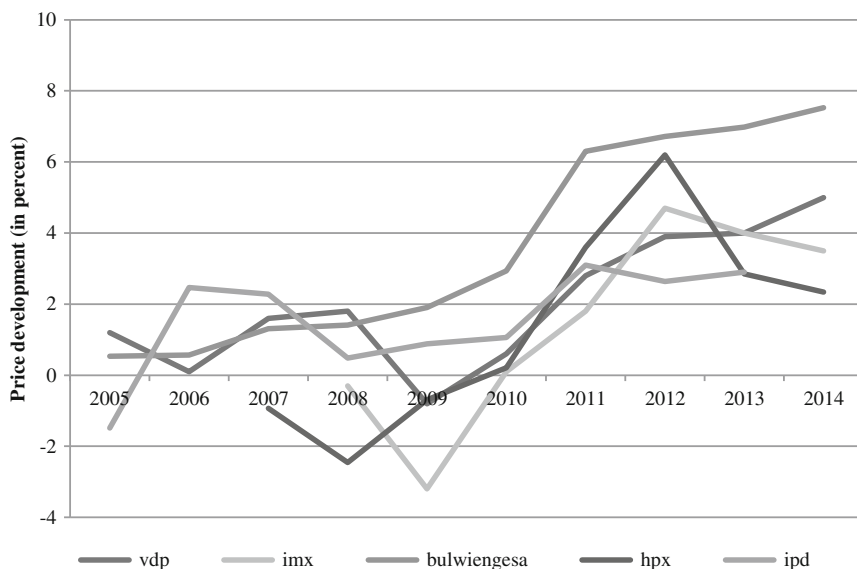


Fig. 2 Price development of residential property (in percent). *Source:* Own calculations

increased according to vdp and bulwiengesa in 2014, the hpx and IPD results indicate the opposite. One reason for the disparity, of course, is that the indices draw on different databases. The IPD measures the performance of property held by institutional investors while the imx captures prices offered for property mainly held by households. Nevertheless, even between the vdp index and the Hypoport index, which both refer to data provided by banks—and to some extent by the same banks—the differences are striking.

Against this background, it is difficult to give investors advice. Since the official price indices are still in an early stage of development, there is as yet no benchmark. The vdp index may well be capable of filling this gap but access to detailed data is only granted to members of the project. Moreover, it is important to understand that the objectives of the indices are different. For instance, the ipd analyzes mainly aim at providing a benchmark for institutional investors while the DEIX primarily captures the market for single-family houses. Thus, the choice of index depends strongly on the underlying aim or question. In addition, investors must necessarily be cautious about data and subject information to thorough checks. In view of this, general market data will for some time to come remain an important source of information on the prospects for the property market.

4 Outlook

This survey makes clear that there is a plethora of information available on the real estate market. Yet useful data is sometimes hidden in the official statistics or restricted to certain groups. In addition, there is still a lack of leading indicators for the property market, especially concerning prices and rents. This situation makes it extremely difficult for foreign market participants to evaluate the German market. However, the situation is improving continuously. With the emergence of new and sophisticated hedonic indices, less professional data providers will gradually be forced out of the market. Furthermore, the increasing coordination between valuation committees will enhance the transparency of the residential market. For the time being, though, investors will need to treat information from this very heterogeneous market with considerable caution and continue to rely on their own research. Additionally, for a comprehensive overview of the market, a cross-check of property market data with business cycle indicators is highly advisable.

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Size and Impact of Real Estate Sector and Its Role for Business Cycles and Growth

Wolfgang Maennig

Abstract

The real estate industry is one of the most important sectors of Germany. Its development and the development of real estate values are most important to Germany's economic business cycle and the country's long-term growth path. On average, Germany's real estate activities and price trends have stagnated more or less since the mid-1990s until 2006 and thus deviated from the international pattern. The underlying structural differences include, amongst others, the demographic development, the characteristics of the German real estate finance system, the fiscal policy and a decade-long low and stable general inflation. In return, the real estate sector in Germany—particularly when compared to other countries—serves rather a stabilizing function, especially in periods of economic slowdowns.

Keywords

Market size • Inflation • Construction

1 Real Estate Markets and the Economy

More than 788,000 German companies are active in the real estate industry and employ around 2.8 million people, which is the equivalent of a 24.5 % share of all businesses and 9.8 % of Germany's workforce. The gross value added of the real estate economy totaled some 420 billion euros in 2011, which equals a share of 18.7 % of Germany's gross value added (Institut der deutschen Wirtschaft Köln et al. 2013). This makes it safe to say that the real estate industry is one of the most important sectors, second only to the manufacturing industry. The value of real

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estate assets in the Federal Republic of Germany is estimated to total approx. 12.96¹ trillion euros, which compares to a German gross domestic product of some 2.9 trillion euros. Around half of all assets held by private households represent real estate. Real estate represents 83.9% of national gross investment (Institut der deutschen Wirtschaft Köln et al. 2013).

With these figures in mind, the development of real estate values and of the real estate sector as a whole is as important to Germany as it is to other countries²; this holds for both the economic short-term business cycle and the country's long-term growth path: Given its central significance in the capital formation (and retirement schemes) of private households, not just current, but also anticipatory changes in real estate values clearly impact consumers' willingness to spend.

During the global economic crisis of 2007–2009, the real estate sector in Germany—particularly when compared to other countries—served rather a stabilizing function. Accordingly, residential rents on average rose by about 1%, as in previous years, and because of the decline in commodity prices they even slightly outpaced the general inflation rate. Real estate prices continued a trend of increasing prices, which started in 2006, after a longer period of decreasing prices (Fig. 1). Nearly all important countries, such as e.g. the United States, Spain, Ireland, the United Kingdom, the

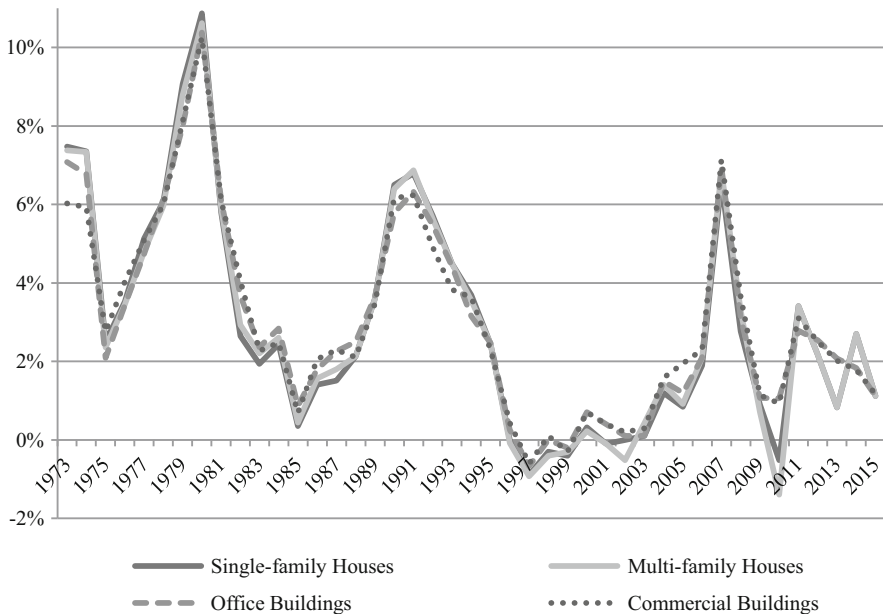


Fig. 1 Nominal price increases for various building types in Germany, 1973–2015. *Source:* Destatis

¹ Data Source: Federal Statistical Office (Destatis), National wealth accounts (2013).

² On the considerable influence of the real estate economy on the economic situation in general, see Leamer (2008).

Scandinavian as well as many Eastern European and Asian countries³ initially reported brisk real estate value growth during the 1990s and price dips by 2008 at the latest, which triggered or exacerbated the economic dip (see Cieleback 2016).

The deviation of Germany's real estate price trend from the international pattern up to 2006 is explained by the average disposable real per-capita income—which has stagnated for at least a decade and a half, the high real interest rate, and the demographic development (Kholodilin et al. 2008). It is also explained by the characteristics of the German real estate finance system (e.g. including relatively long interest fixings of 5–10 years instead of a variable interest rate, relatively low LTVs for first-time buyers, virtually no secondary mortgages during a boom market) and the fiscal policy (non-deductibility of interest expenditures for owner-occupied homes, high transaction costs, for instance in the form of real estate transfer taxes).⁴ Another price-retardant effect can be traced back to the subsidized construction boom following the country's reunification in 1990, especially in East Germany. The downscaling of many subsidy programs (homeownership subsidy, degressive deduction for depreciation, special deduction for depreciation) since the mid-1990s has put an additional damper on the price trend.

Another reason for the relatively stable price trend of German real estate is the fact that Germany's inflation rate has, by and large, been modest over the past decades (Fig. 2), which was not particularly seductive to getting people to “seek refuge in tangibles.” In the years 1991 through 2014, the general annual inflation rate in Germany averaged 1.76%. Largely on the same level were the inflation rates for building work in the construction of single- and multi-family homes, operational office and business buildings, where it ranged between 1.8 and 1.9% in the annual mean, thus ensuring a slow growth in replacement costs. The average price increases for the maintenance of multi-family homes equaled 2.2%. Only the mean annual rate of price increases for zoned land was markedly higher at 5.0%, suggesting a bottleneck tendency for building land.⁵

The average German real estate prices have been rising since 2006 and especially since 2010 due to positive labor market developments, (too) low real interest rates and missing attractive alternative investments as well as a perceived increased uncertainty on financial markets. In addition, there has been a larger net immigration which hit an inelastic supply. It must be added that price increases have been concentrated on urban real estate markets with a potential overvaluation by between 5 and 10% (Deutsche Bundesbank 2013), due to a tendency of (re)urbanization. By the way, even this upswing only modestly increased the turnover on German real estate markets (Fig. 3).

³ Canada manifested a stagnating price trend that more or less matches the German curve. Japan has been subject to a recessive price trend for some time now.

⁴ Cf. Chapter 9 in Institut der Deutschen Wirtschaft Köln et al. (2013).

⁵ The stats for the time between 1976 through 2009 (with the year 1990 omitted because of the interruption of the data series during that year) reflect a similar situation: The mean general inflation rate for Germany approximated 2.4%, while the inflation rates for building services in construction for single- and multi-family homes, operational office and business buildings averaged a rate between 2.8 and 2.9%. The average price increase for the maintenance of apartment blocks equaled 3.1%, and the increase for zoned land was 6.9%.

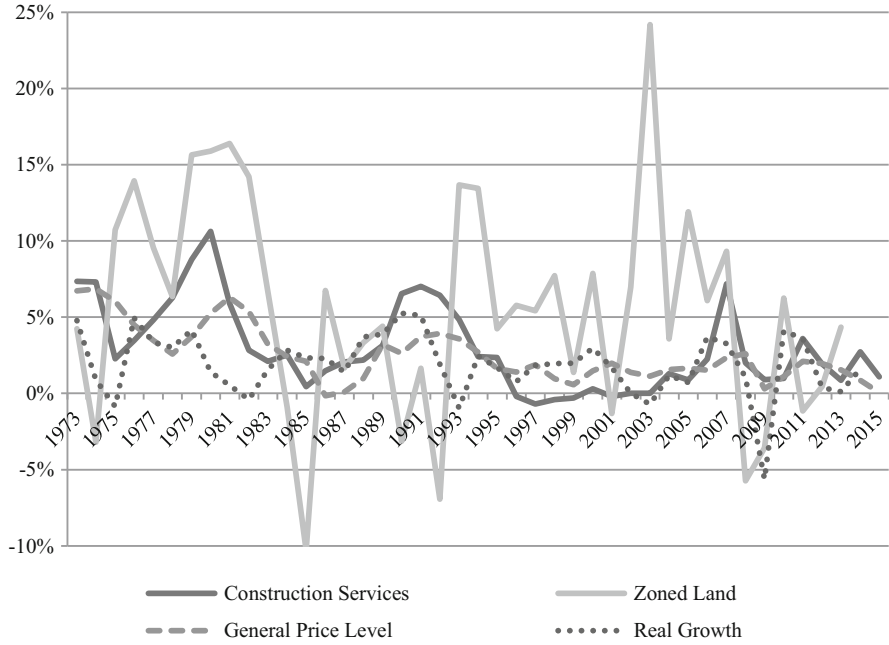


Fig. 2 General inflation, price increases for zoned land and construction services, and real growth, 1973–2015. *Source:* Destatis

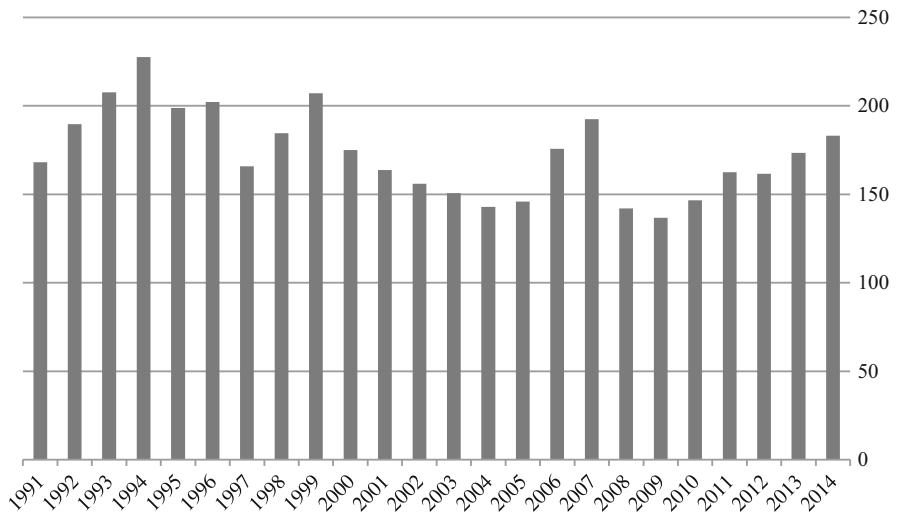


Fig. 3 Turnover on German real estate markets in billions euros, 1991–2014. *Source:* IVD-Bundesverband and OECD for CPI

2 Construction Activity in Germany

Considering the low price volatility of German real estate, it comes as no surprise that the German investment activity in the real estate area has been relatively stable in turn. Figure 4 illustrates that building investments—not including the historically unique time of the German reunification up to the end of the last century, which was defined by particularly voluminous investments—have developed at a relatively stable rate. During the period between 1991 and 2001, the average volume of housing construction exceeded the 1970–1988 period by an average of 77%. Since 2006, the investment activity in housing construction increased again, it did so up to a level of around 50% above the period of 1970–1988.

The change in investments activity in housing construction between the 1980s and the time since 2002 compares to the population increase caused by the country’s reunification (territory of the former Federal Republic until 1990, and expanded to include the East German states since 1991) by around 25%; yet investments in non-residential construction have lagged behind. There are no signs suggesting an exaggerated building boom that would trigger supply-driven pressure in Germany (excepting the historic tax-induced misallocations in the East German States in the 1990s).

The construction industry, having peaked at approx. 111 billion euros in 1996, dropped back to approx. 99 billion euros by 2014 (Fig. 5). The German labor market does not fully reflect these relative stable developments. Rather, the number of jobs sank from the high-water mark of around 1.3 million construction industry jobs in 1996 down to just over 750,000 jobs today. This should be blamed less on business

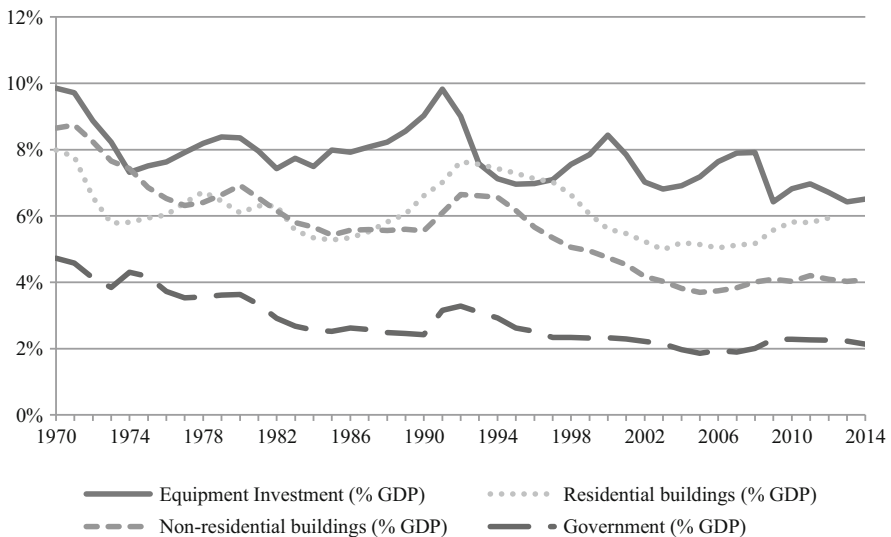


Fig. 4 Investment activity in Germany 1970–2014 (Investment relative to GDP, 1991 = 100). Source: Sachverständigenrat, Long-term series, Table 35: gross investments

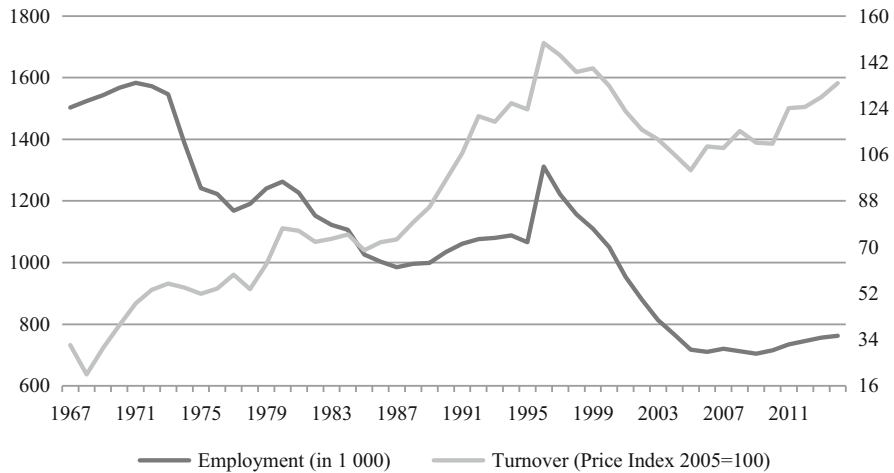


Fig. 5 Jobs (in 1000, left scale) and turnover (in billions euros, price basis: 2005=100) in the construction business, 1967–2014. *Sources:* Deutsche Bundesbank, Destatis

cycle impacts, though, but rather on structural ones: One factor that needs mentioning here is the substitution of domestic construction workers by foreign ones. Moreover, labor-intense housing construction lost in significance while capital-intense civil engineering regained in importance. Statistically speaking, this has caused the construction industry to seem more productive.

3 Future Prospects

According to the expectations of some market participants, positive future effects for German real estate might result because the performance of a given asset type, such as real estate, is at the same time subject to the (anticipated) performance of alternative investment options. Government bonds from countries with a good credit rating only offer modest return. And historic precedent has led some market participants to associate the prospectively surging sovereign debt of countries (Standard and Poor's 2010) with the incentives that political decision makers might have for fanning inflationary tendencies. On the basis of the assumption—to some extent confirmed for the United States⁶—that real estate has an inflation-hedging effect, this will set off another run on tangible assets. The corresponding price hikes will, at least to some extent and for the early investors, make this assumption a self-fulfilling prophecy, though hardly for all investors.

⁶ See Huang and Hudson-Wilson (2007) and the literature cited there. On doubts concerning the inflation-hedging capacity of German real estate, see Just and Uttich (2015).

(Life) insurance companies and international (real estate) investors appear to contemplate reshuffling their portfolios in favor of stable German real estate (Institut der Deutschen Wirtschaft Köln et al. 2013).⁷ This could turn out to be an efficient strategy, if investments succeeded in prospering regions that are less likely to be impacted by demographic contraction processes.

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⁷ That being said, it should be added here that another solution for debt-ridden public households is to raise taxes. For the sakes of efficiency, it is preferred to levy taxes on goods of inelastic demand and/or supply.

Demographic Outlook and the Implications for Real Estate Markets

Tobias Just

Abstract

The fertility rate in Germany has been very low for 40 years, at more or less 1.4 children per woman. In the past, the resulting deficit of births could be offset partially with immigration. The population in Germany shrank by almost 800,000 between 2003 and 2010, and demographers expect the coming decades to bring more contractions and a marked ageing of society. However, in the last few years, the number of inhabitants has been rising, thanks to strong inward migration from southern and eastern Europe and particularly due to a strong inward migration of refugees. This chapter will outline the most important demographic trends for Germany, as well as the regional differences, in order to derive the most important implications for real estate markets.

Keywords

Fertility • Migration • Ageing • Cohort effect • Remanence

1 Demographic Development in Germany

Population changes are among the key parameters that shape real estate demand. *Ceteris paribus*, a growing population requires more living space than a shrinking population, and an ageing society has different requirements to a younger society. The dependency of demand on population development is not unique to the real estate sector. However, because real estate is tied to a specific location and is built to last for decades, the demographic burdens can be more onerous than those relating to stocks or bonds. For example, if people migrate from eastern to western

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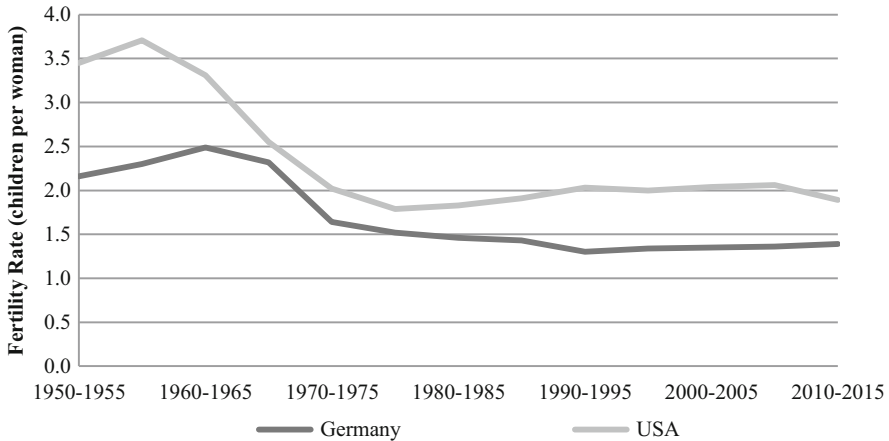


Fig. 1 Fertility rates in Germany and the United States. *Source:* United Nations (2015)

Germany, this has much less impact on bond markets than on local real estate markets.

More than 20 years ago, Mankiw and Weil (1989) were already warning of price distortions that could occur on real estate markets as a consequence of demographic shifts. Back then, they forecast that real house prices in the US would decline by nearly 50 % within 20 years, because they were concerned that the sharp decline in the birth rate until 1970 would cause a major shift in the population structure and thus in housing demand. Although it has been shown that the Mankiw and Weil model was invalid, investors in Germany in particular should nevertheless pay attention to demographic trends, as the burdens are far more serious in Germany than in the US. For example, the birth rate in Germany, which has now been stuck at about 1.4 children per woman for more than 40 years, is markedly lower than the fertility rate in the US (Fig. 1). Only, in the last few years have fertility rates moved up slowly in Germany, but remain markedly below the necessary long-term level of 2.1 children per woman, which would stabilize the number of inhabitants without any inward migration.

1.1 Population Shrinking and Ageing

Germany currently has a population of nearly 82 million people—since peaking in 2002, the number of inhabitants fell until 2010 by a total of almost 800,000 people. The sharp stated decline in 2011 is reflected in new data from the latest census and is not due to outward migration. Since 2011, the number of inhabitants has been rising again, thanks to inward migration from east and southern Europe, that resulted from high unemployment in the respective country of origin. A further

increase over the next few years is almost certain, thanks to the very strong inward migration of asylum seekers especially from Syria, Afghanistan and even some eastern European states. But as soon as the economic woes in the south vanish and the civil war, especially in Syria ends, net migration will fall again. A further population increase would then be unlikely, as the birth deficit will widen from about 200,000 people at present to 300,000 people in 2020. Nonetheless, the following analysis is based on the most recent projections of the Statistical Office, which do not incorporate assumptions on the development of asylum seekers. This means that the projections must be considered as comparatively conservative today.

In the last 50 years, net inward migration into Germany has averaged no more than 200,000 per year, and stripping out the impacts of the campaign to attract “guest workers” and reunification, the figure is only around 100,000 per year.

In its most recent population projection, the Federal Statistical Office developed a total of eight scenarios and three model calculations for population development until 2060 (Destatis 2015a). Two of these scenarios, that appear to be very plausible (G1-L1-W1 and G1-L1-W2, here called 1-W1 and 1-W2) are selected for the following analysis. In both scenarios, the birth rate is kept constant at 1.4 children per woman, while life expectancy continues to rise slowly. The life expectancy of a new-born girl will increase by around 6 years until 2060, whereas men live for an extra 7 years, compared to the current situation. In Scenario 1-W1 the statisticians assume average net inward migration of 100,000 people per year; hence, this scenario is referred to as the “lower migration scenario”. In Scenario 1-W2, net inward migration is assumed to be 200,000 people per year (the “higher immigration scenario”).

With the aid of these assumptions, projections can be made about future population-development paths. These assumptions are at best be plausible, but neither right nor wrong. This also means that accurate probabilities cannot be attributed to the scenarios. In the more favorable scenario with higher immigration, the population in Germany falls steadily until 2060 by a total of around 11 %, to roughly 73.1 million inhabitants. Due to high immigration in 2011 and 2013, Germany’s population has been growing. A new decline is not expected until 2023. The very high inward migration of refugees is not even covered, and in 2015 roughly one million refugees arrived in Germany. Many will not be allowed to apply for asylum, but even so, the most recent projections are currently likely to be at a very conservative lower-end.¹ In the lower migration scenario, the shrinkage occurs faster; in 2060, there could be fewer than 68 million people in Germany).

At the same time, the age structure is shifting, as the baby boomer generation of people born between 1950 and 1970 is increasingly reaching retirement. The working-age population, i.e. the number of people aged 20–65, will decline much sooner and faster than the overall population. By the middle of the century, the

¹ The number of refugees that will remain in Germany is very difficult to forecast. There are indications from former waves of asylum seekers, that most of the refugees will move back to their home countries, if the reasons for their flight disappear within a reasonably short period of time.

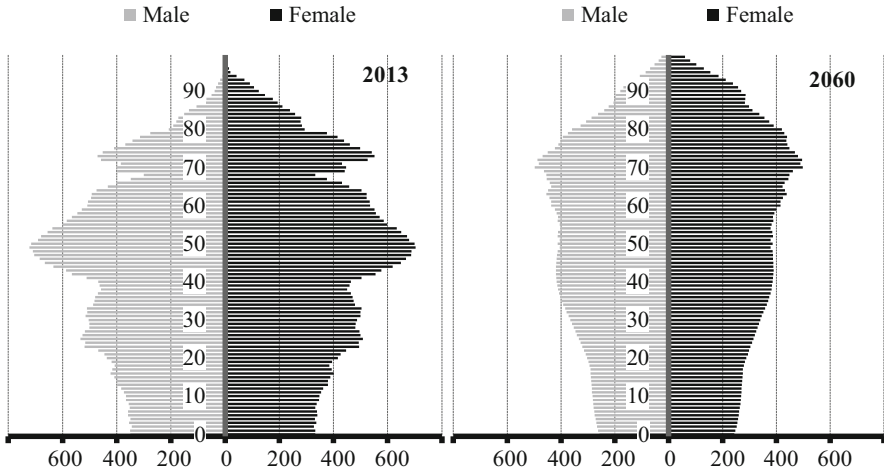


Fig. 2 Population pyramids for Germany (lower migration scenario). *Source:* Destatis (2015b)

working-age population should decline by between 11 million and 15 million (i.e. 23–30%). At the same time, there will also be around 40% more people of retirement age in 2037 than at present, remaining at about 24 million until 2060 (Fig. 2). The number of over-80-year-olds will rise constantly, reaching its peak at about 10 million in 2050 and then falling.

1.2 Significant Regional Differences

Real estate is local by definition, so it would be simplistic to apply demographic trends for Germany as a whole to one real estate decision. The decisive criterion is the development of the specific region in which one would like to invest. These developments are very mixed in Germany, because birth rates, life expectancy and internal migration patterns within Germany vary significantly. Figure 3 shows that in 2013, there was a large wedge-shaped swathe of migration outflow regions, which stretched from eastern Germany to deep into western Germany. The main migration “winners” are the southern *Länder*, the Hamburg metropolitan area and Berlin, along with its environs. The difference is remarkable; while outward migration exceeded 1% in 2013 in the weakest regions (for example in Suhl and Frankfurt (Oder) in the former East Germany), Potsdam, Leipzig and Flensburg experienced net inward migration of more than 1% within the same year.

The map clearly shows that in addition to the hard-hit regions in eastern Germany there are also some growth centers in the east of the country.

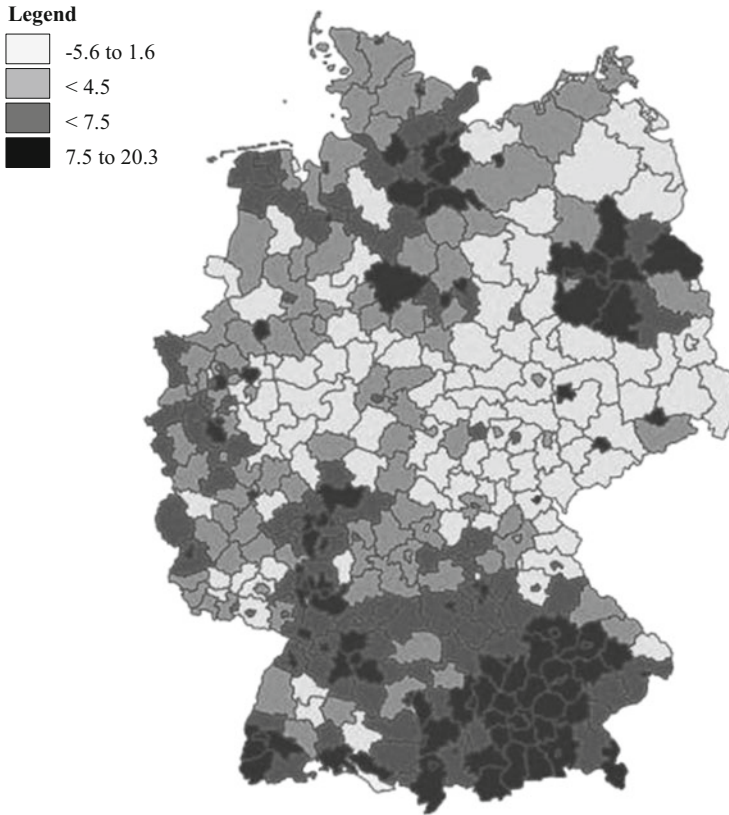


Fig. 3 Net migration per 1000 inhabitants in 2013. *Source:* Destatis (2014)

Although there are currently significant differences between those regions experiencing inflows and outflows, compared with the migration flows observed immediately after reunification, they are relatively small. In the mid-1990s, up to 5 % of the inhabitants of the weakest regions migrated each year to the (predominantly) west-German growth centers. Similarly strong migration flows are unlikely to be repeated in the next few decades, but the resulting dearth of future mothers and fathers will impact on population developments for decades to come.

The Federal Institute for Research on Building, Urban Affairs and Spatial Development (BBSR) published its most recent regional population projections for the over 400 districts (Kreise) in Germany in 2015. According to this projection, the population will have declined in more than 50 % in all German districts by 2035. For nearly 100 regions, the researchers expect double-digit rates of decline. All the same, the BBSR projects growth rates of between -5% and $+5\%$ for a little less than half of the regions. Table 1 shows the growth projections for the top 10 and the bottom 10 regions in Germany. The top regions are all in southern Germany, while the bottom ones are all in eastern Germany.

Table 1 Population forecast in % for selected German regions (“Kreise”)

Top 10 regions			Bottom 10 regions		
	2016–2035	2012–2035		2016–2035	2012–2035
Ebersberg	15.9	21.2	Prignitz	–22.6	–26.3
München	15.8	22.3	Wittenberg	–22.7	–26.1
Landsberg a. Lech	14.5	19.2	Gera	–22.8	–26.3
Erding	14.4	19.3	Dessau-Roßlau	–23.0	–26.7
Dachau	13.8	18.3	Greiz	–23.8	–27.3
Starnberg	13.6	18.4	Mansfeld-Südth.	–24.5	–28.1
Fürstentfeldbruck	13.3	17.3	Elbe-Elster	–25.4	–29.2
Freising	12.1	17.4	Altenburger Land	–25.9	–29.9
Breisgau-Hochs.	10.9	15.1	Suhl	–26.6	–31.1
Miesbach	10.5	13.7	Oberspreew.-L.	–27.8	–32.0

Source: BBSR (2015)

Such granular population projections should, however be treated with caution. Working-age people are usually a great deal more mobile than the elderly. While the former follow the job offers of successful companies, the latter focus on the recreational value of a region or simply stay put. Regional population projections thus implicitly include assumptions concerning regional economic forecasts. That is why—when the BBSR projections are updated—significant changes regularly have to be made to the outlook assessments as well. Defining the difference between three relatively recent regional population projections as a “projections range”, it is remarkable that almost 70 out of 439 districts show a forecast range of more than 10 % points. For these regions, projecting population trends seems more difficult than for those 50 districts where the range is less than 2 % points. A recent analysis has shown that net initial yields of residential property in Germany not only correlate with regional population forecasts, but also with the forecast range, i.e. with the measure of uncertainty. Investors not only demand a higher risk premium in those German regions where the demographic outlook is unfavorable, they also demand a higher risk premium for regions where projections look uncertain (see Just 2011a).

It should also be noted that other demographers arrive at different assessments. It therefore makes sense to consult several (regional) population forecasts (see Just 2013) in order to obtain a comparative analysis of regional population projections.

Precisely because the elderly are less mobile than younger people, the ageing trends are more stable and more uniform across Germany. Even so, looking at ageing, there are also significant differences between individual regions, but they are not as striking as in the development of the working-age population (for details, see for example the BBSR projections 2015).

1.3 Comparison with Other European Countries

If Germany becomes increasingly reliant on immigration in future, this immediately raises the question of where these immigrants will come from. Since a growing number of European countries are faced with similar challenges to Germany, a shift in the migrant structure is likely to occur.

Europe is by no means a homogeneous continent with regard to demographic developments. European countries can be grouped into three categories, the first including France, Sweden and the UK, for example. In these countries, the natural population growth has been negative over the past decades, but has recently stabilized at a positive level. These countries will almost certainly experience population growth even without immigration in the coming decades. Only in the very long term is a (slightly) negative natural population growth to be expected for these countries. The second category comprises countries whose natural population growth is still positive, but has fallen so sharply in recent years that a decrease is likely very soon. This category includes countries such as Poland (and many other central and eastern European countries). Until recently, Spain also fell into this category, but due to strong outward migration in the course of the recession, the population has started to shrink in Spain. Although birth rates in central and eastern European countries have risen slightly in the last few years, they are still much lower than the replacement rate of 2.1 children per woman (see Goldstein et al. 2009). The third and final category contains those countries whose birth rates already began to decline at an early stage. These countries have already been reliant on inward migration for years to offset their natural population decline. If they do not succeed in doing so, their populations will shrink, and this applies especially to Russia and Germany. In Italy, the negative population change has only been offset recently by large-scale immigration, but, net migration there declined sharply after 2009. None of these estimates take into account the recent increase in the number of asylum seekers. As this development stems more from geopolitical crises than from structural differences, these numbers are difficult to forecast.

The implications of demographic developments for German real estate markets that are outlined below can thus be applied most readily to the countries in the third category and to a lesser degree to countries in the second (see Takáts 2010 and Just 2011b for detailed information) (Table 2).

2 Implications for Housing Markets

It is banal to claim that a decline in the population has a negative impact on housing demand, *ceteris paribus*, because a larger number of people have higher demand for living space than a smaller number. It is, however, no longer banal whether the overall effect is that the population decline is offset by income growth and changes in the age structure. The reason is that, as people age, their circumstances, income and wealth also change, and possibly also their willingness to change where they live. This has far-reaching implications for housing demand.

Table 2 Population trends in Europe (medium variant)

	Fertility rate 2010–2015, children per woman	Population growth 2015–2050, change (%)	Number of people 80+ years 2015–2050, change (%)
Germany	1.39	−7.65	135.64
France	2.00	10.47	101.80
UK	1.92	16.38	140.32
Spain	1.32	−2.78	129.38
Russia	1.66	−10.36	48.24
Southern Europe	1.41	−6.83	115.46
Eastern Europe	1.55	−14.06	58.23
Western Europe	1.66	2.48	127.95
Northern Europe	1.87	14.85	135.48
Europe	1.60	−4.29	105.44

Source: United Nations (2015)

2.1 The Number of Households Continues to Increase

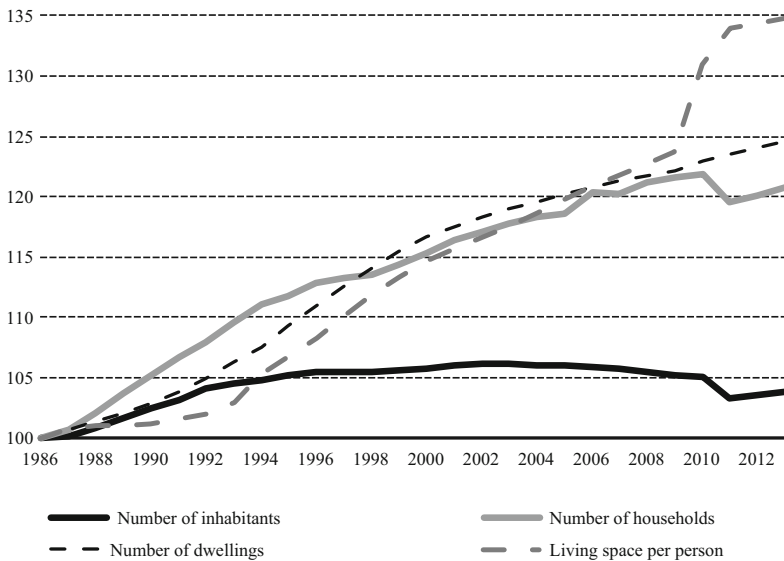
Population size ultimately determines housing demand only indirectly, since the number of households is the decisive factor. As already shown, the number of inhabitants in Germany declined by almost 800,000 between 2003 and 2010. Nevertheless the number of households in Germany continued rising even during these years. Note that the latest census data from 2011 led to a correction in population, household and housing stock data. This sharp correction is only a statistical artefact, as the previous data was inaccurate (not real data, but calculated estimates since the last census in 1987).

Since reunification, the number of households has risen by more than 10 %—to around 40 million at present. Given the shrinking population, this means that the average household size has decreased to just over 2 people; in 1991, the average household in Germany comprised nearly 2.3 people. This trend is the product of “social atomization” tendencies and above all, societal ageing. The average household size among the elderly is much lower than the average size of a family household with children. Ongoing societal ageing therefore implies that the average household size in Germany is likely to fall in the coming decades towards 1.9 persons. This impact on the growth in household numbers will counteract population decline. Most demographers expect that population size will probably rise for 5–10 more years, depending on the migration scenario. The number of households, though, will increase faster and for longer than the number of inhabitants. Nonetheless, the growth rates for the number of households of up to 5.6 % for the whole period until 2025 are, however, much lower than in preceding decades.

It should also be noted that the ageing-related increase in the number of single and two-person households will most probably not boost demand commensurately, because health as well as financial capabilities will limit the demand for living space of a large share of the elderly. If, in particular, the demand for professional care institutions increases substantially due to ageing, this will impact negatively on demand in the “normal” housing market (see Just 2013).

2.2 Demand for Living Space to Grow

Figure 4 not only clearly shows that the number of households has risen more sharply than the number of inhabitants over the last few decades, it also shows that living space per person has increased significantly. Each inhabitant occupied an average of nearly 47 m² living space, 12 m² more than in the mid-1980s (again note that the latest hike in the space absorption data stems only from the census in 2011, which replaced the annually adjusted data). This increase does have something to do with the growth in disposable incomes, but it also relates to demographic shifts. In order to understand this, it makes sense to differentiate between three key effects:



Annot.: For the period before reunification, the number of households has been calculated on the basis of household development in the former West Germany.

Fig. 4 Population, households and dwellings, 1986 = 100. *Source:* Destatis (2015c, d, e), own calculations

- *Cohort effect*: This effect refers to the difference in demand behavior between one cohort or age group and another. Depending on income and asset developments, as well as their specific socialization and experiences as an age cohort, today's 70-year-olds demand much more living space than those 20 years ago. During the next few decades, the cohort effect can at the very least be expected to be weaker than in the past, with some researchers predicting that it will even become negligible.
- *Life cycle effect*: In the course of their lives, most people adjust their living space usage to changes in their income and life situations. The outcome is that, statistically speaking, living space usage increases on average until about the age of 50.
- *Remanence effect*: This effect is ultimately part of the life cycle effect. Over recent years, it has been noticeable that the space usage of many households over the age of 50 has remained virtually constant for many years. Even if children leave the household or a partner dies, many people remain in their dwelling. The result is a trend that living space per person (not per household) within an age cohort is on the increase.

In eastern Germany, a base effect could also be observed. This is ultimately a special case of the cohort effect, resulting from the decade-long division of the country. Since the elderly in East Germany also behave predominantly remanently, their living space usage even 20 years after the reunification, still reflects the scarcity that characterized the socialist era (in many respects). In the coming decades, today's generation will gradually be replaced by a new generation of the elderly. The structural differences in demand between eastern and western Germany in this age cohort will disappear, and this means a positive statistical impact on demand.

Overall, demand for living space can be expected to rise even faster and longer than the number of households. In particular the cohort and remanence effects will help to offset the negative shock of population decline. This effect will not last for ever, though. Depending on the migration scenario and assumed intensity of the remanence and cohort effects, living space can be expected to increase by between 5 and 10 % until at least 2025 (see, for example Just 2013).

2.3 Asymmetric Price Reactions

Real estate prices react positively to changes in demand. This means they are basically no different to other goods. *Ceteris paribus*, a growing population also leads to increasing property prices and vice versa. There are extensive empirical indications of this relationship (e.g. Demary and Voigtländer 2009). It is, however, worth taking a closer look especially at a country like Germany—where there are huge regional differences in population development. The short to long-term price reaction differs, depending on whether a piece of real estate is located in a region with inward or outward migration.

In a region with inward migration, the rising population ensures excess demand because the supply of housing can react only slowly to a growing population. Rising prices induce an increase in construction output only over the longer term, on account of the time lag caused by to the approval process and relatively slow progress of construction work. This gradually reduces the excess demand and prices can slowly return towards their starting level. If projections and/or expectations of future demand are too optimistic, prices can even slide below their starting level.

In regions with a shrinking population, outward migration initially leads to oversupply and the many new vacancies send prices falling. Just like the adjustment reaction, properties then have to disappear from the market in order to establish a new market equilibrium. This is, however, far more difficult for a region experiencing a population outflow than providing additional properties in a region undergoing a population inflow. After all, in this case, it is not about potentially making a profit, but simply about preventing losses. In this situation, many investors will decide to wait and see. The result is that the markets react very slowly, prices are squeezed more tightly and for longer than they trend upwards in areas with inward migration.

There are empirical indications that this asymmetry generally exists in Germany. Maennig and Dust (2008) were able to show that, among other things, the prices of single-family homes in German towns in 2002 were particularly low in regions with shrinking populations. The relationship between price level and population growth was, however, not significant.

Figure 5 demonstrates this relationship for the price of newly built dwellings. Population change in the period from 2000 to 2010 is plotted on the x-axis and the

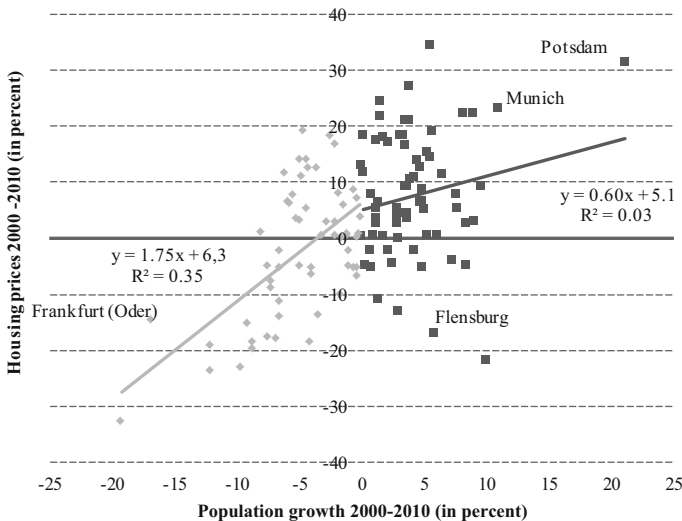


Fig. 5 Asymmetric price reaction for German newly built housing. *Source:* bulwiengesa (2010), own calculations

price of newly built dwellings on the y-axis. The regression adjustment for regions with a positive population trend is extremely poor ($R^2 = 0.03$). On the left-hand side, where the cities with declining populations are plotted, the relationship is not only much stronger, but also more statistically significant. This suggests that, also in the future, demographically-driven price risks in the outward migration regions will be greater than the opportunities in inward-migration regions.

3 Demand for Commercial Real Estate

A great deal more research has been conducted on demographic impacts on residential markets than on commercial property markets. This does not, however, mean that the demographic trends cannot weigh on the demand for commercial space. Because the size of the workforce, that is, the number of people aged 16–65, declines sooner and faster in an ageing society than the overall population, the upheavals in commercial real estate could turn out to be even more severe than in residential property.

The working-age population in Germany is projected to decline by at least 23 %, according to the current baseline scenarios, and even the 30 % decline shown in Fig. 6 assumes net inward migration of 100,000 people per year.

3.1 Office Property

Assuming no change in any other labor market parameter, the demand for office space would fall by exactly the amount in Fig. 6 until 2060. There is, however, a lot to suggest that the jobless total could shrink further, that the participation rates of

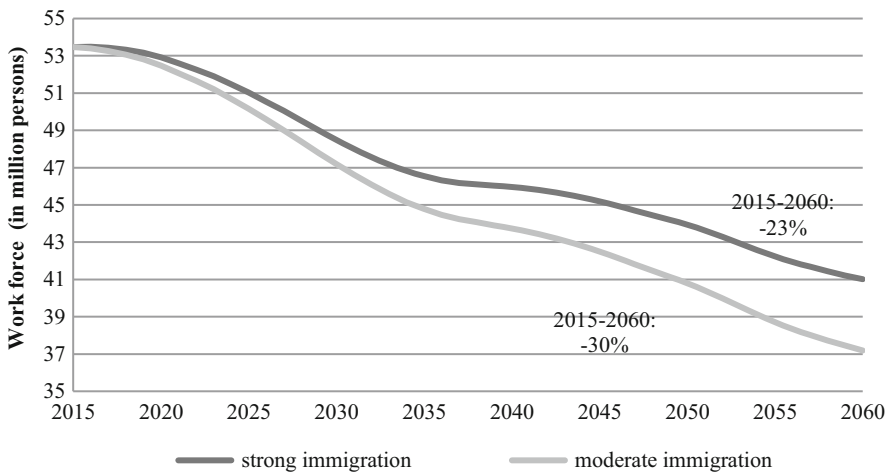


Fig. 6 Working age population (15–65 years) in Germany. *Source:* Destatis (2015a)

working-age women and the elderly could be raised or that the share of people working in offices will continue to rise in future, as it has over the last few decades. A large share of the demographic burden on the office markets would then be lifted for at least several decades. If, for example, the unemployment rate were to drop successively to 4 % and the participation rate of the working-age population were to rise by 7 % points by 2030, the demand for office space could then increase by nearly 10 % in the scenario with higher immigration by 2020 (compared with the base year 2005). If the structural change towards more office work also continues until the middle of the century (increase in office employment ratio by 7 % points), an increase in demand of 16 % by 2025 would even be realistic.

However, real estate consultancies often point out that office space per employee is comparatively generous in Germany. International competition is more likely to lead office users to use their office space more efficiently, that is, more sparingly than in the past. A significant share of the positive demand stimuli could then be absorbed. Moreover, achieving full employment, boosting labor participation and increasing the office employment ratio are by no means guaranteed.

Table 3 summarizes potential scenarios for the office markets (for a detailed description, see Just 2013). The particularly striking aspect is the wide range of projections. Investors then should demand a higher (demographically related) risk premium on their office investments than on residential investments.

Table 3 Scenarios for German office market demand

		Demand for space	
		Change, 2020 vs. 2010	Change, 2050 vs. 2010
Scenario: pure demographic effect	Moderate immig.	-3 %	-34 %
	Stronger immig.	-2%	-26 %
+ Successful labor market policies	Moderate immig.	+1 %	-30 %
	Stronger immig.	+2%	-19%
+ Continuous shift towards office jobs	Moderate immig.	+6 %	-7%
	Stronger immig.	+7 %	+3 %
+ Increased office space efficiency	Moderate immig.	+2.5 %	-24 %
	Stronger immig.	+3%	-15%

Source: Just (2013)

3.2 Retail Property

The German retail property sector could be hit by a triple whammy of demographic change. Firstly, the decline in the size of the working-age population also reduces the growth rate trend. Disposable income would thus grow more slowly than in the past, and this would severely limit growth in the retail sector. Secondly, the shopping basket of an ageing population has different contents to those of a young population. Proportionately, expenditure on accommodation and health is likely to rise, while spending on travel might fall (Buslei et al. 2007). Overall, retail sales, as a share of total consumption expenditure, are likely to continue declining (somewhat). This trend, however, is only due in small part to societal ageing, the more important factors being saturation tendencies for several typical retail goods. The increased importance of online retailing is presently intensifying the pressure on bricks-and-mortar retailers.

Thirdly, as the population ages, perceptions of what constitutes an ideal retail property will probably change. Proximity to the customer will become more important on account of possible physical limitations and the stores themselves will have to take these limitations into account more often. This may be reflected in wider aisles or an adapted product mix, for example. And finally, service will become (even) more important.

Figure 7 illustrates the elements of a demography-proof retail property. Of course, not every property has to possess all these attributes. In future, more properties will react more often to the specific requirements of an ageing society at these strategic levels. In many cases, these concepts can be addressed more easily in shopping centers.

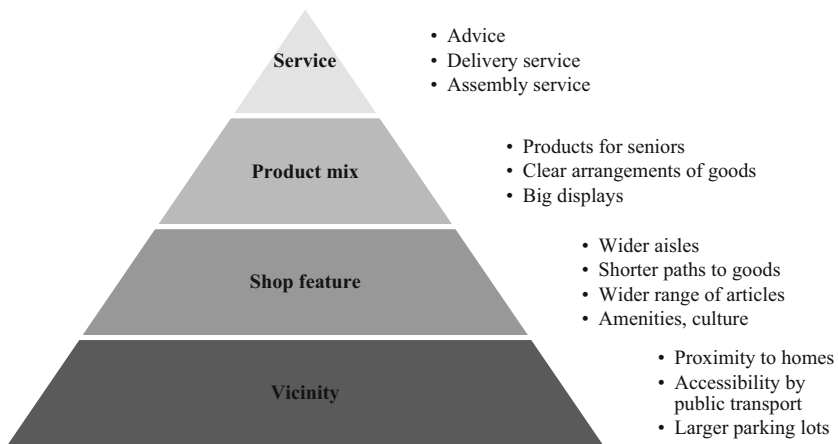


Fig. 7 Retail property: adaptation to an ageing society. *Source:* Own illustration based on Seidel (2007)

4 Concluding Remarks

The population size in Germany declined between 2003 and 2010, and current projections indicate that a further decline is very likely, not in the very near future, but over the next few decades. At the same time, the share of elderly people has been rising. Given the persistently low birth rate in Germany and the increase in life expectancy, these trends will certainly also continue in the coming decades. There is much less uncertainty surrounding societal ageing than the total population, as immigration trends can at least partly be managed with the appropriate policies.

This differing assessment of the probabilities of the various trends also has strategic implications for property investors. Risk-averse investors should in particular focus on those real estate formats that bank on societal ageing. These include, for example, living formats designed for the elderly, as well as long-term care facilities. According to current forecasts, the demand for long-term care places alone could balloon from around 700,000 at present to between 1.3 and 3.0 million by the year 2050 (Just 2013). For opportunistic investors, however, precisely those properties offer opportunities which core investors avoid, because of the unfavorable demographic outlook for the catchment area. In many regions with net outward migration, initial yields have come under considerable pressure since the mid-1990s. Since about 5 years ago, however, they have settled at a much higher level in many eastern German markets. Evidently, a risk reassessment took place there and a new equilibrium was found. Ultimately, demographic trends for real estate investments constitute an additional risk factor that can be priced in, using a commensurate risk premium. For all real estate formats, it is also the case that a large proportion of the demographic risk in real estate markets can be reduced by slowing down the increase in supply, since the demand for replacement investment will also rise in Germany over time.

Having said that, investors must be aware of the significant forecast risk inherent to all long-term projections. Investors must be able to adjust their strategies, when demographic outlooks change. What is more, some of the projections appear so simplistic that severe competition in these “no-brainers” is very likely. Accordingly, investing in a growth sector like nursing care does not guarantee a satisfactory return, but is a good reason to analyze the specific market, the specific property and the specific players (Just and Uttich 2015).

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Germany's Regional Structure

Tobias Just and Philipp Schäfer

Abstract

Many foreign investors start looking at Germany from a macro perspective. However, Germany is not a monolithic real estate market, but consists of very different regions. Some of these differences can easily be tracked back to historical events and phases such as the division of Germany after World War II. In this chapter, the reader will learn more about the economic and social differences characterizing the German regions. Data is presented on current key economic indicators and on the development of some key indicators in the more recent past. The chapter highlights important potential drivers of future developments.

Keywords

Economic power and growth • Regional inequalities • Convergence

1 Introduction: A Brief History of the Past 70 Years

In the last century, Germany faced several major disruptions. The two world wars were a human catastrophe for millions of people. The wars changed the political, economic and geopolitical landscape not only in Germany, but in all Europe.

After the Second World War and before reunification, Germany was divided into two separate states for 41 years, the Federal Republic of Germany (FRG) in the west and the German Democratic Republic (GDR) in the east. The FRG had 11 states, as of its founding in 1949, and nine after 1952. From 1957, when the French-occupied “Saarland” voted for its return to Germany, the FRG consisted of ten states

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(Schleswig Holstein, Hamburg, Bremen, Lower Saxony, North Rhine-Westphalia, Hesse, Rhineland Palatinate, Saarland, Baden-Württemberg and Bavaria), which are now called the old states (*Alte Bundesländer*).¹ The GDR originally consisted of five states (Brandenburg, Mecklenburg Western Pomerania, Saxony, Saxony-Anhalt and Thuringia). In 1952, the states were abolished and the GDR was divided into 14 administrative districts called “Bezirke” instead.² Just prior to the German reunification on 3 October 1990, East German *Länder* were reconstituted into roughly their earlier configuration as five new states (*Neue Bundesländer*). The former district of East Berlin joined West Berlin to form the new state of Berlin (Recker 2009). Henceforth, the ten “old states” plus five “new states”, plus the new state of Berlin added up to the following current 16 states of Germany (Fig. 1).

Each of these 16 states has its own constitution and is largely autonomous with regard to its internal organization (*federalism*). Because of differences in size and population, the subdivisions of these states vary, especially between city states (*Stadtstaaten*) and states with larger territories (*Flächenländer*). For regional administrative purposes, the five states of Baden-Württemberg, Bavaria, Hesse, North Rhine-Westphalia and Saxony consist of a total of 19 Government Districts (*Regierungsbezirke*). Moreover, as of 2013, Germany has been divided into 402 districts (*Kreise*) at a municipal level (Fig. 1). These consist of 295 rural districts (*Landkreise*) and 107 urban districts (*Kreisfreie Städte*). Municipalities are the smallest independent territorial authorities of the administrative division. According to Art. 28 (2) of the German Constitution (*Grundgesetz*), the municipalities govern all local community affairs autonomously and have the right of self-government.

Germany has a polycentral city structure with 2060 cities. About 80 of these cities have more than 100,000 inhabitants, 13 more than 500,000 inhabitants and four more than 1,000,000 inhabitants (Berlin, Hamburg, Munich and Cologne). Real estate professionals often speak of the Big-7, i.e. Berlin, Hamburg, Munich, Frankfurt (Main), Dusseldorf, Stuttgart, Cologne. Sometimes, Cologne is not included and professionals then speak of the Big-6. These Big-7-cities are the most liquid and transparent real estate markets in Germany.

The remainder of this chapter presents data on economic and social differences between the German regions [provided on district-level (NUTS-3)].

¹ West Berlin was under the sovereignty of the Western Allies and was neither a Western German state nor part of one. However, it was in many ways de facto integrated into West Germany under a special status.

² Soviet-controlled East Berlin, despite officially having the same status as West Berlin, was declared the GDR’s capital and its 15th district.

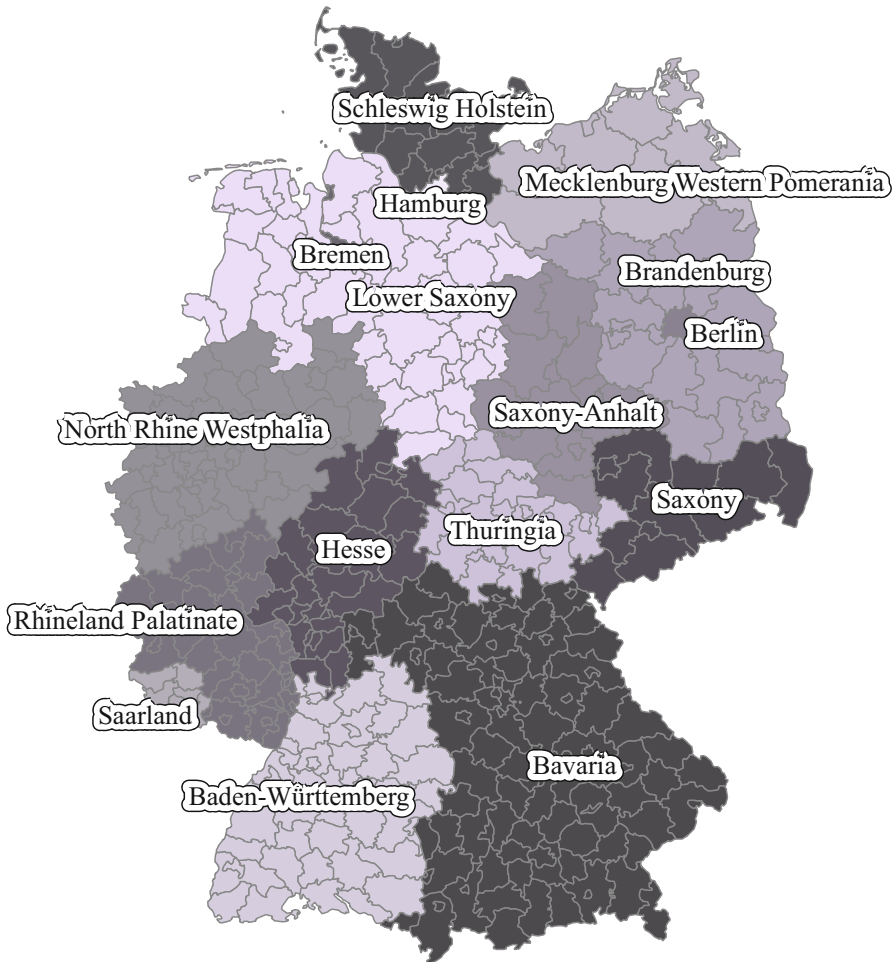


Fig. 1 16 federal states of Germany with a district structure (NUTS-3). *Source:* Own illustration. Cartographical basis: © Geo Basis-DE/BKD 2011

2 Economic Power in the German Districts

Germany is the fourth largest economy in the world and the largest within the Euro Area. The German economy has been growing faster (average economic growth at 1.3 % since 2010) than most countries of the Euro Area (average economic growth at 0.1 % in the Euro Area-19) (Eurostat 2015). This growth performance has been backed by a large, competitive and innovative manufacturing sector, a robust labor market and the country's status as a "safe haven". This safe haven argument is

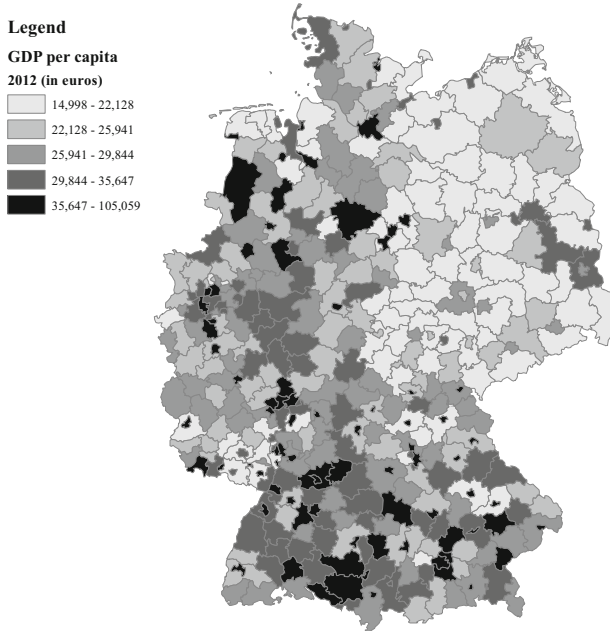


Fig. 2 District level GDP per capita (nominal) in 2012. *Source:* Federal Statistical Office and the Statistical Offices of the Länder (2015a), own illustration. Cartographical basis: ©Geo Basis-DE/BKD 2011

supported by a comparatively favorable public financial situation, also triggering very low government bond yields. However, the overall positive economic situation masks significant regional differences within the German economy. To provide an initial idea of these differences, the following map shows the GDP levels per capita (nominal) in 2012³ among the German districts (Fig. 2).

2.1 Gross Domestic Product and Disposable Income

GDP is commonly used as an indicator of the economic health of a country, as well of a country's standard of living. In 2012, GDP per capita in Germany was at 30,767 euros, with cities (and their adjacent rural districts) frequently outperforming rural areas (Table 1). Thanks to the multi-billion-euro car producer Volkswagen, the relatively small city of Wolfsburg achieves the highest GDP with 105,059 euros GDP per capita before the urban districts Ingolstadt (101,016 euros), Schweinfurt (85,934 euros), Frankfurt (78,877 euros) and Regensburg (73,764 euros). The reasons

³ More recent data on district-level was not available at the time of publication.

Table 1 GDP per capita of top/bottom urban and rural districts in 2012

		District	GDP per capita (in euros)
Urban (42,093 euros)	Top 5	Wolfsburg	105,059
		Ingolstadt	101,016
		Schweinfurt	85,934
		Frankfurt am Main	78,877
		Regensburg	73,764
	Bottom 5	Oberhausen	24,284
		Gera	22,327
		Herne	21,066
		Delmenhorst	20,763
		Bottrop	20,607
Rural (26,659 euros)	Top 5	Munich Rural District	85,673
		Dingolfing-Landau	53,545
		Main-Taunus-District	52,323
		Böblingen	45,956
		Hochtaunus-District	45,051
	Bottom 5	Märkisch-Oderland	16,433
		Gifhorn	16,378
		Rhine-Palatinate-District	16,115
		Kusel	15,711
		South-West-Palatinate	14,998
Germany			30,767
West Germany			32,635
East Germany (Berlin included)			22,882

Source: Federal Statistical Office and the Statistical Offices of the Länder (2015a), own illustration

for Wolfsburg's exceptional position are that the city has the same number of jobs as inhabitants (about 120,000), and about 74,000 people commute daily to the city.

Of course, small cities with a few big corporations can achieve an even higher GDP per capita than the major conurbations of Munich, Berlin or Cologne. The rural districts Märkisch-Oderland, Gifhorn, Rhine-Palatinate-District, Kusel and South-West-Palatinate clearly perform worse than the last-placed urban districts of Oberhausen, Gera, Herne, Delmenhorst and Bottrop. By and large, even 25 years after unification, the districts in the old states clearly outperform those of the new states. GDP per capita in West Germany averages almost 50 % more than GDP per capita in East Germany.

Disposable income is an indicator of economic strength. This indicator measures buying power rather than output, and thus takes into account redistributive measures by the different governmental layers. Due to these redistributive measures, the regional differences are smaller than with regard to the GDP-values. In 2012, disposable income per capita in Germany was at 22,544 euros. Among the German districts (Table 2), the city of Heilbronn has the highest disposable income with 39,524 euros before the rural districts Starnberg (33,337

Table 2 Disposable income per capita of top/bottom urban and rural districts in 2012

		District	Disposable income per capita (in euros)
Urban (20,002 euros)	Top 5	Heilbronn	39,524
		Baden-Baden	26,718
		Munich	25,955
		Memmingen	24,436
		Coburg	23,822
	Bottom 5	Frankfurt (Oder)	16,482
		Rostock	16,352
		Halle (Saale)	16,349
		Gelsenkirchen	16,309
		Weimar	15,782
Rural (20,685 euros)	Top 5	Starnberg	33,337
		Munich Rural District	29,394
		Erlangen-Höchstadt	28,098
		Hochtaunus-District	27,885
		Miesbach	26,997
	Bottom 5	Stendal	16,782
		Nordhausen	16,535
		Kyffhäuser-District	16,447
		Uckermark	16,224
		Vorpommern-Greifswald	16,173
Germany			22,544
West Germany			21,190
East Germany (Berlin included)			17,601

Source: Federal Statistical Office and the Statistical Offices of the Länder (2015a), own illustration

euros), Munich (29,394 euros), Erlangen-Höchstadt (28,098 euros), Hochtaunus-District (27,885 euros) and Miesbach (26,997 euros). Again, West Germany (21,190 euros) clearly outperforms East Germany (17,601 euros).

2.2 Labor Markets

Germany has currently one of the lowest unemployment rates in the EU. In addition, the German unemployment rate has fallen to its lowest level for 20 years. In 2014, the unemployment rate averaged at 6.7 %, according to the Federal Employment Agency (Bundesagentur für Arbeit 2015). Despite the overall positive situation, there are large regional differences between the lowest and the highest unemployment rates in the German job market. The absolute difference in 2014 was at 14.0 % points (Eichstätt 1.4 % and Uckermark 15.4 %). Noticeably, not only districts in the new states (e.g. Mansfeld-Südharz or Uckermark), but also

Table 3 Unemployment rate of top/bottom urban and rural districts in 2014

		District	Unemployment rate (in %)
Urban (8.3 %)	Top 5	Ingolstadt	3.6
		Memmingen	3.9
		Erlangen	4.1
		Schwabach	4.2
		Regensburg	4.4
	Bottom 5	Duisburg	13.1
		Frankfurt (Oder)	13.1
		Herne	13.4
		Bremerhaven	14.7
		Gelsenkirchen	14.7
Rural (5.6 %)	Top 5	Eichstätt	1.4
		Donau-Ries	2.1
		Pfaffenhofen a.d. Ilm	2.1
		Erding	2.1
		Neumarkt i.d. Opf.	2.2
	Bottom 5	Stendal	12.9
		Mecklenburgische Seenplatte	13.2
		Vorpommern-Greifswald	13.6
		Mansfeld-Südharz	13.8
		Uckermark	15.4
Germany			6.3
West Germany			5.5
East Germany (Berlin included)			9.4

Source: Federal Statistical Office and the Statistical Offices of the Länder (2015a), own illustration

districts in the old states (e.g. Bremerhaven or Gelsenkirchen) have high rates of unemployment. Nonetheless, Table 3 shows that by and large, an east–west-divide still exists (West Germany 5.6 % and East Germany 9.4 %). Furthermore, labor market data also reveals a north–south–divide. Almost all districts in the south (especially in Baden–Württemberg and Bavaria) have very low unemployment rates. Noticeably, the five Bavarian urban districts Ingolstadt (3.6 %), Memmingen (3.9 %), Erlangen (4.1 %), Schwabach (4.2 %) and Regensburg (4.4 %) have the lowest unemployment rates among all urban districts in Germany, suggesting very strong labor demand. On average, the rural districts (5.6 %) have lower unemployment rates than the urban ones (8.3 %). The lowest unemployment rates can be found in rural areas within the economically strong conurbations in the south.

2.3 The Infrastructure Divide

Infrastructure is the backbone of any economy. An efficient transportation infrastructure enables the division of labor. An educational infrastructure enables future

growth through the accumulation of human capital and modern health facilities safeguard an economically and socially active life.

Germany has a very dense highway network, with about 13,000 km and a very good railway network with about 35,000 km of track. In addition, Germany has about 550 airports and air bases from which 16 airports offer international flights. There is also a well-established network of domestic waterways with about 7000 km and important international ports.

Generally, people move to economically strong regions where they can earn well, which in turn both requires and enables a well-organized infrastructure. Especially the larger German cities offer well-organized local transportation services with various alternatives such as public busses, streetcars, suburban trains and subways. In other words, highly populated regions usually have a well-established infrastructure. The following map shows the population density at district level in Germany in 2013 (Fig. 3).

Besides the good transportation infrastructure, the communication infrastructure has become a key locational factor. The performance of the communication infrastructure is important for the overall performance and development of an economy. Thus, broadband internet has become an important means for regions to remain competitive. Empirical studies suggest that there is a close correlation between the

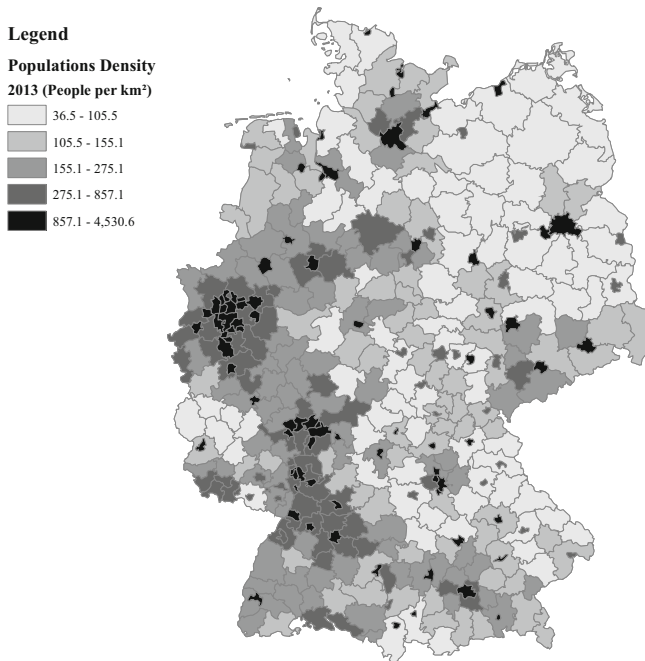


Fig. 3 Population density in Germany in 2013. *Source:* Federal Statistical Office and the Statistical Offices of the Länder (2015a), own illustration. Cartographical basis: ©Geo Basis-DE/BKD 2011

quality of broadband internet and economic growth (Katz et al. 2010; Czernich et al. 2011; Rohman and Bohlin 2012 etc.). Germany has a comprehensive data transfer rate of 1 Mbit/s. However, regarding broadband internet with more than 50 Mbit/s, there are significant gaps in Germany. According to a study from *Deutsche Bank Research*, there are significant differences between the western and the eastern federal states, as well as between the urban and the rural areas. Especially the rural areas have problems with broadband internet expansion, due to a lack of funding. On average, no more than 14 % of all rural areas have access to broadband connections with a minimal speed of 50 Mbit/s. This contrasts with 80 % of all urban households which have highspeed internet of 50 Mbit/s. Moreover, on average, 39 % of households in the old states have broadband connections with a minimum speed of 50 Mbit/s, whereas the new states (excluding Berlin) achieve 29 % on average. This digital divide may exacerbate regional economic discrepancies. International comparisons are also critical; Germany has only about 1 % fiber optic cable connections, measured on all broadband internet connections. This is way behind the average value for the OECD countries (16 %) and even further behind Japan (70 %).

3 Economic Growth Since the Turn of the Millennium

If a good infrastructure is the basis for economic growth and the strong regions can finance such an infrastructure and attract young and well educated employees, this might entail the risk of economic differences becoming even greater. Still, it can be argued that, according to the level effect, low-income districts might catch up over time. This section will analyze which of these two different possible dynamics has been dominating in Germany in the recent past. In order to better understand the long-term growth potential, data on education and innovation, as well as recent tax and public expenditures data for the period after year 2000, is analyzed. The following map shows the average growth of GDP per capita (nominal) from 2000 to 2012 for the German districts (Fig. 4).

Contrary to economic power (Sect. 2), there is no gap between the eastern and the western regions with regard to GDP growth. In fact, the eastern districts have slightly higher growth rates on average (per capita).

3.1 Regional Economic Growth and Labor Markets

From 2000 to 2014, GDP per capita (37.5 %) as well as disposable income per capita (32.7 %) increased significantly, and the unemployment rate increased until 2005 before it dropped to 6.7 % in 2014. In total the unemployment rate fell by 2.9 % points during this period (Fig. 5).

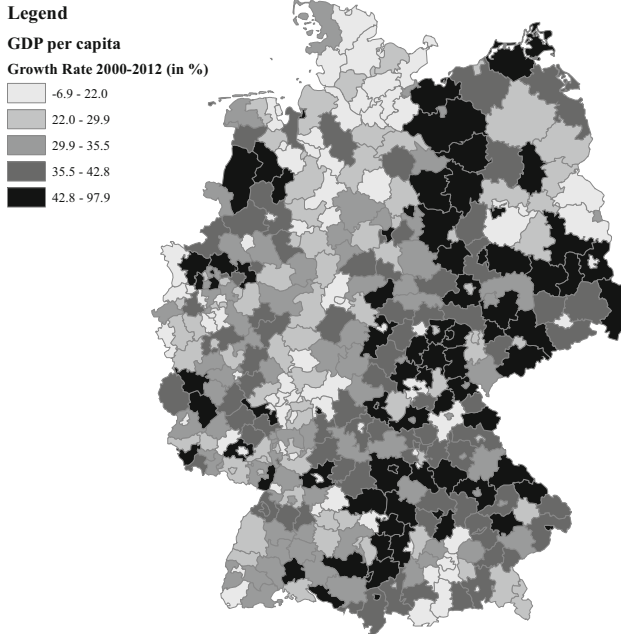


Fig. 4 Growth rate of GDP per capita (nominal) 2000–2012. *Source:* Federal Statistical Office and the Statistical Offices of the Länder (2015a), own illustration based on own calculations. Cartographical basis: ©Geo Basis-DE/BKD 2011

By comparing **GDP growth per capita** between 2000 and 2012 at the district level, it is evident that the districts in the new states⁴ (40.8 %) increased more on average than those in the old states (31.6 %) and that the rural areas (35.6 %) increased more than the urban ones (27.7 %). This suggests that the regions with lower base levels increased more than regions with higher base levels, which confirms the existence of a level effect. Moreover, it is worth noting that the four largest cities of Berlin (24.0 %), Hamburg (17.6 %), Cologne (15.6 %) and Munich (14.0 %) rather surprisingly, achieved lower growth rates over the past few years than the average German city.

For **disposable income per capita**, the picture is slightly different. Between 2000 and 2012, the districts in the new states (31.4 %) increased on average nearly as fast as those in the old states (31.3 %). This might imply that there is no level effect. By contrast, the rural areas (33.4 %) outperformed the urban ones (25.6 %), which suggests that there are indeed level effects. Consequently, three of the four largest cities, namely Cologne (22.4 %), Munich (20.1 %) and Berlin (18.9 %) also achieved lower growth rates than the average German city over last few years. Only Hamburg (28.8 %) performed better than to the average.

⁴ Here and in the following analysis, Berlin is allocated to East Germany.

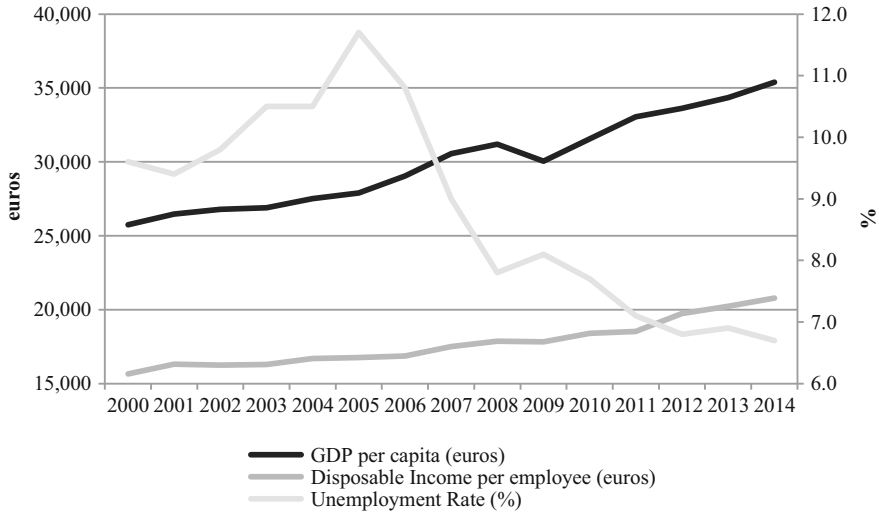


Fig. 5 Economic growth in Germany. *Source:* Federal Statistical Office and the Statistical Offices of the Länder (2015b), own illustration

Between 2001 and 2014, the **unemployment rates** in the districts in the new states (-6.0 % points) decreased more than those in the old states (-1.5 % points). In rural areas, the unemployment decreased slightly more (-2.7 % points) than in the urban districts (-1.8 % points). These findings are also evident when comparing unemployment rates between the four largest cities. While Berlin (-5.0 % points) could reduce unemployment distinctly, the western cities of Cologne (-0.8 % points) and Hamburg (-0.6 % points) could only marginally improve their job-market, and the situation in Munich (0.7 % points) even became slightly worse than before (however, from a very low level in Munich).

In summary, regarding the dynamics of these three key figures in recent years, the districts with lower base levels around the turn of the millennium generally developed more in the last few years than the districts with higher base levels. Consequently, the new states have caught up with the old ones and the rural areas have caught up with the urban areas. However, at least part of this convergence process was simply financed by significant regional transfers from the rich to the poor states and regions (*Länderfinanzausgleich*). There are also a few prominent examples with improved job-markets in East Germany, and also cities with deteriorating job-markets in West Germany. The same holds for urban and rural districts.

3.2 Education and Innovation

Innovation is a key factor for growth and employment, and in order to innovate, knowledge and analytical skills are important, that is, education matters. All in all, Germany has a well-established educational system. It is partly the responsibility of the federal states, but is coordinated by national conferences of the ministers of education. Many indicators reveal that the education level in Germany is on the rise. The number of young people without a degree has been falling, the number of high-school graduates and the performance of German pupils in comparative tests like the PISA-test has been improving. Most Germans achieve a secondary level II qualification and many complete a vocational training. Moreover, according to the last OECD educational report from 2014, the level of educational expenditure increased in 2012, even though its share of GDP decreased slightly. However, despite improving key performance indicators, Germany has not caught up to other developed countries with regard to the number of tertiary graduates (OECD 2014). There are also large differences within Germany. As measured by the development of the number of graduates with higher educational levels from 2006 to 2013, the old states have been performing better than the new ones and the urban districts significantly better than the rural ones in the last few years (Fig. 6).

The innovation capacity of small and medium-sized companies is the basis of German prosperity. By international standards, Germany boasts an excellent position in the fields of science, research and development. German companies are leaders in developing innovative products, and “Made in Germany” is still regarded as a seal of quality throughout the world. As measured by the development of company foundations per 1000 inhabitants in 2001–2013, the level of innovation reveals a similar picture. The western regions, as well as the urban districts, have evolved better than the regions in the east and the rural districts (Fig. 6). However, company formations are not necessarily innovative. Innovative formations are presumably found where both the number of graduates with higher educational levels and the numbers of company formations are high. By comparing both numbers, the picture still looks similar. Even in this context, the old states outperform the new ones and particularly urban districts yield higher values than rural districts.

3.3 Taxes and Public Expenditures

Public expenditures at all levels are primarily financed via taxes and fees. Commercial tax⁵ is the most important source of income for the municipalities in

⁵The amount of payable *commercial tax* (*Gewerbesteuer*) is based on the *trade tax assessment base* (*Steuermessbetrag*) and on the individual *commercial tax rate* (*Hebesatz*) of each community. The trade tax assessment base is determined by multiplying the corrected *trade earning* (*Gewerbeertrag*) of the respective business enterprise with the *basic federal rate* (*Steuermesszahl*) of 3.5%. The resulting amount is multiplied by the commercial tax rate of the community and results in the amount of payable commercial tax.

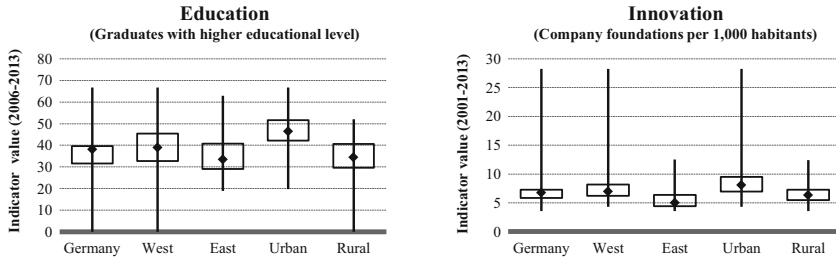


Fig. 6 Spread of the development of education and innovation. *Explanation:* The quadrangles mark the interval in which 50 % of the graduates and of the company foundations respectively are located. The dots in the middle indicate the respective mean. *Hint:* Berlin is allocated to East Germany. *Source:* Destatis 2015, own calculations

Germany. In 2013, about 43.0 billion euros in commercial taxes were collected by the municipalities. This was an increase of 0.7 billion euros or 1.8 % compared to 2012. The level of the commercial tax rate is a reliable indicator of economic power and locational attractiveness. Low commercial tax rates are frequently found in small and peripheral municipalities or in communities with just a few large companies that stabilize the local economy. At the same time, high tax rates can be found in large municipalities with an efficient infrastructure. The commercial tax rate is a matter for each single community and varies from 200 % up to 530 % in Germany. From 1995 to 2013, the mean level of the commercial tax rate was 379 (indicator value) in Germany (Fig. 7). Urban areas showed clearly higher tax rates than the rural areas—and this holds for both east and west German regions.

Public expenditures aim particularly at satisfying the collective social needs of the people. Capital expenditures are one part of these public expenditures. The mean level of capital expenditure per capita was 339 (indicator value) from 1995 to 2009 in Germany (Fig. 7). In the western regions, the mean level of capital expenditure was only slightly higher than in the eastern parts, whereas the rural areas clearly outperformed the urban areas.

4 Convergence or Divergence in Germany?

Since economists concentrate on these regional diversities and their causes, the focus is always on the question of whether important economic indicators converge or diverge from each other in an economy, and the respective causes. Convergence implies, for example, that income or production levels across regions become more similar, i.e. growth rates of the laggards are higher than for the high-income regions until similar levels are reached. Divergence means that the rich regions become even richer than the poorer ones.

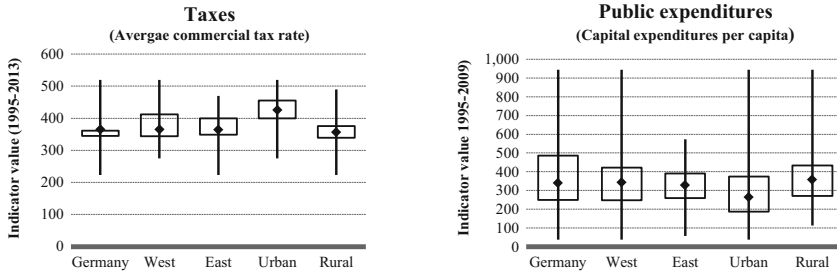


Fig. 7 Spread of the development of taxes and public expenditures. *Explanation:* The *quadrangles* mark the interval in which 50% of the tax rates and of the capital expenditures respectively are located. The *dots* in the *middle* indicate the respective mean. *Hint:* Berlin is allocated to East Germany. *Source:* Destatis 2015, own calculations

According to neoclassical growth theory, regions with low income levels grow faster than regions with high income levels. The previous sections have shown that there are some signs of convergence across German regions. The following scatter plots support these observations; there seems to be convergence both between western and eastern districts, and between urban and rural ones. Thus, the growth rate of GDP per capita (abscissa) is negatively correlated with the level of GDP per capita (ordinate) (Fig. 8).

Regions with lower GDP levels in 2000 grew faster than regions with lower GDP levels. This applies to nearly all regions of the new states as well as for the rural districts. Consequently, there are clear signs of economic convergence in Germany.⁶ Particularly the former East Germany made significant progress. This is also observable when comparing GDP growth rates at the federal state level (Fig. 9). However, part of this convergence is financed by the intranational fiscal transfer system.

Before the turn of the millennium, the five new states of Thuringia, Saxony-Anhalt, Saxony, Mecklenburg Western Pomerania and Brandenburg had high economic growth rates, due to their low base levels after reunification, and thus caught up significantly with the old states. Post-millennial growth rates have slowed down, but nevertheless, the five new states still had the highest growth rates after Bavaria, but with lower gains on the old states than before. In 2013, the levels of GDP across the federal states were similar. In this respect, Germany is no different to many other developed countries (OECD 2013).

⁶ Eckey and Schumacher (2002) and Eltges (2013) also confirmed these findings. They found that convergence was especially strong in the early 1990s after reunification, and it slowed down afterwards.

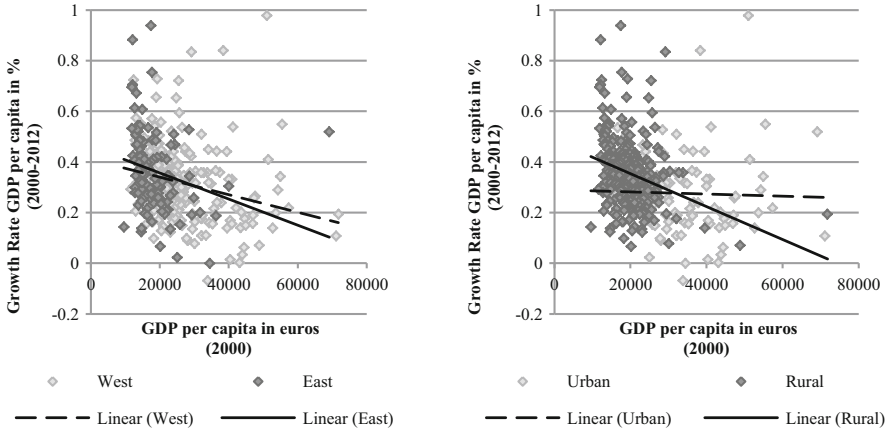


Fig. 8 Base level and growth rate of GDP per capita (2000–2012). *Hint:* Berlin is allocated to East Germany. *Source:* Federal Statistical Office and the Statistical Offices of the Länder (2015a), own calculations

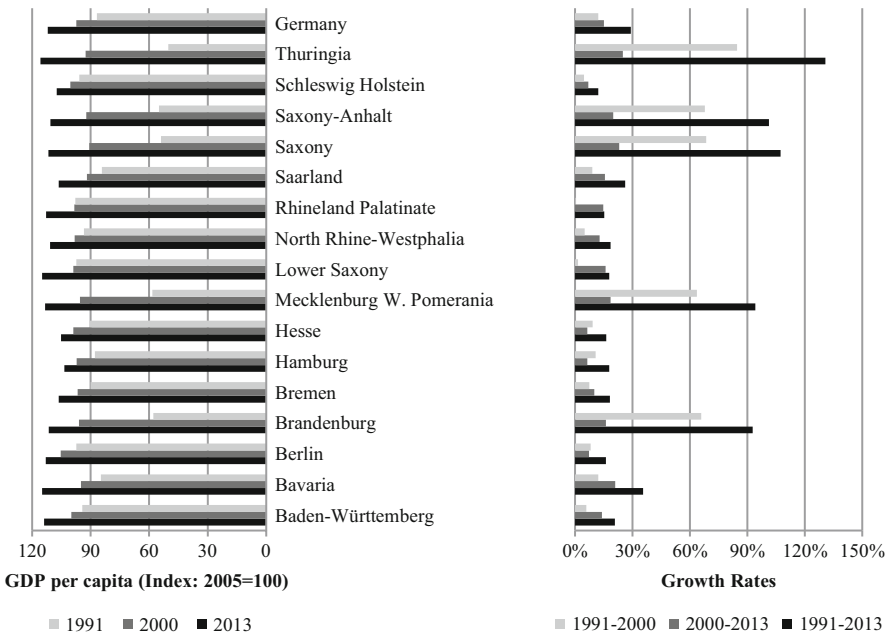


Fig. 9 GDP per capita development 1991–2013 on federal state level. *Source:* Federal Statistical Office and the Statistical Offices of the Länder (2015c), own illustration

5 Implications for Real Estate Professionals

What are the implications of all this for real estate professionals? First, the German real estate market is fragmented, more than in other European countries. An important part of the regional differences in Germany can be explained by the economic structures that shape the polycentral city structure of Germany. Only 5 % of the German population lives in the agglomeration area of Berlin, that is, roughly one third of the corresponding population shares of Greater London and Paris (Île de France). Similarly, the population share of the ten largest German cities is smaller than the ten respective shares of the largest cities of France or Great Britain. Second, this polycentric structure has a stabilizing effect on the real estate markets (housing, retail, logistics, hotel etc.), since demand is not concentrated on only one location, which reduces scarcity and consequently, the fluctuation potential of real estate prices and rents for Germany. However, this structure is detrimental for real estate market transparency and liquidity. The number of big ticket transactions is also negatively affected.

Hence, in international comparison, the German real estate market is considered very stable. This holds for both residential and commercial real estate markets, and helps to limit up- or downward excesses. Third and last, the most liquid and transparent real estate markets are the cities of Berlin, Hamburg, Munich, Frankfurt (Main), Düsseldorf, Stuttgart, Cologne (Big-7). Nevertheless, smaller cities can also have important and attractive real estate markets and distinct growth potential (e.g. Dresden, Ingolstadt or Regensburg). One reason for the importance of these large city real estate markets is the infrastructure advantage over the rural areas. Good transportation connections, an attractive labor market, natural and man-made amenities are important locational factors, and the basis for locational decisions of investors, developers and many more.

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The German City System

Guido Spars and Inès-Caroline Naismith

Abstract

The German city system with its essential structures, founded in the Middle Ages and further developed during the industrialization, features characteristics that are unique within Europe. Consisting of a polycentric network of cities ranging from 200,000 to 600,000 inhabitants that is supplemented by a concentration of small and medium-sized towns (<20,000 inhabitants) mainly in the West and Southwest, the German city system is interspersed with evenly distributed large cities that contribute to a functional polycentricity within Germany due to their differing economical specialization. Based on the assumption that in future cities can be regarded as privileged fields of innovation for knowledge and cultural production, the large and in particular the metropolitan areas like Berlin, Hamburg and Munich can be expected to show a considerable prospective growth owing to their highly diversified knowledge-economical functions. Furthermore, their functional competitiveness and their central position within Europe allow the German cities to be well prepared for the competition amongst European cities and regions.

Keywords

City system • Specialization • Metropolises

1 The Significance of City Systems

The exchange of goods and services across city boundaries was always at the core of the development of cities. Particularly trade and the spatial division of labor between the different settlements contributed to an increase in prosperity. Although

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the first city foundation in Germany had already occurred in the first century AD initiated by the Romans, the actual town foundation phase took place in the High Middle Ages from 1250 to approximately 1400 AD. The fragmented territorial structure of the Holy Roman Empire of German Nation during this phase was crucial for the multitude of foundations. Whilst wanting to protect their territory, the rulers also had a great interest in the expansion of handicraft and trade in their dominions. Some of the towns developed along the trade routes, others originated from the expansions of former rural settlements due to the settling of craftsmen and merchants, others again grew around the potentates' castles (Kostof 1992).

An increasing improvement of transport technologies for people, their material and later on also digital goods constantly enhanced the possibilities and also the frequency of the exchange between the cities. In this context an urban or city system can be understood as a number of cities within a certain region (of different spatial levels) in mutual entwinement (Knox and Marston 2001). The relations between the cities primarily include material and immaterial streams of goods, but also migration as well as organizational entwinements (Blotevogel 2002).

Urban systems can differ with regards to their level of hierarchy. This may include rural central places supplying the population of their respective hinterland or even larger regional centers with specialized trade, service and job market offers. The national capitals and metropolises of international acclaim equipped with distinctive control and service functions represent another variation (Sassen 2001). In addition to a purely hierarchical order a city systems can also be determined by the functional specialization of sectors. This refers to a complementary division of labor between cities within an urban system, e.g. city A is a commercial location, city B is an industrial site and city C is an administrative location (Blotevogel 2002).

In order to understand the German property markets and their mode of operation, this chapter will give an insight into the German city system, its previous genesis and the currently discussed ideas concerning its future development.

2 Theories and Models of the Urban Hierarchy

A great part of the literature being concerned with urban systems is dominated by models that are based on urban hierarchies related to size and power and the cities' mutual task sharing and division of work.

Thus, the first works of Auerbach (1913) and Zipf (1949) have posed the question of regularity in the size distribution of cities. An empirical regularity was discovered: the so-called Rank Size Rule. The core of this rule states that within a country there is a statistically significant correlation between the logarithmic number of a city's inhabitants and its rank in a list sorted by size. Just and Stephan (2009) could prove this correlation as well as the estimated coefficient as being stable within Germany in the period from 1700 to today. Furthermore the authors found strong indications for the Zipf law not only being valid on a national level, but also on the level of Federal states and partly even on a deeper (regional) structural level (Just and Stephan 2009: 18ff).

The main criticism with regards to the Rank Size Rule as an approach to understand the city system is seen however in the facts that:

- the importance of a city's location within the country is blanked out,
- the suburbanization processes hamper a statistical external demarcation of the cities (actual population),
- due to globalization and Europeanizing a national view of the cities reaches its limit anyway,
- the Rank Size Rule provides an observation but not an explanation.

Theoretical approaches were thus looked for that could also explain the division of labor between the cities and their size ratio. An important theoretical starting point was the Central Place Theory by Walter Christaller (1933) that was first developed for South German cities, but displays up to the present day relevance for the German regional planning policy.

Christaller identified the hierarchy in the offer of central goods as well as that of administrative control and service functions as a substantial reason for the hierarchical order of the German city system and thereby went beyond the thesis of pure size differences.

He correlated the centrality of goods and their corresponding range to the transport costs and the minimum sales volume. Thus, he illustrated how overlapping grids of goods of differing centrality ensure an optimum supply for the population (Christaller 1933). His theoretical Central-Place-Concept is characterized by the following principles:

- The larger the range of a good, the higher the centrality.
- Each central place offers the goods defining its own centrality as well as all the goods of a lower centrality.
- Each central place forms a closed functional system with the places and market areas of lower levels located in its market area.
- Allocations of one centrality level offer the same product structure; a specialization between the locations does not exist.

Central places—transferred from theory to practice—are a basic component of the urban settlement system in Germany. The system of regional and medium (or secondary) centers—being locally concentrated—aims to secure the supply for the population and economy with infrastructure services within the intertwined area of the central places. Also short and medium-term demand concerning the basic supply with jobs, public and private services should be covered in secondary centers, where as long-term demand should be met by the regional centers.

3 History of the German Urban System

As described, the basis of the German city system dates back to the town foundation phase in the twelfth and thirteenth century. A close city net had already developed at that time that lasted until the nineteenth century. New impetus from industrialization was not induced before the end of the nineteenth century. Large urban districts originated from the growth of the raw material-oriented industries at Ruhr, Rhine and Saar. The industrial boom supported a differentiated structure of the city system and led to an intensification of the inter-urban interweavement. The degree of the urbanization increased continuously, even in a clearly disproportionate way since the foundation of the Reich in 1871.

The decision to make Berlin the capital of the German Reich did not only lead to enormous population growth in Berlin in the 1920s, but also to a concentration of functions of all sorts. This trend was strengthened under the National Socialists, so that in the 1930s the imperial capital temporarily became the dominating primate city. This is also pointed out by Blotevogel's analysis of the German city system on the basis of the employment figures in the service sector at three different times (1939, 1970 and 1995) (Blotevogel 2002). In 1939 the dominant position of Berlin as the only metropolis in Germany was still noticeable, while the later years of the investigation show a diminishing relative importance.

Following the Second World War ten million refugees were looking for a new home within the Federal Republic. Immigration was not only limited to the severely damaged big cities, but most notably to the medium-sized and small towns that grew due the living conditions they offered.

The division of Berlin changed both the role and the importance of the city. With the establishment of the Federal Republic in 1949, the historically grown, decentralized city system was further strengthened by federal structures. Each of the created federal states was given its own state capital with administrative and governmental functions. As a compensation for the decision to declare Bonn as the new federal capital the Federal Government supported the big cities in Germany in their pursuit of functional specialization. Thus Hamburg could be established as the city of the print media, Frankfurt with the newly founded federal central bank as the financial center, Cologne as the insurance and/or later on media and art metropolis and Munich as the city accommodating the film industry. The pronounced functional division between the cities (regional city system) was further promoted by the instigation of differing educational policy. Since the 1960s further university cities were added to the traditional ones like Tübingen, Heidelberg or Marburg—e.g. Konstanz, Siegen or different university cities in the Ruhr district.

In the 1960s and 1970s changes regarding the spatial structures occurred that required regional planning policy measures. A distinct south–north gap developed, as the South German regions managed, due to their lesser environmental pollution and their higher innovation capacity, to economically outdistance the old-industrialized and peripheral regions (Blotevogel 2002). A second determining process was the suburbanization caused by the strong inner-regional population shift in the countryside surrounding the cities. The federal government's and the

federal state governments' reactions to this were manifold. On the federal level the regional planning law was enacted in 1965, the most important target being the guarantee of equivalent living conditions in all regions of the Federal Republic. As a result of the federal and regional planning programs different types of cities and city regions have developed up to date. Furthermore the conurbations as well as the peripheral regions—e.g. the German–German border area, the Emsland as well as the low mountain range regions—were strengthened by different supporting measures (e.g. the so-called joint tasks). This space-effective state activity was supplemented at the regional level by comprehensive local and district reforms. They were the answers to the increasing economic interdependencies within the urban regions.

A re-organization of the traditional administrative borders appeared more than necessary in the light of the daily commuter flows, the financial crisis of the central cities as opposed to the rising tax revenues of the surrounding communities as well as the high administrative costs caused by the multitude of small-sized area units. However, in North Rhine-Westphalia the number of independent municipalities was reduced from 2.300 (1970) to 396 (1978). Similarly, comprehensive regional reorganizations also seized the eastern federal states since 1990.

The urban system of the GDR with its historically founded division into two differently structured regions—the highly industrialized south and the north with only a few cities—was supported by the regional planning policy of the GDR.

Since the new construction activity concentrated primarily on the industrial core cities, the small and medium-sized towns particularly in the north were affected by a constant decrease in population. Unlike in West Germany, the surrounding countryside of the big cities was not affected by comprehensive suburbanization. Additionally East Berlin as the capital of East Germany maintained its position as primate city. Apart from overcoming the regional disparities within East Germany, reunification turned the coalescence of both city systems into an important desideratum of all-German regional planning. An essential pre-condition to this was the development of the infrastructure. Following the German–German division the city system underwent a substantial change. Mass migrations from the former eastern areas as well as the GDR (and/or the Soviet occupation zone) to West Germany took place. The decision for Berlin as the capital and future seat of an all-German government had far-reaching consequences not only for the German city system.

4 Today's Status

A comparison between the German city system and that of other industrialized countries reveals some specific characteristics. German cities play a substantial role within the European city system, even if they are not always distinguished by their size. Cities such as Berlin, Bremen, Dusseldorf, Frankfurt a. M., Hamburg, Cologne, Munich and Stuttgart are not players in the global premier league like London or Paris (Gloersen 2006; Volkmann 2012). Although Berlin has gained in political significance after the reunification, the German urban system is still

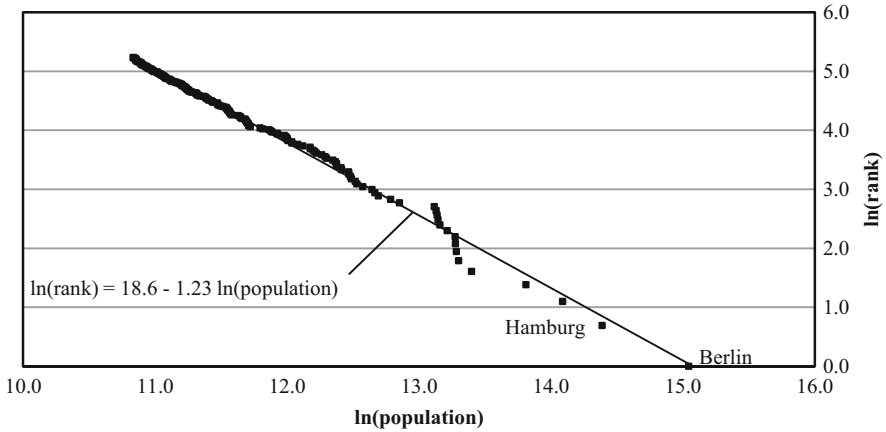


Fig. 1 Estimate of the Zipf-parameters for German cities 2008. *Source:* Just and Stephan (2009)

lacking a city that is at least twice as large as the next largest city (a so-called primate city)—a circumstance, which can be ascribed to both the German–German division and the federal structure of the Federal Republic, thus preventing a monopoly status of Berlin.

However cities with a size from 200,000 to 600,000 inhabitants are common in Germany, which leads to a slightly convex form of its rank size distribution curve (Fig. 1).

The German city net is closely meshed and in comparison with other European cities characterized by the relatively good accessibility both of the large and smaller cities. Only a few of the German cities are to be regarded as peripheral in an inner-European comparison.

While small and medium-sized towns (<20,000 inhabitants) are mainly concentrated in the west and southwest, the large cities show a relatively balanced spatial distribution. With Hamburg and Munich, the second and the third-biggest city are located at opposite ends in the north and the south of Germany, while Berlin and Cologne—the largest and the fourth-largest city are situated in the east and the west (Fig. 2).

The Rhine Ruhr, Rhine Main and Rhine Neckar agglomeration stand out as a polycentric conurbation; consisting of coalesced city regions. They contrast the metropolitan areas in the north and northeast with only few cities, as well as the southeast and the entire low mountain range of Germany. Today Germany ranks among the highly urbanized countries of the western world. According to the definition of the Federal Regional Planning Act, 54% of the population today live in agglomeration areas and a further 30% in so-called urbanized regions. The remaining 16% of the inhabitants are allotted to rural areas. However, only 35% of the population live in cities with more than 100,000 inhabitants (BBR 2005).

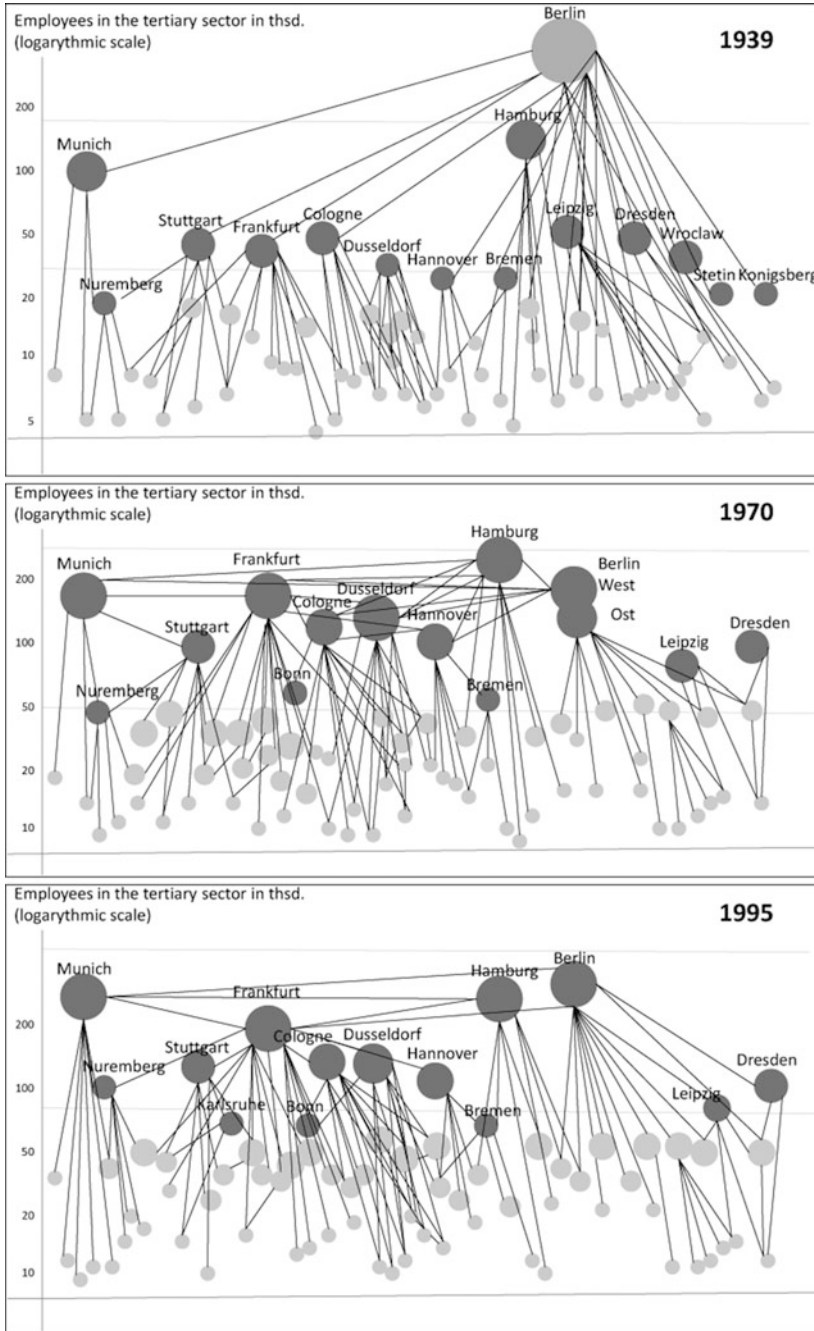


Fig. 2 Urban hierarchy in Germany in 1939, 1970 and 1995. *Source:* Blotevogel in: Nationalatlas BR Deutschland, Vol. 5, 2002

The decentralized urban settlement structure in Germany consists of 154 regional and 1086 centers, allowing nearly everyone (97 % of the population) to reach a regional center within 60 minutes by car, thus offering a high supply quality, even if not all the centers in the subregions have been equipped with comparable standards yet. Until today, the large number of small and middle cities often competing with each other is another typical characteristic of the German city landscape. The German regional planning policy is aimed at counteracting these concentration processes—the network of regional centers being an exemplary evidence of this policy. On the other hand, many of the smaller cities have preserved their medieval heritage and utilize it in the competition for tourists, for instance the South German cities Nordlingen or Rothenburg ob der Tauber, which rank among the most well-known tourist destinations.

4.1 The Functional Division of Labor in German Cities

From an economic perspective it is relevant to take a closer look at the different functional specializations of German cities. The polycentric structure of the German city system is also reflected in the significance of the economical centers. In a pan-European comparison the German cities rank among the first with regard to their functional division of labor, however without reaching the level of the global economic centers London and Paris. Comparing the branch profiles of the five largest cities on the basis of their quota of employees in the respective industries, distinct profile deviations and thus specializations are revealed. The following analysis is based on data of the Federal Statistical Office from 2013 concerning the employees subject to social insurance in Berlin, Hamburg and the independent cities Frankfurt am Main, Cologne and Munich.¹

A look at Hamburg's branch profile reveals a clear focus on trade, industry and transport and logistics with a share of 28.4 % of the overall employment, thus being 10 % higher than in Munich. This segment is also strongly pronounced in Frankfurt. However, Cologne has the strongest development within the range of the information and communication persons employed (8.2 %), followed by Munich (8 %), which mirrors the importance of the media economy in both cities (Table 1).

The by far highest value for the financial and insurance sector in Frankfurt (14.3 % of the employees) reflects the importance of this industry for the city. Furthermore Munich maintains a slight lead regarding the relative occupation (23.6 %) within the collective category scientific and technical as well as other services. The profile of Berlin is characterized by a high portion of public servants. The value of Berlin (28.6 %) is approximately 8–10 % higher than that of the other

¹ In excess of the employment rates of the land and housing sector being specified here, the values referring to the real estate sector being disclosed by Maennig (2016) within this anthology also cover the employees in the construction industry and in parts of the service segments, which can be assigned to the real estate economy.

Table 1 Comparison of the share of employees subject to social insurance in the branches of the five largest cities in Germany

City	Agriculture, forestry, fishery (%)	Construction industry (%)	Manufacturing (%)	Trade, tourism, transport (%)	Information and communication (%)	Finance and insurance services (%)	Land and housing sector (%)	Self empl., scient., techn. services etc. (%)	Public services (%)	Art, entertainm., domestic services etc. (%)
Hamburg	0.10	3.3	12.9	28.4	6.2	5.6	1.4	19.9	18.3	4.0
Cologne	0.04	3.1	12.9	22.9	8.2	8.1	1.0	19.9	20.0	3.9
Frankfurt	0.04	2.7	8.3	26.6	6.3	14.3	2.1	21.0	14.4	4.2
Munich	0.07	2.6	13.4	18.4	8.0	7.9	1.2	23.6	19.1	5.7
Berlin	0.03	4.5	10.3	22.0	5.3	2.8	2.1	18.1	28.6	6.1

Source: Destatis (2013), own representation

cities. Berlin also shows the highest value (6.1 %) regarding the sector art, entertainment and domestic services, followed by Munich with 5.7 %. With a value of 13.4 % the city of Munich is the leader with regards to occupation in the processing industry. The inclusion of the five next largest cities Bremen, Dusseldorf, Essen, Dortmund and Stuttgart in the comparison reveals similarities and differences in the cities' profiles.

With regards to the comparatively low shares of the land and housing sector it is worth noting that this official category must not be mistaken for the overall real estate sector. Real estate finance, construction and many commercial real estate services are counted in other subsegments. The overall real estate sector is significantly larger in all cities. For a detailed assessment of Germany's real estate sector see Maennig (2016) or Voigtländer and Demary (2009).

Similar to Hamburg, Bremen's profile shows a focus on trade, industry and traffic, closely followed by Dortmund with a slightly lower value (24.3 %). But Bremen also has the highest value in processing industry amongst the five second-largest cities. Dusseldorf—like Stuttgart—shows a high value for financial and insurance industry and it is leading in the second pentad of the cities with regards to business-related services. Furthermore Stuttgart has the highest value regarding information and communication industry as well as the art, entertainment and domestic service sector. Dortmund's and Essen's profiles shows—similar to Berlin's in the first pentad of the cities—an emphasis on public services. Both have also the highest values (approx. 5 %) for construction industry. In the case of Essen this surely results from the fact that the company headquarters of Hochtief are located in Essen. The ESPON 2006 program (European Observation Network for Territorial Development and Cohesion) of the European Union examined European cities with regard to their different functional importance with a focus on polycentrism working with a European-wide demarcation and characterization of functional urban areas, the so-called FUA's (Antikainen 2005; Gloersen 2006) (Table 2).

It became apparent that the different specializations of German cities contribute to a functional polycentrism, which represents a specific characteristic within Europe. Germany ranks among the leading countries with regard to the implementation of the economic dimension of the Lisbon strategy. While the economically strong regions in Germany are at the vanguard of Europe in terms of competitiveness and innovative ability, parts of North and East Germany, however, can often, at the best, be qualified as European average.

With regards to changes within the metropolity of the German city system Volgmann (2012) measured concentration and specialization processes of German cities between the investigation periods 1995–1997 and 2008–2010. Therefore a complex metropolis index with over 48 indicators was constructed and partial indices for eight subfunctions of the metropolity were measured. The evaluation of the data confirms that a process of spatial reorganization of the functional locations took place in the period between the reunification and the years 2008–2010. Regarding the data from Volgmann Berlin sets itself more and more apart from the other cities and positions itself clearly as the metropolitan spearhead, Munich follows behind by some distance, whilst Hamburg rises to third rank

Table 2 Comparison of the share of employees subject to social insurance in the branches of the five next largest cities in Germany

City	Agriculture, forestry, fishery (%)	Construction industry (%)	Manufacturing (%)	Trade, tourism, transport (%)	Information and communication (%)	Finance and insurance services (%)	Land and housing sector (%)	Self empl., scient., techn. services etc. (%)	Public services (%)	Art, entertainm., domestic services etc. (%)
Bremen	0.06	3.8	20.8	26.4	3.2	3.1	1.3	17.0	19.6	4.8
Dusseldorf	0.15	2.5	11.2	22.7	6.3	8.6	1.2	24.0	18.7	4.5
Essen	0.06	5.0	13.0	21.4	4.8	3.2	1.2	22.5	24.5	4.3
Stuttgart	0.10	3.3	16.5	16.0	6.5	8.1	0.8	22.1	20.8	5.9
Dortmund	0.06	4.7	14.4	24.3	4.0	5.2	0.8	17.2	24.8	4.4

Source: Destatis (2008), own representation

outpacing Frankfurt. An analysis of the entire space under observation reveals an interesting spatial pattern with an East–west-gradient: Whilst Hamburg, Munich, Berlin, Dresden and Nuremberg could strengthen their relative metropolitan position within the German city system, the large West German cities Cologne, Dusseldorf, Bonn, Hanover, Bremen, Frankfurt and Stuttgart had to face losses with regards to their metropolitan functions. It is further remarkable that large cities in mainly monocentric metropolitan areas gain in relative significance whereas the core cities in the polycentric areas Stuttgart, Frankfurt Rhine Main and Rhine Ruhr stagnate or even display losses. This can be defined as an intraregional deconcentration of metropolitan functions (Volgmann 2012: 174), as especially the towns and districts surrounding the core cities affected by losses show relative gains in their metropolitan functions (e.g. the districts Munich, Erding, Karlsruhe, Heilbronn, Rhine-Sieg, Dortmund, Leverkusen, Boeblingen and Esslingen), an exception is Munich which shows a growth of metropolitan functions in the city center as well as the surrounding rural districts.

5 Future Outlook for the German Urban System

A closer look at the prospective challenges for urban development in Germany reveals that the demographic development and the change within the economic structure will be even more crucial in future for the importance and development opportunities of the German cities.

In this context particularly the effects of globalization on new forms of organizing the spatial division of labor at the national, European and global level have been discussed for many years (Friedmann 1986; Sassen 2001; Taylor 2004).

Many German cities also regard intra-regional migration as a key to solving their problems, since in recent years these immigration cities were able to benefit to a greater extent than others from immigration.

The different immigration performance of the cities is closely related to the development of training and job opportunities. Notably the highly qualified work force is of particular interest for urban development and the local or regional economy, since it can be assumed that the significance of the knowledge economy as a driving force of future urban prosperity will continue to increase. Referring to this, cities can be regarded as a privileged field of innovation for knowledge and cultural production (Läpple 2004; Kujath and Zillmer 2010).

Agglomeration theories assume that it is not only the concentration of human capital in general (functional diversification) but especially also the concentration of specific knowledge workers that is vital for interaction processes and therefore for the attractiveness of urban centers or urban regions, thus allowing to attract more human capital for certain professions (Gertler 1995; Storper 1997). This also implies that the entrepreneurs will increasingly align their choice of location on the basis of the availability of qualified employees. This is yet another indicator for the importance of an urban and regional planning policy which takes into account the

Table 3 Average annual net rates of migration for large cities in Germany between 2000 and 2007 by different qualification

	Total	Highly qualified	Qualified	Low-skilled
Average district West	0.2	0.3	0.2	0.2
Munich	1.2	1.8	1.0	0.7
Hamburg	1.1	1.7	1.1	0.4
Cologne	0.4	0.3	0.5	0.1
Nuremberg	0.3	0.2	0.3	0.2
Bremen	0.2	1.1	0.1	0.3
Dusseldorf	0.2	0.4	0.2	0.1
Frankfurt/Main	0.2	-0.1	0.3	0.3
Stuttgart	0.1	-0.2	0.2	0.2
Essen	-0.2	-0.1	-0.2	-0.1
Dortmund	-0.4	-0.7	-0.3	-0.5
Average district East	-0.2	0.2	-0.3	-0.6
Berlin	0.0	0.5	-0.1	-0.2
Dresden	-0.3	0.4	-0.5	-1.7
Leipzig	-0.6	-0.6	-0.6	-1.4

Source: Buch et al. (2010)

main location factors of the knowledge economy such as quality of life, culture and leisure offers, image, well-differentiated housing markets (Faller et al. 2009).

An investigation by the IAB (Buch et al. 2010) proved that between 2000 and 2007 Munich and Hamburg, in particular, succeeded in attracting qualified and highly qualified workers, resulting in annual net rates of migration² of one per mill, thus leaving the other metropolises behind (see Table 3). The same applies for Bremen, at least concerning the group of qualified workers. Berlin, Dresden, Dusseldorf and Cologne at least show positive values of 0.3–0.5 per mill regarding highly qualified employees. Frankfurt, Stuttgart, Essen, Dortmund and Leipzig show negative values regarding the group of highly-qualified workers in the same period and thus display migration surpluses. In Leipzig and Dortmund these annual mean values even are as low as -0.6 and -0.7 per mill.

A more recent investigation of Buch et al. (2014) concerning the attractors of the highly-skilled in German cities concludes that the local job market conditions (relative level of wages and growth of employment) crucially affects the mobility of highly-skilled labor, but it also points out the importance of locational factors and leisure opportunities. This is further substantiated by the robust correlation between the migration rate of the highly skilled and the duration of sunshine, the available living space and the share of restaurant workers within a location. Illustration 3 shows the distribution of highly-skilled labor in the federal territory

²The net rate of migration in this case is calculated as follows: Net rate of migration = (immigrants-emigrants)/employees at the place of work × 1000.

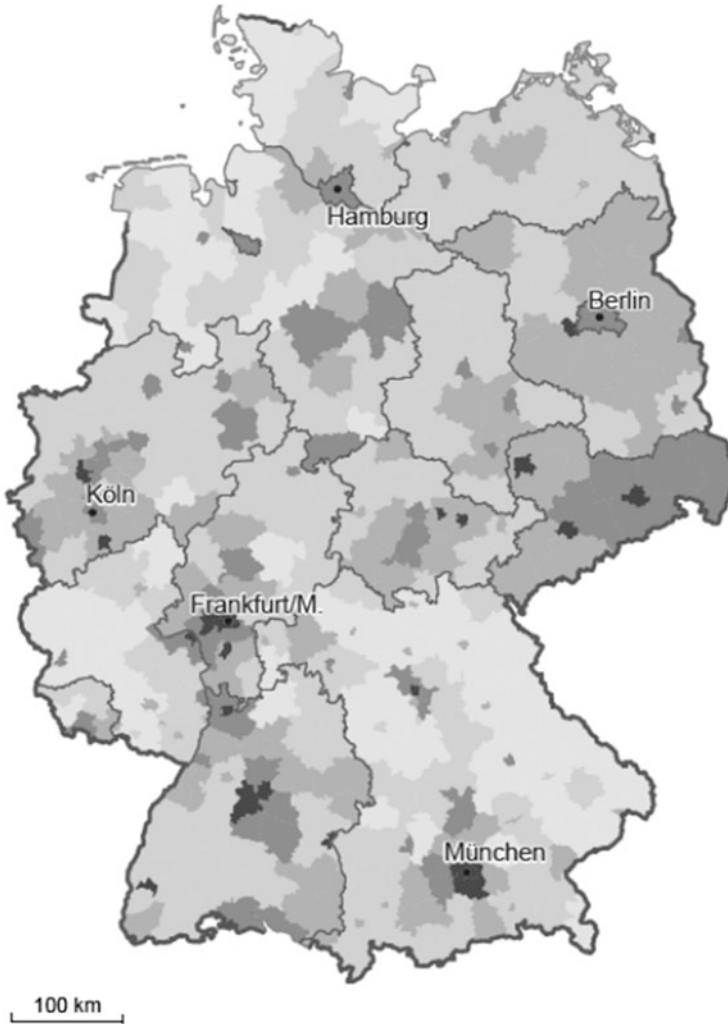


Fig. 3 Highly-skilled labor. *Source:* BBSR (Ed.) (2011)

measured by the share of graduates of the employees subject to social insurance contribution in the year 2009 (Fig. 3).

Acting on the assumption that knowledge economies and therefore the distribution of human capital are of great importance for the successful further development of cities (Park 2000; Krätke 2007), a closer empirical analysis of these interdependencies appears to be of scientific interest.

Adopting a European perspective, the examination of van Winden et al. (2007), which is based on a wide set of indicators (foundation and progress indicators),

identifies six European types of cities: “star”, “star nicheplayers”, “pearls”, “metropolises in transition”, “intellectuals” and “nicheplayers in transition”.

Kujath and Zillmer (2010) partially built on this typology. They adjusted the effects of the knowledge economies for the German urban system to the knowledge economies and the German city system, based on employment figures at different points in time (1998 and 2006) on NUTS 3 level.³ Finally, Growe (2010) studies the spatial concentration and specialization of human capital in the German urban system and shows that in Germany both an influence of an increasing labor division on the basis of an increasing functional specialization as well as the existence of functional balanced hubs⁴ due to urbanization externalities can be documented.

On the one hand Growe shows that the highest increase in spatial concentration occurred in the group of knowledge-based professions with an affinity towards cities. On the other hand, professions with no spatial affinity apparently enhance the spatial de-concentration. Consequently, areas of high density are of great significance for the major part of the knowledge-based professions. Professions tending to a more focused concentration within cities even show a further increased concentration. Five important functional hubs within the German urban system could be identified based on the data presented by Growe (2010). The most important hub (Munich) shows a balanced inner functional structure. The other four hubs are Frankfurt, Berlin, Hamburg, and Stuttgart. These hubs show complementary functional strengths and their functional specialization increases over time (Table 4).

Only Hamburg shows a decrease in specialization. This development might be caused by the distinctive increase of Berlin’s specialization during this period in the same functional areas. In consequence a further rise in the characteristic labor-division of the German urban system in favor of these agglomerations is to be expected.

Kujath and Zillmer (2010) specify the knowledge-based economy on the basis of the four functional areas information and medium industry, high technology

Table 4 Profiles of German cities in functional specialization

	Specialized functional surplus	Balanced functional surplus
High functional importance	Frankfurt, Berlin, Hamburg, Stuttgart	Munich
Small functional importance	Nuremberg, Rhine-Neckar	Rhine-Ruhr, Bremen, Leipzig-Dresden, Bielefeld-Hannover, Saar

Source: Growe (2010), The Rhine Ruhr agglomeration includes Cologne

³ The NUTS-regions are based on the existing national administrative subdivisions. In countries where there are only one or two regional subdivisions or where the size of the existing subdivisions is too small, a second and/or third level is created.

⁴ “The agglomerations with values above the arithmetic mean (cut-off value) are designated by the word ‘hub’” (Growe 2010: 13).

industry, transformation oriented service entrepreneurs and transaction-oriented service entrepreneurs and examine their distribution on the spatial levels of the city system. Kujath et al. regard the urban locations of the knowledge-based economy as system elements that result from the enterprises settled on the micro level and their respective spatial patterns. Their choice of location and their interaction patterns (e.g. communication and production processes) supply a crucial contribution to the positioning of the cities within a (national) city system.

To begin with, Kujath and Zillmer (2010: 153) state that between 1998 and 2006 the increases in employees within the knowledge-based economies above all occurred in regions with less than 100,000 inhabitants, in particular in South Germany and regions of Northern Germany—thus outside the large cities. However, mainly jobs in the high-tech sector were affected by this growth, jobs that do not exist exclusively in the larger cities. These findings show clearly that not only large agglomerations represent potential growth poles of the knowledge-based economies, but that even the small and middle cities have prospects for a positive development.

The authors assume that the distribution of the knowledge-based economy is following functional specifications. Thus not all cities participate in the same way (qualitative-functionally) and to the same extent (quantitative) in the changes of the economical structures and therefore take different positions within the knowledge-economic city system.

By using a cluster analysis the authors formed seven types of regions and arranged these in three groups, which differed with regard to the knowledge economy's importance for the region (low, average, above-average). A look at the types with above-average significance of the knowledge economy reveals "stable high-technology regions", "growing regions with transaction-oriented service entrepreneurs" and "the metropolitan areas" Berlin, Hamburg and Munich as a type of their own. Concerning the urban system it becomes apparent that

- a high diversity of the knowledge economy as well as high concentration values for the transaction-oriented service entrepreneurs and the information/media segment can only be found in large cities and their environs,
- the knowledge economies in small and middle cities outside the agglomerations develop predominantly on the basis of high technology and thus
- a size-dependant hierarchy of knowledge-economic functions with only few exceptions becomes visible in the knowledge-economically oriented cities.

A combination of the above-mentioned categories developed by van Winden et al. (2007) and the systematics of Kujath and Zillmer (2010) are shown in Fig. 4, giving examples for the different city categories and thus illustrating the interrelation between the importance of the knowledge economy for the city and the city typologies.

Assuming that the knowledge economies will in addition unfold an important influence on the development of the cities in the next decades, it can be expected that the large agglomerations and, in particular, the metropolitan areas (Berlin,

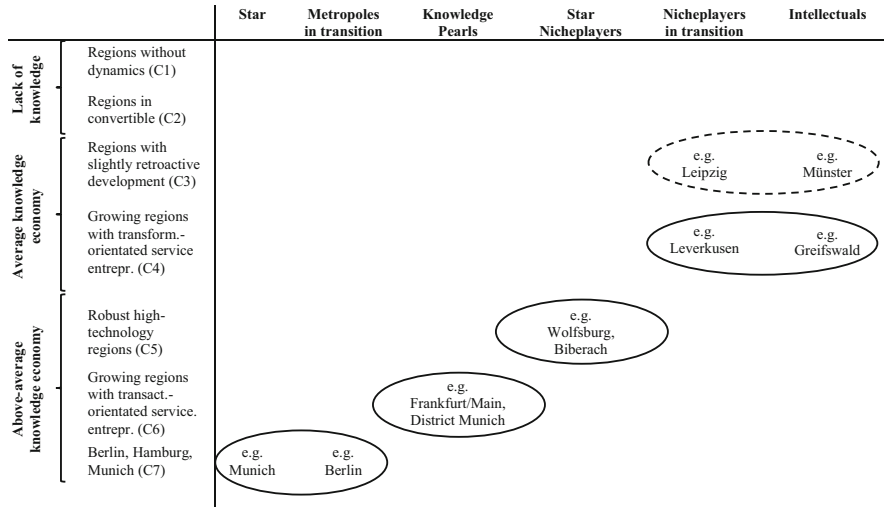


Fig. 4 Comparison of knowledge-economic city typologies. *Source:* Kujath and Zillmer (2010)

Hamburg, Munich) will keep growing considerably due to their high diversity with regards to the knowledge-economic functions.

Whether Munich will be able to utilize its growth potential due to its relatively well-balanced functional specialization depends on the one hand on the future importance of individual industries and segments for the economic development in general. On the other hand, many different aspects, e.g. aiming at location costs and-qualities (infrastructure, surface development, high rents and land prices etc.) or capacity factors also play an important role. It is difficult to assess how exactly these interacting factors will affect Munich’s economic performance in the next few years. It is equally challenging to forecast the development of the competing, partially not complementary, specialized and closely neighboring metropolises Berlin and Hamburg.

However, apart from the growth prospects of the large agglomerations it is also important to pay attention to the development potential of small and middle cities, in particular if—e.g. like in South Germany—they differentiate themselves as high technology locations.

A further important parameter for the future development of the German urban system is the direction of the spatial policy in Germany. The previous space-effective policy in Germany was—in simple terms—strongly aligned to the so-called “equalizing goal” and thus to spatial cohesion. This includes the pursuit of the principle of equivalent living conditions (e.g. art. 72 German Constitution, Regional Planning Act, ROG) as well as the political objectives of the joint task aiming at the improvement of regional economic structures and regional funds of the European Union. All of these attempt to support less developed regions in their efforts to catch up. The equalizing aim and its significance have been critically

discussed both within the regional planning policy and the regional planning research, not merely amid the debate about the evaluation results of spatial convergence in the context of German reunification.⁵

The report on spatial planning of 2005 (BBR) formulates developmental expectations for German cities and regions until 2020. Simultaneous and sustainable population and occupation growth is only predicted for the western German regions. Along with the metropolitan regions with metropolises such as Munich, Hamburg, Stuttgart, Cologne, Rhine Main and Rhine Neckar, the larger areas in rather rurally structured regions such as Oldenburg, Emsland, Osnabruck as well as the Upper Rhine and Bodensee show some growth potential. The gap between the regional growth nuclei and stagnating or shrinking regions will widen. Parts of old-industrialized areas as well as the sparsely populated peripheral regions will be particularly adversely affected. The regions being notably affected by a decrease in population and employees will above all be situated in the east. They represent a particular challenge for a balance-oriented regional planning policy (BBR 2005). Furthermore the regional planning report of 2011 (BBSR 2011) denotes 11 metropolitan regions that have been acknowledged as such by the Ministerial Conference on Regional Planning. These are imbedded in an EU-wide network of metropolitan regions and the report mentions the possibility of assigning differing functions to these 11 metropolitan regions within the national and European context. The further development of the regional planning vision “growth and innovation” could also take into consideration networks beyond the borders of metropolitan areas and smaller areas, in order to initiate cross-regional partnerships (BBSR 2011: 212).

It can be assumed for the future development of German cities that a further balanced, polycentric urban system will continue to exist. This is based on the strength of German cities and regions, which formed a pronounced profile over the previous decades. The competition between the European regions will indeed intensify especially with regard to the development of the Eastern European countries and their integration into the European Union. However, German cities are well prepared for this competition due to their functional competitiveness and their central position within Europe. A further consolidation in order to promote interregional and inter-communal networking and cooperation nevertheless seems to be advisable.

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⁵ Thus the future commission of the Bavarian federal state government recently presented a report, demanding a stabilization of the cities and a clearer break with the spatial planning goal of the equivalence of the living conditions.

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The Micro-Cosmos of German Cities: New Insights into the Supply of and Demand for Urban Amenities

Gabriel M. Ahlfeldt and Nicolai Wendland

Abstract

The value of location, arguably the most important determinant of real estate prices, is a composite of a broad range of characteristics such as access to labor markets, natural amenities like parks and waterfronts, urban amenities like restaurants and cultural facilities and the socio-economic characteristics of the resident population. To consumers searching for new living space, the cost of collecting relevant information on neighborhoods they are not familiar with is high. For developers, real estate agents and policy makers, the changing nature of consumer preferences for the various types of amenities are typically hard to observe, creating uncertainty as to where and how to best provide and promote desirable living space. The results are frictions like higher moving costs and reduced mobility, imperfect product differentiation and welfare losses. A new application, POTENTIALSPACES, aims at reducing these frictions by developing (a) micro-geographic indices that capture the endowment with such amenities covering the whole of Germany, (b) a web interface to search for a preferred combination of amenities, and (c) a real-time monitoring system of the demand for amenities. Using POTENTIALSPACES as an example, this article introduces the theoretical underpinnings and practical applications of “big data” in the realm of real estate.

Keywords

Urban amenities • Micro-geographic data • Potentialspaces

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1 The Determinants of Neighborhood Value: A Typology of Urban Amenities

With respect to locational demand and supply side factors, housing markets are notoriously complex, plagued by imperfect information and constant change. Any attempt to improve market transparency and to reduce market frictions must start from an identification of what the relevant locational factors are.

The classic models in the spirit of Alonso (1964), Mills (1967) and Muth (1969) have traditionally stressed the role of access to labor markets and residents' desire to minimize commuting costs. While these classic models imposed the restrictive and arguably unrealistic assumption that all employment is perfectly concentrated in a single dimensionless central business district, more recent contributions have relaxed this assumption and allowed for more complex spatial configurations theoretically (Ahlfeldt et al. 2015; Fujita and Ogawa 1982; Lucas and Rossi-Hansberg 2002) and empirically (Ahlfeldt 2011; Ahlfeldt et al. 2015; Ahlfeldt and Wendland 2013).

While there is little doubt that access to job opportunities is an important locational advantage, cities are not only productive places to work, but—depending on the neighborhood—are more or less enjoyable places to live (Brueckner et al. 1999; Glaeser et al. 2001; Schiff 2015). Besides accessibility-related amenities such as good transportation, the related literature has focused on two types of amenities. Natural amenities are more or less exogenously given and include scenic views or access to rivers, lakes and forests, but can also include man-made features such as parks or canals. Genuinely urban consumption amenities comprise a variety of establishments, ranging from good restaurants to inspiring cultural facilities, cutting-edge bars or high-quality retail. The location of such amenities is normally endogenous and depends on the surrounding density and type of residents.

A fourth important locational factor is a social externality which, even more than endogenous urban amenities, directly relates to the type of residents living in an area. Various social milieus have been defined in the literature, which differ in economic strata (e.g. income) and value orientation (e.g. bohemian vs. bourgeois), and there is little doubt that some households more than others appreciate the proximity to other households of a certain milieu or social mix (Ahlfeldt et al. 2014; Sinus-Sociovision 2007).

Briefly summarized, the character of a neighborhood is a composite good consisting of at least the following components: accessibility to economic activity, natural amenities, consumption amenities and the socio-demographics of the resident population.

2 The Primary PS Scores: Centrality, Urbanity, Nature, Status and the Aggregate PS Score

Having identified the main categories of urban neighborhood characteristics our next step is to create metrics of the local supply of amenities that are intuitively accessible. Based on a micro-geographic data set matched to a fine spatial grid, we develop four *Primary PS Scores* (amongst several subscores), each of which express a neighborhood's endowment with a particular amenity using an intuitive 0–100 scale.

A typical feature of cities is that the locational character can change both continuously and discretely in space (e.g. at barriers such as a railway). To capture the micro-geographic character of locations, the cells of a spatial grid used to analyze the data must be sufficiently small. Our baseline spatial grid consists of 250×250 m cells within urban counties (*Kreisfreie Städte*). In rural areas locational characteristics typically follow a relatively smooth trend. Therefore our grid cells in rural counties (*Landkreise*) are larger, covering 1 km^2 . This gives us a total of approximately half a million grid cells for the whole of Germany.

For each grid cell, we collect a wide range of spatial data from various data sources, including data from statistical offices, “big data” available from sharing portals like [©]OpenStreetMap, and commercial data provided by the GfK. We collect data on workplace employment for all municipalities and neighborhoods where available (typically the larger cities). To approximate accessibility we combine these data with the distance to the nearest city center (ignoring towns), which we approximate by the mainline station (*Hauptbahnhof*) following Cuberes and Roberts (2014). We compute the share of rivers, canals, lakes and the sea in the grid cell surface area to approximate the endowment with natural amenities. Similarly, we compute the density of gastronomic and cultural amenities such as bars, restaurants, opera houses, theatres and the like. Finally, we merge socio-demographic data on the age structure of the resident population, the unemployment rate and disposable household income, which is available at the spatially disaggregated level of postcodes.

Residents at any location obviously benefit not only from the job opportunities and amenities within a given grid cell, but also from the endowments of nearby grid cells. To account for these cross-cell interdependencies we follow the standard approach in the economic geography literature and aggregate our raw data to a market potential (Harris 1954). In a market potential, for every location i , the respective activities at another location j are considered, but with a weight that diminishes in the distance between the two locations i and j .

We combine the potentials based on the various neighborhood variables described above to four *Primary PS Scores* which directly correspond to the categories of neighborhood characteristics defined in the previous section. The potentials are rescaled using a non-linear transformation to ensure that each *PS Score* is approximately log normally distributed within a scale from 0 to 100. In keeping with intuition, higher scores imply a higher amenity value.

- *Centrality* captures access to surrounding economic mass, including job opportunities.
- *Nature* captures access to natural amenities, as does
- *Urbanity* for urban consumption amenities.
- *Status* captures the socio-economic strata of a neighborhood.
- The *Aggregate PS Score* combines these scores using weights retrieved from an econometric analysis of property prices and rents. The *Aggregate PS Score* provides an indication of the overall locational value that is reflective of the general market perception. Since it allows for a straightforward comparison to asking prices across alternative properties it is particularly useful to investors searching for value for money.

All *PS Scores* are computed for (a) all grid cells in the country and (b) each urban county separately. The purpose is to provide each *PS Score* in two complementary metrics:

1. The **City Value** is on a scale that is specific to a city or rural county (b). All index values are expressed relative to the grid cells within the highest (e.g. status = 100) and the lowest (e.g. nature = 0) percentile in a given category. The *City Value* is the preferred metric for comparisons across locations within a city and is particularly useful to users looking for alternative spaces within the city they live in.
2. The **Comparison Value** is a combination of a country-wide (a) and the city-specific index (b). It ensures comparability across regions in Germany while at the same time taking into account city-specific perceptions of what is e.g. a vibrant or a green area. With the *Comparison Value* it is, for example, possible to find areas in Hamburg or Munich that are similarly vibrant to a known area in Berlin. Such a comparison is especially useful for users searching in a new city for living space that is as similar as possible to their current neighborhood.

Figure 1 exemplarily illustrates the resulting *Primary PS Score Nature*. In line with intuition, the *PS Score Nature* closely follows geographical features such as rivers or coastlines. As an example, the sparsely populated areas in the northeast, dominated by lakes and forests (Mecklenburgische Seenplatte) score particularly highly in terms of *Nature*. Figure 2 illustrates the distribution of the *PS Score Urbanity* within (fine grid) Berlin and the surroundings (coarse grid) of Berlin. As expected, high *Urbanity* scores are typically found in central areas.

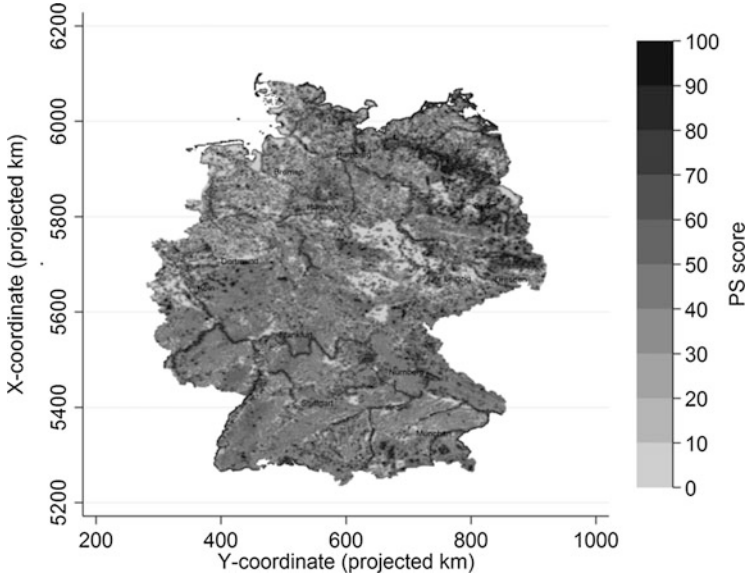


Fig. 1 PS score nature. Source: Own data and illustration

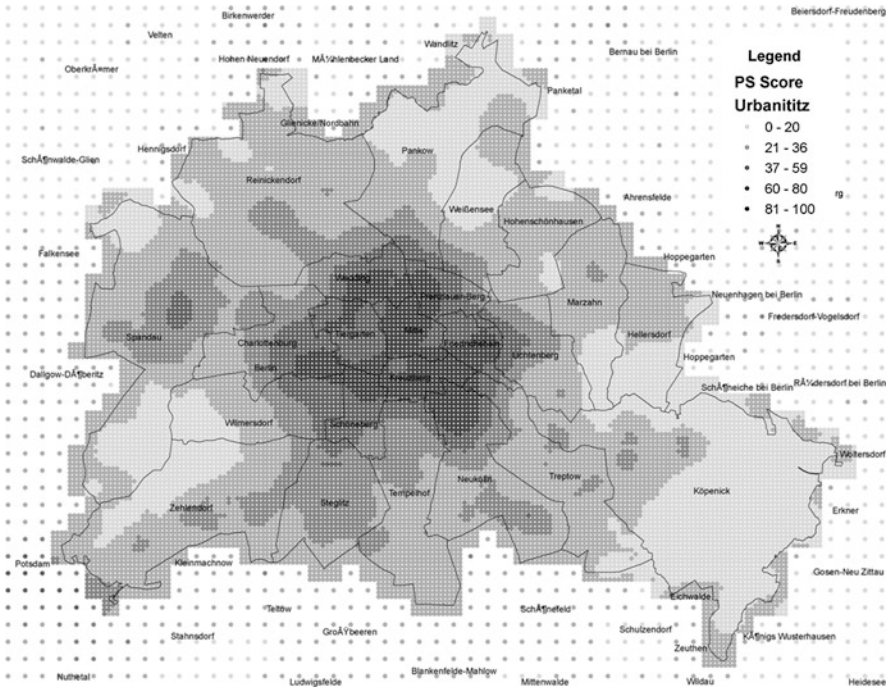


Fig. 2 PS score urbanity. Source: Own data and illustration

3 The Applications

3.1 The PS Search for Neighborhoods

The browser-based search function allows users to identify neighborhoods that best match their preferences. This is especially useful when a user is looking for a new living space within an unknown district or city. The interface offers four ways to search for areas and properties:

In a **basic search**, users who have decided on a metropolitan area (either the one they are living in or another where they are planning to move to) can quickly set the upper bounds and lower bounds for each *Primary PS Score* (*Centrality*, *Urbanity*, *Nature* and *Status*) and retrieve the neighborhoods that best match their preferences—the user’s potential spaces. If no locations fall within the chosen intervals, an algorithm identifies the closest matches. A click onto any of the potential spaces will retrieve the real estate listings by the leading German real estate platforms (e.g. ©Immoscout).

The **advanced search** offers additional options, such as setting a maximum commuting time to the place of work (or another pertinent location), restricting offers to rental properties or purchases, the minimum floor space or the maximum price or rent. Figure 3 offers a screenshot of the basic interface and illustrates how the matching algorithm returns potential spaces (the shaded areas) as well as real estate listings in these areas (icons, where the numbers indicate the number of listings in an area).

The **local search** (*Umkreissuche*) allows users to explore an area by retrieving the *PS Scores* for any neighborhood in Germany. Besides offering a convenient way to access real estate listings in areas that have already been identified as desirable neighborhoods, the local search offers a straightforward way of familiarizing the scale of the *PS scores* in areas that are well-known to the user.

The **like-and-find search** allows users to define a benchmark space they like (e.g. the current residential area) and a target area (i.e. the city or district they want to move to). The algorithm then searches the target area for potential spaces with the same characteristics as the benchmark space. The *PS scores* allow for an evaluation of the quality of the match. It is straightforward to refine the search, e.g. if a higher *Centrality* is to be achieved with a move (Fig. 4).

3.2 Applications for Real Estate Agents

The quality of services provided by real estate agents depends on their market knowledge and ability to present information in a user-friendly way. Agents who include the *PS Scores* in their exposés provide an improved orientation for potential customers. Compared to a generic description of the neighborhood character, the *PS Scores* advocate the location advantages and prevent unrealistic expectations by regarding a neighborhood in a transparent manner. Unnecessary visits can be

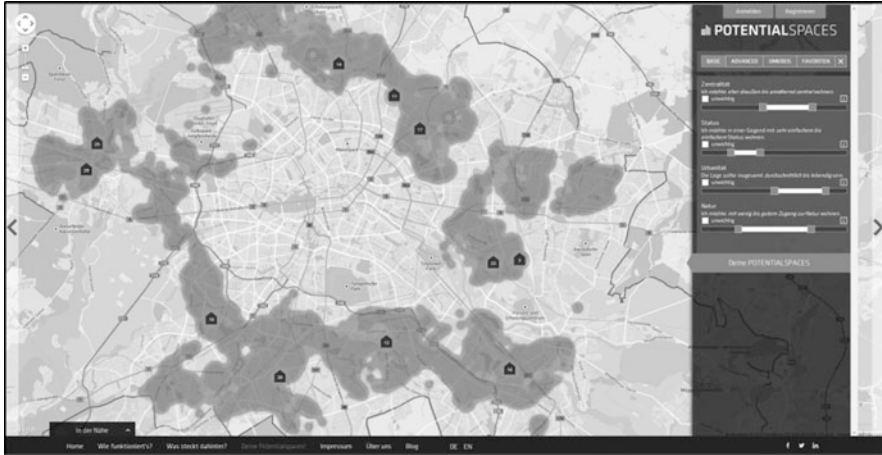


Fig. 3 PS search interface. Source: Screenshot of www.potentialspaces.de



Fig. 4 PS scores and PS search. Source: Screenshot of www.potentialspaces.de

avoided with a better fit between customers and properties achieved, which is beneficial to both customers and agents.

With the *PS Scores* we also provide an analysis of how the scores correlate with prices and rents. For example, in Berlin an increase in the *PS Score Urbanity* by ten points, holding the other scores constant, is associated with a price increase of 6%. The implicit prices attached to the *PS Scores* help with setting appropriate asking prices.

3.3 Applications for Real Estate Platforms

Currently, the largest platforms offering real estate listings in Germany are Immobilienscout24, Immonet and Immowelt. The addition of *PS Scores* to the regular property descriptions of such real estate web applications will provide a transparent and stylized representation of a neighborhood. A key advantage for customers would be a quick and convenient comparison of neighborhood characteristics across a large number of properties in different areas. The like-

and-find option would enable platforms to recommend areas to their customers which offer characteristics similar to the initially chosen area. A typical example would be a recommendation along the lines of “*if you are searching in area x, you might also like area y*”. That way, users could, for example, be offered more affordable properties in neighborhoods with comparable amenities.

3.4 Demand Indices: Applications for Developers and Investors

Frictions in real estate markets not only arise because of imperfect information on the consumer side, but also the producer side. Preferences for space vary across space and over time. Population aging and gentrification are striking examples. Since location preferences vary across age groups, the changing demographic pattern in Germany affects demand for group-specific amenities and living space in many areas. In other areas, the increasing influx of young professionals and students shifts demand in completely different directions. Developers and planners can only respond to changes in demand to the extent that they have access to recent geographically disaggregated information on consumer preferences. Notably, the search behavior of *PS Search* users is directly informative of these consumer preferences.

To create indices of local demand for amenities the parameters of each user search are saved in a data base in anonymized form. By aggregating the users' search intervals (e.g. 45–50 for *Nature*) into spatiotemporal bins it is possible to create indices which describe the average demand for specific amenities for arbitrary regional submarkets, virtually in real-time. Over time, a rich panel data set will be created which can be used to understand how socio-demographic changes affect the demand for neighborhood amenities.

Figure 5 summarizes the trends in the expressed user preferences for the four main amenity categories for Berlin. While over the relatively short period of 2 years no major changes in user preferences are expected, some trends are nevertheless visible. In line with the frequently referenced rise of the consumer city (Glaeser et al. 2001), preferences for amenities seem to be increasing over time.

Figure 5 offers a somewhat stylized representation of the overall change in preferences for specific amenities over time, but the data collected via *PS Search* offer more detail. In Fig. 6, focusing on the *PS Score Centrality*, we plot the mean of the upper and lower bounds of the user searches. The interval gives the relevant preference band for an average user at different points in time. This preference band is reflective of the minimum requirements an average user attaches to certain types of amenities as well as the endowment beyond which the average user becomes indifferent.

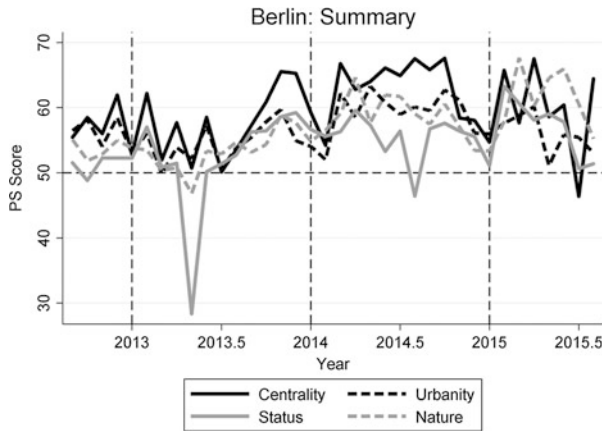


Fig. 5 The four main categories: Demand indices for Berlin. *Source:* Own data and illustration

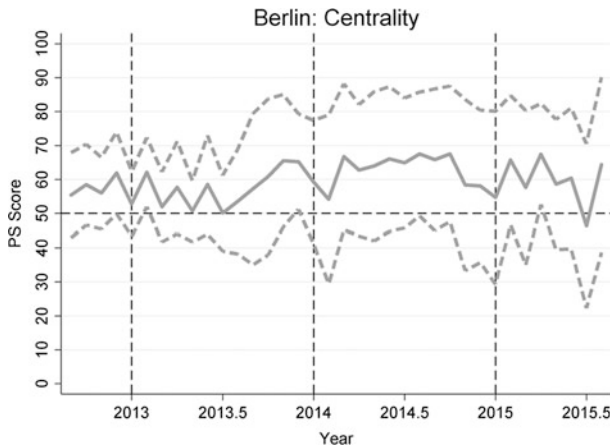


Fig. 6 PS Demand indices for Berlin: Centrality. *Notes:* Dotted lines are the mean of the upper and lower bounds of the user searches. Solid line is the average of the dotted lines. *Source:* Own data and illustration

4 Conclusion

Housing markets are characterized by frictions due to imperfect information. To consumers searching for living space, the cost of collecting relevant information on neighborhoods they are not familiar with is high. For developers and policy makers, the changing nature of consumer preferences for the various types of amenities are typically hard to observe, creating uncertainty as to where and how to best provide desirable living space. Such frictions lead to higher moving costs, reduced mobility, imperfect product differentiation and welfare losses.

We propose a novel approach to reducing such frictions, combining “big data” and an interactive web interface. We construct indices which quantify the locational endowment with the empirically most relevant amenities at a spatial micro-level for the whole of Germany. We make these indices available to users in an intuitively accessible way on the web platform www.potentialspaces.de, where users can search for real estate in the neighborhoods that best match their preferences.

From the search behavior on the platform we infer the user preferences for specific types of amenities for (spatial) sub-markets. We construct intuitive indices which reflect changes in the local demand structure virtually in real-time. With this enhanced information on the spatiotemporal structure of demand for amenities the response of supply to demand can be improved.

Overall, POTENTIALSPACES allows consumers to find their preferred neighborhoods faster and more conveniently, sending signals that help to direct the construction and renovation of living space to those areas where supply is needed the most.

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Sustainable Buildings

Christine Lemaitre

Abstract

The construction and real estate sectors are in a state of change: Energy efficiency, resource protection, residential and workplace health, value retention and risk mitigation are now in focus. General conditions and market interests are changing. Therefore, in the future buildings will be planned, built and operated differently, i.e. more sustainably than in the past. Sustainable building means to build intelligently: The focus is on a comprehensive quality concept that serves the building and real estate sectors, as well as society in general. Sustainable properties are beneficial to the environment, conserve resources, comfortable and healthy for their users, and fit optimally into their socio-cultural surroundings. This article is an introduction to the German Sustainable Building Council's quality label (DGNB), which supports planners and construction firms in the realization of sustainable buildings. The DGNB certificate assesses the building's overall performance, not individual actions. Along with pre-certification, the DGNB criteria can be used to identify efficient, inexpensive steps during the planning phase. Furthermore, the DGNB pre-certificate gives investors the confidence during the early planning stage that the building's performance targets will be reached when it is finished.

Keywords

Sustainability • Integral planning • Certification • Evaluation

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1 Sustainability

Today sustainability is a central concept that applies different principles of action to a variety of issues and fields.

The term sustainability has its origins in the forestry sector, where it referred to achieving a balance between logging and reforestation. The modern meaning of the word can be traced back to the Brundtland Report, which was presented by the World Commission on Environment and Development (WCED) in 1987. This independent committee of experts, initiated by the United Nations, was tasked with drawing up a concept for long-term, environmentally compatible global development that had responsibility for future generations as an explicit objective. Today’s society can meet its needs without compromising the ability of future generations to meet their own needs. Every generation must come to terms with its current problems without shifting the burden to the generations to come.

The international definition—and therefore the national definition—of sustainability rest on three pillars (Fig. 1):

The ecology pillar is based on the protection and use of nature and natural resources to the extent that the needs of future generations can still be met. The economy pillar has its focus on shaping economic activity so that earning ability and prosperity are ensured in the long term. Current economic resources cannot be unfairly exploited at the cost of future generations. The society and culture pillar aims at establishing a future-proof society that is worth living in and where social justice prevails. All members are important parts of the community.

These pillars impact on each other. Sustainability cannot be viewed in isolation. This could be the source of conflicts: for example, economical solutions are not always environmentally compatible; social goals sometimes conflict with ecological ones. Acting in a sustainable manner requires understanding the principles, recognize the contradictions and develop a balanced solution for each situation.

The built environment has a fundamental influence on life on earth and on all three levels of the identified protective goals of sustainability. The figures given below are intended to illustrate the significance of the role played by the construction and real estate sector (Fig. 2).

Even against this briefly sketched backdrop, the relevance of sustainable practices to the construction and real estate industry becomes clear.

Ecology	Economy	Society/Culture
Environment Natural resources	Economy Financial resources	Society Human resources

Fig. 1 The pillars of sustainable development and the areas they protect. *Source:* Own representation

Ecology	
40%	of greenhouse gases result from the construction and use of buildings.
40%	of the total energy in industrialized nations is used for the operation of buildings.
50%	of the materials taken from the earth are used in the construction sector.
Economy	
90%	was the increase in heating costs in the last ten years.
70%	of the total investment capital of developed countries is tied up in their existing buildings.
Society/Culture	
85%	of the lives of people in Western industrialized nations is spent in buildings.
30%	of all newly inhabited buildings cause their users to develop sick building syndrome.

Fig. 2 Figures relating to the construction and real estate industry. *Source:* Hegger et al. (2008)

Ecology	Natural environment and resources
Economy	Capital and value
Society/Culture	Health, happiness, functionality, design

Fig. 3 Building-related areas of protection derived from pillars of sustainability. *Source:* DGNB

Planners and decision makers have claimed sustainability for buildings even when focusing on only one of the pillars during the building process. Ecology and economy frequently have conflicting goals, while social aspects are often seen as incidental. However, awareness of the quality of sustainably planned and constructed buildings is growing steadily. It has been recognized, for example, that sustainable buildings retain their value better than conventionally planned buildings. The international, cross-sector pillars of ecology, economy and society/culture are therefore applicable to buildings as well. They are given concrete expression in the following building-related areas of protection (Fig. 3):

Considerations and decisions during the planning phase as well as the technologies used can have a major impact on these qualities, which has led to the development of broader applications of engineering and processes. Not only can this model improve the cost-effectiveness of a structure in terms of construction, occupancy and remediation costs, it also sets the stage for an environmentally compatible, resource-efficient, functional, comfortable and healthy building that fits perfectly in its social and cultural surroundings.

2 Integral Planning

Conventional planning processes generally aim only to comply with short term planning goals such as low construction costs and the proper functioning of the building. Since the life span of a building is in general 30–50 years it is important to plan ahead and to design and construct future-proof buildings. These buildings have to be adaptable so they can be adjusted to any changes in usage or performance demand. Therefore an integral planning process which takes into account all

potential future requirements is the basis for sustainable buildings. Integral planning means, that all of the disciplines involved in construction work together, track progress, control quality, and make adjustments where needed in the construction process. Mostly integral planning can lower lifecycle costs and increase user comfort and acceptance, both of which increase the value of a building.

Integral planning therefore has to begin early. At the beginning of the planning process (in the project development phase), the team consisting of the building owner, investors, and planners have the greatest influence on the future building's sustainability. In the course of the process, options to tweak the system become narrower and costs to promote sustainability targets increase.

Good cooperation within a planning team significantly affects a building's quality. The same holds true for all aspects of sustainable building. To achieve optimal building performance in terms of sustainability, planning teams should be informed of sustainability objectives at the very start of their work. Important decisions on building shape, material choice, ventilation concepts, technical equipment, and so on always have consequences for other aspects of planning and construction. These decisions therefore affect a building's ecological and economic quality and, in turn, the result. This process involves regular overarching discussions on the state of planning and further development. Along with such important planning points as functionality, economic considerations, and deadlines, sustainability should be a main focus. For effective cooperation, all involved parties should have access to notes from important conversations.

3 The German Certification System

3.1 Overview

The German Sustainable Building Council's quality label (DGNB) supports planners and construction firms in the realization of sustainable buildings. One important goal is to show how complex building sustainably is so that this complexity can be taken into account in plans for the building.

The DGNB certificate assesses the building's overall performance, not individual actions. Building owners and planners therefore have the greatest possible leeway in reaching these targets. Innovative solutions are promoted. The certification system can be updated thanks to its flexibility. It can be easily adapted to new technical, societal, or international developments. Along with pre-certification, the DGNB criteria can be used to identify efficient, inexpensive steps during the planning phase. Furthermore, the DGNB pre-certificate gives investors the confidence during the early planning stage that the building's performance targets will be reached once it is finished.

The DGNB certificate promotes integral building planning, thereby capping optimization potential for construction, operation, and the end-of-life phase. As a result, the risk of vacant buildings is reduced. The award increases the chance of selling and renting since it demonstrates a building's holistic high quality to owners

and users. Furthermore, the DGNB certificate signals greater quality and workmanship, reduced number of sick days on behalf of the users, increased user-friendliness, and improved re-rental ratios. The DGNB certificate offers the right occupancy profile for every type of building. Nonetheless, all buildings are evaluated on the same basis, which reduces training time for auditors and facilitates the application of the system.

3.1.1 Advantages of the Certificate

- *Active contribution to sustainability:* The certificate quantifies the positive environmental and societal effects of a building.
- *Cost and planning certainty:* The certification process provides, in the early planning stage, a high degree of certainty that the performance goals of a building can be reached at the time of completion. For example, it helps to reduce the energy consumption and costs during operation.
- *Reduces operational risk:* The certification process promotes integral planning during construction. This leads to more transparency and well-defined processes during planning and construction, opens up potentials for optimization, and minimizes the risks during construction, operation, renovations, and removal.
- *Practice-oriented planning tool:* The certificate was developed by practitioners for practitioners. It supports owners and designers in a goal-oriented way in developing sustainable buildings.
- *Focus on life cycle:* The certificate is based on the life cycle of a building, which is indispensable for an evaluation of its sustainability.
- *Made in Germany:* The certificate is optimized for the German and European building environment. This includes building codes and norms, as well as long-term market experience with energy efficient buildings etc.
- *Marketing tool:* The certificate serves as a communication tool for investors, owners, and users—it documents their commitment to sustainability. As a sign of quality, it supports export, and it enhances the attractiveness of the German real estate sector for investors.
- *Comprehensive quality of a property:* The certificate enhances the chances for sale and rent. The certification makes the high quality of a building tangible for owners and users. Furthermore, it signals a performance-enhancing work environment as well as high user satisfaction.
- *Performance is key:* The German certificate evaluates the building's performance and not merely single measures. Owners and designers are given a large leeway to achieve the targets.
- *More than "Green Building":* The certificate far exceeds the ecologic aspects of "green building" by including the economic performance, as well as socio-cultural and functional aspects of buildings.
- *Flexibility:* The certificate system can flexibly be updated. It can easily be adapted to technical, social, and international developments.

3.2 Evaluation Areas

The system's foundation was developed for the building type "New office and administrative buildings". On this basis, other occupancy profiles were developed for completely different types of buildings. As a second-generation certification system, the quality seal features a very high level of flexibility. The foundation of the evaluation consists of a list of focal points developed by broad consensus and their criteria for sustainable building. Depending on the type of building to be evaluated, these criteria are weighted according to use-specific factors. Each occupancy profile—that is, each type of building—thus has its own weighting matrix and is optimally adapted to its specific use.

The areas of evaluation are:

- Environmental quality
- Economic quality
- Socio-cultural and functional quality
- Technical quality
- Process quality
- Site quality

The six areas are weighted in the overall evaluation of the building according to their relevance. Economic quality, environmental quality, and socio-cultural, functional, and technical quality each make up 22.5 % of a building's total performance index, while process quality contributes 10 %. Quality of the location is not included in the total performance index but is evaluated separately (Fig. 4).

Each of the six evaluation areas is divided into several criteria, such as energy demand, acoustic quality, or demand for space. For each criterion, quantifiable target values are defined and measurement methods and required documentation for verification are outlined. A maximum of ten points is given for each criterion. All criteria are weighted for the evaluation in two steps. Independent of the specific occupancy profile, each criterion has a weighting factor and can be counted in its broader category as often as three times. This weighting factor reflects a criterion's societal and political relevance and is the same for all types of use. Thus, a building's energy demand is more important within the scoring than acoustic comfort. At the occupancy profile level, the system's methodology allows for further fine-tuning. Here, weighting is determined according to a use-specific adaption factor that can increase a criterion's value by as much as threefold. This adaption factor can also be zero to remove criteria—indoor air quality does not matter for highway bridges, for example. Depending on the extent the requirements were fulfilled, the certificate is given in silver, gold or platinum. The degree of fulfillment is given as a percent and a grade. With an overall degree of fulfillment of at least (Fig. 5)

Fig. 4 DGNB qualities.
Source: DGNB



Fig. 5 Weighting of the qualities. *Source:* DGNB



- 50 %, a silver quality seal is awarded
- at least 65 %, gold
- at least 80 %, platinum.

3.2.1 An Overview of the Criteria

In developing the quality seal, six evaluation areas were defined that consist of roughly 40 criteria representing the relevant areas of sustainable building. For version 2015 of “New office and administration buildings,” the quality seal is

based on the following 36 criteria. Of these, 32 criteria describe building quality, while four describe site quality, which is evaluated separately.

- **Environmental quality**
 - Life cycle impact assessment
 - Local environment impact
 - Responsible procurement
 - Life cycle impact assessment—primary energy
 - Drinking water demand and waste water volume
 - Land use
- **Economic quality**
 - Life cycle cost
 - Flexibility and adaptability
 - Commercial viability
- **Socio-cultural and functional quality**
 - Thermal comfort
 - Indoor air quality
 - Acoustic comfort
 - Visual comfort
 - User control
 - Quality of indoor and outdoor spaces
 - Safety and security
 - Design for all
 - Public use
- **Technical quality**
 - Sound insulation
 - Building envelope quality
 - Adaptability of technical systems
 - Cleaning and maintenance
 - Deconstruction and recycling
 - Mobility infrastructure
- **Process quality**
 - Project and design
 - Design concept
 - Sustainable aspects in tender phase
 - Documentation for facility management
 - Design and urban quality
 - Environmental impact of construction
 - Construction quality assurance
 - Systematic commissioning
- **Site quality**¹
 - Local environment

¹ Accounted for separately; does not affect a building's overall appraisal.

Public image and social conditions
Transport access
Access to amenities

3.2.2 The Building Owner's Role

The owner of a building, who wants to certify his building must contact an auditor. The latter must be approved by the DGNB for certification. The DGNB website has a comprehensive list of auditors. For all construction projects, it is recommended that the owner includes the auditor in the planning process as early as possible. After all, this early stage is when the planned building can be optimized best for sustainability and/or to receive the DGNB certificate in gold, silver, or bronze. The auditor's task is to advise the owner on how to receive the DGNB certificate. The owner may then decide that the auditor only handles documentation, verification, and organizational matters for the certification process. Alternatively, the owner can assign a more far-reaching range of advising tasks to optimize the planned building in terms of sustainability. The owner and the auditor must therefore come to an individual agreement about the extent of the advising work. Once the auditor has registered the building for the certification process, the owner and the DGNB sign a contract that describes the procedures for auditing and certification. The contract also includes a confidentiality provision in which the DGNB pledges not to release the names of the project or the building owner to other parties before the public awarding of the certificate. As soon as the DGNB pre-certificate or certificate has been awarded, the owner can use it for marketing and public awareness. The owner then receives a certificate, a plaque to hang on the building, the rights to use the DGNB certificate logo (in platinum, gold, or silver), and the certification evaluation results.

3.2.3 The Auditor's Main Tasks

Auditors support the owners on their way to certification. Thanks to DGNB international training the auditors know the DGNB international system and the principles of sustainable building. Auditors are the organizational and content link between the DGNB and the project to be certified. They bring the DGNB system's perspectives into the project and supplement the planning team with advice on certification.

Their core tasks include the following:

- registering projects with the DGNB
- inspecting, assessing, and checking for plausibility the documents and evidence created by third parties (owners, planners, contractors, etc.) that are available at the time of planned pre-certification/certification
- compiling required documents and submitting them to the DGNB in compliance with the DGNB's documentation requirements
- communicating with the DGNB office, answering questions, submitting opinions on evaluations etc.

3.2.4 Auditors' Optional Advising Tasks

In the planning phase, building owners can ask auditors to complete a further reaching range of advising tasks than required for DGNB certification. For example, auditors can provide an initial estimate of building performance before the actual certification process begins. They evaluate the building's performance according to the certificate's six areas and analyze to what extent the requirements of the individual criteria are fulfilled and which certificate the building could achieve. Then, the auditors present the results to the owners and to the planning teams. The auditors can also support planning teams in highlighting planning variants with consideration of certification results and create concepts for how buildings can achieve a higher certification level. In this process, teams realize how specific, isolated decisions on sustainability aspects can affect other areas of planning. Auditors can moderate the integral planning process in terms of sustainability and the best possible certification result. If everyone acts in concert right from the beginning, a building can be optimized to a larger extent. Auditors can complete the following additional tasks in the planning phase:

- presenting the certification process to owners and planning teams and organizing workshops to explain the tasks of planning teams and contractors
- creating a status report after the draft planning phase (draft planning) and the execution planning phase to align objectives
- coordinating verification management by planning teams and contractors
- participating in important planning meetings that have to do with certification
- providing support for calls for tenders and awarding of contracts

During construction, auditors can complete the following additional tasks:

- monitoring parts of the construction process and documentation and declarations provided with consideration of DGNB requirements
- participating in important construction meetings that have to do with certification; building owners decide whether auditors only take care of documentation and verification for the DGNB and conduct the certification procedure or whether they also provide a broader range and greater depth of advising support. Building owners and auditors must therefore come to an individual agreement about the extent of the advising work.

3.2.5 Optimizing a Building

The DGNB system includes the possibility of pre-certification for projects. In other words, investors, owners, and other interested parties can ask for gold, silver, or bronze pre-certification as early as the planning and construction stages. This process has two main advantages:

1. Buildings can be optimized for sustainability from the very beginning.
2. Pre-certification can be used to market buildings as early as the planning and execution stages.

Pre-certification makes it possible for investors and owners to optimize their projects in the planning stage. The process creates a planning basis for sustainable construction and promotes an integral planning approach. Pre-certification is an excellent instrument to achieve planning goals, increases transparency, ensures clear planning and construction processes, improves risk management, and increases a building's quality. For pre-certification, all main sustainability criteria must be defined as intentions or goals in an early planning step. Pre-certification therefore supports decision-making while also drawing the attention of those involved in construction to the requirements and is an important medium to communicate planning and construction objectives. In addition, pre-certification increases the likelihood that a building's planned performance goals will be achieved once it is completed. The process also makes it more likely that the completed building will receive certification without problems and the pre-certification's evaluation results will be confirmed. Pre-certification also provides advantages for marketing a building that is not completed yet. Because of the system's high degree of transparency and credibility, the building's future performance can be substantiated as early as the planning stage, increasing the building's chances of being rented or sold. Pre-certification can also increase security for financing projects. When a minimum performance requirement is met, a certificate with evaluation results is awarded.

3.3 International Development

With the DGNB certification system, the DGNB has developed a second-generation certification system that sets standards even internationally. One of the DGNB system's greatest strengths is its high level of flexibility. It can be adapted to both future technical and societal developments and regional particularities. These points can include climate, structural, legal requirements, and cultural factors. Because of these features, the DGNB certification system has been internationalized very quickly. In June 2009, only half a year after the first DGNB certificates were awarded, TOWNTOWN Company Building of Vienna received the first certificate for a building outside Germany. Other projects in Austria and Luxembourg have already been certified, and both the number of inquiries from foreign investors and the number of certifications are increasing. Investors are interested in using the DGNB system's renown to document their properties' high quality standards. It is also the aim of the DGNB to optimally adapt the certification system developed in Germany to the requirements and specific conditions in other countries. This is achieved with the help of close partnerships with local non-profit and non-governmental organizations as well as with the cooperation with the so-called DGNB Community, which brings together local groups of interested professionals and experts in "sustainable building with focus on the DGNB system". An international board of representatives of the DGNB and its partner organizations ensures the high quality standard worldwide. The Austrian Green Building Council (ÖGNI) was the first to adapt the system and awarded the

first certificates for the Austrian version of the DGNB system in May 2010. Up to date Switzerland and Denmark have successfully established their local DGNB system, Argentina is currently in the process of adaptation and China currently seems to be one of the most promising future markets for the DGNB. Organizations in other countries such as Brazil, Thailand and Spain have also partnered up with the DGNB and the list of interested parties in other countries keeps on growing. Following the rapid internationalization of its highly flexible certification system, the DGNB offers training courses for international DGNB consultants, both in Germany as well as in other countries in order to promote a common language on sustainability.

3.4 The DGNB International Certification System

The “International DGNB System” has been developed in order to provide a certification tool based on international codes and standards to allow its implementation in various countries while preserving the high quality and transparency of the DGNB philosophy. The system, available entirely in English, bases each of its criteria on corresponding European Standards and DGNB requirements in compliance with the principles of the DGNB Core System. Since November 2010 the scheme for “New Office and Administrative Buildings” is available for use, and further international schemes are developed.

The DGNB International System is the first, and to date, the only system worldwide, in which the procedure for adaptation to different countries is an integral part of the system itself. This adaptation takes into account different climatic conditions, associated cost-benchmarks, and a specific database for life-cycle assessment, within which datasets for all European countries are made available. The International System is therefore directly applicable within Europe.

In addition to direct implementation of the criteria to local certification projects, further adaptation of the system in the form of country-specific schemes is possible, following the establishment of a corresponding contract. Necessary requirements for such a contract are a sufficiently strong market interest as well as a qualified local working group. This working group has to comprise experts for the following seven areas: ecology, energy, building materials/pollutants, technical quality, socio-cultural quality, processes, and location. The core of the individual criteria remains unchanged in the development of the country-specific schemes. The adaptation primarily takes place within the assessment method and evaluation criteria levels.

The DGNB also carries out the associated training courses and conformity inspections. The operational system implementation in a specific country can also be carried out by the local partner, following the establishment of a corresponding contract of cooperation. For this, a full membership in the DGNB Partner Network is necessary, in which all of the requirements for a full membership as specified above must be fulfilled.

4 Added Value of a Certification

The construction and real estate sectors are in a state of change: Energy efficiency, resource protection, residential and workplace health, value retention and risk mitigation are now in focus. General conditions and market interests are changing. Therefore, in the future buildings will be planned, built and operated differently, i.e. more sustainably.

First evaluations of certified buildings have shown that the life cycle costs of certified buildings decreases with the certification degree. It shows that gold certified buildings are in general more cost efficient than bronze certified buildings. Therefore the certification e.g. the sustainability of a building results in a more efficient and cost optimized building. This kind of performance can be achieved by using a transparent certification system in order to systematically optimize the buildings in the right way. Only by this level of transparency, bringing it down to measurable values, building performance can be compared, regardless of the location of a building.

Sustainable building means to build intelligently: The focus is on a comprehensive quality concept that serves the building and real estate sectors, as well as society in general. Sustainable properties are beneficial to the environment, conserve resources, comfortable and healthy for their users, and fit optimally into their socio-cultural surroundings.

In the same way, they stand for economic efficiency and long-term value-retention. Sustainable properties are cost efficient due to their lower operation and maintenance costs. The manageable additional planning and construction costs will usually amortize in few years (Fig. 6).

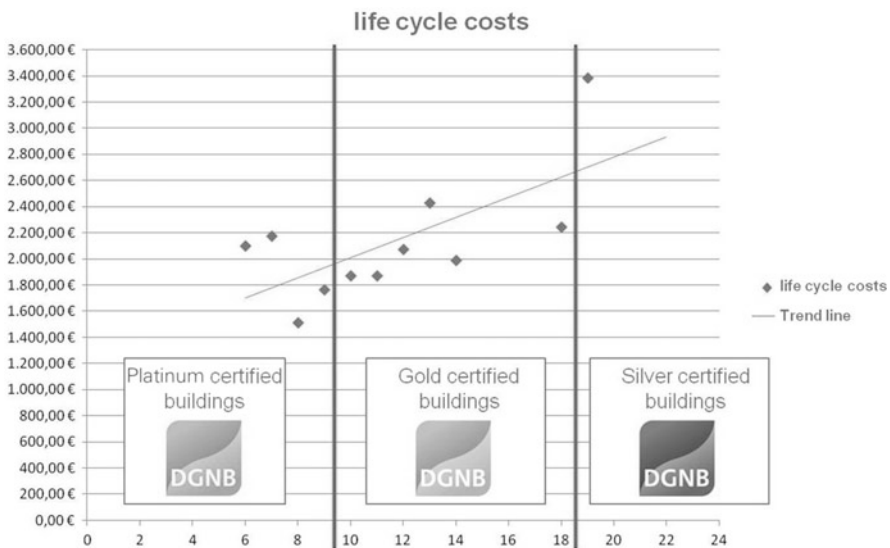


Fig. 6 Relation between the life cycle costs and the certification stage. Source: DGNB

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Part II

Judicial Framework

Regulations and Laws on Real Estate Agents, Notaries, Cadastres and Rent Increases

Michael Schick

Abstract

This chapter describes the system of cadastres and land registers as well as the characteristics of real estate brokerage and the system of notary publics in Germany and contrasts some of its aspects with the situation in other countries in Europe. In addition, the chapter explains the new legislation concerning the regulation of rents in Germany.

Keywords

Land register • Real estate agent • Notarization • Regulation of rents

1 Introduction

The laws and regulations governing cadastre, land register, notary publics, estate agents and rent increases in Germany show particularities that may or may not have analogies in other European countries. The British and Irish transaction systems, for instance, emphasize private rights more forcefully than the German system. It contains no legal regulations to govern notaries public or land registers. Instead, the transaction is negotiated between the commissioned solicitors of either party. Entry in the land register is not compulsory. By contrast, deeds in Germany require notarization, as it is called. The position of the notary public within the transaction process is therefore a prominent one. Similarly, the role of the estate agent in Germany differs from the one in Sweden, for instance.

This chapter will start by profiling, in Sect. 2 below, the basics of property and plot sales in Germany, that is, the system of cadastres and land registers. Next, Sect. 3 will focus on the parameters of real estate brokerage including the changes

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in the legislation concerning the payment of the estate agent's fee in the brokerage of residential real estate. Section 4 will focus on new regulation restricting the scope of rent increases in the segment of residential real estate. Section 5 will briefly outline the German system of notary publics. The chapter will conclude by comparing, in Sect. 6, some aspects of German law with the legal situation in other countries in Europe.

2 The German System of Cadastres and Land Registers

2.1 Cadastre

One of the most important formal requirements for any sort of property ownership in Germany is the land survey register or cadastre (Liegenschaftskataster). It represents a comprehensive register of all landed property in Germany in cartographic form as cadastral map (Liegenschaftskarte) as well as in text form as cadastral register (Liegenschaftsbuch). The map alone includes all definitive data on a given plot and the buildings that may be located on it. The register provides additional information, such as the names of owner, street, and type of use of the respective building and plot. Important to know: A plot is not the smallest independent property unit in a German cadastre. Rather, a plot (Grundstück) may subdivide into several land parcels called cadastral units (Flurstück). These cadastral units are the smallest units used in the cadastre. Neither do plots represent the largest unit of area measurement in the administrative property landscape. Categories subsuming individual plots include, for instance, the cadastral section (Flur) and the cadastral district (Gemarkung). These consist of a pool of property units from a larger number of—normally adjacent—cadastral units of plots.

The authority in charge of the cadastre is the so-called cadastral office (Katasteramt). In addition to the task of managing the cadastre, the cadastral office is also responsible for conducting the necessary land surveys. Accordingly, cadastral offices map all cadastral units, plots and buildings in Germany, stating location, type of use, size, owners (or ground lessees, where applicable) and their topographical characteristics.

2.2 The Land Register

Together with the cadastre, the land register constitutes the second formal prerequisite that is essential for property ownership in Germany. The land register is the official directory of landed property in which the ownership situation and the rights and encumbrances possibly associated with a given plot are recorded. To this end, each plot is accorded a so-called land register folio (Grundbuchblatt).

The land register folio subdivides into the inscription (Aufschrift), inventory (Bestandsverzeichnis) and three sections (Abteilung). The inscription includes information as to which land registry is responsible for which plot and the number

under which the respective land register folio is registered. The inventory lists the respective plot. It may actually list more than one plot if the respective owner holds the rights to several plots in the jurisdiction of the same land registry. In this case, the plots are assigned consecutive numbers (the subsequent sections I through III refer to these numbers). The inventory also includes the exact designation of the plot (matching that of the aforesaid cadastre), cadastral district, cadastral unit number, the type of use, the location and the size of the plot.

Next come the three sections of the land register folio. The first section documents the ownership situation. It captures the owners and ground lessees and—whenever there is more than one owner—the pro-rate share of the entitlement or the legal relationship defining the ownership association. Moreover, it will state the reason for the acquisition.

Possibly existing property encumbrances will be listed in the second section. Relevant encumbrances may include easements (possibly including easements of access, i.e. the right to use the plot to cross to another plot), rights of first refusal and ground leases, long-term leases or permanent rights of residence, among other titles. Mortgages or land charges—while factually being encumbrances—are neither considered encumbrances along the lines of Section II of the land register, nor are they posted therein.

Instead, the latter belong in the third section. It covers the so-called mortgage liens: mortgages, land charges and annuity land charges. It lists the type or contents of each mortgage lien, including the respective amount plus interest, possible fringe benefits, creditors, execution proceedings, and possible joint attachment of other properties. Whenever this section shows more than one land charge, they are ranked in priority depending on the order in which they were posted in the land register. Pursuant to the German Land Registry Act (*Grundbuchordnung*, GBO), the land registers are kept by the land registries. They are responsible for the properties situated in their sphere of jurisdiction.

2.2.1 The Land Register's Key Role for Transactions

The land register details all legal relationships of relevance in regard to a given plot. The same is true for changes in legal relationships. From the perspective of the transaction process, the land register thus attains an even greater significance than the aforementioned cadastre. Indeed, the land register represents the focal point of all legal relationships on the German property and real estate market. The acquisition of ownership in a given property requires the entry of the new owner in the land register. As a matter of principal, the new owner is entered into the land register upon application only. This, in turn, presupposes the seller's consent, which is explained by the following provision in the Land Registry Act: An entry in the land register necessitates the approval of any person whose title will be affected by the entry, for instance the property's seller.

2.2.2 Applications to the Land Registry

The example above showcases one fact: Applications, entries, and requests for information submitted to a land registry and cadastral office (as with any other

German authority) are subject to a proper procedure regulated in detail. In this context, it is more or less plausible that the official language for these procedures is German. This requirement mandates that all documents and certificates have to be composed in German whenever stakeholders of a given transactions state their case before a German land registry or cadastre. As already mentioned, posting, changing or striking an entry from the land register requires an application. The application must be submitted in person to the office of the respective land registry. Depositing it in the general mailbox of the land registry building will not do. Rather, the application is not considered received until the person in charge—the judicial officer (Rechtspfleger)—has accepted it and confirmed its receipt with the exact date.

The judicial officer confirming receipt of the submitted application is also the person reviewing the application. If an application is incomplete, or if other impediments prevent entry in the land register, the officer may grant the applicant a reasonable grace period to remedy the impediments. Theoretically, the officer is also authorized to reject an application, stating the reason for doing so, though this is rarely seen in practice.

2.2.3 Inspecting the Land Register

You need to substantiate a legitimate interest in order to be permitted to inspect the land register. Unlike other official registers—such as the commercial register (Handelsregister) or the register of associations (Vereinsregister)—public access to land registers in Germany is restricted pursuant to Article 12, Land Registry Act. This contrasts with the situation in other countries; Austria for example is something like a role model in terms of transparency.

In Germany, you need to state objective reasons to demonstrate your legitimate interest. The reason for such restrictiveness is simply to protect the owner and other entitled parties posted in the register. It is up to the recording clerk to decide whether the reason for wishing to inspect of a land register is sound and legitimate. Being interested in buying a certain property does not represent a legitimate interest. Inversely, the owner or a mortgage creditor, for instance, does have a principally justified interest—and these may inspect the entries regarding the respective plot any time. The same is true for anyone who has obtained the registered owner's consent.

3 German Brokerage Law

3.1 The Estate Agent

The term “brokerage” signifies the mediation of a contract that may involve either an asset or a service. German brokerage law differentiates between mercantile brokers and estate agents. Mercantile brokers are active in the brokerage of contracts for objects that play a role in the context of commercial intercourse, such as e.g. commodities, securities or insurance policies. By contrast, the estate agent's

area of activity covers the brokering of lease contracts, property deeds, and loan agreements.

Brokers in Germany thus occupy an interstitial realm of several overlapping regulatory frameworks. The specific duties of a broker are codified in public law, civil law, professional codes of conduct, and codes of fair competition. The statutory framework for the broker's profession is outlined by the German Civil Code (BGB), the German Industrial Code (GewO), and the German Brokers' and Commercial Developers' Ordinance (MaBV). Also relevant for estate brokers working in the residential segment is the German Rental Property Law (WoVermG).

Under German law, brokers are considered as conducting a business. If for instance, a person pursues estate agency as his or her profession, he or she requires a business license from the respective regulatory agency pursuant to Article 34c, German Industrial Code.

For the real estate sector in particular the professional label of estate agent is not protected. Any person can register and operate a brokerage business—as is mandated by the principle of economic freedom. Neither is it necessary to substantiate a professional qualification or vocational training to become active as broker. A first indication in terms of qualification is an agent's membership in a recognized professional organization such as the IVD German Real Estate Federation. As a leading association of German real estate consultants, brokers, managers and experts, the IVD (Immobilienverband Deutschland) is an advocate for its members in political discussions, addressing business, economic and legal issues on their behalf and actively engaging with the press, trade associations, consumers, etc. The IVD is the first point of contact for all matters relating to the profession and for all practical questions concerning the real estate industry.

Members of the IVD have to pass a comprehensive entrance exam and prove that they have valid professional liability insurance. Thus, the IVD is able to fulfil its role as a champion for consumers within the real estate sector. A second organization to be named is the RICS (Royal Institution of Chartered Surveyors).

Estate agents also have the option to submit voluntarily to a quality check, and to be certified accordingly. A case in point is the European DIN EN 15733 standard that has been in force in Germany since April 2010. It tests professional minimum requirements and verifies whether a given estate agent regularly engages in continued professional development. The first institution that has started issuing certificates in compliance with DIN EN 15733 to estate agents in Germany is DIA Consulting AG.

3.2 The Estate Agent's Contract

3.2.1 Principles and Deviating Regulations

The legal provisions pertaining to the estate agent's contract are governed by the German Civil Code. According to these provisions, an estate agent's contract represents a unilateral contract. This means, among other things, that the contract

contains no obligation to perform. The estate agent him- or herself is not obliged (but has the right) to become active on behalf of the client. Neither is the client obliged to “accept” the services performed by the estate agent. Indeed, the client may withdraw the order placed, call in an additional estate agent, or change the conditions at which a given asset is offered at will.

A contract structure principally takes the following aspects into account: You need to distinguish between the estate agent’s contract, on the one hand, and the so-called master-contract, on the other hand (for instance, the deed or lease contract brokered by the agent). If the estate agent submits a property quote to the client, and the client reviews the quote, the process creates no obligation on the client’s part unless a contract is eventually signed. Accordingly, the remuneration of the estate agent—that is, the commission or agent’s fee—depends on whether the agent’s job was actually accomplished through the agent’s efforts.

Then again, the brokerage provisions pursuant to the German Civil Code may be contracted away. This means that agreements deviating from the law may be made in full awareness of the fact. One exception in this context is the letting of residential space (see Sect. 3.2.2). In the area of commercially used real estate, though, an estate agent’s contract may—in contrast to what was said above—imply a direct or indirect obligation to buy or sell a given property. However, such cases require notarization of the estate agent’s contract.

3.2.2 Particularities Regarding the Brokerage of Residential Space

An estate agent’s contract involving the brokerage of residential property is subject to the German Rental Property Law (WoVermG). Unlike the non-mandatory brokerage law of the German Civil Code, the Rental Property Law defines largely compulsory provisions. Here, you may not deviate from the legally prescribed provisions by negotiating individual agreements. The sine-qua-non condition for a valid claim to a commission in the residential sector is that the estate agent was actually active in his or her role as broker and that this activity actually precipitated the signing of a lease for residential floor space. In addition, the following principles apply to the brokerage in the residential sector: No commission may be agreed if the estate agent is simultaneously the owner, landlord, manager or tenant of the offered apartment. The same applies if the estate agent is economically or legally associated with the owner, landlord or manager. Equally unlawful are prepaid commissions. The situation changes again if rent-controlled council housing is at issue. In this case, no commission may be claimed from the tenant even if all other preconditions are in place.

3.3 The Estate Agent’s Fee

The estate agent’s fee or brokerage commission is the remuneration for the successful job of an estate agent. As said before, an entitlement does generally not exist unless the agent’s efforts meet with the intended success. The estate agent’s claim to the payment of a commission is regulated in Article 652, Section 1, Sentence

1, German Civil Code. In practice, estate agents sometimes already acquire a claim to payment of a commission if the reference to, or brokerage of, a property by an agent terminates in a signing—even if the agent did not facilitate or broker the letting or transaction process any further. Whenever an estate agent claims payment of a commission, he or she has to produce evidence—especially when the claim is disputed

- that an estate agent’s contract was signed that included a promise to pay a commission in case of success,
- that the brokerage activity, meaning brokering of an agreement or substantiation, actually took place,
- that a master contract, such as a deed or lease, was signed into effect,
- that there is a causal relation between the brokerage and the signing.

In the eyes of the legislature, the amount of the going commission is entirely independent of the material and time effort incurred by the estate agent. The commission is freely negotiated. In no case, however, must it be out of proportion with the service performed by the estate agent. An exemption in this regard is once again the brokerage of housing. Here, the legal regulations stipulate that the commission must not exceed 2 months’ rent, with VAT to be added. The basis for the calculation of the commission is usually the net rent. That said, service charge components that are not listed separately as recoverable costs in a given lease may by all means enter into the calculation of the commission.

3.3.1 Payment of the Estate Agent’s Fee

Which share of the commission after the completed transaction is paid by the seller and which by the buyer depends on the case at hand (for information about the payment of the commission in the brokerage of properties for rent, see Sect. 3.3.2). Another factor that tends to impact the amount of commission is the market cycle. In times and regions where supply exceeds the specific demand, owners tend to pay the agent’s commission. In times of surging demand, by contrast, buyers are usually prepared to pay the agent’s commission. Principally speaking, an estate agent may even be active for the buyer and seller side simultaneously, and charge a fee. This scenario is called “dual agency.” Since an estate agent normally has to represent the interest of his or her client, the rule in this case is that a person acting as a dual agent should take a neutral position. If the agent breaches the duty of neutrality, he or she will forfeit the claim to a commission from the party thereby put at a disadvantage.

3.3.2 Special Procedures for Payment of the Estate Agent’s Fee in the Brokerage of Properties for Rent

When it comes to the brokerage of properties for rent, Germany has legislation that specifies when an estate agent’s fees must be paid by a tenant and when they must be paid by a property owner or landlord. The legal framework for such situations is set out by the amended Tenancy Act (MietNovG), which came into force on 1 June 2015. The modified regulations have been described as introducing the “customer

principle.” The aim is to establish market principles in relation to estate agents’ fees, making the party that commissioned the agent responsible for paying the fees. According to the act, an estate agent may only charge, or accept, a fee for finding his or her client a property for rent if the agent and the client have signed a written brokerage contract. In such cases, the agent may only offer their client such properties as he or she has been exclusively commissioned to broker. This means that an estate agent is only permitted to act on behalf of a landlord or property owner once a brokerage contract has been signed with his or her apartment-seeking client. The estate agent is then prohibited from offering the client any properties that are already in his or her portfolio. Were the agent to do this, he or she would be committing a regulatory offence. Should the prospective tenant turn down an apartment offered by the estate agent, or should the landlord decline the tenant’s application, the estate agent is prohibited from offering the apartment to any of his or her other clients. One consequence of the amended Tenancy Act is that it will be the landlord of the apartment being let, or the property’s owner, who are required to pay the agent’s fees in a majority of cases.

4 Residential Lettings: Regulation of Rents

4.1 Regulation of Rents for New Leases

Increases in rents for newly signed leases for apartments and other residential spaces are subject to legal regulation from 1 June 2015. The basis for this regulation is the amended Tenancy Act (see Sect. 3.3.2). The new regulations can be described as a “rent cap” (Mietpreisbremse). According to Article 556d, Section 1 of the Civil Code, the contractually agreed rent for the new letting of an existing apartment may not exceed local comparable rents by more than 10 %. This restriction applies to the rent agreed in the initial lease agreement. Rent increases during the term of the lease, such as those in accordance with Article 557 (Increases in rent by agreement or law) or Article 559 (Increases in rent after modernization measures) of the Civil Code, are therefore permitted without restriction. If the rent paid by an apartment’s previous tenant already exceeded these levels, the higher rent will continue to be applied in accordance with grandfathering provisions, and the rent does not have to be reduced. However, this exception only applies if the previous rent is deemed appropriate and in accordance with the principles of the amended Tenancy Act. Rent increases that were made during the final year of the previous lease agreement are excluded from these grandfathering provisions.

If the agreed rent violates the rent cap, the lease agreement is, at least in part, invalid. Should the tenant believe that the rent specified in the lease agreement is unjustifiably high, he or she can lodge a complaint and demand that the rent be adjusted and any excess rent be refunded. The right to repayment of excess rent is limited to payments made or due after the tenant’s complaint has been received by the landlord. As long as the tenant pays his or her rent without challenging the amount, there is no basis upon which to demand repayment of excess rent

payments. Any complaint made by a tenant must be supported by factual evidence. The tenant has a right to request information in connection with their complaint in accordance with Article 556g, Section 3 of the Civil Code. This means that the tenant can demand that his or her landlord supplies all relevant data necessary to determine compliance with the rent cap. This data may include the amount of rent paid by the apartment's previous tenant, as well as details on the age and construction of the building. The landlord's duty of disclosure is limited to providing information in his or her possession. The landlord is not required to engage in extensive research.

The rent cap only applies in areas designated as having a shortage of housing. The exact areas and districts are determined by Germany's federal states. Article 556d, Section 2 of the Civil Code bestows each federal state with the power to designate the areas in which the rent cap will be applied for a period of five years. The designations cannot be arbitrary; they are linked to specified parameters. In each of the areas it must be clear that the supply of housing for rent to the population at suitable conditions is under serious threat. For instance, this is the case when an area's rents are increasing above and beyond the national average; when demand far outstrips the supply of vacant properties; or when an area's population is growing at a rate that exceeds new house and apartment building activity.

4.1.1 Exceptions and Special Provisions

Stepped and Indexed Rents

Article 557a, Section 4 of the Civil Code defines the types of rent increases in the form of stepped rents that are permitted. Stepped rents allow different levels of rent to be agreed upon for varying fixed periods of time. The respective rent, and rent increases, must be specified in monetary terms. Rents must remain unchanged for a period of at least one year. As specified in the amended Tenancy Act, the regulations described in Sect. 4.1 are to be applied to every stepped increase specified in the lease agreement. The decisive factor in determining what level of increase is allowed is the point in time at which the first payment of the new step is due in relation to the local comparable rent at the same point in time. Stepped rent agreements that were entered into prior to the introduction of the new legislation are excluded from the act's provisions.

It is also possible to link rents to the consumer price index (Preisindex für die Lebenshaltung aller privaten Haushalte) published by the Federal Statistical Office. In case of the so-called indexed rents, the rent cap (as explained in Sect. 4.1) only applies to the initial rent as detailed in Article 556d, Section 1 of the Civil Code. Subsequent rent increases are not covered by the legislation.

Exceptions from the Rent Cap

Newbuild apartments are fully excluded from the rent cap legislation according to Article 556d Sentence 1 of the Civil Code. Newbuilds are classed as any residential space not let and previously used prior to 1 October, 2014. Previous use includes space used by the property's owner or any commercial letting. Also excluded from

the amended legislation are apartments designated for temporary use, furnished rooms and social housing for people with urgent housing requirements. Student accommodation, residences for young people and commercial properties are also excluded.

The rent cap will also not apply to the first lease following an extensive modernization of a property. A modernization is classed as extensive when an apartment has been brought into a condition comparable to that of a newbuild, when the costs of the modernization are approximately one third of the costs for an equivalent newbuild or when essential parts of the property (such as heating, windows and energy consumption) have been improved.

4.2 Regulation of Rents for Existing Leases

The level of rent increases permitted under existing lease agreements is also restricted, as specified in Article 558, Section 3 of the Civil Code. In normal circumstances, rents can be increased by a maximum of 20 % within any three-year period. Germany's federal states have been able to designate areas with housing shortages since 2013. In these areas, landlords are limited to increasing rents for their existing tenants by at most 15 % within any three-year period.

4.3 Residential Lettings: Rent Increases Following Modernizations

4.3.1 Allocation for Modernizations

When a landlord or property owner carries out modernization measures, 11 % of the costs can be passed on to tenants per year in the form of rent increases (allocation for modernizations in accordance with Article 559 of the Civil Code). However, such an allocation is only permitted when the measures

- achieve long-term reductions in energy or water consumption,
- increase the utility value of the property,
- or sustainably improve the general conditions of the property.

As specified in Article 555c, Section 1 of the Civil Code, the landlord or property owner is required to inform his or her tenants of the modernization measures in writing three months before the measures are scheduled to begin. At this point, tenants also have to be informed of any subsequent rent increases and the future levels of their monthly rents. Once they have been informed, tenants have the right to extraordinary termination of their leases: a tenant is able to cancel his or her lease with two full month's notice. Otherwise, tenants are required to accept the modernization measures and any inconvenience they cause, except in cases where the measures would result in particular hardship for the tenant, the tenant's family or

members of the tenant's household. In such cases, special hardship provisions are included in the legislation.

4.3.2 Rent Cap and Modernizations

In accordance with Article 559 of the Civil Code, the costs of modernization measures can also be passed on to tenants in the way described above in those areas designated as having a shortage of housing, where the rent cap applies. The maximum permissible rent is set at 10 % above the local comparable rent, plus the 11 % modernization allocation per year. Even in cases where the modernization measures were carried out prior to a new lease agreement being signed, the landlord or property owner is allowed to pass the modernization costs on to the new tenant in the way described previously. However, when determining the local comparable rent, the original condition of the property is used as the benchmark in order to avoid pricing the modernization costs into the calculation twice. In addition, the modernization needs to have been carried out within the three years prior to the commencement of the lease.

5 Regulations and Laws Relating to the Notary Public

5.1 The Notary Public

In Germany, a notary public exercises the function of a so-called preventive legal review. One of the essential purposes of his or her activity is therefore to prevent or at least minimize future litigation (an activity referred to as non-contentious litigation or administration of the law). As already elaborated in Sect. 3.2.1, calling on a notary public will in and of itself constitute a certain impediment preventing precipitate or unreflected (purchase) decisions. In the case of property acquisitions, for instance, the notary public handles the legally required notarization: Certain contracts must be notarized in order to become legally effective. Rather than being limited to sales contracts, this requirement actually extends to certain brokerage contracts, too (see Sect. 3.2.1).

5.2 The Notarization

Aside from contracts for deed and the aforesaid brokerage contracts, notarization is also required for construction contracts, the execution and registration of a ground lease, as well as for the conveyance of condominium titles. In these cases, the notary public is not responsible for bringing about consensus between the contractual parties—in the case of the contract for deed, for instance, this is normally the estate agent's task. Not until all the contract-related details have been sorted out will the notary public come into the picture. With all the data submitted, the notary will draft the deed and forward it to all the stakeholders for review. It is also part of the role of the notary to brief the contractual parties on the legal consequences of the

contemplated transaction. The signature of the parties on the document made out by the notary public confirms that the subject of the contract does reflect the intention of the contracting parties.

The notarized contract of sale may also identify the brokerage commission or estate agent's fee, which is a particularly sensible thing to do from the agent's perspective. For it will secure the agent's commission in addition to the estate agent's contract. A notarized sales contract must principally list all provisions agreed on. Otherwise, it runs the risk of becoming null and void.

The original copy of the notarized document remains principally in the custody of the notary public, whereas the contractual parties receive notarized copies. The copy represents an identical copy of the original, except that it bears the notary's annotation that it matches the original. This attestation clause must state place and date of the issuance, and must bear the notary's seal or stamp and signature.

Once a contract for deed has been notarized, it must be executed. Among other things, payment must be transacted, and the application to the land registry must be filed in order to convey the plot or building into the purchaser's ownership (see Sect. 2.2.1 of this chapter).

6 Conclusion, and the German Situation Compared to that of Other Countries

Proper, organized, meticulous, in some aspects actually pedantic—and highly bureaucratic above all: This is more or less the way Germans are perceived abroad. The above elaborations on German land registry, cadastre regulations and laws well as on the laws governing German estate agents and notaries public merely outline the subject—as a comprehensive account would clearly go beyond the scope and volume of this anthology. Yet even this fleeting glance at the subject matter suggests that Germany fully deserves the image as a highly regulated and bureaucratic country in this as in other respects. This impression needs to be qualified, though, as you could arguably say as much about the systems of other countries. Not least, this is one of the factors that makes the legal quality of the German land registers comparable with most land registers in continental Europe and Scandinavia.

Germany's notarization system is admittedly highly regulated, too. After all, the notary public will play a definitive role in three key stages of the transaction process: drafting the deed, conveying the property, and transferring payment. This is legally required, and again, you could say as much about other countries: In France, for instance, the notary public plays a role quite similar.

All things considered, German estate agents are actually less strictly regulated than agents in other countries. The legal impediments for an activity as estate agent are negligible in Germany. Neither are the performance requirements very high. For the sake of comparison: In Sweden, for one, the estate agent has an extremely dominant position during the transaction process. He or she manages virtually the

entire process, and actually doubles as notary public. Accordingly, the performance requirements for professional estate agents are rather high in Sweden.

It is safe to say: The role and functionality of German brokerage laws and regulations have well withstood the test of time. Better yet, the trade of estate agents has moreover been undergoing a shift toward increasing professionalization in recent years.

For the first time in Germany, the new Tenancy Act now regulates rent increases for new leases. At the time of writing (May 2015), it is not possible to accurately predict which German regions will be covered by the new regulations. What is already clear is that they will apply in Berlin and it is very likely that Germany's other big cities will also be affected.

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Legal Framework for Real Estate Asset Classes

Clemens Just

Abstract

Investments in real estate in Germany can be basically differentiated between direct and indirect investments. While the former will usually be structured as a straightforward single-object or portfolio transaction, the latter may take a variety of legal forms. Most important, German law offers stock corporations, G-REITs and real estate investment funds as potentially different legal forms for investments, which are analyzed in some detail below.

Keywords

Stock Corporation • REITs • Closed-end funds • Open-end funds

1 Introduction

An investment in German real estate may take a variety of legal forms. Although legal literature suggests almost a plethora of different structures, one can easily draw the line between a direct and an indirect investment. The former enables an acquisition of the real estate in question either by an asset deal or a share deal (of the holding company). The latter comprises investments in special real estate vehicles which are often tax optimized. Given the complexity and the economic importance of indirect real estate investments, the following article focuses on these investments and their various legal implications (Sect. 3).

However, prior to dealing with different structures of indirect real estate investments, direct investments are briefly discussed (Sect. 2).

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2 Direct Investments

The legal structure of a direct investment depends on the underlying asset(s) and the envisaged transaction. If the real estate is to be transferred as such, ownership will be transferred directly by way of a notarized real estate sale and transfer agreement. In addition to the purchase price, the investor needs to factor in costs for the notarization (pursuant to a statutory fee order depending on the value of the transaction) and further costs involving the registration of securities may incur, in particular a priority notice (*Vormerkung*) as well as costs for the registration with the competent land register. Ownership of the real estate only passes once the new owner has been registered with the land register. In the interim period, a priority notice secures the position of the buyer. The registration procedure will be carried out by a notary (see Schick 2016). Subject to the workload of the land register, the actual registration may take a few weeks.

By comparison, real estate may also be held by a holding company. It may be in the interest of the buyer, e.g. for tax reasons, to acquire this holding company outright and it will thus enter into a share purchase and transfer agreement regarding all shares of the holding company. More common in practice the buyer will purchase 94 % and 6 % of those shares through acquisition entities so as to avoid triggering real estate transfer tax. Depending on the legal form of the holding company, a notarization of such an agreement may be required, e.g. for a German limited liability company (*GmbH*), but not for a German stock corporation (*Aktiengesellschaft*). Once these shares have been effectively transferred, which may be delayed by conditions precedent such as merger control clearances in the underlying agreement, ownership of the real estate passes effectively to the buyer.

This basic legal structure may become more complex if not one property is to be transferred, but a portfolio comprising several assets. On a time scale, such a portfolio transaction can be more challenging as the usual due diligence requires more time and the assessment of the value can be more complicated, including portfolio deductions. In legal practice, both asset deal and share deal transactions are a well-established market standard in Germany and should not cause legal problems once the business terms have been agreed to.

3 Indirect Investments

For various reasons, an investor may prefer an indirect investment in real estate over a direct one, e.g. to diversify its real estate risk or to optimize the tax structure. Furthermore, a participation in a special real estate vehicle may be more fungible, enabling investments to be better sold off again. This enhances an investor's flexibility and the chance to react to deteriorating market conditions. It should be noted that an investor is free to make indirect investments also through foreign legal entities, which themselves have German real estate in their portfolio. A Luxembourg, UK or US law governed entity may invest in German real estate, just as a German law governed company is free to focus on foreign real estate.

The following chapters explain the basic structure of indirect investments through entities under German law.

3.1 German Stock Corporation

Significant real estate is held in Germany by stock corporations (*Aktiengesellschaften—AG*), either by stock corporations dealing exclusively with real estate (*Immobilienaktiengesellschaften*) or general stock corporations with other business objectives which also own real estate. An investor may therefore be interested to invest in an *AG*. Legally, those entities are primarily governed by the German Stock Corporation Act (*Aktiengesetz*).

3.1.1 General Structure

A German stock corporation may list its shares on a stock exchange, but can also remain a private company and thus be less regulated. A stock corporation requires a registration with the competent commercial register, in particular a statutory capital minimum of 50,000 euros must be paid in. Unlike the structure in the US or the UK, a German stock corporation has two boards, namely a management board (*Vorstand*) and a supervisory board (*Aufsichtsrat*). The supervisory board is elected by the shareholders, but may not manage the company. Basic rights and obligations of the supervisory board include controlling the management, the appointment and dismissal of the management board members and the representation of the company *vis-à-vis* the management board. To be able to fulfil these obligations, the supervisory board has the right to request detailed information and is entitled to inspect all corporate books and records.

The management board, which is appointed and supervised by the supervisory board, manages the corporation with certain discretionary powers. Consequently, the shareholders have no direct influence on the management of the company; the management board plays the most important role in the day-to-day corporate governance of a stock corporation. However, the shareholders can exercise their influence among other rights by having the court review shareholders resolutions. Furthermore, minority shareholders have information and audit rights and may even cause the management to claim damages from the individual board members in case of negligence.

Such minority shareholder rights were restricted on the basis of the new squeeze-out implemented in the German Transformation Act (*Umwandlungsgesetz*). Such minority shareholders can now be deprived of their shares by the majority shareholder, provided that such squeeze-out is executed in connection with a merger and the minority shareholders own shares of less than 10 % jointly.

3.1.2 Investments in Stock Corporations

Since a stock corporation may be listed on a regulated market or may be privately held, an investment in a stock corporation may be either an acquisition of publicly traded shares or of non-listed shares. Neither method of purchase necessitates the

involvement of a German notary. In practice, a major real estate stock corporation is a publicly listed one, the investment in which may require more attention than a standardized stock purchase and transfer agreement due to the fact that it is object to more regulations as a publicly listed company. If certain thresholds are exceeded or the ownership falls below those thresholds, namely 3 %, 5 %, 10 %, 15 %, 20 %, 25 %, 30 %, 50 % or 75 % of voting rights in the company, a notification to the company must be made, thus enhancing transparency shall be enhanced for participants on the capital markets. If these requirements of the German Securities Trading Act (*Wertpapierhandelsgesetz*) are not met, the German Federal Supervisory Authority (*BaFin*) may impose a fine and the voting rights of the shares may even be blocked from exercising their voting rights.

If the investment exceeds a threshold of at least 30 % of the shares in a publicly listed stock corporation, a takeover offer (*Übernahmeangebot*) pursuant to the provisions of the German Securities Acquisition and Takeover Act (*Wertpapiererwerbs- und Übernahmegesetz*) is necessary. This takeover offer requires certain information to enable the shareholder to make a well-founded decision for accepting or declining the offer, such as further information on the buyer, its strategy or conditions to the offer. The price for the offer is linked to the stock-market price of the target. The management and the supervisory board are required to present an opinion regarding the offer to the shareholders. The procedure is intensely regulated and supervised by *BaFin*. Failure to comply with the provisions may lead to fines and the blocking of voting rights.

3.2 Real Estate Investment Trusts

After intensive political discussions, Germany implemented a regime on Real Estate Investment Trusts (REITs), also referred to as G-REITs. The German REIT Act dated May 28, 2007 came into effect retrospectively as of January 1, 2007 and was amended on June 22, 2011 at last. G-REITs are intended to offer a tax-privileged mobilization of real estate of German companies while improving the equity ratio of real estate holding companies. In the beginning, only a few companies were registered as G-REITs. This was predominantly related to the financial crisis which coincided with the implementation of the G-REIT legislation and which severely impeded public offerings. In addition, the law was not clearly drafted by legislators and this led to confusion as to how the law should be implemented. In the meantime, the legislator has also reconsidered certain legal inconsistencies, such as the extension of the exit tax to enable further G-REITs. Until the end of 2014 only a handful of G-REITs have still been registered. Due to the implementation of the Alternative Investment Funds Managers Directive (2011/61/EU), also referred to as AIFM-Directive, it may be less attractive to use a G-REIT structure, because, *inter alia*, not only open-end and closed-end funds will be subject to stricter rules, but also REITs (see below under Sect. 3.3.1). However, the question whether the AIFM-Directive applies to G-REITs will be

decided by *BaFin* on a case by case basis, whereby each structure should be considered on its own merits based on substance not on form. It remains to be seen whether the use of G-REITs will increase in popularity in the near future.

3.2.1 General Structure

A G-REIT is basically a German stock corporation with certain legal particularities. Investors can thus indirectly invest in real estate through a REIT, which is exempted from German income tax (*Körperschaftsteuer*) and trade income tax (*Gewerbesteuer*). The German REIT Act states that residential real estate, which is in particular used for private rent and was built prior to January 1, 2007, is excluded from investments of a G-REIT. In an international context, this is a German anomaly and can only be explained as the result of a political compromise.

Dividends will be subject to tax at the level of the investor, but (generally) are not taxed at the level of the G-REIT itself. In order to receive tax privileges the G-REIT has to comply with certain legal requirements, in particular a G-REIT has to distribute at least 90 % of its annual profits. Furthermore, a G-REIT must have its business seat in Germany and its shares must be permitted for trading at an organized market of a Member State of the European Union or at an organized market of a Member State of the European Economic Area. The nominal share capital must amount to 15 million euros and all shares must be vested with voting powers. The business object must be related to real estate. Trading of real estate is restricted.

At least 75 % of the assets of a G-REIT must consist of real estate at the end of the business year. Furthermore, at the end of the business year, at least 75 % of the net sales must result from the lease or sale of immovable assets. Non gratuitous secondary business for third parties must not be rendered by G-REITs, but must for tax reasons be rendered by REIT service companies.

At the end of the business year the equity accounted in the individual and consolidated financial statements of the G-REIT respectively must not fall below 45 % of the value with which the immovable assets are accounted for in the financial statements. A shortfall below that figure during the business year is, however, not detrimental.

3.2.2 Investments into G-REITs

The German legislator has stipulated that at the time the shares of the G-REIT are permitted for trading at a stock exchange, 25 % of the shares must be in free float. Thereafter, there must be a minimum of 15 % of the shares in free float. No investor may directly hold more than 10 % of the shares in a G-REIT. Shares held for account of third parties count as own shares. The same applies for an investor holding shares which grant it more than 10 % of the voting rights in a G-REIT. However, an investor exceeding this threshold will not be deprived of its dividend or voting rights. Neither will the tax advantage cease to apply immediately. Instead, the investor will only be able to exercise its rights in a way an investor holding 10 % of the shares would be able to exercise. The tax advantages will only cease to apply if the threshold is exceeded for 3 successive years.

As a REIT is not taxed on the level of the company but at the shareholders' level, a G-REIT has to distribute at least 90 % of its annual profits to its shareholders at the end of each business year. 50 % of the capital gains resulting from the sale of real estate may be disregarded in that respect for they may be placed into reserves that have in principle to be dissolved within the next 2 years. In order to determine the annual net profit, scheduled depreciations are permitted in constant annual installments only.

Notification requirements for an investment in a G-REIT apply as with any listed German stock corporation. Given that an investor may not directly hold more than 10 % of the shares in a G-REIT, the thresholds of 3 % and 5 % are of particular interest.

G-REITs are not yet so diversified, such as hotels only or specific commercial real estate, so that their investment object can fall into various real estate categories.

3.2.3 Further Development

Unlike the US REIT market, which was established in 1960 and has become a successful investment opportunity a G-REIT is still a fairly new vehicle similar to the UK-REIT. In the aftermath of the financial crisis, initial public offerings were virtually not existent and consequently there have not been many floatings of G-REITs. Despite some pessimistic forecasts on this investment segment, a REIT is an internationally accepted and well-known investment vehicle which has become a part of real estate investments in Germany, but not as much as expected prior its implementation. The German legislator has also tackled certain issues and implemented changes to the current legal REIT regime, such as the extension of the exit tax for tax privileged conversions into a G-REIT. However, the exit tax is only granted for disposals in the period between January 1, 2007 and December 31, 2009. Whether a G-REIT falls within the scope of the AIFM-Directive was intensely discussed in public. This is due to the fact that G-REITs cannot only acquire and manage real estate, but also carry out other functions, such as own operational activity. As indicated above (see Sect. 3.2 end), *BaFin* has taken a flexible approach on that, in line with that of the EU Commission, which should render sufficient flexibility and clarity to the market.

Thus, from a legal perspective, there are no principal impediments for investments in G-REITs.

3.3 Real Estate Investment Funds

3.3.1 The New KAGB

On July 7, 2013, the new German Capital Investment Act (*KAGB*) came into force, implementing the AIFM-Directive. For the first time, all alternative investment funds are covered and regulated by one act. Furthermore, the *KAGB* integrates the UCITS-Directive [The Undertakings for Collective Investment in Transferable Securities Directive, (2009/41/EU)] by repealing of the German Investment Act (*Investmentgesetz*). Investment models others than UCITS or AIF funds henceforth

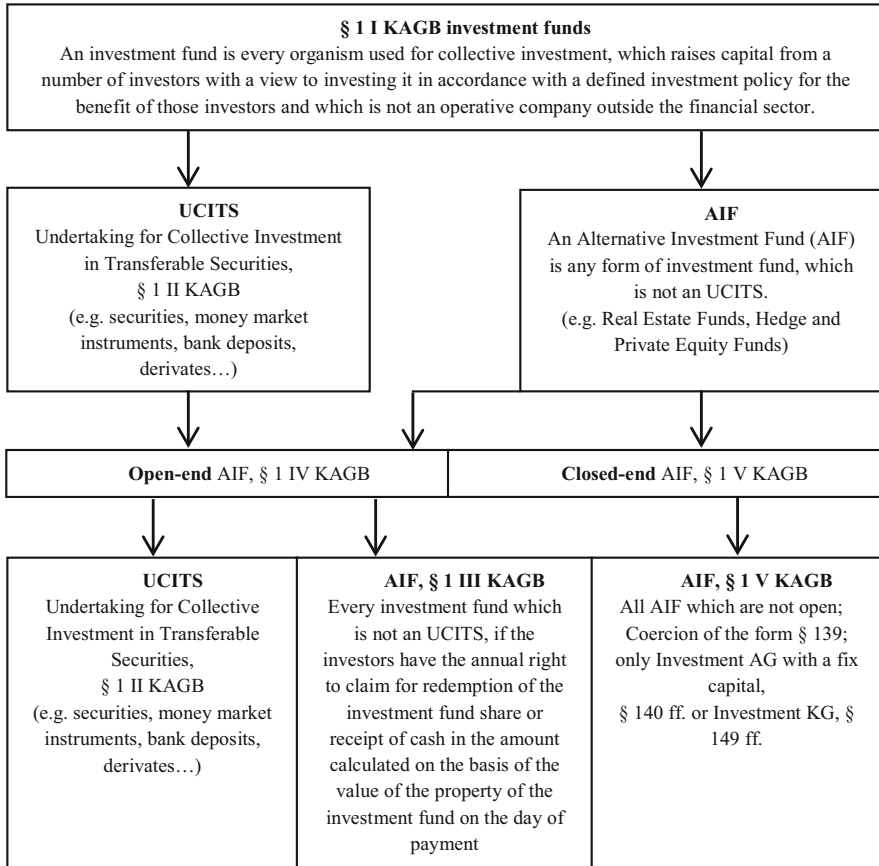


Fig. 1 The general structure of regulating real estate funds. *Source:* Own representation

will be inadmissible and qualify as a prohibited investment business in order to protect investors and the financial market even better (Fig. 1).

Speaking about real estate funds, one can distinguish between two categories: Open-end funds and Closed-end funds. Open-end funds fall within the scope of the umbrella term of Open-AIF; i.e. the investor has an annual claim for redemption of the investment fund assets. Closed-end funds on the other hand—which fall under the umbrella term of Closed-AIF—invest long-term into a specifically defined object without the above mentioned flexible claim for redemption.

3.3.2 Open-End Funds

Open-end real estate funds, being alternative investment funds, are subject to the regulations of the *KAGB*. Open-end real estate funds can still be structured both as open-end public funds as well as open-end special funds. They allow both major and small investors to invest in real estate, regardless of the investment amount and

the individual investment period. An open-end real estate fund is a special real estate investment fund (*Grundstückssondervermögen*), which has to be allocated to a specific number of real estate, depending on the fund size. Open-end real estate funds buy mainly commercial real estate (mostly office-buildings or retail real estate) and try to generate revenues by rental income and thus increasing the value of the properties.

The fund's assets are managed by a capital management company (*Kapitalverwaltungsgesellschaft—KVG*). Such *KVG* is classified as a special credit institution and regulated by *BaFin*. The investment fund (*Sondervermögen*) itself does not have legal capacity of its own, but is represented by the *KVG*.

General Structure of Open-End Real Estate Funds

By repealing the *InvG* and replacing it by the *KAGB*, the legislator also substituted the former capital investment company (*Kapitalanlagegesellschaft—KAG*) by the uniform term capital management company (*KVG*). Such *KVG* can be organized as an internal and external one: an external one is appointed by or on behalf of the investment fund and is on that basis responsible for managing the investment fund. An internal one takes over the portfolio and risk management as part of the investment fund itself (e.g. in the case of a *GmbH & Co. KG*, the internal *KVG* can be represented by the general partners). In practice, an external *KVG* is likely to take preference in the future since an investment fund must always be managed by only one *KVG*, but one *KVG* can manage several investment funds. The share capital of an external *KVG* must not fall below 125,000 euros; the share capital of an internal *KVG* not under 300,000 euros. In addition, the business operation of a *KVG* requires approval by *BaFin*.

In the future open-end public real estate funds (now also termed as open-end public-AIF) can only be established in the form of the investment fund. In an open-end public real estate fund, investors have the right to redeem shares at least once a year. Investment funds can be established as a public-AIF only within a fiduciary relationship.

An investment fund may invest in real estate already constructed, construction in process and in non-constructed, insofar as the latter is intended for immediate construction and use. In addition, the holding of rights to building lease (*Erbbaurecht*) and usufruct (*Nießbrauch*), shareholdings in real estate companies and assets for liquidation management (e.g. bank deposits, REIT shares and derivatives for hedging purposes) are possible. A maximum of 30 % of the value of the investment fund of the real estate fund may be invested in countries abroad that are not part of the European Economic Area. Real estate investment funds are evaluated by external evaluators. Prior to the implementation of the AIFM-Directive, this evaluation of real estate and real estate companies was carried out by a single expert, not belonging to an expert committee formed by the fund; by contrast, the regular sale review was made by the expert committee itself. Under the new responsible *KAGB* there are now two independent external evaluators. These evaluators must carry out on-site inspections and evaluate the portfolio every

12 months. Real estate and shareholdings in a real estate company are evaluated each within a time-period of 3 months prior to each date of issue.

Investments in Open-End Funds

When investing in open-end real estate funds, the investor does not acquire a stake in the real estate. Therefore, it is not a co-owner, but it finances (proportionately) the purchase of one or more pieces of real estates and participates, depending on the level of its investment, in the success of the investment. The assets of the real estate fund are managed by a specialized AIF-KVG, which has the necessary knowledge and can provide effective and efficient asset management. The total holdings of the real estate are evaluated 3 months before any possible share issuance, but at least once a year. The required minimum liquidity of 5 % of the value of the investment fund shall ensure that the AIF-KVG, despite the investment opportunities in illiquid asset classes, has sufficient liquidity to meet the requests for return of investors in the customary order and pays its share of the investment fund. If the required minimum liquidity is not met, the AIF-KVG must, if necessary, suspend the redemption of shares temporarily to restore it. Furthermore, only 49 % of its investment fund may be invested in other assets than real estate in order to prevent the AIF-KVG from managing a real estate fund with no real estate. As an instrument of collective investments, open-end real estate funds may collect funds from a variety of investors and then invest collectively. As a result, even a small investor may invest in real estate. In addition, the possibility to exit from the investment on short notice can be very attractive to investors.

Further Development

Surprisingly, when first discussing the implementation of the AIFM-Directive, it seemed that open-end real estate funds might be abolished completely, in particular due to an inconsistency between short-term redemption options of the shares and the long-term investment and illiquidity of real estate investments. Ultimately, the draft was revised so that open-end real estate funds still are an investment alternative under the new *KAGB*. Open-end real estate funds benefit from long-term leases of commercial real estate. The contracts are typically linked to the development of consumer prices. Thus, the funds also provide solid protection against inflation, whereas the regulations of the *KAGB* primarily offer protection to the investor. However, as the administrative effort for an AIF increases, it remains to be seen how the market reacts.

3.3.3 Closed-End Funds

Unlike stocks or open-end funds, closed-end funds do not aim to finance a temporally unlimited and unrestricted project. Rather, closed-end funds typically deal with a project- and real estate-related, temporary investment mainly in material assets such as real estate. Since July 22, 2013 both the investment act (*Vermögensanlagegesetz*) and the newly introduced *KAGB* apply to initiators of closed-end real estate funds, depending on whether the form of investment can be qualified as a term of investment assets (§ 1(1) *KAGB*). For investors a closed-end

real estate fund (closed-end public AIF) now provides even more protection. For initiators, however, additional regulations may lead to new problems.

General Structure

Closed-end real estate funds can be characterized by the fact that the investment is only possible during a specified period, usually until the determined investment sum has been reached. After that, the fund will be closed and the admission of other investors is no longer possible. The individual investor takes an entrepreneurial risk.

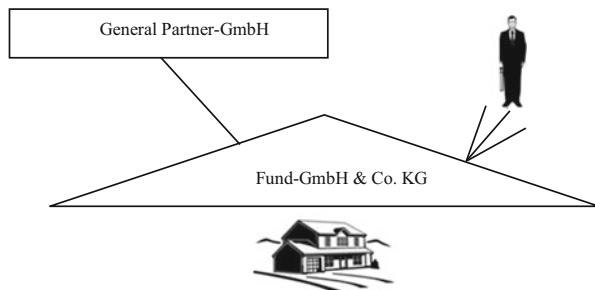
Closed-end real estate funds are usually organized as a German limited partnership in the form of a *GmbH & Co. KG*, i.e. the general partner itself has a limited liability. By purchasing partnership interests, the investor becomes a limited partner and thus co-entrepreneur from a tax and legal perspective. The partnership interests of a closed-end fund are issued at a pre-determined price, called the minimum investment amount. Normally, it lies between 5000 euros and 25,000 euros (Fig. 2).

In order to spread the risk, the fund may also invest in other funds focusing on real estate (fund-of-fund construction). Such cascade between these funds shall minimize the risk of investments.

By law, the *GmbH & Co. KG* shall be represented by its general partner, the *GmbH*. However, to avoid tax disadvantages (see Krämer 2016), the partnership agreement may empower a limited partner to represent the fund. The main decision making body is the assembly of partners, which shall decide on all acts which exceed the ordinary course of business unless a special supervisory board (*Aufsichtsrat* or *Beirat*) has been implemented for this.

After the *KAGB*, which governs investment in closed-end funds, came into force, the German Capital Investment Act (*Vermögensanlagegesetz*) continues to be applicable alongside the *KAGB*, if the real estate fund does not qualify as an alternative investment fund. In the case of closed-end investment funds, which can be either UCITS or AIFs, it is important to differentiate between domestic closed-end public AIFs and domestic closed-end special-AIFs. Special-AIFs are only accessible to a specific group of investors (e.g. banks, insurance companies, semi-professional investors, etc.). For a public-AIF the *KAGB* offers an exhaustive list of assets, such as material assets e.g. real estate, including forests and

Fig. 2 A simplified presentation of the general structure of a closed-end fund



agricultural land, into which may be invested. A securities prospectus will need to be published for closed-end fund unless specific exemptions apply.

Such a prospectus shall contain all relevant information which is necessary for the investor to make a solid investment decision. The prospectus itself must be approved by *BaFin*. However, *BaFin* only reviews the prospectus insofar as the prospectus includes all necessary information and whether there are obvious contradictions in it. Unlike the prospectus of a listed stock corporation, the sales prospectus is therefore only reviewed in the light of its coherence, not whether the statements are true, correct or consistent.

Partnership interests in closed-end funds can also be traded in the closed-end funds trading markets primarily in Hamburg, Hannover and Munich (*Zweitmarktboerse*). However, these markets are not as tradable as a stock exchange.

Investments into Closed-End Funds

Investors can either become limited partners to the fund or invest via a trustee or there can be a mixture of both structures. The precise investment structure is laid down in the partnership agreement (*Gesellschaftsvertrag*) of the fund and its trustee agreement (*Treuhandvertrag*). To ensure that the investments are only used in compliance with the investment targets of the fund, a special trustee is regularly appointed to supervise and release the investments (*Mittelverwendungskontrolleur*). All three main agreements, the partnership agreement, the trustee agreement and the trustee agreement on investments are made transparent in the prospectus so that an investor may assess its legal and economic up- and downsides. The closed-end fund will also have entered into further service agreements regarding the concept and foundation of the fund. In practice, all relevant obligations and rights that are derived from these service agreements terminate with the finalization of the prospectus.

In particular, large initiators often have main distribution companies, which themselves have concluded sub-distribution agreements with other companies. The main distribution agreement stipulates the main obligations of the distribution company, the compensation and the protection of customers.

To reduce an investor's risk of insufficient capital being raised, there are often guarantees from companies in the sphere of the fund. Usually, such a guarantee covers the difference between envisaged and the actual raised capital.

Further Development

In the light of implementing European legislation, in particular the MiFID (Markets in Financial Instruments Directive), it was intensely discussed whether German closed-end funds should be regulated more tightly. Throughout the implementation of the *KAGB* closed-end funds are subject to strict regulations.

The *KAGB* offers a wide scope due to the implementation of a new, substantive fund concept. It includes all kinds of investment funds and the forms of organization regarding both open-end and closed-end funds. Yet, the vehicle as such will in all likelihood not be affected.

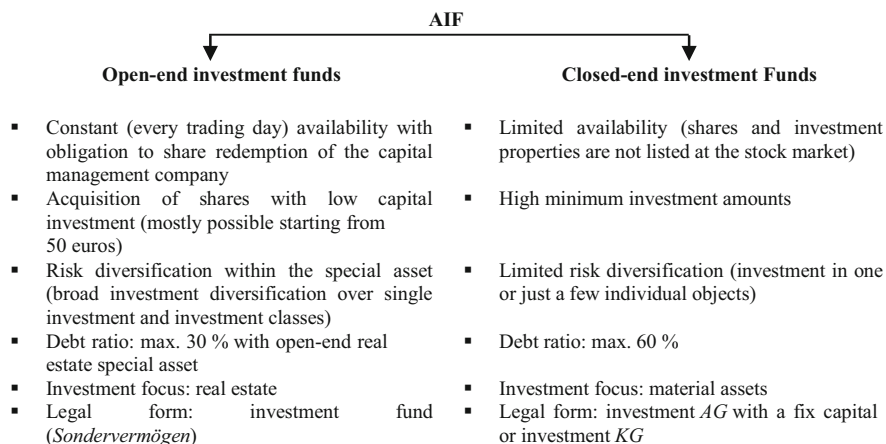


Fig. 3 Open-end and closed-end investment funds. *Source:* Own representation

Looking ahead, the distribution of interests in the funds will be stricter regulated and the drafting of a prospectus may change, e.g. costs for investors and commissions must be more transparent. The comprehensive regulation resulting from the implementation of the *KAGB* and the legal uncertainty in various legal single questions about the requirements concerning closed-end funds, resulted in a great reluctance by market participants and a significant drop in demand from private investors. This development is not about to change in near future. However, investors can also benefit from these changes. The aim of the implementation of the *KAGB* is the protection of the financial market and investors—it contains a comprehensive regulation of closed-end funds as well as regulatory guidelines for any form of distribution.

Closed-End and Open-End Real Estate Fund in Comparison (Fig. 3)

3.4 Conclusion

Real estate investments in Germany can be basically differentiated between direct and indirect investments. While direct investments require (usually) the involvement of a German notary and can be structured as portfolio or single-object transactions, German law offers a variety of different indirect real estate investment opportunities. From a legal perspective, such investments differ considerably. While an investor becomes a shareholder of a real estate stock corporation and of a real estate investment stock corporation, an investor may also be free to buy interests in closed-end and open-end funds. Both are rather German specific investments, which are very worth considering. It remains to be seen to what extent the German REITs market may thrive in the near future. Implemented shortly

before the financial crisis occurred, the German REITs regime has not yet attracted a lot of companies, but there is some glimmer of hope on the horizon.

Given the abundance and idiosyncrasies of German real estate investments, investors should consider the up- and downsides very carefully and factor in potential legal obstacles before making their investment decision.

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Valuation of Real Estate in Germany

Dietmar Meister and Kerstin Dressel

Abstract

When evaluating real estate in Germany, German valuation experts often apply the German valuation standards. These conform to international valuation practice in many—but not all—respects. In this chapter we will identify what is specific about German valuation standards and introduce the German valuation methods: sales comparison approach, income approach and cost approach. As data availability is the main challenge for each valuation, this chapter will also include information on where to find relevant market data.

Keywords

Market value • Valuation guidelines • International comparison

1 German Valuation Standards

Depending on the purpose of the valuation, there are different German valuation standards. The most important standards, which are usually applied for determining the market value, are presented in this section of the book. These standards comprise the following acts, principles and regulations:

The definition for value is set down in the German Federal Building Code [*Baugesetzbuch* (BauGB)]. In addition, two sets of regulations stipulate how to appraise real estate: the German Property Valuation Ordinance [*Immobilienwertermittlungsverordnung* (ImmoWertV)] is a federal ordinance setting out standardized principles for determining market value of real estate in Germany. The German Valuation Guidelines [*Wertermittlungsrichtlinien* (WertR

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2006)] are a more detailed set of instructions for carrying out real estate valuations in line with the principles of ImmoWertV.

WertR was already partly replaced by Sachwertrichtlinie (SW-RL) in 2012 and Vergleichswertrichtlinie (VW-RL) in 2014 and will be completely replaced once the Ertragswertrichtlinie (EW-RL) will become effective. It is planned that these three different RL will then be combined to one document.

These German valuation standards must be adhered to by municipal “panels of experts” (Sect. 3, Gutachterausschuss) and in valuations conducted for courts or other public authorities. In all other cases, the German valuation standards are not legally binding, and international valuation standards and methods can be applied. Nevertheless, the German valuation standards represent common valuation practice in Germany, by German appraisers.

2 Value Definitions

In this subsection, we provide translations of the most commonly used definitions of value.

2.1 Market Value [Verkehrswert]

Market value according to with § 194 BauGB is defined as follows:

The standardized market value is defined as the price which would have been agreed in the normal course of business at the time the assessment was made, taking into account the existing legal circumstances and actual characteristics, general condition and location of the property or other subject of assessment, without consideration of any extraordinary or personal circumstances.

When determining market value in line with § 194 BauGB, the valuation is subject to the provisions of the ImmoWertV and the WertR. The market value definition is in line with that of the International Valuation Standard Committee.

2.2 Mortgage Lending Value [Beleihungswert]

Mortgage lending value is defined in § 16 (2) PfandBG, as:

The mortgage lending value must not exceed the value resulting from a prudent assessment of the future marketability of a property, taking into account the long-term, sustainable characteristics of the property, the normal regional market conditions, as well as the current and possible alternative uses. Speculative elements must not be taken into consideration. The mortgage lending value must not exceed a market value calculated in a transparent manner and in accordance with a recognized valuation method.

Mortgage lending value is determined in accordance with the BelWertV [“Beleihungswertermittlungsverordnung”: Regulation for the Determination of

Mortgage Lending Value] dated 12 May 2006. In order to determine the mortgage lending value of a property, the income value and the depreciated replacement cost value of the property shall be calculated separately, pursuant to § 4 BelWertV (“two-pillar principle”). The definition of mortgage lending value reflects a more conservative valuation approach than the definition of market value.

2.3 Investment Value [Investitionswert]

Investment value or worth is defined in the International Valuation Standards (IVS 2013) as follows:

Investment value is the value of an asset to the owner or a prospective owner for individual investment or operational objectives.

The investment value may differ from the market value, as this is an entity-specific basis for value and special interests of a given investor are reflected in the investment value.

3 Market Transparency Through the Boards of Expert Appraisers

In addition to defining market value, the German Federal Building Code calls for the establishment of a board of expert appraisers to monitor and consolidate data on land prices (§ 192 BauGB). This board of expert valuers is supported by local panels of experts, who are responsible for collecting and analyzing data, publishing statistics and carrying out valuations (§ 193 BauGB).

These local panels of experts, called *Gutachterausschuss*, publish consolidated data on real estate transactions in specific cities or regions and are therefore important contacts and sources of data for valuers. Local panels of experts can generally be reached through municipal authorities or cadastral offices. An internet search using the term “Gutachterausschuss” or “Gutachterausschuss für Grundstückswerte” and the name of the town or city usually yields the relevant contact information, see <http://www.gutachterausschuesse-online.de>.

The significance of the Gutachterausschuss to appraisers arises from the fact that data on individual transactions in Germany are protected by privacy laws and are not automatically published. Without personal involvement or personal contacts, it can be impossible to obtain critical information about relevant sales.

The local Gutachterausschuss, however, has access to all sales contracts in its geographic area and makes anonymous and consolidated data available to the public, thus providing all appraisers with a common, objective basis for information. In practice, most valuations in Germany are based on rather limited information on specific transactions, market reports published by market players (e.g. large brokers) and data from the local Gutachterausschuss.

3.1 Collection and Analysis of Data

The Gutachterausschuss receives copies of all sale and purchase agreements in its geographic area and sends out questionnaires on the underlying transaction details. By analyzing the resulting data, the Gutachterausschuss is able to provide the following information:

- Average land values per square meter of undeveloped land for different uses (as zoned) and locations
- Conversion factors for land values with different density or plot ratios;
- Gross property yields for different usage types, especially for multi-family houses, mixed-use buildings and commercial buildings
- Comparable factors based on rental income (e.g. multipliers) or square meter-prices.

When analyzing the information included in the sale and purchase agreements and in the questionnaires, the Gutachterausschuss usually applies the valuation methodologies described in ImmoWertV and WertR respectively SW-RL and VW-RL to derive the parameters listed above. Hence, these data can be used for appraising properties according to German valuation standards, though.

3.2 Publications

The findings of the board of expert appraisers are usually published annually in market reports of the respective board and can be purchased. In some cases, mid-year or quarterly developments will also be published. In line with privacy laws, information on individual transactions can be purchased in anonymized form—that is, without revealing the specific address, seller or buyer. It is difficult to draw conclusions from this information regarding specific transactions (see also Voigtländer 2016).

The information available from the Gutachterausschuss may differ in quantity and quality from one locality to another, as market activity and the number of current transactions in specific real estate markets varies.

3.3 Valuation

According to § 193 of the BauGB, the panel of experts performs real estate valuations as required by public authorities—for example to determine compensation payments arising from compulsory sale for purposes of public utility. As this is not the main focus of the book, we will not explore this aspect in more detail.

4 Valuations in Line with the German Federal Ordinance for Property Valuation

4.1 Introduction

All valuations refer to a certain valuation date and reflect the market situation at this valuation date. They may, however, also consider likely developments in the foreseeable future. The valuation date may differ from but is usually identical with the “quality date”—the quality date being the date when the state of the property was assessed. According to § 4 (2) ImmoWertV (Immobilien-Wertermittlungsverordnung), the main characteristics of a property which are relevant for valuation are:

- Location of the property
- State of development
- Property type (information provided in zoning plan)
- Land use intensity (information provided in zoning plan)
- Title and encumbrances (information provided in land registry, registry of public land charges or contracts/agreements)
- Tax obligations of duties (information provided by public authorities)
- Others (e.g. current usage, land area, constructional systems, building age etc.)

Most of these characteristics are not peculiar to the German market. In the following, we will therefore focus on the German valuation approaches and the market data needed to conduct valuations in Germany.

In order to carry out a valuation, it is necessary to have access to the relevant market data. Consequently, appraisers should use the valuation methodology for which they have the most reliable market data. In the following, we will describe the accessibility of market data necessary for carrying out valuations in accordance with the ImmoWertV. In addition, we will introduce the German valuation approaches.

4.2 Data Required

As already mentioned above, we will focus on the required market data. Some of the relevant market data for a property valuation in line with German standards is available from the respective *Gutachterausschuss*. The information published by these panels of experts is based on the analysis of sales contracts. Further guidance is included in the WertR, SW-RL and VW-RL.

The information in the WertR is very general and is not updated regularly. Therefore, market data made available by the local panels of experts or other market players is preferred when applying the income approach. Nevertheless, the SW-RL includes information on standard construction costs in its Appendix

Research data required			
Source	Comparison approach	Income approach	Cost approach
Gutachterausschuss (panel of experts)	Average land values	Property yield	Market adjustment
	Conversion factors (e.g. due to differing plot ratio or plot size)		
	Indices (e.g. for land values, condos, single family houses)		
	Comparable factors (based on rental income or square meter space)		
German regulations for valuation	Conversion factor (due to differing plot ratios)	Non-recoverable costs (standardized costs)	Standard construction costs
		Total useful life	Total useful life
Others - Brokers/Banks - Research institutes - Cities/Chamber of commerce/Economic Development - Statistical office	Further Transaction data/sales offers	Further market data	Indices
		Market rents	Analysis of construction costs published by the chamber of architects
		Turn over to analyze lease-up periods	
		Vacancy rate to determine void risk allowance	

Fig. 1 Resources for relevant market data. *Source:* Ernst & Young

1 which are commonly used when applying the cost approach and to determine depreciated replacement cost values.

As the data provided by local panels of experts is usually published only once a year, market information provided by other market players is quite useful to determine current market developments. Furthermore, other market players often provide information which is otherwise only published in exceptional cases (e.g. information on market rents, residential rent tables) by the panel of experts.

The table below shows, where to find the respective market information. While market data is available from many different market players, the table focuses only on major sources. For further details see Voigtländer (2016) (Fig. 1).

4.3 Valuation Methodologies

Chapter 3 of ImmoWertV comprises three different valuation methodologies:

- Sales comparison approach
- Income approach
- Cost approach

The structure of the valuation is stipulated in the ImmoWertV; the WertR respectively SW-RL and VW-RL state which valuation approach is appropriate (see also Sect. 5.2).

4.3.1 Sales Comparison Approach

The sales comparison approach is based on actual sales of properties which can be compared to the subject property in terms of its main attributes (e.g. location, type of use, size, and building age).

Normally, adjustments are necessary when carrying out valuations based on sales comparables, to account for differences in, for example, the size of the land. These adjustments should be based on the information provided by the panel of experts (e.g. indices or conversion factors).

In Germany, the sales comparison approach is typically used to determine land values. The determination of land values is often based on standard land values. From our perspective the sales comparison approach can also be used for condominiums and town houses. Other comparable market factors can also be used in the valuation of developed properties instead of sales comparables (e.g. rental income multipliers).

4.3.2 Income Approach

The income approach is usually based on market rents (general approach). If the in-place rental income differs significantly from market rents, the income approach can be based on a dynamic cash flow model (dynamic income approach), which considers the specific, existing lease terms (rent roll) only until contracts expire. Thereafter, market rents are assumed.

General Approach

The German income approach is based on the idea that a property can be divided into land and buildings. It is assumed that the land value does not depreciate, whereas the buildings have a certain useful or economic life. ImmoWertV identifies two different static income approaches: In the standard income approach, income is split and allocated to land and buildings. In the simplified income approach, no such differentiation is made during the life of the building. At the end of the building's useful life the value of the land is discounted for the following years and this land value is then added to the value of the building. The following flow chart shows the income approach based on market rents without any adjustments for differences in location and market rents (Fig. 2):

The income value does not necessarily reflect the market value of the property. According to § 8 (2) of ImmoWertV, the market situation must be considered when applying the different valuation methods. In addition, according to § 8 (3) ImmoWertV, the following property-specific characteristics must be considered:

- Condition of the property above or below average
- Maintenance backlogs
- Differences between market rents and existing rental agreements

We usually consider any deductions or additions before adding the (discounted) land value, with the exception of market adjustments, which are considered on the

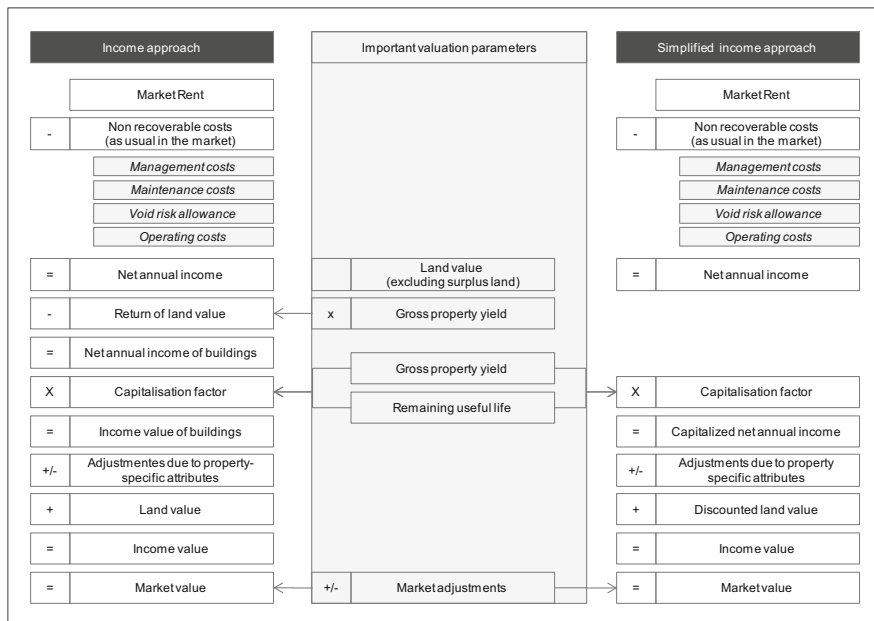


Fig. 2 Income approach. *Source:* Ernst & Young on the basis of ImmoWertV

basis of the calculated income value. Surplus land is valued separately and added to the valuation result.

Dynamic Income Approach

The dynamic income approach is based on lease contracts and may be applied when the income is expected to change in the future and/or market rents are deviating from contractual rents. The valuation is then split into a detailed planning period and a terminal value. Current rents (Vertragsmieten) form the starting point for the detailed planning period. The dynamic income approach considers the same non-recoverable costs as the static income approach (Sect. 4.3.2).

The dynamic income approach was not considered in the previous version of the German federal Ordinance for Property Valuation (“WertV”—valid until July 1, 2010). The ImmoWertV (effective since 1 July 2010) does not provide more detailed information on how to apply a dynamic income approach. This missing guideline will be an obstacle to the roll out of the dynamic income approach in Germany.

4.3.3 Cost Approach

Published standard construction costs form the starting point for the cost approach. As standard construction costs are not updated on a daily basis, published data must be indexed in order to reflect costs at the valuation date. Standard construction costs also contain secondary costs, e.g. costs for planning and permits. Secondary

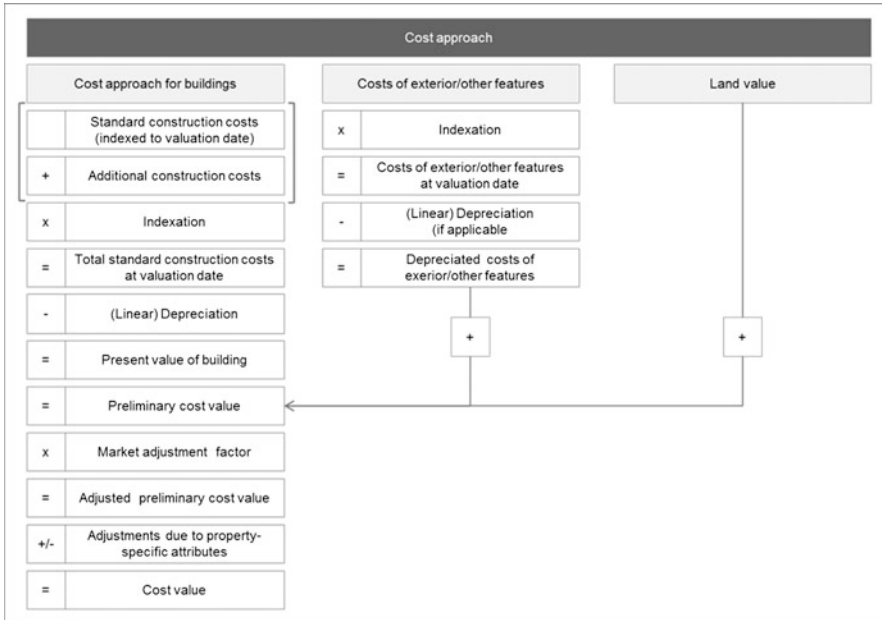


Fig. 3 Cost approach. *Source:* Ernst & Young on the basis of ImmoWertV

construction costs are usually expressed as a percentage of direct construction costs. Exterior features which are not yet included in the land value, must, like all other features, be considered separately.

Consequently, the cost approach includes construction costs for buildings, exterior features and other features as well as the land value.

The chart below gives an overview of the cost approach according to § 21 et seqq. § 14 (2) and § 8 of the ImmoWertV (Fig. 3).

5 Selected Aspects of German Valuation Guidelines

5.1 Introduction

The WertR (Wertermittlungsrichtlinien) provide a more detailed set of guidelines and instructions for carrying out real estate valuations in accordance with the principles of ImmoWertV.

The WertR respectively SW-RL and VW-RL, for example, contain information on how to evaluate properties (developed/undeveloped) when applying the different valuation approaches and give background information on special property attributes.

The ImmoWertV was updated in 2010. The WertR have not been updated since 2006 but partly replaced by SW-RL and VW-RL and WertR, and therefore they

refer to the older version of the German federal Ordinance for Property Valuation. They may nevertheless be applied together with the updated version of the ImmoWertV with respect to regulations for the income approach until the EW-RL becomes effective.

In this section, we explore several aspects of the valuation guidelines which we consider particularly relevant to property valuation in Germany.

5.2 Selection of Valuation Approach

According to the WertR, the valuation approach is not limited to the valuation approaches presented in the ImmoWertV. Other approaches may be applied in these cases where they would result in appropriate values.

The *sales comparison approach* is used when the property market is geared to sales comparables. Consequently, it is commonly used to determine land values for developed and undeveloped properties. In practice, it is also used to evaluate condominiums or town houses as these property types may easily be compared on a square meter or unit basis. In addition, a solid data base is available for these property types.

The *income approach* is the most important valuation approach for developed investment or income-producing-properties. It is mainly used for multi-family housing and all types of commercial properties, if these properties are rented. The income approach may also be applied to condominiums and single-family houses.

For single-family houses, the *cost approach* is also a very common valuation method. The decision to buy a single-family house is commonly based on a comparison of land values and construction costs (buy or build).

5.3 Ground Leases

The valuation of ground leases (Erbbaupacht) according to German standards differs slightly from the international approach, as German valuation approaches split properties into land and building. As a consequence, ground lease is not considered as a non-recoverable expense.

According to WertR, the preferred valuation method for ground leases is the sales comparison approach for land value. In practice, however, sufficient market data are rarely available to support the sales comparison approach for ground leases. Therefore, most appraisers use an approach based on financial mathematics for estimating missing data.

When applying an income based valuation approach, the return on the land (Sect. 4.3.2) is based on the land value ignoring the ground lease payment to arrive at the value of the buildings. The value of the buildings is then added to the advantage/disadvantage of the leasehold. This advantage/disadvantage can be determined as illustrated below. Please note that Fig. 4 shows the valuation of a ground lease right assuming that the remaining useful life is in line with the

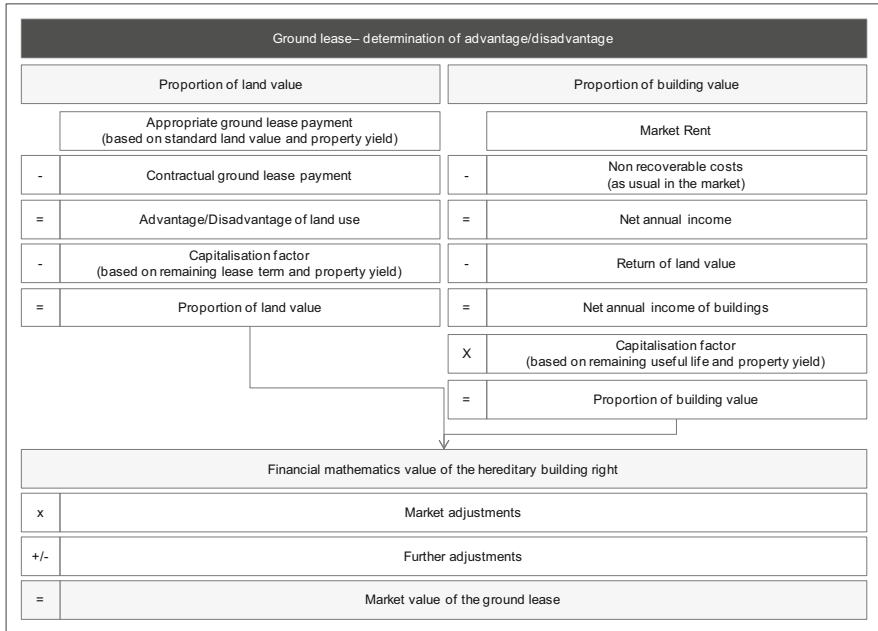


Fig. 4 Ground lease valuation. *Source:* Ernst & Young on the basis of WertR

remaining term of the ground lease or that the compensation at the expiry date of the ground lease is 100 % of the market value of the building.

The appropriate ground lease payment is not necessarily in line with the return on land value, and ground lease payments [expressed as percent of land value] frequently differ from the property yield. If no market data on common ground lease payments are available, then the appropriate ground lease equals the return on land value. Local adjustments can be made on the basis of market data for ground leases published by the local Gutachterausschuss, and leaseholds may warrant further adjustments in comparison to freehold properties. When no market data are available for the property type in question, we apply a market factor of 1, which means that no adjustments are made.

A site encumbered by a ground lease is valued by discounting the land value over the remaining term of the ground lease and by capitalizing the ground lease payments. In this valuation, a market adjustment must also be considered. According to WertR, the market factor for adjusting the value of the encumbered land (from the owner’s point of view) must be at least 1. Hence, we conclude that the market factor for the ground lease (point of view of the lessee) may not exceed the factor 1.

5.4 Valuation Parameters

The WertR, respectively SW-RL and VW-RL contain definitions for the main valuation parameters such as gross annual rent, nonrecoverable expenses, net annual rent, property yield, useful life, and standard construction costs (Sect. 4.2). They also provide tables with depreciation and capitalization factors. Please note that EW-RL did not become effective as of May 2015 and is only available in a draft version so far. All definitions with respect to income approach as well as some main valuation parameters relevant when applying the income approach will be comprised in the EW-RL.

6 Methodological Differences Between German and International Income-Related Valuation Approaches

The main difference between German and international income-related valuation methods is the split between land value and building value in the German valuations. In the German approach, land value is assumed to last for eternity, whereas buildings have a finite useful life. According to international valuation standards, land and buildings are treated as one unit with one single, total value.

Another difference lies in the standard assumptions regarding rental income. While the German income approach typically starts with market rents, contractual rents usually form the basis of the international income approach. It is possible to consider contractual rents in the German approach, and the updated ImmoWertV contains a kind of DCF-model (Discounted Cashflow-Model) in which contractual rents are the basis for the valuation.

All other differences between German and international valuation standards relate to the nature and sources of data, rather than valuation methodology as such. One example is transaction costs: The German Gutachterausschuss derives property yields by analyzing sales contracts. Therefore, when applying the German income approach, the valuation result is the net market value. In contrast, most international valuation approaches calculate gross market values, and transaction costs are considered separately, as the valuations are based on net initial yields or all risk yields.

7 Summary

Property valuations should always result in market values which are achievable at the date of valuation. The applied valuation method must reflect the local market environment, including the specifics of supply and demand.

The regulation of valuation practice in Germany comprises guidelines on how to evaluate real estate and is governed by the federal ordinance (ImmoWertV).

Compared to international valuation practice, the framework in Germany is more detailed in terms of guidelines and instructions for performing valuations in

accordance with the ImmoWertV. The transparency of the real estate market, however, is severely limited by privacy laws. Local panels of experts (Gutachterausschuss) collect, analyze and publish consolidated data for local real estate markets and are an important source of information for appraisers. Nevertheless, an accurate valuation depends in large measure on the local market knowledge of the appraiser.

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What Germany's Amended Tenancy Laws Do and What They Don't

Michael Schick

Abstract

The latest amendments to Germany's tenancy laws (*Mietrechtsnovelle*) have resulted in a number of fundamental changes to the rental housing market that both conflicts with practical realities and disadvantages landlords and apartment seekers alike.

Keywords

Germany • Tenancy laws • Mietpreisbremse • Bestellerprinzip

1 Introduction

The amendments to Germany's tenancy laws (*Mietrechtsnovelle*), which came into effect on 1st June 2015, have resulted in a number of fundamental changes to the rental housing market. In a number of instances, the theoretical motivation behind the amendments conflicts with practical realities.

The stated goal of the tenancy law amendments is to relieve pressure on the overheated housing markets in many of Germany's cities. While wide-ranging initiatives to encourage the construction of more municipal housing and to provide incentives for private investors have missed their mark, the federal government has set itself the principal task of guarding the interests of existing and prospective tenants. Newly enacted measures such as stipulating which party to a lease pays a rental agent's commission (*Bestellerprinzip*), and what has come to be known as the "rental price brake" (*Mietpreisbremse*), are supposed to shield tenants from free market excesses. However, the practical impact of a number of these amendments is now leading to even more extreme distortions of the housing market.

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2 The Bestsellerprinzip: Why It Makes Life Difficult for Prospective Tenants

A central element of the new legislation is the Bestsellerprinzip. In theory, its core intention is this: Whoever commissions a rental agent should also pay the agent. In the past it was left to the market to determine who would pay an agent's commission. In urban markets, overwhelmingly characterized by a shortage of housing, it was typically tenants who paid rental agents, whereas in more rural areas, often characterized by an over-supply of housing, it was typically landlords who settled a rental agent's bills. Now that the new law has come into force, the reality is that it has become almost impossible for rental agents to accept either mandates or commission payments from tenants.

Germany's Bundesrat, in many ways the country's equivalent of the U.S. Senate, arrived at the same conclusion when it issued a statement on 7th November 2014 highlighting a number of deficiencies in the tenancy law amendments released (Drucksache 447/14). The statement included the following:

The wording of the draft bill fails to suitably regulate for circumstances in which a number of prospective tenants, with similar search profiles, approach a rental agent and request assistance in finding an apartment. The wording of this draft legislation makes it entirely possible that a rental agent who contributes to the successful agreement of a lease contract is left without any right to claim commission payments from either the landlord or the tenant.

The authors of this statement have modeled the two most frequent, and likely, sets of circumstances:

1. Within a short period of time, a rental agent is commissioned by numerous apartment seekers who are all looking for similar apartments in terms of location, size and rent. The rental agent contacts a landlord and is authorized by the landlord to offer an apartment to the apartment seekers. If, as a result, a lease is subsequently signed, the law does not envision that the apartment seekers are responsible for paying the rental agent's commission, as the agent was simultaneously acting for a number of apartment seekers and not "exclusively" for one party.

Even if the rental agent were acting exclusively for a single client, a commission payment would only be due once the apartment seeker has decided to sign a lease and has been accepted as a tenant by the landlord. This is an unlikely set of circumstances as apartment seekers view an average of eight apartments before they settle on the one that they actually want.

Should the apartment seeker decline the apartment on offer, or the landlord refuse to accept them as a tenant, the apartment becomes "untouchable" for the rental agent. The agent is not allowed to offer the same apartment to other apartment seekers in anticipation of receiving commission payments. If the agent were to do so, rather than earning a commission, the new law states that the agent would potentially be liable for a fine of up to 25,000 euros.

There is also no obligation for the landlord to pay any commission as the rental agent has clearly informed the landlord that a contract, including an agreement on commission payments, already exists between the rental agent and the apartment seeker.

2. The rental agent is mandated to act on behalf of a landlord. A prospective tenant views the apartment, but no lease is agreed. The rental agent is then employed by a second apartment seeker who subsequently agrees a lease on the apartment. As in the first case, the rental agent is unable to charge any commission for services rendered as the apartment had already been added to the agent's "portfolio" for the first apartment seeker. On this subject, the Bundesrat's statement contained the following:

*The rental agent is aware of an apartment that meets the profile of one of the agent's new clients, but is unable to offer them this apartment as the agent had already offered the apartment to a previous apartment seeker with whom a contract existed.*¹

The Bundesrat demanded that the law be amended in order to make it possible for rental agents to earn commissions from subsequent apartment seekers should their services result in the agreement of a lease contract:

*The law needs to be clarified so that a rental agent can secure a new mandate from a landlord to offer an apartment to another prospective tenant, and to require the second apartment seeker to pay the agent's commission.*²

The new legislation also disadvantages apartment seekers. At first glance, a prospective tenant will naturally be pleased to hear that they are spared the extra costs of a rental agent's commission fees, but a closer examination of the new regulations soon makes it clear that an apartment seeker is no longer able to make use of a rental agent's services as they would have in the past. A majority of rental agents are now declining to work directly with apartment seekers due to the above-mentioned legal uncertainties and potential loss of earnings that may well result.

The problem becomes even clearer when we consider the example of a working professional who is planning to relocate to a big city with a tight housing market. Prior to the 2015 tenancy law amendments, this person was able to contact a rental agent in the city in question, provide the agent with detailed search criteria, such as desired location, apartment size and maximum monthly rent, and arrange appointments to view suitable apartments. This is no longer possible under the new legislation.

In such cases a rental agent did not merely perform as a broker, but also as a "compass," helping clients find their feet in an unknown city. The rental agent filtered what was on offer, classified, prioritized and made recommendations. An

¹ Statement of the Bundesrat—Federal Council of the German Parliament, 7 Nov 2014.

² Statement of the Bundesrat—Federal Council of the German Parliament, 7 Nov 2014.

agent's suggestions and their knowledge of specific neighborhoods, population mixes and infrastructure, were of great help to apartment seekers as they looked for the ideal apartment in the right neighborhood. The rental agent also served as an intermediary between an apartment seeker and a landlord, helping to dot any i's and cross any t's.

Soon after the Bestellerprinzip came into force, a survey carried out by one of Germany's largest real estate websites revealed that 83 % of respondents would still be prepared to pay for the services provided by rental agents in the future. A majority of the survey's participants explicitly stated that rental agents' expert knowledge of local markets and neighborhoods is a big help when it comes to evaluating locations and prices.

The amendments miss their mark as far as the aims set out in the federal government's coalition agreement are concerned. After all, the goal was to ensure that market principles should determine who pays the rental agent, i.e. the party employing the rental agent should pay for the agent's services. The new regulations represent a damaging infringement of rental agents' professional freedom, which is why the German realtor's association Immobilienverband Deutschland (IVD) is determined to ensure that legislators produce the fairest possible tenancy act amendment 2.0 without delay, so that landlords, tenants and rental agents can all profit equally.

3 Rent Indexes: Important Benchmarks on Shaky Ground

The second controversial element of the tenancy law amendments relates to rent indexes (*Mietspiegel*). Heated debates have raged across Germany's media, focusing on what has become commonly known as the "rental price brake" (*Mietpreisbremse*). Rent indexes have always been based on the idea of presenting a "local benchmark rent" which can be used as a basis for determining the permissible extent of rent increases.

Experts have long complained that Germany's rent indexes actually produce an imprecise, and in many cases, fully false snapshot of local housing markets, particularly as there is no "single" index.³ There are a large number of indexes and they are often shaped by political objectives as much as anything else. It is also widely recognized that the indexes are not always based on the strictest scientific methodologies.

Rent indexes are divided into two categories, unqualified and qualified. Unqualified rent indexes are consensus-based and are intended merely to serve as a point of reference. An unqualified index is either produced by a municipality and approved by representatives of tenants and landlords or it is produced and approved by all three groups collaboratively (Section 558e, German Civil Code). As this often sounds more like a series of cozy get-togethers over a bottle (or two) of wine and

³ Lerbs and Sebastian (2015).

less like the disciplined analysis of reliably collected data, unqualified rent indexes have come to be known as “Beaujolais Rent Indexes” in honor of the famous wine region. In contrast, qualified rent indexes should be based on representative data collected and analyzed according to accepted scientific methodologies (Section 558d, German Civil Code). However, it is still up to debate what constitutes such “accepted scientific methodologies”. In addition, there is actually a third possibility: no rent index. This is because municipalities have the right to produce rent indexes, but are under no legal obligation to actually do so (Section 558c, Subsection 4, German Civil Code). This regulation states that a municipality “should” produce a rent index “if” a requirement for an index exists and the work involved in compiling the index is not “unreasonable.”

Rent indexes therefore do not represent a reliable reference for determining “local benchmark rents.” So far, only existing lease agreements have been affected and the law has had no bearing on new leases. Rent indexes are widely accepted as the basis for determining rent increases, despite criticism from landlords—especially as the indexes made it easier to justify rent increases in areas with high levels of tenant turnover and housing construction.

However, rent indexes have now been given a completely new function: They have become the central instrument for setting new rents. In the past, it was market forces that governed new rents. In their current form, rent indexes simply cannot fulfill this additional function.

It has now become clear that qualified rent indexes are needed, particularly as legislators have amplified their importance. Unfortunately, it has not yet been possible to clarify the methods and procedures by which the indexes are compiled. Now it has become a matter of utmost urgency: There is a pressing need for a short-term fix, an ordinance that specifies exactly how rent indexes should be compiled and what data they should contain. It is not enough for the responsible government ministry to simply keep on issuing non-binding instructions, as has often been the case in the past.

A major shortcoming of current rent indexes is that they present a largely undifferentiated snapshot of the housing markets they are intended to represent. In Hamburg apartments are divided into two categories, in Berlin there are three categories. Such undifferentiated approaches make it impossible to produce indexes that accurately reflect the complexities of a multi-faceted housing market. In the real world, there can even be major differences in value along a single street: for example one apartment building could be located at a major traffic intersection with another building bordering a quiet and tranquil park.

It is essential to categorize locations in a more differentiated manner. The IVD therefore recommends using multi-factor regression models that combine both standard land values (*Bodenrichtwerte*) and characteristics of the building as one basis for rent indexes. Such models are perfectly suited as they are a relatively accurate indication of just how desirable a specific location really is. Such solid datasets would allow exact factors to be determined which could then be combined with rental values in order to produce accurate, up-to-date and transparent rent indexes.

No-one disputes the fact that the quality of a rent index is largely a question of money. Germany's federal states will also have to make sure that enough money is

made available when they issue ordinances in accordance with Section 566d II of the German Civil Code requiring municipalities to produce qualified rent indexes.

Should legislators approve a tenancy law amendment 2.0, then the current uncertainty surrounding the country's rent indexes will prove to have been nothing more than an unpleasant episode. Should legislators pass up this opportunity, an avalanche of lawsuits will clog up the courts for years to come.

4 Modernizations: As Necessary as They Are Uneconomical

There is no question that modernizations are required to satisfy the ever more stringent legal requirements for housing, a majority of which result from increasingly ambitious climate protection targets. At the same time, modernizations also contribute to overall economic growth and therefore have a wider economic significance.

However, one section of June 2015's tenancy law amendments now stipulates that rent increases following modernization measures must be limited to a maximum of 10 % of these costs, and that these rent increases may only apply until the costs of the modernization measures have been amortized. What this means for landlords and real estate owners has been outlined by the Institute for Housing, Real Estate, Urban and Regional Development at the Ruhr University in Bochum (InWIS) in part two of the institute's report, "Wirkungsanalyse der Mietrechtsänderungen" for the National Real Estate Industry Association of Germany (Bundesarbeitsgemeinschaft Immobilienwirtschaft Deutschland):

*The implementation of the draft laws on post-modernization rent increases, and especially the regulation on amortization periods, will make modernization measures completely uneconomical.*⁴

In fact, InWIS determined that the new regulations mean that investors will have to accept zero yields on the capital they invest in modernization measures. Not only this, but while tenants will not have to pay for the long-term benefits of modernization once the costs have been amortized, landlords will have to ensure that the refurbished components are kept in working order, resulting in additional maintenance costs. Thus the new regulations undermine the whole concept of rent as a transfer payment in return for the right of usage.

After all, the improvements that result from the modernization measures are not temporary, but permanent, and as such they should continue to be paid for:

*Offering services without compensation in the form of rental payments is not 'renting' but rather 'giving away'.*⁵

⁴ Neitzel et al. (2014).

⁵ Neitzel et al. (2014).

A rent increase is a tenant's payment to a landlord in return for a higher standard of living and the other benefits arising from the modernization. The costs of the modernization measures serve as the benchmark for determining subsequent rent increases in accordance with a verifiable and transparent process.

These examples show how urgently necessary it is to modify the tenancy law amendments.

The Bestellerprinzip needs to be adjusted; clear criteria for the compilation and financing of rent indexes need to be specified; and guidelines for increasing rents following modernizations need to be revised.

It is understandable that politicians want to, and actually must, participate in this sensitive area of housing. After food and clothing, a sheltered space to live and retreat is the third elementary human need. However, it is in no way clear why legislators have interfered in the housing market in such an ill-conceived manner that even those who should have benefited from the new laws—tenants and apartment seekers—are not satisfied. If politicians want to avoid conflicts between tenants and landlords, and prevent a flood of lawsuits that will challenge the nation's disputed rent indexes, they will have to correct the mistakes made in June 2015's amendments quickly, and pass a tenancy law 2.0 without delay. This is the only way to deal with the contentious points mentioned above both transparently and to the benefit of all parties.

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Commercial Leases

Wolfgang Usinger

Abstract

This contribution describes the formal requirements for commercial lease contracts, the possibilities of rent reviews, lessor's option for VAT, the special provisions for registered leases and the possibilities of diverging from certain legal regulations for lease contracts in the German Civil Code ("*Bürgerliches Gesetzbuch—BGB*") esp. concerning operating costs, obligations for maintenance and repair/decorative repairs, security, subletting. Such diversions are restricted by the law on general terms and conditions of business.

Keywords

Formal requirements • Market rent • Lease-back

1 Introduction

Under German law, leases do not constitute real encumbrances of the real estate, but are instead merely contracts under the law of obligations.

The German Civil Code ("*Bürgerliches Gesetzbuch—BGB*") contains statutory regulations regarding these contracts in Sections 535 ff. These can be contracted away by contractual agreements to the extent to which they are not mandatory statutory provisions. The possibility of diverging from the statutory regulations in lease contracts is restricted by the law on general terms and conditions of business ("*Recht der allgemeinen Geschäftsbedingungen*")—see Sections 305 ff. BGB).

Generally, usual market lease contracts are the general terms and conditions of business of the lessor—exceptions to this are often found in the retail sphere;

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retail chains as lessees frequently attempt to achieve the use of their own lease contract sample.

Several samples for standard lease contracts are available on the retail market, whereas others are issued by regional land owners' associations. These samples frequently contain numerous breaches of the provisions of Sections 305 ff. BGB regarding the law on general terms and conditions of business, and are usually not suitable for new buildings, buildings still to be constructed or buildings which are still under development.

The regulations concerning commercial lease contracts cannot be unrestrictedly transferred to residential tenancy agreements.

2 Duration

The maximum term for lease contracts is 30 years. If a lease contract is concluded for a period longer than 30 years, it can be terminated by the lessor and the lessee after the expiry of the 30th year with the statutory period of notice for termination (Section 544 BGB). The statutory period of notice for termination for commercial lease contracts is 6 months (less 3 working days) to the end of each calendar quarter. If the contractual parties wish to agree a term of the contract longer than 30 years, this is not possible on the basis of a lease contract. Instead of a lease contract, the parties must conclude either a registered lease ("*Dauernutzungsrecht*"—see Sect. 12 below) or a contract for a heritable building right ("*Erbbaurechtsvertrag*"). Registered leases and heritable building rights are not subject to any time-limits.

Commercial lease contracts usual in trade are normally concluded for 5 or 10 years. In case of a fixed term of the lease for just 5 years, the lessee is usually granted an extension option for a further 5 years in order to enable an automatic indexation of the rent (see Sect. 5.1 below).

3 Provisions Regarding Formal Requirements

3.1 Requirement of Written Form ("*Schriftformerfordernis*")

Lease contracts which are concluded for a term of more than 1 year must be in written form. In practice, many lease contracts failed to meet this requirement, which is why the examination of compliance with written form requirements is of significant importance in the lease contract due diligence for the purchase of leased real estate.

If the written form requirements are not complied with for lease contracts with a fixed term of more than 1 year, the lease contract is not invalid, but is deemed to have been concluded for an indefinite period. This means that the lease contract can be terminated by the lessor and by the lessee with the statutory period of notice for termination regardless of any fixed term which may have been agreed. Ultimately, compliance with written form requirements also has significant effects on the calculation of the intrinsic value of the real estate involved, if the market value of the real estate is based on its being leased.

In order to meet the requirements of written form, it is necessary for the lease contract deed to contain the important contractual conditions and a “single deed” must be created. The “single-deed nature” of the deed is created in an expedient way by attaching all parts of the lease contract to one another in a fixed way. This fixed connection can be waived if the “single” nature of the deed is evident from other circumstances, like, for example, sequential page numeration or continuous content of the text. The written form requirement in principle applies to all agreements which are intended to constitute the lease contract, i.e. the entire contract content, including all side agreements which are intended to form part of the lease contract, is subject to the written form requirement. Therefore, if for example a shop is let before it is completed, plans and building specifications and a description of the fit-out will usually form part of the contract. For this reason, plans and the building and fit-out description must either be attached to the lease contract to form one single deed or the lease contract must at least contain an express reference to the plans and the building specifications and the fit-out description so that the annexes can clearly be identified.

The written form requirement also applies to supplementary and additional contracts, which is frequently overlooked in practice at the conclusion of lease contracts. If the written form requirement is not complied with for a supplementary or additional contract, this has the unpleasant legal consequence that the defect in written form of the supplementary or additional contract “infects” the entire contract, regardless of whether the main contract fulfills the written form requirement or not; in other words, a written form defect in a supplementary contract leads to the entire lease contract being susceptible to termination with the statutory period of notice for termination regardless of the contractually agreed term of the contract.

3.2 Other Requirements

Occasionally, it is agreed in commercial lease contracts that, in case of the sale of the leased premises, the lessee has a right of pre-emption or a right of purchase under certain circumstances. Such agreements are not infrequently found in lease contracts for properties which only have one sole lessee. They are also usually included in financial leasing contracts (“*Leasingverträgen*”), in which the lessee usually is granted the right to acquire the leasing property after the expiry of the minimum leasing period (“*Ankaufsrecht des Leasingnehmers*”), frequently at a purchase price corresponding to the book value of the real estate. If the lease contract contains such rights to purchase/sale obligations, this leads to the lease contract as a whole requiring notarization. If the contract is not notarized, the agreement concerning the right to purchase by the lessee/the sale obligation of the lessor is null and void. This does not necessarily mean that the entire lease contract is to be considered null and void: it is decisive whether the parties to the lease contract would still have concluded the lease contract even without the right of purchase/sale obligation. If this is the case, the lease contract remains valid in spite of the invalidity of the right of acquisition/sale obligation (BGH, decision of

17 December 2008, NZM 2009, 198). With a financial leasing contract, it can usually be assumed that it is not concluded without the lessee having a right to purchase after the expiry of the minimum leasing period, because the lessee de facto provides advance finance for the purchase price through the leasing installment which exceeds the usual rent (the purchase price, at book value, is far below the market value of the real estate). In these cases, it can be assumed that the failure to notarize the right of purchase of the lessee leads to the invalidity of the entire leasing contract.

4 Security for the Lease Contract in Rem

In Germany, lease contracts are not registered in the Land Register. This constitutes a certain risk for the lessee because the lessor has the right to terminate the lease contract—regardless of the contractual term of the contract—early with the statutory period of notice for termination in three cases:

- (a) In case of compulsory auction of the leased premises:

The successful bidder can terminate all lease contracts for the auctioned property to the first possible statutory date for termination after the court order conferring title to the real estate on the purchaser has been pronounced in the compulsory auction procedure (Section 57a Compulsory Auction Act—ZVG).
- (b) In case of sale of the leased premises by the lessor's insolvency administrator:

If insolvency proceedings have been opened over the lessor's assets, if the insolvency administrator sells the leased premises and if the purchaser enters into the lease relationship (which usually is the case pursuant to Section 566 BGB—see Sect. 11 below), the purchaser can terminate the lease relationship to the first possible statutory date for termination after entering into the lease relationship (Section 111 Insolvency Code—InsO).
- (c) In case of the conclusion of the lease contract with the holder of a heritable building right as lessor:

If the heritable building right expires through lapse of time, the site owner is entitled to terminate the lease relationship to one of the two first possible dates after the expiry of the heritable building right contract [Section 30 (2) Erbbaurechtsgesetz—Erbbaurechtsgesetz].

If the first possible dates resulting from a. and b. above or one of the two first possible dates resulting from c. above are not observed, then in case of a. the successful bidder, in case of b. the purchaser and in case of c. the owner in each case remains bound by the lease contract for the contractually agreed term of the lease.

The lessee can avoid the risk of termination pursuant to a. and b. above by obtaining from the lessor the grant of a right of use which is secured by a restricted personal easement which is registered in the Land Register, subject to the proviso that cancellation of the easements cannot be required in the cases specified in a. and b. above. Relief from termination pursuant to c. above can only be obtained by an

agreement with the owner concerning the continuation of the lease relationship with it after the expiry of the heritable building rights.

From the lessee's point of view, the agreement of a lessee's easement is in particular advisable if the lessee itself has made a considerable investment in the leased premises and has concluded the lease contract for a long term. Lessors are extremely unwilling to grant lessee's easements. In practice, lessee's easements therefore usually are only found in lease contracts with key tenants in the retail sphere in case of lease/leasehold agreements for hotels or leases for office space to major tenants, such as, for example, banks and insurance companies.

5 Rent/Rent Review/Operating Costs

5.1 Stable Value Clauses/Other Adjustment Clauses

Automatic adjustment clauses are common usage in commercial lease contracts. According to the Price Clause Act (Preisklauselgesetz), they are permissible on condition that the lease contract meets the following requirements:

- (a) The lessee has a claim to a minimum term of the lease of 10 years. This is often realized in such a way that the lease contract provides for a fixed term of 5 years and an extension option for the lessee for 5 years; an extension option is the power to extend a lease relationship by a certain period through unilateral (usually written) declaration.
- (b) The adjustment clause must be equally favorable to the lessor and the lessee, i.e. permit upward and downward rent changes—rent adjustments “upwards only” are not permissible. The agreement of floors or caps is only permissible if they are equally favorable/unfavorable to both parties.
- (c) The rent adjustment may not be greater than the change of the index to which the rent adjustment is connected.
- (d) The rent adjustment is connected to the consumer price index (“Verbraucherpreisindex”) published by the Federal Statistics Office or a comparable index published by the Statistics Office of the European Community. Alternatively, the rent can be connected to the index for goods which are manufactured or sold in the leased premises; use is seldom made of this possibility.

In practice, there are usually clauses which either provide that the rent is adjusted as of the first January of each calendar year in proportion to the change of the consumer price index in the last calendar year or which provide for the respective adjustment of the rent when the consumer price index changes by a certain percentage or a certain number of points, whereas, depending on the market situation and negotiating position of the lessee, the rent adjustment can occasionally be lower than the index alteration.

If the criteria listed in a. to d. above are not complied with, this does not, however, lead to the automatic invalidity of the adjustment clause; instead, it only becomes invalid if this is found in a court decision and the court decision has become final and legally binding (Section 8 Price Clause Act).

In this context, it must be noted that a lease contract which fails to fulfill the written form requirement (see Sect. 3.1 above) results in this lease contract being capable of termination with the statutory period of notice for termination, with the consequence that the precondition specified in a. above is not fulfilled and the validity of the automatic adjustment clause is also threatened.

In lease contracts which do not fulfill the preconditions specified in a. above, we often find reservation clauses (“*Leistungsvorbehalte*”) which do not provide for an automatic rent adjustment, but instead regulate that the rent must be renegotiated if certain preconditions (e.g. the consumer price index) have changed. Alternatively, a graduated rent can be agreed in such cases (rent increase in amounts fixed for the entire term of the contract—“*Staffelmiete*”).

5.2 Market Rent Review

As the market rent does not always change parallel to the consumer price index (changes here were in any case extremely moderate in recent years), lessors (and sometimes lessees as well) occasionally attempt to agree clauses which provide for an adjustment of the rent to the so-called market rent at regular intervals (usually every 5 years). Market rent refers to the rent obtained for properties which are comparable to the leased premises as regards purpose of use, age, size, location, equipment and transport connections. If the parties are unable to agree on the amount of the market rent, it is frequently agreed that this market rent will be fixed by an adjudicator (“*Schiedsgutachter*”).

Market rent clauses can also be combined with an automatic adjustment clause if it is equally favorable to the lessor and the lessee.

5.3 Sales-Related Rent/Profit-Related Rent

It is usual in retail lease contracts to agree rents which depend on the sales achieved by the lessee in the leased premises. Sales-related rent agreements are usually combined with minimum rent agreements, i.e. the sales-related rent is usually not permitted to be lower than a certain minimum rent. The minimum rent is mostly combined with an automatic adjustment clause (see Sect. 5.1 above).

It is also possible to agree a rent which depends on the profit generated by the lessee in the leased premises. In practice, the agreement of a profit-related payment for use is almost exclusively found only in hotel leasehold contracts; the point of reference here is usually the GOP (gross operating profit), to be calculated on the basis of the Uniform System of Accounts for the Lodging Industry. A profit-related rent is usually combined with the agreement of an indexed minimum rent.

5.4 Operating Costs

Usually, the lessee pays the operating costs for the leased premises. These operating costs are defined in the Operating Costs Ordinance (“*Betriebskostenverordnung*”). In residential lease contracts, only the operating costs defined in the Operating Costs Ordinance can be apportioned to the lessee, whereas operating costs which are not listed in the Operating Costs Ordinance can also be included in commercial lease contracts. Important: The lessee is only obliged to pay the operating costs which are precisely defined in the lease contract. Reference to the Operating Costs Ordinance is sufficient for the definition. To the extent to which the lessee is also intended to pay operating costs which are not listed in the Operating Costs Ordinance, these must be specifically enumerated in the lease contract.

Heating and hot water costs are also regulated in the Heating Costs Ordinance (“*Heizkostenverordnung*”), pursuant to which at least 50 % but at most 70 % of the costs must be apportioned according to consumption. The proportion apportioned according to consumption can be increased to 100 % by contract. All remaining operating costs are normally apportioned to the lessees on the basis of the area ratio.

5.5 Value Added Tax

If the lessor has opted for value added tax for the construction of the building or the purchase of the built site, it must also agree in the lease contracts that value added tax is payable in addition to the rent and the operating costs. However, a corresponding agreement is only possible to the extent to which the lessee (in case of subletting: the sublessee) uses the leased premises exclusively for turnover (or intends to do so) which does not exclude the deduction of input tax [Section 9(2) Value Added Tax Act—UStG]; in other words, letting with value added tax is only possible if the lessee generates turnover in the leased premises which is subject to value added tax. This is, for example, not the case with banks, insurance companies and public-law corporations. If the lessor has opted for value added tax for newly constructed leased premises and has been reimbursed on the basis of this for the value added tax on the planning and construction services by the tax authorities, and if it then leases the leased premises to a bank, it must repay to the tax authorities the value added tax for the leased premises; this results in an increase of its planning and construction costs by the amount of the value added tax which has to be repaid to the tax authorities. This increase in costs must be taken into consideration in the calculation of the rent for the bank. Residential premises cannot be let subject to value added tax.

6 Maintenance and Repair

According to Section 535(1) BGB, the lessor must provide the lessee with possession of the leased premises in a condition suitable for the contractually agreed use and must maintain them in this condition during the term of the lease. The lessor is responsible for the maintenance and repair of the leased premises by law. This statutory regulation is usually contracted away in commercial lease contracts: the obligation to maintain and repair the leased premises can be transferred by the lessor to the lessee in a commercial lease by the lessor's general terms and conditions of business to the extent to which this affects maintenance and repair requirements which are caused by the use of the leased premises or are to be attributed to the risk sphere of the lessee (BGH, decision of 25 February 1987, NJW-RR 1987, 906).

In addition, the lease contract can impose on the lessee the obligation to share the maintenance and repair costs of parts of the building which do not belong to the leased premises used exclusively by the lessee, but which serve the use of all or several lessees (e.g. maintenance and repair costs of lifts, lift lobbies, rooms for heating installations etc.). However, the apportionment of these costs to the lessee must take into consideration that such an agreement is only valid if the relevant amount is restricted to a specific amount per year (BGH, decision of 6 April 2005—NZM 2005, 863), a restriction which is often disregarded.

7 Decorative Repairs (“Schönheitsreparaturen”)

According to the regulations of the BGB, decorative repairs are the responsibility of the lessor. However, these are usually transferred to the lessee in the lease contract which is also permissible in general terms and conditions of business of the lessor, subject to certain restrictions.

8 Security

It is usually agreed that the lessee must provide a rent deposit (usually by a directly liable guarantee of a bank). Depending on the credit-worthiness of the lessee and the market situation, this deposit ranges between 3 and 6 months' rent for commercial lease contracts. Higher security is usually only found in case of a lease of special real estate which is leased to one single lessee, such as, for example, hotels. Security of up to 2 years' rent is occasionally agreed here. In case of such high security, a bank guarantee is also frequently replaced in many cases by a—hard—letter of comfort by a parent company of the lessee. The transfer of possession of the leased premises to the lessee can be made dependent on the lessee first providing the rent deposit, or the comfort letter.

9 Subletting

According to German law, the lessee is not entitled to transfer its rights and duties out of the lease contract to a third party. The power of transfer can be agreed in the lease contract, however, this is usually not the case because lessors normally are not willing to accept this rule.

If the lessee no longer requires the leased premises and if it has no possibility of terminating the lease contract, it will attempt to sublet the leased premises. Subletting is only permissible with the consent of the lessor [Section 540 (1) BGB]. If the lessor's consent is however refused without any important cause for such refusal, the lessee is entitled to extraordinary termination of the lease contract with the statutory period of notice for termination. This right of termination cannot be excluded in the general terms and conditions of business of the lessor. As regards the conclusion of the lease contract, it is recommended in practice to define in the lease contract what is to be considered important cause for the refusal of consent to subletting.

10 Sale and Lease Back

Increasingly frequently, the sale of a site/building is combined with the agreement that the vendor leases back the building as a whole or in part. As these cases usually involve a legal connection between the purchase contract and the lease contract, the lease contract must be notarized together with the purchase contract. If this does not take place, the lease contract and the purchase contract are invalid. The invalidity is healed by the transcription of title to the leased site in the Land Register to the purchaser (Section 311 b. Sentence 2 BGB) but can until this point in time be asserted by either party, even after the payment of the purchase price.

Leases which are based on a sale/lease back construction are normally negotiated individually together with the sale and purchase agreement. The legal prescriptions on general terms and conditions of business (Section 305 ff. BGB) are therefore in most of these cases not applicable. This allows and usually leads to agreements which are more favorable for the lessor (the Purchaser of the property) than it would be allowed under the government of the sec. 305 ff. BGB especially with respect to the lessor's responsibility for the state and maintenance of the leased premises.

11 Lease Contract in Case of the Sale of the Site

If the leased site is sold, then from the time of transfer of ownership (i.e. with effect from the day of the transcription of title in the Land Register) the purchaser enters into all rights and duties out of the lease contract [Section 566(1) BGB], without a separate agreement being required for this. However, this only applies to lessees who have already taken possession of the leased premises on the day of sale (day of

transfer of ownership). To the extent to which this is not the case (frequently: in the case of properties under development), transfer of the lease contract to the purchaser only takes place if this is agreed on the one hand in the purchase contract and on the other hand in the lease contract. This must be checked at the time of conclusion of the lease contract.

In case of sale of the leased premises, the vendor is also liable to the lessee like a guarantor if the purchaser does not fulfill the obligations out of the lease relationship which has been transferred to it [Section 566(2) BGB]. The vendor is only released from this obligation if the lessee, having obtained knowledge of the sale, terminates the lease contract to the first date possible according to the contract, which may only be the case after the expiry of many years in case of a long-term commercial lease contract. This liability cannot be excluded by general terms and conditions of business.

12 Registered Lease (“Dauernutzungsvertrag”)

If a term of the lease of longer than 30 years is desired for the transfer of use, the only alternatives to a lease contract are the conclusion of a heritable building right contract or a registered lease. The conclusion of a heritable building right contract is often undesirable for tax reasons because the holder of the heritable building right is/becomes owner of the building constructed or to be constructed on the basis of the heritable building right. For this reason, the registered lease is an alternative.

In practice, we occasionally find registered lease contracts as hotel contracts or contracts for the transfer of use for other special real estate which is only used by a sole user. They occasionally also replace a lease contract for large scale retail leases. Registered leases are seldom found for the transfer of office space.

12.1 Advantages of a Registered Lease Contract

- (a) The registered lease contract is one of the most flexible legal instruments at all: it can be structured like a purchase contract (purchase of the registered lease right) or like a lease contract. It usually replaces a lease contract.
- (b) All significant elements of a lease contract can also be included in a registered lease contract, i.e. the registered lease contract can be contractually structured to a significant extent like the lease contract.
- (c) There are no written form difficulties (see Sect. 3.1 above) with a registered lease contract. There is therefore no risk of early termination of the contract for failure to comply with written form.
- (d) There are no provisions about the permitted duration of the registered lease contract. It can be created for “eternity”, however, a period of more than 99 years is unusual.
- (e) If the structure of the registered lease contract is similar to a lease contract, the rent is replaced by payment for use (“Nutzungentschädigung”) to be paid on a

permanent basis (monthly or quarterly), which can also be indexed automatically as with a lease contract.

- (f) There are no special rights of termination by the purchaser in case of the purchase of the leased premises through compulsory auction or the purchase from an insolvency administrator.

12.2 Disadvantages of the Registered Lease Contract

The registered lease has to be registered as an encumbrance in Section II of the Land Register. It can be sold and inherited. Pursuant to Section 35 of the Residential Ownership Act, it can be regulated that the sale of the registered lease depends on the consent of the site owner. However, such consent can only be refused for important cause. A complete sale prohibition in favor of the owner is excluded.

12.3 Form of the Registered Lease Right

As the registered lease is registered in the Land Register, the signatures under the registered lease contract must be certified by a notary. In addition, registration of the registered lease is only possible with a certificate of self-containment with an allocation plan (“*Abgeschlossenheitsbescheinigung*” Section 32 Residential Ownership Act). This certificate is issued by the competent building supervisory authority. If the registered lease is connected with a right of pre-emption or a right of purchase by the entitled party under the registered lease, notarization is necessary (see Sect. 3.2 above).

12.4 Reversion

Contrary to the position with a lease contract, there is no possibility of termination for important cause of the registered lease contract (e.g. due to delay with payment by the entitled party under the registered lease). In case of the registered lease contract, the possibility of termination for important cause is replaced by the so-called right of reversion (*Heimfallrecht*). This is the right of the site owner to require that in case of the occurrence of certain preconditions (breaches of contract), the registered lease must be transferred to itself or to a third party specified by the site owner.

In contrast to the position with a lease contract, the registered lease contract can also provide that the commencement of insolvency proceedings over the assets of the entitled party under the registered lease contract is a reason for reversion. In the context of reversion, it must be regulated whether and for what amount compensation must be paid to the entitled party under the registered lease contract in case of reversion. In case of long-term registered leases (more than 10 years) the duty to pay compensation pursuant to Section 41(3) of the Residential Ownership Act

cannot be contracted away, but the compensation can be reduced to nil in cases in which the registered lease replaces a lease contract.

12.5 Relationship Between the Registered Lease and Liens

The registered lease is registered in the Land Register ranking either above encumbrances in Section III of the Land Register or, in case the financing bank requires the withdrawal to lower rank of the registered lease, below the financing lien, together with a so-called “*Bestehenlassenvereinbarung*”. This is an agreement between the site owner, the entitled party under the registered lease and the site owner’s bank in accordance with which the registered lease withdraws to lower rank below the financing lien, but is not lost in case of compulsory auction out of the financing lien. This agreement is registered in the Land Register, therefore has effect in rem and thus also secures the registered lease in case of compulsory auction of the lien with higher rank and in case the financing lien creditor assigns their claims out of the loan contract and the lien to third parties (Section 39 Residential Ownership Act).

13 Hotel Contracts

A hotel contract is usually either a leasehold (“*Pachtvertrag*”) or a management contract, occasionally a franchise contract or a license contract. However, in case where the parties’ intention is a lease for more than 30 years, the hotel contract has to be structured as a registered lease contract similar to a leasehold contract (see Sect. 12 above). The law regarding leasehold contracts (“*Pachtverträge*”) is regulated in the BGB in Sections 581 ff. BGB. It mainly corresponds to the rental law regulated in the BGB, but in particular differs from statutory rental law by termination regulations which diverge from rental law and because the leaseholder has an obligation to maintain inventory which is included in the leasehold and to replace such inventory within the framework of proper management of the leasehold premises.

With the intention of minimizing their own capital commitment and their own entrepreneurial risk as far as possible, the major international hotel groups have long since established the practice of concluding pure hotel management contracts. The swift worldwide expansion of the major hotel groups is predominantly based on management contracts. The number of pure management agreements probably by far exceeds the worldwide number of leasehold contracts. However, this does not apply to Germany, where there is persistent resistance by owners to management contracts, not least because hotel real estate which is operated on the basis of a management contract is significantly more difficult to sell than a hotel which is managed on the basis of a leasehold contract. This in particular applies if the management contract makes no provision for minimum earnings for the site owner, which can lead to the real estate being incapable of sale. In order to avoid

this incapacity for sale, we find so-called “hybrid contracts” relatively frequently. These are either leasehold contracts which contain elements of a management contract because part of the leasehold rent is dependent on the result (Gross Operating Profit—GOP) of the hotel operation, or they are management contracts in which the owner is guaranteed certain minimum earnings, similar to rent. From a tax point of view, the hotel leasehold contract (like the registered lease contract) provides the site owner with income from leases and leaseholds. Management contract income constitutes income from the operation of a trade. A detailed description of the problems of hotel leasehold contracts and hotel management contracts would exceed the scope of this discussion. As far as hotel management contracts are concerned, it must be pointed out that according to the case-law of the Federal Supreme Court it is unreasonable to expect the site owner to adhere to such a contract if the hotel manager permanently generates negative results or if the results are so low that they are insufficient to generate a reasonable yield on the committed equity capital. In this case, the case-law permits an extraordinary right of termination by the owner. However, as there are no generally applicable regulations in this context from which we could deduce the level of the yield which must at least be produced, it is urgently recommended to specify in detail in the management contract the circumstances under which the owner is granted a right of termination. Case-law states that the maximum permissible duration of a management contract is 20 years.

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Planning and Building Law

Petra Lau

Abstract

This article describes the urban land-use planning which comprises the preparatory land-use plan and the binding land-use plan, the content, the procedures, legal effects and the responsibility of the municipalities for the preparation of these plans, and the approvability of development projects. In addition, the article contains the requirements concerning the building permission and the building permission procedure.

Keywords

Spatial Planning Act • Urban land-use • Building regulation

1 Introduction

The legal bases in the field of planning comprise the categories general planning law (planning and building law [Planungs- und Baurecht]) and sectoral planning law [Fachplanungsrecht]. The planning and building law regulates both cross-sectoral and mostly coordinating planning and building while the sectoral planning law focuses on the preparation and execution of measures within a special sector of public responsibilities. A sectoral planning is regionally significant where space is occupied and the spatial development or the function of an area is influenced. Special laws regulate in particular regionally significant sectoral planning for transport, energy, water—and waste management and for public infrastructure (e.g. airports, roads, lines for power- and water supply). The central instrument of sectoral planning is the planning approval procedure [Planfeststellungsverfahren] to determine a legally binding decision in form of a planning approval decision

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[Planfeststellungsbeschluss] regulated in sec. 72 ff. VwVfG of the *Bund* or the *Länder*. In certain cases the competent authority may grant a planning permission [Plangenehmigung] instead of a planning approval decision (sec. 74 para. 6 VwVfG). In insignificant cases the planning approval and a planning permission are omitted (sect. 74 para. 7 VwVfG). Sectoral planning may also set designations of protected areas to safeguard public interests (e.g. nature reserves). The relationship of sectoral planning and of the requirements of spatial planning is determined by so-called spatial planning clauses [Raumordnungsklausel].

Planning and building law comprise the spatial planning law and the public building law. The traditional term “Raumordnung” describes the comprehensive, supra-local and super-ordinate stage of planning the structure and development of space. Sustainable spatial development is a substantive vision for spatial planning in Germany.

Spatial planning is laid down in the Federal Spatial Planning Act [Raumordnungsgesetz—ROG] and the state spatial planning acts, as far as they contain additional regulations. The spatial planning law contains spatial structure plans at the federal, state and regional levels. The spatial structure plans stipulate the spatial ideas on developing the space in form of goals of spatial planning and principles of spatial planning. There are spatial plans for entire Germany for concretion of principles of spatial planning (sec. 17 para. 1 ROG), for designation of cross-border site concepts for harbors and airports in coordination with the traffic planning of the *Länder* (sec. 17 para. 2 ROG), a spatial plan for Germany’s Exclusive Economic Zones in the North Sea and the Baltic Sea (sec. 17 para. 3 ROG), and spatial plans for the territory of a state (sec. 8 para. 1 No. 1 ROG) and regional plans for defined regions within a state (sec. 8 para. 1 No. 2 ROG).

Public building law is divided into planning law [Bauplanungsrecht], also referred to as urban development law [Städtebaurecht], the building regulations law [Bauordnungsrecht] and additional laws and regulations [Baunebenrecht], e.g. regulations for conservation of historic monuments or for conservation of nature.

There is no standard legislative competence for the public building law. The territorial validity of federal law [Bundesrecht] is the entire territory of the federation while state law [Landesrecht] is only valid for that state [*Land*]. The legislative competencies of the Federation and the *Länder* are regulated by the Constitution [Grundgesetz—GG]. Legislative powers for public building law are divided between the national level and the *Länder*. In the field of urban development law the national level has the legislative powers (Art. 74 para. 1 No. 18 GG). Land law is a part of concurrent legislation. Although “on matters within the concurrent legislative power, the *Länder* shall have power to legislate as long as and to the extent that the Federation has not exercised its legislative by enacting a law” (Art. 72 para. 1 GG, but the Federation has exercised its legislative).

In contrast, the *Länder* have the right to legislate the building regulations law (Article 70 GG).

Depending on the legislation competencies, the additional laws and regulations may be regulated by the Federation or the *Länder*.

2 Urban Development Law

2.1 Legal Framework

The most important regulation of urban development law is the Federal Building Code [Baugesetzbuch—BauGB¹]. The BauGB is supplemented by the Federal Land Utilization Ordinance [Baunutzungsverordnung—BauNVO], Plan Notation Ordinance [Planzeichenverordnung—PlanzV], Real Estate Valuation Ordinance [Immobilienwertermittlungsverordnung—ImmoWertV]. These regulations are valid for all Germany.

2.2 Urban Land-Use Planning²

The function of urban land-use planning [Bauleitplanung] “is to prepare and control the use of land within a municipality, for buildings or for other purposes” (sec. 1 para. 1 BauGB³). The municipalities (in smaller municipalities often an administrative association of those) regulate urban development and the structure of their territories by means of urban land-use planning in their own responsibility (sec. 2 para. 1). Urban land-use planning is one of the self-government tasks of the municipalities guaranteed by Article 28 para. 2 GG. The municipalities shall prepare land-use plans [Bauleitpläne] “as soon as and to the extent that these are required for urban development and order” (sec. 1 para. 3).

There is a link between the spatial planning law and urban land-use planning: Land-use plans shall be brought into line with the goals of spatial planning (sec. 1 para. 4).

Land-use plans for neighboring municipalities must be coordinated (sec. 2 para. 2).

The goals and principles of urban land-use planning are regulated in the form of planning guidelines in sec. 1 para. 5. Land-use plans are designed to ensure a sustainable urban development. They are important instruments to promote the climate protection and the adaptation to climate change. There is a planning premise of “internal development before external development”.

The planning guidelines are defined in detail in sec. 1 para. 6. This regulation contains a non-exclusive catalogue of planning requirements (e.g. healthy housing and working conditions, social and cultural needs of the population, protection of

¹ There is no translation of the current BauGB. However, there are unofficial translations based on a translation of an earlier wording of this act, published by the Federal Ministry for Regional Planning, Building and Urban Development, Oldenburg 12/1993.

² General information you can find in Pahl-Weber and Henckel (Eds.): *The Planning System and Planning Terms in Germany. A Glossary*, Hannover 2008.

³ All sec. without mention of the law are sec. of the BauGB.

the environment, the economy, what is referred to as building culture, i.e. sticking to certain quality standards in constructing, and monument conservation).

The requirement to weigh [Abwägungsgebot] is a key requirement in the German planning system. Public and private interests are to be duly weighed and fairly balanced (sec. 1 para. 7).

The BauGB contains regulations for safeguarding land-use planning. These safeguards are described in sections 14–28.

Urban land-use plans comprise the preparatory land-use plan [Flächennutzungsplan—F-Plan] and the legally binding land-use plan [Bebauungsplan—B-Plan] (sec. 1 para. 2).

2.2.1 Preparatory Land-Use Plan

The preparatory land-use plan is a planning instrument for the territory of the municipality. It shall represent in basic form the type of land uses according to the intended urban development which is proposed to correspond to the anticipated needs of the municipality (sec. 5 para. 1 s. 1).

The local council adopts the preparatory land-use plan as a special type of government measure. It is internally binding for local authorities but not for the public. Public bodies, charged with the planning tasks and involved in the planning process must adapt their planning proposals to the preparatory land-use plan (sec. 7).

In the end, binding land-use plans are to be developed from the preparatory land-use plan (sec. 8 para. 2).

The preparatory land-use plan is not subject to judicial review pursuant to sec. 47 Code of Administrative Court Procedure [Verwaltungsgerichtsordnung—VwGO], except for representations with legal effects of sec. 35 para. 3.

Contents of a preparatory land-use plan may be:

- non-exclusive catalogue of possible representations (sec. 5 para. 2, 2a), e.g.:
 - general land-use types, specific land-use types, general level of use for building coverage;
 - facilities and infrastructure for public and private provision of goods and services;
 - spaces for supra-local transport and main local communication routes;
 - spaces for public utility use;
 - green and open spaces, sports and recreation;
 - water bodies, docks and areas of water designated for supply and distribution purposes;
 - agricultural land and woodland;
 - spaces for measures for the protection, preservation and development of the natural environment and the landscape);
- several markings, e.g. spaces, designated for building where the ground has been severely contaminated by hazardous materials (sec. 5 para. 3 No. 3),
- designations or notes of plans or other arrangements for use which have been determined under other statutory provision, e.g. nature reserves, appointed

flooded area or assembles of physical structures protected as monuments under federal state law (sec. 5 para. 4–4a).

The representations of a preparatory land-use plan may be given in graphic or textual form. The PlanzV lays down the symbols for graphic representations. The municipalities are obliged to employ the symbols as set out in this Ordinance.

The BauNVO details the potential content of preparatory and binding land-use plans. The preparatory land-use plan may distinguish the general types of land-use or the specific types of land-use, in the binding land-use plan only the specific types of land-use. As a rule, the preparatory land-use plan represents general types of land-use while the binding land-use plan designates specific types of land-use; see also Sect. 2.2.2.

As a rule, the preparatory land-use plan is a planning instrument for the entire territory of the municipality, but the local planning authorities are able to exclude spaces and representations of other kinds in certain cases. In very small municipalities preparatory land-use plans usually do not exist (sec. 8 para. 2).

A partial preparatory land-use plan (sec. 5 para. 2a) allows the municipality to concentrate privileged development projects regulated in sec. 35 para. 1 No. 2–6 in specific locations. These locations may be defined as concentration zones by a (partial) preparatory land-use plan. These concentration zones may be also defined by a spatial development plan (sec. 35 para. 3).

Adjoining municipalities have also the possibility to prepare a joint preparatory land-use plan, “where their urban development is determined largely by common conditions and requirements, or where a joint preparatory land-use plan would facilitate an equitable balance between their various concerns” (sec. 204 para. 1).

There is also a regional land-use plan. It has the function both of a regional plan and of a joint preparatory land-use plan. The regional land-use plan may be prepared in conurbations or where the spatial structure is characterized by other interdependencies between adjacent regions (sec. 8 para. 4 ROG). This plan must meet the requirements both of the ROG and of the BauGB.

2.2.2 Binding Land-Use Plan

The land-use plan is a planning instrument for a part of a municipality territory. It contains the legally-binding arrangements for urban development. It forms the basis for further measures required for the implementation of the BauGB (sec. 8 para. 1).

The local council adopts the land-use plan as a statute [Satzung] (sec. 10).

The binding land-use plan is subject to abstract judicial review by the Higher Administrative Court [Oberverwaltungsgericht] in which the validity of the plan is examined independent from a specific case [abstrakte Normenkontrolle] (sec. 47 VwGO). There is also a particular judicial review by the Administrative Court [Verwaltungsgericht] in which the court rules on the validity of the norm in examining of the case [inzidente Normenkontrolle].

Contents of a binding land-use plan may be:

- exclusive catalogue of possible representations (sec. 9 para. 1–4), e.g.
 - type and degree of building and land use;
 - coverage type, plot area which may or may not be built on and the location of physical structures;
 - special uses for sites arising out of specific urban-development requirements;
 - public thoroughfares for specific purposes spaces for local public infrastructure;
 - spaces for waste disposal and sewage treatment;
 - public and private green areas;
 - the setting of time-limits and conditions for designations on special urban development grounds;
 - regulations based on *Landesrecht* (e.g. local building regulations for design and appearance) may be included in the binding land-use plan as designations (sec. 9 para. 4);
- several markings, e.g. areas where the ground has been severely contaminated by hazardous materials (sec. 9 para. 5);
- designations made in accordance with other statutory regulations, and monuments as defined in *Landesrecht* (sec. 9 para. 6);
- designations or notes of appointed flooded areas (sec. 9 para. 6a).

Detailed information on the type and degree of building and land use, coverage type and plot areas are to be found in the BauNVO.

Types of building and land use are regulated in sec. 1–15 BauNVO. The following general and specific types of land-use are possible:

- general residential building areas: small residential estate areas, residential-only areas, general residential areas, special residential areas;
- general mixed building areas: village areas, mixed-use areas, core areas;
- general commercial building areas: commercial and industrial areas;
- special building areas: special areas. Special areas (SO) (Sections 10 and 11).

The degree of the building coverage (sec. 16–21a BauNVO) may be prescribed within a legally binding land-use plan by designating:

- Site occupancy index [Grundflächenzahl] or the size of the area to be covered by physical structures [Größe der Grundfläche];
- Floor-space index [Geschossflächenzahl] or the floor-space [Größe der Geschossfläche], the cubic index [Baumassenzahl] or cubic capacity permitted for the physical structures [Baumasse];
- Number of storeys proper;
- Height of the physical structures.

In determining the permitted level of building coverage the municipalities may only exceed the upper limits under certain conditions (sec. 17 BauNVO).

In the binding land-use plan the coverage type may be prescribed as open, closed or deviating (sec. 22 BauNVO).

In the binding land-use plan the plot area to be built on may be determined by fixing building limiting lines, required set-back lines or coverage depths (sec. 23 BauNVO). There are exceptions for secondary structures and physical structures, where these are or may be permitted in distance spaces under federal state law.

The binding regulations may be determined in graphic or textual form. The Plan Notation Ordinance lays down the symbols for graphic designations. The municipalities are obliged to employ these symbols. The binding land-use plan shall be accompanied by an explanatory statement, setting out the aims, purposes and most significant aspects of the plan.

There are three types of binding land-use plans (see Sect. 2.3.1).

The distinction of these plans is important for the permissibility of development projects within the area covered by a legally binding land-use plan. More information is to be found in Sect. 2.3.1.

2.2.3 Informal Plans

In addition to the preparatory land-use plan and the binding land-use plan regulated in the Federal Building Code several other types of plans are to be found in German urban development practice, e.g. urban development concepts [Stadtentwicklungskonzepte], sectoral development concepts [sektorale Entwicklungskonzepte], urban development framework plans [städtebaulicher Rahmenplan], urban development designs [städtebauliche Entwürfe]. These plans are the base for the preparation of future plans or for the concretion of former plans. Plans of these types are called “informal plans”. There is no regulated procedure for the preparation of informal plans.

Informal plans are internally binding for local authorities, but not legally binding. Informal plans may not establish the right to the development of land. In the preparation of land-use plans, attention is to be paid in particular to informal plans adopted by the municipality (sec. 1 para. 6 No. 11).

2.2.4 Procedure of Urban Land-Use Planning

The BauGB regulates the procedures of the preparatory land-use plan and the binding land-use plan in Sections 2 ff. The provisions of the BauGB on the adoption of land-use plans are also applicable in respect of amendments, supplements and cancellation (sec. 1 para. 8).

There are the standard procedure, the simplified procedure and the accelerated procedure. The procedure of urban land-use planning is required for the preparation of the preparatory land-use plan and the binding land-use plans. It requires the same necessary stages of the standard procedure for the preparatory- and binding land-use plan. Only after resolution on adopting the plans, deviations exist between both plans. The following scheme shows the standard procedure of urban land-use planning (Table 1).

Throughout the standard procedure, an environmental assessment is carried out (sec. 2 para. 4 BauGB). The Annex 1 of BauGB is to be applied.

Table 1 Standard procedure of urban land-use planning (standard procedure)

Preliminary stage
Resolution on the preparation of a preparatory or binding land-use plan
Public notice of the resolution on the preparation
Preparation of the preliminary draft
First phase of participation —Early public participation and preliminary coordination with authorities and other public agencies—simultaneously or successively
Preparation of the draft and of the explanatory statement including the environmental report
Resolution on the public display
Public notice of location and duration of public display (at least 1 week before)
Second phase of participation —Public Display (1 month) and participation of authorities and other public agencies (1 month)—simultaneously or successively—in certain cases: preclusion
If necessary: cross-border participation
Modification of the draft—once again public participation and participation of authorities and public agencies (in certain cases: restriction to parts of the draft and period of participation)
Resolution by municipality on adopting the preparatory or binding land-use plan
Preparatory land-use plan: approval of the higher administrative authority
Public notice of the approval
Effective date
Preparation of the summary statement
Binding land-use plans: (only certain binding land-use plans: approval of the higher administrative authority)
Public notice
Plan comes into force as local statute
Preparation of the summary statement

Source: Own table

As part of the environmental assessment the impact mitigation regulation [Eingriffsregelung] and the fauna-flora-habitat impact assessment [FFH-Verträglichkeitsprüfung] under sec. 34 and 35 BNatSchG (Federal Nature Conversation Act—FNCA) are to be processed.

In the standard procedure the BauGB requires an explanatory statement to accompany the preparatory or binding land-use plan and also an environmental statement as a part of it.

The preconditions for the simplified procedure are regulated in sec. 13 para. 1:

- amendment or supplement to an urban land-use plan does not affect its basic intention or
- preparation of a binding land-use plan in built-up areas does not substantially modify the standard of permissibility or
- preparation of a binding land-use plan with designations in accordance with sec. 9 para. 2a and
- no obligation for carrying out an environmental impact assessment and
- no conflict with protective goods regulated in sec. 1 para. 6 No. 7b.

In the simplified procedure it is permissible:

- to dispense with the requirement to provide information and to enter into discussion pursuant to sec. 3 para. 1 s. 1
- to provide public concerned with the opportunity to comment within an appropriate period, or alternatively to make use of the public display procedure as provided under sec. 3 para. 2,
- to provide affected authorities and other public agencies with the opportunity to comment within an appropriate period, or alternatively to make use of the participation procedure as provided under sec. 4 (sec. 13 para. 2).

No application in the simplified procedure:

- environmental assessment,
- environmental report,
- details of types of environmental information,
- summary statement,
- monitoring (sec. 13 para. 3).

The preconditions for the accelerated procedure are regulated in sec. 13a para. 1. This procedure is valid only for binding land-use plans with the following objectives:

- rehabilitation of areas,
- redensification or
- other measures of internal development and
- 20,000 m² area to less than 70,000 m² and no requirement to carry out an environmental assessment in the result of preliminary testing of the individual case and
- no obligation for carrying out an environmental impact assessment and
- no conflict with protective goods regulated in sec. 1 para. 6 No. 7b.

In the accelerated procedure:

- regulations of the simplified procedure shall apply *mutatis mutandis*;
- the preparatory land-use plan may be corrected without a special procedure;
- preservation, safeguarding and creating jobs, supply with housing and infrastructure are adequately taken into account;
- no impact mitigation regulation in case of binding land-use plan with less than 20,000 m² area.

As the preparatory land-use plan is at higher level of planning than the binding land-use plan, it is usually prepared first, amended or supplemented. But on behalf of the effective use of planning resources “preparation, amending, supplementation and revocation of a binding land-use plan may take place simultaneously with the

[...] preparatory land-use plan” (sec. 8 para. 3 s. 1). This is called parallel procedure.

The municipality may also prepare an advanced binding land-use plan [vorzeitiger Bebauungsplan], if there is no preparatory land-use plan so far. The precondition is that “prior to the completion of the preparatory land-use plan where urgent grounds for this exist, or where the binding land-use plan will not be in conflict with proposed urban development within the territory of the municipality” (sec. 8 para. 4).

2.2.5 Reallocation of Property Rights

Land reallocation comprises the reallocation of property rights (Sections 45–79) and the simplified reallocation of property rights (Sections 80–84). In accordance with sec. 45 para. 1 the procedure of reallocation of property rights is intended “for the purpose of reorganizing or opening up specific new areas for development . . . to create plots suitable in terms of location, shape and size for built development or for other uses”. The procedure is applied within the area covered by a binding land-use (sec. 30) and also within built-up areas (sec. 34) where the character of the immediate environs provides satisfactory criteria for reorganization (sec. 45). This procedure facilitates to reorganize or to open up specific new areas for development and to provide land for public infrastructure e.g. local thoroughfares, spaces for parking, public green spaces, children’s playgrounds.

The municipality also may carry out a simplified reallocation of property rights under the following preconditions:

- the municipality shall occur the reallocation where and as soon as this is required to implement the binding land-use plan or the ordered urban development in built-up areas;
- immediate adjoining or close proximity plots or parts of plots will be exchanged among themselves or
- plots, in particular splinter of plots or parts of plots will be allocated to one party;
- these plots or parts of plots may not be capable of independent development.
- the allocation to one party is in the public interest.

2.2.6 Provision of Local Public Infrastructure

Regulations of first-time provision of local public infrastructure are found in Sections 123–135. Here, local public infrastructure are public roads, paths and public spaces scheduled for development, public thoroughfares, collecting roads, parks and green spaces, physical structure to provide protection in specific land-use area against harmful environmental influences.

If the provision of local public infrastructure is regulated by the *Länder* these regulations apply.

Any construction is only permitted where the provision of local infrastructure has been secured. The provision of local public infrastructure is inseparably connected to land-use planning. The municipality is responsible “for the improvement of land by the provision of local infrastructure and road access rests . . . unless

this duty is incumbent on some other body under other statutory provisions or other obligations under public law” (sec. 123 para. 1).

In accordance with sec. 123 para. 3, “no legal claim exists to provision of local public infrastructure.” But in some cases the municipality may be bound to establish the provision of local public infrastructure.

The municipalities shall collect charges for the recoupment of otherwise unrecoverable public expenditure on local public infrastructure (sec. 127 para. 1). The legal bases for the collection of charges are to be found in sec. 127–135. In accordance with sec. 132, “the municipalities shall regulate by statute

1. the type and extent of local public infrastructure within the meaning of sec. 129,
2. the manner of assessment and allocation or recoupment charges and the level of the standard rate,
3. cost-splitting (sec. 127 para. 3), and
4. the characteristics for the final construction of a public infrastructure facility.”

In accordance with sec. 133 para. 1, “the duty to make recoupment charges applies in respect of land designated for use for building or for commercial purposes from the point when this land is permissible for it to be either built on or put to commercial use.” The municipality covers at least 10% of the legitimate recoupment charges (sec. 129 para. 1 s. 3). All other costs are covered by the property owners. Special regulations apply for urban redevelopment measures and urban development measures.

In accordance with sec. 11, the municipality may stipulate the provision of local infrastructure to a third party by contract [Erschließungsvertrag]. The subject of the land improvement contract includes the infrastructure installations within a specified area. The third party may commit himself by contract to bear the costs of providing infrastructure either completely or in part. These regulations shall apply irrespective of whether these infrastructure installations qualify under federal or state law for the collection of recoupment charges.

The construction of child day-care facilities, schools and gyms is not a subject of provision of local public infrastructure. In these cases the municipality may enter into urban development contracts [städtebaulicher Vertrag]. The non-exclusive subjects of an urban development contract are regulated in sec. 11 para. 1.

The agreed obligations of both the land improvement contract and the urban development contract must be commensurate with the overall circumstances. There are also regulations for improvement, extension or renewal of public roads, paths and public spaces, but they are regulated by the respective *Land* and are only valid in this *Land*.

2.3 Permissibility of Development Projects

The regulations for the approvability of development projects are essential for planning and building. The BauGB distinguishes between three types of zones, in which the approvability is differently regulated:

- the permissibility of development projects within the area covered by a legally binding land-use plan;
- the permissibility of development projects within built-up areas;
- building in the undeveloped outskirts area.

2.3.1 The Permissibility of Development Projects Within the Area Covered by a Legally Binding Land-Use Plan

Sec. 30 regulates the permissibility of development projects within the area covered by a legally binding land-use plan. This regulation includes three different types of legally binding land-use plans:

- qualified building land-use plan [qualifizierter Bebauungsplan],
- non-qualified binding land-use plan [einfacher Bebauungsplan] and
- project-based binding land-use plan [vorhabenbezogener Bebauungsplan].

A development project is permissible where it does not contradict the designations of a qualified binding land-use plan and the provision of local public infrastructure has been secured. The qualified binding land-use plan must include as minimum designations:

- types of building and land use;
- degree of building coverage;
- plot area to be built on;
- local thoroughfares.

Within the area covered by a non-qualified binding land-use plan, the permissibility is determined in other respects by sec. 34 (Permissibility of development projects within built-up areas) or sec. 35 (Building in the undeveloped outskirts area).

Within the area covered by a project-based binding land-use plan a development project is permissible when it does not contradict the designations of the project-based binding land-use plan and the provision of local public infrastructure has been secured. The project-based binding land-use plan is one of three parts of the project and infrastructure plan [Vorhaben- und Erschließungsplan] (sec. 12). The project and infrastructure plan is a special instrument of public private partnership in the field of urban development. The project and development plan is prepared by the project developer. It includes a description of the planned project and the associated infrastructure.

Under certain conditions a building permission may already be issued during the preparation of the plan. The constellations and conditions are regulated in sec. 33.

Where a development project contradicts the designations of the binding land-use plan or a land-use plan during preparation there is the possibility to apply exceptions (sec. 31 para. 1) or dispensations (sec. 31 para 2). No person has the right to require an exception or a dispensation.

2.3.2 The Permissibility of Development Projects Within Built-Up Areas

Sec. 34 regulates the permissibility of development projects within the inner zone, also referred to as built-up area.

This regulation is used for areas without a binding land-use plan, which are already substantially built-up, or for areas with a non-qualified binding land-use plan in accordance with sec. 30 para. 3 (see also Sect. 2.3.1). For an area or a plot to be counted as part of the inner zone or built-up area it must display a pattern of connected development [Bebauungszusammenhang] and be part of a community [Ortsteil]. “Within built-up areas a development project is only permissible where, in terms of the type and degree of building coverage, the coverage type and the plot area to be built on, the building proposal blends with the characteristic features of its immediate environment” [Einfügungsklausel] and the provision of local public infrastructure has been secured (sec. 34 para. 1 s. 1). In addition, the requirements of healthy living and working conditions must be satisfied and the overall appearance of the locality may not be impaired (sec. 34 para. 1 s. 2). There is a special regulation for the type of building coverage. In accordance with sec. 34 para. 2, where the characteristic features of the immediate environment “correspond to one of the specific land-use areas contained in the” BauNVO “the permissibility of the development project is determined solely with reference to type and to whether it would in general be permissible under the ordinance within the specific land-use area; in respect of building developments permitted under the ordinance as exceptional cases sec. 31 para. 1 applies, in other cases sec. 31 para. 2 applies mutatis mutandis” (sec. 34 para. 2).

Development projects must not have harmful effects on central supply areas within the municipality or within other municipalities (sec. 34 para. 3).

Deviations to the requirements of fitting in of its immediate environs (sec. 34 para. 3a) may be permitted as exceptional cases, where

1. extension, alteration, changes of use or renewal of a building with craft, commercial or residential use which were erected with permission,
2. this is justifiable in terms of urban development and
3. also under due account of the interests of neighbors is compatible.

This regulation shall not apply for retail properties which may affect consumer-oriented supply for the population or may have harmful effects on central supply areas in the municipality or in other municipalities.

The municipality has the option to prepare inner zone statutes [Innenbereichssatzungen]. The municipality may designate the boundaries of built-up areas [Abgrenzungssatzung], may designate built-up areas in the undeveloped outskirts [Außenbereich] as built-up areas [Entwicklungssatzung], may incorporate individual plots located in the undeveloped outskirts area in the built-up area [Ergänzungssatzung]. The objective of these statutes is the use of the permissibility of development projects within built-up areas. The types of statutes may be

conjoined. During the preparation of a statute the simplified procedure for the land-use planning applies *mutatis mutandis*.

2.3.3 Building in the Undeveloped Outskirts Area

As a principle, it is not permitted to build in outskirts areas. Exceptions are regulated in sec. 35.

Sec. 35 para. 1 regulates “privileged” development projects. Such a project is only permissible where there are no conflicting public interests (the non-exclusive catalogue of public interests is regulated in sect. 35 para. 3), ample public infrastructure provision can be secured and where it serves one of seven development projects:

- agricultural or forestry activities;
- horticultural production;
- public supply of electricity, gas, telecommunications, heat and water, sewage management or a commercial operation which is bound to its existing location;
- projects which are bound to the outskirts area because of the specific requirements, its harmful effect on its surroundings or because of its special function; facilities for animal farming under certain legal conditions;
- research, development and use of wind- and water energy;
- energy uses of biomass plants under certain legal conditions;
- research, development and use of nuclear energy for peaceful purposes or treatment of radioactive waste excepting construction of facilities for fission of nuclear fuels for the commercial production of electricity;
- use of solar radiation under certain legal conditions.

Sec. 35 para. 3 sent. 3 has a legal significance for the admission of projects according to sec. 35 para. 1 number 2–6, e.g. wind turbines.

Sec. 35 para. 4 regulates “favored” development projects. These projects are linked to existing developments. In case of these projects “it cannot be objected that they are in conflict with the representations of a preparatory land-use plan or a landscape plan, detract from the natural character of the landscape or provide reason to suppose that they may lead to the creation, consolidation or expansion of a splinter settlement”, so far it is outskirts compatible. These are the following projects:

- change to a previous use of a building within the meaning of sec. 35 para. 1 No. 1;
- rebuilding of a permitted residential building with deficits or defects, of the same type and in the same position;
- rebuilding of a permitted building, where this building has been destroyed by fire, natural phenomena or any other extraordinary circumstances;
- alteration or change of use of building which contribute significantly to the appearance of the cultural landscape and warrant preservation;
- extension of a permitted residential building;
- physical extension of a permitted building with commercial use.

Other “non-privileged” development projects may be permitted as exceptional cases provided that this does not conflict with public interests (sec. 35 para. 2).

Development projects permitted under para. 1–4 “are to be realized in a manner which makes economical use of land, limiting the amount of land sealed by development to a minimum, and shows due consideration for unallocated in the outskirts area” (sec. 35 para. 5). For development projects in accordance with sec. 35 para. 1 No. 2–6 there are additional conditions of authorization.

The permissibility of development projects for the purpose of creating housing or smaller craft and commercial uses in the territorial validity of this statute complies with sec. 35. The following public interests (conflict with the representations of the preparatory land-use plan on spaces for agricultural use or for woodland and creation, consolidation or expansion of a splinter settlement) have not relevance. During the preparation of a statute the simplified procedure for the land-use plan applies *mutatis mutandis*.

2.4 Instruments of the Special Urban Development Legislation

The special urban development legislation provides instruments for special situations in urban development. The measures are in particular Urban Redevelopment Measures [städtebauliche Sanierungsmaßnahmen], Development Measures [städtebauliche Entwicklungsmaßnahmen], Urban Redevelopment [Stadtumbau] and Socially Integrative City [Soziale Stadt].

Urban redevelopment measures are “those measures by means of which an area is substantially improved or transformed with the purpose of alleviating urban deficits” (sec. 136 para. 2). This may be structural or functional deficits, often a combination of both. Urban redevelopment measures are undertaken in the interests of public welfare and where the public interest requires consistent preparation and speedy execution. This instrument and its procedure is regulated in sec. 136 ff. Important stages of the procedure are: preparatory investigations, social planning, formally designation of the redevelopment area as a statute (redevelopment statute) by the municipality, implementation of regulatory and constructional measures and completion of redevelopment.

The period for redevelopment must be determined by a resolution. It should take no longer than 15 years. The municipality must determine the type of redevelopment procedure (simplified or standard procedure). Within a formally designated redevelopment area certain development projects and legal procedures require a written permission. Subsidies and grants [urban development grants] are often available to cover the costs of preparation and implementation of the urban redevelopment measure. In the standard procedure, owners of property within a formally designated redevelopment area are required to contribute to financing through a financial settlement [Ausgleichsbetrag].

The purpose of urban development measures (Sections 165 ff.) is “to subject local districts or other parts of the municipal territory to development for the first time in a manner which is in keeping with their particular significance for urban development within the municipality, or which is in accordance with the desired development of the federal state district or the region, or to make such areas available for new developments within the framework of urban reorganization” (sec. 165 para. 2). They are conducted where the public interest requires consistent preparation and a quick execution. The municipality may formally designate an area in which an urban development measure is to be implemented as an urban development zone by a statute. The most important precondition is: the urban development measure must be required “in the public interest, in particular in order to meet an increased demand for housing and places of employment, for the construction of public facilities or consequential developments, or in order to return derelict land to productive use” (sec. 165 para. 3 No. 2). The municipality is required to prepare without undue delay binding land-use plans and to implement the proposed development in the urban development zone. With only few exceptions, the municipality shall acquire the properties located in the development zone (sec. 166 para. 3). It is obliged to dispose of those properties after implementation of the measures. Where the municipality does not acquire a property, the owner is obliged to make a financial settlement to the municipality.

Urban redevelopment is the adaptation of parts of the municipality or of the entire community to urban shrinkages due to structural changes and population decrease. The program “Urban Redevelopment East” [Stadtumbau Ost] and the program “Urban Redevelopment West” [Stadtumbau West] were launched by the federal and state governments in 2002 and 2004, respectively. The goals of urban redevelopment lie in particular in the adaptation of urban structures to the development of the population and economy, the strengthening of urban areas and the demolition of permanent unused buildings. Urban Redevelopment is regulated in sections 171a to f. The municipalities may designate areas for urban redevelopment by a simple resolution. Basis for this resolution is an urban development concept prepared by the municipality assisted by affected persons, authorities and other public agencies. This concept must constitute the aims and measures for the development of this area.

The program “Socially Integrative City” was launched by the federal and state governments in 1999 to remove social bads in deprived urban districts or in other areas of the municipal territory with special development needs. The goal is the stabilization and upgrading of the living conditions in districts with social, economic or structural deprivation, the bundling of human and material resources, the activation and participation of the local residents and the establishment of new management systems and organizational structures. With this program in particular local initiatives in the fields of employment, cultural and social work are founded. Here the neighborhood management has achieved a special importance. The “Socially Integrative City” is regulated in sec. 171e. The municipalities may designate areas for “Socially Integrative City” by a simple resolution. Basis for this resolution is an urban development concept prepared by the municipality

assisted by affected persons, public authorities and other public agencies. This concept must constitute the goals and measures for the development of this area.

3 Building Regulations Law

The *Länder* shall have the right to legislate the building regulations law (Article 70 GG). Therefore all *Länder* regulate their own building regulations law. In the field of building regulations law the respective building regulations [Landesbauordnung] is the most important law supplemented by various regulations such as ordinances and technical rules. The building regulations of the *Länder* are based on the Model Building Regulations [Musterbauordnung]. They are similar in content and structure, although some regulations differ considerably (e.g. building permission procedures). Therefore it is important to use the building regulations of the respective Land, where the property is located. Here, the building regulations for Berlin (BauO Berlin—BauO Bln) are used.

The building regulations law contains procedural and substantive provisions.

3.1 Procedural Building Regulations Law

The procedural provisions regulate in particular the organization and competencies of the building control authorities [Bauaufsichtsbehörden], the building permission procedure and rights and duties of involved parties (e.g. clients, architects, building companies, engineers).

The enforcement of building regulations law as other regulations under public law governing the building activities falls within the competence of the lower building control authority unless otherwise provided. To carry out these duties the building control authorities have several preventive like permission procedure and repressive instruments such as monitoring, suspension of construction or interdiction of any use.

Unless otherwise provided Construction, modification and change of use of structures require the permission. Whether the following provisions apply must be ascertained for each project:

- priority of other permission proceedings (sec. 61 BauO Bln):
- Listed development projects are required to other permission proceedings e.g. structures are required to permission regarding to commercial law except permissions for restaurants.
- building projects not subject to permission procedure, demolition of structures (sec. 62 BauO Bln):
- Listed development projects with little impact and limited difficulty are not subject to permission procedure e.g. single-storey building with a gross plot area up to 10 m², except in outskirts areas. All public regulations must be taken.
- exemption from permission (sec. 63 BauO Bln):

- This procedure covers projects which provide for building activities for buildings which are no physical structures and areas of special types or with special uses [Sonderbauten] under the follow preconditions:
 - the development project lays in an area covered by a binding land-use plan as defined by sec. 30 para. 1 or sec.s 12, 30 para. 2 BauGB;
 - it does not conflict with the designations of the binding land-use plan or exceptions and deviations in accordance with 31 BauGB are approved or no conflict with planning law has been found in a preliminary decision regarding urban development law;
 - provision of local public infrastructure has been secured;
 - the local authority does not want to carry out a simplified building permission procedure or to pass a temporary interdiction according to sec. 15 para. 1 s. 2 BauGB.

The client must notify this development project with the required documentation to the building control authority. One month after arrival to the building control authority or in cases of prior information the client may start with this project. He may realize this project within 3 years. Otherwise a new procedure is required.

- authorization of moveable structures (sec. 75 BauO Bln):
 - The most moveable structures require a model approval prior their first assembly for use.
- Building authority approval (sec. 76 BauO Bln):
 - This procedure is used in cases of public buildings under responsibility of a federal or federal state building agency.

If none of these regulations is relevant, building permission proceedings are required. Depending on the preconditions, the BauO Bln differentiates between simplified building permission procedure (sec. 64 BauO Bln), the building permission procedure for advertising structures (sec. 64a BauO Bln) and building permission procedure (sec. 65 BauO Bln). The building application is to be submitted in writing to the building control authority. It is to be accompanied by the complete documentation required for an appraisal of the building proposal (required documentation)⁴ and for the building application to be processed. Consent may be given for individual documents to be submitted at a later date. The required building technology certificates and their control are regulated in sec. 67 BauO Bln. A survey of dealing with building application is to be found in sec. 70 BauO Bln. The building control authority decides on the building application within a month. The beginning of a period of time is where the complete documentation is present by the building control authority. Only for the simplified building procedure a

⁴ An exclusive list of required documentation is to be found in Ordinance on required documentation, building technology certificates and the procedure in detail [Bauverfahrensverordnung (BauVerfVO)].

fiction of permission under certain preconditions [Genehmigungsfiktion] is regulated.

- Simplified building permission procedure:

This procedure is used for construction, modification and change of use of structures except physical structures and areas of special types or with special uses [Sonderbauten].

The building control authority investigates:

- the accord with regulations on permissibility of development projects in accordance with sec.s 29–38 BauGB;
- proposed and required deviations according to sec. 68 para. 1 and 2 sentence 2 BauO Bln as well as the accord with the requirements of sec.s 4–6 BauGB and
- other public law requirements so far as due to the building permission a decision according to other public law regulations is omitted or replaced.

- Building permission procedure:

This procedure is used for physical structures and areas of special types or with special uses [Sonderbauten]. The building control authority investigates:

- the accord with regulations on permissibility of development projects in accordance with sections 29–38 BauGB;
- the requirements regarding to or on the basis of this Act and
- other public law requirements so far as due to the building permission a decision according to other public law regulations is omitted or replaced.

The building permission is to be granted unless the building proposal is in contravention under public law regulations which are controlled in the building permission procedure. The building permission must be in written form. The building permission expires within a period of 3 years from permission being granted, or if construction work is interrupted for a period of 1 year. On written application extensions respectively of up to 1 year may be permitted. The preliminary decision and the planning law preliminary decision are valid for 3 years. Extensions are also possible respectively of up to 1 year.

In addition, there are also plants (listed in annex of 4. BImSchV) subject to permission under Federal Immission Control act [Bundes-Immissionsschutzgesetz—BImSchG] (sec. 4 BImSchG). A distinction is made here according to standard permission procedure (sec. 10 BImSchG) and the simplified permission procedure (sec. 19 BImSchV). Often, an environmental impact assessment is required. For more information look into Gesetz über die Umweltverträglichkeitsprüfung [UVP], e.g. Annex 1 and Annex 2.

This permission under BImSchG includes the building permission and other administrative decisions.

3.2 Substantive Building Regulations Law

Sec. 3 BauO Bln contains the general requirements regarding structures and buildings. Structures “shall be arranged, constructed, altered and maintained in such a way as to ensure that no risk is posed to public safety and order, and in particular to life, health and natural resources” (sec. 3 para. 1 BauO Bln). The removal of structures and change to their use are governed by paras. 1–3 as appropriate.

In addition to the building regulations and ordinances technical rules are very important for the construction of physical structures and buildings. These are in particular the technical rules introduced by the supreme building control authority by public notice as Technical Building Regulations [Technische Baubestimmungen] (sec. 3 para. 3 BauO Bln). Deviations from the technical building regulations may be made in cases where the general requirements contained in para. 1 may be satisfied to the same extent by means of some other solution; nothing here shall affect sec. 17 para. 3 and sec. 21 (sec. 3 para. 3 BauO Bln).

The BauO Bln contains the following substantive requirements concerning:

- general regulations (terms such as physical structures, building, building classes, general requirements);
- building land and buildings (e.g. construction of buildings, pedestrian and vehicle access to plots, distance spaces);
- physical structures (e.g. design and appearance, general requirements regarding building construction, building products and building techniques, walls, ceilings, roofs, emergency exits, openings, guarding and other safety measures, building services, usage requirements).

The building control authority is empowered to permit deviations from the requirements within this Act or based upon this Act (sec. 68 BauO Bln).

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Part III

Tax and Subsidy Framework

Tax Framework for Investing by Asset Classes

Joachim Krämer

Abstract

There is no standard structure for foreign real estate investments in Germany. The different investment vehicles have various advantages and disadvantages for different investors. Obviously, tax consequences must also be taken into consideration when an investor considers the investment vehicle that fits his individual circumstances and special needs best.

Keywords

Trade tax • Taxation of dividends • Capital gains taxation

1 Introduction

The tax regimes governing the different investment vehicles that can be used for real estate investments in Germany vary significantly. In addition, there are some German particularities with respect to the structure and the taxation of some investment vehicles (e.g., closed-end funds).

Therefore, investors must carefully choose the investment vehicle they want to use for real estate investments in Germany. To get a fair view of the overall tax burden in connection with a German real estate investment, one must consider both, the taxation at the level of the investment vehicle and at the investor's level.

With respect to real estate investments in Germany, two tax particularities must always be taken into consideration: German trade tax, on the one hand, and German real estate transfer tax, on the other, in addition to the internationally known income and withholding tax issues (see also Farle and Schmitt 2016).

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2 German Stock Corporation

In general, taxation of investments in German real estate through a German stock corporation is not significantly different at the entity level or the shareholder level from taxation of any other German stock corporation.

2.1 Entity Level Taxation

The profits of German corporations are generally subject to corporate income tax. The corporate income tax rate is uniformly 15 % for profits distributed and retained earnings plus the solidarity surcharge in the amount of 5.5 % on the corporate income tax liability (i.e., a total of 15.825 %).

In addition, German corporations are generally subject to trade tax (*Gewerbesteuer*) on the trade income generated by a permanent establishment in Germany. However, a corporation that exclusively holds and manages real estate can be effectively exempt from German trade tax (cf. under Sect. 3.2). Thus, it is possible that a German stock corporation that exclusively holds and manages (German) real estate is in effect only subject to German corporate income tax. This is to keep real estate holding companies from being subject to double taxation with trade tax and land tax.

When the taxable income of a German stock corporation is determined, the German interest barrier rules (which limit the tax deductibility of interest expenses) and the German special tax loss carryforward restriction apply.

2.2 Shareholder Level Taxation

2.2.1 Taxation of Dividends

When distributing dividends, a German stock corporation must generally withhold taxes for the account of the shareholders in the amount of 25 % plus the solidarity surcharge of 5.5 % thereon (i.e., a total of 26.375 %) and remit the withheld amount to the competent tax authority. The basis for the withholding tax is the dividend resolved by the general shareholders' meeting.

The withholding tax must generally be deducted regardless of whether and to what extent the dividend is exempt from taxation at the shareholder level and whether the shareholder is a person residing in Germany or in a foreign country.

When dividends are distributed to a parent company within the meaning of the EU Parent Subsidiary Directive domiciled in another member state of the European Union, an exemption from withholding tax will be granted upon request if further prerequisites are satisfied (*Freistellung im Steuerabzugsverfahren*). The key prerequisite for the application of the EU Parent Subsidiary Directive is that the shareholder must have held a direct participation in the share capital of the distributing stock corporation of at least 10 % for at least 1 year.

The withholding tax on distributions to other foreign resident shareholders is reduced in accordance with a double taxation treaty, in case Germany has concluded such a double taxation treaty with the shareholder's country of residence. Under most German double taxation treaties, the German withholding tax on dividends is limited to 15 % for portfolio investments and 5 % for qualified investments (i.e., 10 or 15 % in the share capital or more). The reduction of the withholding tax is generally granted in such a manner that the German tax authorities refund the difference between the withheld total amount, including the solidarity surcharge, and the tax liability determined on the basis of the tax rate in the double taxation treaty, upon request.

When dividends are received by corporations whose statutory seat and effective place of management are not located in Germany and which are therefore not tax resident in Germany, generally 2/5 of the withholding tax deducted and remitted can be refunded without the need to fulfill all prerequisites required for such refund under the EU Parent Subsidiary Directive or under a double taxation treaty.

The exemption from withholding tax in accordance with the EU Parent Subsidiary Directive and the aforementioned options for a refund of the withholding tax depend on whether certain additional prerequisites (in particular the "substance requirements") are met.

Shareholders who are not tax resident in Germany and who hold their shares through a permanent establishment or a fixed place of business in Germany, or as business assets for which a permanent representative has been appointed in Germany, are subject to German resident taxation in Germany in respect of that dividend income.

In all other cases, the German tax liability is satisfied for the dividends through the deduction of withholding tax by the distributing stock corporation.

2.2.2 Taxation of Capital Gains

Capital gains obtained by non-German tax resident shareholders are subject to German taxation only if the selling shareholder holds a qualified participation in the stock corporation or holds the shares through a permanent German establishment or fixed place of business or as business assets for which a permanent representative is appointed in Germany.

In the case of a qualified participation, i.e., a participation of at least 1 % in the share capital of the stock corporation, 5 % of the gains from the sale of shares are generally subject to corporate income tax, plus the solidarity surcharge if the shareholder is a corporation. If the shareholder is an individual, only 60 % of the gains from the sale of such shares are subject to the individual, progressive personal income tax plus the solidarity surcharge (this is known as the "partial income taxation" method). The tax is levied by way of tax assessment.

Regardless of the foregoing, under most German double taxation treaties, capital gains from the disposal of shares in a German stock corporation are exempt from German capital gains taxation. A few German double taxation treaties provide special treatments for German stock corporations which derive more than 50 % of their value directly or indirectly from immovable property situated in Germany.

Capital gains from the disposal of shares in such companies are subject to German capital gains taxation even if the shareholder is a tax resident of the other contracting state.

In general, the transfer of shares in a German stock corporation that owns German real estate only triggers German real estate transfer tax if 95 % or more of the company's share capital are unified in the hands of one single shareholder.

3 Real Estate Investment Trusts

3.1 General Structure

As in almost every other real estate investment trust (REIT) regime in the world, the main tax feature of the German REIT is that its profits are entirely tax exempt at the company level, but are fully taxable at the level of the shareholders. Adequate taxation of foreign shareholders in Germany was therefore one of the most important issues to be resolved before a REIT regime could be established. That has been achieved by restricting the maximum direct shareholding to less than 10 %. Under most German double taxation treaties, the dividend participation exemption is only available for shareholders who directly hold at least 10 % of the total share capital. Thus, REIT shareholders cannot benefit from such dividend participation exemption.

3.2 Entity Level Taxation

As a regular German stock corporation, a German REIT would be subject to both corporate income tax and trade tax. However, as mentioned above, a REIT is completely tax-exempt if it meets the criteria set out by Clemens Just (2016). Once the REIT has satisfied those criteria and is exempt from taxation, failure to comply with the criteria on an ongoing basis is penalized in various ways. A REIT's tax exempt status will be revoked retroactively as of the beginning of the calendar year in which the REIT is delisted.

A REIT may not sell more than 50 % of its average real estate portfolio within any given 5-year period, otherwise it immediately loses its tax-exempt status. To determine whether the REIT meets the 50 % test, its real estate and the real estate of its subsidiary real estate partnerships and foreign real estate corporations is evaluated at fair value in accordance with IAS 40.

The tax exemption for a REIT may also end if less than 15 % of the REIT's shares are in free float for three consecutive fiscal years, or a single investor holds 10 % or more of the REIT corporation's shares for three consecutive fiscal years. However, once the REIT has become aware of its failure to comply with either the free floats or the maximum shareholding requirement, it must ensure that it is in compliance with these requirements by the end of the business year that follows the

business year in which it became aware of its noncompliance. The REIT will only lose its tax exemption if it misses this deadline (see also Clemens Just 2016).

A REIT's equity must amount to at least the equivalent of 45 % of its real estate measured at fair value in accordance with IAS 40. If a REIT fails to comply with the limitation on debt financing in three consecutive years, it loses its tax exemption.

To be applicable for the tax exempt status a REIT must meet certain composition of assets, composition of gross revenue and minimum distribution requirements (see Clemens Just 2016). If a REIT fails to comply with these requirements, the tax authorities may impose penalty payments. For ongoing failures, the REIT's tax exempt status may be revoked.

It is worth noting that the REIT is only exempt from corporate income and trade tax. By contrast, the REIT remains subject to real estate transfer tax, land tax and VAT (see also Farle and Schmitt 2016).

3.3 Shareholder-Level Taxation

Since the profits of a German REIT are not taxed at the company level, all of its profit distributions must be taxed at the shareholder level. To ensure adequate taxation, the REIT must distribute at least 90 % of its annual distributable profits (the minimum distribution). Since the profits are not taxed at the level of the REIT, the effective taxation of non-resident shareholders becomes even more important.

3.3.1 Profit Distributions

A REIT's profit distributions to non-residents shareholders are subject to German non-resident taxation.

As with resident shareholders, profit distributions to non-resident shareholders are subject to a regular dividend withholding tax at a rate of 25 %, plus a 5.5 % solidarity surcharge. Dividend withholding tax on profit distributions to non-resident shareholders is a definitive tax. Such shareholders are not subject to tax assessment in Germany.

The withholding tax rate on distributions to shareholders that are not German tax residents may be reduced under an applicable double taxation treaty (normally 15 %). In such this case, the reduction of the withholding tax is generally granted in such a manner that the difference between the total amount withheld, including the solidarity surcharge, and the tax liability determined on the basis of the tax rate in the applicable double taxation treaty is refunded by the German tax administration upon request.

Under most German tax treaties, the withholding tax rate is even further reduced if the shareholder in question directly holds 10 % or more of the company's share capital (this is known as the "treaty participation" exemption). The statutory rule restricting direct participation in a REIT to less than 10 % ensures that REIT profit distributions to non-resident shareholders can never become eligible for such treaty participation exemptions. If a shareholder holds 10 % or more of a REIT's share capital, he may not claim any more rights than a shareholder holding less than 10 %

(except for voting and profit participation rights). Such a shareholder is thus not eligible for the participation exemption under an otherwise applicable treaty.

However, the rule restricting the maximum shareholding to less than 10 % does not prevent investors from indirectly holding 10 % or more of the share capital of a REIT, since this rule only applies to direct shareholdings. Therefore, an investor may even hold all the shares of the REIT indirectly, through at least 11 subsidiaries. The treaty participation exemptions remain inapplicable, since they require a direct shareholding of at least 10 %.

The EU Parent Subsidiary Directive participation exemption is not applicable to a REIT's profit distribution. That is because REITs are tax-exempt entities to which the directive is not generally applicable.

In the case of non-German tax resident corporate shareholders, 2/5 of the withheld and remitted dividend withholding tax will be refunded by the German tax authorities upon request.

In particular, this 2/5 refund of withholding tax for non-resident corporate shareholders and the refund of withholding tax in accordance with a double taxation treaty depends on whether the German "substance requirements" are fulfilled. Under the German substance requirements a corporation that claims not to be tax resident in Germany must demonstrate that it maintains business premises and personnel and is engaged in business activities in its alleged country of residence.

3.3.2 Capital Gains Taxation

Capital gains realized by a non-German tax resident investor on the disposal of shares in a German REIT are subject to German non-resident taxation only if the shareholder holds at least 1 % of the REIT's share capital. It is worth noting that in this case the so-called "partial" or "zero income" taxation method—whereby only five in the case of investors that are subject to corporate income tax or 60 % in all other cases of income is subject to tax—is not applicable to capital gains from REIT-shares.

However, the general liability for German capital gains tax is eliminated under most German text treaties. Only few German tax treaties have special provisions for real estate companies under which capital gains on the disposal of shares in those companies can be taxed in the company's country of residence rather than the seller's.

4 Closed-End Funds

As a closed-end German real estate fund is essentially a German limited partnership, its taxation follows the same principles as the taxation of German limited partnerships.

4.1 Fund Level Taxation

With the exception of VAT and German trade tax, which is directly imposed on the fund if it carries on a trade or business, the fund is tax transparent. Thus, the individual investors are the taxable entities rather than the fund itself. Rental income from German real estate and capital gains from the sale of German real estate and any other income received are all exempt from income tax at the level of the fund.

In general, closed-end German real estate funds are structured in a way that they are not subject to German trade tax. This can be achieved by (1) making use of the German special trade tax regime for real estate holding companies, or (2) ensuring that the fund is not deemed to be engaged in a trade or business for German trade tax purposes so that it is in principle not subject to German trade tax, or (3) ensuring that the effective place of management of the fund is not in Germany so that the fund is not a German trade taxable entity. However, a trade tax efficient structure of a German closed-end real estate fund admittedly requires some careful structuring, and alternatives (1) and (2) above put some restrictions on the fund's business activities. Under these restrictions, the fund may not for example engage in real estate trading or project development. In addition the fund may not lease operating facilities or provide any extra services such as facility management etc.

4.2 Investor Level Taxation

4.2.1 Rental Income and Capital Gains from Disposal of Real Estate

For tax purposes, investors are deemed to receive their income from the fund in proportion to their participation, regardless of its actual distribution policy. The income is subject to German taxation according to the individual circumstances of the investor (i.e., corporate investors are subject to German corporate income tax, whereas individual investors are subject to German personal income tax). Thus, non-German tax resident investors are subject to German non-resident taxation on the income from the fund to the extent it consists of rental income from German real estate. This applies irrespective of whether the fund maintains a permanent establishment in Germany or not. In addition, foreign investors are also generally subject to German non-resident taxation on the income from the fund to the extent it consists of capital gains from the disposal of real estate located in Germany. However, some exceptions may apply for non-corporate investors in a closed-end real estate fund that is not engaged in trade or business if the period between the acquisition and the disposal of the respective real estate exceeds 10 years.

It is worth noting that the fund's income that is subject to German non-resident taxation at the level of the funds foreign investors is determined in accordance with the general German tax accounting rules. Thus, in particular the "interest barrier" rules apply, limiting the tax deductibility of interest expenses.

Income taxes at the level of the foreign investors are levied by way of tax assessment in Germany. There is no withholding tax on income that non-German

tax resident investors derive from closed-end German real estate funds. The taxable income is uniformly and separately determined at the fund level by the German tax authorities and subsequently allocated to the individual investors on a pro rata basis.

4.2.2 Capital Gains from the Disposal of Fund Interests

In general, capital gains realized by a non-German tax resident investor upon the disposal of its interests in a German closed-end real estate fund are subject to German non-resident income taxation at the investor level. Again, some exceptions may apply when non-corporate investors sell interests in German closed-end real estate funds that are not engaged in trade or business. In the case of corporate investors, capital gains from the sale of fund interests may also be subject to German trade tax at the fund level depending on the individual circumstances (in particular whether the fund is a trade taxable entity in Germany). Like German non-resident income tax on the fund income, German non-resident income tax on capital gains from the disposal of fund interests are levied by way of tax assessment in Germany.

It is worth noting that in some particular circumstances the transfer of interests in a German closed-end real estate fund may trigger real estate transfer tax at the fund level. Real estate transfer tax is triggered in particular if more than 95 % of the total fund interests are transferred to new investors within any given 5-years period.

5 Open-End Funds

For German tax purposes, a distinction is made between public and special open-end real estate funds. Like a public open-end real estate fund, a special open-end real estate fund has no legal personality and is managed by a German management company. A special open-end real estate fund is not a separate class of funds, but a regime that allows an open-end real estate fund to avoid certain regulatory requirements under the German Capital Investment Act (*Kapitalanlagegesetzbuch, KAGB*). This is because only non-individual investors may invest in a special open-end real estate fund and the number of investors is limited to 100 for tax purposes. In principle, special open-end real estate funds are tailored for a small number of institutional investors who typically have some influence on the investment strategy and the fund's operations. No sales prospectus and no license are required under German regulatory law for a special open-end real estate fund.

5.1 Fund Level Taxation

Both public and special open-end real estate funds are exempt from German corporate income tax and German trade tax. The fact that the investment management company, which nominally owns the fund's assets, is subject to German income tax in its own capacity does not affect the tax treatment of the fund.

Thus, there is no income taxation at the fund level on rental income from real estate in Germany and income from the sale of such real estate by the fund.

It is worth noting that the acquisition and sale of real estate is subject to real estate transfer tax, which is owed at the fund level. However, given the legal structure of German open-end real estate funds where in general the investment management company is the legal owner of the properties, no real estate transfer tax is owed if the fund units are sold, redeemed or otherwise transferred.

5.2 Investor Level Taxation

5.2.1 Rental Income and Capital Gains from Disposal of Real Estate

In the case of special open-end real estate funds, rental income of the fund from real estate in Germany and capital gains on the sale of real estate located in Germany within a period of 10 years of the acquisition are subject to tax in Germany at the foreign investor level. This is true irrespective of whether the rental income or the profits from the sale of the real estate are distributed to the investors or are retained at the fund level. Distributed profits and the fund's retained earnings are subject to German withholding tax at a rate of 25 % plus the 5.5 % solidarity surcharge (i.e., 26.375 % in total). However, in the case of special open-end real estate funds, such withholding tax is not a definitive tax, but is credited against the foreign investor's corporate or personal German income tax liability in the subsequent tax assessment in Germany.

Until recently, income from real estate in Germany and income from the sale of such real estate held by a German public open-end fund were not subject to tax in the hands of non-German tax resident investors. This very favorable tax treatment has been changed by the German Annual Tax Act 2010 (*Jahressteuergesetz 2010*) with effect for all business years of public open-end funds starting after December 31, 2010. As in the case of special open-end funds, rental income from real estate in Germany and income from the sale of such real estate held by a German public open-end fund will be subject to tax at the level of non-German tax resident investors, irrespective of whether such income is distributed or retained by the fund. The fund's rental income and any income from the sale of German real estate will be subject to German withholding tax at a rate of 25 % plus the 5.5 % solidarity surcharge (i.e., 26.375 % in total). Unlike in the case of the special open-end real estate funds, the withholding tax for public open-end real estate funds is a definitive tax for non-German tax resident investors. Thus, foreign investors in public open-end real estate funds will not be subject to tax assessment in Germany.

Only in the case of public open-end real estate funds the withholding tax rate on distributed and retained earnings may be reduced under an applicable double taxation treaty if all further prerequisites are fulfilled (in particular the "substance requirements").

If a corporate investor whose statutory seat and effective place of management are not located in Germany, and who is therefore not tax resident in Germany invests in a German public open-end real estate fund, generally 2/5 of the

withholding tax deducted and remitted can be refunded without having to meet any further prerequisites except for the “substance requirements”. Thus, in this case the effective withholding tax rate is 15 % plus the 5.5 % solidarity surcharge (i.e., 15.825 % in total).

5.2.2 Capital Gains from the Disposal of Fund Interests

As in the case of an investment in German real estate via a foreign corporate entity, or a German corporate entity if the shareholder is eligible for treaty protection, capital gains realized by a non-German tax resident investor upon the disposal of its interests in a special or public open-end German real estate fund are not subject to German taxation. As mentioned above, the transfer of interests in a German public or special open-end real estate fund does not trigger German real estate transfer tax. Thus, the divestment of German public or special open-end fund interests can be realized without triggering German income tax or real estate transfer tax.

6 Summary

The taxation of real estate investments in Germany depends heavily on the investment vehicle chosen by the foreign investor. Thus, it is obvious that choosing the adequate investment vehicle requires thorough advanced planning by the investor. When doing that planning, an investor must take all of its individual circumstances into account, such as investment strategy, risk aversion and so on as the different investment vehicles match different investor backgrounds and strategies. There is not one single-best vehicle for all real estate investors. To the extent the investment vehicle is regulated by German law (e.g., REITs or open-end funds), the regulatory framework must obviously be also taken into account when choosing the investment vehicle.

Last but not least, the selection of an investment vehicle must obviously be made on the basis of up-to-date information since, as always in tax matters, the tax regime for real estate investments is subject to frequent changes. However, in the recent past, the German legislation has intended to make the tax regime for German real estate investments attractive for foreign investors.

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German Taxation of Inbound Real Estate Investments

Valentina Farle and Rainer Schmitt

Abstract

This chapter gives an overview of the main aspects of the German principles of taxation relevant for inbound German real estate investments by non-German corporate investors. As a rule, such investments are subject to German (corporate) income tax and solidarity surcharge. The tax structuring usually focuses on mitigating German trade tax and German real estate transfer tax. In the course of the transaction itself, German value added tax issues play a significant role.

Keywords

Income tax • Trade tax • Transfer tax • VAT • Tax liability

1 Introduction

With respect to inbound real estate investments by non-German corporations, Germany may currently be regarded as a low taxation country.

The effective income tax rate applicable to inbound real estate investments by foreign corporations—not resident in Germany for German income tax purposes—may be as low as 15.825 %. The German corporate income tax (*Körperschaftsteuer*, “CIT”) rate currently amounts to 15 %. A so-called solidarity surcharge (*Solidaritätszuschlag*, “SolSur”) of 5.5 %—introduced in order to help financing German unification—still applies to all German income tax charges, resulting in a combined CIT rate of 15.825 % including SolSur.

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Hence, compared to most of the bigger European countries with respective corporate income tax rates typically being beyond 20 % or even exceeding 30 % (e.g., in Belgium, France), Germany offers a very competitive income taxation environment. However, the effective tax rate can be increased due to the applicability of provisions regarding the forfeiture of net operating losses (tax losses incurred in the current or previous years) or by the non-deductibility of expenses, in particular the so-called interest barrier (*Zinsschranke*). CIT and SolSur aspects of real estate investments are described in more detail in Sect. 2.1.

The German tax structuring of German real estate investments concentrates on trade tax aspects since the aforementioned final tax burden of 15.825 % is only achieved in cases where German trade tax (*Gewerbesteuer*, “TT”) is not due on the investment. TT is only applicable to defined (actual or deemed) trading income attributable to a German tax-permanent establishment (*Betriebsstätte*, “PE”). Furthermore, there is a specific TT exemption for real estate investments (the so-called extended trade tax exemption, *erweiterte Kürzung*). The TT rates are determined by the German municipalities and vary from municipality to municipality. In 2015, they ranged from the minimum rate equaling 7 % to beyond 19 %. Therefore, the TT burden may well be higher than the CIT and SolSur burden. In addition, TT law contains extraordinarily extensive provisions restricting the deductibility of expenses, for example expenses for debt-financing, leasing, renting, etc. As a consequence, TT payers with non-deductible expenses may effectively incur TT on these expenses, paying tax without generating profits and thus increasing their costs. TT aspects of real estate investments are further discussed in Sect. 2.2.

A potential solution to the above-mentioned German income taxation issues regarding the non-deductibility of certain expenses and the applicability of TT may generally be the investment through a regulated German real estate investment company (*REIT-Aktiengesellschaften*, “G-REIT”) or through a regulated German collective investment vehicle, as they are generally exempt from German CIT, SolSur and TT. In respect of the investment vehicles this only applies to an undertaking for the collective investment in transferable securities (“OGAW” or “UCIT”) compliant with the respective EU Directive 2009/65/EG (which however, does not allow for investments in real estate) or an alternative investment fund, i.e., an investment fund not complying with the UCITs Directive (an “AIF”) provided, *inter alia*, (i) the AIF or OGAW is subject to an investment regulatory supervision in its country of residence, (ii) the shareholder can sell its shares at least once a year to the fund or sell listed shares at a stock exchange, (iii) the purpose of the investment fund is exclusively directed at investing and managing its assets for the investors without taking on an active entrepreneurial role vis-a-vis the assets held (save for certain real estate investment entities), funds are invested, (iv) in a risk diversified manner, (v) exclusively in eligible assets and (vi) comply with detailed maximum investment, maximum leverage and certain corporate governance rules. Where these conditions are fulfilled, German (corporate) income taxation, SolSur and TT may (only) apply at the level of the respective investors under rules which are specific to the relevant collective investment vehicle.

AIF not complying with the aforementioned requirements are either transparent for CIT purposes (but may be subject to TT) and their investors are taxed under the ordinary German tax principles (where made via a German GmbH and Co KG, a limited liability partnership, or a comparable foreign entity) or, in all other cases, are subject to detailed tax regimes governing special purpose funds (*Sondervermögen*), legal estates (*Vermögensmassen*) or corporations, as applicable. As they are highly regulated, the involvement of German collective investment vehicles usually triggers considerable additional costs and time over the intended investment cycle in comparison to the utilization of a simple corporate structure; in addition, they are subject to investment restrictions. However, the use of an AIF, in particular, may offer substantial advantages and should be considered for any major German real estate investment. AIFs and G-REITs are described in more detail by Krämer (2016).

Germany levies a real estate transfer tax (*Grunderwerbsteuer*, “RETT”) which is triggered upon the transfer of real estate and may also fall due upon the direct or indirect transfer of participations in real estate vehicles. The RETT rules are highly complex and at the same time also widely unknown to international investors considering an investment in German real estate. There is no RETT rate applicable to the whole of Germany; instead, the respective rates are determined by the German federal states (*Bundesländer*) ranging currently from 3.5 to 6.5%. A number of federal states have recently increased the RETT rates applicable to real estate located in their area; this development is expected to continue. Since RETT is a considerable burden on German real estate investments, a major concern of the German tax structuring of German real estate investments is mitigating RETT. An overview of the relevant RETT principles is given in Sect. 2.3.

Although in many cases it is not hugely important for the mere tax structuring of German real estate investments, German value added tax (*Umsatzsteuer*, “VAT”) aspects regularly play a significant role in the course of the transaction, for example during the negotiations regarding purchase, lease and sale agreements. Moreover, they constitute a major concern with respect to any German real estate due diligence exercise. Since the economic importance of VAT on the returns on investment may be considerable, such VAT issues and their economic consequences must be addressed very early in the course of the investment, its pricing, the respective business plan and in the relevant agreements governing the investment. Hence, international investors into German real estate need to acquire a decent understanding of the relevant VAT rules. VAT aspects are discussed in Sect. 2.4.

German real estate tax (*Grundsteuer*, “RET”) applies to all German real estate investments and is briefly touched upon in Sect. 2.5.

Under certain circumstances, the purchaser of real estate may become liable for German tax obligations relating to the time period prior to the transfer. A brief summary of the tax liability risk is given in Sect. 2.6.

German gift and inheritance tax may also be relevant for a particular German real estate investment. This can be the case with respect to investments made by individuals as well as for example regarding transactions involving foundations or

trusts. However, since these cases are rather rare in practice, German gift and inheritance tax aspects have been left outside the scope of this overview.

2 German Taxation of Real Estate Investments

2.1 German Corporate Income Tax and Solidarity Surcharge

2.1.1 Overview

German income taxation differentiates between German income tax and CIT. Income tax concerns only individuals investing directly or via tax transparent vehicles whereas CIT is charged to entities such as limited liability companies, stock corporations, foundations, associations, states, municipalities, etc. German income tax is levied at a progressive rate of up to 45 % plus church tax, if any; TT, if any, may be partially or totally credited against the income tax. CIT is levied at a flat rate of 15 %; TT, if any, is triggered in addition and not deductible or creditable for CIT purposes. Both income tax and CIT are increased by SolSur at a rate of 5.5 % on the tax amount.

The CIT basis is typically determined on the basis of the accounting accrual method, i.e., comparing the balance sheet equity—as determined under German tax rules and slightly modifying the commercial accounting standards—at the end of a business year with the one at its beginning (*Bilanzvergleich*). However, in certain cases such as non-German corporations investing in German real estate, the CIT returns can alternatively be based on a modified cash-in-cash-out method (*Einnahmen-Überschuss-Rechnung*) except where (i) the German tax authorities specifically instruct the investor to use the accrual accounting method or where (ii) the foreign investor is subject to bookkeeping rules under its domestic rule of law (the latter case is currently heavily disputed).

The net taxable income of a typical real estate investment comprises the total income (from rents, capital gains and other income from interests etc.) minus deductible interest on e.g., bank or shareholder acquisition financing minus depreciation over buildings (excluding land) and other assets minus extraordinary amortization minus any other deductible current expenses such as (reasonable) asset and property management fees and maintenance costs minus deductible tax losses (NOLs), if any. Acquisition or manufacturing costs for assets as well as the respective ancillary costs can generally only be depreciated over time; however, even certain maintenance or modernization costs have to be capitalized when incurred within a 3-year period after the acquisition of a building and exceeding 15 % of the net acquisition costs for that building. Land can generally not be depreciated over time. The straight-line depreciation allowable for buildings is between 2 and 3 % depending on the specific features of the real estate investment in question; a degressive depreciation rate is currently accessible only in exceptional cases, such as for certain historical buildings or for buildings located in specific urban rehabilitation zones.

In terms of cooperation with the German tax authorities, the (foreign) taxpayer not only has to file tax returns, render evidence of the expenses and provide for the relevant bookkeeping including a transfer pricing documentation, but also has to be able to identify the ultimate beneficiary of his payments (e.g., in case of shareholder loans, service providers etc.); all in all, when it comes to cross-border scenarios, the taxpayer is subject to increased cooperation obligations vis-à-vis the German tax authorities, including higher levels of expectation as to the burden of proof.

2.1.2 Foreign Vehicles

In determining whether a foreign vehicle qualifies as a corporate taxpayer or is subject to income tax, the respective foreign vehicle has to be compared with German vehicles on a case-by-case basis considering all relevant circumstances based on the applicable domestic corporate laws and the bylaws of the vehicle (*Rechtstypenvergleich*). With respect to certain foreign vehicles it is quite clear how these have to be dealt with under German tax law. For example, S.à r.l.s under Luxembourg law or B.V.s under Dutch law are comparable to German limited liability companies, GmbHs, and may therefore be subject to CIT. However, the classification may be difficult with respect to other foreign vehicles, particularly US LLCs. The German tax authorities have published a catalogue containing detailed guidance and criteria for such comparisons.

2.1.3 Partnerships

Partnerships as such are not subject to German income tax or CIT. Instead, the partners may be taxed with respect to their partnership interest. However, although partnerships are in principle transparent for German income tax and CIT purposes, they are not fully disregarded in this respect. Rather, a number of special rules may apply where an investment is made using a partnership structure. The utilization of partnerships may be advantageous or disadvantageous from a German tax point of view, as the case may be. For example, if several German real estate investments are intended to be made, a structure consisting of limited liability partnerships (German *Kommanditgesellschaften*, KGs, or comparable foreign vehicles) holding the assets and one limited liability company (German GmbH or a comparable foreign vehicle) serving as their sole limited partner may be considered. From a German tax point of view these structures can offer a pooling of profits and losses for CIT/SolSur purposes with respect to all investments and yet ring-fence the individual investments for legal and possibly also for TT purposes. Furthermore, in certain scenarios it may also allow for full deductibility of interest expenses under the interest barrier rules (due to the splitting up of the portfolio into different vehicles, the so-called *de minimis* threshold (*Freigrenze*)). However, such a structure may be costlier than a single-entity structure due to the number of vehicles to be administered and also more difficult to handle from a RETT perspective due to certain rules only being applicable to partnerships.

2.1.4 Interest Deductibility

There are a number of provisions which may restrict the interest deductibility for German (corporate) income tax purposes, but the interest barrier is by far the most important one to be considered with regard to German tax structuring. The interest barrier rules are in detail rather complex, but can be briefly summarized as follows: there is no restriction on interest deductibility to the extent that the interest expenses are covered by interest proceeds. Only the deductibility of interest expenses exceeding the interest proceeds (net interest expenses) is restricted.

Under the interest barrier rules, the deductibility of the net interest expenses is in principle restricted to the relevant “tax” EBITDA of the business in question. The abbreviation “EBITDA” is specifically defined in the German tax provisions regarding the interest barrier. For German interest barrier purposes in a business or a broader economic context, it means Earnings before Interest Tax Depreciation Amortization, but only as determined in the interest barrier rules. The relevant EBITDA equals 30 % of profits taxable in Germany plus interest expenses minus interest proceeds plus ordinary depreciation and amortization amounts of the business, all under German income tax laws. Non-deductible net interest expenses are carried forward, resulting in a so-called interest carry-forward (*Zinsvortrag*), which increases the future interest expenses, but not the EBITDA relevant in the future. Amounts of relevant EBITDA not used up can also be carried forward for up to five business years, resulting in a so-called EBITDA carry-forward (*EBITDA-Vortrag*).

The applicability of the interest barrier to foreign investors is currently not quite clear in several respects and highly disputed. However, the tax authorities clearly assume the applicability, so that the rules should be taken into account for the German tax structuring of inbound real estate investments. There are certain exceptions to the applicability of the interest barrier: according to the most important one, the *de minimis* threshold rule, the interest barrier does not apply only if the net interest expenses of the business in question in that year amount to less than 3 million euros. If the *de minimis* threshold shall be relied upon with respect to a particular investment and the net interest expenses are expected to be volatile, for example due to a floating rate facility being used (a respective swap might not be relevant in this respect, depending on the circumstances), it might be advisable to plan with a considerable buffer.

Also, it needs to be considered that the German tax definition of interest expenses can well comprise elements which foreign investors rather see as regular costs of the financing or would otherwise attribute to other accounting periods (such as, for example, bullet payments at the end of the term). If the *de minimis* threshold of 3 million euros is reached, the interest barrier in principle applies to the total net interest expenses. Furthermore, since an interest carry-forward increases the interest expenses of future years, the applicability of the interest barrier in one particular year resulting in an interest carry-forward might already exclude the *de minimis* threshold for subsequent years. In the case of corporations and trading partnerships the *de minimis* threshold applies to each vehicle. Therefore, the splitting and allocation of real estate portfolios and even real estate assets to different vehicles

which each have a *de minimis* threshold might be a way to achieve the non-applicability of the interest barrier.

There are further exceptions to the interest barrier rule, namely if the business is not or only partially part of a group (the *non-consolidation exemption*), or if the equity ratio of the business is at least the same as the equity ratio of the group (the *consolidated group exemption*); companies, in addition, have to adhere to prerequisites concerning the absence of certain shareholders, related entity and even third-party back-to-back financing. Hence, these provisions are complex and are rarely relied on with respect to inbound German real estate investments.

As mentioned, apart from the interest barrier rule, there are other prerequisites for an interest deduction by, for example, foreign corporations. To mention just a few of them, the interest generally needs to be incurred by a financing assumed in connection with the acquisition or maintenance of the German property, the underlying agreements need to comply with the arm's length principle and where concluded with related entities also need to be documented in advance in writing, comparable to third party transactions and implemented strictly as agreed, transfer pricing documentation needs to be produced in time and at hand; in cases where the income is determined by a cash-in-cash-out method, the interest expenses should actually be paid at least once annually to be recognized (this point is being debated but should better be observed).

2.1.5 Forfeiture of Tax Losses

Where interests in a property-owning vehicle are transferred, the current tax losses (e.g., current tax losses, losses carried forward from previous business years and interest carry-forwards for purposes of the interest barrier) incurred by that point in time may be forfeited. Where partnerships are concerned, losses are forfeited in case and to the extent of a direct or indirect discontinuation of the enterprise and/or the entrepreneurs. When it comes to corporations, a direct or indirect transfer(s) of more than 25 % of the shares within 5 years to one acquirer, a group of related acquirers or a group of acquirers with similar interests leads to a loss of the corresponding percentage of tax losses; all losses are forfeited where such transfer(s) exceed 50 % of the shareholdings. Such forfeiture, however, does not take place to the (simplified) extent the losses concerned are lower than the taxable hidden reserves in the assets of the company (i.e., pro rata tax equity compared to the pro rata fair value of the shares concerned) or where the same shareholder directly holds 100 % of the shares in the transferring and in the transferee entity.

2.1.6 Shareholders

Dividends distributed by German limited liability companies (GmbHs) and stock corporations (AGs) with a corporate seat or center of management in Germany are subject to German tax liability under German domestic income tax laws, even if generated by a foreign shareholder. In principle, a German withholding tax rate of 26.375 % applies. In the case of foreign corporate shareholders, a refund of two fifths, resulting in a reduction to 15.825 %, might be available. Further reductions or refunds of the withholding tax might be available under the European parent

subsidiary directive or under applicable double tax treaties. To the extent this is not the case, the withholding tax in principle becomes definitive. All reductions or refunds need to be specifically applied for. However, German national income tax laws currently contain extensive “anti-abuse” provisions substantially restricting such reduction or refund options with respect to foreign shareholders. It is questionable whether these provisions are in line with European laws and/or to which extent they may contain unlawful treaty overrides, but it must be taken into account that reductions or refunds of withholding taxes might not be granted unless such provisions are fulfilled. The withholding tax requirement does not apply to partnerships as investment vehicles, or corporations not having their seat or center of management in Germany. Therefore, the use of a foreign vehicle (with sufficient substance) for the investment might avoid any issues with respect to an exemption from or a refund of German withholding taxes. Capital gains derived by non-German investors from the alienation of shares in a German corporation, i.e., having its corporate seat or center of management in Germany, are subject to limited tax liability in Germany where the shareholder at any time has held at least 1 % in the company within the last 5 years unless the seller is protected by an applicable double taxation agreement allocating the right to tax exclusively to the seller’s jurisdiction; where interests in a property-owning partnership or the real estate itself is disposed of, the capital gain is typically fully subject to German limited tax liability.

2.1.7 Tax Authorities’ Specific Instruction Right to Withhold Taxes on Account of Foreign Investors or Creditors

German tax authorities can instruct a German payer—of e.g., interest payments, dividends or of a purchase price in case of an asset or share sale—to withhold and transfer to the tax authorities from any payment to a foreign creditor an amount equal to the expected German tax liability of such non-German creditor or investor. Where this used to be a mere theoretical threat in the past, this instrument has most recently been increasingly applied by German tax authorities. Needless to say, that this may adversely affect any disinvestment and transfer of unencumbered title, e.g., where a financing bank expects to receive the undiminished purchase price to release existing encumbrances. Hence, the parties should agree on appropriate clauses in the respective sale and purchase agreements.

2.1.8 Lenders

Under German domestic income tax laws, interest on debt finance may be subject to German tax liability, even if generated by a foreign lender. This applies, for example, if the lender is directly or indirectly secured with German real estate even where the borrower is a foreign vehicle, or if the borrower has either a seat or center of management in Germany and the debt finance has a profit-participating remuneration component. If there is a German tax liability on the lender under German national income tax laws with respect to the interest on the debt finance, a German income tax charge may nevertheless be avoidable or at least reduced if the lender is protected under a double taxation agreement with Germany which

provides that such interest cannot be taxed, or can be taxed only to a limited extent, in the country of source (i.e., in Germany).

There is no German withholding tax requirement regarding the interest in the case of regular German limited liability companies as borrowers (and the interest being a fixed or floating fraction of the loan principal) that are not classified as financial institutions, rather the lender has to file (corporate) income tax returns regarding the interest. However, as stated above, the German tax authorities may order the borrower to withhold tax from the interest if this is justified to ensure collection of the German (corporate) income tax charge on the interest. In particular, loan agreements with foreign lenders based on international standards often provide for so-called tax gross-up and tax indemnity clauses which burden the borrower of the debt finance with the risk of any tax charges occurring in jurisdictions other than the home jurisdiction of the lender with respect to the debt finance. In cases where the lender is, for example, located in a country without a double taxation agreement with Germany like the Cayman Islands or in Japan or Italy (or any other country with a double taxation agreement providing Germany with the right to tax a potential interest in the country of source), the borrower may have to indemnify the lender for any German income tax amounts triggered.

Such tax indemnity amounts increase the financing costs of the borrower. In practice, there are mainly two ways to deal with this issue from a borrower's perspective: either the respective facility agreement excludes a tax gross up and tax indemnity in case a German income tax charge arises for a lender merely on the basis of the facility being secured with German real estate. Alternatively, it may be agreed that a lender, at least at the point in time of becoming a lender under the facility, must be fully protected under an applicable double taxation agreement from any German income taxation regarding the interest. In the latter case, however, the borrower still bears the risk of any changes occurring later, for example due to a change of the double taxation agreement.

2.2 German Trade Tax

2.2.1 Overview

TT is only applicable to defined trading income attributable to a German tax permanent establishment (*Betriebsstätte*, "PE").

In the absence of a German permanent establishment, current income or capital gains achieved by a foreign corporate investor are not subject to TT; the same applies in the case of a mere German asset management partnership (*vermögensverwaltende Personengesellschaft*) held by foreign investors (where TT, however, may be levied at the level of its domestic partners). Real estate vehicles which are subject to trade tax merely owing to their legal form (and not due to any activities performed by them), can also apply for the so-called extended trade tax exemption (*erweiterte Kürzung*), which does not result in a full exemption from TT, but rather in the carving out of defined real estate income from the TT

base (e.g., current rental income whereas the exemption of capital gains may be subject to further conditions).

TT structuring of inbound real estate investments by international investors as a rule focuses on all these three aspects (trading income, German PE, extended trade tax exemption) with a view to having at least one respective lines of defense against a TT burden on the investment. The requirements for not having relevant trading income, for not maintaining a German PE to which such trading income may be attributed, and/or for meeting the requirements for the extended trade tax exemption may—depending on the investment at hand—impose restrictions on the investment model, the management of the investment and on exit strategies. Nevertheless, the mitigation of a German TT charge on the investment may result in considerable economic advantages and may therefore justify the respective costs and efforts required to achieve this. It is also worth noting that inbound real estate investments seem to have come under the substantial scrutiny of the German tax authorities, with large portfolio investments being confronted with TT assessments on the grounds that the TT strategies initially envisaged for such investments have not been followed through in practice over the whole course of the investments. It is, thus, essential that the foreign investors are not only provided with sufficient substance for German tax purposes, but that they, as well as all asset and property managers of inbound real estate investments, fully understand the requirements which the TT strategy imposes, and live up to them without any exception. Furthermore, it is vital that respective proof of the implementation of the TT strategy is documented and can be rendered vis-à-vis the tax authorities.

2.2.2 Economic Importance of German Trade Tax

German TT is levied by the German municipalities which effectively determine the TT rate applicable to permanent establishments (TT payers) within their area by specifying a respective TT multiplier on an annual basis. The applicable TT multiplier is multiplied by 3.5 %, which results in the relevant nominal TT rate. The minimum TT multiplier is 200, resulting in a nominal TT rate of 7 %. Most municipalities currently have TT multipliers between 400 and 450, resulting in respective nominal TT rates between 14 and 15.75 %. In some municipalities such as Oberhausen the current TT multiplier may be as high as 550 with a resulting nominal TT rate of 19.25 %. The TT base is determined by taking the respective income for (corporate) income tax purposes and adjusting it according to a number of TT provisions, *inter alia*, regarding the (partial) non-deductibility of certain expenses (so-called trade tax add-back provisions) and the carving out of eligible real estate investment income upon application (extended trade tax exemption). In order to understand the full economic importance of German TT on an intended investment it is necessary to look not only at the nominal TT rate applicable, but also to take into account the trade tax add-backs. Under the trade tax add-back provisions, expenses for non-equity capital, *inter alia*, may be non-deductible in part or in full. This in principle concerns, for example, 25 % of all interest expenses for debt finance and economic equivalents such as discounts in the case of factoring. There is a *de minimis* exemption to the extent the respective expenses do not exceed

100,000 euros. The trade tax add-back provisions therefore result in an increase of the overall costs of debt finance in the amount of the TT charge triggered on the respective expenses. The potential German TT burden on a certain investment may well be higher than the respective German CIT/SolSur burden, and TT may even be triggered if the vehicle is in an economic loss position.

2.2.3 Trading Income

Trading income subject to German TT may be generated on the basis of either the activity performed or the legal structure of the vehicle.

Certain vehicles per se generate trading income subject to German TT. This applies *inter alia* to German limited liability companies and stock corporations as well as to foreign vehicles comparable to these. Luxembourg S.à r.l.s or Dutch B.V.s therefore always have trading income for German TT purposes—however, they may avoid having a permanent establishment on German ground. Whether domestic and foreign partnerships per se generate trading income depends on their legal structure: If all partners with unlimited liability are domestic or foreign limited liability companies or stock corporations and only these or non-partners have management authority regarding the partnership under the articles of the partnership, the partnership generates trading income per se.

Since it is possible to confer management authority regarding the partnership on a limited partner with respect to a German limited liability partnership (*Kommanditgesellschaft*, KG), the generation by such partnership of trading income merely on the basis of the legal structure can easily be avoided. However, in the case of certain foreign partnerships, for example Dutch C.V.s, a limited partner is automatically converted by law into a general partner with unlimited liability in case of interference with the partnership management. It therefore needs to be checked in each particular case whether a foreign partnership generates trading income due to its legal structure.

In the case of individuals and vehicles not per se generating trading income, trading income may nevertheless be generated on the basis of a trading activity being performed. In the case of partnerships a trading activity in principle affects the entire income of the partnership. There is no clear-cut definition as to what constitutes a trading activity for German TT purposes, rather the German tax authorities and tax courts decide on a case-by-case basis, taking all relevant circumstances into account. Therefore, it is not possible to give a full and complete description of the facts that may lead to a trading activity. A trading activity with respect to real estate investments is (*inter alia*) present if a real estate project is developed and marketed, if real estate assets are traded, or if real estate is used to render not only mere letting or leasing services but services of another economic nature, as for example is the case with regard to hotels and pensions vis-à-vis their clients, and may be the case with regard to boarding houses, holiday apartments, student and old age accommodation facilities as well as shopping centers. Regarding the question as to whether activities performed go beyond mere letting or leasing services it is decisive whether only space is offered or a more complete kind of service. A boarding house may constitute a trading activity if it is run

comparably to a hotel, offering a number of services to changing guests, such as cleaning, food, washing or shopping. A shopping center may result in a trading activity of the lessor if, for example, marketing, security, cleaning, or food court servicing are centrally provided for and organized by the lessor with a view to furthering the tenants' respective businesses and turnovers.

2.2.4 German Permanent Establishment

A German permanent establishment (“PE”) is roughly defined as a fixed asset used for conducting the business. An asset is fixed for this purpose if, over a certain period of time, usually more than 6 months, it relates to a certain place (with partially deviating definitions under domestic law and double taxation agreements). A real estate asset fully rented out is a fixed asset but does not result in a PE of the lessor—since it is typically used for conducting the business of the lessee only. Vacant space to be let and not used by the lessor should also not result in a PE of the lessor. However, if for example the lessor maintains an office to be contacted by present or future tenants, such an office may result in a PE of the lessor; the same may apply to a sample flat or sample office maintained by the landlord.

Even if no fixed asset is used for conducting the business in Germany, a German PE may still be present. This applies, for example, where the center of management of the business is in Germany. The center of management is the place where decisions of some importance regarding the day-to-day management of the business are regularly made. With respect to real estate investments such decisions may not only include decisions regarding the purchasing, the financing, the developing, the renting, the refurbishing, the maintenance, the conclusion of utility contracts and the selling of the property. In this respect it is not decisive who has the legal capacity to act for the business and to represent it, but who actually makes the decisions. This can be a service provider or a shareholder. For example, if a German property and asset manager acts as a German platform for the investment and actually makes all decisions regarding the day-to-day management of the investment, the foreign vehicle making the investment may have its central place of management in Germany. Likewise, if the German shareholder of a foreign vehicle actually manages its affairs from Germany, the foreign vehicle may have its center of management in Germany. Also, in the case of shopping centers it is being debated whether the foreign landlord is deemed to have a permanent establishment in offices let to the center manager in the shopping center and for the same duration as its center management contract.

In the event of a German real estate investment being made through a foreign vehicle, a German center of management of the vehicle will in most cases result in all income generated from the investment being allocated to a German PE. The German tax authorities closely examine the location of the center of management of foreign vehicles holding German real estate. Therefore, in cases where a German PE is to be avoided, it is vital to properly implement respective decision-making processes and produce and keep respective proof thereof, for example in the form of meeting minutes, travel tickets, catering bills and hotel invoices. The center of management of a foreign vehicle is furthermore likely to be challenged where the

vehicle is not provided with sufficient substance in its country of residence but serviced by a foreign service provider or domiciliation agent acting for a number of foreign vehicles. Therefore, it is also essential that the vehicle making the German real estate investment has sufficient substance for German tax purposes including, *inter alia*, its own office space and equipment, communication lines and personnel, in particular a management based outside Germany and having the expertise, qualification, remuneration and track record to make relevant decisions reasonably expected in respect of the specific investments.

2.2.5 Extended Trade Tax Exemption

In the case of trading income attributable to a German permanent establishment, German TT applies in principle. However, if the activity performed is exclusively confined to the use and management of its own real estate (and in addition to the use and management of its own capital), upon application the income generated from the real estate may be carved out from the German TT base. The requirements for the extended trade tax exemption are strict, and there are also a number of exclusions. It therefore needs to be examined in each particular case whether a certain intended real estate investment may be eligible for the extended trade tax exemption or not. The extended trade tax exemption as a rule only applies to vehicles which generate trading income exclusively due to their legal structure and which are otherwise not engaged in any commercial or trading activities. The performance of any deemed or actual trading activity whatsoever will normally fully exclude the extended trade tax exemption for the vehicle. Consequently, the extended trade tax exemption is not available to vehicles which acquire real estate assets with a view to marketing them in the course of a trading activity. This applies, for example, to a project development in case the exit shall be affected by the vehicle through an asset deal. Real estate trading activities are not eligible either. Furthermore, the extended trade tax exemption does not apply in cases where the leasing or letting forms part of a trading activity, which is the case, for example, with respect to hotels, pensions, certain shopping centers, etc. A vehicle is therefore in principle only eligible for the extended trade tax exemption if its activity is confined to the mere long-term letting or leasing of spaces owned by it. If the vehicle holds the real estate asset for more than 10 years, the German tax authorities and courts will usually consider the requirement of a long-term investment horizon as being met. A share deal regarding the vehicle (as opposed to an asset deal by the vehicle) should as such not be harmful in this respect if the real estate vehicle is a corporation; with respect to partnerships holding real estate, this is not entirely clear.

The vehicle's activity must furthermore exclusively concern real estate; any leasing or letting of assets that are not real estate for German tax purposes may in principle exclude the extended trade tax exemption. Harmful assets may include the inventory of hotels, the furniture in apartments, machines as well as so-called business fixtures (*Betriebsvorrichtungen*). Business fixtures do not serve the building as such, but rather a certain business carried out in the building. For example, an elevator for people serves the building, an elevator for goods the business, the air

conditioning serves the building, special heating and cooling devices for server rooms serve the business, an escalator for people serves the building, a conveyor belt for goods the business, etc. As a rule, the letting or leasing of business fixtures is harmful for the extended trade tax exemption, except if the business fixtures are part of the real estate leasing and letting, their value is absolutely and relatively low and the business fixtures are essential to an economically viable use of the real estate as such. It may be a solution to have potentially harmful activities performed by a sister corporation.

The extended trade tax exemption is furthermore fully excluded if the real estate is in whole or in part used for the business of a shareholder in the case of corporations or a direct or indirect partner in the case of partnerships. There is no *de minimis* threshold in this respect. A tenant may therefore never, neither directly nor indirectly through partnerships, acquire a stake in the real estate vehicle intended to use the extended trade tax exemption. The extended trade tax exemption is for example also excluded if the real estate serves as a policy reserve fund (*Sicherungsvermögen*) of an insurance company as shareholder or partner, since this also constitutes a use of the real estate for the partner's or shareholder's business. There are further partial exclusions, *inter alia* for real estate partnerships having contractual relationships with partners, for tax-neutral contributions within a period of the preceding 3 years and for income from the sale of a partner's interests.

2.3 German Real Estate Transfer Tax

2.3.1 Overview

German RETT may be triggered by asset deals and share deals concerning real estate or comparable rights such as hereditary building rights (*Erbbaurechte*) located in Germany. In the case of share deals, even transactions at levels far above any entity holding title to the property can trigger RETT in Germany (such as, e.g., the acquisition of all shares in a listed US company indirectly holding German property by a UK company). The RETT rate depends on the German federal state (*Bundesland*) in which the respective item of real estate is located. The lowest applicable rate is currently set at 3.5%, the highest rate being 6.5%; however, a couple of federal states may still raise their rates in the foreseeable future. German RETT applies to each and every taxable event and is in principle a non-recoverable cost. Although legally purchaser and seller are typically jointly liable to pay the RETT, it is market standard for the purchaser only to economically bear the RETT burden.

2.3.2 Asset Deals

The entering into a binding agreement regarding the sale and transfer of German real estate alone triggers RETT; hence, the trigger event typically is the signing and not only the subsequent closing of a transaction. The transfer itself triggers RETT only where no previous inter-parties agreement regarding the sale of the property exists as in the case of mergers, spin-offs etc. Where a sale or transfer of a property

is subject to a condition precedent or a third-party approval, RETT is triggered upon fulfilment of the condition or the granting of the approval respectively. Other events resulting in RETT becoming payable include the conclusion of agreements concerning the transfer of rights under purchase agreements and sales offers and also respective transfers. If a binding purchase agreement regarding German real estate is entered into and the purchaser agrees to transfer the rights under the purchase agreement to a third party, RETT may be triggered twice; the same holds true where—together with the acquisition by a trustor—the property is transferred to a trustee. Finally, RETT is also triggered with respect to transactions not as such resulting in a full transfer of German real estate but legally or economically permitting the realization of and disposition over the German real estate value for one's own account.

As a rule, the tax base is the consideration agreed for the (intended) sale and transfer. In most cases, the relevant consideration will be the purchase price. The purchase price is taken into account for RETT purposes even if it is (too) low and does not reflect the proper market value of the real estate. In the case of transactions between related parties, it may therefore be possible to reduce the RETT burden by stipulating a low(er) purchase price in the purchase agreement (but beware of any public or private pre-emption rights). However, a merely symbolic purchase price will be disregarded. In addition, if the purchaser assumes any other obligations with respect to the transfer, the value of such obligations will also form part of the relevant consideration and thereby the RETT basis. This applies, for example, if the purchaser takes over a financing from the seller under terms which are worse than those available to the purchaser at the time of the purchase. The same may apply, *inter alia*, in certain cases of the taking over or establishment of certain encumbrances, of the seller retaining rights to use the real estate, or where the land comes as a package with a building contract etc. With respect to cases where no consideration can be determined and in cases of certain transactions between vehicles and their partners or shareholders, the tax base will be an especially determined real estate tax value (*Bedarfswert*), e.g., based on a multiplier of the annual rent minus certain depreciation allowances. Debtors of the RETT are seller and purchaser jointly, but the tax authorities will usually follow a stipulation in the purchase agreement as to who shall bear the RETT, provided a prompt collection of the tax can be expected.

2.3.3 Share Deals

The rules governing RETT in case of share deals are complex and cannot be described herein in all detail. Only a short overview can be given. As a rule of thumb, German RETT aspects should always be carefully examined prior to any share sale or transfer, provided German real estate is held anywhere in the structure below the considered share transfer; in this respect it is not decisive whether the vehicle is a partnership or a corporation, domestic or foreign, holds German real estate itself or only a (minority or majority) stake in another entity with some direct or indirect stake in German real estate. With respect to share deals there are three main sets of rules under which German RETT may be triggered.

First, the direct or indirect transfer (not the mere sale) of 95 % or more of the interest in the assets of a real estate holding partnership to new partners within 5 years triggers German RETT upon the last relevant transfer. In this case, for RETT purposes a transfer of German real estate from the partnership with the “old” partners to a partnership with the “new” partners is deemed to have happened. For example, if a German real estate partnership is held equally by two (corporate) partners and in the first year partner one transfers its interest in the partnership (direct transfer) to a third party and in the fifth year all shares in partner two are transferred (indirect transfer), German RETT will be triggered upon the second transfer. The respective tax has to be paid by the partnership itself. Therefore, any potential investor in a German real estate partnership should determine the respective RETT position beforehand. Purchase agreements concerning partnership interests and also partnership articles may contain clauses dealing with German potential RETT issues.

Second, any sale or transfer resulting in a direct or indirect unification (*Vereinigung*) of 95 % or more of the shares or interests in a German property owning vehicle (be it a corporation or a partnership) in one hand triggers RETT; the same applies where such unified shares or interests are sold or transferred to another hand. One hand for this purpose may be a single person or entity, but also a group of dominated and/or dominating persons forming a fiscal unity for German RETT purposes. The RETT due to an initial unification has to be paid by the person(s) or vehicle(s) in whose hands the concentration occurs the first time; RETT triggered by a sale or transfer of unified shares or interests is to be paid by the person(s) or vehicle(s) involved in the transfer (for example seller and purchaser). Therefore, in appropriate cases it is advisable to implement provisions dealing with potential German RETT consequences in a respective sale and transfer agreement. With respect to share deals the RETT base will under current law always be the especially determined real estate tax value (*Bedarfswert*).

Third, RETT is also triggered where one hand directly and/or indirectly holds an economic participation of at least 95 % in a vehicle that holds title to a property. The precise scope of this new rule is heavily discussed; undoubtedly this shall include the structures previously used as “RETT”-blocker models; it, however, remains unclear to which extent it also covers mere contractual arrangements such as inter-party agreements or finance agreements. Where this provision is fulfilled, RETT is owed by the person(s) holding the economic participation in the property vehicle.

2.3.4 Exemptions

There are several exemptions from RETT. These concern *inter alia* certain intra-group transfers, taxable events involving partnerships, certain re-transfers, transfers subject to gift or inheritance tax as well as transfers between certain relatives, transfers between spouses and certain transfers involving foreign states and state authorities. For tax structuring purposes, the exemptions regarding (i) transfers involving partnerships or (ii) intra-group reorganizations are of particular importance. If real estate is for RETT purposes transferred by a partner to a partnership, RETT will not be levied pro rata to the interest that the transferor holds in the

partnership at that point in time and for another period of the next consecutive 5 years. If real estate is transferred by a partnership to one of its partners, RETT will not be levied pro rata to the interest that the transferee partner has uninterruptedly held in the partnership for a period of 5 years preceding the transfer. Finally, if real estate is transferred from one partnership to another partnership, the RETT will not be levied to the extent the pro rata interests of the partners in both partnerships are identical, they have held their interests in the transferor partnership uninterruptedly for 5 years preceding the transfer and still hold their interests in the transferee partnership uninterruptedly for 5 years following the transfer. In addition, RETT is not levied in case of certain reorganization measures pursuant to the German Reorganization Act, contributions or other corporate law based acquisitions, provided that such transaction exclusively concerns dominating and dominated entities or dominated entities dominated by the same dominating entity, whereby domination is defined as directly or indirectly holding a 95 % shareholding uninterruptedly for a period commencing 5 years prior to and ending 5 years after the relevant reorganization.

2.3.5 Notifications

The taxpayer(s) of a potentially RETT-able transaction are generally obliged to notify the competent German tax authorities about certain defined transactions within 2 weeks; irrespective thereof other persons such as notaries, public authorities or courts also have to notify the competent tax authorities of potentially RETT-able transactions they are *ex officio* involved in.

2.4 German Value Added Tax

2.4.1 Overview

The German regular VAT rate is currently 19 %. Supplies with respect to German real estate are usually within the scope of VAT in Germany (VAT-able), but VAT-exempt. In certain cases there is a possibility to exercise an option for VAT regarding outgoing supplies in order to obtain the possibility to recover or credit input VAT with respect to ingoing supplies.

2.4.2 Real Estate Letting

The letting of German real estate is within the scope of German VAT, but it is generally a VAT-exempt supply of services. Due to the VAT exemption, the landlord does not have to declare and pay German VAT on the rent (or the sales proceeds), but is also not entitled to German input VAT amounts on supplies received with respect to the letting services, in particular regarding the construction and maintenance of the real estate assets let. Generally not VAT-exempt are the letting of parking spaces and the letting of movable assets, in particular inventory, furniture and business fixtures. Only where the parking spaces or, as the case may be, the movable assets are let in connection with, and are only auxiliary supplies to,

a VAT-exempt letting of real estate as the main supply, these may also be VAT-exempt.

2.4.3 VAT Option for Real Estate Letting

Under certain circumstances the landlord may be able to opt for VAT regarding the letting. In the case of a valid VAT option by the landlord, the landlord has to declare and pay VAT on the rent and/or sales proceeds, but is also entitled to input VAT amounts regarding the letting. A VAT option is only possible if the letting services are rendered to another VAT entrepreneur acting within the VAT enterprise. With respect to real estate letting regarding so-called new buildings, there are further requirements for the VAT option, namely that the tenant must use, or intend to use, the spaces exclusively for the rendering of services for which the recovery of input VAT is not excluded (whereby the tax authorities define “exclusively” as not being less than 95%). In the case of new buildings, therefore, the VAT option of the landlord for the letting is as a rule economically neutral for the tenant, since the tenant is entitled to a respective input VAT deduction or refund.

However, *inter alia* regarding banks, insurance companies, medical practitioners, hospitals, schools, state authorities and residents, a VAT option is not possible in the case of new buildings due to the facts that these tenants either are not qualifying as entrepreneurs acting within their enterprises for VAT purposes or are rendering VAT-exempt supplies without entitlement to input VAT. *New* buildings are all buildings with construction termination date after 31 December 1997. If a building has a construction termination date prior to 1 January 1998, it may still be classified as a new building, depending on the dates and circumstances of the building construction; all other buildings are old buildings in this respect. If an *old* building is extensively modernized it may afterwards have to be reclassified as a new building. In the event of a VAT option, the landlord furthermore has to provide proof to the tax authorities that the requirements for the VAT option are met. The VAT option is an election right exclusively of the landlord. However, it depends on the contractual arrangements between the tenant and the landlord whether the agreed rent is a gross rent not to be increased by applicable VAT amounts, or a net rent in respect of which applicable VAT amounts have to be paid on top. Since the possibility of the landlord to opt for VAT depends on the actual use that the tenant makes regarding the spaces let and also on the ability of the landlord to provide proof thereof, real estate letting agreements usually contain VAT clauses, which—from the perspective of the landlord—should ideally contain for example the following provisions: rent to be paid plus applicable VAT, right of the landlord to opt for VAT, obligation of the tenant to use the spaces let exclusively for supplies in respect of which the entitlement for input VAT is not excluded, obligation of the tenant to give the landlord all information and documents required to provide proof of the requirements for the VAT option towards the tax authorities, obligation of the tenant to agree with any subtenant on an equivalent VAT clause, which, however, must provide for direct claims of the landlord towards the subtenant and a guarantee by the tenant towards the landlord that the subtenant will fulfill the respective obligations, and finally a provision

establishing a damage claim of the landlord in case of a violation of the tenants obligations and/or an automatic increase of the rent to the extent that the letting should not be subject to VAT.

2.4.4 Input VAT and Input VAT Corrections

With respect to VAT on incoming supplies, an input VAT entitlement (*Vorsteuerberechtigung*) exists, if at the point in time at which such incoming supplies are received these are intended to be used for outgoing supplies that are subject to VAT (directly linked). This means that for the input VAT entitlement it is decisive what the recipient intends to do with the incoming supplies at the moment the supplies are received. However, depending on the nature of the incoming supplies, an input VAT correction (*Vorsteuerberichtigung*) might apply at a later date if after the receipt of the incoming supply it is in fact not used for the purpose initially intended, but for a purpose resulting in a different input VAT entitlement.

Depending on the circumstances of the case at hand, the input VAT correction may result in a partial or total payback obligation of the input VAT deduction or refund initially taken, but it may also result in further input VAT amounts becoming deductible or refundable. With respect to real estate assets (for VAT purposes including business fixtures) in principle an input VAT correction period (*Vorsteuerberichtigungszeitraum*) of 10 years applies, beginning when the asset is used for VAT purposes for the first time or a subsequent receipt of incoming supply. The input VAT correction rules apply to all supplies which are not fully used up at the point in time these are received. For example, the cleaning of the façade of a building may result in a so-called input VAT correction object (*Vorsteuerberichtigungsobjekt*). The input VAT correction is as a rule *pro rata temporis* regarding the total input VAT amount on the incoming supply over the course of the applicable input VAT correction period of, here, typically 10 years. Therefore, even if initially the full input VAT is taken with respect to a certain incoming supply and then such supply is used to render fully VAT-exempt supplies without any input VAT entitlement so that the input VAT has to be corrected in full, the taxpayer nevertheless retains a liquidity advantage, since the input VAT is received in one sum upon receipt of the supply, while the input VAT correction applies only over a period of time. This liquidity advantage may be substantial. However, with respect to foreign entrepreneurs, for example foreign vehicles used for German real estate investments, under certain circumstances it may not be possible to claim German input VAT amounts via the ordinary VAT return and respective assessment procedure, but rather through a special input VAT refund procedure (*Vorsteuervergütungsverfahren*). This needs to be examined in each particular case since the input VAT refund procedure for foreign entrepreneurs is more time-consuming, costly and can in general be quite cumbersome, potentially resulting in a liquidity disadvantage or even in VAT amounts in practice not being recovered.

2.4.5 Asset Deals

The sale of German real estate by a VAT entrepreneur within the VAT enterprise may either constitute a non-VATable supply in the course of a transfer of a business or of a separable part of a business as a whole (so-called non-VATable transfer of a going concern, *nicht umsatzsteuerbare Geschäftsveräußerung im Ganzen*) or a VATable delivery (*umsatzsteuerbare Lieferung*), which in principle is VAT-exempt. A non-VATable business transfer exists if the seller transfers to the buyer all that is necessary for the purchaser to be able to continue the business activity of the seller without having to incur considerable further expenses or efforts. Whether a transfer has to be classified as a non-VATable business transfer, is determined on the basis of all circumstances of the relevant case. There is still some uncertainty regarding the applicable criteria so that real estate transfer agreements usually provide for clauses dealing with the two alternatives, the non-VATable business transfer and the VATable delivery.

The transfer of real estate in conjunction with all respective lease agreements and lease documentation constitutes a non-VATable business transfer if the transferor has performed a letting activity regarding the real estate to third parties (other than the tenant or entities forming part of a fiscal unity for VAT purposes with the landlord) that the transferee intends to continue after the transfer. However, if for example the transferor is a project developer having constructed a building on the real estate and having let it to tenants, this transfer will not constitute a non-VATable business transfer, since the activity of the transferor (project developing) is not continued by the transferee (letting). The same applies in cases of a sale of the real estate to a tenant, since the tenant as transferee may not continue the letting activity of the transferor which falls away due to the transfer.

In the case of a non-VATable business transfer, the following applies: the transfer is not VATable so that there is no VAT on the transfer. However, the transferee steps into the shoes of the transferor for VAT purposes and continues the VAT position of the transferor regarding the real estate, in particular the input correction objects and periods triggered prior to the transfer. This, inter alia, means that the transferee may have to correct and pay back past input VAT amounts recovered by the transferor or even by his predecessors. In order to be able to do this, the transferee needs the respective information, and the transferor is in principle obliged by law to give such information transfer agreements as a rule contain clauses with respect to a non-VATable business transfer which deal with potential future input VAT corrections by the transferee, respective purchase price adjustments for the real estate, an obligation of the transferor to indemnify the transferee from any other possible negative consequences of the VAT succession as well as from any potential tax liability and details regarding the transferor's obligation to provide information and documentation relevant for tax purposes.

In case of a VATable delivery, the following applies: the VAT-exemption concerns supplies subject to RETT. If there are still input VAT correction periods running with respect to the real estate (see above regarding the general rules for input VAT corrections), a VAT-exempt supply of the real estate may trigger input VAT correction amounts to be paid back by the seller to the tax authorities. In order

to avoid input VAT corrections, the seller may opt for VAT regarding the sale if the supply is to an entrepreneur for the respective enterprise. In the case of a valid VAT option, the reverse charge procedure applies. This means that the VAT triggered by the VAT option has to be declared and paid by the purchaser directly to the tax authorities. Since the purchaser has to pay the VAT on the sale, for the protection of the purchaser the VAT option regarding the supply of real estate may only be validly declared by the seller in the deed regarding the sale and therefore with the consent of the purchaser.

To the extent the real estate is to be used to render supplies which are subject to VAT, the purchaser may receive a respective input VAT deduction. However, since the sale also triggers new input VAT correction objects and periods, the purchaser may have to correct in total or in part the input VAT taken with respect to the purchase if during the input VAT correction period of the following 10 years the real estate is not used subject to VAT as initially anticipated. Therefore, a purchaser will normally only agree to a VAT option by the seller if the purchaser receives a full input VAT deduction regarding the VAT on the purchase and it is likely that the input VAT does not have to be corrected in the future or if the risk of input VAT corrections is reflected in the purchase price for the real estate asset. Depending on the circumstances of the case at hand, if the purchaser continues the use of the real estate that the seller has made, the seller might be requested by the purchaser to guarantee that the VAT option in the purchase agreement only concerns spaces which are used fully subject to VAT and in respect of which the purchaser will receive the full input VAT deduction. This applies in particular if the existing lease agreements regarding the real estate do not contain detailed VAT clauses.

2.4.6 Share Deals

For VAT purposes share deals may be non-VATable or VAT-exempt with the seller's option for VAT in the case of a share deal to a VAT entrepreneur acting within the VAT enterprise. In practice, it is in most cases not examined in detail which alternative applies. From the perspective of the purchaser, purchase agreements may contain a clause that the purchase price is gross and not to be increased by any VAT amounts and that the seller may not exercise any potential VAT option right. This means that VAT on the transfer as a rule does not apply and that the seller may not take any input VAT amounts regarding the sale, for example with respect to the VAT on the costs for a vendor due diligence.

2.5 German Real Estate Tax

Real Estate Tax, RET, is levied in principle on all German real estate. The RET rates vary between municipalities since each municipality determines, on an annual basis, its RET multipliers applicable to the real estate located in its area. Due to financial problems, numerous municipalities have recently increased their RET multipliers. The RET burden with respect to a particular real estate asset is also dependent on the type of the real estate asset, its use and other factors.

Since the RET assessments are currently based on very old property valuations (as per 1964 in the “old” federal states, as per 1935 in the “new” federal states), the Federal Fiscal Court has asked the Federal Constitutional Court to review whether the entire RET Act is still in line with the German constitution. In many cases, RET aspects are not of particular relevance to German real estate investors since it is usually passed on to the tenants as an ancillary charge subject to the stipulations in the lease agreement. However, especially with respect to commercial real estate, the amount of ancillary charges is often capped, or a lump sum payment with respect to ancillary charges is agreed upon. Furthermore, the ability and/or willingness of tenants to pay such ancillary charges in addition to the net rent may be limited, in particular as many costs constituting ancillary charges increased considerably in the recent past (the so-called second rent). In such cases, and also with respect to vacant spaces and project developments, the RET is economically in part or in total borne by the investor. Therefore, RET aspects should be taken into account in any German real estate investment business plan. RET is charged on the basis of the circumstances present at the beginning of the calendar year. This means that any changes with respect to the German real estate that are relevant for the RET (change of owner of real estate, changes to buildings, construction and use) are only taken into account as of the beginning of the next calendar year. If for example the real estate is transferred on January 15 the RET for that calendar year will still be charged to the seller and only as of the next calendar year to the purchaser.

Furthermore, many tax authorities take years to issue new assessment notices regarding relevant changes. The real estate as such is liable for the payment of the RET thereon. Furthermore, the transferee of German real estate is also liable for the RET on the real estate triggered since the beginning of the last calendar year before the transfer. Therefore, German real estate transfer agreements usually contain provisions as to the economic allocation of any RET amounts to seller and purchaser in the event that the RET is still charged to the seller even for periods after the transfer, or in the event that the purchaser has to pay RET amounts relating to periods prior to the transfer.

2.6 German Tax Liability

The purchaser of German real estate may become liable for taxes of the seller or even earlier predecessors. In addition to RET liability, in the case of a transfer of a going concern, the tax liability of the purchaser might also concern amounts with respect to so-called business taxes (*Betriebssteuern*) and withholding tax amounts (*Steuerabzugsbeträge*). As a rule, if for VAT purposes a non-VATable transfer of a going concern is present, this constitutes also a business transfer for tax liability purposes. Business taxes and withholding taxes for which a tax liability may occur are for example VAT, TT, wage tax, construction withholding tax, etc. The business transfer tax liability is limited as to time: the purchaser becomes liable for business taxes and withholding tax amounts corresponding to the time period beginning at the start of the calendar year preceding the transfer and ending upon

the transfer. Furthermore, such tax amounts have to be assessed within the time period of 1 year after the purchaser has given notice to the tax authorities of the business transfer. However, the tax assessment has to be issued to the seller or earlier predecessors within the 1-year period, not to the purchaser. The purchaser, however, might be able to receive information from the tax authorities as to the total open tax amount for which a tax liability may be applicable. Usually, real estate transfer agreements contain provisions dealing with such potential secondary tax liability of the purchaser.

3 Conclusion

The German tax environment for inbound German real estate investments offers considerable opportunities for international investors. A cautious tax structuring of the investment, detailed negotiations of tax clauses in sale, transfer and lease agreements, appropriate provisions in the business plan, asset and property management manuals for dealing with the investment on a day-to-day basis as well as having an exit-planning strategy on entry, help realize and retain such upsides and therefore effectively increase the returns on investment. Since inbound German real estate investments have increasingly come under the particular scrutiny of the German tax authorities, international investors unfamiliar with the German tax concepts relevant for the particular investment may in turn be surprised by unexpected and material tax charges at a late stage of the investment cycle. It is therefore vital that German tax aspects of the investment are dealt with by the managers of the investment throughout. Procedures should be implemented ensuring that, even if the people dealing with the investment change, the German tax structure considerations are still observed.

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Monument Protection and Zoning: Regulations and Public Support from an International Perspective

Wolfgang Maennig

Abstract

This contribution outlines regulations regarding the protection of historical buildings, redevelopment law and preservation statutes and describes compensatory subsidies available in the form of tax benefits and/or grants. The article evaluates German regulations and public supports available for monument protection and modernization from an international perspective.

Keywords

Monument protection • Preservation • Redevelopment

1 Monument Protection

According to different data sources, the number of monuments in Germany varies between 850,000 (IFO 2005, p. 97) and 1.2 million—predominantly private—properties, which corresponds to 5–7 % of all buildings in the country. The numbers differ because German states use different classifications (e.g. single monument, monument area, ensembles, constitutive part of a monument area etc.).

The recording of historical properties has largely been completed, even though modern buildings will gradually be listed as they reach the typical age limit of 25–30 years. Currently, only some of the *Länder* in Germany apply formalized proceedings for registration of protected monuments and the rest provide an informal and solely informative listing only. In the latter case, objects that meet the legal definitions of cultural monuments are deemed worthy of preservation *ipso jure* and therefore are listed automatically. Hence, owners and investors are

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increasingly confronted with administrative preservation requirements applied unexpectedly by the soaring inclusion of modern buildings in listings.

While divergent in detail, the state laws on monument protection specify protected objects as assets, multiple of assets and parts of assets, the preservation and use of which are in the public interest. This requirement applies when the protected assets are crucial to the history of mankind, cities and settlements, or for the development of working and production conditions, as well as when there are historical, artistic, scientific, ethnological or urban design reasons for their preservation and use (Haspel et al. 2008). Furthermore, clarification of the significance of previous achievements for the present day and expression of the wealth and diversity of European culture are also viewed as objectives. Finally, monument protection enhances the quality of a regional location, which may result, for example, in a boost to tourism (Deutsches Nationalkomitee für Denkmalschutz 2004, pp. 16–22). Aesthetics, artistic dimensions and visible traces of former uses thus play an important role in the selection process. However, authorities claim that more prominent locations or higher market values do not influence their decisions.

Jurisdiction over preservation matters is regulated in the monument protection laws of the various states, with the top protection authority being the responsible ministry; each of the states has a Monument Protection Office, which acts as the central authority. Independent cities and counties act as lower conservation authorities and are the first point of contact for investors and owners. They check and verify whether the expected expenditure for preservation and repair requires grants and subsidies from federal funds (Deutsches Nationalkomitee für Denkmalschutz 2004, p. 13).

The primary legal consequence of designation of a building as a monument is that the owner has an obligation to preserve and maintain his/her properties. A secondary obligation dictates that owners must obtain permits under monument protection laws for modifications, removals, repairs, restorations and modified uses (cf. Haass 2008). If such measures are initiated without the requisite permits or if the owner is in breach of secondary provisions contained in permits, an injunction may be issued against the person in charge of the building measures to cease. If owners or investors refuse to comply with their obligations or neglect to do so, an injunction may be issued, ordering them to take specific maintenance or repair measures necessary for the monument in question. If the recipient of such an injunction fails to comply, the necessary measures can be taken by way of substitute performance, in which case the recipient is held responsible for the resulting costs. Expropriations are also possible, although such cases are rare.

The only essential limitation to preservation requirements is the general necessity of the reasonability of any public measures (Basty et al. 2008, p. 179). According to the basic liberties set out in the German constitution, preservation requirements may be ineligible if operating expenses for such requirements cannot be covered now or in the future by the revenue of the property itself. However, since the burden of proof rests with the investor and the usual duration of court proceedings is often measured in years, investors almost always seek to negotiate

with the public preservation authorities. In such negotiations, investors tend to have a weak bargaining position.

Owing to such ownership restrictions, according to civil law, monument protection of a building may itself be considered a defect in the quality of the property and therefore may have to be disclosed by the vendor without being asked (Basty et al. 2008, p. 139).

However, building operations in accordance with the regulations are eligible for tax deductions and financial assistance in the form of loans and subsidies. The number of funding opportunities in the field of heritage protection is so extensive that only an overview can be given.¹ In many states, depending on the importance of the object, the urgency of action to be performed and the expected tax benefits, (interest) subsidies and loans can be granted. If a monument is located in a redevelopment area (“Sanierungsgebiete”), funds can be allocated as part of the (federally funded) Urban Development program (“Städtebauförderung”). The same applies to agricultural, village renewal and economic development programs (“Landwirtschafts-, Dorferneuerungs- und Wirtschaftsförderungsprogramme”). The program for the conservation of cultural monuments of national importance (“Programm zur Erhaltung von Kulturdenkmälern von nationaler Bedeutung” and the Special Program “BKM Sonderprogramm zur Förderung von Baudenkmalen” also subsidize heritage buildings (Haspel et al. 2008, pp. 300f). Under certain circumstances, EU funds may be available. Finally, private and public foundations also provide funds (Martin and Krautzberger 2006, H 151). For an overview, also see Deutsches Nationalkomitee für Denkmalschutz (2014).

Quite often, such grants are not as important for investment decisions as the possibility of obtaining tax benefits with respect to inheritance, gift and property taxes, particularly in connection with income tax under sections 7i and 11b of the Income Tax Act (EStG) (regarding real estate leased to a third party) and under sections 10f (for owner-occupied real estate) and 10g (for real estate that is used neither for income purposes nor for the owner’s own residential purposes). The owner/investor can claim increased deductions for the historical costs from the time that work is completed, provided that before work commenced agreement was reached on costs with the competent conservation authority (Basty et al. 2008, p. 1). The purchase price and ancillary and financing costs cannot be deducted. Following an inspection, the conservation authority will issue a certificate to be submitted to the tax office. For properties leased to a third party, 9 % of the maintenance and/or modernization costs can be written off in the first 8 years and 7 % in each of the following 4 years. The subsidy under EStG section 10f for owner-occupier is a 9 % deduction that can be claimed annually for a period of 10 years.

EStG section 7h regulates possible increased deductions for buildings in redevelopment areas but is not linked directly to monuments. However, for monuments located in a redevelopment or urban development area, section 7h is the preferred

¹ For a more detailed description, see Beck (2008).

provision to be applied because the share of the confirmed costs is generally higher in this case.

2 Redevelopment Law (“Sanierungsrecht”)

The material rights of investors may be materially affected by urban redevelopment law, which is governed by sections 136-164b of the Building Code (BauGB). In the states of former West Germany, redevelopment areas have been set up in many cities and villages since 1960, particularly in old towns and city centers. In the states of the former East Germany, most old towns and city centers have been designated as redevelopment areas since 1991.

According to BauGB section 136, such redevelopment measures should benefit the general public by reducing urban design nuisances. According to BauGB section 136 IV 3, public and private interests should be balanced (Erbguth 2009, section 9, recital 6). The preparatory phase of the redevelopment procedure includes preliminary investigations pursuant to BauGB section 141, formal definition of the redevelopment area, and description of the redevelopment objectives and purposes according to BauGB section 142. Section 147 I sets out regulatory measures for the implementation phase and addresses issues such as acquisition of real estate and relocation of residents and companies. The measures affected by redevelopment law under BauGB section 148 II 1 include modernization, repairs and new and replacement buildings, which are all subject to written approval by the municipality.

Once a redevelopment area has been designated officially, these measures are subject to comprehensive disposition and development restraints under BauGB section 144. All projects conducted without legal redevelopment approval are at risk of being stopped by the building control authority. According to BauGB section 144 I-II, all intended projects and legal transactions (including divisions) are subject to approval. Even the purchase contract for properties in redevelopment area is object of inspection. If, after examination of the cost and financial overview to be submitted under BauGB section 149, the competent administrative authority concludes that the investment property has been purchased at such a high price that restoration is compromised for financial reasons, the purchase may be blocked.

The second major impact of BauGB sections 153ff. is the so-called land value compensation (“Ausgleichsabgabe”). This is used as a levy on owners of properties in the redevelopment area for any redevelopment-related increases in land value. This also applies to owners whose properties are not redeveloped directly, but who may potentially experience an increase in value as a result of measures taken in the redevelopment area. Such countervailing charges for conventional buildings usually range from four to five figure Euro amounts and must be paid by the owner. This can be important for investors who acquire a property after redevelopment. As a rule, the value increase is already factored into the purchase price. If the redevelopment area is then declassified after a few years, they will still be obligated to pay any countervailing charge.

Charges stemming from redevelopment that may be hard to anticipate in some cases are offset by public grants under BauGB section 137. Thus, affected parties may be advised, supported or, if necessary, aided financially during the implementation (Battis et al. 2009, §137, no. 8). The grants listed in BauGB section 164a-b can be used in preparation of redevelopment measures, in the implementation of regulatory measures without a permanent countervalue, in the implementation of building measures, for the remuneration of redevelopers, and for expenditure in connection with a social compensation plan and hardship relief for tenants. Applicants do not have a vested claim to urban design grants (Stüer 2009, no. 2189).

As in the area of monument protection, EStG sections 7h, 10f and 11a also provide for tax breaks for investors and owners, according to which the costs for measures to be taken can be claimed as deductible expenditure. Section 7h is subject to similar regulations as section 7i for monuments. In the year of construction and in the following 7 years, it is possible to claim increased deductions of 9 % of the construction costs, and then 7 % in each of the subsequent 4 years. The increased write-offs can be applied to costs for construction, modernization and repair, as well as to measures related to the conservation, restoration and functional use of buildings. Conservation expenditure can also be spread across up to 5 years if the requirements under EStG section 7h are met. Construction costs for new buildings are generally not covered under section 7h, but they may be assessed as being eligible for grants by the redevelopment administration agency. Grants from redevelopment or development subvention funds must be offset.

It is recommended that international investors hire specialists to prepare applications for the implementation of measures and procurement of grants. Redevelopment administration agencies and authorities have considerable discretionary leeway.

3 Preservation Statutes and Social Environment Protection ("Erhaltungs- und Milieuschutzsatzung")

The objective of the individual measures defined in BauGB sections 172–179 (preservation statutes) is preservation of the urban design character of an area and/or composition of the local population. Displacement of the local population (which should be prevented) may for example occur if rented flats are converted to owner-occupied flats, if buildings with cheap housing space are removed and replaced by executive living space, or if structural changes are made to set up second homes or holiday apartments. The building code does not define uniform structural requirements regarding what composition of the population should be protected; instead, this is determined on a case-by-case basis.

The objective of preventing a change in population composition is permissible if negative effects on the urban design are expected if such a change occurs. Such urban design effects may manifest as the municipal infrastructure being unsuitable for new residents after the local population has been displaced. One example cited is if a population with low income and little mobility is replaced by groups with

higher income, this could result in substantial restructuring measures to adapt the area to the higher level of motorization of the new residents. An adverse effect on urban design, however, could also stem from out-migration of low-income groups to other residential areas if this also creates negative consequences for other city neighborhoods (Battis et al. 2009, section 172, recital 46).

In areas designated by municipalities as protected social environments, demolition measures, modifications or changes in use in relation to building structures require approval. However, such approval cannot be withheld, for example, for building measures in a residential area if such measures will only achieve an average equipment standard, rather than so-called luxury restoration (Schmidt-Eichstaedt 2005, p. 491).

The demolition of a building is permitted if its preservation would entail costs that cannot be covered from current income (Stüer 2009, no. 1993). In such cases, if the municipality rules out demolition of a building, owner expropriation becomes possible under BauGB section 85 I 6.

These restrictions can create considerable limitations for investors, because they are forced to realize less profitable investment options or may be locked into the status quo, for the most part, in terms of apartment equipment and rent amounts. These restrictions for investors are not offset by tax breaks, in contrast to the situation for redevelopment areas (Geßner 2008, p. 126). Only in exceptional cases in states of the former East Germany does an option for subvention exist, which is via the monument protection route to conserve historical city centers. Subsidies are available only for projects in areas that have an urban design conservation ordinance in place under BauGB section 172, which provides for broad-based measures to protect and preserve historical city centers with heritage-value building stock whose structure and function are at risk (Haspel et al. 2008, p. 303).

4 Evaluating Regulations and Public Supports for Monument Protection and Modernization from an International Perspective

The objectives of the zoning instruments described have one thing in common: they aim at preventing changes to the cityscape that are perceived as negative, while promoting those that are seen as positive. These measures, when properly designed, can contribute to the positive development of a specific area or region.

The value of cultural heritage to society is recognized worldwide and is acknowledged in urban redevelopment strategies, especially in terms of attraction to tourists, employees, and firms (Listokin et al. 1998; Noonan 2007). In the case of Berlin, Ahlfeldt and Maennig (2010) stress that the totality of the built environment—and not just proximity to a single monument—constitutes the amenity recognized by real estate markets. According to their estimates, an additional landmark in close proximity can have a marginal price effect on neighboring

properties of up to 2.8 % within a sphere of influence of approximately 600 m, with the strength of the price impact halving every 90 m.²

Such positive externalities of historical building stock can generally result in an unregulated market that does not adequately assess and/or develop areas or buildings of historical, cultural or urban design value. Against the backdrop of the war-related substantial loss of historical building stock in Germany, limiting property rights and granting some public benefits by way of compensation is justified. Protection of the historical building stock in Germany seems to be in too low supply in parts. As part of the currently planned energy-efficient restorations, the country risks redeveloping many historical, carefully structured façades, windows and roofs that are not protected to such an extent that they will no longer exist.³

Many German authorities have recognized the appeal of well-preserved historical building stock. They have also recognized that historical buildings can sometimes be rendered even more appealing through careful modernization, even including modern additions to structures. In other regions, however, investors face inflexible monument protection offices that dictate an obligation to conserve the current status quo. To some degree this is related to political objectives to conserve even the most unfortunate failures in modifications to historical building stock, because they happen to have been realized at the “proper” time (for some, this would have been the time of GDR-times). Experienced investors are aware of the view, widespread in international monument protection circles, that demolitions and additions are worthy of protection when seen in the context of time, even if they destroyed the original beauty of the buildings. According to one view widely held by some in monument protection, restoration or recreation of the original building stock is merely “historicist” and must therefore be rejected. Experienced investors also know that the authorities have considerable freedom in their decisions, depending less on facts than on “soft” (some might even call it “corruptive”) factors. However, it is particularly difficult for international investors to identify such factors. It is possible to take legal action on building applications that are rejected on account of monument protection. However, such proceedings in the administrative courts can take years.

Explanations regarding monument protection also generally apply to redevelopment law and the preservation statutes. The approach itself is generally efficient and legitimate, but this is not always true of the manner in which some authorities handle these matters. Sometimes decisions are taken that make sense only in light of institution-specific and/or local (political party) political objectives that are difficult to understand for local residents, and even more so for international investors.

² For similar results in other countries around the world, see Coulson and Leichenko (2001) and Noonan (2007).

³ For an illustration of such harmful restorations in the 1960s and 1970s, see Siedler and Niggemeyer (1993).

Thus, there are cases in which permit applications to mount balconies on apartments were rejected because such “luxury modernizations” would displace the local population and thus jeopardize redevelopment and social environment protection objectives. The courts seem to realize that at least one balcony per flat is part of the contemporary standard of an average apartment and should be approved, but the situation is still unclear regarding lifts. Dividing or merging of apartments is still considered problematic. Frequently, such measures are approved only on condition of upper rent limits (Dyroff 2009).

Another problem arises for investors in the lifting of a redevelopment area designation. The countervailing charges that are then applied are set on the basis of (valuation) reports sometimes prepared by the same agencies that were responsible for the redevelopment areas for many years. In this respect it is not surprising that the value increases calculated tend to be high. The underlying valuation techniques do not generally meet scientific requirements or the rules of general assessment practices. For example, when calculating the diminution in value, a grade between 1 and 5 is applied to characteristics that are difficult to operationalize and quantify, such as “cityscape” and “amenity and design quality of the street space”, which are then weighted arbitrarily and condensed into an overall assessment. The valuation methods typically used in the real estate industry, which are based on objective comparisons of purchase price trends in the redevelopment area and comparable other neighborhoods, are not applied, particularly when this would reveal that the situation in a redevelopment area had deteriorated in relative terms (Haass 2010).

To compensate for disadvantages stemming from regulations on monument protection, restoration and social environment protection, some public grants are available, particularly tax breaks. As for listed facilities or properties in redevelopment areas, limits on property rights and/or the increased financial burden are largely compensated by financial concessions, mostly in the form of tax deductions, depending on an investor’s fiscal arrangements.

Tax deductibility of historical or acquisition costs in redevelopment areas or for monuments is highly appealing for investors (Haag et al. 2007, no. 266) and results in positive effects for the regional construction industry that can more than compensate for the economic costs of such loss of tax revenue (Maennig 2006, p. 30). Investors with a relatively high tax burden sometimes tend to limit their view to the tax savings and ignore the overall calculation, which also includes increased costs for the buildings and/or limited marketability.

It may be true that facilities in listed buildings and redevelopment areas are financially lucrative in individual cases, not only according to the plans, but also subsequently. However, the market mechanisms must also be borne in mind. If such (fiscal or other pecuniary) advantages existed, the market would quickly offset these through corresponding increases in the real estate price (Looman 2009). It is small wonder, then, that for listed properties in Berlin and for other value-affecting characteristics, slightly significant negative price discounts at best are observed for protected properties (Ahlfeldt and Maennig 2010), an indication that in this case the

disadvantages stemming from restrictions on property rights are largely balanced by tax breaks.⁴

Whether or not the urban economic objectives of regulations are achieved may depend on the individual case. In many cases, the objectives may have been achieved. However, a discussion has commenced that tends to be skeptical in nature at times. In some instances, the objectives defined in the statutes on restoration and/or social environment protection have clearly not been achieved, while in others, the exact opposite seems to have occurred. Zoning-induced (not zoning-intended) deterioration in the quality of life in one area, for example, can be observed despite improvements in the equipment features of apartments, where redevelopment administration agencies, with the best of intentions but not enough foresight, used the occupancy rights⁵ partially related to public redevelopment subsidies to settle large families with a poorer migration background. Some redevelopment areas subsequently saw a strong increase in the share of residents with a poorer migration background. In some primary school classes, 100 % of the children come from a poorer migration background. Such stratification developments would hardly have occurred in these areas without the redevelopment measures.

Even when using a fundamentally different line of argument, regulatory zoning instruments can systematically lead to the missing of targets and/or deterioration of the situation. The redevelopment areas of Berlin Prenzlauer Berg are cited as an example. In the early 1990s, five areas with a total of over 30,000 housing units came under the purview of redevelopment statutes. Obligated to apply the principles of careful urban renewal, conservation of the composition of the social structure was adapted as a redevelopment goal as well (Holm 2011). According to Büro für Stadtplanung, -forschung und -erneuerung (2008) on the occasion of abolition of redevelopment areas, the population structure has changed completely in spite of, or especially because of, massive deployment of public funds. The formerly mixed neighborhood of Kollwitzplatz was replaced by a largely homogeneous West-German middle-class environment. Similar trends have been observed in the redevelopment areas of Winsstraße and Spandauer Vorstadt in Berlin-Mitte. What is striking is the dominance of younger adults (18–45 years of age), who account for around 60 % of the influence on the shaping of the Prenzlauer Berg area. In the rest of Berlin, the corresponding percentage is only half as high. Radical changes have also been noted in the educational status of residents. The proportion of graduates and of students of universities and of universities of applied sciences among those older than 18 years has increased to 66 % in Kollwitzplatz. In the

⁴ These results are in line with previous international studies that found mixed or negative heritage policy effects, including Asabere and Huffman (1994), Asabere and Huffman (1994), Schaeffer and Millerick (1991) and Creigh-Tyte (2000). By contrast, premium prices for historical building design quality have previously been identified by e.g. Penfold (1994) and Deodhar (2004).

⁵ Occupancy right: the right of the competent administration agency to demand that the property owner makes available an occupancy-based apartment to specific people seeking accommodation (section 26.2 of the law on promoting social housing, WoFG), generally those who experience particular difficulties in finding housing.

Winsstraße redevelopment area the share is almost 77 %, compared to 17.5 % in 1992. The average household income shows corresponding trends. In 1993 (at the start of the urban renewal measures) they were at 75 % of the reference value for Berlin, while they are currently at 140 %. Within the last 20 years, the redevelopment areas in Prenzlauer Berg have evolved from being the poorest neighborhoods of the city to being wealthy.

This change in social structure, which is in sharp contrast to the redevelopment objectives, can be explained less by the upward mobility of existing residents than by massive replacement of the population. In the Winsstraße redevelopment area, only 16 % of those who had lived there since 1990 still lived there in the mid-2000s. State-subsidized redevelopment projects, in this critical line of argument, contributed to area gentrification, which attracted new residents.

The allegation of zoning-induced “deterioration”, however, is correct only if these (or any other) changes to the population structure are considered problematic. Anyone reluctant to accord local people primacy for a specific area will have a problem with this line of reasoning. Incidentally, the same “milieu” that wants to grant such neighborhood primacy, or wishes to have such primacy granted, typically exhibits a wholly different (i.e. liberal) attitude to international migration.

Regardless of how change is assessed, the first step is to determine whether zoning-induced changes have in fact occurred. Reasoning on the urban economic efficiency of zoning instruments regularly lacks the necessary conjectural evaluation (“with and without” comparison), as indicated previously. The above-mentioned statistical descriptive statements and valuation reports by redevelopment administration agencies do not meet the requirements from a statistical perspective.

To the best of the author’s knowledge, with the exception of Ahlfeldt et al. (2016), no multivariate and geo-referenced, difference-in-difference analysis of zoning in Germany exists. Their results are sobering, though: They find, that the zoning policy reduced (increased) the number of buildings in poor (good) condition by 25 % (10 %). Property prices in zoned areas increased at an accelerated annual rate of 0.4–1.7 %, compared to no-zoning areas. The respective increase in property value resembles the public investment volume in zoning areas. Thus, zoning and public spending did not lead to any positive and self-reinforcing housing externalities, i.e., the hope that subsidies for the renovation of a property will benefit others in addition to the subsidized landlord. Zoning and the relevant subsidies have primarily been a cash transfer to landlords participating in the program. Today, there are no more direct subsidies to landlords.

The substantial restorations, gentrification and real estate value appreciation in Prenzlauer Berg, are by no way a counter-example. The gentrification of such central neighborhoods, especially those with an attractive endowment of consumption amenities (Glaeser et al. 2001) were foreseeable in the early 1990s and would have occurred even without public redevelopment measures. The recent selection process which led to the designation revitalization areas in the north of Berlin-Neukölln is a good example of such a “picking the winners” strategy (Noonan and Krupka 2011). Policy makers selected the target areas from a pool of areas with high levels of unemployment and a high share of residents with poor immigration

background, but they choose areas which had undergone a positive development in the past years. By contrast, an increase in the 6 year change of the unemployment rate and the share of residents with immigration background, decreased the probability of being selected. Local authorities do not simply choose the areas which have the greatest need for revitalization, but instead prefer areas which show first signs of a revitalization or gentrification process (Richter 2014). The recent set up of redevelopment statutes on a massive scale is a repeat of the “picking the winners” strategy of the nineties, in order to guarantee them a “success story” and additional legitimacy.

For potential investors, such gentrifying structural changes may not constitute an argument against investing in areas of redevelopment. However, the inefficiencies described for conditions and countervailing charges, as well as the long processing times, can contribute to a perception that the granting of permits for modernization and redevelopment measures may be subject to some lack of regulatory transparency, if not outright arbitrariness. Qualified experts who know the regulatory mechanisms and local idiosyncrasies are difficult to identify, and even then come at a considerable cost. Overall, zoning and listed properties may be less attractive for international investors in view of the rather complex regulatory practices in Germany.

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Part IV
Financing

Commercial Property Financing

Frank Nickel

Abstract

Following the start of the financial crisis in 2007 capital markets worldwide were in shock. While initially only markets in the United States were affected, during the summer of 2007 the European securitization market, was also stricken. Even though there were no real estate bubbles in Germany compared to most European and US markets, it took more than 5 years until the market for commercial real estate finance recovered and reached pre-crisis volumes and terms in 2014. This chapter shows the differences between Mortgage Pfandbrief and securitization through the issuance of CMBS, analyses market developments during the last few years including the Loan Sales Market and provides a short introduction to real estate finance.

Keywords

Due diligence • Pfandbrief • CMBS • Financial crisis

1 Market Changes in Recent Years

1.1 Market Changes Due to Internationalization

Since the abolition of national currencies and the introduction of the Euro, property investment and property financing concepts have undergone extensive internationalization.

Until the 1990s, property investment tended to have a strong national focus, not least due to the prevailing legal restrictions. Until 1992, the business activities of German mortgage banks were restricted to Germany, with the same restriction

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applying to the activities of open-end real estate funds until 1996. In 2005, the specialist banking system was abolished and the national restrictions on the property market were thus completely lifted. This was the beginning of internationalization of the sector and a move away from predominantly regional practices not only in Germany, but right across Europe.

The definition of what constitutes “typical” national property financing has continued to evolve since then. The influence of Anglo-American financing became dominant in this time, with the result that English is now commonly used and recognized in loan and collateral agreements alongside the respective national language. Along with financing agreements based on LMA (Loan Market Association) standards, Anglo-American evaluation methods have made a significant contribution towards the harmonization of international financing markets. Furthermore, international pressure has led to professionalization and specialization also in the property sector.

In Germany, the importance of a term sheet before a financing commitment has increased significantly since early 2000. Having previously served merely as written confirmation of the as yet non-binding credit terms, the term sheet became indispensable on account of the growing number of property sales in bidding processes. The term sheet provides the seller with sufficient proof in relation to the availability of secure financing for the transaction, at least for the early bidding rounds. Binding bank commitments are not required until later bidding rounds.

1.2 Market Changes Due to the Financial Crisis

In early 2007, the US subprime crisis began to unsettle the capital markets. Initially only US markets were affected, but by the summer of 2007 the crisis had also reached European securitization markets.

Subsequently, until the end of 2010 structured credit products were almost impossible to sell on either side of the Atlantic. The reasons for this were primarily seen as being in the lack of transparency, the complex structure of the products and the sustained loss of confidence among investors in this product category. Given that valuations by rating agencies had historically tended to be overly optimistic, investors continued to distrust the forecast value and stability of these valuations.

However, in the fourth quarter of 2010 there were the first signs of a recovery in the CBMS market in the USA.

In late 2012 and in 2013 new CMBS were issued in Germany, with all transactions involving the refinancing of large residential property portfolios in the institutional segment. However, this trend did not continue into 2014, when only one smaller transaction in the commercial real estate segment was completed.

2 Types of Financing

A distinction is made between asset financing and financing of the construction phases. The only difference between individual property financing and portfolio financing lies in the number of properties financed.

2.1 Asset Financing

With asset financing, the property is financed when a certain value added is reached [completion, letting and transfer to tenant(s)], taking long-term investment considerations into account. The profitability of the property can thus be demonstrated by a stable cash flow from the payment flows secured by rental agreements. This property is, however, subject to a permanent reduction in its remaining useful life; positive changes in its value can only be achieved by rent increases or by significant interest in property in comparison with alternative assets. For these reasons, asset financing is generally subject to a repayment agreement.

2.2 Project Financing

Project financing, often referred to as construction financing, is the riskiest form of property financing for banks. Here, the purchase of a site is often already financed. All additional value added such as planning, securing building rights, constructing the property, letting and transfer hold permanent risks and can lead to failure of the entire project and thus also to a default on the financing. Professional monitoring of the progress of the project and risk-related equity participation on the part of the developer are therefore essential.

3 Documentation and Risk Hedging

3.1 Due Diligence

The term ‘due diligence’ has its origins in US investor protection legislation. Within the context of a financing review, the due diligence process aims to identify all risk potential of the transaction.

Financial due diligence: Primarily market and location analyses and review of profitability, particularly of the rental situation, the tenant analysis as well as recoverable and non-recoverable costs.

Legal due diligence: Primarily clarification of the situation regarding ownership and administrative law for the investment, land register, cadastral map and brown field sites, review of the tenant and lease situation and of service agreements.

Tax due diligence: Primarily effects on land transfer tax, VAT and land tax, depending on whether the transaction is executed as an asset deal (purchase of the property) or share deal (purchase of the property company).

Technical due diligence: Primarily assessment of the condition, quality of fittings, functional checking of the architecture and the technical systems of the property.

3.2 Loan Agreement

Until the beginning of internationalization in the mid-1990s, loan agreements for property financing in Germany consisted mainly of form agreements. These agreements, which ran from 4 up to a maximum of 20 pages, regulated the individual conditions—typically the credit terms and collateral definitions—agreed between the customer and the bank with reference to the German Civil Code (BGB).

The Anglo-American influence resulted in demand for bilingual loan agreements on the one hand and the incorporation of Anglo-American practices on the other. This in turn led to freely negotiated loan agreements, which often contained more than 200 pages. These extensive agreements were also demanded with a view to subsequent securitization. This individual documentation based on the Anglo-American model has survived along with the form agreement.

With regard to repayment requirements, collateral interests of the financial institutions (reduction of the riskier loan-to-value ratios as quickly as possible) on the one hand and the liquidity interests of investors on the other hand need to be balanced. Commercial loans usually demand higher repayments than home loans. This is due to increased wear and tear and more rapid changes in the requirements of tenants. In the case of loans for commercial property, repayments of 2.0 % p.a. are standard. Depending on the loan-to-value ratio and the general risk assessment, repayment rates of 0.5 % p.a. until the cash sweep (all surpluses after the interest payment and administration costs are used for repayment of the loan) can be agreed.

3.3 Collateral

A basic distinction is made between recourse and non-recourse loans. In the case of non-recourse loans, only the property with its value and cash flow is used as collateral. With this type of loan, the financing can be handed over to a virtually special purpose vehicle without any credit rating. In the case of recourse loans, additional collateral such as assignments of mortgageable financial assets, land charges on additional objects and guarantees and sureties on the part of the borrower and his principle shareholders are accepted.

Financing is usually provided against land register collateral. A distinction can be made between a mortgage and a land charge. While a mortgage establishes a

unique link between the loan and the personal debt to the debtor (accessoriness), the land charge is not linked to a single debt and can be assigned and transferred. Land charges are thus abstract security interests and are increasingly preferred over mortgages as collateralization for debts.

In order to establish a clear relationship between the flexible land charge and the collateralization of a specific loan, a purpose statement is concluded between the borrower and the financing institution. This can be amended and adapted to the changing needs of both parties.

3.4 Covenants

The financial covenants that are typically used in Anglo-American countries are subsidiary agreements to the loan agreements, under which the borrower is subject to legally binding obligations during the term of the loan. As the internationalization of financing markets has progressed, covenants have become increasingly popular in the German property financing business. They have become a necessity primarily on account of the increasingly non-recourse structure of loans in recent years as well as the growing trend towards reducing the amount of equity. Having access to the latest information facilitates early identification of deterioration in collateral and this helps in designing countermeasures.

3.4.1 Loan-to-Value Covenant (LTV)

With this property value-based covenant, the equity is defined during the purchase and during the term of the loan. It refers to the ratio between the loan amount and the current market value of the property is usually reviewed annually. In order to avoid having to take immediate action in the event of minor deteriorations in value, buffers or recovery periods are built in, in case this covenant is not fulfilled. With redemption loans, the relationship between market value and remaining value is taken into account.

3.4.2 Interest Coverage Ratio (ICR)

With this type of covenant, the ratio of the net cash flow of the property—after deduction of all property-specific costs—to the interest is calculated. Depending on the investment risk, banks require a defined ratio between coverage of the net earnings of the property to the interest owed to the bank. When calculating the net cash flow, emphasis must be placed on a realistic calculation of costs [management costs, vacancy periods, all costs associated with changes of tenant and capital expenditure (CapEx)]. From the banks' perspective, particular attention must be paid to quality assurance with the ICR covenant to ensure that cash flow improvements are not made at the expense of tenant credit ratings or by exchanging long-term for short-term rental agreements.

3.4.3 Debt Service Coverage Ratio Covenant (DSCR)

Unlike the ICR covenant, with the DSCR covenant the repayment is included (debt service coverage). Beyond this, the same calculation basis applies as for the ICR covenant.

3.4.4 Non-financial Covenants

These include:

- Requirement for originator approval in the event of a change in the composition of the shareholders on the part of the borrower
- Requirement for approval for additional debt financing
- Disposal options for transferred credit balances
- Reporting requirements
- Regulation of possible outflows of shareholder capital during the term of the loan
- Minimum rating of anchor tenants
- The corresponding legal consequences must be negotiated individually between the borrower and the financing bank and documented in the loan agreement.

While the LTV covenant has been common in Germany for some time, ICR and DSCR covenants only began to be included in German loan agreements in around 2004. Currently, in 2015, there is again a noticeably greater desire among clients to negotiate covenants. However no general trends can yet be ascertained.

3.4.5 Sanctions for Covenant Breaches

The covenants constitute part of the loan agreement and are thus agreed before the start of the credit relationship with all legal consequences arising from possible breaches. For one-off or minor breaches (e.g. slightly exceeding the LTV), risk premiums for the credit terms and subsequent security are the norm, while in the case of construction financing, rights of retention are also agreed for credit tranches that have not yet been disbursed.

Continued or serious breaches of the agreement (e.g. missing interest or redemption payments) can lead to complete absorption of the cash flow (cash sweep) and to immediate extraordinary termination of loan agreements (event of default) and the realization of collateral.

3.5 Interest Rate and Currency Risks

The influence of the Anglo-American perspective has led to an optimization of earnings with an individual interest strategy. This is part of the optimization strategy for reducing the investment costs and increasing earnings. Starting points exist primarily in the selection of fixed interest periods and, where applicable, in financing in a foreign currency. These optimization options are, however, associated with additional risk potential and in the context of property financing

are hedged against by derivatives, essentially through interest rate and currency swaps.

3.5.1 Interest Rate Swaps

An interest-rate fluctuation risk only exists for long-term agreed fixed interest at the time of extension of the loan or upon conclusion of follow-up financing. Depending on the current interest rate curve, short-term loans can be cheaper than long-term loans that are matched to the actual purpose of the investment and the term of the loan. However, in this case there is a permanent risk of rising interest rates both in the short term and in the long term during the term of the loan. The benefits of a short-term fixed interest period for the borrower must therefore be balanced with the security needs of the bank, as the interest-rate fluctuation risk lies with the borrower during the term of the loan.

Interest-rate fluctuation risks are generally hedged by means of an interest rate swap. This involves offsetting the risk with a second, compensatory risk (hedging). This risk-compensating swap must be purchased by the borrower on the banking market and is available through the financing banking institution or specialized banks at current prices.

- The interest rate payable on the variable loan is the 3-month Euribor plus a credit margin
- From the swap, the 3-month Euribor is obtained from the bank
- In the swap, the customer pays the agreed swap fixed interest

In total, the agreed swap fixed interest plus credit margin are paid.

3.5.2 Currency Swaps

If the financing is provided in a foreign currency, there is a further hedging requirement. With a currency swap, a possible exchange rate risk is hedged if the rental income and servicing of borrowed funds are in different currencies. Both the interest rates and the exchange rates of the two currencies can be swapped. An interest rate/currency swap is concluded with the bank on the basis of variable or fixed Euro financing. A foreign currency interest rate is paid to the bank and in return a congruent variable interest rate based on the Euribor or congruent fixed interest in Euro is received.

4 From Pfandbrief via CMBS Back to Pfandbrief

For the refinancing of commercial loans, financial institutions can issue bonds—usually in the form of property *Pfandbriefe*—on the capital market or securitize the loans.

4.1 What Is a Pfandbrief?

Pfandbriefe (covered bonds) are special loans that are hedged against the issuer's insolvency. They are issued in accordance with the Pfandbrief Act (PfandBG). The issuing bank must have a Pfandbrief license. Both the issuing institution and the mortgage are under the supervision of the Federal Financial Supervisory Authority (BaFin). The loans assigned to an individual Pfandbrief as collateral are referred to as the cover pool. This cover pool contains debts, which are backed by property financing in accordance with stringent legal requirements and are separate from the issuer's assets. The cover pool is thus a special asset, from which the debts of the Pfandbrief creditor are served until the Pfandbrief matures. In the event of insolvency, a court-appointed manager separates the cover pool from the insolvency and manages it on behalf of the creditors.

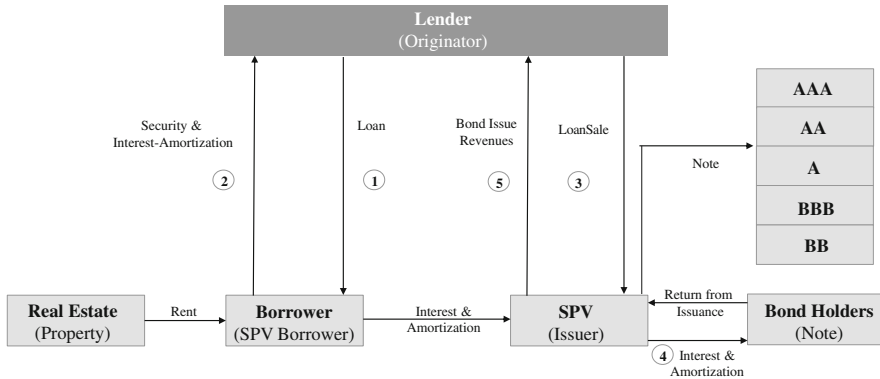
In order to be able to allocate financing to the cover pool for Pfandbriefe, the lending value of the property to be financed must be determined by an independent expert. This involves statements regarding the property itself, its future saleability and the sustainability of earnings (rental and cost analysis). The lending value should reflect the price at which the property would also be marketable at any time in the long term (see Meister and Dressel 2016). The lowest value principle applies here. Therefore, should the purchase price of the property lie below the defined lending value, this purchase price is accepted as the lending value. Furthermore, the property must be suitable for alternate use, which means that it must be usable for another user or another purpose. Note that in comparison to the normal market value analysis for securitizations, the lending value must not be subject to (virtually) any fluctuation.

A first-priority lien on property, which is entered in the relevant land register or in the mortgage register, is an essential requirement for a loan with Pfandbrief capacity. For foreign financing, the local lien must be comparable with the German lien on property. The lien on property is generally the amount of the loan plus interest and costs for realization. The Pfandbrief Act demands adequate insurance for the property, at least in the amount of the building value. Claims arising from this insurance must be transferred to the financing bank.

Since its invention in 1769 not one Pfandbrief has become insolvent. Investors have become more critical and sensitive in relation to the credit rating of the issuing institution, the quality of the cover pool and the entire issue. More detailed questions are being asked about issuance prospectuses. Because of this, the volume of Pfandbriefe on the market is still significantly smaller than it was before the Lehman crisis (see Sect. 4.2).

4.2 What Are CMBS?

Securities backed with CMBS (Commercial Mortgage Backed Securities) are similar to Pfandbriefe, as the interest and repayments to investors are securitized by a loan portfolio assigned to the individual CMBS transaction. Pfandbriefe are



Commercial mortgage-backed securities (CMBS) are a type of securitization that is backed by mortgages on commercial rather than residential real estate

1. Lender provides a loan to the Borrower
2. Borrower grants securities to the Lender (property, etc.)
3. Lender sells loan including securities to the SPV Issuer. Through this process the SPV Issuer becomes the new Lender
4. SPV Issuer refinances itself through the Note issuance at the capital market (different tranches – AAA, AA, etc.)
5. Service of the bonds through interest and amortization of the loan

Fig. 1 Securitization. *Source:* Own representation

subject to stringent statutory regulations with respect to the security requirements for the cover pool (Pfandbrief Act), while CMBS are civil law contracts, which are not subject to any directly assigned legal framework.

In a CMBS transaction, non-securitized, illiquid assets are converted into securities suitable for the capital market and are thus oriented to the practices of the capital market. In a CMBS transaction, the property portfolio to be securitized is sold by the lending institution (originator) to a special purpose vehicle (SPV), which finances the purchase through the issuing of bonds (Commercial Mortgage Backed Securities). The procedure for a CMBS transaction is represented in Fig. 1.

Given that securitizations are exclusively regulated by individual agreements, any property-backed debts can be added to the portfolio of a CMBS transaction. The underlying collateral values are limited only by the estimates of the rating agencies and the expected response of the investors. The conservatively applied lending value is therefore not used for structuring securitizations; the current market value provides the calculation basis in this case. The loans assigned to a CMBS are generally referred to as the “collateral pool”. Changes can no longer be made to the underlying collateral pool following conclusion of the transaction. CMBS structures are thus much more static than Pfandbrief issues. With CMBS, reserves are formed either by storing liquid assets or by means of over-collateralization.

A significant difference between mortgage Pfandbriefe and CMBS lies in the typical tranching of the debts for securitization. This means the creation of priorities for risk classification and the distribution of the payment flows. The interest for the respective tranche is based on the risk and loss potential.

Given the fact that the individual tranches can be sold independently of one another to different investors, this clear division of risk and return on the capital

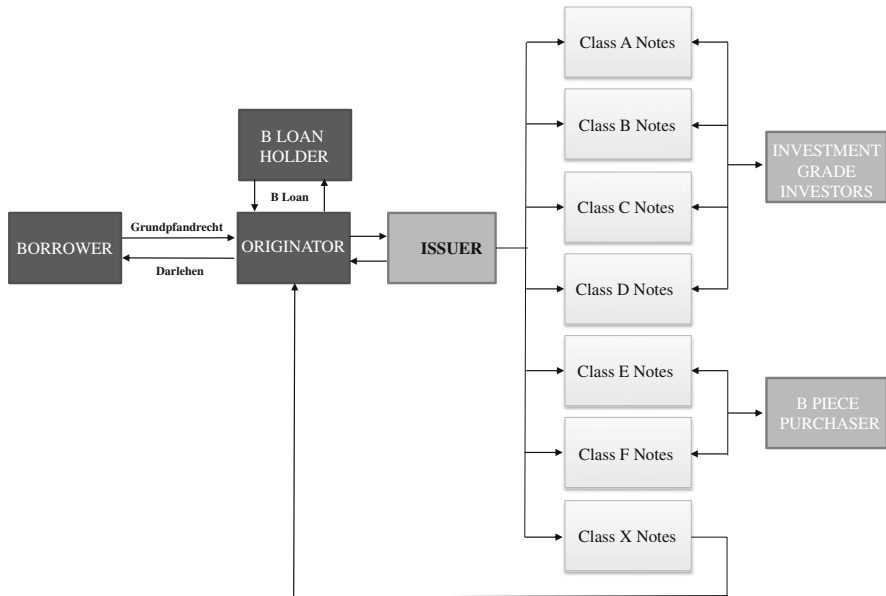


Fig. 2 Structuring real estate finance. *Source:* Own representation

market is an important aspect of CMBS transactions. The individual tranches are distinguished using the ratings AAA (probability of default very low), AA, A, B up as far as the risk-bearing equity capital. The majority of CMBS loans are bullet loans, which means that the ongoing redemption is deferred and the loan is paid back completely on the date of maturity (Fig. 2).

After placement of the securitization, the master servicer acts as a contact. In Germany, this task is generally undertaken by the arranging bank for customer retention reasons. The primary function of the master servicer is monitoring and distribution of the payment flows. His work, particularly in relation to proper debt management, is in turn monitored by the trustee. As soon as a loan deviates from the planned payment flows as a result of defaults, for example, the master servicer transfers this loan to a special servicer. The special servicer has greater scope contractually with respect to decision-making, adjustment of the credit terms, enforcement measures and realization of collateral (Fig. 3).

The first securitization was created in the United States at the beginning of the 1970s and since then it has been a major component of the US refinancing market. This financial product first reached Germany in the 1990s. Local regulatory authorities were critical of the product for a long time and were concerned that the special purpose vehicles (SPVs) could escape regulatory supervision. Significant volumes only began to be placed after 2002 (Fig. 4).

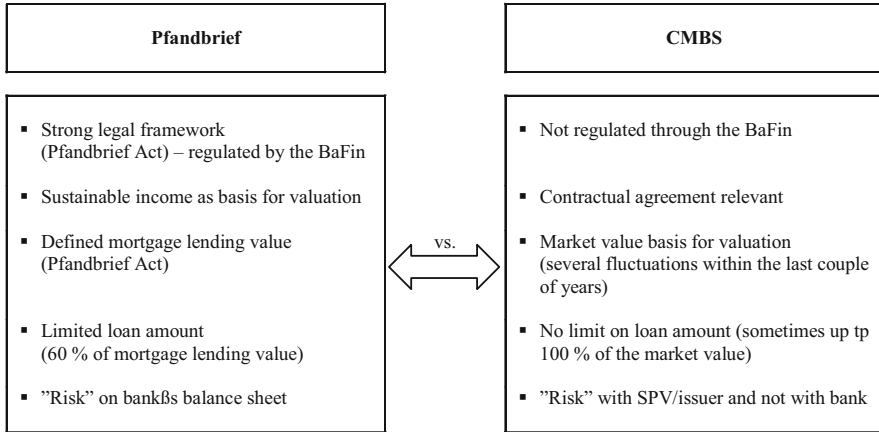


Fig. 3 Differences between CMBS and Pfandbrief. *Source:* Own representation

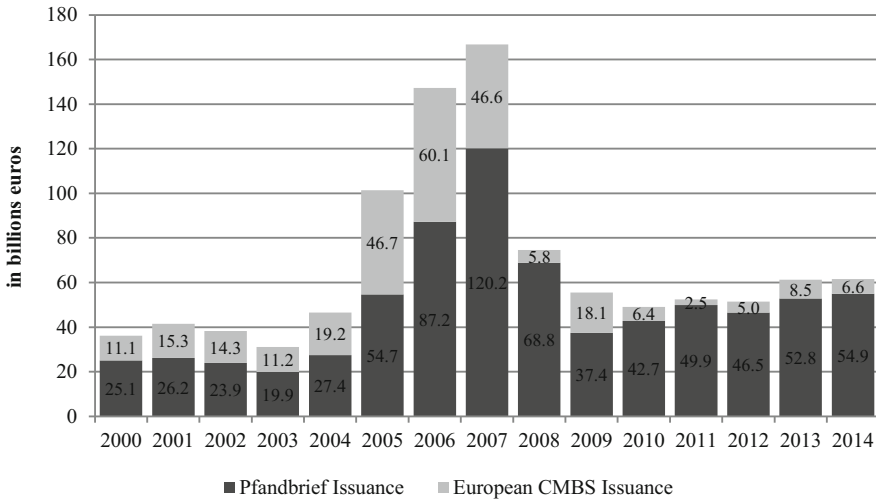


Fig. 4 CMBS and Mortgage-Pfandbrief issuance volumes 2000–2014. *Source:* VDP and the Securities Industry and Financial Markets Association (SIFMA)

5 Changes in the Lending Environment

Although Germany did not experience a property bubble like most European and American markets, it became a lot more difficult to finance property or refinance existing loans in the period 2007–2011 than in the years before. After 2012 the market re-stabilized, not least due to the falling costs of refinancing for the banks, and returned to robust double-digit new-business growth rates. The following

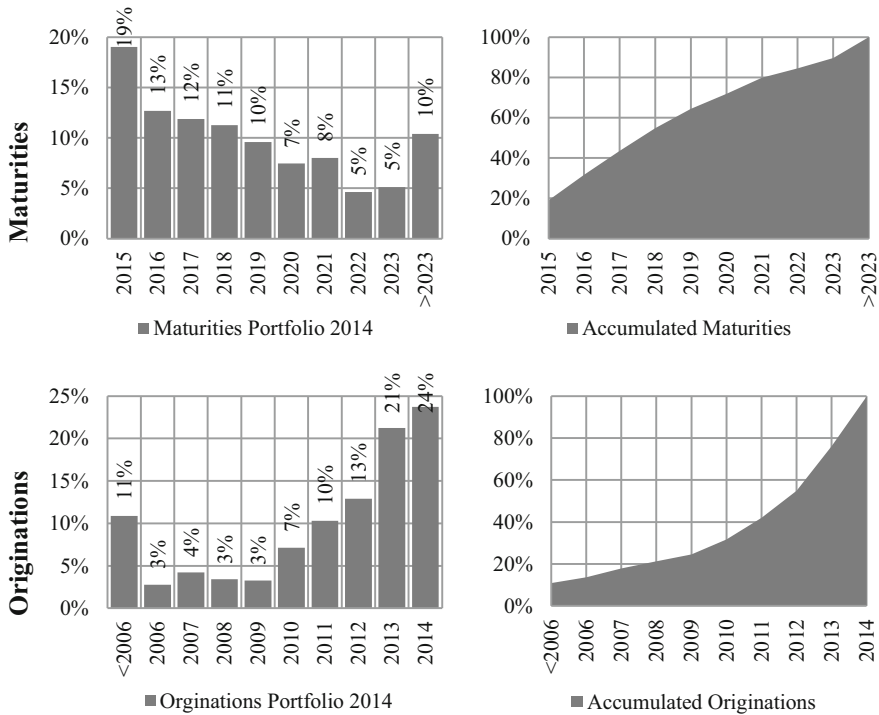


Fig. 5 German Property Market (Maturities and Originations). *Source:* Hesse and Just (2015)

figures underline the stable conditions of the German property financing market (Fig. 5).

5.1 The Renaissance of Club Deals

The individual amounts being financed are at a much lower level than they were before the crisis. Individual loans amounting to billions of Euro no longer exist. These days, bank consortiums have to be formed for significantly lower amounts than before the crisis, and ideally before the granting of a credit. Until mid-2010, a limit of 100 million euros per bank for individual risks was observed on the market. Since then, individual loans of 250 million euros are once again being granted for exceptionally good risks.

In the current study “German Debt Project” by IREBS it is noted that large-volume loans, in excess of 100 million euros, account for 22.5% of institutional residential building credit and 18% of commercial credit, again a significant proportion of the new business that the banks take up (Hesse and Just 2015).

5.2 Margin Adjustments

In the years 2008–2010, the big question in real estate finance was rather on whether banks were willing to finance at all than on single terms of the financing. Due to the value adjustments on own lending portfolios and the reduced supply, traditional loans were almost impossible to get.

Since 2014 margins for new business have again come under pressure. In response the banks started again to concentrate on more profitable business such as developments and financing of operator real estate. Therefore the margins for usual real estate products have most likely dropped far below the average 130 bps for a 70 % LTV loan.

As a result the Basel III guidelines will lead to higher refinancing costs for existing loans and a higher return on investment for future property projects. Net margins for the banks will therefore become very thin and force them to divert to business areas such as construction finance, financing of special property such as hotels and health care or turning to higher-margin foreign business.

6 Changes in Due Diligence and Adjustment of Loan Agreements

With many foreign banks withdrawing from the German financing market, German banks were able to increase their shares in commercial real estate lending. Together with the renaissance of Pfandbrief financing this has led to a move back towards German-language, form loan agreements. When CMBS products were first sold in Germany, clients were reluctant due to the requirement for more extensive Anglo-American documentation but the benefits of the high loan-to-value ratios and non-recourse structures offered outweighed their concerns. As a result of the general change in the refinancing options of banks and concentration on the Pfandbrief market, there is currently no need for German-speaking investors to accept Anglo-American contractual documentation, which frequently runs to more than 200 pages. Nevertheless, this type of loan documentation continues to be the standard for banks from Anglo-American countries or banking institutions with a strong Anglo-American influence. Given the credit supply bottleneck, a borrower will thus accept this option in case of doubt.

6.1 Due Diligence

In the boom years, the respective tranchings of the rating agencies frequently took over part of the due diligence or partially replaced the necessary review of the property and its parameters. Banks and investors took over risk classification without any detailed assessment. This has led to far too many unpleasant surprises in recent years. Today, banks are once again attaching big importance to carefully executed due diligence, which is normally carried out by bank employees, with

assistance from service providers in the technical, tax and legal areas where required.

The short evaluation of the property is currently carried out or commissioned in the term sheet creation phase; the final evaluation of the property must be available by the time of the credit decision at the very latest.

6.2 LTV

While Pfandbrief financing is subject to stringent regulatory requirements with respect to the maximum loan amount (max. 60 % of the lending value), loan-to-value ratios close to or even in excess of the purchase price were common for CMBS financing in the boom years. As the market began to recover in 2009, maximum financing of 65–70 % of the purchase price was available. This restrictive position has somewhat softened since then. Loan-to-value ratios of 70–75 % of the purchase price have become standard again, and the number of applications for loans of up to 80 % of the purchase price is rising. According to a recent IREBS report, by 2014 the average LTV of commercial loans was 67.2 % and of institutional residential property loans 68.7 %. This is remarkable, as over the same period the proportion of financing with a very low LTV (under 40 %) rose, and thus a strong increase in the maximum LTV must be deduced (Hesse and Just 2015).

Despite this, the LTVs available today are still nowhere near reaching the levels experienced during the boom years. The portion of the loan in excess of the Pfandbrief portion is viewed critically by credit institutions. The market for the sale or syndication of these loan portions is limited. A major cooling is not expected before a recovery of the CMBS market.

6.3 Covenants

The covenants for effective financing are adjusted to the more customer-friendly environment only now. The delay can be ascribed to the falling margins and the higher LTVs.

In the case of quantitative covenants such as ICR and DSCR, the required ratios for credit approval have been rising significantly due to the rising risk appetite of banks. During the boom, ICR covenants had ratios of just over 1.00, while DSCR covenants were just above this value depending on the repayment agreement. At present, ICR agreements are in the range of 1.25. Due to the ever more frequently demanded repayment components, DSCR requirements have increased to around 1.70. With these covenants, there is a noticeable return to risk-adequate levels; renewed softening is neither necessary nor desirable.

Because of the lower loan-to-value ratios after the crisis, the LTV covenants had to be adapted to the new conditions. Now, however, increasing importance is attached on the side of the borrower to detailed agreements in the event of the agreed covenant not being achieved. While the benchmarks for cash sweeps or

defaults agreed in the loan agreements had more of a documentary function during the boom, they are now the subject of lengthy negotiations between banks and borrowers.

6.4 Formal Requirements for Rental Agreements

In the retail property asset class (supermarkets, retail warehouses), the increasingly strict legislation of the last 10 years has created considerable uncertainty, which affects the holding of written rental agreements. Definition problems with respect to exact identification of the property that is the subject of the rental agreement or too great a time gap between the signing of the agreement by the tenant and landlord have led to difficulties from a legal perspective. The resulting difficulties with financing and the need for frequent renegotiation between tenants and the new investors have led to loss of confidence in this asset class as well. This restrictive position of the courts now seems to be softening.

7 Refinancing Existing Loans

The ability to redeem a loan upon maturity without any problems depends mainly on the quality of the property, the structure of the loan and the general conditions in the financing market. The capital-intensive property sector depends on the permanent availability of a financing market.

7.1 Pfandbriefe

The Bundesbank estimates the commercial property loans of credit institutions active in Germany to be worth around 250 billion euros. With an average fixed interest period of 7 years, this gives an annual refinancing volume of approx. 35 billion euros. After securitization activity reached its peak in 2006, the Pfandbrief volume started to decline slightly. For the next few years, no exceptional increase in refinancing volumes is anticipated. Institutions are prepared for annual refinancing, not least thanks to continuous repayment of the Pfandbrief loans, and are taking up this volume in accordance with the legally prescribed loan-to-value ratios.

It can generally be observed that since 2013 the credit institutions have again been placing more value on customer retention.

7.2 CMBS

The image often painted at the beginning of the current decade of an insurmountable wall of CMBS refinancing did not lead to the much-feared general catastrophe.

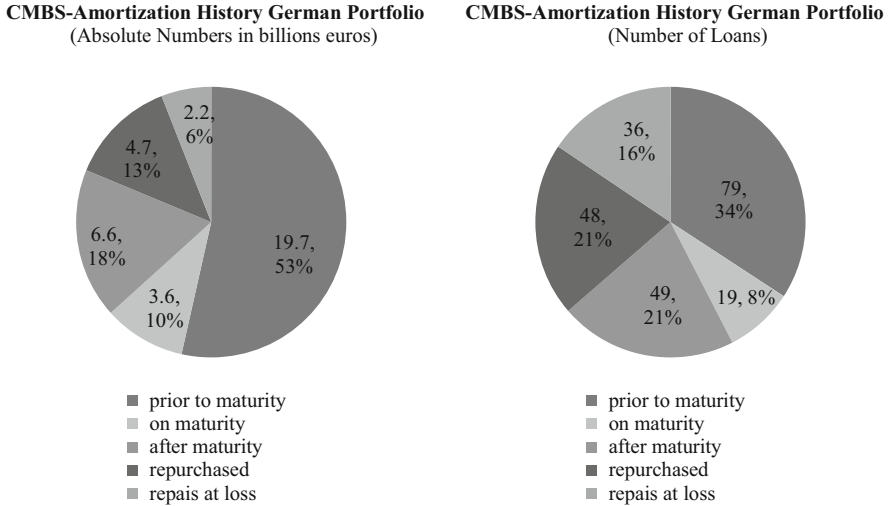


Fig. 6 CMBS-Amortization History German Portfolio. *Source:* Hesse and Just (2015)

In 2015 the outstanding balance on securitized loans was only 9.4 billion euros. This still makes Germany the second-largest CMBS market in Europe, however, new business has almost come to a standstill. In 2014 only a single transaction, with a volume of less than 700 million euros was placed. The majority of outstanding CMBS were repaid or refinanced via other credit structures (senior unsecured, bonds). A good 3.0 billion euros of CMBS is currently administered by special servicers and significant losses are to be expected. This will however have very little effect on the market generally (Fig. 6).

7.3 Loan Sales Market

Due to the effects of the financial crisis the first international banks began in 2012 to bundle loans into portfolios and to sell portfolios on a grand scale via structured processes, instead of winding up real estate loans themselves.

German banks have thus far held back on this type of product. Bad banks (AMAs—asset management agencies) were set up, within the parent institute or externally and significant inventories of sub-performing and non-performing loans were divested to them. However, to date primarily foreign loan portfolios have been sold-off, in particular from Spain.

The following figure gives an overview of these markets, which largely go unnoticed publicly (Fig. 7).

The volume of loan sales transactions grew in 2014 to over 80 billion euros; some 2.5-fold the volume of 2013. These transactions were focused on the UK, Ireland and Spain. Particularly the Irish National Asset Management Agency

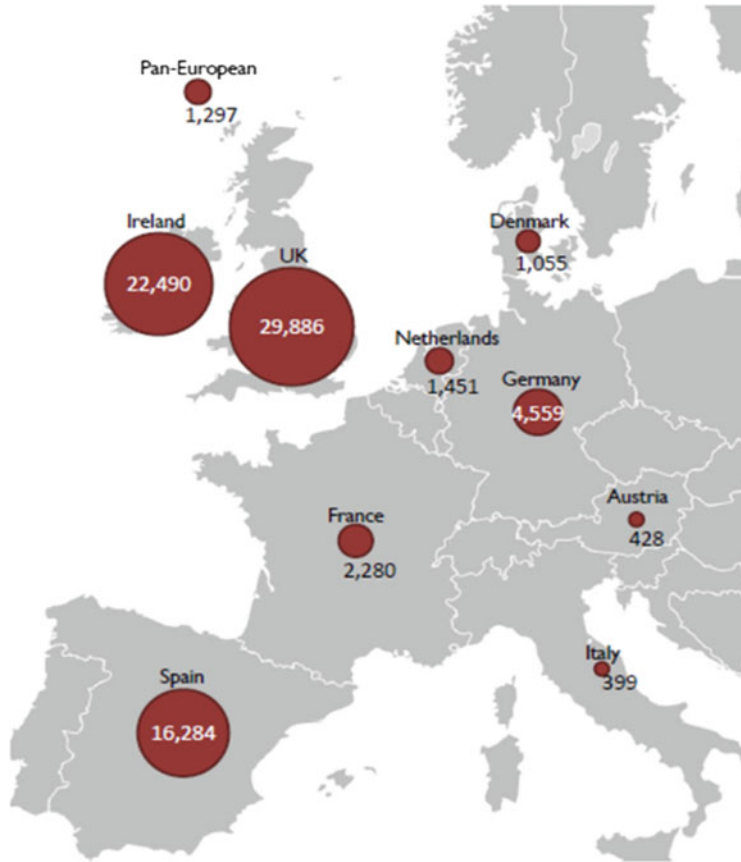


Fig. 7 Closed Sales by Geography 2014 (in billions of euros). *Source:* Cushman & Wakefield LLP

(NAMA) is very active in the market and is well on the way to achieving complete sale of the Irish banks' sub and non-performing loan portfolios by the end of 2015.

The purchasers of the portfolios are international private equity companies and the origin of the vendors was, to some 77%, the USA. If Germany and the Netherlands follow the international trend, further high volumes may be expected in the coming years.

8 Outlook

Following the financial crisis and despite the subsequent euro-crisis the property financing landscape in Germany has recovered significantly and has meanwhile begun to exhibit tendencies whereby the profitability of the product for the banks is called into doubt. Following the boom years of 2012 and 2013, the new business in 2015 is leveling-off. Pressure on margins, the demand for increased LTV levels and

the currently nascent customer debate regarding the easing of covenants make classical property financing increasingly unprofitable. The pressure on banks from increasing regulatory requirements for transparency limits profitability still further. The market is very stable and the temporary threat to the market posed by a CMBS refinancing crisis appears to have been banished, due to stable procedures and long-established standards.

It is therefore the Pfandbrief market, which continues to provide a solid basis for the comprehensive servicing and fulfillment of clients' requirements regarding property financing in Germany.

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Going Public and M&A in the German Real Estate Market

Klaus Elmendorff and Christian Schmitt

Abstract

This chapter examines the German real estate market focusing on two main topics, the public market and the private M&A market. Initially an overview and the specific characteristics of the public real estate market are described, including requirements from an investor's point of view regarding listed real estate companies. In addition, the process and prerequisites of becoming a listed company in Germany are specified. The second part focuses on the real estate M&A market in Germany. Following an overview of the market developments over the last years and the current environment an outline of a typical M&A process including relevant issues for real estate companies is described.

Keywords

IPO • Public real estate markets • Merger and acquisition • Non-public mergers and acquisitions • Public takeover

1 Going Public

1.1 Public Real Estate Market Overview

Compared to other European real estate markets until now only a small number of companies has turned to the publicly listed market in Germany. According to the Deutsche Börse RX Real Estate Index that includes real estate companies in the Prime Standard only seven companies fulfil the requirement of more than 1 million euros trading volume per day (Börse 2015). Companies included in the index are

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Deutsche Euroshop, Deutsche Wohnen, Gagfah¹, alstria office REIT, Deutsche Annington Immobilien, LEG Immobilien, and TAG Immobilien. Further Germany and real estate focused indices are the EPRA Germany Index published by the European Public Real Estate Association (EPRA 2015a) and the Ellwanger & Geiger Deutsche Immobilienaktienindex (E&G DIMAX), which is published by the German private bank Ellwanger & Geiger 2015. However, due to the rather broad definition of constituents the E&G DIMAX² actually does not reflect the German listed real estate market. The EPRA Germany index can be considered the most relevant index for the German public real estate market, particularly as a benchmark for international comparison. As per May 2015, the EPRA Germany index consisted of ten companies including alstria office REIT-AG, Deutsche Annington Immobilien SE, Deutsche Euroshop AG, Deutsche Wohnen AG, DIC Asset AG, Gagfah S.A.¹, LEG Immobilien AG, DO Deutsche Office AG, Hamborner REIT AG, and TAG Immobilien AG.

Following a wave of IPOs of many previously private equity funds owned companies (e.g. GSW, LEG, Deutsche Annington, TLG), the German listed real estate sector has experienced significant growth in the last few years. However, compared to the overall German real estate market, the publicly listed share is still relatively small. Despite this growth, Germany’s public real estate market is still in an infant stage if seen in a global context. The overall market capitalization of the sector is comparatively low. According to EPRA the aggregate market capitalization of listed real estate companies in Germany is 27 billion USD and in comparison the overall German real estate market, including non-listed assets has a size of approximately 1693 billion USD (EPRA 2015b). The left-hand pie chart in Fig. 1

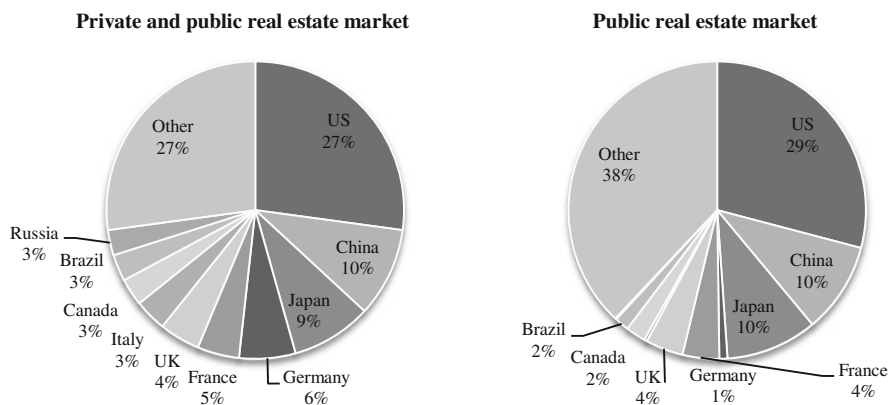


Fig. 1 Overview of the private and public real estate market. *Source:* EPRA Global Real Estate Market (2015b)

¹ Gagfah S.A. was acquired by Deutsche Annington Immobilien SE in March 2015. The combined entity was rebranded as Vonovia.

² The DIMAX consists of companies that generate at least 75 % of revenues and earnings through real estate activities. No free float, market capitalization or listing standard requirements.

Table 1 Global private and public real estate market

Country	Overall Real Estate market (in billions USD)	Public Real estate market (in billions USD)	Public market in % of overall market
U.S.	7508	894	11.9
China	2693	303	11.2
Japan	2420	306	12.6
Germany	1693	27	1.6
France	1259	123	9.7
UK	1223	125	10.2
Italy	967	10	1.1
Canada	823	66	8.0
Brazil	801	48	6.0
Russia	762	4	0.5
Other	7508	1167	15.5
Total	27,657	3073	Average 11.1

Source: EPRA monthly statistical bulletin March 2015

shows Germany's share of the aggregate global value of the private and public real estate markets whereas the chart on the right side displays Germany's share of the public market alone. Germany's total market accounts for approximately 6% of the global real estate universe and is approximately 25% of the size of the U.S. real estate market; the public German real estate market, however, accounts for less than 1% of the overall global public real estate market, despite being Europe's largest economy in terms of GDP (EPRA 2015b) (Table 1).

1.2 Characteristics of the Public Real Estate Market

To understand why the German public real estate market is less developed, it is helpful to take a look at Germany's "equity culture" in general: In Germany only a small percentage of households owns stocks of listed domestic companies. Even though the percentage has increased over recent years, only 8.9% of German private households are directly invested in stocks. In other countries the direct equity investments are significantly higher, e.g. France 15.0%, Switzerland 17.6%, US 26.0%, Japan 29.7% of households (Giannetti and Koskinen 2010). The aggregate market capitalization of the total listed market relative to GDP in Germany is at 59% well below the European and global averages (German Federal Statistical Office, World Federation of Exchanges 2014). In Germany, it is more common to invest indirectly in shares, e.g. via equity funds, certificates and, increasingly, exchange-traded funds.

Also regarding real estate investments other indirect vehicles play a much bigger role than real estate stocks: Indirect investments like open-end and closed-end real estate funds have a very long and successful history in Germany.

With the aim to further develop the public real estate market the German REIT legislation was introduced with retrospective effect on 1. January 2007.³ The intention was to build on the successful REIT concept known in many countries across the globe to create a new liquid real estate asset class with a transparent and conservative business model that is focused on stable dividend payments. In order to protect tenants, residential real estate companies were excluded from the advantages of the G-REIT structure. At the time expectations were very high; the market anticipated a large number of REIT IPOs and hence increased liquidity, transparency and competition in the listed German real estate market.

However, expectations were not met; the IPO window quickly closed after the first signs of the financial crisis emerged. The first and largest REIT that went public (in 2007) was alstria office REIT with a market capitalization of 913 million euros on first quotation. Today, only three listed companies fulfil the REIT requirements in Germany, namely alstria Office REIT, Hamborner REIT, and Fair Value REIT.

A further characteristic of publicly listed real estate companies in Germany was the historically low free float. In 2011, the companies included in the German EPRA Index had an average free float of around 50 % with each company having at least one major shareholder holding more than 20 % (according to company information as of December 2010). With the sell downs of anchor investors the stocks have become more liquid e.g. Fortress, Cerberus, Whitehall, Natixis, and Oaktree (mainly private equity funds). Today the average free-float for a publicly listed real estate company has increased to 74 %.

The number of real estate IPOs picked up starting 2011, which led to a significant size increase of the publicly listed German real estate market fueled by the low interest rate environment. Another characteristic worth mentioning is the major role of residential real estate companies within this development which amounted for the majority of the newly listed companies.

1.3 Investment Criteria

There are five main investor criteria a company has to comply with to successfully list as a public company. While these criteria also apply to already listed companies, there is particular investor scrutiny with regard to companies that want to tap capital markets.

Management For any successfully listed company it is paramount to have an established and experienced internal management team in charge. Ideally, interests of both management and investors are aligned through share participations and stock option programs.

³Bundesgesetzblatt Jahrgang 2007 Teil I Nr. 23; most recent amendment in 2011 cf. Bundesgesetzblatt Jahrgang 2011 Teil I Nr. 30.

Investment Strategy and Return Broadly speaking there are three main business strategies for real estate companies: Asset holding, asset management and project development. Often, business models include more than one strategy and in some cases all three strategies are pursued in parallel. In the recent past the business models have become more interlinked resulting in no strict categorization of companies within one of these models, but in a much more integrated business model with no players focusing exclusively on one of the silos.

The asset holding strategy is the low risk and steady income business model real estate companies and in particular REITs are associated with. Asset management involves the maximization of the real estate portfolio's value and performance via operational improvements, acquisitions, and disposals. The more project development activities are included, the more volatile and riskier the underlying strategy becomes. In Germany and also other European countries there are only very few pure-play listed development companies given the nature and risk-return profile of the development business.

In addition to the general investment strategy, there is a categorization within the asset class a company is invested in. Successfully listed real estate companies communicate a coherent and consistent strategy including an outline of relevant investment criteria and growth targets.

Investors have a strong preference for companies with a clear focus on one particular asset class. Prevalent asset class categories of listed real estate companies in Germany are residential, retail and office. As of May 2015 listed companies focusing on industrials, logistics or hotels did not yet exist. This also applies to the second dimension of the asset class strategy, i.e. whether companies are focusing on core, value-add or opportunistic assets. Most German listed players have a focus on core assets, which is consistent with the most common strategy as asset holder. However, there is also some leeway. For example, if a company is focusing on prime locations with prime assets, some non-core assets may be acceptable to provide for additional upside potential.

In summary, public investors prefer companies with a concentration on high quality properties in attractive markets that provide for stable cash flows and value appreciation potential.

Size and Liquidity In order to hold liquid and tradable shares, investors require a minimum free float of between 300 million euros and 500 million euros, although this target range largely depends on the market environment. Investors want to be able to trade their positions quickly. Both minimum size and liquidity are also prerequisites for certain stock exchanges as well as main selection criteria for many indices. However, in the light of the evolution of the German public real estate market, this has become increasingly simplified, as not only the number of listed companies has increased but also the respective size of these companies due to follow-on capital offerings or consolidation through mergers or acquisitions (e.g. Deutsche Wohnen/GSW or Deutsche Annington/Gagfah).

Transparency and Governance Full transparency and appropriate governance are crucial for the success of an IPO. The exit or sell down of existing shareholders can for example reduce a potential conflict of interest that has to be addressed.

Capital Structure While the LTV (loan-to-value) is generally adjusted according to the underlying business model, LTVs perception by investors is also dependent on the prevailing market environment.

If the REIT status is envisaged a maximum LTV of 55 % is legally permitted in Germany. In the aftermath of the financial crisis a LTV of up to 60 % was temporarily acceptable for investors in German real estate companies. This compares to target leverage ratios of 40–50 % internationally. In the current market environment global investors' preference for leverage levels of German real estate companies depends upon the asset class a company invests in i.e. for residential real estate companies target leverage levels within 50–55 % and 40–45 % for companies investing within other real estate asset classes are acceptable.

1.4 Pricing

In theory, real estate stocks are best valued by a discounted cash flow analysis given relatively long-term cash flows. In practice, many investors focus on financial ratios, particularly when assessing IPO investments, as these ratios provide a relevant asset allocation benchmark that can be applied easily based on the limited data available in the public domain.

To ensure a common and transparent reporting that enables the comparison of different companies, EPRA has published a best practices recommendation as guidance for real estate companies regarding their financial information reporting (EPRA 2015a). Companies are increasingly implementing these standards, following both investors' and research analysts' demand for an industry-wide standard.

The three main relative metrics that are usually used for German real estate companies are premium/discount to NAV (EPRA net asset value) as metric to compare the pricing of the equity, FFO yield as proxy for the return from the annual cash flow generation for equity holders and EV/EBITDA (Enterprise value/Earnings before interest, tax, depreciation and amortization) as operational pricing metric independent from any capital structure and tax considerations.

EPRA NAV defines the value of the underlying properties as per the valuation of an independent appraiser excluding liabilities. Theoretically, this is equivalent to the fair value of the equity. Historically, most real estate IPOs in the German market have been priced relative to NAV. For public listed real estate companies the implementation of the EPRA standards is recommended to provide transparency regarding financial reporting. For further information can be found in the EPRA Best Practices Recommendations as of December 2014.

Key terms include EPRA net asset value which *“makes adjustments to the IFRS NAV in order to provide stakeholders with the most relevant information on the fair*

value of the assets and liabilities within a true real estate investment company with a long-term investment strategy” or the EPRA Earnings “A key measure of a company’s underlying operating results and an indication of the extent to which current dividend payments are supported by earnings”, which are also often described as funds from operations (FFO) (EPRA Best practice recommendations, January 2015).

Figure 2 shows the development of EPRA NAV premium/discounts in Europe according to major EPRA indices over a period of 15 years (EPRA 2015c). While all indices follow the same trend the German index shows a much higher volatility. In the period between 2005 and end of 2008 German real estate stocks were trading at historically very high premiums but in the turmoil of the financial crisis the sector in Germany was hit much harder than the rest of Europe. As of today, European real estate companies trade at all-time highs and German companies trade significantly above the 15 year average.

FFO defines recurring net earnings theoretically available for dividend payments, not considering any fiscal accounts that ultimately define distributable re-serves. The concept of FFO was established in the German market with the IPO of Gagfah in 2006 and has its origin in the USA where the metric is a key benchmark for REITs. FFO is heavily influenced by differences in the financing as well as accounting structure.

The third main relative valuation metric EV/EBITDA does not take into account capital structure or tax considerations and is also commonly used in other industries. The concept is particularly qualified for a direct comparison of operational performance across various jurisdictions.

One of the key challenges of the relative valuation approach is the adjustment of differing accounting and reporting standards. For example, the treatment of asset sales, revaluation results or the capital expenditure and maintenance split in both

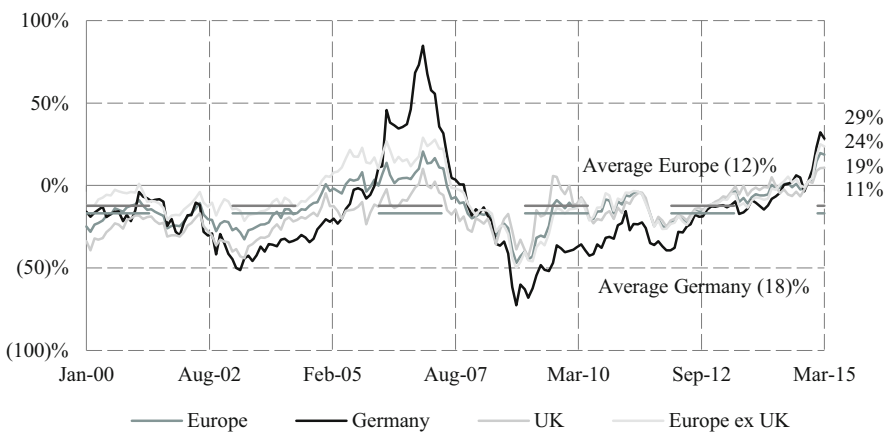


Fig. 2 EPRA NAV cycle since 2000. Source: EPRA Monthly published NAV Bulletin March 2015c

FFO and EBITDA varies by company. To ensure a common and transparent reporting that enables the comparison of different companies EPRA has published a best practices recommendation as guidance for real estate companies regarding their financial information reporting (EPRA 2015a). Companies are increasingly implementing these standards, following both investors' and research analysts' demand for an industry-wide standard.

2 IPO Process

The timing of an IPO is driven by technical factors as well as the market sentiment. Technical factors such as the financial calendar of the company as well as the legal prospectus requirements only allow for limited placement windows. This is due to the so called "135 days rule", which stipulates that the financial information in the prospectus testified by the accountants is not older than 135 days. Potential listing windows are shown in Fig. 3.

However, only in a market environment with a favorable investor sentiment towards equity investments in general and towards the specific equity story of the company, a company can ultimately enter the listed market successfully. As market windows can quickly close following e.g. an external event and due to the fact that it is generally difficult to forecast at what time market windows will reopen, it is important to keep the process open and to start the IPO preparation well in advance. A generic IPO process including the relevant phases and the corresponding timing is shown in Fig. 4.

2.1 Preparation Phase

A main part of the preparation phase is the due diligence, during which the advisors carry out an extensive analysis of the company (incl. the real estate portfolio) with the aim to ensure that the company fulfils all requirements for a potential listing. Focus areas are the business plan, financing, the quality of the real estate portfolio, contracts in place, tenant structure as well as environmental and legal issues.

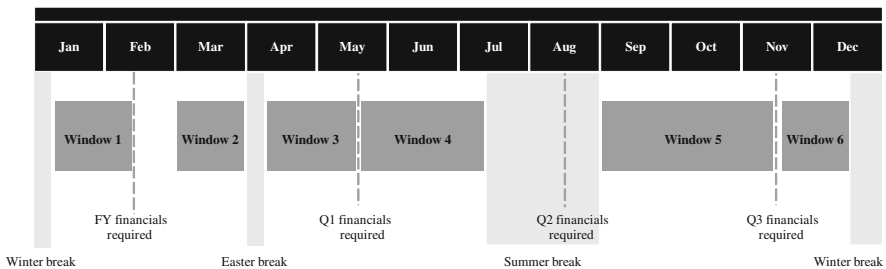


Fig. 3 Overview of listing windows in an IPO process. *Source:* Deutsche Bank Corporate Finance

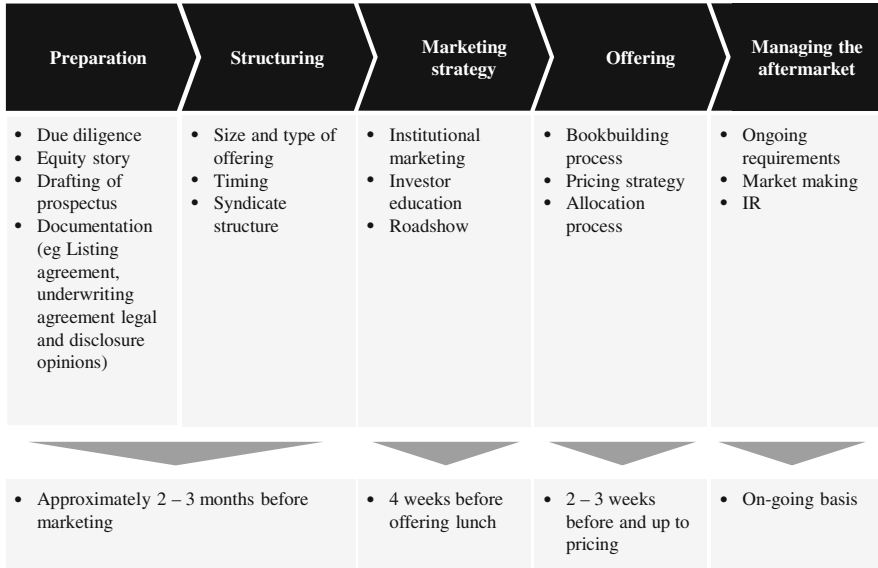


Fig. 4 Generic IPO process. *Source:* Deutsche Bank Corporate Finance

Based on a successful due diligence, the company prepares the analyst presentation together with its advisors. The analyst presentation is used to present the company incl. the equity story to research analysts. This is a key document of the company’s marketing strategy.

A listing in a regulated market requires a prospectus including all relevant information regarding both the issuer and the issuance. While the prospectus process for real estate companies does not differ from the process for other companies, there is one additional document real estate companies have to provide. In line with the EU directive CE 809/2004 (most recently amended in 2014 via delegated regulation No 1392/2014) real estate companies in Europe are obliged to add a valuation opinion defined by the CESR Recommendations (128–130) to the prospectus. The valuation opinion has to be prepared by an external consultant according to international standards. The valuation assignment should not be older than 1 year compared to prospectus publication date and is in practice often aligned with the reporting date of the last financial report included in the prospectus. Next to the prospectus there are additional documentation requirements including the underwriting agreement between the company issuing new securities and the lead underwriters of the syndicate. This agreement determines the public offering price, the underwriting spread, the net proceeds to the issuer, and the settlement date. Further documents include the listing agreement, legal and disclosure opinions.

2.2 Structuring

At the beginning of the IPO process the issuer selects a syndicate of banks, usually comprising of one or two lead banks acting as global coordinators, book-runners, and additional co-lead managers, depending on the size of the IPO. Main criteria for the selection of the syndicate banks next to costs are track record, distribution power (sales force and access to relevant investors) as well as research capabilities. During the structuring phase the syndicate banks together with the company define which investors will be targeted as well as how both the future shareholder and capital structure of the company is supposed to look like. During the structuring phase the size of the offering, the general transaction structure and the final timing are defined.

2.3 Marketing Strategy

The marketing strategy consists of three cornerstones: institutional marketing, investor education and the roadshow. Institutional marketing for early key investors aims at receiving detailed feedback regarding the general feasibility of the transaction before a formal process is started. The second step is educating investors. This has become a critical tool to secure investor support already at an early stage. Investor education is driven by research analysts who publish an IPO research report. During the roadshow the management team presents the company and the equity story to potential investors e.g. in New York, London or Frankfurt via one-on-one and group meetings with institutional investors.

2.4 Offering

In the offering phase the so-called book-building is conducted by the syndicate banks, collecting all investment requests of potential investors, usually for a period of up to 10 trading days. At the end of the book-building the price for the shares is determined based on the demand in the “book” and the shares are allocated to investors.

2.5 Managing the Aftermarket

After a successful IPO the share price should not drop significantly below the offering price during the first few trading days. The syndicate banks ensure the stabilizing of the market in line with the directive 2003/6/EG of the European Parliament and the Council.

3 Non-public Mergers and Acquisitions

3.1 Market Overview

The German market for real estate transactions is very fragmented by nature. The most active markets include Berlin, Munich, Frankfurt, Dusseldorf, Hamburg, Cologne and Stuttgart.

At the same time, the German market is characterized by numerous small transactions. However, in recent years, the share of portfolio transactions has steadily increased as depicted in Fig. 5. The smaller deals are usually executed by local brokers and mostly involve small local investors and high net worth individuals. The development of both single-asset and portfolio transactions since 2009 is shown in Fig. 5. Since 2009, the investment volume into the German commercial real estate market has steadily increased reaching 40 billion euros in 2014. In the pre-crisis years, private equity companies were entering aggressively into the market and together with both open-end and closed-end real estate funds were the most active buyers during these years. A main driver for this development was the availability of cheap, high-volume credit from banks (in some cases transactions were made at 100 % LTV). After 2007, volumes dropped significantly, however, not only due to the dry-out of the financing markets and the difficult refinancing environment. Another reason has been diverging price expectations of buyers and sellers. For many potential sellers, prices were falling below a critical threshold, and therefore they refrained from selling.

The development of the German real estate market has been different to many other European countries both before and after the financial crisis. While most real estate markets have suffered heavily in course of the crisis, the impact on the German market was less severe. Though transaction volume has been falling

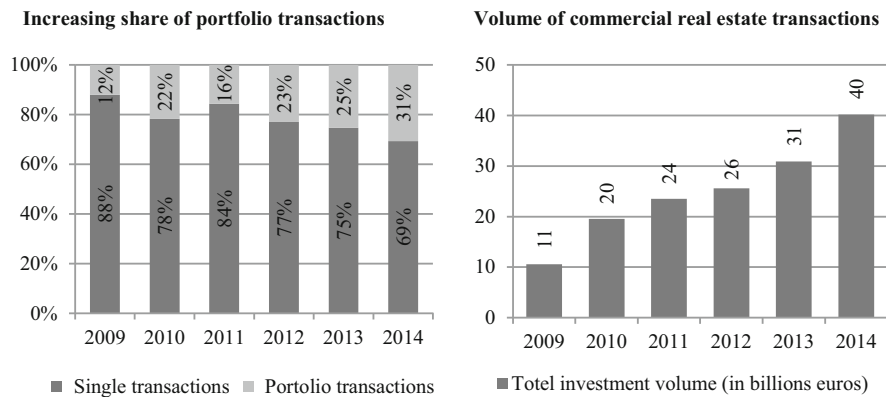


Fig. 5 Development of transaction volumes in the German market. *Note:* excluding residential portfolios. *Source:* BNP Paribas Real estate Property Report Investment Market 2011–2015

markedly, the prices for both residential and commercial property have remained relatively stable.

3.2 Investor Landscape

According to the BBSR (Bundesinstitut für Bau, Stadt-, und Raumforschung 2014) the majority of investors in the German market are still domestic investors. Buyers with a strong equity base focusing on stable core assets remain the most active investor group.

This is in-line with the share of domestic investors still at high levels of approximately 92 % private investors on the sell-side and approximately 99 % on the buy-side (Bundesinstitut für Bau-, Stadt- und Raumforschung 2014).

Main investors in the commercial real estate sector have been both open-end and closed-end real estate funds, and in recent years increasingly private equity companies. Some of the largest commercial portfolio transactions during the peak years have been realized by private equity companies, acquiring assets from open-end real estate funds. In addition, over the recent past hedge funds have entered the commercial real estate sector and thus became a significant group within the present investor base.

Recently, investors' focus was almost exclusively on core objects in top locations with long-term rental contracts. Hence 60 % of all office investments in Germany were focused on the large markets in the seven largest cities.

3.3 M&A Process in the Non-public Markets

In general, real estate transactions may be pursued either as asset deal or as share deal. While in an asset deal the real estate is sold directly, only the shares of the legal entity owning the real estate are sold in the case of a share deal. The procedure of transferring property rights is often less complicated in a share deal since ownership of the shareholding entity passes by virtue of the share sale contract and there is no need to implement the procedure at Land Registry that applies in the case of an asset deal.

A further advantage is that, depending on the structure of the transaction, the acquirer may benefit from various tax exemptions. The real estate transfer tax is a tax that is imposed by states and/or municipalities on the privilege of transferring real property within that jurisdiction. When domestic real estate is sold or changes owner, a one-time real property transfer tax of between 3.5 and 6.5 % (depending on the federal state) becomes effective. Taxable events under the Real Estate Transfer Tax Act include both a direct transfer of real estate and a transfer of shares that lead to an indirect change in ownership. In the latter case, the real estate transfer tax will be triggered where there is a direct or indirect concentration of at least 95 % of the shares (or the economic ownership) in an entity that owns real estate in a single owner or a group of companies, or where there is a direct or indirect change of ownership of at least 95 % in a real estate-holding partnership within a 5-year-

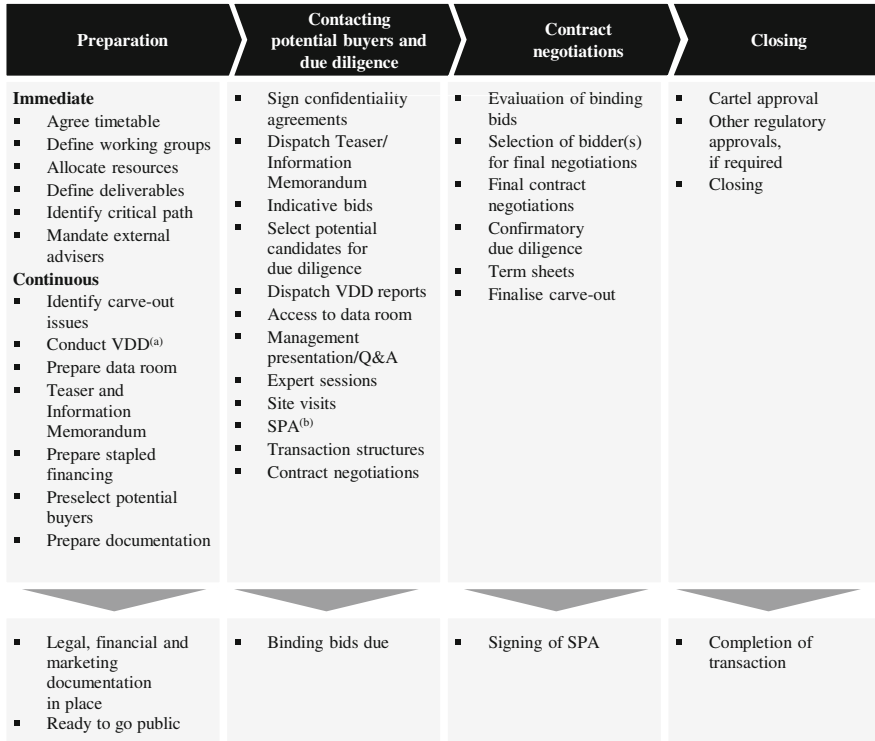


Fig. 6 Generic M&A process (a) vendor due diligence (b) sale and purchase agreement. *Source:* Deutsche Bank Corporate Finance

period. The concept encompasses the legal ownership of property, inherited building rights and “building on land owned by another person.” Often less than 95 % of the shares are sold to structure the transaction in a tax efficient way. This chapter gives an overview of a structured sales process, which is typically applied in corporate M&A transactions or in larger, more complex portfolio transactions. Although the M&A process follows a clear structure, some flexibility is necessary in order to adapt to a rapidly changing market environment. In a sellers’ market for example, the process is rather strict, while in a buyers’ market often a more flexible process is required, more tailored to the needs of buyers. The process can be broken down into four phases. An overview of a generic sell-side M&A process is depicted in Fig. 6.

Preparation Phase During the preparation phase the timeline for the process is agreed on. Accordingly, deliverables and milestones are defined, working groups are set up and external advisers are mandated e.g. investment banks or brokers, accountants and lawyers. The required legal, financial and marketing documents are prepared, the data room with a comprehensive documentation is set up, potential

buyers are pre-selected and potential carve-out issues have to be addressed. It has increasingly become a standard feature in M&A processes to conduct a vendor due diligence (VDD) in order to reduce uncertainty of the transaction. Typical VDD reports cover financial, legal, tax and environmental issues, the latter being of great importance for real estate transactions. The VDD also accelerates the process as it facilitates the financing for potential acquirers.

Contacting Potential Buyers and Due Diligence Contacting potentially interested parties is usually done in a two-staged process: Initially, potential investors are addressed with a teaser (short overview of the asset). After receiving the teaser a non-disclosure agreement is signed and an information memorandum (detailed fact book on the target) is sent to interested parties. Based on the information memorandum indicative bids have to be submitted by potential acquirers.

In the next phase potential investors get access to the data room that includes all relevant information to conduct an own due diligence on the target. Additionally, interested parties are furnished with the vendor due diligence reports (to the extent prepared) and often with a first draft sale and purchase agreement outlining the terms and conditions of the transaction. It has also become customary to organize “expert sessions” for potential acquirers during which they get direct access to relevant employees of the target that are responsible for crucial functions. Finally, potential buyers are requested to submit binding bids together with a mark-up of the draft SPA (Special purpose agreement) that has been submitted.

Contract Negotiations In the third phase of the M&A process binding bids are analyzed and the final bidder(s) are selected. In most cases, two parties are invited to the final negotiations to maintain competitive tension. The negotiation phase includes a confirmatory due diligence during which last remaining issues regarding structure or financing are resolved. At the end of phase three the SPA can be signed.

Closing In the closing phase regulatory approvals have to be obtained, e.g. cartel approval and other formal closing conditions that may be required. The closing of the transaction is the completion of the M&A process when legal ownership of the asset is transferred. If the transaction was structured as an asset deal the legal ownership is transferred as soon as the acquirer is registered in the land register. The land register states the ownership of a property in Germany. If the transaction is pursued as share deal the land register right remains with the existing legal entity that is registered. Finally the purchase consideration has to be paid and other sales conditions have to be fulfilled.

4 Public Market Merger and Acquisitions

With the various IPOs in the last years, a listed real estate market and therefore a market for public takeover transactions has been formed. Especially with the business models allowing for economies of scale, the listed space in Germany experienced significant growth. In context with this characteristic, real estate companies seeking for external growth not only engaged in non-public takeovers in which a public company is taking over a private company or portfolio e.g. Deutsche Wohnen/Baubecon in 2013 or Deutsche Annington/Südewo in 2015, but also in public takeover transactions. Landmark deals in the recent past include the public takeover offer of GSW Immobilien by Deutsche Wohnen in 2013 as well as the takeover/merger of Gagfah and Deutsche Annington in 2014. There has been a surge in public real estate transactions not only in terms of number of transactions, but also in terms of transaction volumes as depicted in Fig. 7.

Irrespective of what type of takeover offer is conducted, the process can be divided in five phases as illustrated in Figs. 8 and 9. First, there are preparatory tasks to be conducted such as Due Diligence or ‘cash confirmation’ (special requirement under German takeover law) before the effective offer can be launched. Secondly, with the completion of the preparatory tasks, the offer is announced in accordance with the German takeover codex (WpÜG) especially in regard to § 10 WpÜG comprising the public announcement of an intention to launch a voluntary takeover. The third step is the publication of the offer document including the submission to the BaFin as well as the subsequent official publication of the document. Fourth, the acceptance period generally spanning to a period of 4–10 weeks, but might comprise a mandatory extension of 2 weeks. With the expiry of the offer period, a successful offer is closing after approval by merger control approval. Finally, with the integration phase, there are various post-takeover integration measures at hand in order to realize the envisaged synergy potential.

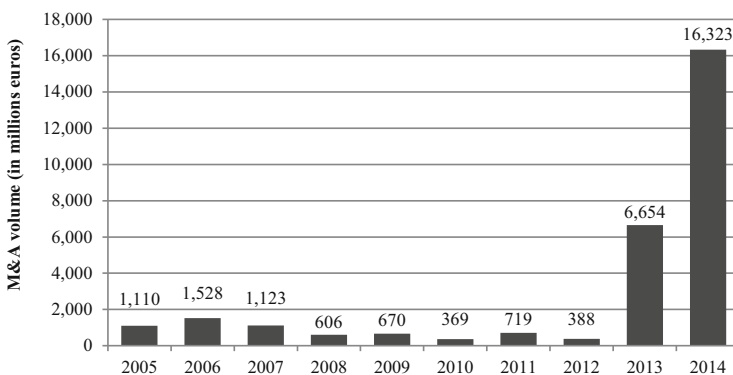


Fig. 7 German public real estate transaction volumes 2005–2014. *Source:* Dealogic

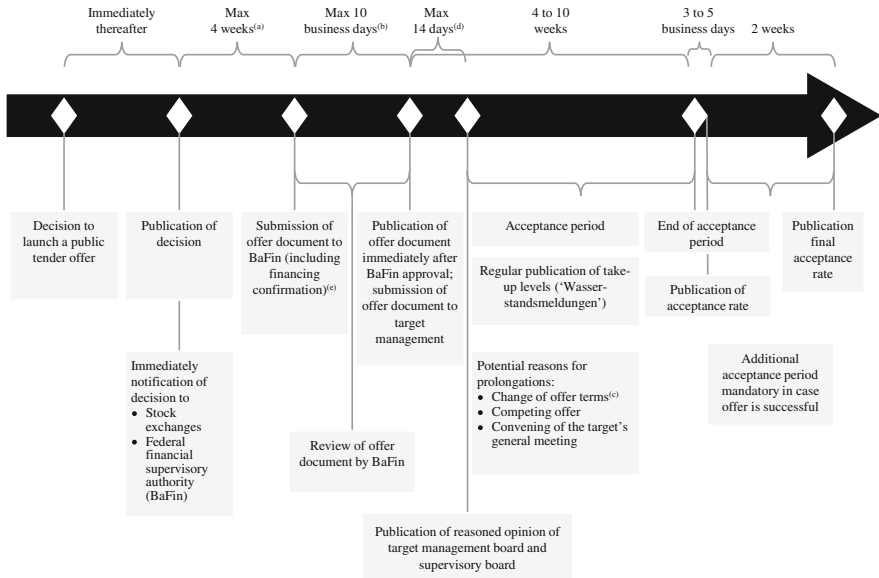


Fig. 8 Overview of an illustrative public takeover timeline (a) BaFin can extend period by up to another 4 weeks if necessary (under specific circumstances only). (b) Period is scheduled generally to 10 business days ('Werktag'); however, BaFin can extend the period by 5 business days ('Werktag') (c) In case offer terms are amended within the last 2 weeks of the acceptance period (d) Without undue delay (e) In case of a cash offer. *Source:* Deutsche Bank Corporate Finance

4.1 Preparation

Before a company decides to prepare a public takeover offer, it has to determine whether a transaction is in line with its corporate strategy and whether it will be creating additional value for its shareholders. Common arguments for a transaction include the realization of synergies generally arising from economies of scale through improved portfolio and property management, such as increased purchasing power and lower financing costs.

Prior to launching an offer, the acquirer has to perform several key preparatory tasks before reaching out to the target. This includes an outside-in due diligence, the elaboration of offer terms, a potential stake building, as well as the preparation of the offer documents.

Although established as a standard on the market the due diligence is not mandatory and thus subject to the discretion of the target's management board. Thus, the scope of the outside-in analysis is limited. Another factor to be considered is the granting of a due diligence period to potential interlopers at the same scope in accordance with legal requirements of German takeover law.

Once completed, the acquirer might decide to engage in stake building by e.g. securing tender agreements with main shareholders which can be additionally

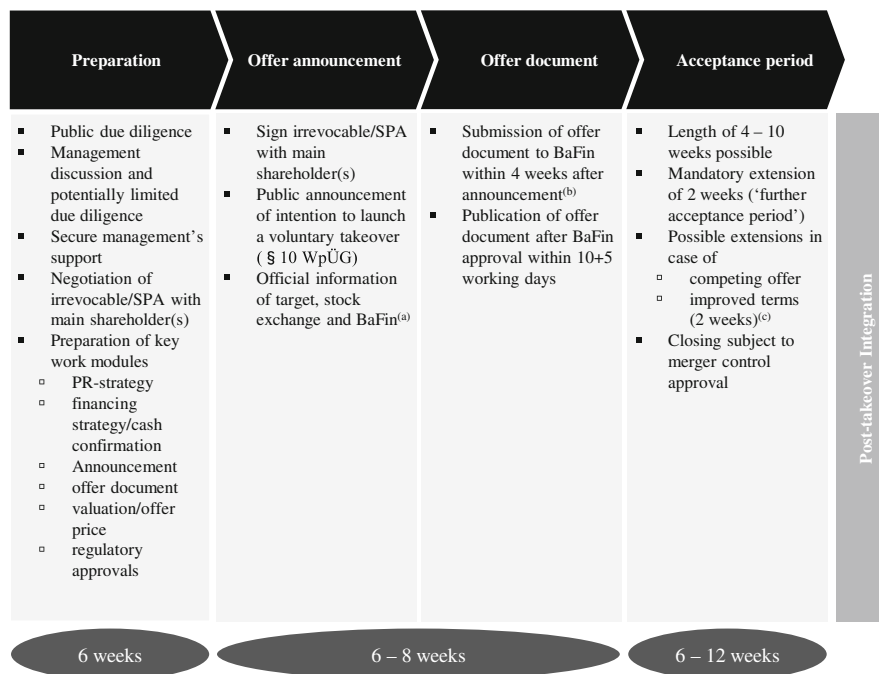


Fig. 9 Overview on an illustrative public takeover process (a) Federal Financial Supervisory Authority (b) BaFin may allow for certain exemptions (c) Extension by 2 weeks if terms are changed within the last 2 weeks of the offer period. *Source:* Deutsche Bank Corporate Finance

fixed via irrevocables (non-cancellable agreements). Alternatively, shares can be purchased in the open market during prior/during/post the offer period, although always in line with German disclosure requirements.

Finally, the offer document has to be prepared including transaction rationale, deal structure, and offer terms as well as a 100 % financing confirmation provided by a bank (cash deals only).

4.2 Offer Announcement

With the intention to launch an offer, the acquirer has to decide on what type of offer to launch, however, in line with the limitations imposed by German takeover regulations. Generally, there are three offer types:

1. Public offer ('Erwerbsangebot')—An offer to achieve a voting position of less than 30 % of the voting rights or the offeror holds already more than 30 % in the target

This offer can be structured with a maximum or minimum acceptance threshold and might be made conditional and can be conducted without a mandatory

additional offer period. In terms of consideration, the offer can be made in cash, shares, or a combination of both. However, in order to comply with German regulations, a financing confirmation has to be provided by the financing bank on the whole offer volume.

From a target perspective, there are no restrictions on frustrating actions and the publication of a reasoned opinion on the offer including a statement by the workers' council is optional ('Begründete Stellungnahme').

2. **(Voluntary) takeover offer ('Übernahmeangebot')—An offer aiming to gain control (i.e. 30 % or more of the voting rights)**

This offer must comprise all target shares and might be made conditional, however, a mandatory additional offer period of 2 weeks is required.

The consideration can be offered in cash and or shares or a combination of both (cash can be made mandatory, if more than 5 % of the target shares have been acquired with cash within 6 months prior to the end of the offer period). However, there are some restrictions on a minimum consideration: The offer must exceed the 3 months Volume Weighted Average Price (VWAP) prior to the announcement. Furthermore, it must exceed any price paid up to 6 months prior to the publication of the offer document ('Vorerwerb') and finally any price paid up to 12 months after the offer ('Nacherwerb'). In line with the public offer, a financing confirmation has to be provided.

From a target perspective, there are limitations on frustrating actions, although a general meeting/supervisory board can provide advanced authorization. In line with the public offer, a reasoned opinion is optional.

3. **Mandatory offer ('Pflichtangebot')—An offer for all outstanding shares following an acquisition of more than 30 % of voting rights**

This offer is very similar to the (voluntary) takeover offer, thus only differences will be described. The offer must be unconditional (apart from anti-trust and other regulatory approvals) and no mandatory additional offer period is necessary. Finally, although same regulations apply, the majority will be offered in cash as usually there has been a prior purchase of shares in cash to exceed the 30 % voting rights threshold.

When launching an offer process, it has to be published as intention to launch a voluntary takeover offer according to §10 WpÜG ('Zehnermeldung'). Additionally, the target, the respective stock exchange, and the BaFin have to be officially informed on the acquirer's intentions.

4.3 The Offer Document

Subsequently, the offer documents are submitted to the BaFin within 4 weeks of the announcement, however general market practice is 2 to 3 weeks. In case of an unsolicited approach, the document is often submitted within 1 week post the announcement. Generally, there will be a meeting with the BaFin in which the offer document will be discussed. Furthermore, prior to the official approval, the

authority will provide a heads up on whether the document will be approved or not. After review and approval through the regulator, the document will be published within 10+5 working days. This document includes all key terms of the takeover offer as well as a financing confirmation letter in case of a cash offer and has to be made available to the public.

4.4 Acceptance Period

Finally, the acceptance period commences ranging from 4 to 10 weeks. This can be extended by 2 weeks as a 'further acceptance period'. Furthermore, the acceptance period can be extended due to external factors such as a competing offer or improved offer terms (up to 2 weeks). Finally, post a successful tender of the target shares, the closing of the transaction is subject to approval by merger control i.e. antitrust etc.

4.5 Post-takeover Integration

Depending on the achieved level of control there are three key options of integrating the target namely, domination agreement (minimum of 75 % of voting rights required), merger (minimum of 75 % of voting rights required), and finally a squeeze-out (minimum of 90/95 % of voting shares required).

According to German takeover law, control is obtained when a party owns more than 50 % of the voting rights, leading to a majority at general meetings as well as indirect 'control' of the management. Thus, a stake of 30 % of the out-standing shares is considered as a controlling stake according to German takeover law.

Depending on the envisaged holding level, there are various possibilities to achieve post-merger integration as depicted in Table 2. A post offer holding of 75 % allows either for a domination agreement in which the target remains listed but is controlled by the acquirer or a merger, in which the target is integrated into the acquiring company resulting in a de-listing.

Another, more uncommon possibility is the integration of a listed company into a non-listed company. In order to execute this measure, a 95 % majority is necessary and a mandatory cash consideration is imposed.

Finally, a squeeze-out can be performed with a 90/95 % majority. This method allows the acquirer to purchase the remaining stake from minority shareholders with fast-track procedures and limited blocking rights of the remaining stakeholders. Since its introduction in 2011, the integration of a listed target into a non-listed company has not been executed due to the reduced complexity of a squeeze-out. Finally, in most cases of a successful takeover, the target might cease to exist, or it might become integrated within the acquiring company, therefore leading to a de-listing of its shares from the stock exchange.

Table 2 Overview of a post-takeover integration measures

Type of transaction	Stake required	Compensation	Comments
Domination agreement	75 %	<ul style="list-style-type: none"> • Cash/shares • Guaranteed dividend 	<ul style="list-style-type: none"> • Legal challenges by minority shareholder likely but manageable due to fast track procedure and special procedure regarding valuation issues ('Freigabeverfahren' and 'Spruchverfahren')
Merger	75 %	<ul style="list-style-type: none"> • Cash • Shares 	<ul style="list-style-type: none"> • In case of merger into listed company, extended risk of legal challenges with existing free float shareholders ('Anfechtungsklagen') • NewCo requires minimum free float of 5 % (according to stock exchange regulations)
Integration into non-listed company	95 %	<ul style="list-style-type: none"> • Cash 	<ul style="list-style-type: none"> • Transfer of all target shares to integrating German stock corporation • Shareholder compensation based on valuation by independent accountant • Complicated—not used since introduction of squeeze-out
Squeeze-out	90/95 %	<ul style="list-style-type: none"> • Cash 	<ul style="list-style-type: none"> • German Corporation Act: Limited blocking rights for minority shareholders given fast track procedures and special procedure regarding valuation issues ('Freigabeverfahren' and 'Spruchverfahren') • German Takeover Code: Following a takeover offer, alternative squeeze-out at PTO price in case >90 % take-up obtained through offer however, contestation of such price in court possible • German Transformation Act: Since 2011, the German Transformation Act (UmwG) provides for a 90 % squeeze-out threshold in connection with a merger of two stock corporations

Source: Deutsche Bank Corporate Finance

5 Takeover Related Issues

In the context of mergers and acquisition there are particular challenges arising from the combination on of two businesses.

First, the utilization of tax loss carry-forwards of the target. This often results in the ceasing of the targets tax loss carry-forwards, but is dependent on a number of factors and thus has to be addressed in each transaction individually.

Second, Real Estate Transfer Tax (RETT), which in Germany is charged at up to 6.5 % of the property portfolio value if more than 95 % of a real estate asset or company respectively are acquired. On a case by case basis this can be addressed within a transaction structure in order to achieve a tax-efficient result.

Third, the creation of Goodwill and its impact on NAV (net asset value) within a transaction should be considered. Generally, Goodwill is an accounting measure in accordance with IFRS to reflect transactions conducted above book value of the target assets. As real estate assets are generally valued at market value (or fair value) in accordance with IAS 40, the net asset value is directly affected by the amount of Goodwill created and might therefore change the value of the combined business post a transaction.

This chapter focused on a brief summary of the particularities of the private- and public real estate markets in Germany. It was outlined that compared to other European markets and given the size of the economy the public real estate market still plays a minor role in Germany. Despite significant growth in the sector in recent years there are still only few companies with a significant market capitalization. As a result of the transformation of the German public real estate markets, the sector has achieved a global investor base and is becoming more relevant in an international context. It remains to be seen to what extent current consolidation trends will impact the industry going forward and whether a significant number of new players will enter the market in order to increase the share of publicly listed real estate compared to the overall real estate market in Germany.

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German Open-End Real Estate Funds

Steffen Sebastian, Till Strohsal, and René-Ojas Woltering

Abstract

Open-end Real Estate Funds (OEREFs) are the predominant type of securitized real estate investments Germany. This chapter explains the institutional and legal environment of this investment vehicle, which is designed to provide the risk-return benefits of private market real estate. We review the historical performance and portfolio composition of German OEREFs as well as possible reasons for their track record. A special emphasis is placed on the turbulences in the aftermath of the recent financial crisis and the legal changes that were undertaken to stabilize German OEREFs.

Keywords

Open-end real estate funds • Liquidity transformation • Financial crisis

1 Introduction

This chapter discusses (OEREFs) as the predominant type of securitized real estate investments in Germany. We distinguish between OEREF structures for institutional investors (*Spezialfonds* or “*special funds*”) and for private investors (*Publikumsfonds* or “*public funds*”). Legal requirements of OEREF for institutional investors are considerably lower than for private investors and information is

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usually confidential. Therefore, we will focus on OEREF for private investors.¹ With a total market capitalization of about 82 billion euros, OEREFs made up approximately 10% of the total German mutual industry in August 2015.² The structure of OEREFs in Germany has a unique institutional design that clearly distinguishes them from other securitized real estate investments, such as Real Estate Investment Trusts (REITs). In contrast to listed property companies that issue a fixed amount of shares, the number of OEREF shares is variable. Hence, short-term liabilities have to be matched with long-term real estate investments. This feature is referred to as *liquidity transformation* and constitutes the key characteristic and core competency of OEREFs.

Historically, the open-end construction has proven to be overall successful in Germany. In contrast to stock returns, returns on OEREFs exhibit a high degree of stability and a moderate mean (Maurer et al. 2004b). By construction, OEREFs originally represented an investment opportunity for private investors. The group of OEREF shareholders is, however, remarkably heterogeneous. In addition to private investors, institutional investors as, for instance, pension funds, banks and non-financial firms are nowadays engaged in “public” OEREFs.

Because of liquidity transformation, OEREFs are subject to liquidity risk. During the global financial crisis many OEREFs suffered from liquidity shortages that led to the suspension of the redemption of shares and even to the liquidation of several funds. With the intention to enhance investor protection and to improve the liquidity transformation of the funds, the legal environment underwent a significant reformation focusing on three key aspects: redemption of shares, property valuation and fund liquidation. Especially institutional investors increasingly tended to use OEREFs as a substitute for money market funds to store liquidity. The main objective of the 2011 law reform of the German Investment Companies Act (InvG) was to avoid such misuse by increasing the overall investment horizon of the typical shareholder. In general, the regulation of open-end funds is much less intense than the rigorous regulation of banks.

In contrast with listed property companies, prices of OEREF shares depend on property appraisals and are not directly determined by demand and supply of a secondary market. Instead, the price—quoted daily—equals the total value of the fund’s assets, less debt, divided by the total number of shares. The value of a fund’s assets reflects valuations of the properties by professional appraisers. Hence, prices are not directly exposed to financial volatility. As the valuation of a certain property takes place only once a year, the quoted price incorporates just part of the market price of the underlying properties.

Since the first OEREF was launched in 1959 the number of OEREFs in Germany has grown strongly. Several new funds emerged in the 1960s, which led to the inclusion of OEREFs in investment regulation. Important changes in legislation

¹ Unless noted otherwise, the term OEREF refers to public funds.

² See the German Association of Investment and Asset Management (BVI) statistics 31/08/2015. On the same date, the total market capitalization of all special funds was 51.1 billion euros.

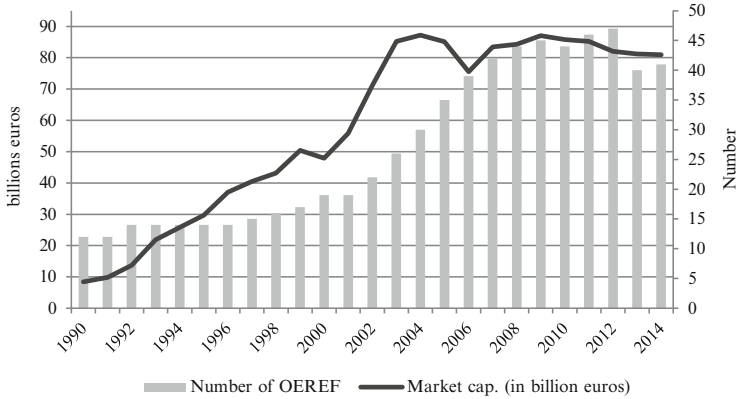


Fig. 1 Market capitalization and number of OEREFs in Germany. *Source:* BVI (public funds only)

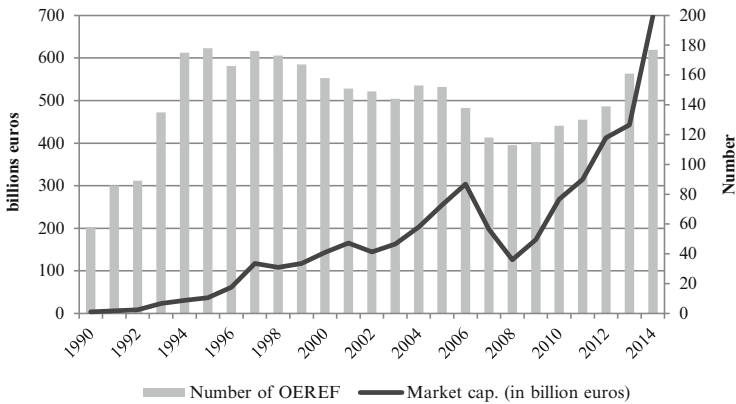


Fig. 2 Market capitalization and number of REITs in the USA. *Source:* REIT.com

included successive approvals of investments in the European Economic Area (EEA) and of investments outside the EEA up to 20 %. During the last decades the market capitalization of German OEREFs increased by a factor of about 10 from 8.4 billion euros in 1990 to 81.0 billion euros in 2014 (see Fig. 1). For the sake of comparison, the US Equity REIT created in 1960 has seen its market capitalization soar from roughly 3.8 billion euros in 1990 to 846 billion euros in 2014. In the same period the number of US Equity REITs increased from 58 to 177, whereas OEREFs increased from 12 to 41 (see Figs. 1 and 2).

Similar to Germany, open-end funds enjoy increasing popularity in many other countries (see Downs et al. 2016). However, some countries have abandoned the open-end fund structure after experiencing problems with the investment vehicle. A prominent example is given by the RODAMCO case in the Netherlands. During the

late 1980s, RODAMCO was the world's largest open-end fund. Due to liquidity problems, the fund had to be transformed into a stock-listed closed fund (for more details see Little 1992; Sebastian and Tyrell 2006). Comparable phenomena have been observed for US mutual funds with illiquid assets (Chen et al. 2010).

The next section takes a closer look at the institutional design and the legal environment of OEREFs. In order to better characterize their role within the German financial market, Sect. 3 provides an overview of the historical performance, the portfolio composition, and the amount of assets under management of OEREFs. A review of possible explanations for the track record of German OEREFs and a brief description of the turbulences in the aftermath of the financial crisis are found in Sect. 4. Section 5 contains concluding remarks.

2 Institutional Design and Legal Environment

German OEREFs have to be managed by investment companies (Kapitalverwaltungsgesellschaften). The investment companies themselves are usually owned by banks or insurance companies. This generally implies that investors in open-end funds are different from those of the managing investment company. The investment companies mostly take the legal form of stock or limited liability companies. An OEREF is treated as a special asset and is strictly separated from the other assets of the managing investment company.

The replacement of the Investment Companies Act (Investmentgesetz, InvG) by the Capital Investment Act (Kapitalanlagegesetzbuch, KAGB) in July 2013, constitutes the decisive element of the legal environment of OEREFs. Furthermore, the InvMaRisk (Minimum Standards for Risk Management), a circular published on June 30, 2010 by the Federal Financial Supervisory Authority (BaFin), clarifies 'general' requirements for risk management (e.g., regular stress tests). The implementation of a risk management policy is part of the 'special' requirements (see BaFin Quarterly Q3/10).

According to the KAGB the following aspects are of particular importance:

- An OEREF has to invest a minimum of 51 % of its capital into real estate (§ 253 para. 1 KAGB).
- Risk must be diversified. German OEREFs must not hold a single property that accounts for more than 15 % of a fund's capital. Additionally, the sum of all properties which individually represent more than 10 % of the fund's capital must not exceed 50 % of a fund's capital (§ 243 para. 1 KAGB).
- To ensure fund liquidity, at least 5 % of the fund's assets (but no more than 49 %) must be invested in cash or cash equivalents (§ 253 para. 1 KAGB). The amount of debt relative to the total value of the fund's real estate must not exceed 30 % (§ 254 para. 1 KAGB).

2.1 Liquidity Shortages and Recent Law Reforms

Liquidity transformation, or the financing of long-term real estate investments through daily available shares, inherently bears the risk of liquidity shortages. In spite of this inherent risk, no liquidity shortages occurred during the first 45 years after the introduction of OEREFs in Germany.

The first notable turbulences in the German market started with the announcement from Deutsche Bank on December 11, 2005, of a reappraisal of their largest OEREF, Grundbesitz Invest (market capitalization about 6 billion euros). This notification triggered the first liquidity crisis in the German open-end funds market. Investors were expecting the redemption price to fall sharply and so the fund-run finally led Deutsche Bank (not willing to undertake supporting purchases itself) to suspend redemption. Shortly afterwards, the panic spread to the whole market and finally, on the 17 and 19th of January 2006, two other funds, KanAm Grundinvest and KanAm US-Grundinvest were temporarily closed as well. Yet, on March 3rd (DB Grundbesitz Invest), March 31st (KanAm Grundinvest), April 13th (KanAm US-Grundinvest), 2006 the three funds reopened and continued redemption. Recovery of the funds took place quite fast so that the net capital flow became positive again by the end of 2006. Yet, in the course of the global financial crisis several funds again had to suspend the redemption of shares (see Sect. 4.2).

The German legislature has attempted to solve the problem of liquidity shortages by enacting two significant law changes: First, coming into effect on January 1, 2013, the InvG was changed through the AnsFug (Anlegerschutz- und Funktionsverbesserungsgesetz). The officially stated main objective of the AnsFug was to attenuate the problem of liquidity transformation. Second, about 6 months later, the majority of the changes through the AnsFug subsequently made it into the new KAGB which came into force on July 21, 2013. The following five major changes are finally reflected in the new KAGB.

1. The centerpiece of the reform regulates minimum holding periods and announcement periods for the redemption of shares. Investors must hold new shares for at least 24 months (§ 255 para. 3 KAGB). In addition, the redemption of shares has to be announced at least 12 months in advance (§ 255 para. 4 KAGB).³
2. Suspension of redemption is also regulated. Funds are now *obliged* to suspend redemption in case of an imminent liquidity shortage (§ 255 para. 1 KAGB). If funds do not comply with this obligation, the Federal Financial Supervisory Authority (BaFin) is empowered to issue an order to do so (§ 98 para. 3 KAGB).

³The former AnsFug regulation allowed private investors to redeem up to 30.000 euros per calendar half-year without announcements. Investors who bought their shares prior to July 20th 2013 still benefit from this rule.

3. There is a compulsory periodic payout to compensate for the minimum holding period and redemption fees. 50 % of the revenues have to be paid out as long as they are not needed for maintenance of the properties (§ 252 para. 2 KAGB).
4. Additional requirements have been placed on property valuation. According to § 249 para. 1S. 1, properties must be valued every 3 months by *two* independent appraisers.⁴ If the redemption of shares occurs more frequently than on a quarterly basis, appraisals have to be carried out within the 3 months prior to the redemption date (§ 251 para. 1).⁵
5. Property sale is facilitated. In case of suspension of redemption for more than 12 months, properties can be sold 10 % under the valuation result in order to generate liquidity. After 2 years of suspension, the authorized deviation is increased to 20 %. After 36 months every shareholder can ask for redemption.⁶ If there is still not enough liquidity, the management companies lose the right to manage the fund. The fund will then be liquidated. (§ 257 KAGB).

3 Historical Performance and Portfolio Composition

Figure 3 shows the yearly inflation rate and the average return of German OEREFs from 1990 to 2014. From 2008 on, the average return graph (blue line) is also split into two components: returns on active real estate funds (green line) and returns on

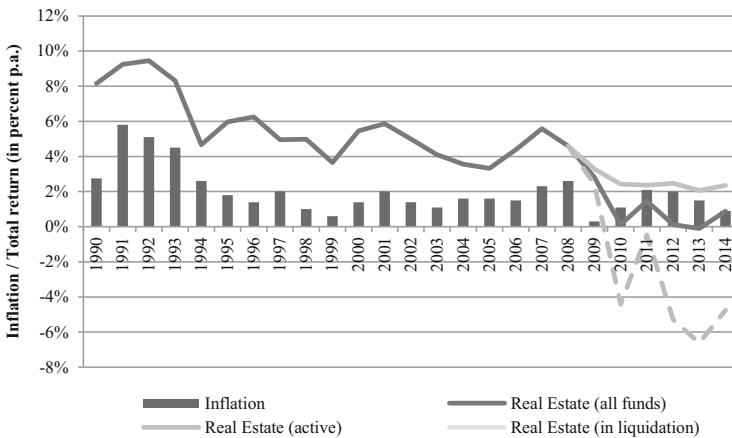


Fig. 3 Inflation and average returns of German OEREFs. *Source:* Until 2007: BVI, Datastream; from 2008: IPD (Ofix—all funds, Ofix—active; Ofix—liquidation)

⁴ The AnsFug regulation specified a committee of three appraisers.

⁵ The quarterly appraisal frequency was not part of the AnsFug changes.

⁶ The former AnsFug regulation specified that investors would be able to demand liquidation after 30 months of suspension.

funds in liquidation (red line). Overall, returns exhibit a fairly high degree of stability, a moderate mean and substantial autocorrelation (Maurer et al. 2004a). Remarkably, prior to 2008, the average return was higher than the inflation rate in each single year, highlighting the inflation hedging characteristics of this asset class. This changed drastically during the financial crisis starting in 2008 when many funds were forced to stop the redemption of shares and sell properties under time pressure to generate liquidity. The red line shows that funds in liquidation significantly underperformed the overall market and even suffered from negative returns. In contrast, active real estate funds continued to beat the inflation rate in each year.

There are two potential explanations for the negative returns of real estate funds in liquidation. First, a recent study of Weistroffer and Sebastian (2015) suggests that in the first fund crisis of 2005/2006 the appraisal values of OEREFs were too high relative to achievable market prices. When the funds must sell off their property portfolios, these overvaluations are finally revealed, resulting in negative appreciation returns due to low sales prices relative to previous appraisal values. This can also be attributed to the funds’ appraisal rules which implicitly assume a “going concern” valuation, whereas funds in liquidation had to realize market prices in a downward real estate market during the aftermath of the financial crisis. Second, open-end real estate funds in liquidation are “forced sellers”, potential buyers know that the funds must sell, which effectively limits the funds’ bargaining power.

The evolution of the composition of fund portfolios is depicted in Fig. 4. The fraction of properties within the average OEREF portfolio remained relatively constant, with an average of 74 %, and an overall range of 10 % points, from 68 to 78 %. The figure shows a fair degree of stability of the ratio of illiquid properties and more liquid assets, such as cash and bonds. Such a portfolio composition reflects the redemption guarantee and the associated need for a liquidity buffer.

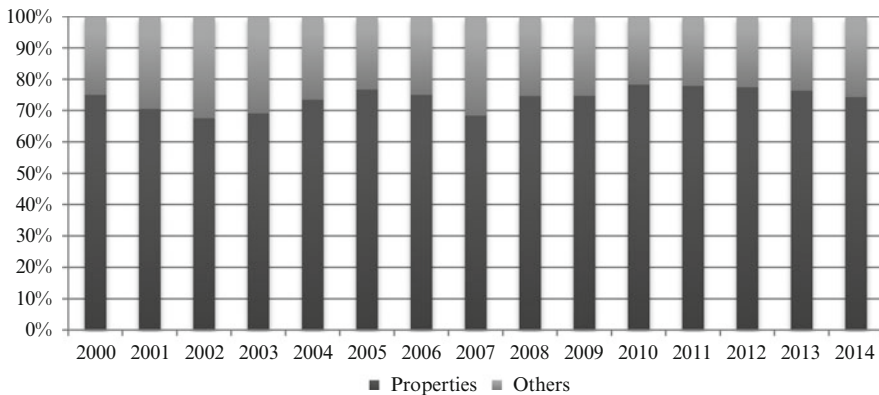


Fig. 4 Portfolio composition. *Source:* German Central Bank, Capital Market Statistic

Table 1 Regional distribution of OEREF investments

Regional focus	31-Jan-1990 (%)	31-Jan-2002 (%)	31-Jan-2014 (%)
Germany	100.00	44.49	25.54
France	0.00	10.15	13.84
UK	0.00	10.24	6.96
Netherlands	0.00	8.77	8.38
Italy	0.00	0.88	7.53
USA	0.00	4.20	4.32
Belgium	0.00	3.39	2.82
Spain	0.00	0.83	7.38
Sweden	0.00	0.00	1.43
Austria	0.00	1.09	1.98
Luxembourg	0.00	0.13	2.47
Others	0.00	15.83	17.35
HHI Region	100	25.47	14.13

Source: Company reports. HHI is the Hirschman-Herfindahl index

Table 2 Sectorial distribution of OEREF investments

Property type focus	31-Jan-1990 (%)	31-Jan-2002 (%)	31-Jan-2014 (%)
Office	59.62	73.86	67.26
Retail	28.12	8.83	17.04
Hotel	7.53	2.14	3.39
Car and parking	0.00	0.29	3.66
Storage and logistic	1.82	5.88	5.67
Residential	2.57	0.16	1.24
Leisure	0.00	0.04	0.71
Others	0.35	8.80	1.03
HHI property type	44.12	56.50	48.74

Source: Company reports

Tables 1 and 2 show the regional and sectorial distribution of investments of OEREFs. In 1990 OEREFs were exclusively investing in Germany with a property type focus on office (59.6%) and retail (28.1%). Over the following two decades more and more properties were located in other countries, mostly in France, the Netherlands, and the UK. The decreasing Hirschman-Herfindahl index (HHI)⁷ illustrates the increasing international diversification. During in the same period the funds show a tendency to increase their investments in offices (67.3% in 2014) and decrease their investments in retail property (17.0% in 2014).

⁷ The HHI index is a measure of concentration. The index is bound between values of 0 and 1. The lower the index, the more diverse is the distribution.

4 Understanding the Success of OEREFs in Germany

By the end of 2014, the total fund size of all German OEREFs represented 10.3 % of the total size of all German mutual funds.⁸ This indicates that the OEREF construction is well established in the German mutual fund market. Apart from the 2005/2006 liquidity shortage and the current turbulences, German OEREFs have experienced a remarkable track record during the last 50 years. There are two common theoretical arguments of particular importance in explaining this phenomenon, the *liquidity insurance* argument and the *disciplining device* argument (see Bannier et al. 2008). These arguments are discussed below and briefly evaluated with respect to the German institutional design.

The first argument, liquidity insurance, stems from notion that some investors are uncertain about when they will need liquidity. Of course, risk averse investors demand insurance and prefer smooth returns. The possibility of a daily redemption for investors (due to the reformation of the InvG in 2012, this possibility became very limited) served as liquidity guarantee and the risk-aversion assumption implies this insurance to be welfare-enhancing.⁹ Moreover, the redemption price, based on expert property valuations, simply results from the fund's total value of assets divided by the number of shares. Since every property was appraised only once a year (or in case of a sell or a buy) this procedure induced a strong smoothing effect and hence low return volatility. However, the liquidity insurance argument is attenuated by a counteracting effect. In order to meet redemption the OEREF is required to invest a considerable part of its capital (see Fig. 4) into liquid assets. This usually lowers the average return of the portfolio below the return that could have been realized through pure long-term property investments. The shorter the average investment horizon of shareholders the more costly the effect becomes.¹⁰

The second argument focuses on the functioning of liquidity transformation as a disciplining device and follows the reasoning of Calomiris and Kahn (1991) regarding banks that issue demandable-debt (bank notes and giro accounts). The mismatch of the maturity of property investments and that of liabilities creates the possibility of permanent liquidity shortages. Put differently, the redemption guarantee of OEREFs permits investors to 'vote with their feet', redeeming shares means withdrawal of confidence in the fund's management. The obvious incentive to withdraw when monitoring misbehavior of the management is further strengthened as the individual investor may expect the same behavior from other investors. In the extreme case, a fund-run would be the consequence. Therefore, investors observing a declining redemption price may potentially suspect moral hazard that

⁸ See the German Association of Investment and Asset Management (BVI) statistics 31/08/2015.

⁹ For a detailed discussion on the theoretical aspects of liquidity insurances it is referred to Bryant (1980), Diamond and Dybvig (1983) and Qi (1994).

¹⁰ For example, if the fraction of institutional investors using OEREFs as a giro account (that even pays interest) is sufficiently large, the positive effect of the liquidity insurance may even be outweighed.

possibly even leads to the liquidation of the fund and hence to the sudden liquidation of real estate. The latter in turn is, at least in general, not possible without considerable price reduction. Simply to prevent bankruptcy of the OEREF, the management can be expected to refrain from moral hazard.¹¹

An explanation for why liquidity transformation has worked comparatively well as disciplining device in Germany can be found in the aforementioned institutional design. The typical German construction is a universal bank as the owner of an investment company that in turn manages the OEREF viewing it as a special asset. Because the universal bank usually has a huge network of additional business relationships (especially within the real estate market), portfolio restructuring entails small transaction costs. Due to this unique institutional design German OEREF shareholders have an exceptionally strong incentive to monitor the fund's management and hence the redemption guarantee effectively imposes discipline on the behavior of the management.

There is another aspect of the German institutional design that has proven to be one of the main reasons for the success of OEREFs. Because the bank is the typical owner of the investment company it is able to provide OEREFs with additional liquidity in case the funds' liquidity buffers are depleted. Such supporting purchases have, in fact, played an important role in the German OEREF market; for instance, in 2004 during a liquidity shortage of funds managed by DekaBank, HypoVereinsbank, and Commerzbank (cf. Fecht and Wedow 2014).

4.1 The Nature of Liquidity Crises

Understanding the nature of liquidity crises facilitates the understanding of the open-end concept and the related issue of liquidity shortages. It also sheds further light on the recent law reformations. The classification of crises to be considered here distinguishes between *fundamental* and *non-fundamental* crises.

A fundamental crisis is triggered when the price of an OEREF share differs too much from the actual market prices of real estate. There are two reasons why this might occur. Firstly, prices of German OEREFs are quoted once a day whereas property valuation takes place much less frequently. Hence, the price of an OEREF share reflects valuations that are up to 12 month old, which induces a strong smoothing effect (Geltner 1993). Secondly, in practice, appraisals tend to lag behind market prices because appraisals are based on lagged transaction evidence, thus valuation uncertainty of future market developments can be reduced (see Quan and Quigley 1991).¹² As a result, OEREF shares are typically undervalued when the real estate market is booming and overvalued when it is on the downturn. The former scenario creates an incentive to buy and the latter to sell. If this effect is strong enough, it may lead to liquidity shortages. Private investors are usually charged a fee of 5%, which attenuates the incentive to sell in case of a downturn

¹¹ Given the one-time benefits resulting from the misbehavior are sufficiently small.

¹² Geltner et al. (2003) surveys several studies on that issue.

in the real estate market. Importantly, institutional investors, who are increasingly investing in OEREFs, are usually not charged these fees.

A non-fundamental crisis is attributed to a self-fulfilling prophecy in the sense that it can be the optimal decision for investors to sell if they expect others to withdraw. If a significant number of investors believe there will be large-scale withdrawals in future, a fund-run may result even though there is no fundamental pricing problem.

4.2 Turbulences in the German Market

Bannier et al. (2008), for instance, categorize the 2005/2006 crisis as a prime example of a non-fundamental liquidity crisis. As explained, the crisis was triggered by the revaluation announcement from Deutsche Bank of its fund Grundbesitz Invest. Remarkably, on March 3, 2006, when Grundbesitz Invest reopened, the redemption price had fallen by less than 2.5 %.

During the course of the worldwide financial crisis, liquidity problems recurred. In 2008 several German OEREFs suspended redemption for considerable periods of time, including large funds such as SEB Immoinvest or CS Euroreal (see Table 3). In 2009, 10 reopenings took place. However, via a press release on September 30, 2010, the first liquidation was announced by the KanAm fund US-Grundbesitz (600 million euros). The Degi Europa and the Morgan Stanley P2 Value followed briefly afterwards, announcing their liquidations in October 2010. The peak of the crisis occurred in 2011 and 2012 when 4 and 7 funds respectively, had to announce their liquidation. The situation cooled down somewhat in 2013 and 2014 with only 4 additional liquidations. Overall, 17 funds went into liquidation between 2010 and 2014. As of October 2015, one fund is closed, and 17 funds are in liquidation (see Table 3).

Thus far, the German OEREF industry seems to be stable. Since July 2013, only one fund (UBS Euroinvest) had to suspend the redemption of shares. Further positive signals are provided by positive net fund flows and new fund openings. Since 2012, net flows into all German OEREFs were consistently higher than 2 billion euros per year. Furthermore three new funds were opened since the peak of the crisis: the KanAm Leading Cities Invest (July 2013), the Deutsche Bank fund grundbesitz Fokus Deutschland (October 2014), and the Fokus Wohnen Deutschland (August 2015) by Industria.

A closer look at the funds that went into liquidation allows for a better understanding of the driving forces behind the stability of the surviving OEREFs. DEGI Europe is an excellent case to examine. When Commerzbank took over Dresdner Bank in January 2009, Dresdner Bank's DEGI Europe fund had already been sold to Aberdeen International. Commerzbank successfully channeled former DEGI investors from Dresdner Bank into their own open-end funds. This sudden loss of many investors has put DEGI, and thus Aberdeen International, under pressure. Likewise, the majority of the funds that went into liquidation suffered from a relatively weak distribution system. In contrast, funds managed by affiliated companies of powerful banks that provided distribution expertise and may also undertake supporting purchases [as is the case, e.g., for Grundbesitz (Deutsche

Table 3 Suspension and liquidation history of German OEREFs

Fund name	Investment trust	Suspension	Reopening	Liquidation since
grundbesitz europa	RREEF Investment	3-Dec-2005	3-Mar-2006	–
KanAm US-grundinvest Fonds	KanAm Grund	17-Jan-2006	13-Apr-2006	–
KanAm grundinvest Fonds	KanAm Grund	19-Jan-2006	31-Mar-2006	–
KanAm US-grundinvest Fonds	KanAm Grund	24-Oct-2008	–	30-Sep-2010
AXA Immoselect	AXA Investment Managers	27-Oct-2008	28-Aug-2009	–
KanAm grundinvest Fonds	KanAm Grund	27-Oct-2008	8-Jul-2009	–
Catella Focus Nordic Cities	Catella	28-Oct-2008	28-Jan-2009	–
TMW Immobilien Weltfonds	Pramerica	28-Oct-2008	11-Dec-2009	–
CS EUROREAL A CHF	CSAM IMMO	29-Oct-2008	30-Jun-2009	–
CS EUROREAL A EUR	CSAM IMMO	29-Oct-2008	30-Jun-2009	–
SEB ImmoInvest	SEB Asset Management AG	29-Oct-2008	2-Jun-2009	–
DEGI EUROPA	Aberdeen	30-Oct-2008	–	22-Oct-2010
DEGI INTERNATIONAL	Aberdeen	30-Oct-2008	30-Jan-2009	–
Morgan Stanley P2 Value	Morgan Stanley	30-Oct-2008	–	26-Oct-2010
UBS (D) 3 Sector Real Estate Europe	UBS RE KAG	30-Oct-2008	27-Oct-2009	–
UBS (D) Euroinvest Immobilien	UBS RE KAG	30-Oct-2008	6-Aug-2009	–
DEGI GLOBAL BUSINESS	Aberdeen	11-Nov-2009	–	18-Aug-2011
DEGI INTERNATIONAL	Aberdeen	16-Nov-2009	–	25-Oct-2011
AXA Immoselect	AXA Investment Managers	17-Nov-2009	–	20-Oct-2011
TMW Immobilien Weltfonds	Pramerica	8-Feb-2010	–	31-May-2011
KanAm grundinvest Fonds	KanAm Grund	5-May-2010	–	01-Mar-2012
SEB ImmoInvest	SEB Asset Management AG	6-May-2010	–	07-May-2012

(continued)

Table 3 (continued)

Fund name	Investment trust	Suspension	Reopening	Liquidation since
CS EUROREAL A CHF	CSAM IMMO	18-May-2010	–	21-May-2012
CS EUROREAL A EUR	CSAM IMMO	18-May-2010	–	21-May-2012
AXA Immosolutions	AXA Investment Managers	26-May-2010	–	15-May-2012
UBS (D) 3 Sector Real Estate Europe	UBS RE KAG	6-Oct-2010	–	5-Sep-2012
DEGI GERMAN BUSINESS	DEGI	29-Nov-2010	–	29-Nov-2012
UniImmo: Global	Union Investment Real Estate	17-Mar-2011	17-Jun-2011	–
SEB Global Property	SEB Asset Management AG	16-Dec-2011	–	05-Dec-2013
KanAm SPEZIAL grundinvest Fonds	KanAm Grund	2-Feb-2012	–	16-Dec-2013
CS Property Dynamic	CSAM IMMO	30-Mar-2012	–	31-Mar-2014
SEB Immoportfolio Target Return	SEB Asset Management AG	13-Jun-2012	–	5-Jun-2014
UBS Euroinvest	UBS RE KAG	4-Jul-2014	04.07.2016 ^a	–

Source: Bundesanzeiger, company announcements

^aPlanned reopening date, if unsuccessful, the fund will liquidate

Bank), Hausinvest (Commerzbank) or Deka (Sparkassen)] performed quite well. In that sense, the recent liquidity crisis may be a shakeout separating the weaker funds from those that exhibit the institutional conditions to overcome turbulent times.

5 Concluding Remarks

In terms of size, OEREFs are the most important German securitized real estate investment vehicle. Until the recent liquidity crisis, the *daily* redemption guarantee on the one hand, and the *long-term* real estate investments on the other hand, constituted the core competency of German OEREFs: liquidity transformation. For decades, liquidity buffers appeared to be sufficient to sustain this function. This changed with the liquidity crisis of 2005/2006 and the turbulences in the aftermath of the financial crisis.

The legislature responded with a reformation of the regulatory regime in order to optimize the functioning of OEREFs and to improve investors' protection.¹³ The

¹³ In contrast, the regulation of special funds, which were much less affected by the financial crisis, remained largely unchanged.

most important changes concern the restriction of the daily redemption guarantee, the reformation of the property valuation regime and the facilitation of suspending redemptions as well as fund liquidations.

The new framework for property valuations decreases the probability of a fundamental liquidity crisis, since it reduces the gap between prices of OEREF shares and real estate market prices.

The centerpiece of the law reformation is the introduction of the minimum holding period of 24 months and the announcement period of 12 months. This change effectively led to the disposal of the daily redemption guarantee for new investors, although old investors who bought their shares prior to 2013 may still redeem up to 30,000 euros per calendar half-year without any restrictions.

Going forward, the share of new investors will finally surpass old investors. While the degree of liquidity transformation provided by OEREFs is reduced, investors now benefit from more security through a reduction in liquidity risk. In addition to the law changes, investors who buy new fund shares now must be explicitly warned that the redemption may be suspended (judgement by the Higher Regional Court of Frankfurt from February 13, 2013). This warning will reduce the misuse of OEREFs as a substitute for a temporary money investment.

Overall, the law reformations have led to a stabilization of the German OEREF industry by bringing the characteristics of the investment vehicle more in line with the illiquid nature of the underlying property investments.

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German Closed-End Funds

Helmut Knepel and Thorsten Voss

Abstract

Closed-end funds investing in real estate play an important role in the asset allocation of wealthy private investors in Germany. The investors take shares in a private company, investing a relatively small amount of money in large individual properties. The following article describes the basic elements of closed-end funds, the market in Germany, the different players, with special emphasis on the impact of the new regulations by the German Capital Investment Act (*Kapitalanlagegesetzbuch*, KAGB) transposing the European Alternative Investment Funds Managers Directive (AIFMD) into German national law.

Keywords

Investment KG • Closed-end public AIF • AIFMD • KAGB • MiFID II

1 Introduction

Closed-end funds have a long tradition in the German real estate market. They allow private investors to participate in large investment projects while investing a relatively small amount of capital. Originally designed to reduce taxable income, they acted as “tax avoidance schemes” for many years and, hence, were considered to be part of the so-called “grey capital market” in Germany. Since July 2013 all types of closed-end funds (as well as open-end funds) in Germany are now regulated by the KAGB (German Capital Investment Act), the German

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implementation of the European AIFMD (Alternative Investment Fund Managers Directive) and UCITSD (Undertakings for Collective Investments in Transferable Securities Directive). With this important step, the image of closed-end funds has changed significantly in the last few years: closed-end funds have become an important part of asset planning for yield-oriented investors.

In the wake of the recent financial crisis, it is expected that closed-end funds could benefit strongly from the trend towards security-oriented, sustainable investments. In contrast to short-term investments listed on the stock exchange, closed-end funds are long-term investments which are not only aligned with stable and sustainable yields, but are also less volatile.

Closed-end funds also play an important quantitative role in the asset allocation for investors in Germany. Since 1996, almost 11 billion euros in equity capital were invested every year in closed-end funds. Only in recent years, since the crisis of the financial markets, placement volumes have dropped significantly. In 2013, only 2.8 billion euros and in 2014 even less could be raised (FERI Gesamtmarktstudie Beteiligungsmodelle 2014). The factors contributing to this development include the development of the markets but primarily the insecurity on the suppliers' side since the introduction of the KAGB.

The majority of equity capital of the closed-end funds was invested in real estate vehicles, as in the past. The remainder of equity capital was invested in maritime, private equity, aircraft, new energy, and various smaller asset classes like forests, infrastructure, games, wine or patents.

Few other investment classes are so diverse and complex or offer so many opportunities and risks. Risks result mainly because closed-end funds are still entrepreneurial activities.

2 Definition and Elements of Closed-End Funds

2.1 Definition and Characteristics

Before 2013, there was no clear legal definition for the product category of closed-end funds. The main aspects were defined in the German Sales Prospectus Act (*Verkaufsprospektgesetz*) and in the respective Sales Prospectus Ordinance (*Vermögensanlagen-Verkaufsprospektverordnung*), which both entered into force in July 2005. Since 2013, closed-end funds more precisely defined and subject to a very detailed regulation in the KAGB.

The main characteristics of closed-end funds are:

- The fund finances an existing investment object, normally with a fixed investment target and a medium or, more likely, long-term investment aim;
- The ratio of equity capital to (non equity) loan capital is fixed. Investors are only admitted until the necessary amount of equity capital has been obtained. At that point, the fund is “closed”;

- Using equity capital, the investors take a share in a private company—which is the owner of the investment object;
- Due to the fixed equity capital volume, the number of investors is limited, meaning that a minimum investment volume applies;
- Existence of a specific strategy for investing the financial resources;
- Existence of a comprehensive, pre-drafted contract (partnership agreement, deed of trust, etc.), on which the individual investor has no influence;
- The entire contract, a comprehensive description of the investment project (including an analysis of all known opportunities and risks), as well as all legal and tax issues are described in a prospectus which, along with the terms and conditions of investment and the investor information, must be examined and approved by the German Federal Financial Supervisory Authority (*Bundesanstalt für Finanzdienstleistungsaufsicht*, BaFin);
- In addition to the obligations set forth in the prospectus which has to be approved by BaFin, the managers of alternative investment funds are subject to supervision by BaFin;
- Therefore, the product category “closed-end funds” is now fully regulated as far as German financial supervisory law is concerned (regulation of managers, products and distribution).

For a fund to be categorized as closed-end, not all characteristics need to be fulfilled at the same time; it is sufficient that only some selected characteristics apply (for example, via a “blind pool” if the investment object has not yet been specified).

2.2 Players and Structure in Brief

The main elements of a closed-end fund and its legal structure are illustrated, in simplified form, in Fig. 1.

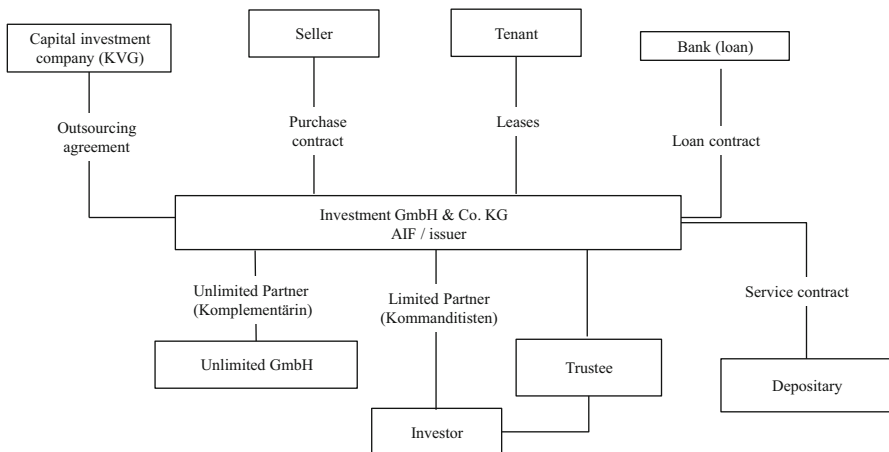


Fig. 1 Main elements and legal structure of closed-end funds. *Source:* Own representation

In a closed-end fund, investors unite to finance a defined investment project. For this purpose, they establish a private company: the investment company (generally as limited partners in an Investment GmbH & Co. KG, i.e. a limited partnership with a private limited company as the general partner). The partners' liability is generally limited to the value of their shares in capital (for details cf. below 3.3. Legal framework). Unlike shares in investment funds, shares in closed-end funds are not securities: they are partnership shares and represent a stake in a company.

Investors can usually participate indirectly in an Investment GmbH & Co. KG as a trustor by way of a trust instrument, the so-called "closed-end public AIF", where the limited partner in trust holds the limited partner's interests in the respective company.

Generally, AIFs invest in real estate through investment companies, i.e., indirectly via property companies or additional intermediate companies, as the circumstances require. In this case, the investment company is the owner of the respective assets; in the case of a real estate fund, this means that it is the owner of the real estate. The object of the company is the acquisition, management and sale of real estate.

Under the KAGB regime, the AIF assigns a capital investment company (*Kapitalverwaltungsgesellschaft*, KVG) with the management of the fund (so-called "external KVG"; if this is not the case, this constitutes one of the rare cases where the AIF acts simultaneously as "internal KVG"). The external KVG is under the supervision of BaFin and takes all essential decisions on the acquisition and sale, management, rental and development of the assets and assumes the collective asset management function, especially portfolio and risk management for the AIF. The KVG (in contrast to the unlimited partner, for example) does not become a shareholder of the AIF. Nevertheless, it is usually responsible for the management and representation of the AIF. The KVG typically also decides on taking out and paying back third-party loans, on the conclusion of contracts with third parties, the number of issued limited partners' interests and the disbursement amount.

In practice, this is implemented by way of an outsourcing agreement with the KVG the conclusion of which has to be reported to BaFin. The outsourcing agreement transfers the provision of real estate-related services to an asset manager. The services include, for example, the identification and verification (due diligence) of real property for purchase and the management of the real property held as assets by the fund.

The KAGB introduced a new obligation: closed-end funds now are obliged to have a depositary (previously: custodian bank). This aims at separating management from the safekeeping of the fund assets. In the case of hard assets, the depositary is entrusted with the ongoing monitoring of the portfolio (e.g. in the case of real property), equity interests in (real estate) companies and other assets that cannot be held in custody.

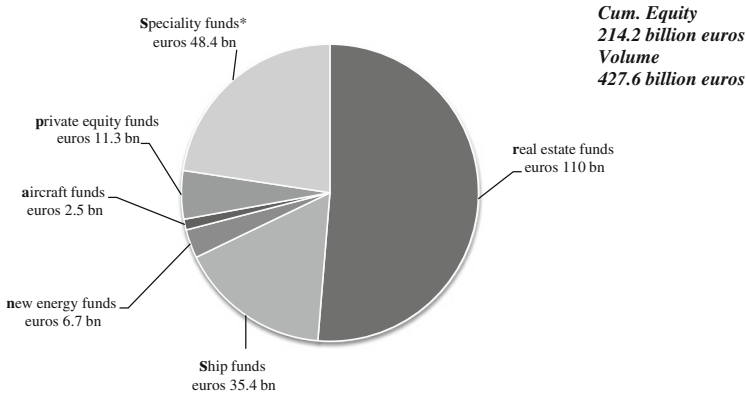


Fig. 2 Equity capital invested in closed-end funds until 2014. *Source:* FERI Gesamtmarktstudie Beteiligungsmodelle 2014 und FERI Erhebung “Platzierungszahlen 2014 für Publikums-AIF und Vermögensanlagen”, Bad Homburg 2015

2.3 Asset Classes

Closed-end funds originated in the financing of real estate investments. Today, however, all types of investment projects are offered on the market in the form of closed-end funds.

The cumulative structure of the total market up to 2014 is illustrated in Fig. 2.

As of 2014, equity capital of more than 214 billion euros was placed in closed-end funds (investment volume of 428 billion euros).

The largest and most important share by far was apportioned to real estate funds, followed by maritime funds. Other categories (e.g. private equity or secondary-market life insurance funds) have started gaining in importance in the last few years only. In the wake of the recent financial crisis, new energy and aviation funds have gained in significance. The special funds include a number of different assets such as infrastructure, containers, forests, game and music funds, as well as wine and securities investment companies.

2.4 Asset Manager, Capital Investment Companies, Distributors and Investors

Each closed-end fund constitutes a unique investment product which is launched by a capital investment company (KVG) formerly called the initiator. Together with the asset manager, it is responsible for the identification of a suitable investment object, the legal and commercial structure of the project, and the drafting of the required documentation. Hence, it is the KVG who develops the fund concept and that is responsible for preparing the prospectus.

As a rule, the KVG is in charge of the management of the investment object and is of vital importance for the success of a closed-end fund. It must be capable of

successfully steering the fund. Hence, the KVG is responsible for almost all parts of the investment process, it often works together with a more specialized asset manager for specific asset classes who, as a rule, takes over all executive responsibilities as well as the day-to-day management of the fund. The cooperation between KVG and asset manager is stipulated in an outsourcing contract which has to be reported to BaFin. It includes, e.g., the identification and verification (due diligence) of property to be purchased and the asset management for real estate held as assets by the fund.

In 2013, there were about 266 initiators in Germany. In general, there are two main groups:

1. **Institutional/listed initiators:** This group includes subsidiaries and associated companies, mainly of banks and insurance companies. Almost every large bank has its own initiator company. A large number of initiators, especially those with high placement volumes, are listed on the stock exchange. Although this is not an indication for the quality of a fund, the stock exchange-related disclosure and information obligations guarantee a high level of transparency for the business of such initiators.
2. **Private or independent initiators:** All other initiators are private or independent initiators. Often, they are owner-run businesses where, in many cases, the owners themselves are the managing directors. In terms of the number of funds, they comprise the main share of the market.

The introduction of the KAGB has fundamentally changed the market since 2013. While some initiators have adjusted to the requirements for establishing a KVG and continue to issue real estate funds (AIF), others have retreated completely from new business with private investors. Some continue to expand their business with institutional investors or focus fully on it, while others who were originally focused exclusively on the institutional business, welcome the regulated world of closed-end AIFs and expand their business model by public AIFs.

In 2014, BaFin approved 30 public AIFs for distribution issued by 21 different capital investment companies. In the same period, 47 investment products of 39 different KVGs were approved. Of these 39 KVGs, 26 are providers of public wind farms and solar plants (Source: FERI Erhebung "*Platzierungszahlen 2014 für Publikums-AIF und Vermögensanlagen*").

In the past, the marketing of closed-end funds was managed primarily by independent financial advisors (IFA) and consultants. Today, however, banks and other financial service providers have also discovered this asset class. The structure is shown in Fig. 3.

In the early 1990s, closed-end fund investors were originally wealthy, private individuals who wanted to take advantage of substantial tax deductions (for allocated losses at that time in Germany). However, due to the reform of the German income tax legislation, the elimination of such tax benefits led to a significant change in the investor structure. In 2004–2008, approximately 350,000–400,000 private individuals participated in closed-end funds each year.

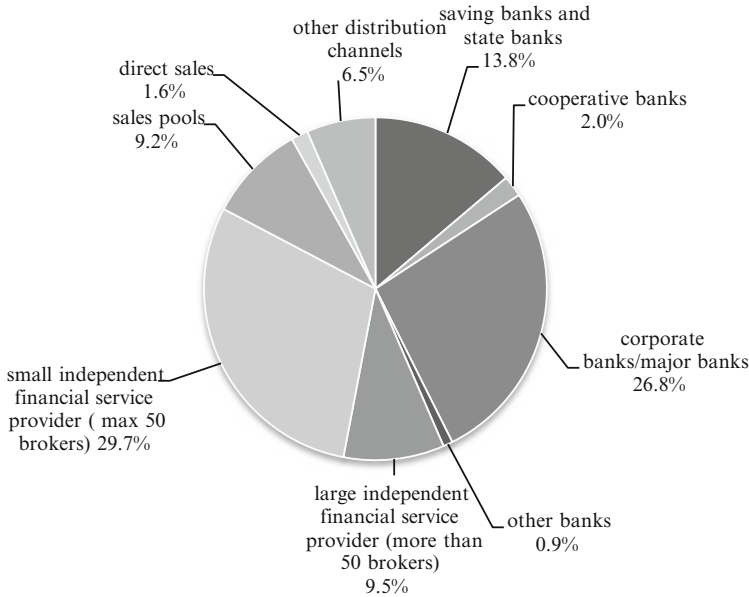


Fig. 3 Distribution channels for closed-end funds in Germany in 2013. *Source:* Feri Gesamtmarktstudie Beteiligungsmodelle 2014, Bad Homburg 2015

In 2009 and subsequent years, however, in the wake of the financial crisis, the number of investors fell below 200,000.

The average subscription sum has also been declining over time. While average subscriptions were more than 50,000 euros in 1999, the average dropped to about 30,000 euros in 2013. The main reason for this development is the expansion of closed-end funds to customer groups with lower income.

2.5 Market Volume

In 2013, around 1.6 billion euros of equity in closed-end property funds (Table 1) have been invested, i.e. 31 % less than in 2010 and far less than the volumes placed in recent years (on average approx. 5 billion euros). Over the past 20 years, the invested fund volume averaged around 9 billion euros annually. The total equity in all closed-end property funds is more than 85 billion euros, more than the overall fund volume of open-end property funds (2014 around 80 billion euros).

In recent years, the debt-to-capital ratio declined considerably from about 55 % in 1999 to less than 43 % in 2013. This is a result of the financial crisis and the issuance of private equity vehicles (in the form of umbrella funds or fund-in-fund concepts) that are mostly designed as mere equity capital funds (i.e. debt financing on the level of the target fund).

Table 1 Closed-end property funds analyzed for several periods

Closed-end property funds								
Placement results								
	1995	2000	2005	2010	2011	2012	2013	2014
	Total							
	in billions euros							
Fund volume	4.6	9.7	8.6	4.2	4.8	3.2	2.5	0.3
Equity	9.0	4.7	4.0	2.3	2.8	2.0	1.6	0.2
	Investment countries							
	Share in percent							
Germany	96.3	65.9	37.4	67.0	70.3	71.9	65.9	53.9
Abroad	3.7	34.1	62.6	33.1	29.7	28.1	34.1	46.1
	Including							
USA	3.3	21.9	21.5	2.2	6.0	9.4	25.8	41.0
Netherlands	0.4	8.5	5.7	10.0	7.9	3.4	1.6	0.0
Austria	0.0	0.2	5.4	3.0	2.1	0.9	1.2	0.0
Great Britain	0.0	0.9	12.4	1.3	2.3	2.5	1.2	0.0
Others	0.0	2.6	17.6	16.5	11.4	11.9	4.4	5.1
	Types of use							
	Share in percent							
Office	–	44.0	74.4	54.7	55.9	42.5	34.9	24.0
Residential	–	12.4	9.0	8.2	7.7	11.7	17.5	31.0
Retail	–	27.4	6.5	17.8	18.2	17.9	21.5	15.0
Hotel	–	5.1	2.9	2.7	1.1	6.1	2.0	0.9
Social property	–	2.9	1.7	4.0	5.5	8.3	5.8	22.0
Logistics	–	1.8	1.6	2.2	0.7	0.2	0.7	1.0
Others	–	6.4	4.0	10.4	10.9	13.4	17.6	6.2

Source: Feri Gesamtmarktstudie Beteiligungsmoedelle 2014, Bad Homburg 2015

Since the introduction of the KAGB, borrowing is permitted until 60 % of the market value of the assets held by the company provided that borrowing conditions are customary in the market.

2.6 Fund Types

In the past, closed-end property funds in Germany invested mainly in core real estate with regular income streams and significant appreciation potential. When carefully selected, they offer a long-term, stable investment opportunity that may comply with the criteria of a sustainable investment.

In the closed-end funds market, funds with an investment target in Germany had the largest placement volumes until the end of the 1990s. This was a result of special depreciation rules for real estate investments in the new federal states after the German unification. The elimination of these tax advantages as well as the

comparatively weak development of German real estate markets resulted in numerous funds failing to meet their forecast performance. As a result, placement volumes declined significantly in recent years. In 2007, they represented only 10% of the overall market. As a consequence of the financial crisis, however, this type of fund has increased again to around 25%.

Depending on the target investment of the funds, it is possible to distinguish between German, foreign, and real estate private equity funds (REPE).

While investments in the 1990s were made mostly in real estate located in Germany, investments in foreign real estate have increased significantly in the wake of the elimination of the tax benefits (allocated losses) on German property investments.

Even here, tax aspects play a role as investors take into consideration existing double taxation agreements when selecting the countries in which they invest. Table 1 shows the breakdown of domestic and foreign funds.

The distinguishing features between these funds are as follows:

Distributions While distributions of German funds amount to approximately 5% before tax (including increasing progression in terms of duration), foreign funds are expected to yield distributions which are by about 1–1.5% points higher. With REPE funds, there is generally no fixed, continuous distribution;

Investment Horizon The investment horizon for German funds is usually more than 10 years, whereas foreign real estate funds are often planned with shorter terms. In most cases, REPE funds are planned for 5–8 years;

Income Tax Category German funds have income from rents and leases. In contrast, foreign funds are taxed according to the location of the property. For countries with double taxation agreements, no taxation is applicable in Germany (except the tax progression clause). REPE funds have business income or income from capital assets;

Expected Return The expected return (internal rate of return, IRR) varies considerably. For domestic core real estate funds, the expected return is around 5%; for foreign investments, expected returns are more than 6%. Private equity structures are generally expected to yield more than 9%.

2.7 Regional and Functional Allocation

The United States of America are by far the largest foreign property market for closed-end funds worldwide. In 2009, however, due to the financial crisis, its significance was dramatically lowered (only 7% of funds invested in the US in this year). As the top priority of investors in this year was financial security, Germany and other European countries were the preferred investment locations.

The primary focus of investors' interests were core properties and, if possible, with public tenants and long-term tenancies. In the meantime, the share of US real estate has again increased from 25.8 % in 2013 to more than 40 % in 2014.

In general, closed-end property funds invest in all types of properties. The structure of the types of use is shown in Table 1. Feri's market study of closed-end funds (Feri Gesamtmarktstudie Beteiligungsmodelle) differentiates between the following types of use:

- Office
- Residential
- Retail
- Hotel
- Social properties
- Logistics
- Developments, REPE, secondary funds
- Other

In principle, office properties had and continue to have the largest share in placement volume. Funds also invest in shopping centers, large specialized retailers, hotels, logistic centers, homes for the elderly and nursing homes, as well as residential property. Funds with existing buildings are found almost as often as project developments or revitalization schemes. In the wake of the financial crisis, a noticeably stronger focus on core funds and the types of use has emerged. In addition to office properties, the main focus is on German residential properties, as they are thought to have substantial value, generate solid cash flows and provide positive risk diversification effects. For property funds with assets outside Germany, however, the office segment remains the most significant asset class.

3 Legal Framework of German Closed-End Funds

As mentioned before, closed-end funds used to be a mostly unregulated product by capital market law for many years.

This has now fundamentally changed with the transposition of the AIFMD into German law in 2013, to be found in the KAGB: Closed-end funds are since then governed by a closely knit regulatory framework comprising product design, evaluation of assets and, last but not least, the marketing process.

3.1 Closed-End Domestic Investment Assets

The KAGB provides detailed rules for closed-end domestic investment funds. By definition, this includes all investment funds that do not qualify as open-end alternative investment funds (AIF). The closed-end domestic investment funds

are the “successors” of the traditional closed-end fund structures in Germany (for more details see Knepel 2012).

According to the KAGB, these structures will only be permitted in the legal form of an investment stock corporation (“*Investment-AG*”) with fixed capital or in the form of a closed limited partnership. Other legal structures, e.g. KGaA (partnership limited by shares) or GbR (civil partnership) models, are no longer permitted.

The KAGB applies a substantive fund concept with regard to the permitted assets. The core notion of the new central concept of the new German investment law is the “*investment undertaking*”. It is rather broadly defined as “*any entity for collective investment which collects capital from a number of investors in order to invest it following a defined investment strategy for the benefit of these investors, and which is no operating company outside the financial sector.*”

On June 14, 2013, BaFin published a decision indicating its understanding of the individual elements of this decision as follows:

The term “*entity*” comprises all legal forms (partnerships, companies limited by shares, funds), regardless of the type of investor participation (equity instruments, participation rights, or bonds). However, individual relationships (such as they exist in managed accounts) or parallel participations of investors that do not have an organizational relationship with each other (such as club deals) are not included. The expression “*for collective investment*” means that the investor participates (also to a limited extent) not only in the profits but also in the losses of the invested assets. Instruments granting a fixed claim to payment or an unconditional claim to capital repayment must be differentiated from this concept (for instance, bonds or deposits). “*Collecting capital from a number of investors*” comprises not only direct and indirect steps to raise capital from one or more investors, but also any commercial communication aiming at raising capital.

A “*number of investors*” is already given if the number of investors is not limited to one investor even if there is, in fact, only one investor. Furthermore, the entity must invest the collected capital “*following a defined investment strategy*”. This requires that the criteria according to which the capital is supposed to be invested are more specific than a general company strategy or the financing of a general business activity. The opportunities given to the management company must be restricted in the investment conditions, the articles of association or the partnership agreement.

The interpretation of the investment attribute “*for the benefit of the investors*” still needs clarification. From BaFin’s perspective, the attribute is not fulfilled if the monies collected are used internally. This is the case if, among others, the issuer is not obliged to invest in assets based on an internally generated index or reference portfolio, or if the interest of the repayment amount is determined or calculable by a formula or a composition of the underlying assets on which the provider has no more leeway in decision-making after the transfer of the monies. Additionally, this interpretation provides for numerous questions of the definition, for instance how to include swap-based exchange traded funds in the concept of investment undertakings when the issuer does not invest in the index values and has no influence in the composition of the index.

The negative defining attribute that the entity may not be “*an operating company outside the financial sector*” is, in a way, the downside of the attribute “*defined investment strategy*”. It allows companies that operate facilities for renewable energy without outsourcing them, run a business (e.g., a hotel) situated on a land plot, or store raw materials to be exempt from the KAGB.

Important for product regulations and distribution specifications are further differentiations between public investment undertakings and special AIFs whose shares may be held only by semi-professional and professional investors. Professional investors include credit institutions, investment firms, insurance companies, investment corporations, large companies as well as governments and supranational institutions.

A semi-professional investor is an investor who either

- (a) invests at least 200,000 euros and who, as certified by the capital investment company (KVG) or the placement agency, has the necessary experience to understand the investment risks or who
- (b) invests at least 10 million euros.

Figure 4 provides a comprehensive overview of the different fund types as defined by the KAGB.

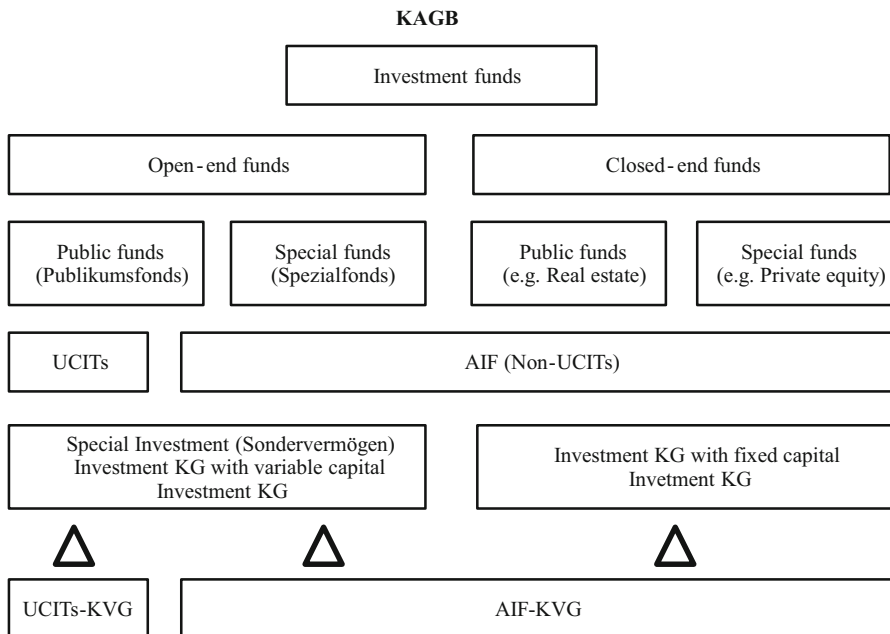


Fig. 4 Investment funds in accordance to the KAGB. *Source:* Own representation

3.2 Product Restrictions for Closed-End Public AIFs Under the KAGB

Unlike the previous regulatory regime, capital investment companies are no longer allowed to automatically consider all tangible assets when establishing a closed-end public AIF. Specific requirements apply, for example with regard to risk diversification, leverage or potential currency risks [for more details see Voss in Arndt/Voss/Bruchwitz, *Recht der Alternativen Investmentfonds*, Sec 261 et seq. KAGB, 1st ed. Munich 2016 (in print)].

3.2.1 Requirements for Blind Pool Constructions

The KAGB applies certain criteria to prevent mere blind pool constructions that do not specify and disclose an investment strategy. The KAGB requires the capital investment company to specifically state the assets that are to be created for the fund in its terms and conditions of investment. This is justified by the need to protect investors who make a long-term investment commitment.

3.2.2 Permitted Assets

The permitted assets are defined in an comprehensive whitelist of permitted assets for closed-end public AIFs. The most important asset class of this catalogue also containing e.g. ships, containers and other hard assets, is real estate including forest and farmland.

3.2.3 The Principle of Risk Diversification

Under the KAGB, the principle of risk diversification also applies to public AIFs. It is required that a fund

1. invests in a minimum of three tangible assets and that the shares in each individual material asset are distributed evenly, or that
2. guarantees that, in economic terms, the default risk is spread.

An exemption from the principle of risk spreading applies for closed public AIFs where only such private investors are permitted to hold interests

- who commit to invest no less than 20,000 euros, and
- who comply with the prerequisites specified in Section 1 (19) Number 33 lit. (a) to (e) KAGB.

However, this exemption does not apply to closed-end public AIFs investing in participations in companies not listed on the stock exchange. They have to observe the principle of risk spreading at all times, hence, in economic terms, the diversification of the default risk has to be guaranteed at all times.

3.2.4 Leverage and Exposure

With the entry into force of the KAGB in July 2014, closed-end public AIFs are permitted to have a maximum debt ratio of 60 % of the fund assets for purchasing tangible assets if the loan conditions are customary in the market and if this is provided for in the investment terms and conditions. This formalizes past practice. Comparable limits apply to the encumbrance of assets. In particular, the KVG is required to confirm to BaFin that the scheduled limitation of the investment capital is adequate and complied with at all times. BaFin can limit the scope of leverage if this is necessary to guarantee the stability and integrity of the financial system. However, this will probably not be of much practical relevance. The limitation of leverage is a challenge, especially for real estate funds as the financing of real estate regularly goes along with considerable external capital financing.

3.2.5 Currency Risks

Furthermore, the KVG must ensure that the assets of a closed-end domestic public AIF subject to currency risks do not exceed 30 % of the asset value of the respective AIF. As was already the case in the former statutory environment of the German Investment Act (“*Investmentgesetz*”, InvG), the KAGB also defines a currency risk as non-existent in the case of currency competition, if, for example, a closed-end AIF invests in real estate in the United States of America and the nominal currency of the AIF is US dollars. In addition, the calculation of the currency risk has to consider the net effect on the assets.

3.3 Legal Framework Conditions of Product Structuring

3.3.1 Articles of Association

Investor protection is no longer governed by general corporate law, but by the more specific and detailed investor protection regulations of the KAGB, which provides a number of legal specifications for the Investment-KG.

The company has to operate as a “closed-end limited partnership investment company” or, using the more colloquial abbreviation of “closed-end Investment-KG”.

3.3.2 Contractual Requirements

The KAGB also provides specific contractual requirements for the articles of association of an Investment-KG which focus is on investor information:

- The sole purpose of the company has to be the collective investment and management of funds based on a specified investment strategy for the benefit of the investors;
- The articles of association of closed-end Investment-KGs are required to state whether it is a closed-end limited partnership Investment-KG or a special Investment KG;

- The articles of association must specify the contractual requirements for invitations to general assemblies and minutes as well as the reporting obligations to ensure transparency of general meetings.
- The articles of association must not deviate from the corporate law requirements.

3.3.3 Management and Representation

The management of the Investment-KG must at least consist of two natural persons and also for an “*Investment Kapitalgesellschaft & Co. KG*” as per KAGB, it is sufficient if the general partner is managed by two persons. BaFin can prohibit unreliable managers and advisors from pursuing their activities and request their dismissal. If the dismissed or retired managing director was entitled to the management of the Investment-KG as organ of a “*Kapitalgesellschaft & Co. Investment-KG*”, an obligation results from the applicable corporate law provisions to appoint one or several new managing directors for the “general partner” company.

If a natural person was entitled to manage the company in his capacity as general partner, the principles agreed in the articles of association for the management and representation of the KG should apply.

3.3.4 Advisory Board

An internally managed closed-end Investment-KG is required to have an advisory board. The advisory board is responsible for monitoring the management for the benefit of the investors with regard to compliance with the investment conditions. Composition and position of the advisory board correspond mainly to that of a supervisory board of a stock corporation.

3.3.5 Members of the Investment-KG

Private investors can only participate in closed-end public AIF, while only so-called professional and semi-professional investors are entitled to participate in an open-end Investment-KG due to the risk involved in this type of investment.

Trust structures for closed-end public Investment-KGs are still permitted. In the internal relationship to the Investment-KG and other limited partners, the investor’s (trustor’s) status is equal to that of a direct limited partner in the Investment-KG. The protection rules and information obligations with regard to investors or parties interested in acquiring a participation as stipulated in the KAGB apply in particular. In accordance with the marketing provisions of the KAGB, for example, the corresponding sales information must be made available to parties interested in acquiring an indirect participation.

3.4 Investor’s Liability

In comparison to the previous legal situation, the legislator has significantly improved the liability position of investors. Due to the fact that the general partners in a closed-end public Investment-KG can in no case effectively consent to the commencement of business operations before the company has been registered, an

unlimited liability of the limited partner based on foundation is excluded prior to the registration of the company.

In any case, new limited partners only become members upon entry in the trade register and, until then, are not exposed to a liability risk. On the other hand, the KAGB does not exclude the entry liability of Section 130 HGB. Hence, private investors entering a closed-end public Investment-KG remain liable for the existing debts of the company. However, the liability risk for investors is limited because the KAGB mostly excludes third-party liability as soon as the capital contribution has been paid by the limited partner.

The KAGB stipulates that a reimbursement of the contribution or a disbursement lowering the value of the limited partner's contribution below the contribution amount shall require the consent of the respective limited partner; prior to providing consent, the limited partner must be informed that he will become directly liable to the creditors of the company if the contribution is paid back by the reimbursement or disbursement and—in the case of trust structures—the consent of the specific trustor/limited partner is required.

3.5 Terms and Conditions of Investment

In the case of a closed-end public AIF, the KVG of the AIF has to submit the articles of association and the so-called terms and conditions of investment describing the investment strategy and defining the scope of the investment strategy to BaFin for approval.

Together with the articles of association, they govern the legal relationship between the investment company and the investors. For closed-end special AIFs, by contrast, the KAGB only requires notification of BaFin without an approval procedure.

Approval of the terms and conditions of investment can only be requested by AIF-KVGs authorized to manage the corresponding type of AIF. Cross-border management of a closed-end public AIF by the management company of an EU AIF or by a foreign AIF management company is not permitted.

BaFin has to inform the requesting party within 4 weeks of receipt of a request signed by the management, if and why the prerequisites for approval have not been met and request missing or modified information or documentation. The 4-week-period starts again when the requested information or documentation has been received. If no decision has been made on the request for approval within the specified 4-week-period, approval shall be deemed as granted. In this case, BaFin will be obliged to confirm at the request of the management company that the request has been approved. BaFin can furnish an approval with conditions.

Modifications to the terms and conditions of investment also require approval by BaFin. Moreover, under certain conditions, modifications to the terms and conditions of investment require the consent of a qualified majority of investors who must hold at least two thirds of the subscribed capital. This is the case if the

modification is not in line with previous investment principles of the closed-end public AIF, or entails a change in costs or in key investor rights.

In the case of a trust structure, the limited partner in trust may only exercise a voting right after prior instruction by the investor.

3.6 Sales Prospectus and Key Investor Information

The AIF KVG has to prepare a sales prospectus with key investor information for each closed-end public AIF it manages.

The KAGB contains minimum information requirements for the sales prospectus and, in this regard, mostly refer to the corresponding provisions for public investment funds with due consideration of the specific characteristics of closed-end public AIFs. Additional information requirements are stipulated in particular with regard to transferability and restrictions to the free tradeability.

Furthermore, detailed requirements for the content, form and layout of the key investor information exist. The key investor information shall enable the investor to understand the type and risks of the offered investment product and to make an informed decision based on the provided information. In this regard, the KAGB refers to the corresponding provisions for open-end public investment funds with due consideration of the specific characteristics of closed-end public AIFs.

The KAGB also provides for an obligation to update key investor information in the sales prospectus if the information is of substantial importance. The key investor information must be kept up to date; however, the updating obligation for closed-end public AIFs only applies during their once-off sales stage.

As soon as the AIF KVG is entitled to start distributing the closed-end public AIF, the current version of the sales prospectus and of the key investor information must be published on the website of the AIF KVG.

3.7 Valuation of Assets

The asset value has to be determined by an external evaluator prior to the acquisition. The KAGB differentiates between tangible assets and participating interests. For tangible assets up to 50 million euros including investments are only permitted if the asset value has been established by an external valuer and if the purchase price to be paid for it by the closed-end domestic public AIF does not or only marginally exceed the established value. For assets exceeding a value of 50 million euros, the valuation must be performed by two external valuers who are independent of each other. In all cases, these valuers may not be the same as the ones who carry out the annual valuation of the assets in accordance with Section 272 KAGB and they must meet specific statutory requirements.

Investments in participating interests need to be evaluated prior to acquisition of such interests or shares in an entity, in a company not listed on the stock exchange or in an AIF. The evaluation must be based on the most recent financial statements

and an auditor's report must have been issued for the respective financial statements. Annual asset valuations are required during the term of a fund.

3.8 Depositary

While the Investment Act so far referred to “*depository bank*”, the KAGB uses the term “*depository*” and differentiates between UCIT depositaries and AIF depositaries, as the AIFM Directive—contrary to the UCITS-IV Directive—contains detailed requirements for the depository. From a view point of investor protection, the KAGB adopts some provisions of the AIFM depositaries for the UCIT depositaries (with regard to sub-deposit and the liability of the depository), but does not go beyond the previous regulations for depository banks pursuant to the Investment Act in order to not anticipate the intended (and partly stricter) provisions of the UCITS-V Directive for reasons of competition between the investment fund locations.

Each AIF-KVG must designate an AIF-depositary for each AIF it manages. Therefore, closed AIFs are particularly and for the first time obliged to specify a depository. To designate a depository, a written agreement is required between the AIF-depositary, AIF-KVG and, if necessary, the AIF.

Art. 83 EU Regulation contains a detailed catalogue on the minimum content of the depository agreement which comprises, among other things, a description of the services to be provided and the depository and supervisory function, the termination options, a declaration on the liability of the depository, and regulations on the exchange of information. Besides credit institutions, also investment companies with sufficient capital can act as AIF- depository. With regard to investment companies, a new type of new financial service to manage and deposit securities is created exclusively for AIFs (“restricted depository services”) so that they do not require approval as a credit institution (defined by the German Banking Act (*Kreditwesengesetz*, KWG)). Furthermore, the legislator used the option provided for in the AIFM Directive that, with regard to closed AIFs, a trustee (*Treuhänder*) (for instance, a notary public, accountant or lawyer) may take on the tasks of the AIF-depositary in connection with his professional or business activity.

As a prerequisite, the trustee must be subject to a professional registration that is legally recognized and mandatory, and to legal and administrative provisions or professional rules, and he must offer sufficient financial and professional guarantees in order to efficiently exercise the relevant tasks of an AIF-depositary and, thus, fulfil the associated obligations.

3.9 Marketing

The AIFM directive regulates the marketing of AIFs to professional investors only. In this regard, the German legislator is bound by the provisions of the directive. In addition, however, these provisions are interpreted as constituting minimum

standards and a number of stricter regulations have been added for distribution to private investors.

The marketing provisions can be subdivided in stipulations regarding the reporting procedure prior to implementing marketing measures on the one hand, and the marketing measures on the other hand. Within these two areas, the legislator differentiates between UCITS and AIF investor groups (private investors, semi-private investors and professional investors) and the time period before and after the date determined by the EU for the application of the regulation based on the AIFM Directive regarding marketing to operations outside the EU.

Under this concept, the following applies to closed-end public AIFs:

3.9.1 Extended Marketing Concept and Abolition of Private Placements

The key aspect of the provisions regarding marketing is the extended marketing concept. According to the KAGB, all marketing of investment assets will from now on require approval in one way or another, in any case if private investors are addressed. The KAGB defines marketing as the direct or indirect offering or placement of units or shares of an investment undertaking.

The KAGB does not limit the obligation to obtain approval for the marketing of investment fund units to public distribution or to public offers, and also does not provide for an exemption from the approval obligation for the distribution of investment fund units to specific institutional investors. This means the actual abolition of a private placement of investment fund units. From now on, the requirements for marketing, also to private investors, will be governed by the KAGB only. The regulations of the Sales Prospectus Ordinance and of the Investment Products Act and their respective exceptions no longer apply to private placements.

3.9.2 Marketing Notice

The marketing of a closed-end domestic public AIF in Germany requires marketing approval in addition to the approval of the terms and conditions of investment which must be obtained from BaFin prior to beginning marketing. The marketing approval replaces the previously required approval of the sales prospectus, but significantly exceeds previous requirements. The regulations for the marketing of closed-end AIFs to domestic private investors differentiate:

- Marketing of public AIF through an AIF KVG and
- Marketing of EU-AIF and foreign AIF through an EU-AIF management company and through foreign management companies.

A notification letter for a closed-end public fund must contain the following information and documents:

- a business plan with information on the notified public AIF;

- the terms and conditions of investment or a reference to the terms and conditions of investment submitted for approval and, as applicable, the bylaws or the articles of association of the notified AIF;
- the depositary or reference to the depositary approved by BaFin;
- the sales prospectus and key investment information of the notified AIF.

3.10 Procedure and Advertising

BaFin examines the documents for completeness and if it determines that the submitted information and documentation is incomplete, a request to submit supplementary information is issued within a period of 20 working days following the day on which all of the below prerequisites apply:

- Receipt of notification
- Approval of the terms and conditions of investment, and
- Approval of depositary

The regulation regarding the start of the deadline period shall account for the fact that depositary and terms and conditions of investment need to be approved in advance and that a verification of sales prospectus and key investor information only makes sense once the verification of the terms and conditions of investment and depositary has been completed. The supplements must be submitted to BaFin within 6 months of submitting the [original] notification or the last supplementary documents. However, it is always possible to submit a new notification. The 20-day deadline period starts again with the receipt of the supplementary notification.

As soon as the complete notification documentation as well as the approval of the terms and conditions of investment and of the depositary have been received, BaFin has to inform the AIF KVG within 20 working days, whether it can start marketing the AIF in Germany. As before, BaFin will also review the sales prospectus which must be presented in the context of the approval procedure. The AIF KVG is permitted to start marketing of the notified AIF in Germany from the date of the respective communication. If BaFin informs the AIF KVG of objections against the submitted requests and documents within the 20-day deadline period, the deadline period is suspended and starts again once the modified information and documentation has been received.

The provisions on advertisement are applicable to UCITS as well as to AIFs with regard to private investors. They correspond essentially to the previous regulations of the Investment Act. Advertisement with regard to private investors must be clearly recognizable as such and must be fair, precise and not misleading. With the exception of some editorial adjustments, the applicable wording of all publications and advertising regulations for all investment funds remain the same as the previous regulations in the Investment Act.

3.11 Outlook: MiFID II

The Markets in Financial Instruments Directive (“*MiFID II*”) and the related Regulation (“*MiFIR*”) is the next big rewrite of EU legislation, due to take effect at the beginning of 2018. Although its greatest impact will be on sell-side broker-dealers and markets, there will also be significant changes for asset managers of closed-end funds, ranging from internal organization and conduct of business to marketing and disclosure [for more details see Voss in Arndt/Voss/Bruchwitz, *Recht der Alternativen Investmentfonds, MiFID II*, 1st ed. Munich 2016 (in print)]. This update outlines the relevant provisions and the issues asset managers should now be considering.

MiFID II is a major rewrite of the original MiFID I legislation which originally came into force in November 2007. It is also considerably more detailed and prescriptive than the original regime. The new Level 1 and Level 2 provisions of MiFID II have been under consultation since 2014. As of February 2016, the European Commission has proposed granting national competent authorities and market participants one additional year to comply with the rules set out in MiFID II. The new deadline is 3 January 2018. The reason for this extension lies in the complex technical infrastructure that needs to be set up for the MiFID II package to work effectively. There is no transitional period.

3.11.1 Applicability to Asset Managers

Asset managers authorized in the EU to provide investment advice and portfolio management for AIFs and/or UCITS within the definition of a MiFID investment firm, will be directly subject to all aspects of MiFID II in relation to these activities.

AIFMs or UCITS managers who solely carry out collective portfolio management are not within the scope of MiFID II itself. However, to the extent that they are also authorized to carry out advisory and portfolio management activities, they will be subject to the MiFID II rules, which are now in some places more onerous than the corresponding AIFMD/UCITS regimes. In addition, where an AIFM or management company distributes its products through MiFID firms, it will need to assist those firms in meeting a range of new disclosure and compliance requirements.

Third-country managers may be indirectly impacted by MiFID II requirements where they distribute their products in Europe and where they receive services from or provide services to MiFID firms in the EU.

The directive is directly applicable to (1) MiFID-authorized investment firms, and (2) to AIFMs and management companies when providing MiFID services such as individual portfolio management or investment advice.

3.11.2 Inducements

Portfolio managers will not be permitted to accept and retain fees, commissions or any monetary benefits from third parties such as issuers and product providers relating to the services provided to their clients. This compares with the current MiFID I rules under which such payments or benefits may be received as long as they comply with the rule on inducements.

Under additional changes to the inducements rule, the requirement for quality enhancement will be more strictly construed; disclosure on a generic basis will not be allowed, and the payment of placement fees is confirmed to be within the scope of the inducements regime.

3.11.3 Dealing Commission

Probably the biggest single change in MiFID II is the proposed abolition of payment for research by dealing commission. Although such payments are currently “unbundled” in the sense that they are separately identified and accounted for by managers, ESMA is proposing “full” unbundling under which managers must either (a) pay for research out of their own pockets or (b) agree with each client on a separate research payment account (“RPA”) with its own budget which will be directly paid by the client as contribution to the manager’s overall research budget. This is intended to decouple the manager’s research spending from its clients’ trading volumes and ensure that the manager only pays for research he actually wants to.

If a manager has to pay for own research, this is expected to lead to a decline in the amount of research used, with a knock-on impact on investment performance. If research is funded through RPAs, there will be significant client/client conflicts on matters such as how the research budget is allocated by the manager among its clients, how it is administered, what happens if one client does not accept its portion of the budget, or if the size and number of a manager’s client accounts changes during the period. UK managers will be potentially disadvantaged in competing with non-EU managers who are not bound by the new restrictions, while international firms running global soft dollar accounts will have to determine how to reconcile practice in the rest of the world with the new EU restrictions.

The directive is indirectly applicable to any other managers or product providers—AIFMs, UCITS management companies or third country managers—using MiFID firms in their distribution network.

3.11.4 Product Governance

MiFID firms which manufacture investment products must:

- ensure those products are designed to meet the needs of an identified target market of end clients (in effect an appropriateness assessment at generic client level) and carry out a product scenario analysis including the risk of poor investor outcomes;
- ensure that the distribution strategy is compatible with that target market, take reasonable steps to ensure that the product is distributed to that target market;
- make appropriate information available to distributors and carry out regular reviews of events that could affect the potential risk or return to the target market.

MiFID firms which distribute such products and/or services must identify appropriate information on such products or services, consider the identified target market, make appropriate disclosures and perform appropriate assessments of

clients' needs, regularly review the products they distribute and the services they provide, and provide information to support manufacturer's product reviews.

3.11.5 Disclosure Obligations

The MiFID II obligation for firms to provide clients with appropriate information on financial instruments and investment strategies is expanded in a number of respects.

A firm providing an advisory service must tell its clients:

- the nature and type of advice it will provide;
- whether or not its advice will be provided on an "independent" basis;
- the scope of advice;
- whether the service will include a periodic assessment and, if so, details of how it will be conducted.

Information on instruments and investment strategies must include:

- appropriate risk warnings including how the client may exit the investment and any related risks;
- the functioning and performance of such instruments in different market conditions;
- additional disclosures where an instrument is composed of two or more instruments or services.

4 Success Factors and Summary

For any investor, the prerequisite for a successful investment is the selection of the most suitable investment offer. This depends on the investor's individual preferences, but depends even more on the characteristics of a specific offer.

There are three main selection criteria for an investment decision: the investment property, the initiator and manager of the fund, and the specific fund concept.

1. **Investment property:** The attractiveness of a property is characterized, in particular, by the quality of construction of the buildings in terms of suitability for the current tenant or subsequent third parties. Of vital importance are the qualities of the macro- and micro-location, the rental situation and, in particular, the creditworthiness of the tenants.
2. **Fund concept:** In addition to the contractual agreements and the design of the legal and tax stipulations, a financing and investment plan as well as a calculated forecast of the economic performance of the investment vehicle form the core of the fund concept. In the financing and investment calculation, estimated investment costs (use of funds) are compared to the funding (source of funds), i.e. the loan and equity capital of the fund. Investment costs include the purchase price and ancillary acquisition costs (brokerage, notary fee, property transfer taxes, expert property valuations, etc.), as well as so-called soft costs. These soft costs

are e.g. costs of the fund concept, the issuing of the prospectus, guarantees (rent guarantees, placement guarantees, etc.), procurement of loan capital; financing costs and commissions for the initiator and distribution (cost of equity). The forecast is a comparison of expected earnings and expenditures which determine the economic success of the fund, i.e. pay-outs and taxable results. On the earnings side, these include the achieved rents, accumulated interest on the existing liquid assets and the revenue derived from the sale of the property. On the expenditure side, it is primarily the interest on and repayment of loans, fund management costs, maintenance and refurbishment costs, re-letting costs, and depreciation. In most cases, the forecast horizon is 10–15 years.

3. **Asset management and capital investment company:** The professional expertise and performance capacity of asset manager and capital investment company are important, yet frequently underestimated success factors. They are the partners of the investor and their quality and management skills can be seen in the realistic design of the product and, in particular, in mastering difficult situations, e.g. under deteriorating market conditions or in the case of tenant default or follow-up financing.

Closed-end property funds offer investors the opportunity to invest in assets they would otherwise not be able to access. This helps investors achieve a very good, diverse asset allocation.

Despite declining yields and dividends as well as a drop in placements as a result of the financial crisis in 2008 and 2009, closed-end funds still offer attractive investment opportunities and will gain in importance in the German private investment market in the near future. Property funds comprising core properties in good locations with long-term tenancies and creditworthy tenants are particularly in demand. Despite the remaining business risks (due to long-term capital commitment and a lack of fungibility), these funds fit into the investment profile of investors who are interested in long-term stable yields. The importance of closed-end funds will be further enhanced when this asset class is traded on the secondary market. Furthermore, the current trends towards a more stringent regulation of both vendors and distributors will liberate closed-end funds from the stigma of being an unregulated product in the grey capital market. There may be declining investment volumes in the short term as the market matures, but such a “consolidation” of the market must be regarded as positive in the mid-term.

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REOCs and REITs

Wolfgang Schäfers, Kai-Magnus Schulte, and Alexander Scholz

Abstract

This chapter considers the German market for listed real estate companies. First, a distinction is made between German listed real estate operating companies and Real Estate Investment Trusts. These are then ordered into the investment spectrum, and the German and European market for listed real estate companies is analyzed. Finally, success factors and value drivers that can support the success and the future of German real estate companies on the capital market are presented.

Keywords

REITs • REOC • Net asset value • Transparency

1 REOCs and REITs

Real estate stocks experienced an international upswing since the bursting of the dotcom bubble that only came to a preliminary end in the face of the global financial crisis and the subsequent sovereign debt crisis. This development however largely passed by Germany. While in countries such as the United Kingdom, the Netherlands, France, Australia, Hong Kong, Japan and the USA real estate stocks have now long been viewed as a promising investment vehicle, real estate stocks in Germany continue, according to the relevant research of EPRA (European Public Real Estate Association), to lead a rather minor existence. Although Germany has a large direct real estate market, only 1.6% of the German real estate assets are securitized in the form of real estate shares. Moreover, real estate stocks represent only 1.4% of the total capitalization of the German stock market (see Table 1).

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Table 1 Real estate markets in international comparison

Country	GDP Sep-14 (USD bn)	Real estate Sep-14 (USD bn)	Listed real estate Dec-2014	Stock market capitalization Dec-2014 (USD bn)	Real estate stocks as % of the stock market
USA	16,318	7,343	12.1 %	24,414	3.6 %
JP	5,606	2,523	11.9 %	4,441	6.7 %
UK	2,666	1,200	10.3 %	3,670	3.3 %
DE	3,701	1,666	1.6 %	1,838	1.4 %
FR	2,775	1,249	9.8 %	1,935	6.3 %

Source: EPRA (2014a); Own illustration

This makes the German real estate capital market relatively under-represented in Europe, and it also lags well behind the expectations of market participants.

With the introduction of the German Real Estate Investment Trusts (G-REITs), hopes of an upturn in the German real estate capital market were raised. This jump-start failed however to materialize, not least due to an unsatisfactory configuration of the law, the delay and uncertainty regarding its introduction as well as the onset of the global financial and economic crisis. Up to these points, only Alstria Office REIT-AG, Fair Value REIT-AG and Hamborner REIT-AG have applied for conversion into this new form of real estate stocks. Nonetheless, the potential for a securitization of real estate in Germany remains substantial.

In this chapter, the Real Estate Operating Company (“REOC”) and the Real Estate Investment Trust (“REIT”) as forms of indirect listed investments in real estate will be analyzed. After presenting the definitional foundations as well as differentiating between the two forms, the chapter then considers REOCs and REITs in relevant (international) market environments. Finally, success factors and value drivers that can facilitate and promote the further development of REOCs and REITs are presented.

1.1 Definition of REOCs

In contrast to Real Estate Investment Trusts, listed real estate operating companies are not legally defined. Moreover, there are no legal or fiscal peculiarities that distinguish the listed real estate operating companies from other listed companies. A distinction is therefore generally made based on the primary aims of the company. Correspondingly, a REOC is a listed company that generates its profits predominately (for example 75 %) from letting and leasing, the sale of portfolio properties, project development and the management of real estate as well as the provision of corresponding services. Listed real estate operating companies can therefore be primarily subdivided into property investors and project developers,

although a mixture of the two—for example in the case of IVG Immobilien AG (until 2014) and DIC Asset AG—is most commonly found.¹

Through the securitization of real estate in the form of a REOC, investors can bypass numerous unattractive characteristics of direct investments in real estate. Assuming sufficient stock-market liquidity, the buying and selling of shares via the stock exchange is easy, and furthermore allows a term transformation, as the investor can sell at short notice his holdings of long-held real estate. He is moreover able to benefit from precise timing and a quick reaction to market trends. Additionally, a size transformation can also be realized, as real estate stocks are usually fragmented into small investment amounts, whereas individual properties generally cost at least six-figure sums or in case of institutional investors even more.

In contrast to direct investing, the purchase of real estate stocks involves no land-transfer tax and no notary or broker fees. The transaction costs are therefore correspondingly moderate, as only the stock-exchange brokerage fee, the commission for the stock purchase and the bank's deposit fee need to be paid. As a result, real estate stocks are also in advantage over open-ended property funds, which in addition to the deposit and management fees generally also levy an issue surcharge of around 5%. This must be generated over the holding period of the shares, which, depending on the situation of the real estate market, can take several years.

Due to a lack of specific taxation regulations, the standard tax regulations for income from stocks apply to REOCs and their shareholders. While private investors had formerly been able to realize tax-free profits from the sale of real estate stocks after 1 year, the dividends as well as the capital gains on disposal have been subject to a withholding tax since January 1st 2009. This withholding tax amounts to either 25% plus the German solidarity tax and, where applicable, church tax (around 28.5% in total) or corresponds to the personal tax rate, where this is lower than 25%. REOCs can, under certain circumstances (cf. §6b EStG), transfer profits from the disposal of domestic real estate tax-free to new properties. In addition, they can issue to their shareholders tax-free stock dividends (bonus shares) instead of regular dividends. REOCs that are internationally active can optimize the tax through the use of different double-taxation agreements.

If a REOC pursues an international investment strategy, it is able to benefit from the consolidation of the European markets as well as lucrative investment opportunities in emerging countries, while at the same time it may further reduce its portfolio risk via diversification effects. Further diversification effects can be realized through a scattering of the sources of income, as REOCs do not only realize their revenue through rental income, but also through sales, real estate services, project development and fund business.

Alongside these comprehensive REOCs, investors can also participate in specialized REOCs. Alongside sectorally and/or geographically focused companies there are also companies that have specialized in property investment, project development, the trading of real estate or service provision. However, the risk

¹ Rehkugler and Sotelo (2009).

profile of project development and real estate services differs significantly from property investment, for which reason a clear focus on the respective core business from the perspective of investors and analysts is required. The investor in REOCs can then compose his portfolio according to his risk propensity.

It remains to be clarified whether an investor in REOCs exposes himself to the performance of the underlying real estate market or the general stock market. In the latter case, an investment in real estate stocks would offer no specific advantages, as it would not represent an alternative investment product to stocks and one would not be able to secure the advantages described above. Through the listing on the stock market, market sentiments as well as upturns and downturns that affect the entire market have a direct effect on the real estate capital market, so that real estate stocks behave in the short term similar to general stocks. However, this relationship is only of a short-term nature. In the long term, real estate stocks behave according to their underlying direct real estate assets, so that these can be considered a substitute for the direct investment in real estate.² Furthermore, the role of the systematic risk factors is significantly different for real estate equities compared to general equities, resulting in a unique risk/return profile of listed real estate. This enables investors to significantly reduce their portfolio risk in case of a mixed-asset portfolio by increasing their investment share in REOCs up to an optimal point.³

1.2 Differences Between REOCs and REITs

In contrast to France and the United Kingdom, Germany did not have a mature market for exchange-traded real estate investments when REITs were introduced. Whilst in these countries the existing real estate capital market in particular was taken into account, in Germany only a relatively small number of real estate stocks were established. The introduction of REITs in Germany has therefore been primarily discussed in terms of the supplementation of the investment market for indirect, non-traded real estate investments. A comparison of the traditional, widely unregulated REOCs with REITs is necessary in order to differentiate between the two vehicles of indirect real estate investment. Furthermore, the question must be asked whether, from the perspective of existing REOCs and their investors, additional value creation can be achieved through the conversion into a REIT.

Both the traditional REOCs in the narrow sense as well as G-REITs according to Paragraph 1 Section 3 of the REIT Act (REITG) are subject to the German Stock Corporation Act. However, substantial differences are found in the divergent and supplementary provisions of the German REIT Act, in particular regarding the investment, revenue and payout obligations set out in the act as well as the limited tax transparency of REITs. The most important differences are outlined below.

² Sebastian and Schätz (2010).

³ Lang and Scholz (2015).

- **Investment and revenue provisions**

The investment and revenue provisions of G-REITs are anchored in paragraphs §3, §12 and §14 of REITG. In contrast to REOCs, it is forbidden for German REITs to pursue in the framework of their business model extensive speculative project developments or the active trade in real estate. Moreover, G-REITs are only permitted to have 20 % of their assets invested in service provision. The law also states that G-REITs must have 75 % of their assets invested in real estate, and that domestic residential real estate built before 1 January 2007 may not be invested in. Moreover, 75 % of a G-REIT's gross earnings must be derived from renting, leasing, letting and disposal of real estate.

- **Tax transparency, payout obligations and leverage**

The most noticeable difference between REOCs and G-REITs is found in the special tax status of G-REITs. If a REOC meets the regulatory parameters of the G-REIT Act, it can opt for G-REIT status and, according to §16 REITG, corporate tax and trade income tax no longer apply.⁴ Taxation at shareholder level takes place, as with REOCs, by means of the withholding tax. From a fiscal perspective, G-REITs are therefore “transparent”; the revenues are taxed exclusively at shareholder level. In contrast to REOCs, G-REITs are here subject according to §13 of REITG to a payout obligation that additionally requires them to distribute at least 90 % of the annual net income. Exempt from this requirement are capital gains on disposal, of which up to half can be placed in a reserve fund that must be dissolved over 2 years.

A further regulatory restriction compared to REOCs is the leverage restriction according to §15 of REITG. While REOCs can freely decide on their leverage ratio, the equity of G-REITs may not fall below 45 % of the amount with which the immovable assets in the financial accounts are set (valued at fair value IAS 40).

- **Business field strategies**

According to the regulatory framework, G-REITs must specialize in portfolio-oriented real estate investment business. As a result, they have a substantially narrower scope than REOCs, which can exploit market cycles for example by means of active portfolio management. In contrast, G-REITs must not engage in trading their real estate assets. This applies for the purpose of §14 of REITG when the G-REIT as well as its subsidiaries included in the consolidated accounts generated revenue within the past five business years from the sale of immovable assets that constitute more than half of the average value of its real estate portfolio within the same time period. Moreover, REOCs can expand their business field through project development activities or property-related services such as real estate fund management for third parties.

As investment products with a wider scope for management must also meet the higher return expectations of their investors, REOCs generally have higher capital costs than REITs.⁵ Decisive is not whether this scope is actually being

⁴ Exceptions are listed in §16.2 to §16.6 of REITG.

⁵ Sotelo (2006).

used, but rather that the opportunity exists. It is therefore all the more important for REOCs to clearly communicate their business field strategy to investors, while for REITs this is already largely ensured by the regulatory framework.

- **Financing strategies**

Existing and in particular future real estate investments can be financed by capital-market-oriented real estate companies through the uptake of additional equity and debt capital. In addition, companies generally have the opportunity to retain profits as an alternative to paying dividends. The plowing back of profits for the refinancing of the existing business activities or new investments is described as internal financing. Correspondingly, with the uptake of additional funds in the form of equity and debt, the capital market is called upon for external financing.

In this respect, the payout obligations of G-REITs determine a substantial restriction in possible financing strategies: as the revenues from the real estate investments, less any depreciation, management, maintenance and borrowing costs etc., must be almost entirely distributed to the shareholders, G-REITs are therefore more strongly linked to the external capital market than REOCs.

2 REOCs and REITs in the Market Environment

2.1 REOCs and REITs in the Investment Spectrum

Thanks to the increased professionalism and development of the market, investors today have a large number of investment opportunities to choose from. These mostly have a relatively characteristic risk/return relation, which allows an ordering in the investment spectrum and a comparison to the individual asset classes. Figure 1 presents a schematic ordering of the individual asset classes, although these can vary considerably, depending on market phase and the period under consideration.

Among all real estate investments, REOCs represent the asset class with the highest risk/return ratio. This is a result of the characteristics of REOCs described above. While open-ended real estate funds (and to a lesser extent closed-end funds) may primarily invest in comparatively low-risk core/core-plus real estate and are subject to various, generally risk-reducing restrictions, REOCs are free to choose which real estate they invest in. So alongside the classic office and retail real estate, hotels and specialized property, which represent a higher risk, can also be acquired. The higher risk/return ratio compared to REITs results in particular from the lack of any minimum payouts or leverage restrictions as well as the absence of limitations of the business field to property investment. A REOC, which along with property investment is also involved in active trading and the development of real estate is

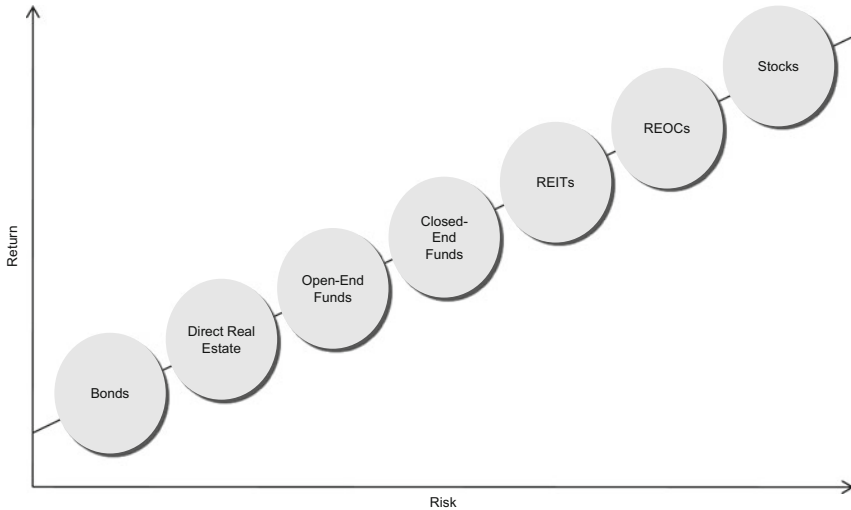


Fig. 1 Schematic risk/return profile of the most important real estate asset classes. *Source:* Own illustration

more strongly impacted by the market situation and market cycles, which increases the risk of these stocks.

2.2 REOCs and REITs in the German Context

So far, the history of neither German listed real estate operating companies nor German REITs has been a clear success story. Figure 2 shows the development of the market capitalization and the number of listed real estate companies according to the FTSE/EPRA NAREIT Germany Index. While the market in the early 1990s was characterized more by a sideward movement than a dynamic development, from the mid-1990s German REOCs experienced a noticeable upswing. The market capitalization grew from around 700 million euros in 1996 to around 4 billion euros in 1999. The crash of the new economy did not pass by Germany's REOCs either, with the market shrinking to a volume of barely 440 million euros. During the boom from 2002 to 2006, the German listed real estate sector grew by an impressive 1600% to its preliminary high point of approximately 7 billion euros. After a significant correction during the global financial crisis and the subsequent sovereign debt crisis, the market has recovered substantially and comprises some 24.2 billion euros (as of end 2014). In particular, during the last year the German listed real estate sector has grown considerably analogous to the general equity market. This positive development in terms of the market capitalization since end of 2010 can be mainly attributed to the exit strategy of private-equity firms which aimed to list residential property companies like GSW Immobilien AG (15. April 2011) or Deutsche Annington (11. July 2013). The following consolidation process in the

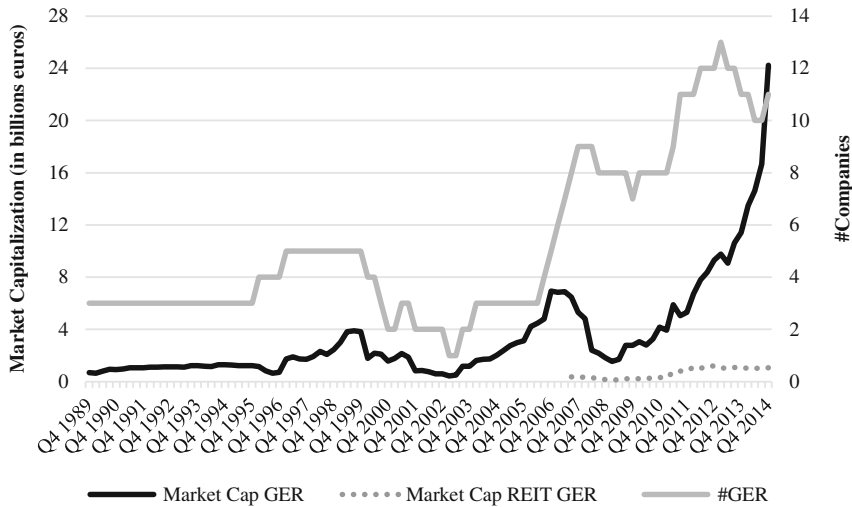


Fig. 2 Market capitalization and the number of real estate companies of the FTSE/EPRA NAREIT Germany Index. *Source:* EPRA (2015); Own illustration

listed residential property market started in order to achieve economies of scale, greater market penetration and to increase the efficiency in their housing management efforts. Consequently, Deutsche Wohnen and GSW Immobilien AG merged in 2013 and Deutsche Annington took over Gagfah in 2015. In the commercial property market segment a similar development cannot be observed, considering the fact that the market capitalization of approximately 8.5 billion euros is significantly lower than for residential property companies (with approximately 15.7 billion euros) and additionally the formerly biggest commercial property company, namely IVG Immobilien AG, is no longer listed.

Since their introduction in 2007, the FTSE/EPRA NAREIT Germany REIT Index records the development of German REITs. Due to the low market capitalization of Fair Value REIT AG (January 2015: 67.7 million euros) only Alstria Office REIT AG and Hamborner REIT AG were quoted at the end of 2014. The market capitalization of the German REIT market therefore amounted to only 1.1 billion euros at the end of 2014.

Alongside the relatively low market capitalization, the limited free float is also a serious problem for many German REOCs. This creates the risk for institutional investors that significant price reactions can be initiated by transactions and that the completion of the order takes longer than expected. The comparatively small segment of listed real estate in Germany is also partly explained by the regulatory disadvantages compared to open-ended funds and the REIT status that was not available until 2007. However, the German REIT market suffers not only from the dissatisfactory REIT legislation. The point of introduction and the subsequent crises impeded new REIT IPOs and the conversion of existing REOCs. Nevertheless, the

potential for listed real estate stock companies in Germany is without doubt substantial. Not only the low capitalization of REOCs and REITs in comparison to the total real estate market but also the high property-holding rates in Germany are indicative of the high potential through the mobilization of capital tied up in real estate.

2.3 REOCs and REITs in the European Context

Considering the German listed real estate market in a European context, its secondary role is clearly visible (see Fig. 3). In Europe, the United Kingdom is by some margin the country with the most listed real estate companies and the highest market capitalization. This is partly explained by London being Europe's most important financial and real estate metropolis. As in Germany, the United Kingdom only recently enacted Real Estate Investment Trusts, which have been expanding the investment spectrum since 2007.⁶ In contrast to Germany however, the United Kingdom already had a long-standing and flourishing listed real estate sector, as clearly shown in the figure. On top of this comes a well-developed stock market culture. Since the crash in the British real estate market between 1990 and 1992, the real estate sector grew to a market capitalization of around 75 billion euros, ten times the volume of the sector in Germany.

However, the strong reliance on the finance sector in the positioning of London as the financial center of Europe meant that the financial and economic crisis affected the British sector all the harder and resulted in the market capitalization sinking to 15 billion euros. By the end of 2014 the British real estate equity capital market has recovered substantially, amounting to approximately 62.6 billion euros. The largest company in the British real estate stock market is Land Securities, with a market capitalization of 11.7 billion euros, followed by British Land (10.1 billion euros) and Hammerson (6.1 billion euros).⁷

The Netherlands is also home to a significant real estate capital market. Due to the small domestic market, Dutch companies began early to invest abroad and brought holdings to impressive levels. This was certainly helped by the so-called FBI status ("Fiscale Beleggings-instelling") with which the REIT concept was introduced as early as 1969.⁸ During the global financial crisis and the subsequent sovereign debt crisis the real estate sector shrunk from approximately 19 billion euros to 5.1 billion euros. In the last 2 years, however, the market capitalization of the FTSE EPRA/NAREIT Netherlands index grew substantially due to both the recovery of the domestic real estate capital market and the inclusion of Europe's largest real estate stock company in the index, namely Unibail-Rodamco (former France). At the end of 2014 the six companies quoted in the EPRA Index had thus a

⁶ EPRA (2009).

⁷ EPRA (2014a).

⁸ EPRA (2009).

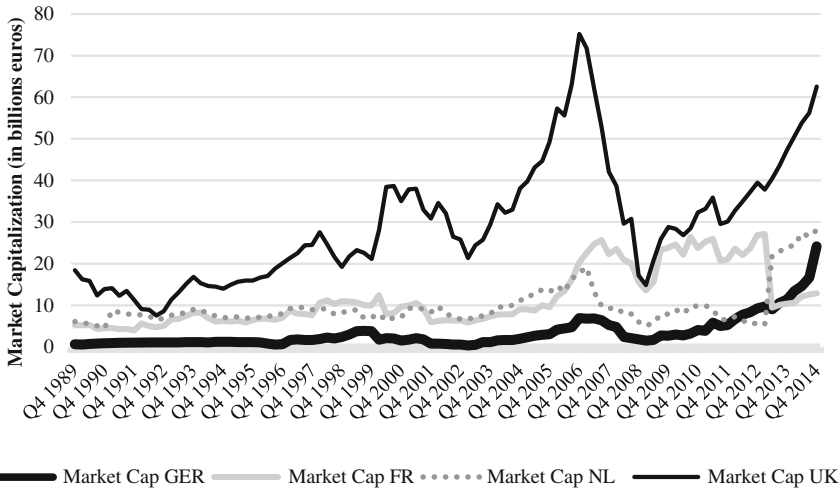


Fig. 3 Market capitalization of the largest countries of the FTSE/EPRA NAREIT Europe Index. Source: EPRA (2015); Own illustration

total capitalization of approximately 28.1 billion euros, with Unibail-Rodamco (20.7 billion euros) dominating the Dutch real estate market and towering above Corio (2.9 billion euros), Wereldhave (2.0 billion euros) and Eurocommercial Properties (1.4 billion euros).⁹

The fourth-largest country segment in Europe is now occupied by French real estate stock companies. Listed real estate operating companies in France were for a long time the only real estate investment form due to a lack of alternative products. France only introduced open-ended real estate funds—OPCI (Organismes de placement collectif dans l'immobilier)—on 1 January 2006.¹⁰ Due to the long lack of open-ended real estate funds and the significance of the Parisian real estate market, listed real estate companies consequently have a long tradition. With the implementation of the REIT concept in the form of the SIIC (Société d'investissement immobilier cotée) in 2003, they have gained an additional boost. France's listed real estate sector grew to a market capitalization of 25.7 billion euros and was therefore already 3.5 times the size of the German market. After a preliminary low-point of 13.6 billion euros, the French real estate stock market has also recovered to a volume of 23.8 billion euros. Due to the exclusion of Unibail-Rodamco in 2013, the market capitalization of the French real estate capital market was merely 13.0 billion euros at the end of 2014. With six companies in the index, France occupies now the fourth rank behind the United Kingdom, the Netherlands and Germany. The largest companies of the French real estate capital market are

⁹ EPRA (2014a).

¹⁰ BVI (2006).

Table 2 Composition of the FTSE/EPRA NAREIT Europe Index in 1990 and 2014

	Companies/market cap in millions euros 1990		Index weight 1990	Companies/market cap in millions euros 2014		Index weight 2014
AT	–	–	–	3	2,701	1.71 %
BE	1	448	1.01 %	7	4,563	2.89 %
CH	2	1,000	2.24 %	4	8,293	5.26 %
DE	3	681	1.53 %	11	24,224	15.35 %
ES	2	1,586	3.56 %	–	–	–
FI	–	–	–	3	1,896	1.20 %
FR	4	5,271	11.83 %	7	12,955	8.21 %
GB	28	18,469	41.43 %	30	62,600	39.67 %
GR	–	–	–	1	293	0.19 %
IE	2	437	0.98 %	–	–	–
IT	2	516	1.16 %	2	814	0.52 %
NL	5	6,152	13.80 %	6	28,097	17.80 %
NO	2	3,042	6.83 %	2	832	0.53 %
PT	1	169	0.38 %	–	–	–
SE	4	6,802	15.26 %	1	10,539	6.68 %
EU	56	44,573	100.00 %	77	157,807	100.00 %

Source: EPRA (2014a); Own illustration

Grecina (3.5 billion euros), Klepierre (3.5 billion euros) as well as Foncière Des Régions (2.6 billion euros).¹¹

Table 2 illustrates the composition of the FTSE/EPRA NAREIT Europe Index of the years 1990 as well as 2014. As already mentioned, the United Kingdom takes the largest proportion of the index (39.7%), followed by the Netherlands (17.8%), Germany (15.4%) and France (8.2%). Having only one or two real estate stock companies listed in the index, Greece (0.2%), Italy (0.5%) and Norway (0.5%) are the countries with the smallest market capitalization. Spain was for a long time a large component of the index and achieved a market capitalization of around 8.5 billion euros in 2007. However, the Spanish real estate crisis, the global financial crisis as well as the subsequent sovereign debt crisis led to the exclusion of Spain from the index. Furthermore, Ireland—despite a long-flourishing real estate market—and Portugal are no longer represented in the index. As explained above, the current upswing in the German listed real estate market is essentially caused by the development in the listed residential property segment. Since the introduction of the FTSE/EPRA NAREIT Index in 1990, the European real estate capital market has grown strongly from 44.5 billion euros to 157.8 billion euros.

¹¹ EPRA (2014a).

3 Success Factors and Value Drivers of REOCs and REITs

The equity capital market presents REOCs and REITs—as with all listed companies—with numerous challenges. Decisive for the attractiveness to investors is that the management is in the position to generate sustainable cash flows and results and thus to grow profitably in the core business. In order to achieve this goal, many different value drivers are available to managers that ensure and increase success on the capital market. The challenges of the capital market on the management, the nature and orientation of the company as well as further success factors and value drivers of listed real estate companies are presented below.

3.1 Management Quality and Track Record

The quality and experience of the management generally plays a decisive role in the success of a REOC or REIT. Along with outstanding real estate market experience, investors also expect extensive capital market experience. Moreover, against the backdrop of focusing on one real estate type or region, it appears advantageous for management to have in-depth specialist knowledge. As trust in the management is of great importance in investment decisions, special attention should be paid to the selection of the management.¹²

In contrast to REITs, REOCs are not restricted to portfolio management and can thus also engage in active trading and project developments. This places additional requirements on the quality and experience of the management, which is all the more the case with companies that have diversified over several different business fields, so that management should be extended to include specialists in the corresponding fields.

3.2 Orientation of the Business Model

The management of listed real estate companies has various options for their investment portfolio foci, as they can concentrate on particular real estate segments or usage types as well as specific geographical regions or pursue a broader investment strategy. The management of REOCs can also decide on focusing on individual business fields (investment, project development, trade, etc.). With REITs, the business field is, as already described, largely limited to managing an existing portfolio.

REOCs and REITs should focus on specific regional markets and/or specific property sectors in the management of their real estate portfolios. The concentration on such core competences promotes the achievement of a leading market position in the respective field and frees both financial and organizational resources.

¹² Schäfers et al. (2008).

Through the concentration on the positively developing real estate segment, above-average returns can be generated. A regional focus with a strong local basis allows a faster recognition and reaction to changes in regional markets as well as the exercising of corresponding market advantages. Through the regional and sectoral focus, investors have the possibility to select a company that covers the desired market segment in the desired region and that best complements their own investment portfolio.¹³

Alternatively, the following of a diversification strategy in contrast to a specialization on individual real estate sectors, regional markets or specific segments can reduce the risk associated with specific sectors and markets. However, this is for various reasons not in the best interests of the investors. On the one hand, the efficiency of the management sinks due to the frequently insufficient know-how in individual markets or real estate segments. On the other hand, the investors themselves are in the position to diversify at their own portfolio level, and therefore search for investment opportunities that best complement their investment portfolio.¹⁴

3.3 Exploitation of Market Cycles

Through active exploitation of real estate market cycles, REOCs and REITs can realize significant value potentials. This can be achieved through short-term buying and selling of real estate, whereby in poor market phases real estate and real estate portfolios are acquired at favorable rates and are sold again after the market has recovered. Alternatively, these properties can also be held long-term in the portfolio and the value potential developed over the investment period. The precondition is again a strong capital basis or opportunities for (external) financing in weakening market phases. In particular for internationally active REOCs, significant value creation potentials arise through the shifting European real estate market cycles. Restrictions emerge for REITs, as these are only permitted to conduct trade with their real estate portfolio to a limited extent.

3.4 Value Creation in the Portfolio

An essential component of the strategy of a real estate company should be a regular analysis of the development and value creation potential of the company's real estate portfolio. In particular in phases with a lack of investment opportunities or limited financing options, value creation in the portfolio represents a low-cost opportunity to increase the company value compared to new acquisitions. A precise knowledge of the market development as well as the early recognition of certain

¹³ *ibid.*

¹⁴ *ibid.*

trends are absolute prerequisites. Opportunities can arise for example through the conversion of (vacant) spaces and properties, renovations and refurbishments.

Further prerequisites are the precise knowledge of the needs and requirements of the tenants of the rented spaces. A regular dialog can improve the relationship with the tenants and also their satisfaction levels, which can be manifested in long-term rental contracts and new tenants through recommendations. This is of significance considering the low costs of contract extension compared to finding tenants and drawing up new contracts.

For German REITs, the opportunity for value creation does exist, albeit limited by regulations. §12 Para. 3 in conjunction with §3 Para. 6 REITG prescribes that at least 75 % of the gross earnings must come from letting, leasing and renting including real-estate-related activities or the disposal of immovable assets, whereby “real-estate-related” is understood to include such activities as the management, maintenance and development of real estate portfolios (in particular technical and commercial portfolio management, rental stock management, mediation activities, project management and project development). This limits the extent to which REITs can pursue value creation in their portfolios.

3.5 Project Development

A further lever for the realization of revenue beyond that achieved from rental income is project development. Unlike in the rental market, high returns can be realized, as long as the higher capital costs associated with the risk can be outperformed. Project development should only be undertaken with corresponding internal know-how or through the adoption of joint ventures with experienced local partners. A scale of the project development activities in relation to the total real estate portfolio should not be overstepped. As REOCs are paying for return potentials from 10 to over 20 % through a significantly higher risk compared to portfolio holding, a balanced opportunity/risk profile must be considered.

Along with a specific knowledge of the respective real estate market and the ability to anticipate future developments, a possibly differently-natured requirement profile on the future rental areas must be considered before every project. In the face of increasing energy and service costs, sustainability aspects should also be considered during the conception, as in the recent past a trend towards “green buildings” is recognizable on the side of users, investors and project developers. The realization itself requires a strict and continuous project controlling to ensure budget compliance with subsequent post-completion, and an as early as possible pre-leasing and, in the ideal scenario, the sale already before completion. A rental contract closed already before building start or completion reduces the risk for the REOCs and makes it easier to find a financier or a purchaser for the property. Due to the already mentioned regulations, the opportunities for REITs to apply this value driver are limited.

3.6 Growth Fantasy

The equity story should, along with the already presented orientation of the business model and portfolio, above all illustrate the growth potential of the company. The difference between internal and external growth must be clarified here.¹⁵

Internal growth of a real estate stock company is above all achieved on the basis of an active management of the portfolio properties, for example through the use of development potentials, modernization, use-related restructuring, improvements in the rental structure, minimization of vacancy rates and portfolio optimization, as well as by means of trading real estate and successful project development, and is generally valid as a reliable indicator for the quality of the management. The potential for internal growth should be clearly communicated. Indicators for internal growth can include sustainably increasing rental income, a continually increasing net asset value as well as increasing cash flows or dividend payouts.¹⁶

Substantial growth for the expansion of the company can often only be realized externally in the framework of merger and acquisition transactions. The possibilities of external growth depend strongly on the market environment, as the internal financing options are often insufficient and the financing must therefore be guaranteed externally via the capital market.¹⁷

3.7 Size, Liquidity and Capital Structure

Further success factors of a REOC or a REIT are its size, liquidity and capital structure. International investors prefer companies with a high market capitalization and high free float, which allows the buying and selling of large blocks of shares without strongly influencing the share price of the affected company. REITs have an advantage in this respect over REOCs due to their legally stipulated free float. With increasing market capitalization the number of stock market analysts accompanying the company also increases, creating additional demand from investors. As pointed out by Scholz et al. (2014, 2015), stock liquidity as well as the underlying asset liquidity are significant pricing factors in real estate stock returns, even after controlling for market, size and book-to-market factors. In addition, real estate stock returns are predominantly positively related to stock liquidity risks, suggesting that real estate equities tend to behave like illiquid common equities.¹⁸ Moreover, the capital structure of a REOC should fit to the corresponding business model and be aligned with the portfolio structure.¹⁹

¹⁵ *ibid.*

¹⁶ *ibid.*

¹⁷ *ibid.*

¹⁸ Scholz et al. (2014, 2015).

¹⁹ Schäfers et al. (2008).

In contrast to REITs, REOCs are not bound to a maximum leverage ratio. While REOCs are free to decide on their leverage, the equity of REITs may not fall below 45 % of the amount with which the immovable assets in the financial statements and consolidated accounts are set. Nonetheless, an excessive use of debt is to be resisted, as particularly in weakening markets problems through the breaching of covenants as well as through possible refinancing can occur.

3.8 Transparency and Corporate Governance

In the competition for capital, convincing capital market communication between the company and its shareholders is essential. A REOC or REIT must be able to comprehensively and promptly communicate its equity story, value and appreciation potentials. The goal must be to inform shareholders, potential investors, financial analysts and financiers as good as possible and to make all relevant information available to them so that they can build up a well-founded picture of the value and valuation of the company. Information on the real estate portfolio (e.g. sectoral or geographical distribution, rental branches etc.) as well as the determinants of the real estate value (e.g. contract rents, growth rates of income and expenditure, vacancy rates, utilized discount rates) is essential. As shown by recent studies, REOCs and REITs inadequately fulfill this information requirement due to missing statutory or voluntary information.²⁰

Transparent reporting can deliver a substantial contribution to the increase of the capital market valuation. This reduces information asymmetries, “agency costs”, the problem of adverse selection as well as liquidity and valuation risks and thus increases the company value.²¹ This relation was recently empirically demonstrated for European REOCs and REITs by Kohl (2009) as well as Kohl and Schäfers (2012). REOCs and REITs should increase the transparency of their reporting to realize this potential.²² This can be achieved for example through the voluntary use of the EPRA Best Practices Recommendations. These include, alongside additions to mandatory IFRS information, real-estate-specific information, in particular recommendations on the uniform exercise of IFRS voting rights. Its recommendations fulfill the information needs of both investors and analysts and therefore contribute significantly to an increase in the transparency and to a better comparability of listed real estate companies in Europe.²³

Alongside transparent reporting, general standards following corporate governance are also essential. These include in particular the freedom of managers from

²⁰ Feri Eurorating Services AG (2008), Rehkugler and Goronczy (2009), Cometis AG (2009), Kohl (2009), and Kohl and Schäfers (2012).

²¹ Healy and Palepu (2001), Bushman and Smith (2003), Callahan and Smith (2004), and Lang et al. (2012).

²² Kohl (2009) and Kohl and Schäfers (2012).

²³ EPRA (2014b).

conflicts of interest. Good internal corporate governance can increase the value of the real estate company, as recently shown by Kohl and Schäfers (2012).²⁴ Compliance with the code of the Initiative Corporate Governance of the German real estate industry should take place in every REOC and REIT.

4 Final Remarks

In this chapter, REOCs and REITs as a form of indirect, stock market investments in real estate are presented. In comparison to the stock market as a whole, German real estate stocks play—despite the importance of the local real estate market and the advantages associated with the securitization of real estate in the form of shares—a minor role. This makes the German real estate capital market rather under-represented in Europe, even though the recent boom in real estate stocks did not pass by Germany completely. REOCs differentiate themselves from REITs above all through the corporate taxation as well as lack of any restrictions on investments, disposals or business fields, so that the resulting extended activity area is riskier, but able to access further sources of revenue such as project development.

In view of the historical development of REOCs and REITs in Germany, their future remains exciting. For example, how will the listed residential property market further develop? Will there be more takeovers or further IPOs? And what will happen to the commercial property segment? While their potential through the low securitization of real estate and the high property-holding rates of companies is very large, it remains to be seen whether and especially how this potential will be realized. Their future status as an indirect form of real estate investment depends in particular on the development of both the local real estate markets and the European capital markets.

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²⁴ Kohl and Schäfers (2012).

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Possible Applications of Derivatives

Daniel Piazolo

Abstract

There is a great instrument to diversify a real estate portfolio quickly and cost effectively: Derivatives on real estate indices! Furthermore, derivatives have a very important hedging function. The global financial crisis has underlined the importance of better risk management. Consequently, hedging and the targeted reduction in exposure will be more used. This can be achieved with derivatives on real estate indices. Real estate investors may use derivatives to expand or reduce the allocation in certain markets and sectors. For example, investors may reduce the share of the German retail sector in their portfolio while they increase the share of French office properties. These possibilities to scale the risk exposure will make real estate derivatives an important instrument in the toolbox of portfolio managers. The availability of standardized real estate derivatives through Eurex and of custom-made real estate derivatives on the OTC market enables institutions to fine tune their real estate commitments. Consequently, with all the potential advantages, one might conclude that in the near future it will have become as much a standard to use derivatives on real estate indices to hedge against market risks, as it is now standard to use derivatives on currencies to hedge against exchange rate risks.

Keywords

Real estate indices • Derivatives • Market risk

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1 Real Estate Futures on International Derivatives Exchange

In 2015 it was possible to trade 13 different types of derivatives on property indices at Eurex, thereby reducing the market risks of property investments (see EUREX 2015). The Frankfurt based Eurex started first to trade futures on an overall country real estate index, namely on the IPD Annual Index for the UK real estate market. Over the last years Eurex then introduced futures on property sectors like “Offices” and then on property segments like “City Office”. Eurex is the international derivatives exchange market and is jointly owned by Deutsche Börse AG and SWX Swiss Exchange.

The refinement of real estate futures at Eurex has been an important development in Europe to open up with the exchange based trade a second route for derivatives on real estate indices besides the OTC (over-the-counter) activities of banks and institutional investors. Eurex is based in Germany, but until now the traded futures have as underlying the UK property index. However, the German property index DIX (Deutscher Immobilien Index) has been the base for OTC trades and has been used for swaps as well as options. In the following the various forms of trading types are discussed.

2 Correlation Between Real Estate Indices, Listed Real Estate Companies and Stock Market

Indices on listed real estate companies or REITs are sometimes seen as a proxy for the overall real estate market. Table 1 shows the annual return of German stocks (“MSCI Germany”), German property stocks (“E&G-DIMAX”) and German direct hold properties (“DIX”) between 1996 and 2014. The E&G DIMAX indicator from the bank Ellwanger & Geiger combines the performance of all listed real estate companies within Germany. Looking at the return, it becomes evident that both general German stocks, as represented by MSCI Germany, and listed real estate corporations, as represented by E&G DIMAX, offered a high return in good years (MSCI Germany 1999: 41.2 %, DIMAX 1999: 56.5). However, in some years, both indices went into dark red (MSCI Germany 2008: -42.7 %, DIMAX 2008: -49.7 %). By contrast, directly owned properties, as shown by the DIX, usually offered a single digit return but so far never a negative one. In other words, the DIX constantly performed with a positive return while general stocks and DIMAX strongly fluctuated between high gains and losses.

The DIX is exceeding general stocks when stocks have negative returns and the DIX is below stocks, when MSCI Germany performs with a positive annual return. This impression is also reflected in the negative correlation between MSCI Germany and DIX of -0.15, as shown in Table 2. In contrast, the correlation between MSCI Germany and DIMAX is +0.62. This might lead to the conclusion that an index on listed real estate companies is a far better proxy for the overall stock market than for the real estate market. In this line of thinking it is thus the conclusion to use real estate indices on direct hold properties to approximate the development of the real estate market. Consequently, it can be argued on the one

Table 1 Annual return (in percent)

	General stocks	Property stocks	Direct property
	MSCI Germany (%)	E&G-Dimax (%)	DIX (%)
1996	22.9	-12.9	4.9
1997	45.9	20.0	3.5
1998	20.3	37.6	4.0
1999	41.2	56.5	5.0
2000	-9.5	-25.4	5.4
2001	-17.7	-2.3	5.4
2002	-43.1	-19.9	3.8
2003	37.1	-3.2	3.0
2004	8.3	8.3	1.4
2005	27.4	38.4	0.7
2006	22.4	46.3	1.6
2007	22.6	-31.4	4.5
2008	-42.7	-49.7	2.9
2009	22.6	20.2	2.0
2010	16.9	19.2	4.2
2011	-14.7	-11.9	5.3
2012	30.1	32.5	4.2
2013	26.7	3.1	5.2
2014	2.8	38.4	6.0
Average	11.5	8.6	3.9

Source: MSCI, Privatbank Ellwanger & Geiger, own calculations

Table 2 Correlation MSCI Germany

	General stocks	Property stocks	Direct property
	MSCI Germany	E&G-Dimax	DIX
MSCI Germany	1.00	-	-
E&G-Dimax	0.62	1.00	-
DIX	-0.15	-0.18	1.00

Source: MSCI, Privatbank Ellwanger & Geiger, own calculations

hand that market participants who want to diversify away from stock market risks should focus on derivatives on real estate indices composed of directly held properties such as the DIX. On the other hand, it should be also noted that REITs correlate with general equities, but cointegrate rather with real estate. Thus, there is also the opportunity for long-term investors to diversify the portfolio with REITs.

3 Exchange Traded Real Estate Derivatives

The main derivative types for the real estate world that are traded on the exchange are futures and certificates. Of course, derivatives in other markets have developed further varieties such as collars, floors etc. and it is likely that also the real estate world will make use of these tools in the near future. In this chapter, we focus on the types that have been used already for real estate indices.

Futures are standardized financial instruments that are traded at a derivative exchange. The buyer of a futures contract must sell or buy a certain underlying instrument at a certain date at a specific price. Hence, both contracting parties must exercise the contract in contrast to options described below. For example, an investor is looking to sell his property in a year. Futures allow him to lock in today's prices and offer him strategic income security. If actual prices have fallen by the time the investor will sell, he will lose money on his property but receive a premium for the futures. If market prices have risen by the time he wants to sell, he will lose some money on the futures but earn higher profits from the sale of his properties on the market. In times of uncertain real estate price development, future markets are good for experienced investors. However, they carry a higher risk than options (see also Baran et al. 2008).

The Chicago Mercantile Exchange (CME) offers futures based on the S&P/Case-Shiller Home Price Index (see below). Investors can trade contracts on single-family home price indices for ten major U.S. metropolitan areas and one composite index. These US activities in the residential sector highlight that it is also possible for markets like Germany to use derivatives not only for commercial properties but also for the residential area.

Certificates are capital-based financial instruments: The buyer invests a certain amount and pays this to the emitter of the instrument. Barclays Bank was the pioneer in this area. Through the real estate crisis in the UK at the beginning of the 1990s, many debtors were not able to pay their mortgages. Barclays and other banks acquired through foreclosures various properties. In order to reduce the exposure to the real estate market, Barclays issued Property Index Certificates (PICs) in 1994. These certificates ensure that the investor receives a return linked to a real estate index. For the UK the basis for these certificates is the IPD UK Annual Index. Real estate index certificates can widen the investment universe of retail investors. Since September 2006 it has been possible to trade a real estate index derivative certificate at German stock exchanges starting at 15 euros. Goldman Sachs has been offering certificates on the IPD UK Annual Index in Germany shortly after its introduction to the UK market. Thus, a German small retail investor can participate via a derivative certificate in the development of the UK real estate market. The value of the derivative depends on the development of the UK real estate total return measured by the underlying UK Annual Index, which is based on the information of over 10,000 properties. Consequently, an investment in real estate is possible without actually directly owning any property or in other words, one synthetically invests in the whole UK real estate market covered by the respective index.

4 Over-The-Counter (OTC) Derivatives

Until the advent of derivatives institutional investors had only been able to influence the risk return profile of a real estate portfolio through measures on property level. Now, derivative swaps offer a cost-effective way to specifically change the risk return profile. The systematic risk of a national real estate market can be encapsulated via a real estate derivative. Then, the total return of a real estate index is swapped against a floating or a fixed interest rate (see also Geltner and Fischer 2008). As a result an investment product can be structured that only carries the unsystematic risk of the individual properties.

A swap offers a chance for real estate investor A who is confident that he can manage his properties more effectively than all market participants on average. The counterparty for this swap is bank B which will try to eliminate its own risk exposure through a second swap with investor C. Investor C, for example, could be a foreign real estate funds that wants to increase the weight of the German market in its portfolio. C will receive the total return and the systematic risk of the German real estate market. In return, C pays a fixed or a floating interest rate via bank B to investor A.

Consequently, for a specified time period the risk and return opportunities are traded between two parties without any change in the ownership of properties. Investor A pays for example the DIX total return to bank B which passes the total return on to investor C. In reverse, C pays an interest rate to B which is passed on to investor A. In most cases, it is negotiated in advance that only the debtor is paying the creditor the resulting difference i.e. the cash flows are netted. The specified time period for a swap usually ranges between 1 and 10 years, thus both parties know the specific end of the transaction. The seller of the total return of the German real estate market (investor A) can automatically re-enter into the real estate market, once he has decided not to renew the swap. In contrast, if investor A had decided to sell directly owned properties, then the decision to re-enter into the German real estate market and build up a real estate portfolio would require substantial efforts.

The first over-the-counter UK real estate swap on the IPD All Property Index versus 3 months LIBOR was traded in 2004. Since then the swap market has grown and has diversified into real estate sectors and sub-sectors.

5 Options: The Right, Not the Obligation

A real estate index option gives the buyer the possibility to benefit from the positive performance of a real estate market without bearing the risk of a negative performance. In return, the issuer of the option demands a price in advance which reflects the potential of this right. In other words: Options are conditional futures. That means one of the contracting parties may choose if the transaction takes place. The buyer of an option has the right but not the obligation to buy (call option) or sell (put option) a certain amount of units of a basis value at a pre-set price. The deal may be

carried out either within a certain time frame (American option) or at a specific date (European option). The seller of the option takes the contrary position.

The investment bank Goldman Sachs was the first bank to issue options on the real estate market in 2004. The British house price index Halifax House Price Index (HPI) is the underlying for this option. As for futures, the Chicago Mercantile Exchange (CME) issues call and put options on ten U.S. metropolitan areas based on the S&P/Case-Shiller Home Price Index. This financial instrument is also available for small private investors to hedge against decreasing home prices. The Zurich Kantonbank offers call options bound to the Zurich house price index (ZWEX) since 2006 (see also Syz 2008). This shows that options are traded on the exchange, but they are also available as an OTC product.

6 Benefits and Costs of Derivatives on Real Estate Indices

Obviously, the involved exchange platform or the bank as intermediary in any derivative trade will get paid for its provided services and own risk exposure. Especially in the case of retail investors these transaction costs should not be neglected. In the case of the above mentioned certificate, the involved bank Goldman Sachs is adjusting the index by 2.8 % p.a., consequently reducing the return of investors. Between 2004 and 2006 the UK IPD Annual Index on average increased by 18.5 % p.a. Thus the adjustment of the index in such profitable times can be seen as fair entrance fee. The correct pricing of real estate derivatives draws on the insights of the approach for established derivative markets on other asset classes, as set out by Patel and Pereira (2008). With respect to investors with an investment horizon of several years, it should be analyzed if the transaction and management costs of for example open ended real estate funds are for such a period favorable compared to the ones of derivative certificates. Concerning large institutional investors, it should be noted that with an investment of derivatives on real estate indices an investor buys the “systematic risk”, while real estate portfolios offer the possibility to buy the “unsystematic risk” which can offer further opportunities. The advantages, disadvantages and cost associated with a transaction of direct real estate investments and derivatives on real estate indices are shown in Table 3.

Derivatives also carry certain risks. One risk of a derivative on real estate indices, which is wanted by buyers of the synthetic real estate market, is the dependence of cash flows determined by the development of the real estate market. If the development of the DIX is positive, then the buyer of the DIX total return has a good position, because he was right with his assumptions. However, if the DIX total return is only small or even negative, then the buyer has to pay the seller the pre-negotiated interest payment without being over-compensated through the receipt of the DIX total return.

A further risk of a real estate index derivative concerns the solvency of the counterparty. In most cases, a bank acts as a mediator between both parties and carries this risk. If for example the DIX total return is extremely high, it is theoretically possible that the counterparty is not able to pay its debts.

Table 3 Advantages and disadvantages of directly held real estate versus derivatives on real estate indices

	Directly held property	Derivatives on property indices
Advantages	Full autonomy of decision and direction for property portfolio	Enable to diversify risk across geographies
	Generate Alpha—Increased returns in comparison to the market as a whole possible	Potential to minimize risks or manage them consciously
	Long-term protection of property (e.g. site for headquarters)	Short-term investment in property feasible
	No predefined time limit on property return	Fast implementation of strategies
	Clear and established supervisory regulations	Low transaction costs for acquisition and sale
Disadvantages	High transaction costs for acquisition and sale; high administrative costs	If invested for a longer period fees for derivatives exceed the saved transaction costs for direct investments
	Considerable acquisition and sale periods	No outperformance of the market possible
	Cluster risk	Danger of default of counterparty
	Always a combination of systematic (market) and unsystematic risks (e.g. tenant)	Derivatives count as liquidity not as property holding, thus for some investors who are allowed only a maximum share of liquidity only of limited use
Costs/Fees	Transaction costs for property acquisition and sale range between 4 and 8 % of the investment volume	Institutional investors: Swap: 0.1–0.2 % of the nominal transaction value per year
	Operating costs are only partly covered by tenants	Futures: Fees for Eurex 10 euros for orderbook trades plus fees for broker
		Private investors: 2.8 % annual index deduction as fee for certificates from Goldman Sachs UK IPD tracker (minimum investment 15 euros)

Source: Own representation

Consequently, most institutional investors limit the possible amount of their exposure with counterparties or banks. With respect to derivatives, this business risk for other kinds of investments is usually reduced as all outstanding amounts are balanced and only the debtor has to make a safety deposit for all currently outstanding debts. However, as long as real estate indices are published only once per year, this kind of risk reduction is only partially possible for real estate index derivatives.

7 The Bases for Derivatives

The existence of a qualified real estate index is decisive for the development of a real estate derivatives market. This index has to meet different standards such as sufficient index size, market coverage, historical data series and compilation by an independent third party. IPD Investment Property Databank GmbH, now part of MSCI, has been issuing such an index for Germany since 1996. Within MSCI Inc. IPD indices are published for various countries. Real estate Indices that are useable for derivatives—either from MSCI or from non-MSCI sources—are set out in the following.

8 IPD German Property Index DIX Deutscher Immobilien Index

The German Property Index DIX (Deutscher Immobilien Index) is based on an extensive databank which contains properties from the institutional investors with a valuation of the properties at least once a year. The DIX covers the performance of directly held institutional properties, but MSCI calculates also benchmarks that include the purchases, sales and developments of these investors. The institutional investors supply the data and receive in return a portfolio analysis relative to the benchmark of all participants. The DIX consists therefore of primary data mirroring the relevant financial accounts and business reports of the data supplier. MSCI validates and double checks all the supplied information to enforce high data quality.

The DIX shows performance as total return as a product of income return and capital growth. Capital growth is the net increase of the market value of all properties in the year adjusted to capital expenditures. Income return is calculated as net rental income which is calculated as gross rental income minus non-allocated operating costs of the year reviewed. Both values are expressed in percent of the capital invested [6]. The derivatives on the DIX had the form of swaps or options. Some of these derivatives were so-called quantos, i.e. the increase in the DIX was not paid in Euros, but in a different currency. Such a type of derivative is attractive for investors who wish to have exposure to the German real estate market, but without the corresponding exchange rate risk. Until now, there are no futures on the DIX. However, Eurex plans to introduce besides the already existing futures on the UK Index additional futures on the IPD French Index and on the German Index DIX.

MSCI Inc. issues IPD indices for 30 countries and several aggregated indices such as the Global Index or the Pan-European Index. All IPD indices are based on the approach as described for the German Property Index DIX. They are based on primary data and make it possible to develop indices for the main market sectors (like France office) and segments (like Lyon office). Main market sectors are usually retail, office, industrial and residential. These markets can normally be

Table 4 Underlying indices for real estate derivatives

	Start of index	Method	Geography	Published by	Sectors	Traded derivatives	Frequency of update	Sub-indices	Source
E&G DIMAX	1988	Stock market based. Reflects development of listed real estate companies	Worldwide	Ellwanger & Geiger	All, since stock market based		Weekly	E&G EPIX, E&G ERIX	www.privatbank.de
FTSE EPRA/NAREIT Global Real Estate Index Series	1990	Stock market based. Reflects development of listed real estate companies	USA, EMEA, Asia	FTSE	All, since stock market based	Futures	Daily	23 Sub-Indices	www.ftse.com
Global Property Research 250 Index	1989	Stock market based. Reflects development of listed real estate companies	Worldwide	Global Property Research	All, since stock market based	Certificates	Daily	Country specific	http://www.propertyshares.com/images/pdf/LaunchGPR250REITIndex.pdf
Halifax House Price Index	1983	Transaction based	UK	Halifax	Residential	Futures, Swaps, Options, Certificates	Monthly	New and Old	http://www.lloydsbankinggroup.com/media/research/halifax_hpi.asp
HKU-REIS University of Hong Kong Real	1991	Transaction based	Hong Kong	University of Hong Kong	Residential	Swaps	Monthly	HKU-HRPI (Hong Kong Island Residential	http://housingderivatives.typepad.com/housing_derivatives/

(continued)

Table 4 (continued)

	Start of index	Method	Geography	Published by	Sectors	Traded derivatives	Frequency of update	Sub-indices	Source
Estate Index Series								Price Index); KRPI (Hong Kong Kowloon Residential Price Index); NRPI (New Territory Residential Price Index)	files/hku_real_estate_methodology.pdf
IPD Annual All Property Indices	1980	Valuation based	Worldwide	IPD	Office, Retail, Residential, Industry, Others	Swaps, Options, Futures	Monthly, Quarterly, Annually depending on country	Country and Sector specific	www.msici.com
NPI NCREIF Property Index	1977	Valuation based	USA	NCREIF	Office, Retail, Residential, Industry, Hotels+F2	Swaps	Quarterly	Sector specific	www.ncreif.com
RPX Radar Logic Real Estate Index	2000	Transaction based	25 Regions USA	Radar Logic	Residential	Total Return Swaps	Daily	Regional	www.radarlogic.com
S&P/Case-Shiller Home Price Index	1967	Transaction based	20 Regions USA	Standard & Poor's	Residential	Futures und Optionen an der CME	Monthly	Regional	www.standardandpoors.com/

S-BOX DIMAX Germany	2007	Stock market based. Reflects development of listed real estate companies	Germany	Börse Stuttgart AG, Structured Solutions AG, Ellwanger & Geiger	All, since stock market based	Certificates	Daily	None	www.boerse-stuttgart.de
S-BOX DIMAX Eastern Europe	2007	Stock market based. Reflects developments of listed real estate companies	Eastern Europe	Börse Stuttgart AG, Structured Solutions AG, Ellwanger & Geiger	All, since stock market based	Certificates	Daily	None	www.boerse-stuttgart.de
ZWEX Zurcher Residential Index	1980	Transaction based	Kanton Zurich	IAZI AG (Informations- und Ausbildungszentrum für Immobilien)	Residential	Certificates	Quarterly	ZWEX Lake, ZWEX Region	http://www.zkb.ch/de/center_worlds/eigenheimcenter/markinfos/wohneigentumsindex_zwex/index.html

Source: Own representation

further disaggregated into segments such as geographical areas, size bands etc. These specific indices (like UK retail) have been used as basis for derivatives.

9 Other Available Real Estate Indices

Other real estate indices useable for derivatives are listed in Table 4. Further assessments of the use of derivatives on real estate indices to manage especially European real estate risk are given by (Fabozzi et al. 2010).

One important aspect of differentiation between the various indices is connected to the method of data collection. There are two types: Valuation-based indices and transaction-based indices. Valuation-based indices express a total return calculated on basis of the estimated current market value and the income return. Transaction-based real estate indices generate their values from real estate transactions at actual prices paid at the market. Most non-IPD indices are transaction-based except the NCREIF Property Index, which also uses the valuation-based method. Both methods have advantages and disadvantages. Challenges for the valuation-based indices concern the reliability of the estimated real estate values and time-lags between valuation and calculation of the indices. Transaction-based indices encounter problems due to the heterogeneity of property (size, quality etc.) and low frequency of transactions. Statistical methods such as Repeat Measures Regression are used to increase precision. Hedonic price models and the Repeat Sales Price method improve transaction-based indices.

Some researchers, like Geltner and Ling (2000), argue that transaction-based indices should be called real estate asset class research indices and valuation-based indices should be named evaluation benchmark indices. Transaction-based indices are more research-oriented and useful for statistical means. They show the general performance of an asset class excluding external effects such as management performances. Meanwhile valuation-based indices should be rather used to set benchmarks and measure performances of specific portfolios in comparison to the market as a whole.

10 Outlook: Substantial Growth Potential for Real Estate Derivatives

Derivatives on real estate indices have the potential to increase effectively the liquidity of real estate as an asset class. A well-functioning market for real estate derivatives will help diversify investment markets since real estate derivatives allow investors to change synthetically and quickly country allocations in their portfolios. If portfolio managers are able to increase or decrease their exposure in the various real estate markets they will be able to manage their risks better. The global financial crisis has also underlined the importance of better risk management. This leads to an overall optimistic anticipation for the real estate derivative market in Germany. The availability of real estate derivatives through Eurex and on the OTC market enables institutions to calibrate their investments to their desired exposure.

Overall, derivatives on real estate indices have also in Germany the potential to contribute in a substantial way to professionalize real estate portfolio management.

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Part V
Asset Classes

Development of Residential Property

Marcus Cieleback

Abstract

The German residential market has been in the focus of numerous (opportunistic) international investors in the last decade. In their view the market was undervalued offering significant potential to benefit from rising prices and a rising home-ownership rate, as Germany's was amongst the lowest in Europe. The actual development proved the business plans, based on these assumptions, by and large wrong. The investors missed out, that more or less stagnating prices and the low home-ownership rate are the result of the structural framework. A detailed analysis of the development of the demand and supply side reveals this, but also shows that institutional investors are only playing a subordinate role in the German housing market as private owners and investors dominate the market. As construction activity in the multi-family sector is recovering from its low, the importance of institutional investors is increasing, supporting the stable performance of the German residential sector already seen in the past.

Keywords

House prices • Housing completions • Rental market • Home ownership

1 Introduction

In the first few years of the new millennium, the German residential market has been in the focus of numerous (opportunistic) international real estate investors. These investors saw great opportunities in the German residential market. As a consequence the investment activity of international investors increased strongly, leading to significant changes in ownership structures of the institutional stock,

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which were not without political controversy. The results of these investment activities were huge portfolio transactions between 2005 and 2007. Approximately 175 portfolios each with more than 800 apartments were sold during this time. However, the significance of municipal block sales involving more than 10,000 apartments, that were of particular public concern, such as the sale of GSW (Gemeinnützige Siedlungs- und Wohnungsbaugesellschaft Berlin, 66,000 apartments) in 2004, GWG in Hamburg (Gesellschaft für Wohnen und Bauen mbH, 38,000 apartments) in 2005 and Woba Dresden (48,000 apartments) in 2006 has drastically declined after the WOBA-deal. Ultimately, in the years 2007, 2008, 2009 and 2010, no more municipal block sales took place, not least because of very strong public resistance.

The financial crisis not only had a significant impact on municipal block sales; also the overall transaction activity of residential portfolios in Germany was heavily affected. With the exception of LEG NRW (Landesentwicklungsgesellschaft Nordrhein-Westfalen GmbH), no more portfolios with more than 10,000 apartments were traded between 2008 and 2010, but the market made a real comeback in 2012. The publicly rescued Landesbanken BayernLB sold DKB Immobilien AG to TAG (25,100 apartments) in 2012 and GBW AG to a consortium of institutional investors led by PATRIZIA (29,400 apartments) in 2013 and Landesbank Baden-Württemberg also sold LBBW Immobilien GmbH to a consortium of institutional investors led by PATRIZIA (21,000 apartments). In addition DeWAG GmbH (13,000 apartments) and TLG WOHNEN GmbH (11,400 apartments) were sold and a number of IPOs happened, e.g. LEG Immobilien AG and Deutsche Annington SE. Consolidation became a major driver of transaction activity on the German residential market, starting in 2013 with the takeover of GSW Immobilien AG by Deutsche Wohnen AG. Deutsche Annington SE was the major player in the consolidation game in the years 2014 and 2015 with the takeover of Vitus Gruppe (30,000 apartments) in 2014 and GAGFAH Group as well as Südwewo (formerly LBBW Immobilien GmbH) in 2015 (Fig. 1).

After the period of the mainly opportunistic interest in the German residential market ended with the financial crisis, institutional investors like insurance companies and pension funds as well as other long term orientated (national and international) players are now the dominant buyers and drivers of the institutional German residential market. In the wake of the financial crisis, the “boring” investment class “residential property” has experienced a renaissance within this investor group. Particularly this investor group, but also family offices and wealthy private investors, are investing money in German rented residential real estate. The advantage of rented residential real estate is, that its tenant base is very granular, limiting the default risk, because in most cases the incomes of tenants of a residential facility are not closely correlated. A total loss of rental income as in the case of an office building with a single tenant is therefore significantly less likely. True, even residential real estate is unable to decouple from a general economic trend, but as housing addresses a basic need, tenants will attempt to maintain their accustomed environment as long as possible. Tenant fluctuation therefore will not increase

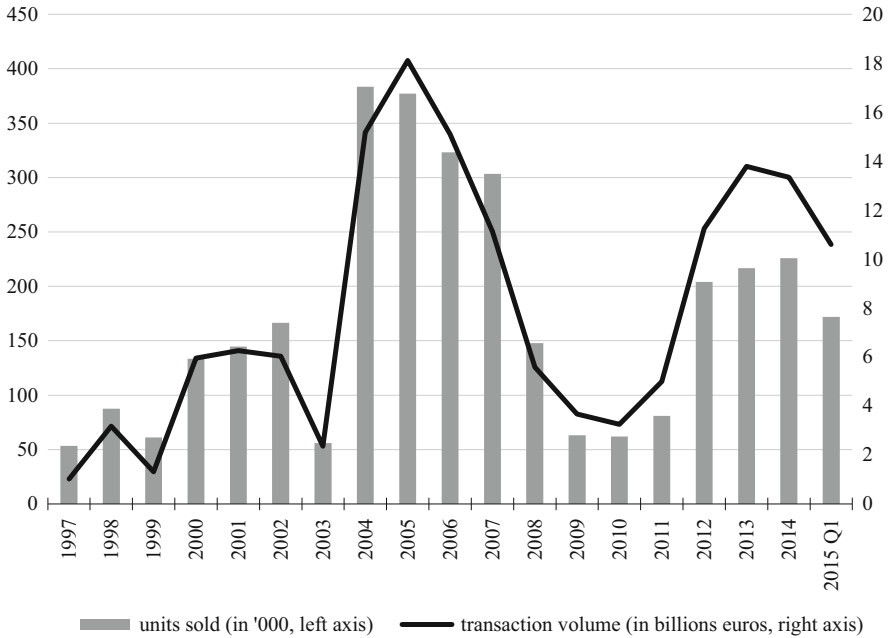


Fig. 1 Portfolio transactions in Germany. *Source:* CBRE

abruptly even in economically difficult times, as was the case in a lot of commercial portfolios during the financial crisis.

The remainder of the chapter is organized as follows: The next section gives an overview of the German residential market, also in comparison to international residential markets, explaining many reasons, why opportunistic players were attracted to the German market, but also highlighting some facts, which were not accounted for completely in their business plans, leading to the change of strategy of these opportunistic investors that could be observed in the past few years. Section 3 discusses the effects of the German reunification on the residential market, before in Sects. 4 and 5 the demand and supply side is discussed. Section 6 gives an overview of the (historic) market performance, and an outlook of the German residential market concludes.

2 The German Residential Market in an International Context

Why were so many (opportunistic) international investors investing in the German residential market at the beginning of this century? One of the main reasons was that the investors believed that few years after the millennium the German residential sector provided relative value due to lagging price performance over the last decade in comparison with other European countries. Given the low or in

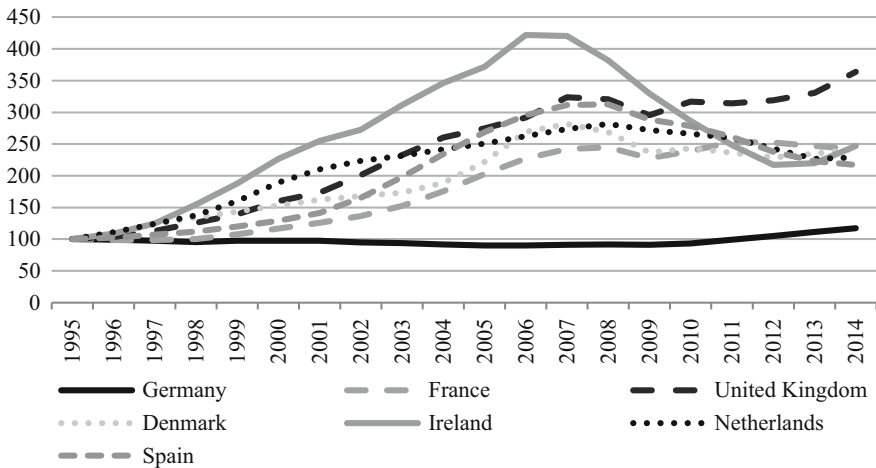


Fig. 2 Nominal house prices in Europe (Index 1995 = 100). *Source:* OECD, own calculations

some years even negative growth of house prices in Germany, limited downside was expected. This situation seemed to offer significant potential to benefit from rising prices, as a result of the comparatively positive economic development in Germany. The actual development proved those business plans by and large wrong, which were primarily based on the assumption of rising prices. In 2014 German wide house prices are still only slightly above the level of the mid 1990s, although contrary to the development in most European countries German house prices have continuously been rising, albeit very slowly, since 2010 (Fig. 2).¹ Most of the portfolios bought by opportunistic investors between 2004 and 2006, due to a change in strategy, therefore form the basis of the portfolios of today's large residential landlords, e.g. Deutsche Annington SE and Deutsche Wohnen AG.

One more feature of the German housing market, which was often used as a good reason to buy into the market, was the low home-ownership rate that was and continues to be among the lowest in Europe; only Switzerland with 35 % registers a lower level than Germany. In combination with the price development described above, the investors saw the opportunity to privatize parts of the acquired portfolios, based on the assumption that the home-ownership rate would rise, approaching the European average. But again, as with the house prices, the reality proved the assumptions in the business plans wrong, as the investors underestimated the power of Germany's regulatory environment. The ownership rate in Germany rose only slightly to about 43 % and there are no signs that this will change fundamentally in the coming years. A major reason for this is the regulation

¹For a discussion about the quality and availability of German house price indices see e.g. ZIA (2010) and Voigtländer (2016).

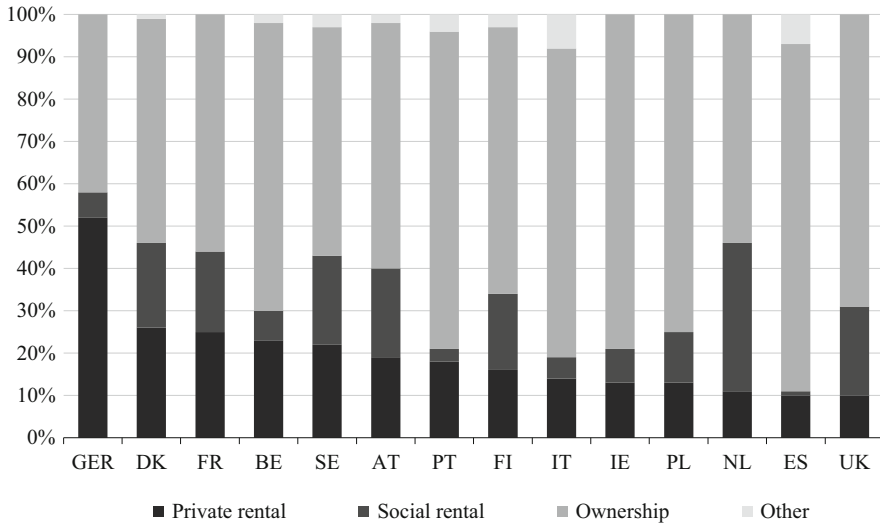


Fig. 3 Tenure split in Europe. *Source:* Housing Europe (2015)

of the residential rental market in Germany, which makes renting quite attractive for large parts of the German population (Fig. 3).²

In effect the combination of a low home-ownership rate and the significant regulation of the rental market is largely the reason for the price stagnation seen in Germany in the past. The key decision for households is whether to rent or own a property. If there is a lack of a broad-based residential rental market due to historical developments, as is suggested by the very high ownership rates in some countries, then almost all the demand for housing is focused on the ownership market. In many cases, demand on the ownership market is also supported by tax incentives, such as tax deductibility of mortgage interest (e.g. unlimited in the Netherlands till 2013 and in Finland up to a certain limit). Many households’ desire to live in their own four walls and the demand on the ownership market was hence partly enabled by government incentives. The dominance of the rental sector in the German residential market ultimately stabilized the price development in the past, by dampening the demand for home-ownership.

This stability hypothesis is also supported by a vulnerability analysis of housing markets undertaken by the IMF in 2008. As part of this analysis the house price gap for different housing markets was estimated. This gap represents the extent to which the increase in house prices in recent years cannot be explained by fundamentals. To assess potential overvaluation, changes in house prices were modeled for each country as a function of an affordability ratio (the lagged ratio

² For a discussion of the German regulation of the residential market in a European comparison see Haffner et al. (2007) and O’Sullivan and De Decker (2007). For an explanation of the low German home-ownership rate see Voigtländer (2009).

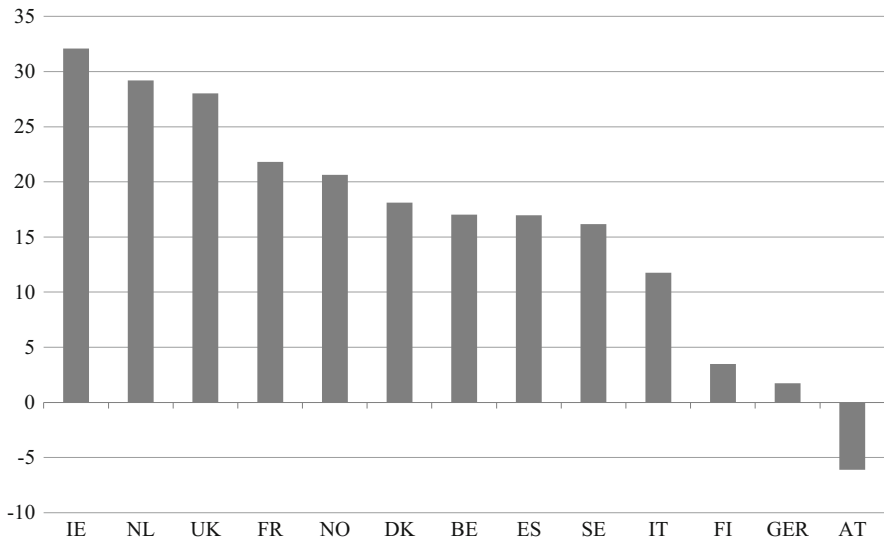


Fig. 4 House price gaps in 2008 (in percent). *Source:* IMF (2008)

of house prices to disposable incomes), growth in disposable income per capita, short-term interest rates, long-term interest rates, credit growth, changes in equity prices and the development of working-age population. The unexplained part of the increase in house prices was interpreted as a measure of overvaluation (and undervaluation, respectively) and therefore used to identify countries that were seen particularly prone to corrections in house prices (Fig. 4).

The unexplained increase in house prices (the “house price gap”) might also reflect variables omitted from the model, for instance macroeconomic volatility, household formation, and institutional factors like changes in tenant law or government incentives. Given the structural environment in Germany it is unlikely that these factors would have changed the results in a significant way. Therefore the results of the model can be seen as supporting the assumption that the German residential market was not significantly undervalued at the time the international investors entered the market, but at the same time it is an explanation why German house prices behaved differently compared with most European countries.

3 The German Reunification and Its Effect on the Residential Market

After German reunification the German residential market has been characterized by marked structural changes during the 1990s as a result of government intervention and strong inward migration. Any analysis of the German residential market,

especially of building permits and completions, has to take these developments into account to avoid “comparing apples with oranges”.

Following reunification in 1990, thousands of residents of the former German Democratic Republic migrated to the western part of Germany in search of employment and better economic prospects. In order to stop this process, politicians promised a rapid convergence in living standards between the eastern and western parts of the country. Especially the housing and construction sector in eastern Germany (five new federal states) was targeted to enhance the living standard and boost private investment. Tax benefits and subsidies for both homebuyers and investors were introduced to stimulate construction of new homes and foster refurbishment of the existing housing stock in the five new federal states. As a result a construction boom in eastern Germany began, that paid little heed to the demand side and therefore to the sustainability of investment returns. During the period 1991–1996 building permits in the five new federal states exploded from 5484 dwellings to 186,155 and completions rose tenfold between 1991 and 1997 from 16,670 to 177,829 units. In 1997 every third dwelling in Germany was built in the new federal states, a remarkable number, considering that it also came to a building boom in western Germany (Fig. 5).

In western Germany the internal migration from east to west was amplified by a wave of immigration from ethnic Germans from Eastern Europe and asylum-seekers. This sharp increase in demand resulted in a housing shortage in the West. The consequences of these developments were temporarily (strongly) rising rents and prices in the early 1990s as well as construction activity picking up considerably in the West. Building permits in western Germany (incl. West Berlin) rose by almost 50 % between 1990 and 1994 and completions nearly doubled in the same period.

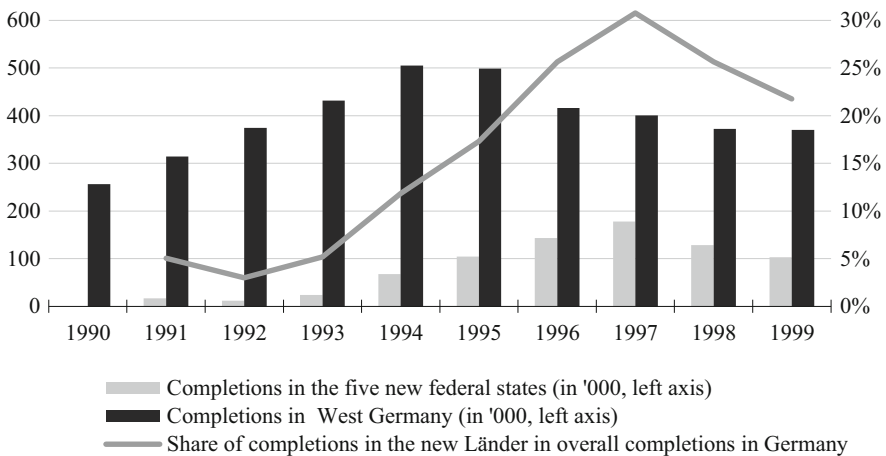


Fig. 5 Housing completions in Germany in the 1990s. *Source:* Federal Statistical Office, own calculations

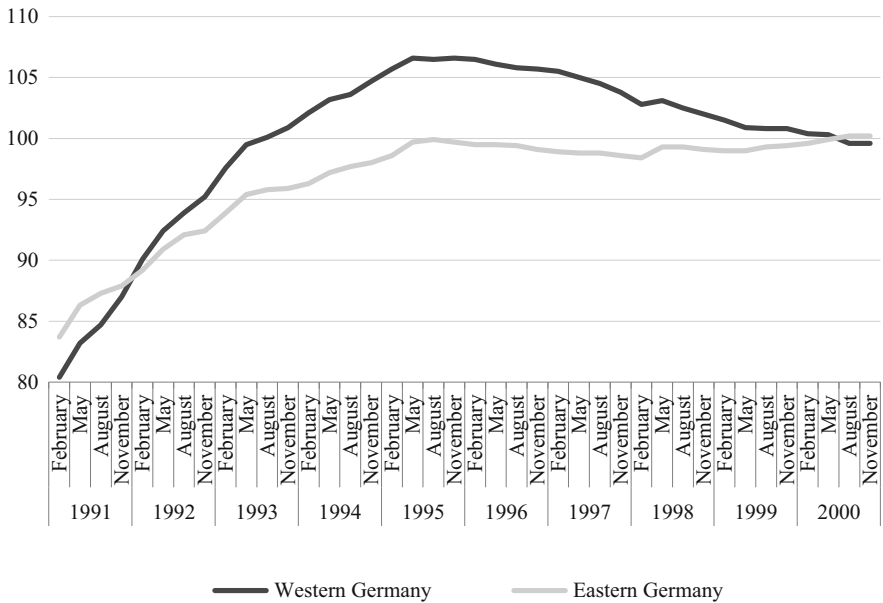


Fig. 6 Construction price index for residential buildings (quarterly figures, Index 2000 = 100, incl. VAT). *Source:* Federal Statistical Office

Simultaneously with this strong increase in construction activity, construction costs shot up until the mid-1990s, in both the five new federal states and in western Germany (Fig. 6). This happened despite the considerable capacity expansion in the construction industry. Also land prices began to move upwards, leading to a situation where residential rents and prices not only increased in western Germany, but also in the new federal states, where this was partly the result of the distorting subsidies. From the mid-1990s a cyclical countermovement with structurally weak demand for housing and the withdrawal of most of the fiscal policy incentives led to a sustained period of correction, which started in the apartment sector with the tightened depreciation conditions from January 1, 1996 and extended to the segment of single-family houses and two-family houses around the start of the millennium.

4 Development of Residential Demand

The need for housing is determined by the demographic developments in Germany. In the described period after the German reunification, the German population grew by about 2.3 million between 1990 and 1996 to around 82 million with corresponding effects on housing demand. After this period, demand induced by demographic shifts has been rather weak, as the overall population grew only slightly till 2002, the year the German population peaked with 82.5 million. Since

then, the German population has been continuously declining and will continue to do so in the future, notwithstanding the population growth in the years 2012–2015 due to especially intra European migration from Europe’s peripheral countries related to the aftermath of the financial crisis. According to the new 13th coordinated population projection of the Federal Statistical Office from 2015, the German population might decline to not more than 68 to 73 million by 2060.³

Given this overall population development in Germany, the demand for additional dwellings due to demographic changes since the mid-1990s in the country as a whole comes mainly from the tendency towards smaller-sized households. In particular, it is the number of single-person households that has grown significantly over the past two decades. The share of one-person households has grown from 35 % in 1990 to more than 40 % in 2014. As the share of two-person households has also risen, the importance of traditional family households with three or more persons has continuously declined from 35 % in 1990 to 25 %. Consequently, the average household size has continuously declined from 2.28 persons per household in 1991 to round about 2.0 persons per household in 2014. This trend is projected to continue in the future. In 2030 the share of one-person and two-person households

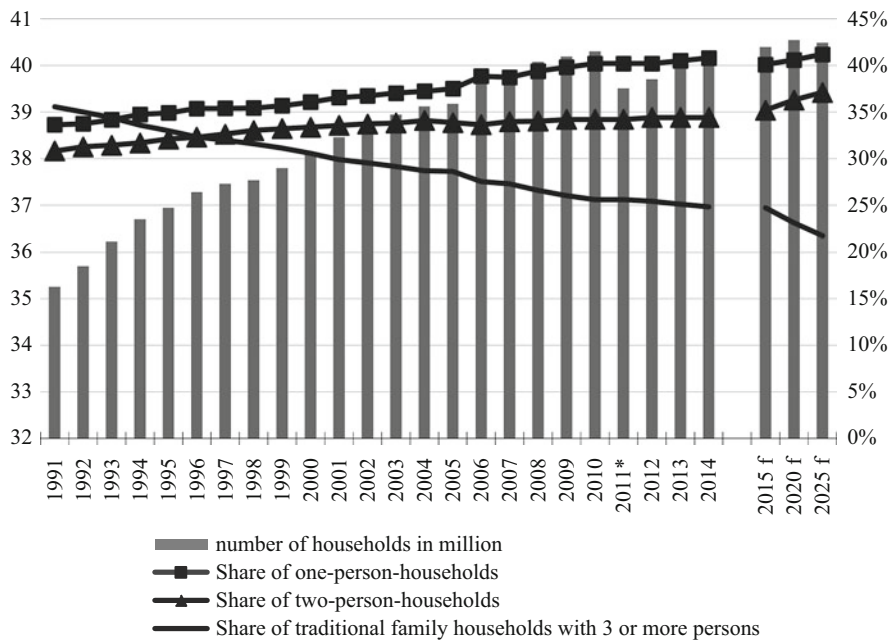


Fig. 7 Number of households by household types. *Zensus 2011, from here the new census data form the basis for updating. *Source:* Federal Statistical Office (2015a, b), own calculations

³ For detailed results of the 13th population projection see Federal Statistical Office (2015a, b) and Just (2016).

will be 43 % and 37 % respectively, reducing the share of traditional family households to about 20 %. At the same time, the average household size will have declined further, to only 1.88 persons per household (Fig. 7).

These nationwide numbers mask the strong regional differences that follow from the federal structure of the country. Internal migration is an important driver of housing demand, as the economically strong agglomerations, mostly in the former western part, attract more and more people. As a result, the overall population in these regions is still growing, in contrast to the national figure. This leads to an increasing urbanization in Germany, associated with strong, demographic induced housing demand in the urban areas. The current urbanization level of roughly 74 % will increase to nearly 85 % by 2050 according to some estimates by the United Nations Population Division. The resulting pressure on the housing market will be reinforced by the even stronger tendency towards one- or two-person households in urban areas.

The development of the number of households and average household size, as well as the changes in the age structure of the persons forming these households, influence housing demand in many ways—especially the size and structure of the dwelling. In general, in the past life cycle effects, remanence and cohort effects led to an increasing living space per apartment and inhabitant (see Just 2016). In the five new federal states these effects were reinforced in the last two decades by a level adjustment effect, as after reunification the standards in the five new federal states began to adjust to the standards in the west, a process that has still not ended. Nevertheless, one can assume that all effects will continue to have a positive impact on housing demand in the future, but to a (much) lesser extent than in the past 20 years.

In addition, the economic and cultural development of a country influences the demand for housing. Firstly by changing attitudes towards housing, and what is regarded as normal housing conditions. This relates to the layouts of the dwellings and their size as well as to the fit-out of these dwellings. As a consequence, many dwellings in apartment blocks, built in the 1950s, 1960s, and 1970s only satisfy basic housing needs today. As soon as a better and more affordable alternative is available the household will move to the new, in many cases more modern, premises. Secondly, economic growth and related advances in productivity ensure a high level of employment thereby creating a solid basis for sustained growth in per capita income. For households this gives an environment, in which the financial options for housing expenditures continuously rise. At the same time, a stable economic environment provides a secure framework for financial planning, e.g. to acquire owner-occupied housing. Thirdly, an economically attractive country or region generally attracts people, which results in an increased demand for housing in that area.

All three factors had, to varying degrees, effects on the development of the German residential market in the past. But given the fact that the overall economic performance measured by GDP-growth of the German economy in an international context was not outstanding, the last two effects had, in the context of a national analysis, only a small positive impact on the demand side in the past decade.

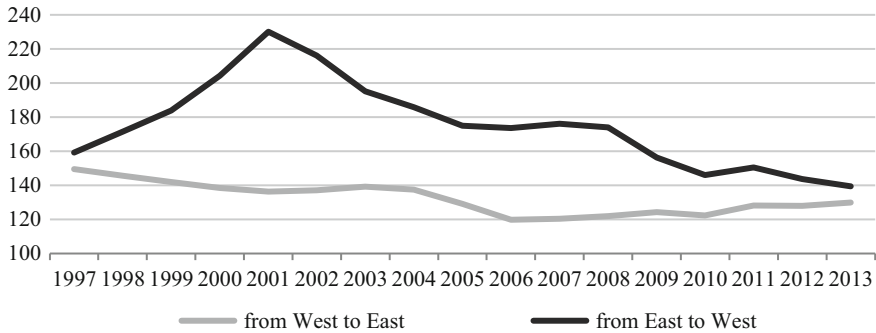


Fig. 8 Internal migration patterns in Germany (in '000). *Source:* Federal Statistical Office (2015a, b)

Nevertheless, on a regional scale, especially the third effect is and will be a strong driver for housing demand in Germany. In general, internal migration in Germany is still biased towards West Germany, with the resulting positive and negative effects on housing demand in western and eastern Germany, respectively, but it evens out increasingly (Fig. 8).

5 Supply Situation

According to official data from the federal statistical office based on the new Census, there were approximately 41.3 million dwellings in Germany at year end 2014 in residential and non-residential buildings. Of these dwellings, nearly 50 % are in single- or two-family houses. The largest part of the German housing stock, roughly four fifth, is owned by private individuals. This includes approximately 17.3 million owner-occupied dwellings, or 43 % of the total stock (GdW 2015). The remaining fifth is in the hands of institutional owners. Thereof barely half is in the hands of institutional investors such as funds, listed companies and insurance companies, which correspond to about 3.3 million dwellings. The other half is owned mainly by the public sector, cooperatives and the church (Fig. 9).

In both western and eastern Germany the majority of the stock was built between the end of WWII and the German reunification, 64 % and 43 % respectively. The bigger share in West Germany is a result of the different handling of war damage to buildings. While in West Germany the damaged buildings were often demolished and new buildings were constructed, in East Germany the buildings have been repaired and restored. In addition the differences are also the result of strong construction activity in the area of social housing in West Germany between 1949 and 1978. In West Germany as well as in East Germany 10 % of the stock were built in the first decade after reunification, and only around 3 to 4 % of all dwellings were built in the new millennium (Fig. 10).

Both, housing permits and completions in Germany were characterized by a marked downward trend since the turn of the millennium up until 2010, which was

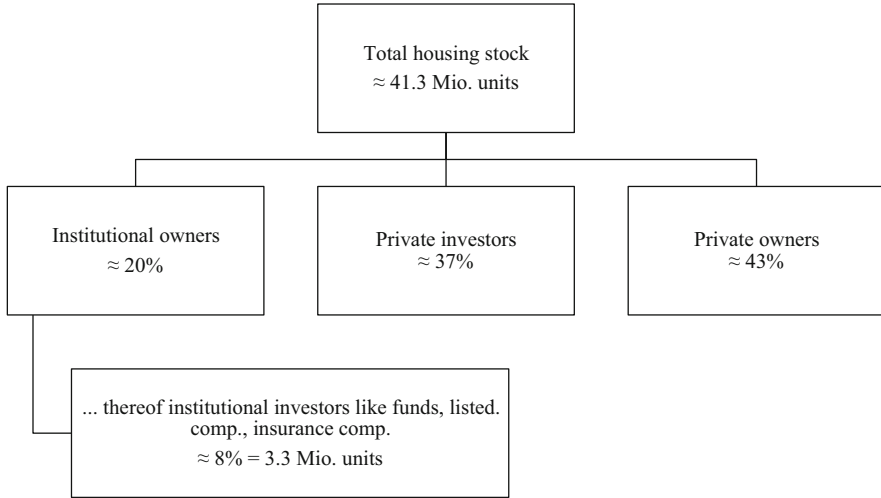


Fig. 9 Ownership structure of the German housing stock. *Source:* GdW (2015)

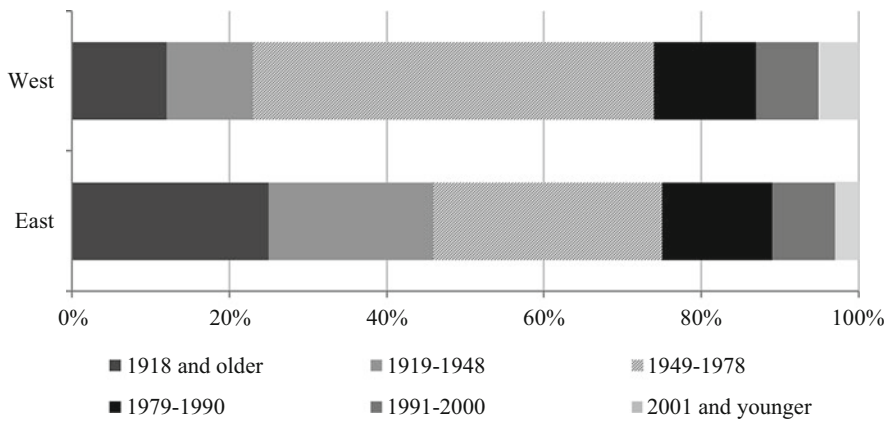


Fig. 10 Age structure of the German housing stock. *Source:* Federal Statistical Office (2015b)

interrupted only when the legislative environment for private buyers changed, e.g. due to the abolition of the home owner’s allowance from January 1st 2006, which resulted in rising permits year on year in 2005 and subsequently for completions in 2006. Since 2010 permits and completions are rising again, but at a slow pace. As Fig. 11 shows, there is a close connection between permits and completions in the following year and this relationship has been very stable since the mid 1990s.

Looking at the completion numbers for Germany in more detail it becomes obvious that over the last two decades the completion numbers of single- and two-family houses have been more stable than the numbers of construction of dwellings in apartment blocks (including residential homes). Since 1998 more

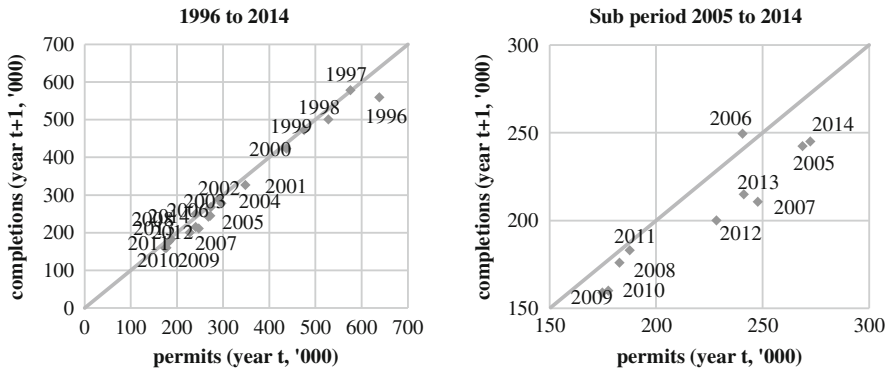


Fig. 11 Permits and completions in $t + 1$ (years refer to the time of completions). *Source:* Federal Statistical Office (2015a, b)

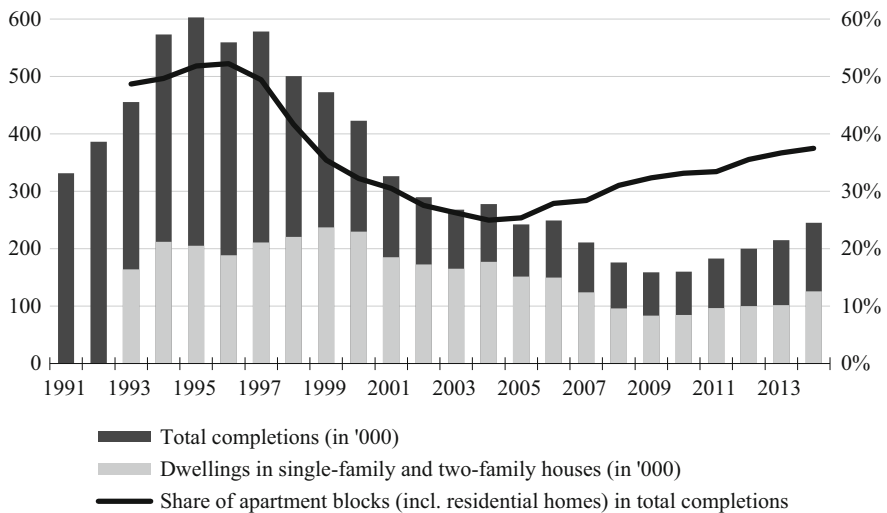


Fig. 12 Housing completions in Germany. *Source:* Federal Statistical Office (2015a, b) own calculations

dwelling have been completed in single- and two-family houses than in apartment blocks. In 2004 the share of completed dwellings in apartment blocks reached its low point of 25%. Since then the percentage of completed dwellings in apartment blocks has been rising continuously, standing just below 40% in 2014.

In 2009, the number of building permits started to pick up, this time not owing to tax effects. Based on the described close connections to completions in the year after, completions started to rise in 2010. These completions are increasingly accounted for by apartment block construction, since continuing urbanization is

shifting the demand for dwellings into the towns and cities, where multi-family houses dominate the housing market (Fig. 12).

As well as in the case of housing demand, significant regional differences are masked by these overall numbers for Germany. It is hardly surprising that in the city states Berlin, Bremen and Hamburg, housing completions in apartment blocks are predominant. Essentially all three federal states do not have sufficient building land to enable the construction of single- and two-family houses on a grand scale. In the West German federal states with economically strong urban regions such as Baden-Württemberg, Bavaria, Hesse and North Rhine-Westphalia, the share of completed dwellings in apartment blocks is also close to 50 %. The completions in these states are heavily concentrated in the urban regions, where building land has become scarce.

6 Market Performance

Based on this demand and supply situation, it is not surprising that the returns of institutional portfolios of German residential properties showed a stable performance in the past, when compared with the office and retail sector in Germany or with international real estate returns. Capital growth was on average almost non-existent in the years up to 2010, evidenced by an annual increase of only 0.4 %. Since 2011, with the massive return of the institutional investors to the German residential market after the financial crisis, capital growth has started to increase, averaging 2.9 % in the years 2011–2014. The income return was roughly 4 % per year during the entire period. This brings the average annual total return to about 5.3 % over the whole period (Fig. 13).

Since these total return figures are based only on the data reported by institutional portfolio holders to MSCI, they only represent a small part of the German residential sector. Therefore a closer look at rent and price developments in Germany makes sense. Looking at the price changes of owner-occupied housing, based on a hedonic, transaction based index, it is possible to control for quality differences that result from the heterogeneity of the properties. The vdp Price Index for Owner Occupied Housing is calculated quarterly and is made up of two hedonic price indices that date back to 2003. They show the development of prices for single-family homes and condominiums and are weighted according to the total number of owner-occupied single-family houses and condominiums. The index is based on transaction details from real estate financings provided by German financial institutions participating in the transaction database of the vdp. Like the OECD numbers shown earlier, these hedonic indices show a distinct price increase for owner occupied housing in Germany during the last 6 years (Fig. 14).

Regarding the market for multi-family houses targeted by institutional investors and family offices an interesting development of rents and capital values can be seen in Germany. Residential rents started a slow but continuous increase of between 1 and 2 % p.a. from 2006 onwards, accelerating to levels of 4 and even 5 % p.a. in the years 2012, 2013 and 2014. This speeding up of rent increases was

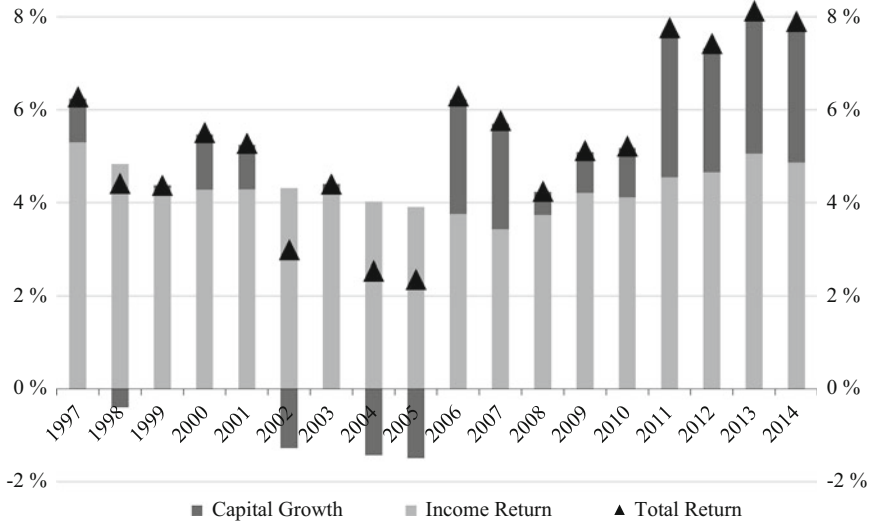


Fig. 13 Residential total return in Germany and its components. *Source:* MSCI/IPD (2015)

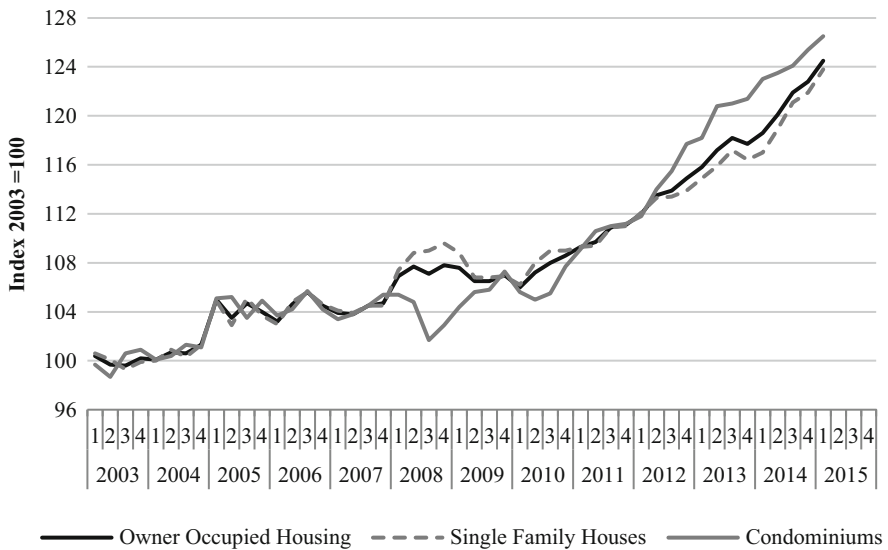


Fig. 14 vdp price index for owner occupied housing in Germany. *Source:* vdpResearch

one of the main reasons for introducing the rent brake (“Mietpreisbremse”) in 2015 (see Usinger 2012). In contrast to the rents capital values of multi-family houses stayed more or less stable up until mid 2011 despite the observed rental growth. Since then, capital values have been rising significantly, not only driven by the

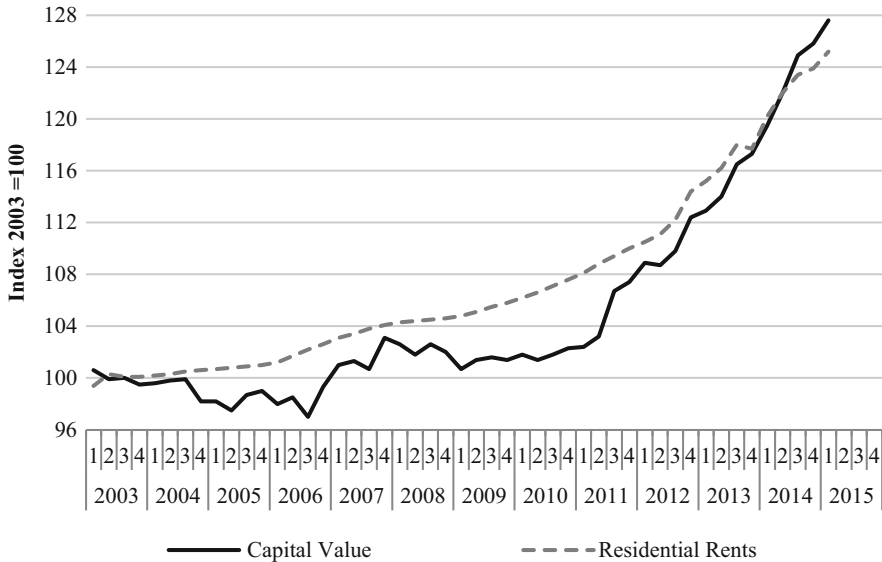


Fig. 15 vdp price index for multi-family housing in Germany. *Source:* vdpResearch

described rental growth but also by substantial cap rate compression due to the high interest in German multi-family housing from long term investors around the world (Fig. 15).

Nevertheless, when looking at these performance numbers of the German residential market, one has to differentiate between the regions within Germany. Generally speaking, especially the economically attractive regions will show higher rent and price growth than the German average, while the rural regions, characterized by outward migration, will see rents and prices stagnating or even falling.

7 Outlook

It is unlikely that the underlying structural characteristics of the German residential market will change noticeably in the next decade, particularly with regard to the ownership rate. Nevertheless, construction activity is expected to continue to increase in the coming years, but not to a level that is sufficient to meet the demographic demand, due to a smaller average household size. Reinforced by increasing urbanization this will exercise considerable pressure on rents and purchase prices in the urban regions. The priority for the coming years will be, to develop (residential) concepts for low income households in order to create living space priced between 6 and 8 euros/m² per month in the urban areas. The rental brake introduced in 2015 will not solve this problem related to the housing shortage in the urban areas, as it only fights the symptoms. If this does not happen, then the danger of frictions on the labor market may arise and the economy will no longer

function without friction, since not enough manpower will be available on all levels of qualifications and wages. One of the central tasks for the future will be to create (affordable) living space as part of an internal development of the city conurbation regions in order to satisfy rising demand.

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German Office Markets

Andreas Schulten

Abstract

Market activity on the German office property market focuses strongly on the seven prime markets Berlin, Cologne, Dusseldorf, Frankfurt, Hamburg, Munich and Stuttgart. Relative to prime rents, the two markets Frankfurt and Munich are comparable and competitive within the global context. Vacancy rates in German markets differ substantially, reaching even 12 % in Frankfurt/Main. Berlin leads in terms of office stock and take-up and is now rapidly developing.

Keywords

Office employment • Office stock • Vacancy rates • Yields • Total returns

1 Introduction

The total, gross German office stock of 412 million m² is spread over seven prime, 14 secondary markets and hundreds of minor office locations. This specific poly-centric structure goes along with a comparably low volatility of office rents. Even in prime markets like Berlin, Hamburg, Frankfurt and Munich, where monthly prime rents range between 20 and 35 euros/m², rents are comparatively stable. Forecasts indicate only a slow rental increase within the next few years. One reason for that may be found in few factors potentially fueling the demand. Office space per office employee is at 29.5 m² gross, which represents quite a high value among OECD countries. However, office employment growth accelerated significantly. Between 2004 and 2014, employment growth across the nation averaged to +9.4 %. Investment returns for German offices were much more volatile than prime office rents. According to the German Property Index, they ranged between –5 % in 2002 and

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14% in 2006, which is due to strong demand on the part of foreign investors between 2005 and 2008 and again after 2012. The good performance of the German economy after 2009 has significantly contributed to the specific profile of the present German office market—a low-risk and low-yield market with long-term investment opportunities.

2 General Facts

For historical reasons, the structure of the German office property market differs fundamentally from other European markets, e.g. in England, France and Spain. The structure of economies and consequently office markets in the aforementioned countries is virtually monocentric (e.g. Paris or London), whereas the German market, because of its specific historical background, which is reflected in the country's federal structure, has a polycentric structure. As a result, in England, France or Spain the economic activity focuses on capital cities and generates major demand for office space in these locations, which in turn is reflected in comparatively high office rents.

In contrast, there are seven prime office markets¹ in Germany. Five of them can be regarded as best performing in terms take-up and investment volume, and they also report the lowest rental yields. Additionally, there are 14 smaller office markets, referred to as secondary office locations², to some extent of national, but predominantly of regional relevance. The following map (Fig. 1) displays location of these seven prime office and 14 secondary office markets in Germany.

Until the mid-1990s, also due to only subdued market activity of international investors, the transparency of the German office market was poor or at least not sufficient, compared with Anglo-American standards. It is only in more recent years that—among other active parties—the German Society of Property Researchers (gif e.V.) has managed to gradually enhance the transparency on the German property markets. Since 1996, the gif has been cooperating with large broker houses in order to collect market data for the most relevant German property markets regarding office take-up, new supply and pipeline, office vacancy or prime rents. A comprehensive set³ of definitions and standards underlies this data collection. All market-data quoted in this article refer to market data as defined by the gif.

¹ Office stock over 7 million m², average annual take-up above 100,000 m².

² Office stock between 1.5 and 4 million m², average annual take-up usually above 35,000 m².

³ Available for free download at www.gif-ev.de



Fig. 1 German prime and secondary property markets. *Source:* bulwiengesa (2011)

3 Office Employment

In an increasingly service-oriented economy, the office property segment reflects not only cyclical, but also structural developments. In many regions the development of business services is actually of greater significance for economic growth than the development of the manufacturing industry.

Official statistics provide no data on office employment and the available classification by service industries is insufficient. The Federal Labor Office, together with the affiliated Institute for Employment Research (IAB) in Nuremberg endeavor to categorize office professions. They define more than 300 professions according to their primary, secondary and tertiary characteristics. Thus, they are able to highlight the main character of a profession. Allocation of an enterprise to a specific sector of activity is pursued according to the “main-focus”-principle. Thus, professions with a minor proportion of office activity are excluded (Table 1).

According to Dobberstein (1997), office professions comprise exclusively employees who indeed occupy office space, thus e.g. physicians working in hospitals are excluded. However, this distinction can be applied exclusively to employees subject to social insurance contributions. Additionally there are office employees among civil servants, self-employed and marginally employed persons (exempted from social security contributions).

The demand side of the German office market is characterized by little total growth and substantial structural changes. Methodologically, German office employment counts four major segments with specific data characteristics:

Employees Subject to Social Security Contributions

Statistics on office employees subject to social security contributions are taken from the statistics of the Federal Employment Agency and they are categorized in respective professional groups according to quotas derived from empirical analyses.

Table 1 Office employees in Germany 2004 and 2014

Professional group with office relevance	2004	2014	Change (in percent)
	Office employees in 1000		
Public administrative professions	1318	1391	+5.5
Technical, media and telecommunication professions	975	1191	+22.2
Consulting professions	631	788	+24.9
Financing professions	912	885	-3.0
Social professions, physicians, pharmacists	410	532	+29.8
Traders, retailers	1031	1039	+0.8
Forwarding agents	347	357	+2.9
Educators, teachers	996	1254	+25.9

Source: Federal Employment Agency, bulwiengesa based on Bundesagentur für Arbeit

Civil Servants

The Federal Statistical Office also reports the number of civil servants, including information on employers, as part of regular reporting on employment in the public sector.

Self-Employed

The number of self-employed persons—yet not broken down to regions—is based on survey data (Microcensus by the Federal Statistical Office) and projections according to latest regional workplace census. The same procedure as in the first case is used for calculating office employment in this category.

Marginally Employed Persons⁴

Information on marginally employed persons is derived from statistics of the Federal Employment Agency. In 2014 the total number of office employees in Germany amounted to roughly 13.9 million persons. This corresponds to an office employment rate (= share of office employees in all gainfully employed persons) of 32.5%. Regionally differences are significant; for prime markets these office employment rates are in the range of 37% (Berlin) and 49.9% (Frankfurt/Main). For secondary markets the office employment rates are in the range between 30.5% for Duisburg and 48.2% for Bonn.

Berlin's office employment rate may be comparatively low, yet the absolute number of office employees in the German capital is the highest among all German office markets and amounts to approx. 695,000 (Table 2).

Table 2 Office employment in Germany in 2004 and 2014

	2004 (in millions)	2014 (in millions)	Change (in percent)
Total gainfully employed persons	39.00	42.65	+9.36
Employees subject to social security contributions	26.52	30.17	+13.76
Office employees subject to social security contributions	9.71	11.22	+15.55
+ Self-employed	1.41	1.55	+9.93
+ Marginally employed	0.51	0.55	+7.84
+ Civil servants	0.77	0.71	-7.79
Total office employees	12.39	13.85	+11.78
Share of total gainfully employed persons	31.8%	32.5%	-
Office employment rates in rural counties range between 20 and 25%			

Source: www.riwis.de, bulwiengesa

⁴ Marginally employed persons (monthly income <400 euros, employees exempt from social security contributions).

4 Office Stock and Vacancy

Office space is commonly seen as space, where typical work at a desk is carried out or could be carried out, and which is traded in the office space market (can be let or purchased as office space). This definition poses some difficulties: To cite just a few examples: service counter areas in banks, universities, courtrooms, police stations, hotels, factory buildings do not count as office space. The gif (2008) provides a more precise definition of office space.

There is no comprehensive database embracing the German office stock. Estimates are usually based on the number of office employees and on assumptions regarding the size of a single workplace.

In the past 10 years however, some extensive surveys on office stocks have been conducted for many large German cities (Bulwien 2008). The first comprehensive stock survey was conducted in Dusseldorf (Flüshöh and Stottrop 2007). By late 2014 comprehensive office stock surveys for roughly 24 German cities had been published.

According to the available information, by the end of 2014 the office stock in Germany totaled roughly 412 million m² (gross office space). This corresponds to approx. 334 m² lettable office area according to the gif definition.

The ratio between the total office stock (gross) and the number of office employees results currently in an office occupation rate of 29.5 m²/office employee. Taking into account vacant office space the ratio is roughly 23.4 m² of office space in use/office employee (Table 3).

Berlin's office stock (lettable space) totals approx. 18.7 million m²; it is by far the largest office property market in Germany, followed by Munich, Hamburg and Frankfurt with between 10.4 million and 13.7 million m² respectively. Dusseldorf, Cologne und Stuttgart comprise approx. 7.5 million m² each. However, the office

Table 3 Office stock and vacancy end of 2014

Territorial unit	Office stock (gross) in m ²	Office stock (lettable space) in m ²	Vacant space (gross) in m ²	Vacant space (lettable space) in m ²	Office employment in 1000	Ratio gross office space/employee
Berlin	23.3	18.7	1.18	0.94	695	29.8
Munich	16.9	13.7	0.95	0.76	498	29.5
Hamburg	16.9	13.5	1.00	0.80	520	30.8
Frankfurt	12.4	10.4	1.58	1.26	332	26.8
Dusseldorf	9.1	7.5	0.99	0.79	241	26.5
Cologne	9.4	7.5	0.66	0.53	300	31.9
Stuttgart	9.2	7.5	0.40	0.32	236	25.7
Total Top-7	97.2	78.9	6.75	5.40	2823	29.0
Germany	412.0	334.0	19.40	15.60	13,966	29.5

Source: www.riwis.de, bulwiengesa

stock is not the most important variable determining prime office rents and net initial yields. Other factors play more important roles.

One parameter characterizing an office market is the vacancy rate. Vacant office space is defined as the sum of all office space offered for letting, sub-letting or for sale, which is not occupied at the time of the survey yet available within a period of 3 months.

After 2010, when roughly 22 million m² of office space were vacant in Germany (value updated according to Bulwien 2008) vacancy declined significantly due to the strong German economy since 2005 and an only marginal new supply compared to the first year of the new millennium. Nearly 7.8 million m² thereof were located in the largest seven German office markets (vacancy rate: 10.1%). In 2014 the average vacancy rate came down to a level of 6.5% and an absolute number of 5.4 million m². However in Frankfurt alone, the total volume of vacant office space is still at 1.3 million m², i.e. 12.1% of the office stock. The biggest German city, Berlin, shows 0.9 million m² of vacant office space and a vacancy rate of only 5.0% (Fig. 2).

Another 2.2 million m² vacant office space exist in the 14 secondary office markets, resulting in an average vacancy rate of 7.1%. The spectrum ranges from 2.7% in Duisburg or 3.6% in Bonn to above 10% in Leipzig. The fact that by and large office vacancy in secondary markets is lower than in prime office locations can be attributed to the less volatile markets in smaller cities.

However, the presented data does not account for qualitative factors: Mostly, vacant office space also includes old office stock, that is no longer marketable as well as stock, which is technically not mature or difficult to customize new schemes in locations considered by the majority of potential tenants as inconvenient.

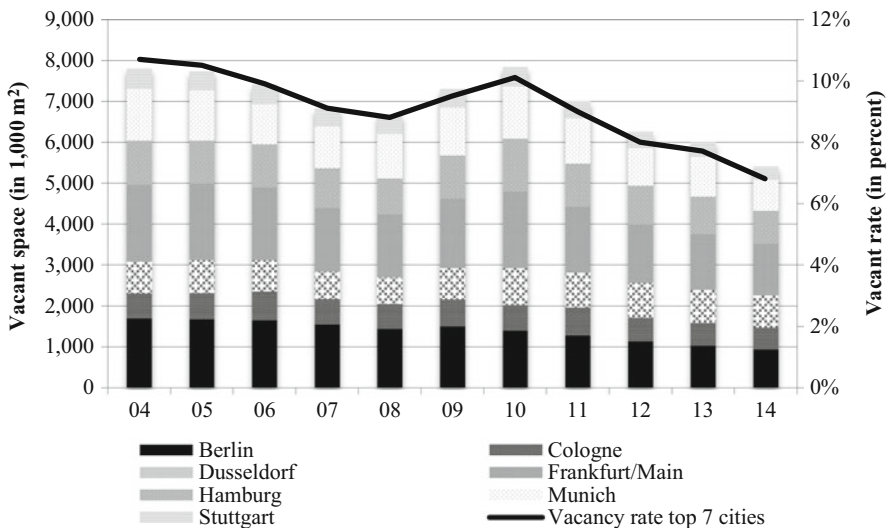


Fig. 2 Office vacancy in prime office markets, 2004–2014. Source: www.riwis.de, bulwiengesa

5 Office Take-Up

Office take-up⁵ in Germany is highly dependent on the development of the economy. During economic upswings, e.g. 1998–2000 and 2005–2007, office take-up numbers increased considerably. In times of economic downturns (e.g. 2001–2004 or after the financial crisis in 2008) office take-up figures declined (Fig. 3).

In Berlin, Hamburg, Frankfurt/Main and Munich as well as in some parts of Dusseldorf this cyclical behavior is somewhat stronger than in Cologne and Stuttgart. On the one hand, this is due to the absolute magnitude of these property markets; on the other hand, it relates to higher economic volatility in the most important sectors driving these city economies. During the past 5 years, the total office take-up in the seven prime markets ranged on average between 228,000 m² in Stuttgart and 573,000 m² in Berlin.

In the 14 secondary markets, the total annual office take-up amounts to between 20,000 and 150,000 m². This corresponds usually to the total take-up volume achieved by two or three prime markets.

It is even more interesting to focus on the actual net absorption volume, which is defined as the change in the volume of office space occupied during a particular period of time in a defined market. The following table displays the volume of office take-up and net absorption in the seven prime markets in 2014 (Table 4).

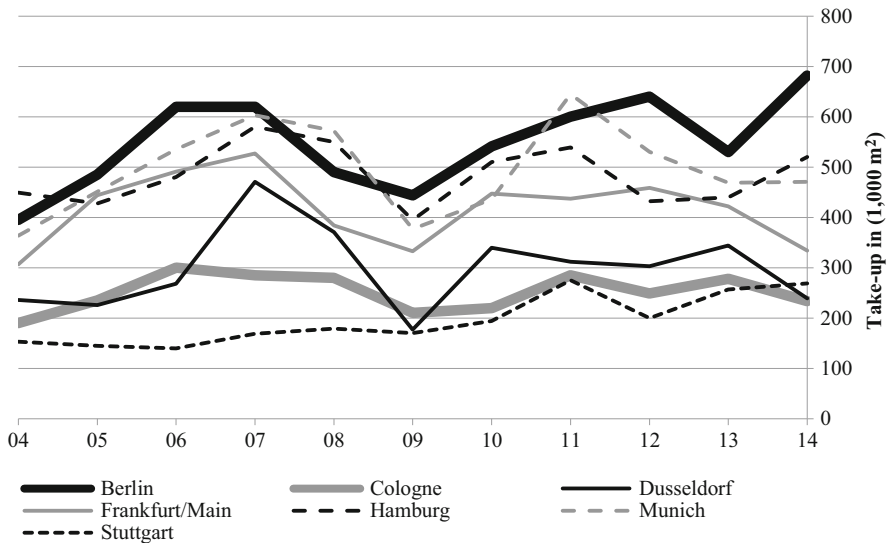


Fig. 3 Office take-up in prime office markets, 2004–2014. Source: www.riwis.de, bulwiengesa

⁵ Office take-up is defined as the sum of all space, which is let, pre-let or sublet in a defined office submarket within a given period. This includes developments for owner-occupiers or sales to an owner-occupier (gif 2008). Extensions of tenancy agreements are not included.

Table 4 Net absorption in prime office markets, 2014

City	Take-up in m ²	Thereof net absorption in m ²	Net absorption in percent of take-up
Berlin	682,000	193,800	28.4
Hamburg	520,000	119,500	23.0
Frankfurt/ Main	334,000	186,100	55.7
Munich	471,000	292,000	62.0
Dusseldorf	239,000	65,300	27.3
Cologne	234,000	-4700	-2.0
Stuttgart	269,000	72,800	27.1

Source: www.riwis.de, bulwiengesa

6 New Supply

Official statistics provide information on the annual construction activity regarding office and administrative buildings. However, these figures should be used cautiously. The volume of a development is often specified only partially or even not all. In some cases completion dates are simply wrong. Here, it is recommended to use market data (available for all seven top cities), which are provided within the annual gif survey or by professional advisors.

Provision of new office supply is also linked to the economic cycle. Due to time lags, the highest completion volumes occur roughly 12–24 months after the economic cycle peaked (e.g. Frankfurt/Main: 600,000 m² in 2003, thus 2 years after the dot.com boom ended) (Fig. 4).

In this context, Berlin played a special role. Due to the German reunification and as a consequence of the high backlog demand and backed by tax incentives introduced between 1995–1999, office completion volumes in the German capital rocketed. During these 5 years 2.8 million m² of office space were delivered to the market. This steep increase in office stock occurred at that time regardless of the macroeconomic situation.

Despite favorable economic conditions between 2006 and 2008, and again between 2010 and 2015, the annual volume of new office supply in the seven prime markets has only occasionally exceeded the 200,000 m² mark since 2005. High office vacancy in many markets called into question the need for additional office supply. Only projects with a relevant share of pre-let office space (at least 50–60 %) were initiated, also due to limited access to equity and debt capital. These indirect restrictions have kept completion volumes at a low level. In addition to this, the booming housing markets in Germany and the relatively low rent level for German offices gave developers of new apartments in city locations a higher margin compared to office developments.

Since 2007, the 14 secondary markets have seen average annual office completion volumes in total between 9000 and 30,000 m².

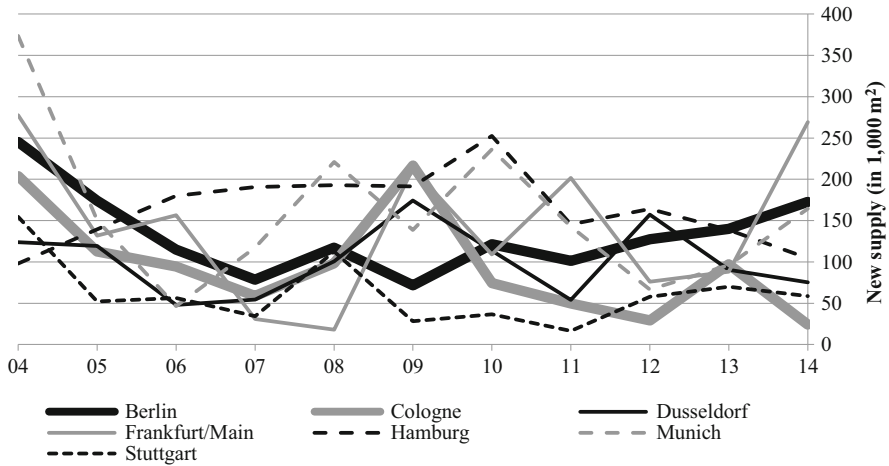


Fig. 4 New supply in prime office markets, 2004–2014. *Source:* www.riwis.de, bulwiengesa

7 Market Rents

Additionally to completion volumes and office take-up volumes, prime office rents quoted in German prime markets also follow economic cycles. In times of office space scarcity, office rents increase, and they fall, when additional new supply is coming to the market during downturn periods. The following figure displays the change in nominal prime rents in German prime property markets.

Given the fact that the German economy showed a very sound development during the past decade, office rent increases were very moderate in any of the seven major office markets. The number of 370,000 new office employees (2004–2014) can easily be projected to a total demand of approx. 8 million m² of new office space. However, with the low level of supply during the same period, the moderate rental development is rather unusual. In some of the German city markets lofts and the industrial buildings might have absorbed substantial numbers of the new office work force. But nevertheless, most market observers tend to forecast further increase in rental levels over the next few years (Fig. 5).

Frankfurt/Main obviously is an outlier. It is Germany's financial center and home to the European Central Bank. Thus, international corporations from the financial sector (banks, financial service providers, consulting companies) dominate the demand for office space in Frankfurt. Still, in 2014 the prime rent in Frankfurt amounted to 35.00 euros/m², considerably lower than office rents in other European financial centers, such as London (approx. 108 euros/m²) and Paris (approx. 60 euros/m²) and also significantly lower than the top rents in Frankfurt had reached in previous upswings (1990 and 2001).

Since 2000, Munich has been the second most expensive office location in Germany. In 2014, the prime rent in the Bavarian capital amounted to

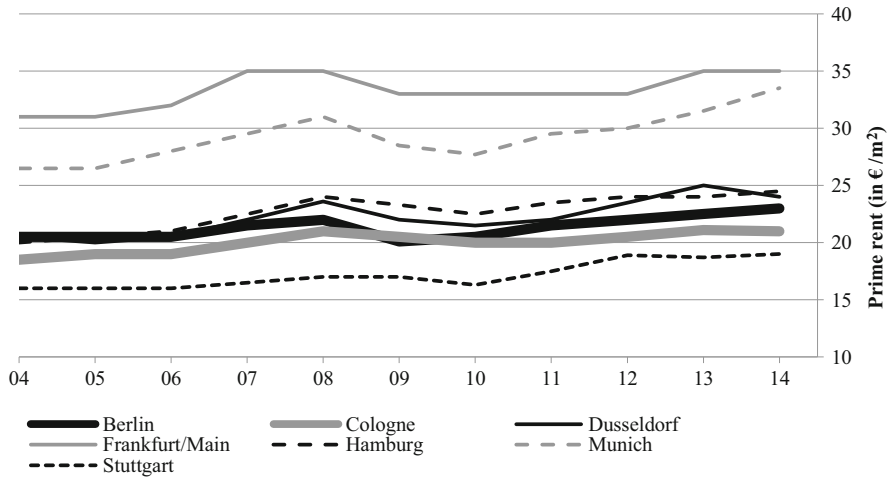


Fig. 5 Prime rents in prime office markets, 2004–2014. *Source:* www.riwis.de, bulwiengesa

34 euros/m². In Berlin, prime rents are—despite the recent local economic boom—considerably lower (at 23.00 euros/m²; end of 2014). This discrepancy is to some extent due to historical reasons. Berlin lacked for a long time after the fall of the wall an efficient business base, which could generate some strong demand for services and consequently for more office space as well. This situation changed only recently with the strong development of start-ups and tech firms now covering more than 20 % of the annual take-up in Berlin.

8 Investment Market and Yields

In the last few years the German investment market has not only become more professional in terms of due-diligence processes but also more transparent. However, when it comes to rent multipliers and purchase prices—unlike in Anglo-American markets—in Germany both vendors and purchasers like to play their cards close to their chests, unless legal requirements (open-end funds, property companies) force them to disclose the figures. In order to gain comparables, local advisory committees can be consulted—even though they only forward anonymized data—as well as brokerage houses and data providers, who systematically monitor property investment markets, take record of investment activities and analyze them.

During the economic boom 2005–2007, total annual investment volumes (office, retail, other) in Germany rose sharply from roughly 20 billion euros to nearly 80 billion euros in 2007. On the seller side, open-end property funds seized an opportunity to reduce their regional cluster risk. They divested large portfolios, some of them worth more than a billion euros. The public sector as well as semi-

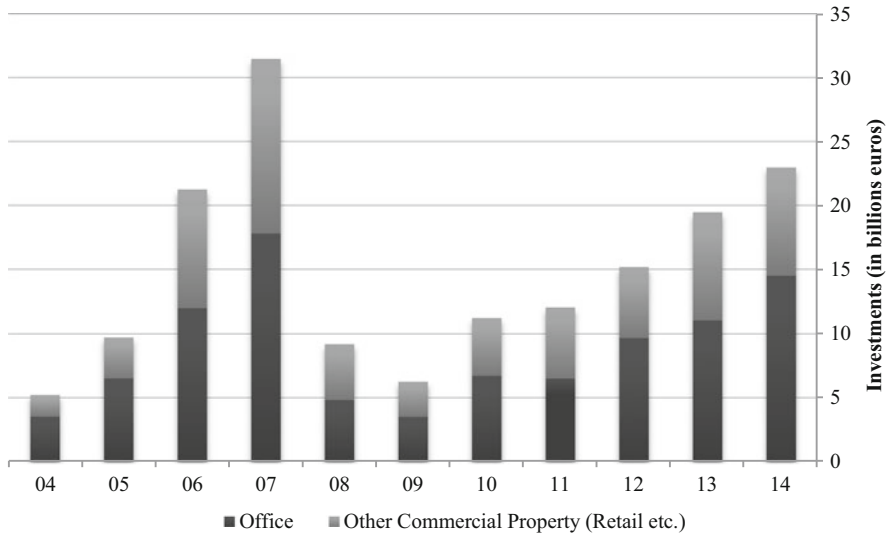


Fig. 6 Investment volume in prime cities, 2004–2014. *Source:* www.riwis.de, bulwiengesa

public institutions, such as the German savings banks attempted to take advantage of the favorable market situation on a large scale by means of sale-and-lease-back-transactions. They disposed of numerous properties and leased them back for 20 years. Particularly prime German markets benefitted; investment activity in this segment literally took off during these years. Between 2000 and 2004, annual total investment volumes in prime cities ranged between 5 billion euros and 7.5 billion euros. In 2007 the total volume in prime cities reached nearly 32 billion euros, thus roughly 40 % of the total volume of investment in commercial property in Germany. This investment boom was triggered by low interest rates and the willingness of financial institutions to allow for very high loan-to-value rates (see also Nickel 2016).

This extraordinary market performance was corrected in the wake of the financial crisis and in the course of 2010 the market stabilized and the total investment volume in prime office property increased from 3.5 billion euros in 2009 to 6.7 billion euros. Over the past 5 years the market recovered again alongside the sound German property market and reached a level well exceeding 20 billion euros with further potential of increase given (Fig. 6).

In line with the considerably increased demand for German assets, yields for office property compressed modestly. In 2007, net initial yields⁶ for office property in German prime office markets ranged between 4.5 and 5.2 %—significantly lower

⁶ Net initial yields are defined as the ratio of net rental income and purchasing price including additional costs (taxes, notary costs, agents etc.). For details please see: gif e.V.: Yield Definitions Real Estate Investment Management, 2007.

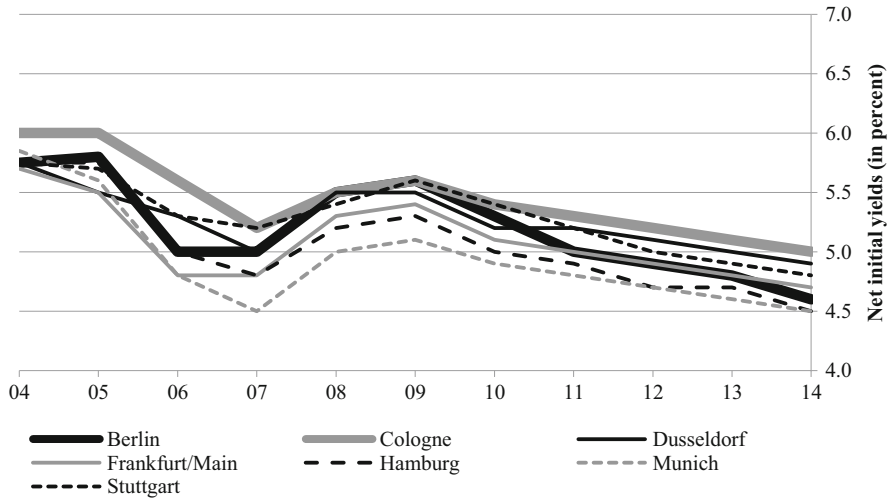


Fig. 7 Net initial yield in prime office markets, 2004–2014. *Source:* www.riwis.de, bulwiengesa

than the long-term average. In the course of the financial crisis, investment volumes returned to much lower levels and the declining demand led to some downward pressure on prices. Consequently, yields increased. With the strong investment appetite described above, the yield pressure became even stronger over the past 5 years and reached an all time low of 4.5 (Munich and Hamburg) and 5.2% (Cologne) in 2014. Among the seven cities the new strength of Berlin can easily be seen (Fig. 7).

9 Total Return

The German office property investment market traditionally offers relatively low return potentials. According to the German property index DIX, the annual total return for German office property amounts to 2.6%, compared to 5.8% in Great Britain or 9.9% in France (see also Piazzolo 2016). These values refer to a 10-year-average from between 1999 and 2009. Total return comprises the cash flow return and capital growth, defined as the property’s resale value after 10 years. Among others, due to the leading role of London and Paris in national markets, the cash flow increase in the investment phase is considerably higher abroad.

Then, the question might arise, why investors are queuing for German real estate again. One reason for the gap between “theory” and “practice” can be seen in differing methods for computing performance. While IPD-indices are based on indirect data collected in the course of valuating the existing office stock, the GPI Index (German Property Index) by bulwiengesa draws upon direct data from the pool of current transactions closed in a year. In 2014, the GPI for office property in Germany was at a still high level of 11.0%. The forecast for the two previous years

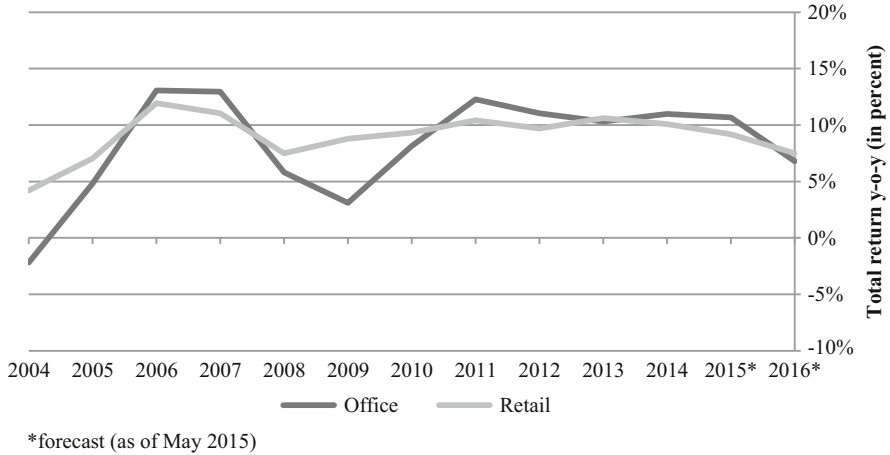


Fig. 8 German property index (GPI/Total Return) by property segments in Germany, 2004–2014. *Forecast (as of May 2015). *Source:* riwis, bulwiengesa

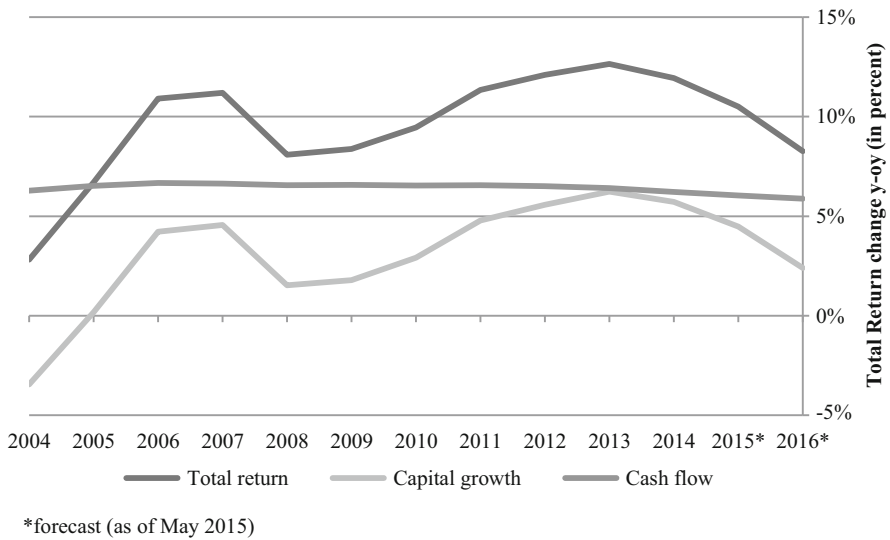


Fig. 9 German property index (GPI) in Germany, 2004–2014. *Forecast (as of May 2015). *Source:* riwis, bulwiengesa

shows a steep decline because of the already high price levels reached (Figs. 8 and 9).

Overall, the performance of German office property—based on market data within a 10-year-time frame between 2004 and 2014—considerably exceeded 10%. According to the GPI index, the average total return amounted to 9.7% and

thus it was only slightly lower than the performance of the British and French office property markets. It is plausible though, that the relatively low performance correlates with the apparently lower risk, which is involved in investing in German property. In contrast to Great Britain and France, German offices as an asset class never generated negative returns despite the last financial and economic crisis. Despite difficult financing conditions and the massive slump in GDP in 2009, investors on the German market had to cope with far fewer value adjustments than investors investing in other European markets. However, the strong focus on German real estate over the past few years along with high average returns gives scope to future depreciation. But yet there are no signs.

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Retail Property Markets

Olaf Petersen

Abstract

Thanks to its relatively high purchasing power combined with nearly 81 million inhabitants Germany is the biggest retail market in Europe. Since the 1990s the dynamics of total sales were low; nevertheless the retail sales area continued to grow. Amid tough competition professional retailers and retail developments not least grew on new and modern sales space. But new planning law for large-scale retailing becomes more and more a bottleneck as planners nowadays often favor inner cities and other existing functioning retail locations. Since the pipeline for prime locations and leasable and investable objects is narrow, rents and property prices for these scarce projects are rising by trend whereas low-quality locations and objects show a more difficult performance. Focusing retail expansion on good micro-locations in well-established shopping cities makes even more sense today due to the significantly rising importance of e-commerce.

Keywords

Retail turnover • Shopping-centers • Location • Sales area

1 Overview of German Retail Trade

1.1 Private Consumption and Retail Demand

1.1.1 Private Consumption and Purchasing Power

Germany has always played an important role for international market players as one of the most successful exporting nations of the world. Although private consumption has not developed very strongly in the past two decades it still

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accounts for the largest share of German GDP. Consumer spending of more than 1.6 trillion euros contributes approx. 55 % to the overall economic performance (Destatis 2015).

Moreover, the savings rate has always been relatively high, due to a distinctive precautionary motive within the German population. Savings amount to nearly 165 billion euros p.a., i.e. the savings rate amounts to 9.5 %. However, in long-term comparison the savings rate currently shows a significant downward trend which reflects the very low interest rates at the money market at the moment. This implies that private consumption has been increasing faster since 2009 than in the 15 years before the crisis.

In total, purchasing power of German consumers for goods, services, housing and savings comes to approx. 1.7 trillion euros. GfK GeoMarketing estimates that the per capita purchasing power will reach approx. 21,600 euros p.a. in 2015. Within Europe, German per capita purchasing power is among the top ten of all countries, though still significantly behind the leading countries Lichtenstein, Switzerland, Norway, Luxembourg or Denmark.

Within the country the purchasing power of the German population varies remarkably. This especially reflects the German divide, even in 2015; regarding the distribution of private wealth the gap between west and east Germany has narrowed, but is still sizeable. Among all German federal states the new, eastern states rank at the very bottom. The weakest performance is achieved in Mecklenburg-Western Pomerania with a purchasing power of approx. 16,600 euros per capita, about 17 % below average and 25 % below the leading federal state (Hamburg).

Beyond the west–east-dichotomy there is also a (smaller) gap between the southern and the northern federal states, with Hamburg being an important exception from this rule.

Looking more closely at Germany the purchasing power disparities are increasing: At county-level GfK GeoMarketing identified the Starnberg county in the vicinity of Munich as the wealthiest region in Germany. Its inhabitants possess a purchasing power of nearly 31,500 euros in 2015, nearly twice as much as the inhabitants of the poorest county Görlitz in Saxony directly located at the border to Poland.

1.1.2 Retail Turnover and Competition

In 2014 the turnover of German retailers amounted to approx. 450 billion euros (ex auto, fuel and sales of pharmacies).¹ Compared to the previous year this corresponds to nominal annual growth of 2.0 % and 1.7 % at constant prices, respectively. On the one hand, these numbers can be appreciated as a remarkably stable development—especially compared to the retail performance in other European economies in these 2 years. On the other hand, the development still

¹ Destatis, Handelsverband Deutschland (HDE).

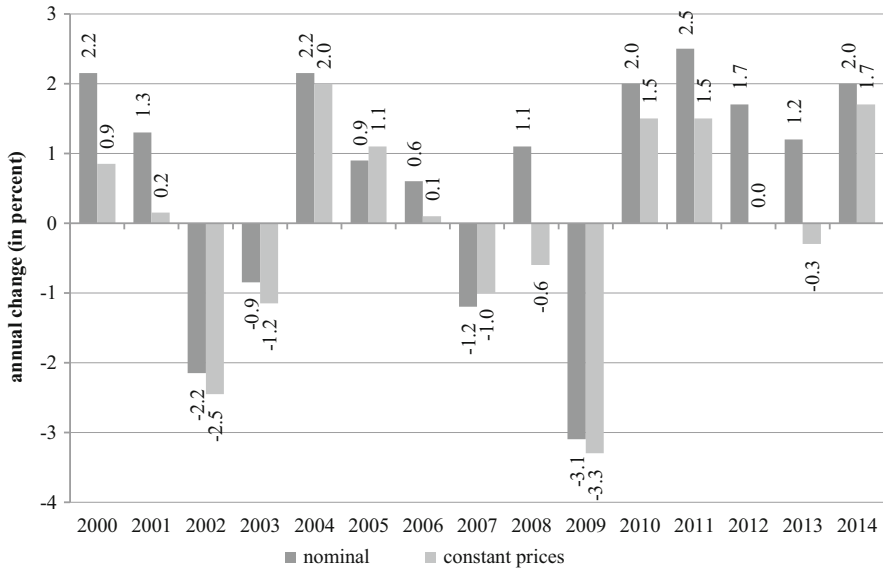


Fig. 1 Development of German retail turnover. *Sources:* Destatis, HDE, COMFORT—Research and Consulting

fits into the typical scheme of the economic cycle of retail since the boom phase during German reunification.

By and large, retail sales growth in Germany has been relatively weak in the last few years with only moderate cycles since 1992: the highest growth rate of real retail sales was achieved in 2004 with +2.0%, while the lowest growth rate was -3.3 in 2009 (Fig. 1).

Overall consumer spending was muted in the last two and a half decades and this was aggravated by a secular trend towards non-retail consumer goods: the share of retail expenses was falling, while the share of expenses for housing, services, car driving and administrative fees was rising over the last few decades. As a result, the share of retail expenses in 2014 was at about 28%, significantly lower than in many other advanced European countries (e.g. Belgium 39%, France, Sweden and Denmark 36%, Netherlands 33%, Austria 30%).

Nevertheless, thanks to its sheer size with more than 81 million inhabitants Germany still represents the biggest retail market in Europe together with France—where inhabitants spend a lot more money per capita on retail—far more than in any other European country.

Another characteristic of German retail is the low level of price increases. Usually, retail price inflation is significantly below overall consumer price inflation. Between 2004 and 2014 the index of retail prices rose by 12.5% whereas the consumer price index climbed by 17%.

This price stability is due to the high price consciousness of the German population and the extraordinarily tight competition within the retail sector.

1.1.3 Structure of the German Retail Market

There are more than 350,000 enterprises in the retail industry, roughly 90 % of which are small businesses with an annual turnover of less than 1 million euros. However, this does not preclude that we find a very high concentration of the business in some sub-segments: In the food sector for example, the ten biggest players have a market share of about 85 %.²

Still, even in the more concentrated market segments competition is very strong, as entry barriers like capital intensity or access to human capital are much lower than in many manufacturing industries. Any pricing power of a few incumbents therefore quickly attracts new entrants—both domestic and international.

This fierce competition makes the German retail market very difficult, even for highly professional concepts, as the failures of Wal-Mart (the world largest retailer) or Marks and Spencer, The GAP illustrate. These companies withdrew from the market because of big losses in their German operations. However, the big success of brands like IKEA, H&M or PRIMARK also reveals the opportunities and is an important role model for many foreign retailers now entering Germany, not least because of its market size.

1.2 German Retail Landscape

1.2.1 Retail Formats

German retail is characterized by a remarkable variety of retail formats. This extends from the single owner-conducted specialty store to the aggressively price-orientated mega-chain stores with thousands of outlets all over the country. In comparison to other European markets the German customer is price-oriented and this is reflected by the significance of discount retail formats, which were secularly rising over the past few decades.

As a result, with about 16,200 stores and a market share of approximately 13 % of total retail turnover, the food discounter segment plays an outstanding role in comparison to other European countries (EHI Retail Institute 2014). However, market penetration, at least as regards the key players Aldi and Lidl, has exceeded its peak. Therefore, for them future growth opportunities especially arise from optimizing their store portfolio in terms of size and layout.

What is more, hypermarkets with a sales surface of more than 2500 m² and a market share of more than 11 % in approx. 2000 outlets play a relatively stable role. However, the market share of very big stores with more than 5000 m² sales surface and a relatively high percentage of nonfood-articles is shrinking.

² Bundeskartellamt, Berlin 2015.

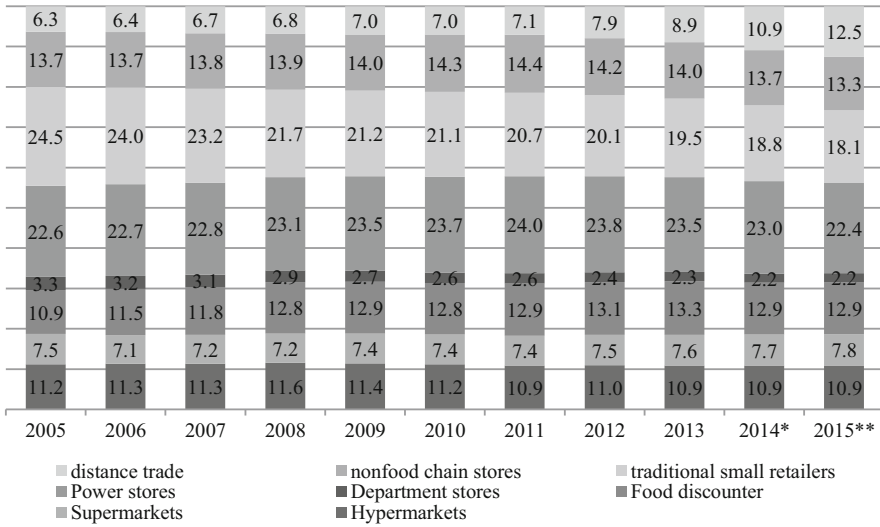


Fig. 2 Development of retail formats in Germany: Market share of retail turnover in percent. *Provisional value, **short term extrapolation. Source: GfK, Frühjahrsgutachten Immobilienwirtschaft (2015)

The market share of supermarkets—self-service food stores with a maximum of 2500 m² sales surface—is falling (today: about 10,500 stores, approximately 8 % market share). Bigger supermarkets usually perform somewhat better than the smaller formats. But after a phase when stores with a sales surface of less than 700 m² were seen as a ‘dying species’, new city-concepts now show that e.g. in the city centers and in quarters with a high population density small-size supermarkets can also perform successfully (see e.g. Rewe, Tegut) (Fig. 2).

Power stores with a market share of approximately 22 % today are in the lead of all retail formats within the nonfood retail sector. Since their start in the 1970s with typical DIY-products like building materials, tools, wallpapers and carpets this retail format has enlarged assortments significantly—to even include products like wine or erotica articles. Their importance is not least a result of the price sensitivity of German consumers and has led to clear market domination of a few power store players in some segments (e.g. market for technical goods: Media Market and Saturn). Although there is to mention that the zenith of relevance of this format has passed and its relevance is declining slightly as a result of missing innovation as well as competition especially from the e-commerce.

The market share of family-conducted retail stores still accounts for approximately 18 % of total turnover, significantly less than in the past, and there is no trend reversal in sight. Tough competition and succession problems are the main reasons for this secular loss of market share. Also important changes in the locational quality of the store property are a key factor.

In contrast to many other countries, department stores play only a marginal role in Germany. In 2014 their market share was just a bit higher than 2 %. Despite their grand history, department stores have been forced into a sandwich position between the new price-oriented retail formats and high-quality specialty stores since their last peak in the 1970s. Today Kaufhof and Karstadt—even after becoming insolvent in 2009/10—are the only department store chains with about 200 stores. But there is further consolidation of department stores on the horizon. Here it has to be considered that many former and still existing department store properties represent very interesting new development opportunities thanks to their central and very good retail locations.

Big clothing specialty stores with sometimes more than 10,000 m² of sales space in city centers are one peculiarity of German retail markets: examples for that are Peek & Cloppenburg, Breuninger or SinnLeffers. In addition to this heterogeneous group of non-food chain stores, there is a big variety of High-Street- and vertical retailers with a focus on clothing and shoes and some other Monolabel-/Flagship-Stores. Here, consumer brands operate their own stores with top-notch standards. Altogether the non-food chain stores achieve a market share of more than 13 %.

Last but not least, distance trade should be mentioned in this context. This sector, however, is currently undergoing a dramatic change and challenging the retail business: On the one hand, the relevance of traditional universal mail-order retailers is diminishing in favor of specialty mail-order retailers and new internet-based suppliers like Amazon or Zalando. But internet is leaving its imprint not only on traditional mail-order retail but on all retail formats and assortments. The magic word now is ‘multi-channeling’, which means that more and more stationary retailers are extending their selling to the internet. As German retail association HDE says: one of three of its members is operating an online-shop in a wide bandwidth of small players widening their local/regional catchment up to the biggest German nonfood retailers like Galeria Kaufhof, Tchibo, Media Markt/Saturn or Douglas. The leading German market research firm GfK estimates that total E-Commerce turnover in Germany—of stationary shops, mail-order retailers and internet specialists amounts to 12.5 % of total retail sales in Germany. And the past trend of rising market shares is not to end soon but for the foreseeable future will concentrate far more on nonfood retail than retail of periodic goods.

1.2.2 Sales Area³ and Locations

In Germany the sales area of all retailers added up to 118.0 million m² in 2014, i.e. more than 1.45 m² per capita. Only three other countries in Europe (Austria, the Netherlands and Switzerland) have more retail space per capita.

³The following numbers concerning sales area and space productivity are all taken from: “Einzelhandel Europa 2015”, GfK GeoMarketing 2015.

While retail sales have been rising only moderately over the past few years, the sales area has increased stronger than turnover. Nearly every year, the latter has outperformed turnover in terms of growth. The structural change in retail is among the most important reasons for this development. Especially, the success of large retail formats like power stores and flagship-stores was an important trigger that has also led to rising sales areas within the other retail formats and has enabled broader retail assortments, more services as well as a more emotional presentation of goods. Since 2012 the trend of rising surface slowed down and came to an end in 2014 when the overall sales area stagnated. The reason for this were insolvencies of bigger retail players like Schlecker, Praktiker and Max Bahr because of old-fashioned concepts, lacking performance and the above mentioned rising significance of the e-commerce.

In 2014 the average space productivity in German retail amounted to about 3.400 euros/m². In comparison to other advanced European countries this number is relatively small⁴ and again reflects the very high level of competition in Germany.

The growth of the sales area also raises political issues with regard to urban development and accommodation of the people. Regulation is complex at diverse levels: The most important regulations are included in the “Baugesetzbuch” and the “Baunutzungsverordnung”. These legal bodies are complemented by various laws and rules of the federal states.

In general, the regulation concerning big-size retailing with a surface of more than 700 m² has become more rigid over the past few years. Now, the developer of new retail space has to testify (by appraisals, plans, figures and other documents) and convince the relevant authorities and councils (especially municipalities and counties) that the project will harm neither existing retailers nor city structures severely. This has become a very high hurdle and prevents the realization of many retail projects.

The German retail landscape shows a well-differentiated structure of locations. The focus is on the established city centers and newly created and managed centers. They meet the needs of the people with regards to diversity of retail, restaurant and café sectors and services, social space, ambiance and pleasing surroundings.

Although competition of other locations -especially of non-integrated properties—has increased in the last few decades, the city center still marks the most important retail location of a municipality with supply balance points for clothing, shoes, technical goods and products for everyday use. And this does not only hold for metropolises like Berlin, Hamburg or Munich, but also for many medium and even small-sized cities as can be seen by average figures presented by the consulting company COMFORT regarding shares of sales area and turnover. Still, the attractiveness of the downtown areas for shopping varies significantly (Table 1).

⁴E.g. Switzerland 6.900 euros/m², Sweden 6.100, United Kingdom 5.700, Belgium 5.400, France 5.200, Italy 4.200, Spain 3.800.

Table 1 Importance of city center retail according to city size

	Share of city retail space 2013 (in percent)	Share of city sales in 2013 (in percent)	City productivity in 2013 (in euros/m ²)
Ø > 1 Mio. inhabitants	18	20	5.300
Ø 500 T ≤ 1 Mio. inhabitants	26	28	4.200
Ø 200 T ≤ 500 T inhabitants	25	28	3.600
Ø 100 T ≤ 200 T inhabitants	30	36	3.600
Ø 50 T ≤ 100 T inhabitants	31	39	3.500

Source: COMFORT (2015)

City centers with a strong performance usually possess a catchment area of at least 250.000 inhabitants. Of course, this catchment area is not necessarily limited to the administrative borders of a city or county. What is more, in the last few years the relevance of primary locations has risen considerably compared to lower-quality locations.

In big and medium-sized cities there are also traditional district and quarter shopping areas besides the center. Their spectrum of retailers and assortments is generally mirroring the needs of the population in the vicinity. So, the food sector plays a key role. For many traditional shopping areas competition has clearly increased amid the rise of new neighborhood shopping centers in a size range of 2000 and 5000 m². These neighborhood centers typically have sufficient parking space, a smaller hypermarket, supermarket or even a food discounter as key tenants and some smaller shops or power stores.

During the last few decades the development of new locations has become very important, such as green-field developments with big-size (or big box) retailers that are easy to access by car. Today the development of these locations is heavily regulated especially if the new formats plan to offer typical inner-city goods like clothing. But for assortments like DIY or furniture the out-of-town locations represent by far the most important German retail locations (Fig. 3).

Last, but not least, shopping centers are of rising importance within the German retail landscape. Their success story started after the unification of eastern and western Germany: in 1990 there were just 93 shopping centers⁵. By the beginning of 2015 the number of shopping-centers reached 463 centers, adding gross leasable area (GLA) of about 15 million m². So, more than 60 % of today's centers are no older than 20 years. This is an impressive illustration of the growth momentum in shopping center development. The biggest 'wave' occurred during the first half of the 1990s. Due to significant pent-up demand the geographical focus was in eastern

⁵ According to the definition of the EHI Retail Institute shopping centers possess at least a GLA of 10.000 m².

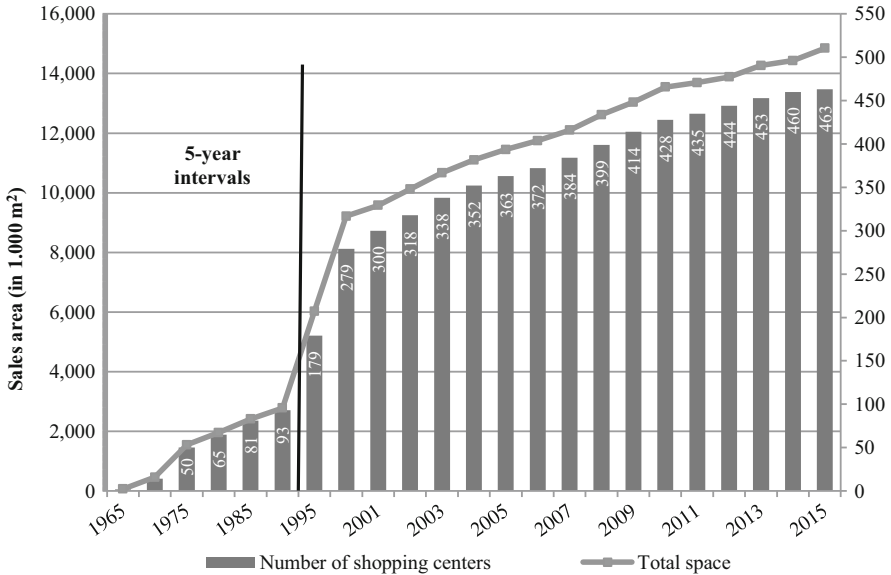


Fig. 3 Shopping center development in Germany. Sources: EHI Retail Institute, Cologne; German Council of Shopping Centers, Ludwigsburg, 2015

Germany. Most of the centers were developed at out-of-town locations, also due to unresolved property right questions.

In the past few years the development focus for new centers shifted back to the inner cities, as many cities restrict the permission process to inner city developments- typically with strict requirements concerning dimension, assortments and architecture.

2 Retail Property Investment

Retail properties play a very important role in terms of total investment in commercial properties in Germany. After a sharp decline in retail property transactions to a level of just under 4 billion euros during the recession of 2009 retail property transactions rose back to a volume of 9 billion euros in 2014. The all-time high was realized in the boom year of 2006 when retail properties worth nearly 20 billion euros were sold. In these heydays most of the investments were opportunistically motivated in the context of a relatively high yield spread (over government bonds) aiming at beneficial leverage effects with very big loan-to-value ratios. Thus, it was possible to realize big portfolio deals as well as big single-object-transactions and projects. Directly after the financial crisis these days were over and risk-minimizing single core properties were preferred by investors. In context of the relatively strong recovery of the German economy since 2009 and ongoing expansionary monetary policy by the European Central Bank the purchase interest of national and

international investors rose significantly and again focused more and more on German real estate properties—as kind of ‘safe haven’ for investment. This also applies to retail properties of all kinds (high street, shopping centers, super-/hypermarkets, discounters: preferred as single assets but portfolio assets again become more important) and most risk classes (especially core and core plus). In contrast the supply of retail properties in 2015 is meek and the decisive bottleneck for deals, so as a general tendency prices are rising for all types of retail properties.

An important structural aspect, which makes retail properties in Germany interesting, is the typical lease contract. The legal framework and the lease terms are advantageous for investors. 10-year leases for new tenancies are common, for anchor tenants in shopping or power centers even 12- to 15- up to 20-years leases are accepted. Furthermore indexation and a high level of contract certainty are the rule. Last but not least, the existing rigid planning law for new big-size retail space also limits potential competition by new entrants (see above).

Concerning the buyers as well as owners and sellers of retail properties funds and institutional investors play an important role. Due to the lack of investment alternatives with good interest rates also wealthy family offices currently become more active on the buy-side of the market. While formerly the German retail property market was to a large extent reserved to German players, the picture changed particularly after the introduction of the Euro. Today, international players play important parts on both sides of the market with still rising significance at the moment.

2.1 Prime Locations

Usually, the prime locations in German cities mark the retail real estate locations with the highest prices. But during the last years the length of these high street locations was shrinking by trend. Together with the fact that the number of owners who want to sell their properties or at least are open for new suggestions can be described as relatively low. This leads to a typically scarce supply of tradeable prime inner cities objects.

Prices and multipliers tend to be relatively stable (even during the financial crisis) and as mentioned above currently are on the rise. Beyond the excellent location the higher prices are achieved via good status of leasing, long-term leases, tenants with a first-rate credit standing for technically state of the art properties. Objects fulfilling most of these criteria constitute the classical core segment.

However, it makes a big difference whether such an object is located in one of Germany’s metropolises or whether it is located in a medium-sized city. Besides the four German cities with more than one million inhabitants (Berlin, Hamburg, Munich and Cologne) also Frankfurt, Dusseldorf and Stuttgart play in a league, where multipliers of more than 20 are absolutely common and even multipliers of 25 and more are no big surprise anymore. In the other major cities similar multipliers are sometimes possible, but not the rule. Depending on the national

position, economy and image of the macro-location yields between 6.5 and 4.5 % are common.

2.2 Other Locations

Prices and multiples for other retail locations usually do not reach the high street levels. Still, due to their sheer size, shopping centers are in absolute terms very expensive. For this reason the number of potential buyers is small—especially during the financial crisis. But compared to the 1990s the situation has improved on the back of the internationalization of the real estate industry.

For good objects in interesting German shopping locations the yields typically reach about 4.5–6 % and are relatively stable.

Prices for other retail real estate assets are clearly more volatile. While yields for peripheral retail property were around 7 % during the boom years of 2005–2007 and deteriorated in the course of the crisis. Now, prices have more or less reached again the ‘boom level’ with roughly 5.5–6.0 % for power centers and around 7 % for self-service stores. The markdown of prices in this segment is relatively large in case of significant shortcomings, i.e. poor location, tenants with risk etc.

3 Retail Property Rent

Of course the level as well as the development of the retail property rent corresponds to the quality of the location, the competition as well as the marketability of the store or object. Against this background retail rents in Germany differ extremely between best high-street locations in shopping metropolises and bad or unlettable sub- or solitary locations in small cities or rural surroundings (Fig. 4).

3.1 Prime Locations

At the moment, there are many (potential) tenants searching for properties in prime locations, and this has led to rising rents in the recent past. For example, the rents in the 25 “most expensive” German cities have continued to develop positively. From 2010 to 2014 prime rents have increased by 7.5 % on average. It should be noted that this is due, above all, to comparatively strong growth in some locations overcompensating for individual cases of declining rents. The majority of rents remains stable at a comparably high level. But of course, the situation is more nuanced than the overall picture may suggest. The mathematical average is therefore meaningless, and can ultimately be misleading. The major cities continue to play in a league of their own along with the top cities ranked just below them. Another point to keep in mind is that the ambitious rents demanded by landlords are not automatically accepted by potential tenants, even in prime locations, and are not always achieved.

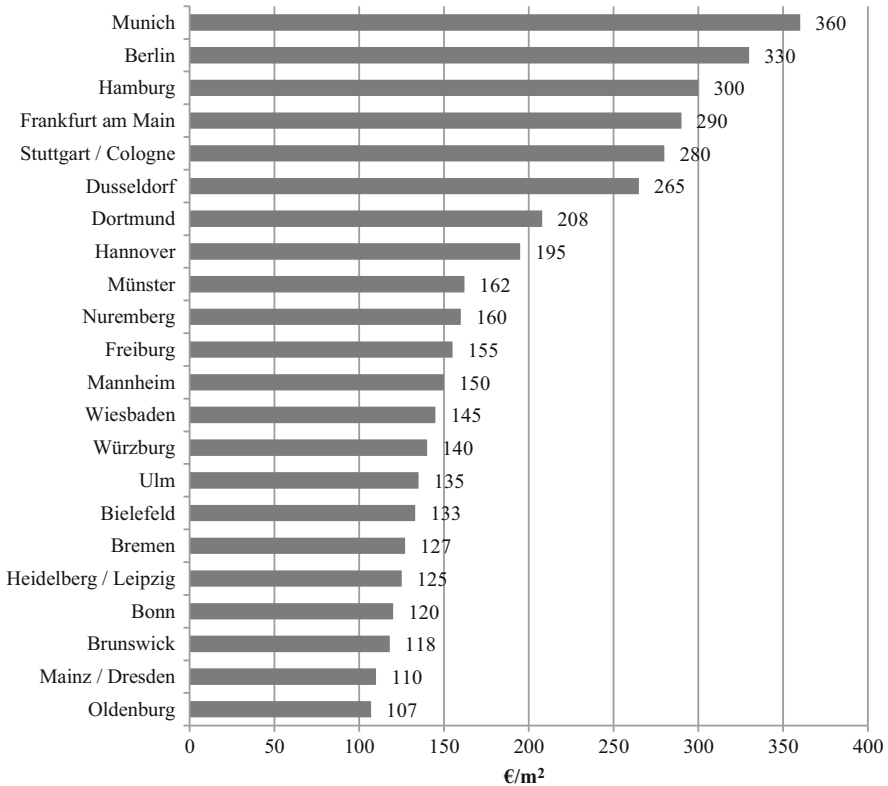


Fig. 4 Retail rents (80–120 m²) in prime locations—ranking of Top 25 cities 2015. *Source:* COMFORT

To achieve a top rent, absolutely everything has to fit. This applies in particular to the structure and layout of the rental space. Here, tenants are rarely willing to compromise. As a result, rental contract negotiations are often more drawn out and intensive than they used to be (Fig. 5).⁶

Admittedly, the relatively positive observation and analysis of the sought-after retail locations in the attractive micro- and macro-locations only represents a small, though important, part of the German retail market—especially for retail chain stores. These prime locations are not only distinguished by their above-average sales per square meter and sales potentials. They also offer the best possible platform for brands and styles, in order to make a lasting impression on consumers. Thus, many retail chains are active in these locations with a long-term perspective and this ensures a lively market. What is more, beyond the “classic” and well-

⁶These and following statements and figures are gathered from the Annual Report 2015 of Comfort, Holding GmbH, Dusseldorf.

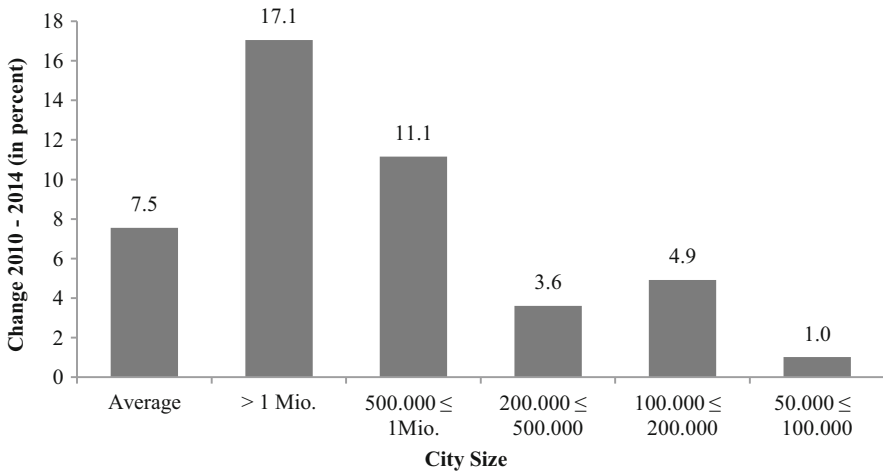


Fig. 5 The development of store rents (80–120 m²). *Source:* COMFORT

established retailers, such as H&M, C&A, New Yorker, Deichmann or Tally Weijl, who have been around for years, a plethora of new concepts and companies is also active (e.g. PRIMARK, Forever 21 with their Anglo-American background, Uniqlo from Japan, Reserved and CCC from Poland, or H&M with their new store concept and other stories).

Furthermore, a multitude of, frequently smaller scale, vertical chains as well as wholesale companies, trying to diversify into retail business are also searching for suitable locations. For example, suppliers such as Adidas, Gerry Weber, Tom Tailor, Hugo Boss, Geox, Olymp or Jack Wolfskin. The share of retailing in overall turnover has been growing over the last few years.

3.2 Other Locations

Outside the top locations both level of rents and returns fall sharply. Concerning large-scale stores 10 to 12 euros per m² marks an important barrier that is typically topped by objects with some attractive features. For smaller stores there are several factors that positively impact on potential rents: the administrative requirements for retail and urban development, the image of the surroundings together with the existence of neighbor (retail) facilities producing pedestrian frequencies. As mentioned before both rental levels and growth potential vary extremely.

Quality, as well as rents for solitary retail locations—besides marketability of e.g. store design, visibility or accessibility—are to a large extent dependent on the performance of the particular retail tenant, and this naturally implies a special operator risk.

Last but not least, rents in German retail parks and shopping centers are fixed in line with international standards. That means, rents for the individual tenant are set in a kind of mixed calculation with a tendency of relatively low prices for the anchor tenants and higher prices for the medium- and small-size lettable areas.

4 Brief Outlook

Today and in the next few years German retail properties are confronted with diverse influences: On the one hand, the relatively positive performance of the German economy, comparatively low interest rates and rare opportunities for profitable money investments after the financial crisis generate high interest in German real estate. Also the general outlook for private consumption and especially for retail looks quite stable on a low growth level.

On the other hand e-commerce will emerge further especially regarding non-food products but does not replace retail shops. Especially in high-frequency locations with a large catchment area, the shops are increasingly becoming stages for the brand names and retail trade brands represented there. They are effectively becoming experience/contact areas ('showrooming') for the consumers. These are effectively flagships for the new generation. With the tendency towards showroom/event-oriented concepts and effectively increasing (area) demands on goods presentation and logistics/click & collect possibilities as well as technical App-features (e.g. beacons) for the shops, there is an increasing decoupling of turnover generation from individual shop business, and therefore also the shop rents, from the turnover actually achieved in individual outlets.

A negative influence from the growing importance of online trade on rents in prime locations has not yet been observed. In fact, the opposite seems to hold true. In historic comparison, absolute highest rents are being achieved in good and very good city locations. The outlook is different for secondary locations and smaller cities. In the past, a trend towards growing concentration of the retail trade in prime locations to the detriment of secondary locations in smaller cities could be discerned. This trend is more likely to be strengthened due to the increasing market importance of online trade.

To sum it up there are important reasons why competent investors, together with powerful national and international retailers, are seeking to expand their engagement in German retail properties. As a result, prices as well as rents for good locations and objects look seem to trend upward in the foreseeable future. The main problem is that the pipeline of objects/locations/stores which fulfill the relevant requests is very narrow, availability is currently very scarce. But for retail properties and stores with noticeable defects it is by no means sure that they will benefit from the generally positive environment.

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Hotel Market Germany

Martina Fidschuster, Christine Mayer, and Philipp Linder

Abstract

For some years, the German hotel market has become increasingly interesting to international investors who have come to appreciate its transparency, stability and diversity. Germany is also regarded as the most important European expansion target by international hotel chains and with this, offers an abundance of investment possibilities. Along with this and apart from the top locations and core investments, whose demand far exceeds its offerings, it is also important for market participants to become active in the segment of internationally little-known locations, the so-called “secondary cities”, that display a definitely positive growth outlook within the hotel industry. This chapter delivers the requisite know-how to be able to comprehensively understand the hotel market in Germany with its opportunities and risks as well as an understanding beyond its well-trodden hotel investment paths.

Keywords

Franchise agreements • FF&E • Hotel investment • Hotel projects • Lease contract • Management contract • Operator • Resorts

1 Supply and Demand

The German hotel market is a very heterogeneous market with a variety of investment opportunities in addition to the internationally renowned cities and internationally branded hotels.

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Table 1 Primary Characteristics of the Hotel Markets in Europe and in Germany

Europe	Germany
<ul style="list-style-type: none"> • Largest hotel market in the world in spite of increasing market movement in the direction of Asia, the Middle East and Africa • Highly developed economy • Highly developed traffic technology and infrastructure • High density of interesting cultural and touristic destinations and countryside • Developed, mature businesses with high revenues • Relaxation as an essential basis for travel and investments 	<ul style="list-style-type: none"> • Largest business travel market in Europe • Largest exhibition locations worldwide • The most important event market in Europe with 720 international congresses per year • Hub-function for travelers from the growth markets of Asia • Low-cost carriers have provided, to date, for the above average growth rates • High growth potential for branded hotels due to the high portion of private hotels

Source: HOTOUR

The demand for hotels is based on various pillars: Leisure travelers, business travelers, MICE (meeting, incentives, conferences and events) as well as trade fair and congress visitors (Table 1).

1.1 Supply

In terms of numbers of businesses, the hotel supply is still predominated by owner-operated hotels, particularly in the budget and mid-market segments. Chain-affiliated hotels are gaining market shares rapidly, though, and as their room counts outnumber the traditional owner-operated hotels, the average number of rooms/beds is rising. At an average of 69 beds in all hotels¹ throughout Germany, the average hotel size is still comparably small though.

As most international hotel chains wish to be represented in the major cities, a tendency towards oversupply can be found in some locations. Particularly in the “BIG SEVEN”,² which are of great importance to the hotel chains, supply has been growing at a very high growth rate. Altogether Germany provided 20,890 hotels with 788,453 beds in 2014.³

There are currently some 380 hotel projects throughout Germany. Budget hotels are becoming increasingly relevant market players and will continue shaping the hospitality industry in this country. The German chain MOTEL ONE is a quality leader in this segment and has changed both guests’ and investors’ perception of value in this segment.

¹ The reference to hotels consists of the operational modes of both hotels and hotels with breakfast together.

² Germany’s largest hotel markets: Berlin, Hamburg, Munich, Dusseldorf, Cologne, Dresden and Frankfurt.

³ IHA (2015).

1.2 Demand

The overall demand for overnight stays has grown considerably throughout Germany in the last few years. Only the terror events of 9/11, SARS and the war in Iraq caused a decline in 2002 and 2003. Whilst the economic recession slowed the growth rate in 2009, results since 2010 have been improving strongly.

As the demand is both leisure and business driven, cities with balanced target groups, e.g. Munich or Hamburg, have been able to perform with very low fluctuations and can generally achieve high occupancy rates.

The demand for overnight stays is dominated by domestic demand. Depending on the specific characteristics of a location, e.g. the number of international businesses or the international reputation of a city (e.g. Heidelberg), the shares of international demand vary to a large extent. The highest shares (up to 49 %) of international demand are recorded in Munich, Frankfurt, Berlin and Dusseldorf.

Out of the 424 million overnight stays registered for Germany in 2014, approximately 23 % were generated by non-domestic demand. The ratio has slightly increased in the last 10 years (2005: 19 % foreign demand). The demand is primarily created by other western European countries (75 %) with the largest demand generators overall being the Netherlands (11 million overnight stays in 2014), USA (5.1 million), Switzerland (5.9 million), UK (5.2 million) and Italy (3.7 million). Source markets like China, Brazil, Korea or the United Arab Emirates are growing quickly from low levels. The growing demand for city trips as well as low-cost carriers and economic growth have been contributing to this development (Fig. 1).

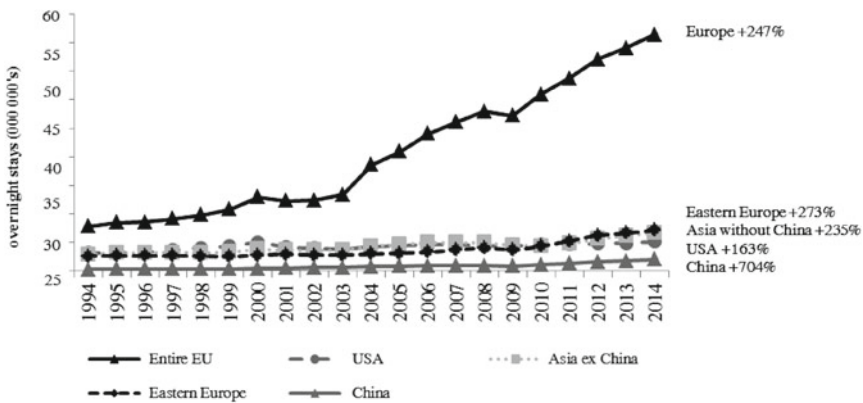


Fig. 1 Development of non domestic overnight stays. *Source:* Federal Statistical Office of Germany, 1995–2015

2 Focus on the Key Markets: The Big Seven

Out of the 424 million overnight stays that were registered in Germany in 2010, approx. 128 million took place in the big cities with more than 100,000 inhabitants. The primary destinations (Berlin, Cologne, Dresden, Dusseldorf, Hamburg, Frankfurt, and Munich) alone registered 76 million overnight stays (Figs. 2 and 3, Table 2).

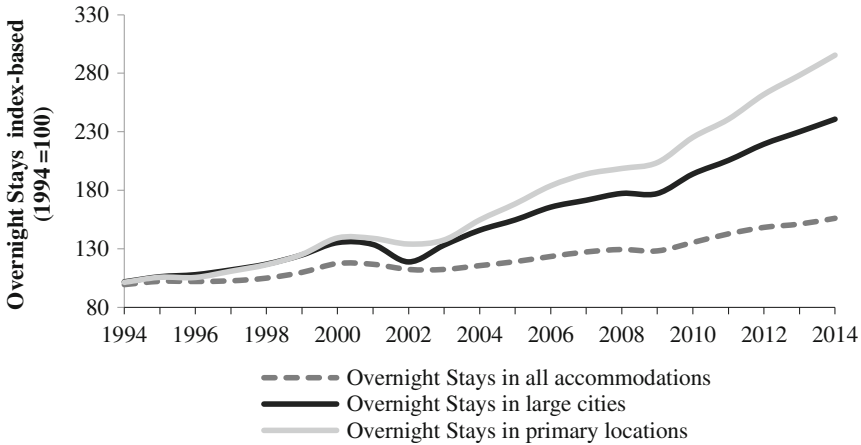


Fig. 2 Development of overnight stays by type of location. *Source:* Federal Statistical Office of Germany, 1995–2015

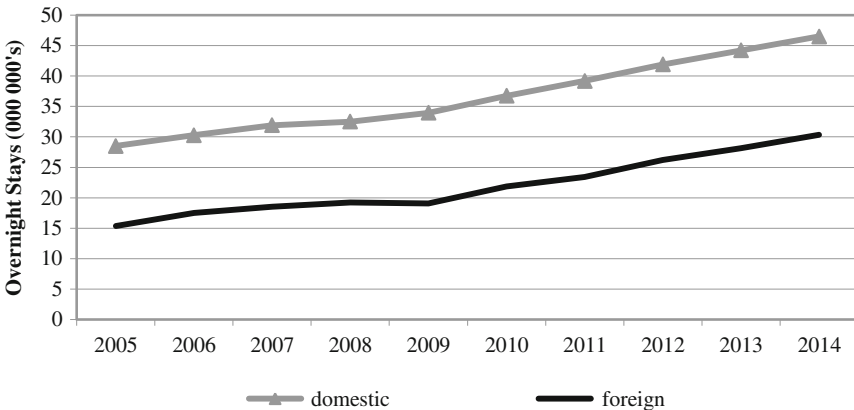


Fig. 3 Demand in primary cities. *Source:* Federal Statistical Office of Germany, 2006–2015

Table 2 Characteristics of the German key hotel markets

	Berlin	Munich	Hamburg	Frankfurt	Cologne	Dusseldorf	Dresden
Bed supply	137.1 k	62.3 k	55.9 k	43.9 k	32.7 k	25.8 k	22.8 k
<i>10 year growth rate</i>	63%	47%	65%	53%	33%	38%	51%
Overnights	28.7 m	13.4 m	12.0 m	8.0 m	5.7 m	4.5 m	4.4 m
<i>10 year growth rate</i>	96%	61%	87%	76%	36%	67%	51%
<i>Bed occupancy</i>	57%	60%	60%	51%	49%	49%	53%
OCC ^a 2015 (2014)	74% (72.5%)	78% (76.5%)	78.9% (78%)	68.5% (68.3%)	69.5% (67.9%)	68% (64.4%)	66.8% (63.9%)
ADR ^b 2015 (2014)	89.3 euros (87.5 euros)	125.7 euros (125.3 euros)	106.3 euros (102.1 euros)	118.7 euros (121.5 euros)	100.6 euros (103.4 euros)	111.8 euros (107.2 euros)	72.1 euros (72.5 euros)
Demand							
Leisure	40%	45%	55%	30%	30%	10%	60%
Trade fair	8%	18%	0%	24%	25%	40%	0%
Business	20%	24%	25%	26%	25%	30%	20%
MICE ^c	32%	13%	20%	20%	20%	20%	20%
<i>International</i>	44%	49%	24%	45%	34%	41%	19%
Characteristics	<ul style="list-style-type: none"> • International demand growing exceptionally • Congress and trade fair location No. 1 in Germany • High occupancy rates due to balanced demand • Low ADR • High competition, 	<ul style="list-style-type: none"> • Events such as Oktoberfest generate high demand • High ADRs • Balanced demand • High bed 	<ul style="list-style-type: none"> • Privately managed hotels very successfully • Popular destination for city trips • High occupancy 	<ul style="list-style-type: none"> • Demand driven by airport, trade fair and financial companies • High ADR • International demand 	<ul style="list-style-type: none"> • Balanced demand structure • Largest international source markets (UK and US) declining 	<ul style="list-style-type: none"> • High influence by trade fairs on demand, changing every other year • High ADRs • Low leisure demand • Asian demand comparably high 	<ul style="list-style-type: none"> • Strong competition in 4–5 star segment • Popular destination for city trips • Attractive for national

(continued)

Table 2 (continued)

	Berlin	Munich	Hamburg	Frankfurt	Cologne	Dusseldorf	Dresden
	especially among first class and luxury hotels, however budget hotels are emerging rapidly	occupancy <ul style="list-style-type: none"> • Highest percentage of international guests 	rates <ul style="list-style-type: none"> • Moderate ADRs • Low share of trade fairs • Dominance of domestic guests 	<ul style="list-style-type: none"> • High share of chain-affiliated hotels • Low occupancy on weekends 			leisure vacations

Source: Federal Statistical Offices, STR Global, HOTOUR Estimation

^aOCC: Occupancy

^bADR: Average Daily Rate

^cMICE: Meeting, Incentive, Conventions and Events

2.1 Performance in an International Comparison

Although demand has risen considerably during the last years, the performance in terms of average daily rates (ADR) and occupancy did not improve much. As the supply grew, some markets experienced a cut-throat competition in the upscale and luxury segment. In order to enter the market and gain the needed market share, hotels offered their services at very low prices. Although occupancy rates in German cities with a balanced demand structure like Berlin, Munich or Hamburg can keep up with other European cities, ADRs are much lower in German cities than in many other European cities. Various hotel operators have been entering the market with luxury hotels expecting to achieve rates comparable to other capitals but had to learn that the German hotel market in general is aggressively priced. Much the same, the corresponding cash flows generated for the real estate owners (or leases) are lower as well (Table 3).

Table 3 Performance of international cities

	2014	2013	2014	2013	2014	2013
	Occupancy		ADR (euros)		RevPAR (euros)	
London	83	83	176	161	146	133
Paris	80	80	255	254	205	203
Munich	78	77	126	125	98	96
Amsterdam	79	77	136	132	108	101
Zurich	73	72	197	194	144	140
Vienna	72	71	96	94	70	67
Berlin	74	73	89	85	66	63
Brussels	69	67	111	111	76	74
Istanbul	65	67	133	142	87	95
Rome	69	67	144	145	100	97
Moscow	60	66	111	136	67	90

Source: STR Global

Note: Occupancy, ADR & RevPAR are among the most important key figures to measure the performance of hotels

Occupancy: The room occupancy indicates the share of the sold rooms within the total number of available rooms

ADR: The Average Daily Rate is the total revenue from overnight stays without value-added-tax and breakfast, divided by the number of rooms actually sold

RevPAR: The Revenue per Available Room is the total revenue from overnight stays without value-added-tax and breakfast, divided by the number of available rooms (or Average Daily Rate x Room Occupancy)

3 Secondary and Tertiary Markets

3.1 Hotel Markets in Secondary and Tertiary Cities

In Germany there are 76 cities with a population of more than 100,000. Some of these generate a considerable number of overnight stays. Aside from the Big Seven, Germany's leading secondary cities like Stuttgart (3.5 million overnight stays), Nuremberg (2.8 million) or Leipzig (2.8 million) are dynamic economic locations and also benefit from the trend toward short city trips. Still often dominated by privately owned and managed hotels, secondary cities in particular are increasingly becoming targets of internationally operating hotel chains and investors. Even tertiary cities (more than 50,000 inhabitants and with between 150,000 and 1,000,000 overnight stays), that are mainly known and frequented by national travelers have attractive hotel markets with considerable growth rates of demand and supply. In many of these smaller markets, demand has been significantly outpacing supply over the last 10 years (see Fig. 4). While cities like Weimar, Baden-Baden or Trier attract leisure tourists thanks to their touristic sights, other cities own an important congress or trade fair business (e.g. Kassel, Mannheim, Augsburg) or gain their largest share of demand from local companies (e.g. Mainz, Ludwigshafen, Darmstadt).

3.2 Resort Hotel Market

Current social and business developments such as the trend towards short trips and wellness travelling, an increase within the Best-Ager target group who generally travel with predilection in their own country as well as the rising flight prices play into the hands of tourism in Germany. The amount of holiday travelling in one's own country has increased in Germany over the years. Along with this, the RevPAR's of the holiday hotels have risen—partially due to rising average daily rates over the last 10 years. At the same time, city hotels react more volatile to economic shocks. Particularly, the economic crisis in 2008/2009 led to falling RevPAR in this segment (Fig. 5).

Large parts of the German holiday tourism occur at the North Sea and Baltic coasts as well as in the southern German alpine regions. Additionally, the strongest growth rates are registered in the holiday regions within the new federal states. Appropriations are primarily responsible for this which in turn, can make the hotels rewarding investments. For example, the provision of funds have been made available for creating new jobs in the hotel industry and for building spa areas in order to reduce the decline of demand in the off-season. The large number of new operations that have sprung up, particularly in Mecklenburg-Western Pomerania in the north-east of Germany, led to a high demand growth (+16 % in the past decade), attractive new accommodations clearly stand out from the partially very aged operations in other holiday regions. Along with this, this development could not have been possible without the suitable appropriations. Other holiday regions



Fig. 4 Growth rates of secondary locations: overnight stays and offered beds 2005–2014. *Source:* HOTOUR

without similar programs stagnated (Bavaria +2 %) or registered a decline in demand (Thuringia—2 %).

Due to the new travel habits, the location criteria for resort hotels have changed. Aside from their image and a clear profile of the destination, it is particularly advantageous to be situated no more than 2.5 h drive from a highly populated and economically strong metro-area.

The hotels within Germany’s largest holiday destinations are still firmly in the hands of private hoteliers. Nevertheless, the hotel chain industry—particularly from the German-speaking areas—is waiting to move, new concepts such as a-ja Resorts have been launched recently. Due to the predominantly domestic demand, international hotel groups are seldom represented and the advantages of an international brand are also less important than in city destinations (Table 4).



Fig. 5 RevPAR index developments. *Source:* HOTOUR for Hotel report IHA 2014

Table 4 Opportunities and risks profile of the German hotel market

Opportunities	Risks
<ul style="list-style-type: none"> • Locations • Primary locations • Metropolitan regions • Large cities with tourist attractions and effective tourism marketing • Mountains and sea as well as holiday regions with clear profile (particularly if appropriations are available) 	<ul style="list-style-type: none"> • Locations • Tertiary locations with unshaped images • Small towns on the periphery • Medium mountain regions without appreciable tourist infrastructure and in greater distances to largely populated centers • Cities with unbalanced demand
<ul style="list-style-type: none"> • Hotels • Brand hotels • Budget hotels • Hotels with clear positioning and target group focus • Original concepts 	<ul style="list-style-type: none"> • Hotels • Capital-weak companies without successor planning • Hotels in the second life cycle without consistent reorientation • Middle-class hotels with unshaped images

Source: HOTOUR

4 Key Players: Hotel Operators

The majority of hotels in Germany are family-owned and not branded. Particularly in the budget segment, chain hotels have only recently started to expand.

Of all branded hotels,

- 47 % are chain-affiliated through cooperation
- 21 % via leases by hotel chains
- ~15 % through franchise agreements
- 10 % ownership by the hotel chain
- ~7 % through management agreements

Table 5 Cooperation vs. Franchise agreements

Cooperation	Franchise
Various degrees of intensity—less standardization than franchised hotels—hotels will stay individual as own entities	Different levels of standardization of the hotel product depending on brand (e.g. IBIS Styles by Accor, 2-star brand for non-standardized hotels versus IBIS by Accor for very standardized product)
Marketing association, sometimes purchasing and controlling as well	Shared marketing, controlling and purchasing
Local, regional, nationwide or international cooperations, based on e.g. quality of interior, type of destination	Nationwide or international franchise
Often used by owner-operator hotels that want to keep to individual touch	Individual hotels (e.g. Best Western) as well as standardized products
Fees vary by level of intensity	Fees vary
Largest cooperations: Land-gut-Hotels, Stadt-gut-Hotels, Schloß-gut-Hotels: 134 member hotels in Germany, 70 foreign hotels; Ringhotels: 127 member hotels in Germany; Top International Hotels: 158 member hotels in Germany, 57 foreign hotels, Romantik Hotels: 113 member hotels, 98 foreign hotels	

Source: HOTOURL and IHA 2015, p. 222

Out of the 34,000 hotels in Germany, some 4000 are branded—i.e. they are either leased, managed or franchised by a hotel chain or are member of a cooperation (see Table 5 below). Although only 12 % of all hotels and guesthouses in Germany are linked to a hotel chain, they provide 40 % of all rooms. Throughout Europe, chain affiliated hotels account for 25 % of all hotel operations and in the US, approx. 70 % (IHA 2015, p. 226).

Not only is the number of branded hotels comparably low, the prevailing mode of operation differs, too. The internationally dominated franchise-system favored by large hotel companies is still comparatively unimportant in Germany.

The main reason for this is the dominance of family businesses—often steeped in tradition—who do not have the heart to assign their own name to a brand. The cooperations active in Germany hold this tradition of individuality vivid and have the following distinctive characteristics:

4.1 German Brands Versus International Brands

As demand in Germany is primarily of national origin, German brands can compete with international brands in most locations. International luxury brands are mostly found in the primary cities such as Berlin, Hamburg, Munich, Frankfurt, Dusseldorf, Cologne and Dresden, whereas other international brands can be found in secondary or tertiary cities as well. The share of internationally branded hotels in leisure destinations is low.

The 20 largest hotel operators in Germany in 2014 in terms of revenue were (Table 6):

Table 6 The 20 largest hotel operators in Germany in 2014 in terms of revenue

Hotel operator	Net turnover in million euros	Number of operations in Germany	Number of rooms	Average Room occupancy in percent	ADR in euros
Accor Hotellerie Deutschland GmbH	1032.5	342	44,902	69.8	n.a.
Best Western Hotels Deutschland GmbH	674.1	195	18,551	71.6	87.0
InterContinental Hotels Group	559.6	n.a.	n.a.	n.a.	n.a.
Starwood Hotels & Resorts Worldwide, Inc.	443.7	n.a.	n.a.	n.a.	n.a.
Steigenberger Hotels AG	425.3	72	12,673	66.7	92.0
Maritim Hotelgesellschaft mbH	368.8	38	10,924	57.2	96.0
H-Hotels	340.0	65	9504	67.2	68.0
Grand City Hotels GmbH	334.2	122	15,829	68.3	64.6
Hilton Worldwide	272.6	n.a.	n.a.	n.a.	n.a.
NH Hotels Deutschland GmbH	269.7	n.a.	n.a.	n.a.	n.a.
Event Hotel AG	247.0	29	7489	70.4	87.0
Motel One Group	217.9	46	10,492	76.7	69.1
Neue Dorint GmbH	217.6	31	5818	60.0	99.0
Rezidor Hotel Group	196.6	n.a.	n.a.	n.a.	n.a.
Kempinski AG	190.3	10	2316	n.a.	n.a.
Marriott Hotel Holding GmbH	154.7	n.a.	n.a.	n.a.	n.a.
Lindner Hotels AG	140.0	24	3837	66.7	95.0
Sol Meliá Deutschland GmbH	133.9	24	n.a.	70.7	96.0
Hyatt Corporation	109.0	5	1471	69.1	176.0
DSR Hotel Holding GmbH	94.7	7	1270	78.9	146.0

Source: AHGZ—contains doublings since some of the known chains such as Event Hotels AG and Grand City Hotels GmbH are franchisees

The largest hotel chain in terms of revenue in Germany is Accor; the French company operates more than 340 hotels under various brands (i.e., Sofitel, Pullman, Mercure, Ibis, Ibis Style and Ibis Budget). In terms of revenue, the 20 largest hotel operators in Germany are divided almost equally into national and international chains.

The largest German hotel chains/brands in terms of revenue like Maritim, Steigenberger (sold to an Egyptian investor), Hospitality Alliance (joint venture of the Ramada brand and Treff Hotels), Motel One Group and Neue Dorint are still focusing on Germany, but are also present in international locations as well.

5 Type of Operations: Lease Contracts

Lease contracts for non-owner operated hotels have been predominant in German speaking countries. As this form of operation guarantees the owner a very predictable and (preferably) fixed income stream, investing in a hotel operated under a fixed lease agreement has always been considered as a very “safe” form of real estate investment. Owners would usually neither engage directly in the hotel operations, nor even care about the operator’s results as long as the lease was paid on time. Their responsibilities—and participation—are mostly limited to the surveillance and upkeep of the building and structure. Most German financing institutes and investors are used to these types of contracts and the supposedly safe income stream generated by fixed lease rates. Nevertheless, institutional investors have become more familiar with hotels and have also become more professional in managing the properties. Since then, stipulations regarding reporting etc. are gaining importance for the investment sector.

The internationally prevailing operations through a management company specialized in hotels that will often hold a franchise of an international brand is not very common in Germany. Due to the entrance of more global players (investors as well as operators) and the preference of franchise or management agreements by international hotel chains, it is getting more common, though.

5.1 Characteristics of Lease Contracts

According to German law, a lease contract cannot extend over a fixed period of more than 30 years, most are valid for 15–25 years plus options for extension.

There are different types of remuneration, fixed and/or variable payments, guaranteed amounts and cap clauses (Table 7).

5.2 Recent Development

Due to IFRS changes and the need to minimize liabilities and risks, international hotel operators have been increasingly reluctant to sign fixed lease contracts. In

Table 7 Lease contracts

Operator	Investor/Owner
Pays fixed amount of lease and/or variable lease	Receives fixed income stream
Opportunities and risks on the operator's side	
Usually pays for the replacement of FF&E ^a , sometimes also property taxes and insurances	Usually responsible for building and structure
Operates hotel without interference by owner	Often receives performance data of hotel only if needed for calculation of a variable lease

Source: HOTOUR

^aFF&E: Fixture, Furniture and Equipment are moveable large and small inventory items such as a bed, table, desk or curtains

order to share opportunities and risks, lease contracts have been undergoing significant changes. So-called hybrid contracts that combine the aspects of management and lease agreements are currently on the rise.

Nevertheless, smaller regional or national hotel operations and franchisees not preparing their balance sheet under IFRS are still offering to sign lease contracts. For strategic reasons, international operators might as well do so, if the hotel was located in a primary city at an excellent site, in order to secure a renowned address for their respective hotel brands.

5.3 Hybrid Contracts

The hybrid contract has components taken from lease and management contracts. Generally such types of contract are characterized by guaranteed payments to the investor or owner and payments depend on profit or turnover. The determining criterion whether a respective hybrid contract is a lease or a management contract is the responsibility for hotel staff. If the operator employs the staff, the contract is considered a lease contract.

Conclusion: Even though the term “hybrid” is often used in practice, legally it must be either a lease contract according to the tax laws of the lease (rental law, income to the investor from renting and leasing) or a management contract (contract of employment, mediation contract or contract for work, income to the investor from a commercial operation).

6 Valuation of Hotel Investments: Characteristics of German Valuation Standards

The valuation standards in Germany depend on the reason for valuation. In comparison to international valuation methods, German valuations might often appear rather conservative (see Meister and Dressel 2016).

Valuation is usually based on two of the three main approaches (Income, Cost or Comparison), whereas for hotels, the Income and Comparison Approaches are the prevailing and recommended methods.

The *Sales Comparison Approach* is often used to validate a value generated through the Income or Cost Approach. However, it is very difficult to find a sufficient amount of comparable sales (in a contemporary manner at the time of assessment). Sales prices can be obtained through “panels of experts” in the cities and counties, the trade press or publications by real estate agencies.

The *Cost Approach (material value)* is based on the “normal production costs”, as defined in German regulations and procedures and is used to validate the Income Approach. Financing institutions prefer certified valuers (HypZert) for the valuation.

There are two commonly used methods that are based on the *Income Approach*: The German *Ertragswertverfahren* (Income Capitalisation) and the Discounted Cash Flow Method.

The derivation of the *Liegenschaftszinssatz* is a key factor of the valuation. As most local committee of valuation experts (Lokaler Gutachterausschuss) do not deduct *Liegenschaftszinssätze* for hotels separately since the number of hotel transactions in a specific city is usually too small to derive a reliable value, the general *Liegenschaftszinssatz* must be adapted. Publications by HypZert might help on this topic. The Capitalised Earnings Method is widely used for the assessment of the market value.

The Discounted Cash Flow Method has been used more frequently as international investors and financing institutes are entering the market. Yields for hotel sales are rarely published for hotel transactions that have taken place in Germany, thus hindering the derivation of the respective discount and capitalisation rates.

The German lending value can only be assessed by certified appraisers (DIN EN ISO/IEC 17024). It is required by mortgage banks and its determination is strictly regulated by various laws. The lending value can never exceed the market value.

7 Players in the German Hotel Investment Market⁴

Since the mid 90s, hotels have been regarded as an own asset class and have been considered an attractive investment opportunity. The tendency of hotel chains towards sale-and-lease-back transactions or sale-and-manage-back transactions has enhanced this trend. Due to the historical predominance of lease contracts and conservative portfolio strategies, investors often prefer hotels with lease contracts.

German-based *Open-end real estate funds* own hotels in Germany and worldwide. By definition, they can only generate their income from rent and leasing and are not permitted any income from trade and business, meaning that they cannot

⁴ Fildschuster (2013).

own hotels without a lease contract. The minimum investment per hotel usually starts at 15–20 million euros. Their active portfolio strategy is conservative, i.e. the share of the fixed lease is frequently as high as possible. Examples: Union Investment, Deka.

Real estate special funds for institutional investors are a little bit less conservative than public funds. They invest only in leases. Example: DEFO (Union Investment) and LB HotelInvest Germany I (LB ImmoInvest). The investment volume per property generally amounts to at least 10 million euros and is limited upwards to 15 % of the entire fund volume.

Closed-end real estate funds have been active as hotel initiators in Germany since the 70s and intensively so since the early 90s. They invest in hotels with (fixed) leases. Examples of initiators of hotel funds: Lloyd Fonds, E&P Real Estate and Fundus Gruppe. Investment volumes per property are from 10 million euros with package purchases also included.

Real estate PLCs and REITs limit themselves, as a rule, to large-volume investments in hotel chains. REITs still have hardly appeared as hotel investors in Germany. Exception: the French REIT Foncière des Murs has acquired a 128 million euros hotel portfolio from B&B in Germany. Examples of real estate PLCs with hotel investments: IVG Immobilien AG, DIC Asset AG, Patrizia Immobilien AG. As a general rule, the investment volume per property amounts to at least 20 million euros.

Insurance companies and pension funds as managers of investment funds are also controlled by the BaFin, (German Financial Supervisory Authority), with accordingly conservative investment strategies with a focus on leases. Examples: Provincial and AXA. Project developments are often transacted through real estate subsidiaries. Example: UNIQA Real Estate. Also, these investors generally buy properties from a volume of 20 million euros.

Private equity funds are often opportunistically oriented funds and frequently work with foreign capital and draw particular attention with Sale and Manage Back transactions from large hotel groups and portfolios in the area of Non-Performing Loans. The originally very ambitious expectations of returns were quite often not fulfilled in the wake of the financial crisis. Example: Blackstone (whose investment company is listed on the stock exchange), MSREF VI International.

Pan-European open and closed-end funds, as well as special funds for institutional investors authorized under Luxembourg tax law are pursued due to less regulation and a less conservative investment strategy than its German counterparts. As a rule, hotels are bought as lease properties and flexible contract models are also possible. Examples: Invesco European Hotel Real Estate P.à.r. L.

Private investors pursue hotel engagements with very different investment strategies. They buy or build hotels either under yield aspects or for the asset's security. Hotels are also sometimes acquired for personal motives, which is partially why very individual properties such as castle hotels, holiday hotels or intercity boutique hotels are selected.

Owner-operators: The range of the owner-operators is as big as the variety in hotels: they stretch from family-controlled, traditional operations through to trophy

properties and resort hotels and up to hotel chains that are (still) in the possession of hotel groups. These are broadly strewn according to the interests of the owners.

Hybrid forms: Some opportunistically oriented investors and private equity funds acquire hotels and also operate them or conduct this through management companies. They also partially operate hotels of other investors as lease or management companies. They are quick, very adaptable and indeed also buy smaller hotels from an investment volume of approximately 3 million euros that they bundle up into bigger portfolios to reach a sufficiently large critical mass. Examples: Grand City, Azure Property Group and Event Holding.

Which real estate is suited for which investor?

From the description of the investors, there appear to be different investment strategies that changed slightly in the course of the financial and economic crisis (Table 8).

Table 8 Investment strategies of hotel investors

Typical investors	Hotel types	Real estate cycle	Locations	Contract structure/ operator
Open real estate funds	4-star hotels Recently more popular: 3-star and lower	Buy new hotels, partly already in planning phase Also hold older hotels Older hotels bought only with long running leases	Cities: prefers primary, but also secondary	Leases with very high fixed lease portion Credit standing- strong operators prefers hotel chains
Pension funds and insurance companies				
Closed real estate funds	3-star to 5-star hotels		Cities: primary, secondary, tertiary and holiday locations	
Real estate special funds	2-star to 4-star hotels		Cities: primary and secondary, if necessary, tertiary	
Pan-European open funds	Mostly all hotel categories	All phases, also shortly before lease expiration of the contract	Cities: primary, secondary and tertiary	Leases, also with lower fixed lease share
Real estate PLCs				
Private equity	Hotels with development potential, also non-performing	High renovation and repositioning requirements	Any, holiday locations only with high significance	Management contracts, also operator free
Private investors	Any, often hotels with prestige	Lengthy holding period in all phases, as a rule	Cities, as well as holiday hotels	All, also their own establishment
Owner-operator	Any	Any		Operator free

Source: Own representation from: Fidschuster (2013)

8 Investment Market

Due to the dominance of leases, the German hotel investment market is less volatile and still shaped by German institutional investors. While globally, hotels with management contracts most notably are sold through the mechanisms of rising or falling cash flows and shorter holding periods are common, local investors look at hotels with often up to 25-year-old leases as a stable investment with steady income streams. This basic position has changed little, even though a shift to turnover leases with base guarantees has taken place during the last years.

International buyers started to become interested in the German hotel market only after the turn of the millennium and with this, considerably contributed to the stimulation and internationalization. The first movers included rather opportunistically—oriented funds in particular that initially involved the Sale and Manage or Lease Back transactions of large hotel groups. Then, numerous purchases of hotels and portfolios consisting of Non-Performing Loans by German banks occurred, which brought movement into the local hotel transaction market in the course of the introduction of Basel II. The interest of international buyers became bigger and the readiness of some banks to finance Loan-to-Value ratios from 80 % and more culminated in the years 2006 and 2007 to transaction volumes of over 2 billion euros for each year (CBRE Hotels 2011). In 2008, the volume was halved in the course of the financial crisis and ground to a halt in 2009 with roughly 350 million euros.

Running up the past 5 years, the transactions have increased tremendously. Particularly in the second half of the year 2010, the investment market began to recover and reached a record level of hotel investments in 2014 with a sum of over 3 billion euros (CBRE Hotels 2015). This was 82 % above the previous year's volume and outperformed the 10-year average by 135 %. The positive trend is poised to continue as Germany remains a stable economic market, the interest rates are historically low and hotels still offer higher returns than other real estate investments.

9 Summary

The characteristic features of the German hotel market are:

- Germany offers a wide variety of interesting hotel locations, also beyond the internationally known cities. It is worthwhile for investors to also deal with Secondary and Tertiary locations.
- An intensive employment of regional and local hotel markets is also necessary because the value drivers in hotel real estate—attainable rates and occupancy—often differ very strongly from location to location. The range of the attainable cash flow or leases is broad.
- The domestic demand dominates the German hotel markets: therefore, national chains and partnerships are as successful in an entire series of markets as the

international chains, although the latter always succeeds in achieving higher rates in the large cities, at least.

- German project developers, banks and investors traditionally shape their entire way of thinking around leases. At least during the last years, hybrid contracts have begun to be accepted primarily in the form of turnover lease contracts with a base guarantee and a profit sharing. Nevertheless, the German investment market is still far away from an acceptance of the management contract as favored by the international chains.
- Hotel operators that are independent of brands, purchasing franchises according to their needs are at the beginning of their development in Germany.
- In this country, the understanding of the market value of a hotel by the financing banks is more past- than future-oriented. Therefore, a long track record of cash flow can still evoke a good result more than the Hockey-Stick effect. This is why the Discounted Cash Flow Method is not accepted for all valuation purposes.
- Mortgage banks must determine the lending value according to strict regulations; this is why the lending value always lies below the market value.
- During the last few years, the German hotel market has become more transparent, comparative transactions are only rarely published. Although purchase prices for hotels are increasingly more available, they are, as a rule, always without information regarding yields, cash flows and/or leases.

The German hotel industry that had already registered a perceptible stimulation in demand in 2014 has also shared in the unexpectedly speedy recovery of the German economy and the consequentially improved consumer climate until 2014. The branch profits throughout from more business trips, conferences and private travelling particularly from the domestic market which stands for just at 80 % of the overnight stays at hotels.

Important indicators for hotel transactions are also:

- The financing environment: while many hotel transactions of the boom years as mentioned before were absolutely done with LTVs above 80 %, the LTVs seem to have settled now to 60–65 % according to risk assessment and contract structure which, in principle, is detrimental to hotel transactions by opportunistic investors. Besides, the readiness to finance by the German banks during the course of the preparations for Basel III and the upcoming stress tests might sink somewhat or, at the least, stagnate. Nevertheless, we currently see that some opportunistic investors appear to have adapted to the new financing environment and are approaching hotel financing with higher equity capital ratios than in the past. Particularly foreign investors have noticed Germany to be an attractive market. Paired with low lending rates, this would speak for the fact that during the coming months, another stimulation in the hotel transaction market will take place as well as the future stable economic market combined with high returns and low interests.
- The offers of the market: With the necessary higher equity capital ratios, the risk readiness of the investors diminished so that the demand for core hotel real estate

has already recognizably risen and will remain at a high level. There may be purchases of hotel projects and/or newly opened hotels at short notice less because the pipelines of the project developers are perceptibly empty and not the least, also due to the absent readiness of the banks to carry out project financing. Meanwhile, budget hotels as segment within the asset class of hotels also continue to be strongly demanded and therefore contribute to a stimulation of the transaction market in the medium term. Also, we expect from the fact that during the next few years, hotels from formerly non-performing loans may come back onto the market.

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“Unternehmensimmobilien”: An Asset Class of High Potential

Stephan Bone-Winkel

Abstract

They provide companies of any type and sector with flexible floor plate for doing business, be it for administrative, storage, manufacturing or service purposes: “Unternehmensimmobilien”. This German term refers to a comparatively young asset class of multi-use and multi-let commercial real estate that a growing number of institutional investors now consider eligible for their portfolios. Reasons underlying the increased interest include enhanced market transparency and comparatively high and stable yields. Having outlined the typology of Unternehmensimmobilien, the essay moves on to discuss latest market trends for this asset class and associated asset management requirements.

Keywords

Unternehmensimmobilien • Multi-use/multi-let commercial real estate • Logistics • Manufacturing • Alternative use potential • Industry 4.0 • E-commerce

1 Changed Work Environments and Manufacturing Processes Cause Demand for Floor Space to Shift

Industry 4.0, the Internet of Things, or e-commerce—these are some of the societal and technological trends that are changing manufacturing processes and work environments at an ever faster pace and in increasingly radical ways. The changes coincide with a demonstrable shift in corporate floor area requirements. Introducing the Internet of Things into the production cycle, for instance, has triggered a fourth industrial revolution. Going forward, products will use interactive networks to

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remain connected with all systems and players involved in a given manufacturing process across the entire product life cycle. But the trends also have implications for the buildings in which many of these processes transpire. The building corpus serving the needs of “Industry 4.0” will require more flexibility and multi-functionality. Corporate real estate known as “Unternehmensimmobilien” in German arguably meets these challenges. It is a term of rather recent coinage in the German real estate industry. It fronts for an up-and-coming asset class with growing potential. Rather than connoting corporate real estate as such, the term refers specifically to multi-use and multi-let properties. Unternehmensimmobilien are characterized by a flexible work environment accommodating a diversity of use types: office, manufacturing, storage, logistics, service and clearance space may be available in modules flexibly adaptable as required and as long as needed. Accordingly, occupiers get exactly the accommodation they want in order to ensure efficient work streams.

Demand on the occupier side is huge. Together with the prospect of stable rent revenues and diverse development options, this makes Unternehmensimmobilien interesting for investors, too. Especially against the background of diminishing returns and a shortening cycle time in the established property asset classes, Unternehmensimmobilien are becoming an alternative investment of growing significance.

The fact that Unternehmensimmobilien did not show up on investors’ radar until fairly recently is owing to the lack of transparent information that used to characterize certain sections of this market. Various market surveys may have been available for some time. But they have been less than helpful because most of them are based on hazy definitions. For instance, historic surveys often equated Unternehmensimmobilien with logistics properties, even though logistics assets represent but one of altogether four different types of Unternehmensimmobilien. An industry initiative formed in 2014—the Initiative Unternehmensimmobilien (IUI)—has responded to the blatant opacity of the segment by publishing a semi-annual Market Report. Among the initiative members are, as of 2015, the companies ATOS, aurelis, BEOS, CORPUS SIREO, Hansteen, Garbe Logistic, GSG Berlin, Investa, SEGRO, Sirius, VALAD and M7 Real Estate—i.e., 12 active players on the German market for Unternehmensimmobilien. In close cooperation with the bulwiengesa research firm, a database was created that collects all transaction and letting data of the member companies. It forms the basis on which investors and market analysts are periodically briefed about the sector’s trading volume and performance. The findings of the IUI’s latest Market Report are discussed at length in Sect. 3.

2 Unternehmensimmobilien Asset Types

As suggested above, Unternehmensimmobilien may be defined as multi-use and multi-let commercial real estate, typically having a mid-market tenancy. Major demand groups renting multi-use commercial premises include—in addition to

light manufacturing businesses—companies in the sectors services, logistics, and retail above all. Inversely, it is precisely the wide variety of tenant leads that implies a broad-based risk diversification for owners and asset managers.

An Unternehmensimmobilien asset normally represents a blend of office, storage, light manufacturing, research, service and/or wholesale space as well as clearance space. Although this increases the overhead compared to less diversified properties, the extra costs are compensated by a secure rental income and a lower default risk (cf. Sect. 4.3 on the asset management of Unternehmensimmobilien). The asset class of Unternehmensimmobilien divides essentially into four distinct types that will be profiled below: converted properties, logistics properties, business parks, and light manufacturing properties.

2.1 Converted Properties

Converted properties often represent former manufacturing sites with a building structure that evolved historically in line with changing business needs. Some of them have campus character, are found in comparatively central locations in urban areas, and are managed in a top-down structure. During the conversion process, the existing rental income will facilitate alteration, supplementary and redevelopment measures aimed at turning a single-occupier property of homogeneous use into a multi-tenant property marked by a variety of use types. The historic nature of period buildings adds special charm to the premises to be marketed. Especially young service providers identify with the "Made in Germany" image of industrial brown-field sites.

Converted properties are highly versatile in their use options because of their very heterogeneous and comparatively large structures. Accordingly, they qualify for nearly any classic type of use. Depending on what sort of redevelopment is undertaken, converted properties may continue to serve business purposes for another 50 years on average, assuming sound use concepts. Their often central urban locations justify elevated rent levels that match or indeed exceed the local reference rent, especially whenever properties of this type are redeveloped into office or retail accommodation. Accordingly, leases tend to be signed for extended average terms, with 10-year leases not uncommon. General purpose accommodation takes exception, as units of this type are mostly let for terms of 3–6 years.

2.2 Logistics Properties

Against the background of the supply chain management, modern logistics properties serve purposes beyond the business of storing, transshipping and order-picking goods and commodities. Existing infrastructure and technology (for instance, annexed offices and social areas, warehouses, conveyor technology, IT, service areas, shops, etc.) facilitate the quick adjustment to new requirements. As early as the project planning stage, project developers see to it these days that the

buildings they raise comply with the latest market requirements while lending themselves to mixed use by several occupiers and having a modular structure. Logistics properties raised after the year 2000 generally show these characteristics. Most of them are operated by logistics firms on the basis of service contracts (contract logistics), and are frequently located near transport hubs. Their standardization and high alternative use potential make properties of this type extremely flexible. As a result, they satisfy the current requirements of the logistics industry. This in turn makes the properties particularly attractive for investors.

The best-case scenario for vintage stock properties is to be located in a region subject to great logistics demand. For an exacerbated shortage of floor area and keen demand will obviously boost their attractiveness as investment property. Due to their architectonic structure, dated legacy properties are rarely suitable for multi-tenant use because they were often custom-developed for their former primary user—historically the standard model. Accordingly, these vintage properties do not qualify as Unternehmensimmobilien except subject to severe limitations.

Driving factors such as globalization and the segmentation of manufacturing processes have greatly boosted the logistics industry in Germany, not least because of the country's advantageous location in Europe. The momentum is further accelerated by the ascendancy of e-commerce, and has lately generated strong demand among occupiers and investors. Among the corporate real estate types, it is the asset class with the fastest-growing footprint in Germany. The combination of keen demand with limited floor space supply makes it also reasonable to expect rental growth upside. The prospect is actually reflected in the ongoing yield compression (cf. Sect. 4.2 on the yield opportunities of Unternehmensimmobilien).

2.3 Business Parks

By their very nature, business parks are intended for multiple occupancy. A combination of office, service, storage and clearance spaces is let in a building cluster complete with professional management. Distinguishing features of modern schemes include central locations and smaller dimensions, whereas older business parks are often located in suburban sites marked by convenient transportation access. Principally speaking, business parks divide into several generations: The first generations were defined by a very low share of office accommodation. Over time, office spaces became increasingly dominant, in some cases accounting for a share of up to 80%. More recently, the trend has shifted again in favor of other types of floor space.

While business parks are inherently designed as multi-tenant properties, the concept of business parks has been repeatedly adjusted to the needs of the economy by changing the pro-rata floor space contingents. This has led to the creation of a wide variety of different business park types. Depending on the location, Unternehmensimmobilien rents in business parks are comparatively high. The elevated rent level is primarily explained by the higher office share. Another factor that comes into play are rather central locations, because these justify higher

square-meter prices. Warehouse space, which often has a multifunctional layout, generates a by all means respectable result for this type of property. The multi-purpose nature of interconnected complexes turns modern properties into safe and profitable vehicles. Older schemes with a high office share and located in peripheral sites, however, need to factor discounts into their office rents. The spread of achievable rents in business parks is therefore comparatively high for office space.

2.4 Light Manufacturing Properties

Light manufacturing properties represent buildings used for light non-nuisance manufacturing purposes. Accordingly, this does not include industrially used units marked by high levels of pollution. Present-day light manufacturing properties tend to be found in location clusters with great access to their constituent cities. They frequently combine several floor area types, such as manufacturing, logistics, and warehouse space, along with a modest shares of office units.

Light manufacturing real estate is located in trading estates or industrial areas close to cities. Due to the relatively high degree of specialization and customization for specific manufacturing processes, lease terms signed by economically established businesses often exceed the 10-year mark, which would otherwise be a rather atypical length of time for Unternehmensimmobilien. This is explained, inter alia, by the substantial proprietary investments that occupiers tend to make, and that presuppose long periods of occupation to allow for amortization. Another factor encouraging strong ties to a given location is the local rootedness of some companies.

From an investor's point of view, the above-average lease terms for light manufacturing properties are a boon. Then again, rent revenues rarely exceed the mid-range. The reason for this is in many cases the relatively simple building standard that could alternatively be used for warehouse, service, and logistics purposes. Modern light manufacturing schemes are often designed for a flexible adaptation of these property types from the start because of the close synchronization of production and logistics processes within the framework of supply chain management. This can be changed as soon as a light manufacturing property is customized to serve the purposes of a certain occupier. Rents rates are therefore much higher for high-tech installations, for instance, whereas their alternative use potential is compromised.

3 The Unternehmensimmobilien Market

While multi-use and multi-let commercial real estate has long been established as distinct asset class under the name "light industrial" in Anglo-Saxon countries, the German equivalent, "Unternehmensimmobilien", was largely neglected in the asset allocation of domestic investors until a few years ago. The skepticism was essentially motivated by two reasons. On the one hand, Unternehmensimmobilien

Table 1 Floor space and values of German Unternehmensimmobilien in H2 2014

Unternehmensimmobilien type	Floor area		Total value		Thereof investment-grade	
	in square meters (millions)	in percent	in euros (billions)	in percent	in euros (billions)	in percent
Light manufacturing	542.9	58.0	298.6	54.9	119.4	40.0
Warehouse/logistics	324.0	34.6	191.8	35.3	115.1	60.0
Converted properties	60.7	6.5	42.5	7.8	21.2	50.0
Business parks	7.8	0.8	10.6	1.9	9.5	90.0
Unternehmensimmobilien total	935.5	100.0	543.5	100.0	266.2	49.0

Source: Initiative Unternehmensimmobilien (2014)

require a skilled asset management (cf. Sect. 4.3). On the other hand, the widespread opacity of the market used to give investors pause.

Yet the German market is vast in scale, and shows proportionate potential. The latest figure quoted by the research company bulwiengesa, which constantly monitors the market, puts Germany's commercial floor space stock (excluding hospitality) at over 3.1 billion m². With over 935.5 million m² or nearly 30 % of the total, Unternehmensimmobilien are among the two largest groups, second only to industrial real estate. The market value of Unternehmensimmobilien totals 543.5 billion euros or well over 26 % of the entire market value of Germany's commercial real estate, just behind office real estate with 600 billion euros or around 29 %. The fact underscores the high real value of this asset class and thus its potential.

A breakdown by property category reveals that Unternehmensimmobilien are dominated by light manufacturing properties. By the end of 2014, they accounted for almost 58 % of the total stock and nearly 55 % of the fair market value of Unternehmensimmobilien. Around 40 % of the light manufacturing property stock re-presents investment-grade assets because of their market-consistent and reversible layout. The other share of these properties has a limited alternative use potential because they were purpose-built for certain manufacturing processes. Another characteristic of this category is the prevalence of owner-occupancy. Assets of this type rarely come up for sale (Table 1).

3.1 The Unternehmensimmobilien Investment Market

Germany's commercial real estate investment market is booming. The year 2014 saw the largest transaction volume since the onset of the financial crisis in 2008. The trend is expected to continue in 2015, with the market heading for a record sales volume. The transaction market for Unternehmensimmobilien, too, benefits from the boom, as the IUI interest group noted in its market reports. In 2014, the transaction volume was close to 1.62 billion euros, a year-on-year increase by

almost 75 %. A 4 % share out of the sum total of 40.5 billion euros in commercial real estate investment assets may not seem like very much. Yet this is up from 3.5 % in 2013, suggesting a growing market share or, differently put: Investors are increasingly aware of Unternehmensimmobilien as an alternative.

At first glance, the transaction figures for the first 6 months of 2015 seem to present a different picture. Year on year, the investment volume plummeted by 19.9 % during the first half-year of 2015. Yet demand for Unternehmensimmobilien has remained as lively as ever. The number of Unternehmensimmobilien units traded during the first 6 months of this year was 72. For the sake of comparison: The 2014 year-end total was just 92 assets sold. Accordingly, the regressive transaction volume must be blamed on the comparatively small size and/or inferior quality of the properties traded rather than on any lack of interest. Many valuable and pricey properties were already sold off in the recent past. Most of the most recent transactions represent real estate in the investment categories “value add” and “opportunistic”. Taken together, investments in Unternehmensimmobilien during the first half of 2015 add up to an approximate volume of 532.2 million euros. Out of a total of 24 billion euros invested in commercial real estate by mid-year, Unternehmensimmobilien thus accounted for roughly 2.2 %. This implies a year-on-year decline by 2.5 %.

Although the dramatic growth rates seen the previous year appears to have levelled out, it would be premature to speak of a lull. The number of traded assets shows the persistently high interest in this asset class. The difference is that the number of development schemes with value-add potential increased year on year (Fig. 1).

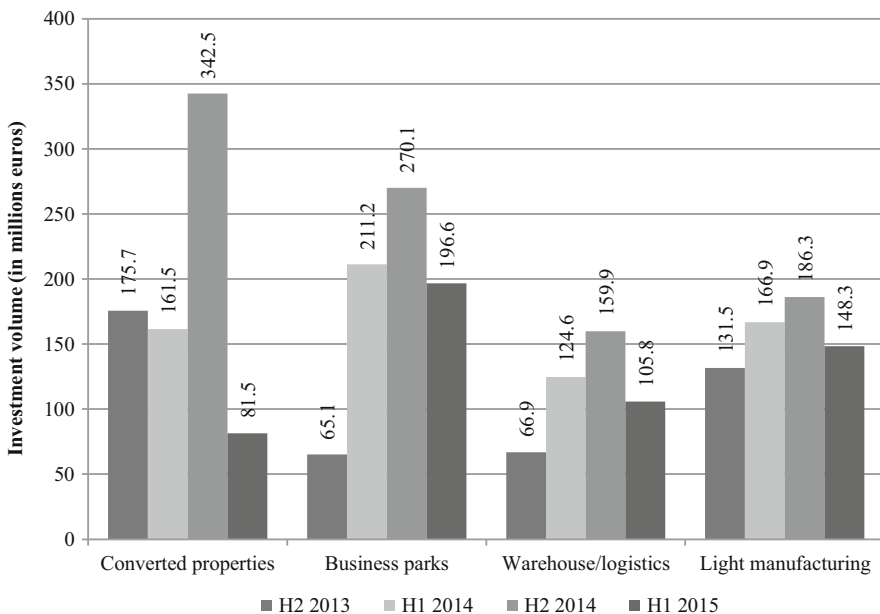


Fig. 1 Investment volume by property type. *Source:* Initiative Unternehmensimmobilien (2015)

In a repeat of their performance in either semester of 2014, asset managers remained the most active players on investment market during H1 2015. That said, their lead position is no longer as formidable as it was a year ago, with the total trading volume (acquisitions and sales) adding up to just over 228 million euros. Asset managers have focused their activities mainly on the buyer side lately—spending well over 169 million euros on new assets. Owner-occupiers have been just as active in 2015. Their ratio of acquisitions and sales is more or less balanced—with 111 million euros worth of real estate bought, and 95 million euros worth of it sold.

3.1.1 Sale-and-Rent-Back

As mentioned earlier, Unternehmensimmobilien are predominantly occupied by mid-market companies. Nearly 99 % of all German companies belong in the SME category, among them market-leading high-tech vendors, automotive suppliers and mechanical engineering firms. This makes Germany the perfect location for Unternehmensimmobilien among Europe's property markets.

Many of these companies have traditionally owner-occupied their permanent establishments. This is true even for German conglomerates—a fact not always working in their favor. A survey conducted by EY Real Estate showed that many DAX- and MDAX-listed companies neglect to raise their vast savings potential in fixed assets, specifically in developed and undeveloped properties. Depending on the industry, some companies could easily dispose of more than 25 % of their premises and substantially cut down on property-related costs, according to the EY survey.

Companies that have become aware of the fact now seek to sell off real estate in order to release the tied-up capital for better use in their core business while also freeing up resources previously committed to the properties' management. This conflicts with the desire to keep using the premises because they are custom-built to their requirements. The workaround is often a sale-and-rent-back arrangement. Not least, this is a solution that clears the way for professionally letting those units that a given company may not or no longer need.

Other benefits include the following: The practice gives owners a chance to bypass the long-winded standard permit procedures and to make affordable but adequate premises available to interested occupiers on short notice. The structural alteration of pre-used property usually orients itself to the requirements of the in-coming tenants, and cost advantages are generally passed on to them. This means effectively: The continued use of Unternehmensimmobilien assets can seriously stimulate further economic development of the location—with occupiers and investors equally benefiting.

3.2 The Unternehmensimmobilien Letting Market

The trend in Unternehmensimmobilien take-up during the first half of 2015 has been very dynamic. A growth by more than 37 % compared to H2 2014 clearly

demonstrates that the demand for floor space in Unternehmensimmobilien remains high. By mid-year, occupier demand had risen to nearly 660,000 m², that is, an increase by roughly 180,000 m².

A quality criterion for Unternehmensimmobilien assets is the diversity of units of different sizes that are available to tenants. Current demand suggests that the focus has shifted to larger floor space contingents. Units larger than 10,000 m² are particularly easy to let at the moment. Characteristic for Unternehmensimmobilien, however, are the small and very small units that, when taken together, are also subject to stable demand.

One of the advantages of Unternehmensimmobilien is that tenants have the option to flexibly rent extra space as necessary. This in turn gives incumbent companies the breathing space they need, without compelling them to enter into long-term lease contracts. Flexibility of this kind sometimes results in very short lease terms. At the same time, there is a sufficient number of long-term leases that generate sustained and stable rental income. Leases signed during H1 2015 were characterized by lengthening terms. The average lifetime is 2.4 years, up from a 1.8-year average during the previous semester. The longest lease term recorded during the period under review was 21.7 years. Nonetheless, ultra-short leases are of great significance for Unternehmensimmobilien. Nearly one in four leases has a lifetime of 1 year or less. It is this share of short-term leases that defines the flexibility of the asset class. Together with the agreements signed for periods between 1 and 2 years, the short-term leases actually account for more than 50 % of the rent roll. Lately, another large contingent of more than 11 % represented leases without fixed contract terms whose premises may be vacated subject to a statutory notice period of 3 months—or alternatively may remain occupied for long periods of time. The share of medium- to long-term contracts accounts for well over one third of the leases.

4 Unternehmensimmobilien as Investment Assets

Given the scale of the market, the investment potential in Unternehmensimmobilien is tremendous. As with any other asset class, the return on investment is determined by a variety of factors—but they are not necessarily the same ones as with office properties, for example. In addition to high property quality, the location must be sustainably eligible. In the case of corporate real estate, this hinges definitively on occupier demand. Particularly suitable in this sense are economic growth regions that show a high per-capita gross domestic product (GDP) or else brisk GDP growth. For a detailed breakdown of the main deciding factors by property type, please see Table 2. The degree to which these factors are met is indicative of the quality of a given property and of its suitability as investment property.

Table 2 Selected investment criteria for Unternehmensimmobilien

Criterion	Type				
	Converted properties	Light manufacturing properties	Business parks	Vintage logistics properties	Modern logistics properties
Top-level requirements	<ul style="list-style-type: none"> - Multi-tenant capacity - Reversibility of use - Alternative use potential - High degree of flexibility - Regions of growing or stable economic strength 				
Location/pitch	<ul style="list-style-type: none"> - Urban/integrated pitches - Suburban pitches or pitches close to prospering regions 	<ul style="list-style-type: none"> - Pitch in conveniently accessed trading estates or close to long-distance modes of transportation 	<ul style="list-style-type: none"> - Pitch in trading estates or close to long-distance modes of transportation 	<ul style="list-style-type: none"> - Pitch in integrated trading estates close to regional and national modes of transportation 	<ul style="list-style-type: none"> - Pitches close to transport hubs - Potential for expansion options - Open to 24/7 operation - Out-of-town or suburban location
Building quality/property quality	<ul style="list-style-type: none"> - Historic building fabric - Permitting flexible partitions - Moderate refurbishment needs 	<ul style="list-style-type: none"> - Divisibility - Moderate refurbishment needs 	<ul style="list-style-type: none"> - Sensible mix of floor area types without excess office share - In good repair 	<ul style="list-style-type: none"> - Delivery access options - Moderate refurbishment needs - General suitability for customization and modernization 	<ul style="list-style-type: none"> - Modern specs - Standardized types of construction - High degree of flexibility - Minimum floor-to-ceiling height 10 m - Convenient delivery access

					<ul style="list-style-type: none"> – At least 1 gate per 1000 m² of warehouse space – Floor load capacity at least 5 t/m²
Property size (usable area)	10,000–80,000	5000–60,000	25,000–85,000	10,000–30,000	15,000–100,000
Accessibility	<ul style="list-style-type: none"> – Great public transportation access – Great private motorized transportation access 	<ul style="list-style-type: none"> – Excellent private public transport access – Great private and heavy goods transportation access 	<ul style="list-style-type: none"> – Private motorized transportation access – Proximity to public transportation 	<ul style="list-style-type: none"> – Proximity to public transportation- to some extent – Great to excellent private and heavy goods transportation access 	<ul style="list-style-type: none"> – Excellent heavy goods transportation access

Source: BEOS Survey (2013a, b, c)

4.1 Value-Based Investment Approach

A value-based approach has proven effective for investments in the Unternehmensimmobilien segment. Underlying this approach is the assumption that a given property is being compared to competing floor space in the building quality it will have at the time it is re-let. The value-based approach centers on the occupier's view of the floor plate available on the market. For investors, this means conversely, that they need to concentrate on the directly competing environment of a given property, and to take the tenants perspective when analyzing the micro-location to check whether another landlord offers superior or more affordable units. A property should only be acquired if there is reason to believe that it can be let on lower long-term rents than competing floor plate. As often as not, this presupposes a property acquisition below replacement costs.

Moreover, investors should adopt a long-term horizon when buying into the Unternehmensimmobilien asset class in order to fully exploit their advantages. The flexibility and reversibility of such floor plate, among other aspects, combine with the diversification on the tenant and property level to enhance the safety margin while reducing volatility.

4.2 Performance of Unternehmensimmobilien

Characteristic for Unternehmensimmobilien are the high and stable yields these properties may return, outperforming those of other commercial real asset classes. In the office and retail property segments, for instance, yields have plummeted in response to keen investor demand in recent years, or else have fluctuated considerably at times, whereas the yield curve of Unternehmensimmobilien manifests a low volatility level, as illustrated in Fig. 2.

The sound performance of Unternehmensimmobilien is based mainly on a stable cash flow combined with a low default risk, low volatility, and moderate appreciation. This profile is rooted in the diversity of the use options, along with the wide spectrum of rent rates and lease terms.

The Initiative Unternehmensimmobilien posts achievable yield spreads in the form of gross initial yields (GIY) in its market reports. It represents the ratio of the net rental income and the net purchase price at the time of the transaction. Accordingly, it reflects both the profitability and the value of a given property. This sets the ratio apart from long-term performance indicators such as the GPI which, being a transaction-based index, tracks potential investments in the latest premium properties. The average GIY equaled 9.9% during the period under review.

The striking heterogeneity of the market for Unternehmensimmobilien necessitates a separate assessment for each investment. Despite existing differences in quality of location, fit-out, and building age, it makes sense to group the various Unternehmensimmobilien assets into the specific types outlined above. All four categories have certain characteristic features that are mirrored in return requirements and the associable risks. Modern logistics properties are subject to

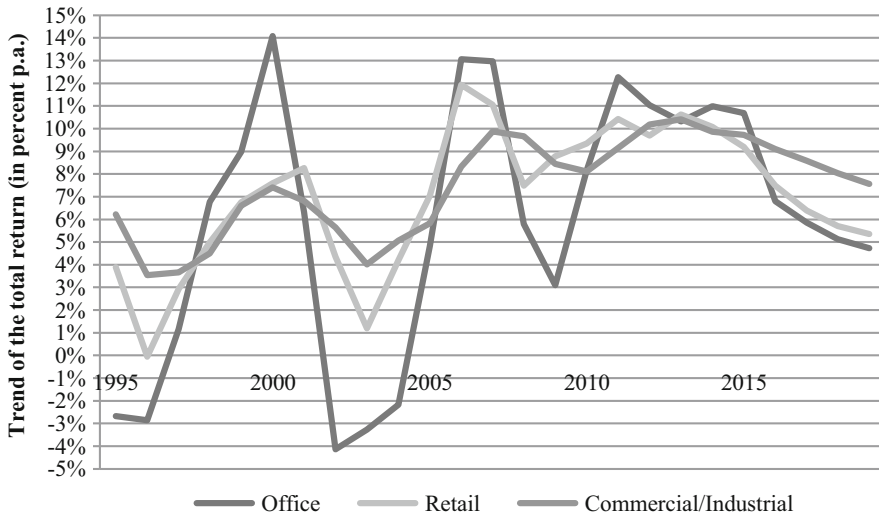


Fig. 2 German property index (GPI): Trend of the total return p.a., in percent, by segment. *Source:* BEOS Survey (2013a, b, c), bulwiengesa (2015)

the lowest risk among the four categories, and are therefore subject to the lowest return requirements, too. This is explained by the currently very high demand for accommodation in this category and dwindling supply, but also by the high quality of the properties, many of which were raised in recent years. Older logistics properties are definitely subject to greater exposure, and the corresponding risk premium is normally expressed in a substantially higher net initial yield. The return requirements for light manufacturing and transformation property are more or less comparable, while their respective exposure differs starkly. It may not be a big problem to sell light manufacturing properties with secure tenant covenants, and to increase their value. Yet finding a follow-up use for them can be tough, and may prove costlier than it would be with converted properties already established. The high risk associated with business parks must be blamed on the many different structures and concepts that evolved over the years. While some of them work just fine, others are plagued by structural issues. Things are not made any easier by the high management effort necessitated by multi-tenant occupancy, even if it reduces the risk of vacancy through diversification.

4.3 Asset Management Requirements

Asset management is generally a key factor for any type of asset. In the case of Unternehmensimmobilien, the asset manager’s qualification attains an even greater significance than it would with other single-use property types because of their

multi-use character and their frequent letting activities involving a larger number of occupiers.

Unternehmensimmobilien are often associated with a high churn rate, but this is rarely based on hard evidence. The prerequisite for tenant loyalty is the asset manager's first-hand knowledge of tenant requirements, and the capacity to meet changing floor space needs. After all, the demand for space can fluctuate considerable over time. Depending on the order book balance, a company's premises may have to be expanded or reduced on short notice. The tenants of a landlord showing flexibility in this regard are more likely to remain in place long-term. Yet the flexibility comes with increased administrative costs to ensure full occupancy of the floor areas.

Asset managers should see eye-to-eye with their tenants, and place them squarely at the center of their activities. Of key importance here is direct communication on the ground, including regular visits the asset manager pays to the occupiers or to the decision makers of the various companies. This means one-to-one meetings, preferably in periodic intervals, e.g. on a quarterly basis. It also recommends itself to keep minutes of the meetings. Between these on-site dates, the asset manager should by all means tap other sources to stay up to date and to be able to respond quickly. Other asset management tasks in this context include the periodic reappraisal of a tenant's credit worthiness and the monthly monitoring of the rent payments. If a tenant falls into arrears, the asset manager is well advised not to respond promptly with a written reminder. Rather, the sensible thing to do is to engage the tenant in dialogue and to hold back on tougher measures until the amicable approach proves fruitless.

Above all, it is of the essence that an asset manager understands the nature of the tenant's core business. It is actually the only way to adapt the lease—as much as possible—to the respective occupier's needs. Familiarity with the tenants also enables an asset manager to respond to changed floor plate requirements. Just as important is that the tenants are personally acquainted with these liaisons and know whom to contact if strategic issues concerning their premises arise.

Maintaining a regular dialogue between tenant and asset manager will achieve a high level of stability. Tenants will be more prone to tie themselves to the place they occupy if it keeps being adapted to their requirements. This also explains why the annual take-up that asset managers of Unternehmensimmobilien quoted in reply to a bulwiengesa poll is lower than that of other asset classes. The average floor area to be re-let annually averages 5500 m² for Unternehmensimmobilien, compared to an average of 7500 m² for office and 10,500 m² for retail premises. The noticeably lower re-letting performance is ultimately explained by a higher rate of lease renewals. Sound asset management bolsters a tenant's commitment to a given location, lowers the necessary re-letting costs, and ultimately helps to find new tenants, too.

5 Summary and Outlook

Business in Germany has traditionally been dominated by mid-market companies. As main target group for Unternehmensimmobilien, they harbor enormous potential. The high level of employment presupposes a corresponding floor-space volume, while the entrepreneurs' risk-averse, long-term horizon ensures sustainable cash flows. Companies in turn appreciate the fact that Unternehmensimmobilien provide the floor space mix they need along with the necessary flexibility to adapt the floor space to their actual use of it. Especially developments like Industry 4.0 and e-commerce will make adaptable floor plates indispensable in the future. Differently put: Companies seeking long-term success need to be capable of adapting their work flows and production processes to changed parameters in ever shorter cycles. On top of the corporate work stream requirements, asset managers also need to take the needs of the corporate workforce into account. Gone are the days when young high-skilled talents were happy to work in any standard office. Even the paycheck is not or no longer the decisive argument for many. Other perks have come to count at least as much in a digitized society: personal flexibility, a communicative atmosphere, the option to pursue your aspirations and to work on your own authority. The boundary lines between the personal and professional realms are becoming increasingly blurred—be it through home office or flexible working time models. This explains why fit-out and structuring of the workplace is steadily gaining in significance in addition to the intrinsic requirements of corporate accommodation. In Germany, there is no property asset class that lives up to these present-day requirements quite like Unternehmensimmobilien.

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Ongoing Catch-Up Potential for German Real Estate Returns

Daniel Piazolo and Justus Vollrath

Abstract

Germany has attracted substantial real estate investments from abroad within the last years. Furthermore, German investors have also invested again a higher percentage of their capital earmarked for real estate at home. Therefore it has to be examined whether the German real estate returns have justified the investments. The answer is twofold: Yes and No. Yes, investments in German property have earned higher returns compared to other countries in some years. No, looking at the average return for almost two decades, the German market has not turned out to be a good investment. Compared to returns in other markets, German returns have been low. Yet they have proven to be less volatile in comparison to other markets. Consequently, one can argue that there is less risk involved at an investment within Germany—relative to other real estate markets. However, the investor has to consider that the German market is very diverse across sectors and across regions. To judge and benefit from regional developments and opportunities, investors are well advised to research the local markets rigorously. Overall, there are good arguments for the view of still highly attractive German real estate markets—compared to other asset classes and compared to other countries.

Keywords

Total return • Risk • International comparison • Risk • Risk adjusted return • Sectors • Investments

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1 Globalization: Also for the Real Estate Investors

For years, Germany has been seen by a developing and under-managed real estate investment market since many international investors were irritated by the importance of the funds sector relative to the listed real estate sector and felt that the German market was contact driven and opaque. However, in the last decade the assessment of the German market has changed. The German real estate market is credited in becoming more professional and more transparent. Following the Global Real Estate Transparency Index of LaSalle (2015) Germany is judged a transparent market, being in the second highest category. Analyses based on this source show that increased transaction volumes go alongside with high transparency index values. For Germany both values have risen significantly over the years.

Within the last decade there have been considerable investments of German investors abroad and of foreign investors in German real estate. These cross-country investments can be attributed to three main factors. First, economic theory preaches diversification and this assessment has been accepted and practiced (cf. Hughes and Arissen 2006). Second, international standardization (like the establishment of the *Acquis Communautaire* and the introduction of the Euro currency) and globalization have facilitated activities in the areas of other national legislations. Third, given the size and the robustness of the German economy investments in the local real estate market seemed to promise more stable returns.

What about returns in the different national markets? Have the returns justified the investments abroad for the German investors? Were the international investors wise to diversify their investments also into Germany? How would investors know that their investments at least earned the average market returns? MSCI analyses property performance for professional property investors to enable the analysis of real estate returns in an international comparison. In Germany, IPD—acquired by MSCI Inc. in December 2013—started its service for property investors in 1998. MSCI's private real estate databank provides detailed return and key figure analyses for many countries and most major urban areas within Europe.

The databank covers the performance of directly held institutional properties from large institutional investors. The institutional investors provide the data and receive in return a portfolio analysis relative to the benchmark of all participants. Thus, the MSCI databank consists of primary data mirroring the relevant portfolio management systems, financial accounts and business reports of the data providers. MSCI validates and double checks all information in order to ensure high data quality. MSCI examines the total return of an investment as aggregated return summing up income return and capital growth of property investments.

In a first attempt we will need to look at real estate returns compared to all asset classes as there is a general trend to increase the exposure to real estate investments compared to other asset classes. Secondly, we will compare the returns of German direct real estate investment against those of other markets.

2 Real Estate Returns in Comparison with Other Asset Classes

One important motivating factor of the calculation of indices for the property market was the comparison with other asset classes. Graph 1 shows the global performance of equities, bonds, listed real estate and unlisted real estate investments on property as well as fund level. Although, not all measures can directly be compared from an investor’s view it illustrates the strong performance of real estate investments on direct and indirect level. Real estate offered in 2014 and over the recent years very attractive returns in different forms and structures. Following the MSCI’s analysis of real estate’s long term performance and volatility risk tends to fall between equities and bonds. However, listed real estate turns out to be very volatile due to its relatively small size and sensitivity to market in- and outflows (Clacy-Jones et al. 2015) (Fig. 1).

A significant proportion of the strong total returns is due to increases in capital value and yield compression. With unlisted real estate (assets) most of the return is achieved by net income, over the past decade this was above 80%. Recently, the proportions of the two components of total return deviated: Capital value growth showed more than twice the long term value of 20% with 43% of total return. Income return has fallen in most countries over the past cycle and is in 18 of 25 markets at or very close to 10 years lows. There are some notable exceptions to this rule among them Germany, Spain and Ireland. In Germany the net income

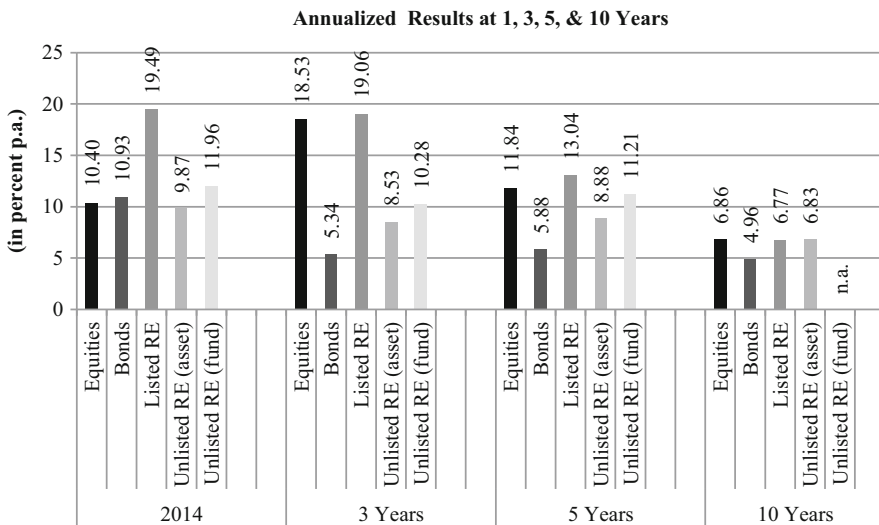


Fig. 1 Comparative global property performance across asset classes 2005–2014. Sources: MSCI World Index (equities); J. P. Morgan, GBI Global (bonds); MSCI World Real Estate index (listed property); IPD Global Property Index (unlisted property—asset level); IPD Global Property Fund Index (unlisted property—fund level)

return has risen from 4.6 to 5.3 over the last 10 years. It remained stable for the last 4 years at a 5.3 %.

An additional view to increased prices and capital values in real estate can be gained by comparing the spreads between the income return of a market and its respective 10-year national bond yield. For 2014 the spread was close to 400 bps in average. This figure is for Germany with a measured 467 bps above average, given the described development of net income returns above (cf. Clacy-Jones et al. 2015).

Attractive real estate markets, high spreads compared to bonds, a significant lower volatility compared to equities and low credit rates lead to an increasing allocation into real estate. Real estate quotas in multi asset class portfolios are on the rise.

3 Total Returns in a Global Comparison

Following the financial crisis in 2007 global real estate returns on direct level were negative in the two subsequent years by significant capital value losses. From 2010 until today real estate investments have shown a strong recovery and performance driven by low yields. MSCI's global Index showed an annualized total return of 8.9 over 5 years compared to 6.8 over 10 years. However, this development is not true for all markets. Following the capital value development since 2007 markets can be classified into three groups cf. MSCI (2015):

1. Resilient markets that had either no or only a weak impact on capital growth during the financial crisis, e.g. Switzerland and Canada. The latter were regarded as safe havens for different reasons. In the very recent years their returns have decreased as their property markets were seen highly priced in comparison.
2. Markets that showed mostly stable returns during the financial crisis, but remained on a relatively weak performance level in the aftermath of the crisis. Among many other European countries Germany can be assigned to this group. Only recently, in 2014, Germany has shown the highest performance since inception of the IPD Germany Annual Property Index with a return of 6%. However, its performance is compared to the global index on a significantly lower level. Germany's annualized property returns are over 5 years 5.0 and over 10 years 3.7.
3. This group consists of countries that displayed higher volatility and mostly had to face stronger impacts in their real estate markets during the regarded cycle. Whereas some countries remained weak (e.g. Hungary) others showed a strong recovery in the recent years, like Ireland and Spain. This group impacts the global index strongly as its weight is c. 67% with US, UK and Japan having the biggest stakes.

Figure 2 shows the total return of real estate investments and GDP growth for 11 countries for the years 1998–2014 (both in nominal terms). It is interesting to

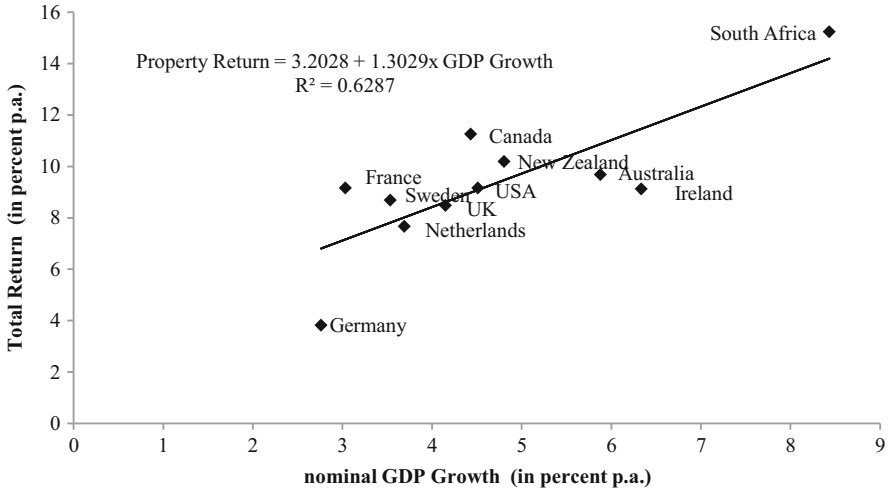


Fig. 2 Property returns versus nominal GDP Growth 1998–2014. *Source:* MSCI Inc.

note, that the pattern of these countries is diverse, despite the fact that all 11 countries are highly advanced, industrialized OECD countries. Concerning real estate, the question is whether there is a correlation between GDP growth and total returns, i.e. whether a higher economic output is linked to higher property returns. This implies the question, if higher economic growth also generates higher property returns. However, a simple regression analysis for a limited time allows only for correlation analysis without the possibility to infer causality. It can be also argued that a strong development on the supply side, with considerable amount of new building and related infrastructure developments will lead to GDP growth.

Figure 2 shows the correlation of nominal GDP growth and total returns in several countries with a time series of total return going back for more than a decade. Countries with a higher GDP growth tend to have a higher total return. Germany had for the years 1998–2014 only nominal GDP growth of 2.8 % per year and total return of 3.8 % per year. Both values are by far the lowest in this sample of 11 countries. All other countries performed better with regards to nominal GDP growth and total returns. Outliers are Ireland and South Africa. South Africa has the highest values for strongest GDP growth and total returns. The driving factors for South Africa are a quickly growing economy and high inflation. The issue of inflation addresses a challenge for such analysis. It is easy to move from a nominal GDP growth to a real GDP growth by taking out overall inflation for this economy. However, it would be necessary to adjust also the total return figure for the appropriate inflation rate. It can be argued that the inflation rate for real estate could be best approximated by capital growth. If capital growth is taken out of the analysis, a major component of the total return calculation would be missing. Furthermore, growth in the value of a building can be seen as an increase in the net present value of future rental income. Thus capital growth might be induced by

monetary developments, but also by real effects. Consequently, to simplify the approach the following analysis focuses on the nominal developments.

Figure 2 shows the regression line and as a statistical measurement of the goodness of fit, the coefficient of determination R^2 , which expresses how well the regression line approximates the data points. If nominal GDP growth is 1 % point higher, total return is 1.29 % higher. The goodness of fit is rather high with a R^2 of 62 %. Obviously, GDP growth is a well-chosen explanatory factor to direct real estate returns.

4 Total Return and Risk

Figure 3 illustrates the relationship between total return and risk in the period 1998–2014. Risk is approximated here by the standard deviation. It is clear that standard deviation is not the best indicator of risk, but it is the most used one, since the data is easily available. Standard deviation punishes positive outliers with a high return in a year in the same way as negative outliers. Consequently, other risk measures like lower partial moments are important tools for further analysis of assessing risk, cf. Thomas et al. (2010). Regardless of these qualifications, standard deviation is employed in the following to abstract from questions, like what level constitute downside risk. Contrary to expectation, there is no significant relationship between total returns and the associated risk; R^2 , the coefficient of determination, for the estimated regression is no more than 3.4 %. This fact is quite remarkable, because it is frequently stated that high risk is correlated with high return. However, the effect might also be driven from a omitted variable bias. The goal of the analysis was to link only risk and return. Diversification is driven by the attempt to reduce risk (Mitropoulos 2008). Within Fig. 3, only Germany seems to

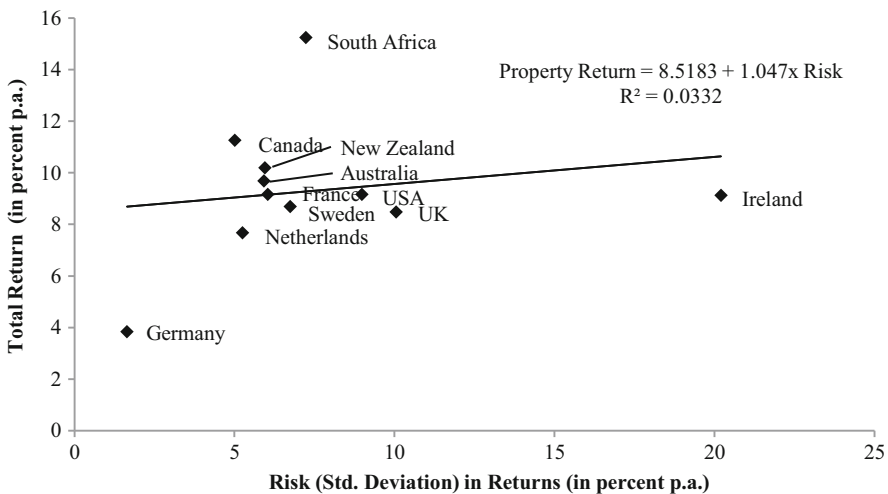


Fig. 3 Property return and risk 1998–2014. Source: MSCI Inc.

verify the idea of low risk matching low returns. Sweden and South Africa have a similar risk as expressed by standard deviation, but differ in a significant way for total returns. Other markets like France and USA have about the same total return, but quite different standard deviations.

It is important to stress that the fundamental insight concerning the close correlation of high return and high risk should hold in the long run, of course. An asset or investment of high risk implies that there are dire time periods when the return might be considerably lower than for the asset or investment of lower risk. Then the key question is, whether the selected period 1998–2014 is a good representative for the long term development or whether it is strongly distorted by a few dire years.

Table 1 shows the total returns for key property classes as well as for a weighted average. It is interesting to examine which sector was the best performing within each country (shaded in dark gray) and which sector was the worst performing one (shaded in light gray). For most countries (two-thirds of the sample) the retail sector performed best while the office sector performed worst (5 out of 11).

More detailed analyses reveal additional insights: Canada for example was outperforming in all four sectors. All sectors in Canada had a performance of more than 10% p.a. This 10% annual performance for each sector stands in sharp contrast to the weak performance of Germany with the lowest returns for all sectors. As mentioned before overall inflation is one factor in pushing up total return. Germany had low inflation rates during this period especially when compared with countries like South Africa. In the years 2000–2014 South Africa had an average inflation rate of 5.5% per year. This high inflation explains parts of the

Table 1 Total returns in different sectors 1998–2014

Total Return (in percent p.a.)					
	All Property	Retail	Office	Industrial	Residential
Australia	9.7	11.0	9.4	10.8	
Canada	11.2	11.8	11.2	10.8	10.3
France	9.1	13.0	9.1	8.5	8.0
Germany	3.8	4.9	3.1	5.2	5.3
Ireland	9.1	8.7	9.9	7.2	
Netherlands	7.7	8.7	6.4	8.2	7.3
New Zealand	10.2	11.4	9.4	2.9	
South Africa	15.2	16.4	13.1	15.8	3.6
Sweden	8.7	9.3	8.2	8.4	10.8
UK	8.5	8.1	8.7	9.2	13.2
USA	9.2	10.1	8.8	9.1	9.2
Unweighted Avg.	9.3	10.3	8.8	8.7	8.5

Source: MSCI Inc.

considerable gap in total returns to the other countries. It is also remarkable that the residential sector performed in a growing number of countries exceptionally well. Among these are Germany, Sweden and United Kingdom. For these, demand from both institutional and private investors lead to substantial value growths.

Table 2 shows for total returns considerable differences concerning the respective standard deviations. This table illustrates the risk from 1998 to 2014 measured by standard deviation per sector for the different countries. Economic theory tells us that there is a close relationship between high return and high risk. However, Tables 1 and 2 tell a somewhat different story—at least for this period. These two tables suggest that sectors with the highest returns are also often associated with the lowest risks. In many countries the important sector office has low returns for the period 1998–2014, but also high risks. Conversely, in many countries the retail sector has high returns and low risks at the same time.

A further significant difference in Table 2 is the spread between the lowest risks in Germany and the highest ones in Ireland. This spread is particularly noteworthy since both countries are within the Eurozone and the European Central Bank has to find the right monetary policy for both countries despite significant differences in the important real estate asset class.

While Tables 1 and 2 showed returns and risk, Table 3 amalgamates these two measures in one single risk adjusted return number. Here the Sharpe ratio is used as a measure of the excess return per unit of risk. The excess return is calculated by the difference of the total return of one sector and the government bond rate returns based on J. P. Morgan Indexes. The Bond rate return has been used for decades as approximation for a “risk free return”, assuming that OECD governments are unlikely to default. The recent developments in countries like Ireland or Spain

Table 2 Risk in different sectors 1998–2014

Risk (Std Deviation) (in percent p.a.)					
	All Property	Retail	Office	Industrial	Residential
Australia	5.9	5.1	6.5	5.8	
Canada	5.0	5.2	6.1	5.4	4.2
France	6.0	7.7	6.8	6.4	5.3
Germany	1.6	1.4	1.9	3.2	2.0
Ireland	20.2	20.7	21.0	15.2	
Netherlands	5.2	4.4	6.0	4.9	5.9
New Zealand	6.0	5.9	8.0	1.3	
South Africa	7.2	7.3	7.5	9.8	14.4
Sweden	6.7	5.9	7.7	6.8	5.2
UK	10.1	10.5	11.0	10.3	6.9
USA	9.0	8.5	10.1	8.7	9.3
Unweighted Avg.	7.5	7.5	8.4	7.1	6.7

Source: MSCI Inc.

Table 3 Risk adjusted return in different sectors 1998–2014

Risk Adjusted Return (Sharpe Ratio)					
	All Property	Retail	Office	Industrial	Residential
Australia	0.4	0.7	0.3	0.6	
Canada	1.1	1.1	0.9	0.9	1.1
France	0.4	0.8	0.4	0.3	0.3
Germany	-1.3	-0.8	-1.5	-0.2	-0.4
Ireland	0.1	0.1	0.2	0.1	
Netherlands	0.1	0.3	-0.1	0.2	0.0
New Zealand	0.5	0.7	0.3	-3.4	
South Africa	0.5	0.7	0.2	0.5	-0.5
Sweden	0.3	0.5	0.2	0.3	0.9
UK	0.2	0.1	0.2	0.2	0.9
USA	0.4	0.6	0.3	0.4	0.4
Unweighted Avg.	0.25	0.45	0.12	-0.01	0.33

Source: MSCI Inc.

have highlighted that the market participants have asked for a considerable risk premium before investing in the money market of these countries. Risk is measured by the standard deviation. The Sharpe ratio indicates how well the total return of a sector rewards for the risk taken. In other words: the higher the Sharpe ratio the better for the investor, as he receives a higher return for any given amount of risk. A Sharpe ratio with a negative sign has to be examined with caution, since the straight-forward comparison of the Sharpe ratios might lead to skewed results. The existence of Sharpe ratios in this exercise underlines the need of careful interpretation during a period seeing the evolution of a risk-free return of government bonds to a return-free risk.

For each country the respective money market return is used. Table 3 shows quite clearly, that office is the sector with the lowest Sharpe ratio for most countries. For seven countries retail is the best performing sector according to this measure.

With regards to the risk adjusted returns for all properties Germany has the lowest value and Canada the highest one. Consequently, Germany’s property returns have not only been comparatively low in absolute numbers, they have even been low in relative terms, given the respective risk-free rate and market volatility.

5 Final Remarks

The years 2007–2009 have meant a major real estate downturn for many countries. Germany has performed relatively well during this period. However, for the period 1998–2014 the German real estate market performed worse than other comparable real estate markets. This underperformance can be seen in all sectors and can be linked to low GDP growth and comparatively high real interest rates. It could be argued that at least Germany has also low volatility for the real estate market. Still, if a risk adjusted return is calculated that takes account for volatility Germany is still outperformed by all other markets during this period.

Many institutional investors had to accept significant negative returns in their international investment during the crisis years 2007–2009 whereas Germany continued to show low, but at least positive returns. These institutional investors look again to a greater extent for stable markets and core products. Consequently, Germany is attracting more investments and has shown highest return in 2014 since inception of the IPD Germany Annual Property Index. Especially, German institutional investors like insurers and open-ended funds are looking to re-invest in real estate at home after moving abroad in recent years. A bigger proportion of conservative institutional investors will invest in Germany again. There are good arguments that Germany has come through a prolonged stagnation leading to comparatively low real estate performance, but that Germany has made necessary, though painful, adjustments to adapt to the new environment—promising ongoing catchup potential. Germany is seen by many investors as the embodiment of a core and conservative European market. Germany still offers comparing attractive net income returns. The growing capital flows to Germany take this situation into regard.

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Part VI

Public Real Estate

Public Real Estate

Eleonore Pöll

Abstract

The broad range of real estate assets and their management in the public sector offers enormous scope for optimization. However, even after years of improvement, the challenges of real estate management in the public sector include insufficient data transparency, a lack of real estate objectives and strategies, inefficient organization and inadequate performance-related management methods and incentive systems. Optimization measures have been pursued at a national, federal state and local level towards professional Public Real Estate Management. Yet despite these efforts and many successes, there is still further re-structuring and building work to be done, particularly with regard to future societal development. Public Real Estate Management will have to meet the challenges of change with essential optimization strategies and early intervention. Evaluation and appropriate organizational optimization as well as active portfolio development will be at the heart of sustainable management. This article describes the situation, the future challenges and requirements of Public Real Estate Management.

Keywords

Public Real Estate Management • PPP • Facility management • Portfolio management • Risk management • Demographics • Evaluation • Organization

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1 **Relevance, Functions and Future Challenges of Public Real Estate: Assets and Management**

Fundamentally, public real estate is of great importance and fulfils far-reaching fiscal, operational and management functions. According to investigations and calculations of various market research institutions, the State is the largest real estate owner in Germany (bulwiengesa 2002). The German government, the federal states and many cities have undertaken valuations of their real estate holdings in recent years, which show considerable figures. Property-related asset values of the cities of Munich, Stuttgart, Cologne, Düsseldorf, Frankfurt and Hamburg, for example, are in the order of billions (gif 2011).

To allow the public authorities to provide services and fulfil their politically determined administrative mandates necessitates a heterogeneous real estate portfolio. The properties and buildings differ considerably in terms of use, age and location. A typical profile of uses at a municipal level shows the following structure: 20 % schools, 15 % kindergartens, 10 % administrative buildings, 5 % sports centers, 5 % fire service buildings, 45 % miscellaneous buildings and properties. The miscellaneous buildings include residential property, sewage works, indoor and outdoor swimming pools, hospitals and undeveloped real estate.

The public sector has an obligation to manage its resources cost-effectively and real estate is a resource of huge importance. The financial implications of these assets are tremendous. On the one hand, there is the significant cost dimension, with real estate outgoings accounting for an average 15–20 % of annual budgetary expenditure. Compare this with the private sector, where this proportion stands at 5–15 % of overall annual expenditure. On the other hand, real estate can serve as a financing instrument. In the short-term, liquid assets can be realized from sales or in the form of regular income from lettings, meaning that property can contribute significantly to the budget.

Through targeted acquisitions and sales of property, banking land and making it available under special conditions, public authorities can play an influential role in housing and business policy and make regulating interventions in the development of the real estate market. Property is also an instrument of urban and economic development policy and, with appropriate management, can provide a significant strategic competitive factor and locational advantage.

Future societal developments pose significant challenges for Public Real Estate Management. Demographic change, for example, has far-reaching consequences. The negative natural population change that has prevailed in Germany since 1972 is the main cause for the decline in population growth. Should the long-term demographic trend continue, the population of 80.8 million in 2013 will decrease to 67.6 million (if immigration is weaker) or 73.1 million (if immigration is stronger) by 2060 and will also become increasingly older. The low birth rate and rising life expectancy will result in an ageing of the population (see Just 2016).

The impact of this demographic change will vary by region in Germany. Growth regions with lower unemployment will enjoy favorable population growth due to immigration and will have a lower average age than those regions in decline. While

the population size in structurally weak cities, such as those in the Ruhr area and the Saarland will decrease, prospering centers in the economically strong south as well as Hamburg and Berlin will attract additional inhabitants. Demographic change will be particularly pronounced in the eastern federal states of Germany, particularly in Saxony-Anhalt and Mecklenburg-Western Pomerania. The impact of demographic change will be most apparent in rural areas. Since the turn of the millennium, there has been significant re-urbanization. Between 1999 and 2008, the population of Germany's major 14 cities rose by more than 500,000 inhabitants or 3 %. By 2030, these 14 German cities will be home to 19 % of all German citizens (approx. 15 million) compared with 16 % at present. The attractiveness of these locations is attributable to their large labor markets, universities and other locational factors such as cultural offerings. The economically strong major cities and metropolises, as well as attractive medium-sized cities, will experience a strong influx of inhabitants over the coming years (Federal Institute for Research on Building, Urban Affairs and Spatial Development (BBSR 2015a, b).

The development of real estate markets is closely correlated with regional demographic development (Just 2013). The result of this is changing structures and requirements, particularly with regard to markets.

- Residential property
- Commercial property
- Childcare and educational property
- Health care and care home

Elderly-friendly property, differentiated demand for residential and commercial property, falling rents and capital values in declining regions and rising vacancies, supply shortages and high rents and capital values in the conurbations, major cities and university cities in addition to rising requirements for healthcare and care home properties are just some examples of the major challenges facing the entire property market and the public sector in particular.

Declining regions will witness an increasing underutilization of infrastructure and public services. In many cases, costs of operation and maintenance will become unsustainable, resulting in the dilapidation and demolition of property and infrastructure.

In contrast, the booming regions will experience supply shortages in terms of housing, infrastructure, schools and childcare, and increasingly so in some areas.

The roles of public administration will change, which will also impact space requirements. Increasing use of electronic administrative solutions and continuing reductions in personnel, partly for cost reasons, will significantly reduce office space requirements for administrators, particularly in the declining regions. Falling population figures and the changing age structure will mean reduced demand for cultural and leisure amenities, resulting in the closure, conversion or demolition of theatres, concert halls and museums, for example, as well as sports centers and swimming baths. Operation and maintenance of under-utilized or vacant facilities will no longer be possible for many local authorities, particularly in the declining

regions. In the booming regions, on the other hand, additional space will be required for administrative, cultural and leisure uses.

German family policies are seeking to counteract demographic change through the extension of state-sponsored childcare, among other measures. The introduction of the legal right to a place in a kindergarten for 3 to 6-year-olds in 1996 was followed with the Childcare Act (Kinderbetreuungsgesetz) in 2005 and the Childcare Funding Act (Kinderförderungsgesetz) in 2008, which should secure a nursery place for infants throughout Germany by 2013. This will create challenges for which municipal real estate managers will be responsible for finding solutions. In addition to issues of financing the childcare facilities, local authorities in booming regions will experience significant problems in acquiring necessary space, while rural regions will be faced with the challenge of large potential vacancy rates in the future. Various solutions will be required, including alternatives such as property funds, PPP and investor models in the financial sphere and, in terms of procuring space, the investigation of unused sports facilities, the conversion and modification of existing properties such as churches, community centers, old schools and swimming pools as well as the revitalization of brownfield sites and the use of rapid solutions such as container constructions. Particularly in the major cities and university cities, there are still insufficient facilities. However, in many municipalities, there is a risk that the existing and newly created childcare places will no longer be required in the future owing to demographic change. In order to avoid managing surplus capacity, the childcare places created with significant investment will then have to be converted and modified as demand declines.

For demographic reasons, school pupil numbers will decrease from almost 11.3 million in 2011 to some 9.7 million by 2025. This is likely to result in school mergers and closures as well as the demolition of buildings in many peripheral regions.

According to the German Federal Statistical Office, there are currently more than 2.5 million people in need of care, more than a third of whom are in care homes. There are currently more than 12,000 care homes in Germany and the number of those needing care is growing continually nationwide, albeit at different rates regionally. Overall, more than 1.2 million people will require a care home place by 2030. The number of care facilities will also need to multiply over the coming years. The future of caring for the elderly must be actively structured, particularly with regard to ensuring adequate sites for building new homes and extending existing facilities as well as investigating the potential to convert existing property.

Meeting the immense challenges of the present and future requires a systematic approach to achieve sustainable development. The public sector is obliged to make optimal use of its real estate resources and to fully explore all potential options. Professional Public Real Estate Management is, therefore, indispensable (Pöll 2014a, b, c).

2 Definition Public Real Estate Management (PREM)

Real Estate Management (REM) in non-property companies, i.e. private sector (corporates) and the public sector is divided into Corporate Real Estate Management (CREM) and Public Real Estate Management (PREM).

According to Schulte et al. (2006), Public Real Estate Management is understood as the overall normative, strategic and operational concept for the optimization and professionalization of real estate management in the public sector at a national, federal state and local level and having regard to the politically determined administrative mandate. Public Real Estate Management means optimization of the real estate portfolio, the fulfilment of the task itself and the organization and structure around real estate; in other words, creating value from the real estate assets of the public sector. It can be defined as the active, results-oriented, strategic and operational management of public sector real estate assets as well as the use and making available of property, both economically and in accordance with demand, for the fulfilment of public sector tasks and with regard to the particular concerns of public sector task fulfilment and achieving objectives serving the public good. This includes assets owned as well as those properties held for use by way of lease, tenancy agreement or leasing contract (Pöll 2005).

Despite some differences in their general conditions, requirements and objectives, the methods and instruments of Corporate Real Estate Management represent valuable orientation for real estate management in the public sector. In both Corporate Real Estate Management and Public Real Estate Management, the real estate asset is seen not only as a factor of production but also as a resource. While the private sector is geared towards maximizing profits, the public sector has the objective of fulfilling tasks within the framework of public services. Nevertheless, the objectives of Public Real Estate Management can be expressed in terms of the objectives of Corporate Real Estate Management. The objectives of Public Real Estate Management include identifying and exploiting the success and resource potential of real estate assets and real estate services.

3 Potential for Optimization in Public Real Estate Management

Large and heterogeneous real estate portfolios, such as those in the public sector, are generally difficult to manage, resulting in serious shortcomings if the approach to these significant resources is not afforded the appropriate importance and is one of administrative rather than economic management. Yet, Real Estate Management in the public sector is all too often still characterized by considerable shortcomings, such as:

- unrefined or absent real estate objectives, planning and strategies
- little transparency as to overall holdings due to unsuitable or absent real estate information systems with inadequate asset-related cost transparency and awareness of value.
- to some extent, still using outdated (e.g. cameralistic) accounting with little flexibility and no reflection of depreciation,
- inadequate or absent controlling methods, systems for monitoring figures and performance and appropriate benchmarks,
- little implementation of success-oriented management and control methods and an absence of systems to incentivize an economic approach to real estate
- management of the real estate portfolio primarily according to the parameters and requirements of the budget and with policy exerting a high level of influence on real estate decisions
- fragmented responsibilities and organizational structures across the overall portfolio and the life cycle of assets with a high level of redundancy in structural and process organization

An awareness of these problems and the associated considerable potential for optimization has resulted in professionalization and re-structuring initiatives in recent years on a national, federal state and local level.

4 Development of Public Real Estate Management: Federal Government, Federal States, Communities and Cities

4.1 Federal Government

The German government has recognized that its real estate assets and the management thereof show considerable potential for optimization. Real estate assets, real estate operations and real estate management were historically the responsibility and activities of the individual department. The Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (Bundesministerium für Umwelt, Naturschutz, Bau und Reaktorsicherheit) is responsible for technical aspects of federal building works. Construction projects are predominantly delegated through the federal states. Up until the end of 2004, the Federal Ministry of Finance (Bundesministerium der Finanzen) was responsible for the making available, acquisition and disposal of real estate.

For optimization purposes, the Federal Institute for Real Estate (Bundesanstalt für Immobilienaufgaben, BImA) was created within the Federal Ministry of Finance on January 1, 2005 as a comprehensive real estate service provider to the German government and as a company with a mandate to act on its own authority and in accordance with commercial principles. BImA is a public agency of the German federal government with legal capacity and with its registered office in Bonn. Its objectives are to ensure the standardized administration of the German government's real estate assets in accordance with commercial

principles and to dispose of assets superfluous to operational requirements profitably.

- The creation of the Federal Institute has facilitated the development of a pure asset manager into a modern real estate service provider to the German government. Its roles include in particular
- inter-ministerial, standardized real estate management within the federal administration in accordance with commercial principles
- covering land and property requirements for federal purposes via debt-financed new-build, acquisitions, leasing or public-private partnership models (PPP)
- profitable disposal of superfluous assets.

The structural reform of the German armed forces and the withdrawal of many foreign stationed forces pose a particular challenge in this respect. Numerous large sites must be converted from military to civilian use. Following its formation, BimA successively assumed ownership of almost all operational real estate assets of the federal ministries (approx. 4700 properties) by 2013. The assets are made available to the ministries in return for the payment of market rents. With a diverse portfolio totaling 25,000 assets with a site area of some 490,000 ha and a combined value of more than 22 billion euros, BimA is one of the largest property owners in Germany (BimA corporate brochure 2015).

4.2 Federal States

Since the mid-1990s, almost all federal states have gradually departed from the classic administrative organization of Public Real Estate Management. Real estate management was organized, for the most part, in structures under public law and also partly in the form of companies under private law. Over the years, evaluations of real estate management by the federal states has resulted in further evolution and restructuring of real estate companies which had already been spun out of government. In Saxony-Anhalt, for example, real estate operations LIMSA and LBB were merged into the federal state enterprise “Bau- und Liegenschaftsmanagement Sachsen-Anhalt (BLSA)” in 2012 (Pöll and Gottschald 2012). Also, in Bremen, a central company was formed as an institution under public law with a mission to provide all services relating to federal-state-owned and municipal property from a single source. In Berlin, real estate fund Liegenschaftsfonds Berlin GmbH & Co. KG was transformed into Berliner Immobilienmanagement GmbH (BIM) in 2015. A current overview can be seen in the following Table 1.

Construction and property management activities have now been consolidated in most federal states. Some federal states have also initiated a centralization of REM activities and operations as well as introducing the landlord and tenant model. Further evaluation and optimization of the structures and processes created in the initial phase are urgently required to ensure further evolution and continual

Table 1 General view on real estate management of the federal states

Federal states	Structure/organization (prevailing)	Centralized facility management	Controlling tool “landlord and tenant model”
Baden-Wuerttemberg	Municipal enterprises: Landesbetriebe nach § 26 LHO: Vermögen und Bau BW, Bundesbau BW	Yes	No
Bavaria	Municipal enterprises: Landesbetriebe nach § 26 LHO: Vermögen und Bau BW, Bundesbau BW	No	No
Berlin	Municipal enterprise, administration: Staatsbetrieb nach § 26 LHO: Immobilien Freistaat Bayern (ImBy)	Yes	Yes
Brandenburg	Limited company, municipal enterprise, administration: Berliner Immobilienmanagement GmbH (BIM), Landesbetrieb für Gebäudewirtschaft (LfG) and Liegenschaftsverwaltung der Bezirksämter	Yes	Yes
Free Hanseatic City of Bremen	Municipal enterprise: Landesbetrieb § 26 LHO: Brandenburgischer Landesbetrieb für Liegenschaften und Bauen (BLB)	Yes	Yes
Free Hanseatic City of Hamburg	Public-law institution: Immobilien Bremen AöR	No (partial)	Yes
Hesse	Municipal enterprise, limited company, administration: Landesbetrieb Immobilienmanagement und Grundvermögen (LIG), LGH Landesbetrieb Gebäudereinigung Hamburg, SBH Schulbau Hamburg, GMH Gebäudemanagement Hamburg GmbH and Objekt- and Betriebsgesellschaften	Yes	Yes
Mecklenburg-Western Pomerania	Municipal enterprises: Landesbetriebe § 26 LHO: Hessisches Immobilienmanagement (HI), Hessisches Baumanagement (HBM) (in change)	Yes	Yes
Lower Saxony	Municipal enterprise: Landesbetrieb § 26 LHO: Betrieb für Bau und Liegenschaften Mecklenburg-Vorpommern (BBL-MV)	No	No
North-Rhine Westphalia	Administration: Oberfinanzdirektion Niedersachsen	Yes	Yes
Rhineland-Palatinate	Municipal enterprise: Bau- und Liegenschaftsbetrieb Nordrhein-Westfalen (BLB NRW)	No (partial)	Yes

(continued)

Table 1 (continued)

Federal states	Structure/organization (prevailing)	Centralized facility management	Controlling tool “landlord and tenant model”
Saarland	Municipal enterprise: Landesbetrieb § 26 LHO: Landesbetrieb Liegenschafts- und Baubetreuung Rheinland-Pfalz (LBB)	No	No
Saxony	Administration: Landesamt für Zentrale Dienste (Amt für Bau und Liegenschaften), Ministerium für Finanzen und Europa	Yes	No
Saxony-Anhalt	Municipal enterprise: Staatsbetrieb § 26 LHO: Staatsbetrieb Sächsisches Immobilien- und Baumanagement (SIB)	No (partial)	Yes
Schleswig-Holstein	Municipal enterprises: Landesbetriebe § 26 LHO: Bau- und Liegenschaftsbetrieb Sachsen-Anhalt (BLSA)	Yes	Yes
Thuringia	Public-law institution: Gebäudemanagement Schleswig-Holstein AöR (GMSH)	No (partial)	No

Source: MCEP, Management Consulting Dr. Eleonore Pöll (2015a, b, c)

improvement in the organization of the structures and processes as well as management in order to meet the challenges of the future.

The introduction of business management tools is underway. BLB NRW, for example, examines a variety of potential scenarios and their effects on the profitability of a property as part of their portfolio management of federal-state-owned property. At project level, BLB NRW has introduced a risk management process. These structures must be sustainably improved going forward and the portfolio and risk management processes continually improved (Bau- und Liegenschaftsbetrieb NRW 2015). Such tools are also essential for the other federal states. However, there is still much development work to be done in the area of controlling, success-oriented management structures and ongoing property management tools such as portfolio management systems and risk management systems with central databases.

4.3 Communities, Cities

At a local level too, there have been re-organizational activities supporting the professionalization of real estate management. Many cities have restructured their building management as an integrated, commercial facility management operation from a single source. According to our own assessment, more than 50 % of larger and medium-sized local authorities have now a central facility management unit. There is an understanding of the necessity for professional Public Real Estate

Management and the opportunities it can generate. Nevertheless, there remains significant potential for optimization in building management. The structures are still often characterized by tradition with fragmented responsibilities over the life cycle and across the portfolio as a whole. Business management and control tools, operating figures and real estate controlling systems have yet to find sufficient use in many local authorities. In the majority of cases, no clear real estate strategy is followed for the overall portfolio and no thought is given to the building life cycle. By contrast, policy and heads of local government exert a significant operational influence on real estate decisions. There are further shortcomings in terms of controlling and management tools, such as portfolio and risk management. Moreover, there are some instances of major problems being caused through the implementation of re-organizational measures. At municipal level, too, evaluation of the current situation and further optimization and evolution of organizations and tools, particularly management tools and incentive systems, are indispensable for the profitable and sustainable management of real estate. In addition to financial and economic challenges, municipal authorities are particularly impacted by the effects of societal changes (e.g. demographics and settlement of refugees and asylum-seekers). Further professionalization of real estate management is indispensable.

5 Key Success Factors Public Real Estate Management

A holistic concept for a professional approach to real estate in the public sector must consider the entire life cycle of properties as well as being able to identify those real estate resources that are strategic success factors. It must be capable of replacing the pure administration of property assets with a culture of active real estate management, including creating optimal value from required assets and achieving the most advantageous disposal of land and property that is not/no longer required. Achieving a professional Public Real Estate Management, i.e. an optimal support of user requirements, reducing costs and increasing revenues, is likely to involve the Key Success Factors (KSF) and practical measures illustrated in the diagram below (Table 2).

6 Objectives, Strategies, Organizational Structures

In the public sector, there is an emphasis on the public interest which contrasts with the focus on revenue generation in the private sector. Potential basic strategies to consider for Public Real Estate Management include divestment strategy, optimization strategy and growth strategy. Differing partial strategies can be formulated for certain property types and/or organizational areas. Often, for example, where there is an acute and/or significant requirement for liquidity, a divestment strategy is to follow. Where real estate activities are intended to influence long-term developments, an optimization or growth strategy would be preferable.

Table 2 Key Success Factors of Public Real Estate Management (KSF-PREM) and corresponding measures

Key Success Factors	Examples of measures
Developing and auditing portfolio strategies to create added value	<ul style="list-style-type: none"> • Creating transparency • Setting up portfolio and risk management • Portfolio and potential analysis • Optimization of facility management • Inclusion of different types of financing • Pursuing early disposals • ...
Optimization of organization and creation of a real estate unit (core business) Evaluation and adaptation of the organization in accordance with future requirements	<ul style="list-style-type: none"> • Centralization/concentration of real estate related responsibility and competency • Clear definition of functions and duties • Flattening hierarchies, process optimization, reduction of interfaces • Concentration on co-ordination and management • Investigation of outsourcing options • ...
Introduction of systems for management, regulation and control of finances, services and procedures	<ul style="list-style-type: none"> • Introduction of controlling, management and incentive systems (market mechanisms, e.g. landlord and tenant model) • Formation of owner, client and service provider structures, principal-agent relationship • Introduction of service and customer orientation • Portfolio and risk management • ...
Use of appropriate tools for increasing efficiency of services and quality	<ul style="list-style-type: none"> • Introduction of business management and real estate principles and tools (e.g. operational accounting, CAFM, portfolio and risk management systems) • KPIs and benchmarking • ...

Source: MCEP, Management Consulting Dr. Eleonore Pöll (2015a, b, c)

A strategic re-direction should always begin with an analysis of the existing strategy as well as a detailed investigation of individual conditions, i.e. the portfolio, the market situation, potential barriers to taking action and the specific success factors.

Defining and implementing objectives and strategies requires transparency across the entire real estate portfolio. The portfolio must be analyzed before being investigated and adapted in respect of future challenges. An integrated approach must be adopted across the entire portfolio and over the complete life cycle. Analyses of the portfolio and its potential must be undertaken to deduce the opportunities and risks arising from the existing property portfolio. Subsequently, objectives and strategies should be developed, defined and continually pursued for

the real estate portfolio and management of future developments over the entire life cycle.

Real estate management can only be optimized via an appropriate structure and organization. Tasks, competences and responsibilities with regard to real estate must be coordinated and assigned. In particular, this organization and its development must take into account the stages of the property life cycle (provision, use, disposal) in order to facilitate optimal bundling of real estate duties with regard to potential specialities and synergies, reduced personnel capacities, low co-ordination expenditure, and high transparency and controllability with the effect of cost degression and economies of scale.

Public Real Estate Management often adopts a functional organization model. The benefits here lie in the scope for clear specialization of personnel, good internal structuring of tasks and the ease with which standardization and standard regulations can be implemented and enforced.

The players in the Public Real Estate Management optimization process are the local authority heads through their policy, the property-occupying organizational units and those managing buildings and properties. However, from their different viewpoints and objectives arise conflicts of interest and, thus, requirements for regulation and control. For the central control of real estate services and players, there are basic models available, such as the owner, landlord and tenant or management model and numerous variations thereon. The most comprehensive model for management and for the introduction of market-oriented processes is the landlord and tenant model.

The benefits of the landlord and tenant model lie in the clear allocation of roles and responsibilities. Applying market-level rents and prices simulates the open market and promotes economic optimization. One possible structure is illustrated in Fig. 1 (Pöll 2000).

The organization of real estate management must adapt to future developments, a changing portfolio and hence an evolving spectrum of responsibilities. In declining regions, this will entail a reduction in portfolio sizes, safeguarding property, managing vacancies, demolition, conversion and disposal of superfluous property, while growing conurbations will be faced with expanding portfolios and seeking and financing appropriate sites to fulfil public-sector obligations. Greater flexibility is required both in terms of organization and portfolios. An evaluation of the real estate organizations developed by public institutions in recent years and a re-orientation in line with future challenges are essential. Functions such as portfolio and risk management, strategic asset management and real estate controlling must be introduced and actively managed. The issues of ownership and self-management will become paramount as the real estate landscape changes, as will discussions regarding the tendering of services relating to the operation, management, administration and optimization of real estate by third parties. Outsourcing of integrated facility management solutions with high transfer of risk and responsibilities (e.g. in respect of operator responsibility), as well as alternative acquisition and disposal methods, must be investigated and implemented where

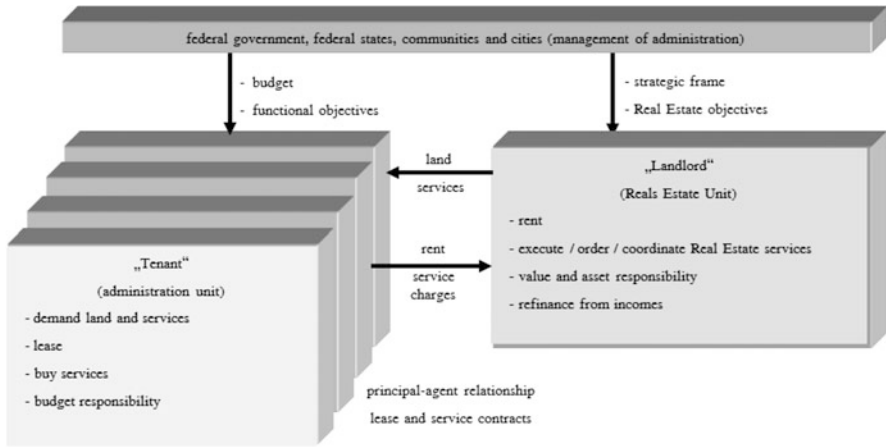


Fig. 1 Schematic view landlord and tenant model. Source: Own depiction

appropriate. Management and co-ordination responsibilities will, therefore, come to the forefront in Public Real Estate Management.

7 Added Value by Professional Public Real Estate Management

As in the private sector, focusing on one’s original duties to strengthen core competences is also highly relevant in the public sector. This requires the creation of organizational units capable of acting on their own authority and which have the appropriate structural and process organization and business management tools and methods at their disposal. The introduction of operational structures as opposed to traditional administrative structures has a number of advantages:

- entrepreneurial ability to take action and financial independence
- control of services, finances and procedures from a business management and real estate management perspective
- creating an incentive to adopt an economic approach to land
- achieving a different appreciation of costs through market conditions
- increased revenues and reduced costs through taking responsibility for results
- greater service mentality, service quality and client/consumer orientation
- efficient fulfilment of results targets, e.g. though profit orientation and profit center structures
- improved motivation of personnel through incentive systems and opportunities for qualification and development

Organizations subject to public and private law can take different legal forms. Those often discussed and chosen according to individual objectives and

circumstances are the optimized administrative solution, the municipal enterprise according to § 26 of the Financial Regulation (Haushaltsordnung), the institution under public law and the GmbH (limited liability company). Evaluation of the different legal forms must be undertaken with regard to the overall strategy in accordance with a variety of financial, organizational and personnel-related criteria. To simplify the decision, a comparative evaluation of the different legal forms can be conducted in a scoring model (see e.g. NIMBUS Project report, 2002, BLSA Project report 2012). Of all legal forms, the municipal enterprise according to § 26 of the Financial Regulation (Haushaltsordnung) is the most popular solution, particularly in the federal states.

7.1 Portfolio and Risk Management

It can no longer be assumed that the public-sector estate must be accepted as it is today. Individual properties and the entire portfolio must be continually optimized. Single-property strategies must feed into an overall vision for the portfolio, risks must be investigated and properties must be benchmarked against each other.

The traditional “buy-and-hold”-strategy must give way to considerations of “sell-or-hold”. Properties must be regularly analyzed in terms of their use and necessity. This requires the introduction of standardized analysis systems and parameters with benchmarking for all property (gif 2009). Rather than focusing purely on current facts and figures, real estate managers must also factor in future developments. Short-term views on property must be translated to a longer time horizon for planning purposes. An active management philosophy must replace the reactive approach. Planning, management and controlling that take account of future developments must be introduced, among administrative aspects, as part of an integrated portfolio management process that includes real estate controlling and risk management in order to create an optimized property portfolio. The German government, federal states and some major cities have already made a start (Pöll 2010).

To evaluate a portfolio and deduce measures for implementation, a “clustering” of the existing property portfolio must be undertaken via property and location analyses. It is also essential to estimate and project the future qualitative and quantitative administrative requirements in order to ascertain the necessity of each property. Accordingly, the entire real estate portfolio must be continually examined in terms of its future necessity and usefulness. Properties must be marketed at an early stage and investments and financing must be adapted to anticipated developments while also taking into account processes such as public-private partnership (PPP) models or sale and leaseback (SALB) transactions. Prompt action is essential to avoid vacant properties, challenging disposals or significant shortages of space. Appropriate acquisition, disposal and provisioning strategies and measures must be developed and pursued. The following actions should particularly be taken:

- Quantitative and qualitative analysis of existing property (portfolio analysis and potential analysis)
- Investigation and continual evaluation of projected future space requirements
- Strict alignment of the real estate portfolio with future requirements and optimization of property management
- Investigation, evaluation and implementation of different acquisition and financing strategies (e.g. rent versus purchase, PPP models)
- Professionalization of acquisition management (particularly management of costs, time and quality in terms of planning and implementation)
- Analysis and active pursuit of disposals of superfluous as well as necessary properties via different disposal methods
- Rigorous adjustment and synchronization of investment and maintenance management to developments and the real estate disposal strategy

Establishing active real estate portfolio management is indispensable in the public sector. This means systematic planning and monitoring of the portfolio with the objective of creating an optimal property portfolio with potential for future success as well as implementing comprehensive risk management.

All actions, particularly those relating to procurement (e.g. new-build, conversion, repair), must be accompanied by risk management in order to manage deviations from objectives, such as exceeded deadlines and budgets, which are particularly familiar in public-sector procurement projects (e.g. Berlin Airport, Hamburg's Elbe Philharmonic Hall, Stuttgart 21). Risk management is an established component of private real estate management, not only due to regulations but also because it is recognized as essential and beneficial. The public sector has significant ground to make up in terms of establishing and applying a comprehensive risk management system. External support would be very helpful in this regard.

7.2 Facility Management

In the public sector, the content of Facility Management is to some extent still restricted to purely operational business and management tasks, which are also heavily fragmented in their organization (departmental principle) and often lie outside of the core competences of the personnel concerned.

Facility Management concepts for the public sector must fit with the organization, i.e. with the bringing together and bundling of management responsibilities. This relieves the pressure on the actual core responsibilities of the authority, allowing a central management of business and management, i.e. with regard to costs, services and land. Control and benchmarking are available as supporting tools. This is particularly important with regard to operator responsibility. Operators of public-sector property bear a high level of responsibility towards numerous stakeholders (the public, employees, tenants, etc.). This brings risks of liability with potential repercussions under criminal, administrative and civil law.

The responsibilities of public real estate and asset managers include, for example, fire protection, traffic safety, operational safety measures, environmental protection, accident prevention and accident avoidance measures. The nature of the properties managed, such as schools, kindergartens, sports centers, clinics, energy generation plants, etc. poses a particular challenge. Operator responsibility entails a variety of organizational, technical, IT and legal requirements. Furthermore, where there are complex responsibilities, there will be interface problems to resolve. Effective processes, appropriate operator guidelines, legally-compliant organization and suitable IT tools, together with active preventative risk management, have become indispensable.

The optimization of Facility Managements goes hand in hand with an examination of one's own depth of services. The outsourcing discussion is often met with dissenting voices in the public sector, citing reasons such as the creation of dependencies and a loss of influence. The high professionalism of the FM market dictates that private sector service providers are more advantageous than corresponding organizational units in the public sector, particularly when it comes to time and quality-related aspects. A significant component of facility management concepts in the public sector is therefore often the development of economically sustainable and politically acceptable operating concepts with a growing inclusion of private service providers.

7.3 Property Management

The conceptual approach of property management lies in the separation of coordinating and controlling management services with an optimization task in property management on the one hand and the executive operational services in building management or facility management on the other hand. Numerous companies in real estate and construction offer comprehensive services within the framework of property management. This involves structuring different service offerings from the completion of individual management tasks or service packages for the owner or business process outsourcing to the complete takeover of the entire property management with transfer of personnel (takeover of entire company or parts of the company). The public sector is still very cautious when it comes to offerings of this nature.

7.4 Public Private Partnership (PPP)

The existing modernization and investment backlog in real estate and infrastructure in the public sector as well as requirements arising from demographic trends combined with the strained financial situation creates considerable pressure to act and leads to a consideration of different procurement options to bring in private capital and know-how.

A Public Private Partnership (PPP) is not a pure financing model but a contractual and organizational model for the public sector for the provision of infrastructure, property and services in conjunction with private partners.

The economic advantages of Public Private Partnership projects compared with conventional procurement variants can be examined through detailed feasibility studies and risk analyses. Efficiency advantages can be illustrated in new build projects and with larger project volumes, e.g. through building cost savings, security of building costs and reduced building times in the operational phase as well as through sharing experiences and optimizing procedures. The success of Public Private Partnership projects is above all attributable to clear and sustained political support, a standardization of the Public Private Partnership procurement channels and efficient decision processes (see also Alfen and Barckhahn 2016).

7.5 Disposing of Real Estate

Properties that are no longer operationally required are primarily brought to the market for direct sale with the objective of generating liquid funds. BImA, for example, brings 2000–3000 properties to the market each year that the German government no longer requires to fulfil its obligations. These include residential and commercial property, former sites of the German military and foreign stationed armed forces as well as special properties such as bunkers and airports. Public sector properties vary in condition and quality and are often not in line with market requirements, so disposing of a property directly ‘as is’ can prove difficult.

Active disposal strategies are required, such as developing the portfolio and using different disposal methods such as tenders (Europe-wide if necessary), direct talks with investors, sale via agent/intermediary, auction and complex procedures such as package deals. Particularly when dealing with very small or properties or assets that are difficult to sell, options such as online auctions have been successfully explored (gif 2013). The public sector is reluctant when it comes to development projects because of the associated risks.

Property that does have operational requirements can be disposed of in the form of a sale and leaseback, for example, whereby the public authority is often guaranteed rights of use and access for the long term. Examples of large sale and leasebacks are package sales of commercial buildings and those used by authorities (offices, police stations, courts etc.) in the Federal State of Hessen as well as the Free and Hanseatic City of Hamburg. However, the public sector takes a very critical view of this disposal method owing, *inter alia*, to the long-term commitments.

Nevertheless, in the public sector too, real estate has become a commodity that is subject to the laws of the economy and investment. Active portfolio management, targeted disposal strategies and a professional sales process, therefore, are becoming ever more important.

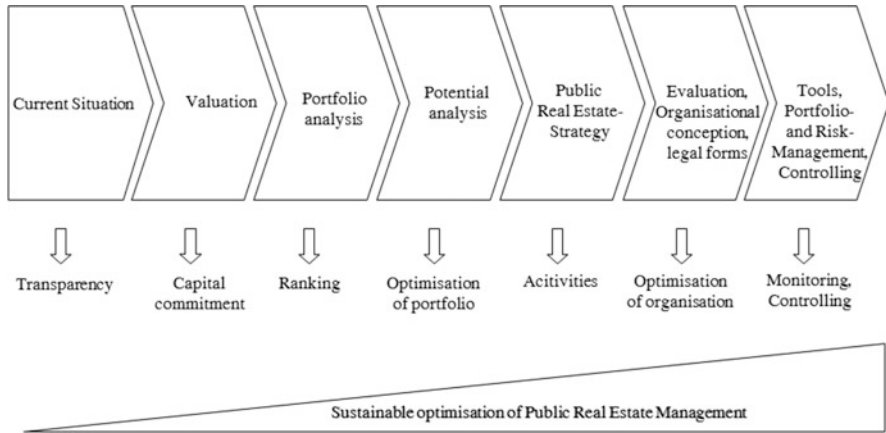


Fig. 2 Operational steps to a professional Public Real Estate Management. *Source:* Own depiction

8 Steps to Professional Public Real Estate Management

Ascertaining the starting situation and the real estate portfolio, assessing value and potential and structuring the public real estate are basic requirements for professionalization. Prioritization and establishment of objectives, subsequent elaboration of corresponding public real estate strategies and the creation of a suitable structure and organization as well as the introduction of essential tools for the management and control of both the portfolio and the organization are indispensable measures (Fig. 2).

Strict requirements are placed on both the project and the implementation management, e.g. in respect of strategies, concept, management and communication. For stringent implementation, importing external know-how to provide consultancy support is highly beneficial in many cases.

9 Summary

The situation and potential for improvement and especially future challenges in public sector real estate demands professional Public Real Estate Management. The objective is to optimize Public Real Estate Management in a sustainable manner. Traditional requirements and uses will change going forward. Sustainable strategies to adapt and early intervention are essential to meet impending challenges. A systematic approach, applied by an organization optimized for the requirements of the future is essential. Portfolios and their potential must be analyzed to create transparency and to formulate strategies. Different acquisition and disposal strategies must be incorporated to adapt existing portfolios. Particularly in

declining regions in Germany, the potential of marketable properties must be exploited at an early stage via disposals and the remaining portfolio must be adapted to future requirements. This will provide contributions to budgets in the short term, a reduction in costs over the longer term and will also avoid the risk of such properties no longer being marketable in later years.

The introduction of portfolio and risk management with an active asset management and real estate controlling approach is essential for sustainable development. The public sector will be positioned to successfully meet the challenges of the future if it intervenes early, i.e. immediately, in respect of the opportunities and risks, and introduces appropriate strategic, management and organizational measures pro-actively, based upon evaluations of the current situation.

The federal government, federal states and local authorities are making progress. However, further intervention is required at all levels. This applies both in strategic and operational areas, e.g. in organization and management systems as well as in the inadequate portfolio and risk management. A systematic course of action in the individual concept, and stringent implementation upon introduction as well as continual improvement of the Public Real Estate Management are essential. The public authorities must be ready and willing to modernize and provide clear support through policy.

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PPP and Infrastructure

Hans Wilhelm Alfen and Sven Barckhahn

Abstract

This chapter examines the role of public private partnerships in the public procurement of public real estate and transportation infrastructure in Germany. Introductory, the general structure and characteristics of PPPs are explicated along with special remarks about specific features of the German PPP approach. This includes the specific role of the financing models applied, especially the role of non-recourse forfeiting of instalments in municipal projects. Further reference is made to the highly divided and complex approach of federal and federal states' authorities to PPPs. Any federal state set up its very own taskforce that issues guidelines and provides support to municipalities in heterogeneous ways. Nevertheless, on project level, a certain degree of standardization led to different types of contract models in the public real estate sector that are applied consistently throughout Germany on any governmental level. Although, even standardized, models in the road infrastructure sector are applied only on federal level, whereas single projects on state and municipal level can still be considered 'pilot projects'. Finally, the flow of deals in the public real estate and the road infrastructure sectors are summed up in tables that also feature updated figures for projects in tendering and under preparation.

Keywords

Infrastructure • Public private partnerships

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1 Introduction

In the wider context of public real estate, public private partnerships have become an established approach to public procurement of public real estate and transportation infrastructure in Germany. The general structure and characteristics of PPPs as well as special remarks about specific features of the German PPP approach will be explicated. Special reference is made to the flow of deals in the PPP market to point out the role of this procurement method in the German landscape of public real estate procurement.

2 Structure and Main Characteristics of PPP

PPP-Models have become an established procurement method in Germany since 2003. By means of PPPs, public bodies have procured projects in several different sectors. The sectors include public real estate (town halls, schools and the like) as well as public infrastructure, such as highways or federal roads. Even if the understanding of PPP may vary more or less from federal state to federal state and often also from sector to sector in Germany and in the sectors mentioned above the term PPP refers to a long-term, contractually regulated cooperation between the public and private sector for the efficient fulfilment of public, non-sovereign tasks. Necessary resources of the partners, such as their expertise, operational funds, capital, staff and risk management capabilities are brought into the project complementarily.

The main resulting characteristics and benefits of PPPs for the public that are expected to be derived from the definition above and are summarized as follows:

- Efficiency gains through sharing tasks and responsibilities (sovereign tasks remaining with the public bodies whereas operational tasks are transferred as far as possible to the private).¹
- Incentive mechanisms through life-cycle approach, long-term contractual relationship and private investments.
- Innovative service delivery through application of output specifications, service levels agreements and performance-related payment mechanisms.
- Faster project delivery, lower public budget burdening and higher public budget liquidity.²

A particular benefit of PPPs for the private partner—especially construction companies as strategic investors—may be the possible implementation of

¹ The public agent makes use of thorough cost-benefit-analyses to proof value-for-money. Tytko (1999), p. 32.

² Clifton and Duffield (2006), p. 580; Müller and Turner (2005), p. 401; Spackman (2002), pp. 288–291 and Grout (1997), p. 59.

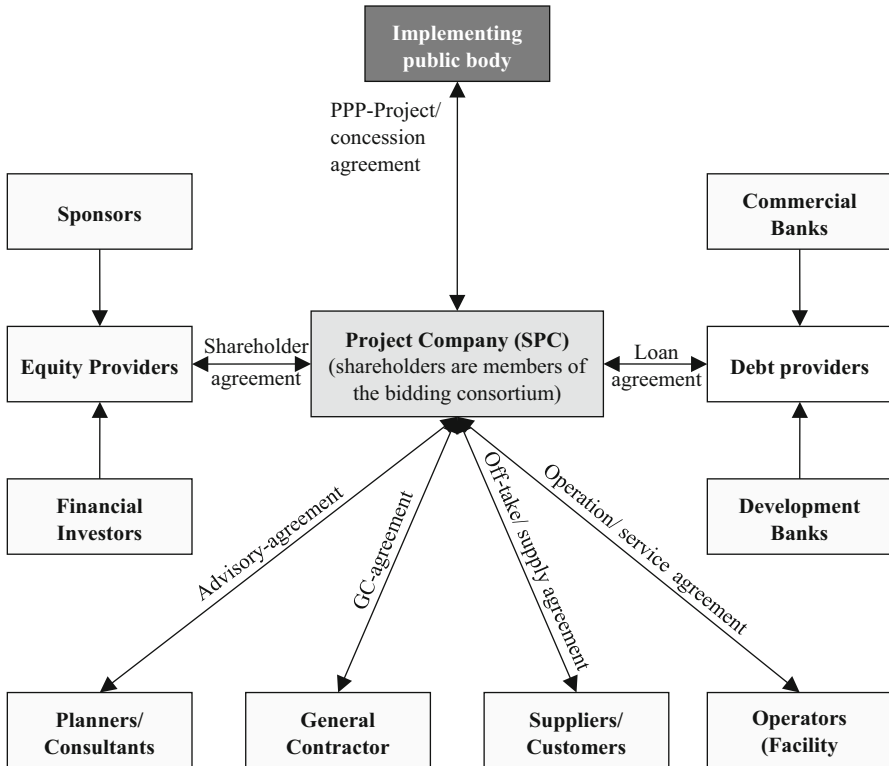


Fig. 1 Contractual relations in the basic PPP-Model. *Source:* Weber et al. (2006), pp. 31 and 37

diversification strategies, in order to relief their heavy dependency from economic cycles. Nevertheless, private partners need to build up expertise to cover the complete value chain of PPPs. Predominantly, construction companies have to extend their value creation with operation and maintenance services. In the past, several construction companies developed skills and capacities and built up knowledge to become leading actors on the realizing side of the market.

A typical structure of a PPP project with its different stakeholders and their mutual contractual relationships is shown in Fig. 1.

The SPC (later in this section as referred to the ‘private partner’) plays the pivotal role in the set up of a PPP structure. The SPC holds all the relevant contracts with a set of different contract partners. First and foremost, the PPP-Project agreement between the implementing public body and the SPC rules the scope of the services to be procured, the means of service delivery and payment mechanisms. The shareholder agreement rules all the rights and duties between the shareholders of the SPC. This includes the take-over of tasks (construction/operation, etc.), the distribution of dividends from the SPC to the shareholders and the allocation of risks. The latter is a crucial point in the eyes of the debt creditors, so that the loan agreement rules responsibilities between the SPC and their

shareholders and the debt providers. More explanations to the financing of PPP-Projects are made in the next section of this document. Furthermore, the advisory agreement, the GC-agreement (general contractor), the operation/service agreement and possible off-take/supply agreements rule special tasks. These tasks are commissioned to special subcontractors, who design, build, supply and operate the PPP-project on behalf of the SPC. As most of the risks are allocated to the subcontractors, the SPC stands almost free of risks, in order to satisfy the debt providers and the shareholders of the SPC.

3 Financing of PPP-Projects

In Germany, the application of PPP models is bound to the use of specific financing models. While in the UK and internationally, project finance is the most common mode of financing PPPs, in Germany and France so-called forfeiting models are commonly used, too and predominantly applied in social infrastructure. The differences between these models are described in following. Later in this section, major distinctions between PPP-Projects in terms of the incoming cash flows depending on the demand or the availability of the assets, the stage of the project at the time of investment as well as Greenfield or Brownfield characteristics will be explained.

Main characteristic of project finance is that the involved creditors develop risk-reflecting, stable financing structures that are based on expected cash flows and capital structure of the SPC, abilities and risk management capabilities of the project initiators. Figure 2 shows the structure of project finance for PPP-Projects. The creditors determine the conditions of the capital commitment and the funds are paid directly to the SPC.³ Further characteristics of project finance are limited-recourse structures, which determine the distribution of credit risks between the creditors and equity providers and the leverage-effect, who requires a high level of debt.⁴ As the creditors concentrate on the expected cash flows for the SPC's debt service, cash flow related lending itself is focused on free cash flows. Free cash flows are the benchmark to rate the SPC's future financial situation, because project finance implies the valuation of returns instead of the valuation of assets.⁵ The whole structure of one project finance consists of several credits, which are suited to the financial situation of the SPC over the contract term. Concluding, different types of credits are paid out to the SPC for different investments with different risk

³ Henschel-Bätz (2005), p. 18 and Tytko (1999), p. 8.

⁴ Literature reviews imply that long before the financial market crisis it has been argued that the advantage of the leverage-effect depends very much on the current market conditions. Financial structures based on the leverage-effect crucially require non-rising interest rates. Newell and Peng (2008), p. 23; Blanc-Brude and Strange (2007), p. 2; Probitas Partners (2007), p. 9 and Tytko (1999), p. 8.

⁵ Weber and Alfen (2009), p. 164 and Tytko (1999), p. 10.

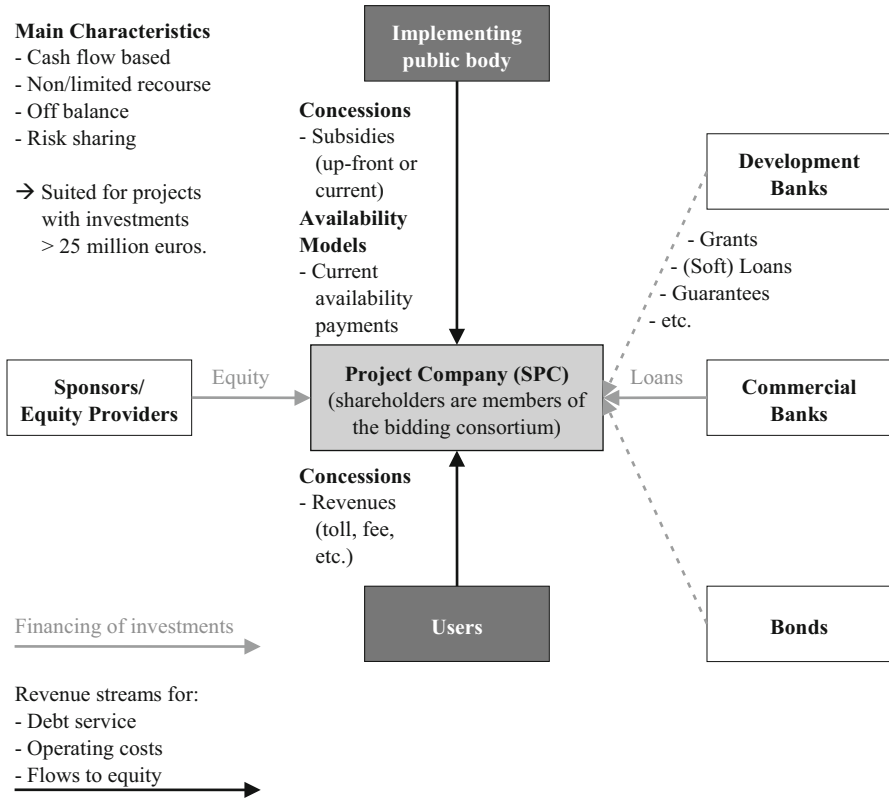


Fig. 2 Financing model: project finance. *Source:* Alfen Consult GmbH (2010)

profiles, e.g. the construction stage is riskier than the operation stage of one PPP-Project. Because of the financing structure reflecting specific project risks, the financing structure of SPC's varies depending on the risk exposition of the free cash flow. Typically, the equity-ratio ranges from 8 to 30 %, whereby SPCs in projects with high market risks might be forced to equity-ratios up to 50 %.⁶ Finally, a high equity-ratio indicates insufficient leeway of the SPC.⁷

Alternatively, small projects in Germany might be financed with a non-recourse forfeiting of instalments instead of project finance. Figure 3 shows the structure of non-recourse forfeiting of instalments for PPP-Projects. The overall financing costs of a forfeiting solution compared to a project finance solution are lower for two

⁶ Pfnür et al. (2008), pp. 153–154; Hopfe et al. (2008), p. 150; Blecken and Meinen (2007), pp. 41–42; Devapriya (2006), p. 563; Henschel-Bätz (2005), p. 18; Sester and Bunsen (2005), p. 438 and Tytko (1999), p. 48.

⁷ The leeway results from the SPC's property rights and volume-related risks remained with the SPC. The price of debt for the SPC is lower, if she bears no risks. Leland (1998), p. 1228.

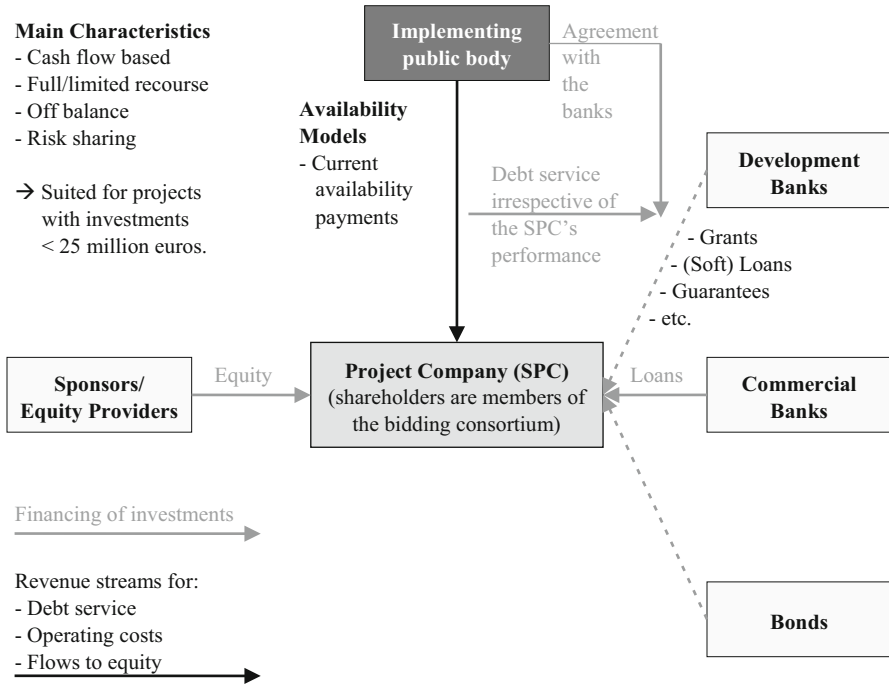


Fig. 3 Financing model: forfeiting model (non-recourse forfeiting of instalments). *Source:* Alfen Consult GmbH (2010)

reasons. One reason yields from lower cost of equity, because forfeiting models require minimal equity investments. Another reason yields from forfeiting instalments. This means that the price of debt is lower, because the model features a credit risk transfer from the bank to the public body. In summary, the capital structure of the SPC shows very little equity, because the credit risk is borne by the public body. In addition, yield spreads for project risks are minimized and the price of debt is 5–20 bps higher than common loans taken by municipal bodies.⁸ Forfeiting the instalments includes the non-recourse sale of the SPC's debt claims from the bank to the public body. In PPP-Projects, the public body pays for the construction of the project without the right to withhold payments due to poor contractor performance.⁹ Hence, the public body also bears the risk of bankruptcy of the contractor.

In total, 70% of the projects featured forfeiting of instalments, whereby representing 33% of total investments. Projects featuring project finance represent 20% of the projects and 61% of the total investments. In recent years, the terms

⁸ Braune (2006), p. 310 and Littwin et al. (2003), p. 22.

⁹ Schöne (2006), p. 101; Braune (2006), p. 310; Weber et al. (2004), p. 50 and Ertl (2004), p. 40.

‘four-phase’ and ‘three-phase’ PPP-Projects were introduced to include and to distinguish projects where private finance is either part of the tasks of the private partner over the full contract term or just includes financing of the construction phase.¹⁰

4 Institutional Set Up for PPPs in Germany

After erratic developments until 2009, the institutional set up for PPPs in Germany is founded on solid grounds. In 2009, the Federal PPP Task Force within the Federal Ministry of Transport, Building and Urban Affairs (BMVBS) was closed and its tasks were shifted to the ‘Partnerschaften Deutschland—ÖPP Deutschland AG’, the new Federal PPP Task Force within the Ministry of Finance (BMF). Main objectives of Partnerschaften Deutschland (PD) are to advise and support exclusively implementing public bodies and to adopt PPP structures to new sectors. Furthermore, PD also supports the harmonization of PPP standards in the federal system and in different sectors, based on specific working committees that hold regular meetings together with the PPP competence centers on federal state level. General standardization, harmonization of guidelines on federal and federal state levels and the exchange of experiences are to be achieved successfully in these new structures.¹¹

On federal state level, there are PPP competence centers in every federal state, whose objectives are to support and advise local municipalities wishing to implement new PPP-Projects. The institutional set up and integration into local and state administration are varying, as can be seen in Fig. 4.

Most of the institutions at federal state level are integrated in the State Ministries of Finance, which is in line with the most successful approach for a quick and sustainable development of PPP internationally. The PPP Task Force of North Rhine Westphalia had taken a leading role in publishing basic groundwork in term of numerous PPP guidelines. Following institutions in other federal states adopted their institutional set up and their approach to support and advise municipal authorities to set up new PPP-Projects. The PD and federal state PPP institutions are focused on public real estate projects like schools, universities, administration buildings, hospitals, prisons, etc. Hence, most PPP-Projects were realized in the public real estate sector.

In the road sector, the institutional set up differs from the one in the real estate sector in parts. While road projects on federal state and municipal levels might be supported by PPP competence centers on federal state level, federal road projects are supported by the Verkehrsinfrastrukturfinanzierungsgesellschaft (VIFG). The VIFG is a special body of the BMVBS that manages the federal transportation-funding budget. Apart from the task to supervise the operator of the toll levying

¹⁰ PD (2014), pp. 6 and 19.

¹¹ Hausmann and Rudolph (2008), p. 156.

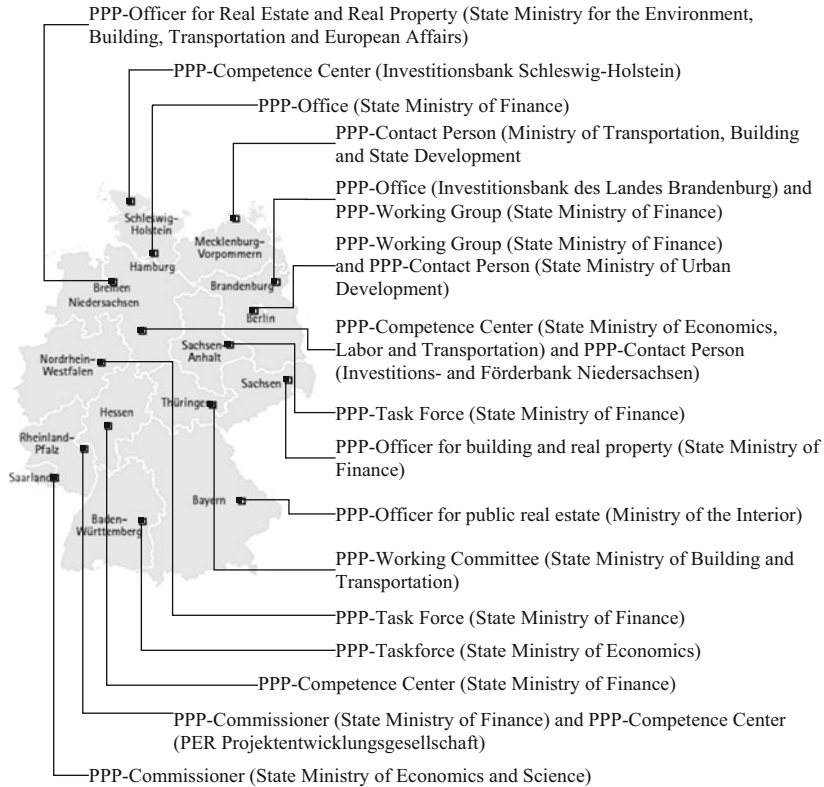


Fig. 4 German PPP task forces on state level. *Source:* <http://www.bmvbs.de/SharedDocs/DE/Artikel/UI/kompetenzzentren-und-ansprechpartner-der-laender.html> (as of 27.09.2010)

system for heavy goods vehicles (HGV) on German highways, the VIFG distributes toll revenues among the annual budget to fund works on roads, railways and waterways. The tasks of the VIFG are laid down and specified in a special law. They cover the distribution of the revenues from the HGV-toll and of revenues from inland waterway transportation in order to finance federal transportation projects in the sectors of road, rail and inland waterway transportation.¹² Furthermore, the VIFG is responsible for the preparation and execution of PPP-Projects in the above named sectors.

¹² §2, VIFGG.

5 Applied Contract Models

Applied contract models in public sector procurement by the means of PPPs in Germany vary in wide ranges. However, models in the public real estate and road infrastructure sectors are inconsistent. This also applies for project executing authorities, both due to the federal system in Germany.

The different models applied in public real estate are:¹³

- PPP-Owner-Model
- PPP-Purchaser-Model
- PPP-FM-Leasing-Model
- PPP-Renting-Model
- PPP-Concession-Model
- PPP-Joint-Venture-Model

In the following, each of models will be described in brief. The six PPP contract models named above are defined in the ‘Federal Report on PPP in Public Real Estate’.¹⁴ Jointly, the models are based on the life cycle approach featuring design, construction, financing and operation of the projected assets. Differences between the models affect ownership of the asset prior to, during, and after the contract term, the reimbursement/payment mechanisms and the utilization of the assets. Undisputedly the type of the model, the implementing public body pays the private partner a periodical remuneration to cover the cost of construction, financing and operation as well as risks and profit.

- Most PPP-Projects in social infrastructure are realized through the application of the so-called PPP-Owner-Model (design-build-finance-operate-transfer). In this model, the implementing public body remains the owner of the assets and the private partner takes over the life-cycle tasks design, construction, financing and operation of the assets. Throughout the contract term of 15–25 years, the private partner bears most of the risks except for realization risks and market risks. The PPP-Owner-Model is predominantly applied to school projects and other public buildings, where ownership of the assets cannot be transferred to the private partner.
- The PPP-Purchaser-Model [(design)-build-own-operate-transfer] also features the private ownership of the assets during the contract term. At the end of the

¹³ The PPP-Contracting Model, which used to belong of the group of eligible models has vanished in recent years due to lacking demand. It was designed for special projects that do not feature the construction of buildings, but the design, installation, optimization, operation and maintenance as well as financing of technical facility equipment (HVAC). The contract term was limited between 5 and 15 years, depending on the life cycles of technical facility equipment.

¹⁴ PwC et al. (2003).

contract term, the assets are transferred back to the implementing public body. Risk allocation, life-cycle tasks and the structure of the payments are not specifically different from other PPP-Models in social infrastructure. The term purchaser refers to the fact that the private partner has to acquire the building ground. Therefore, the regular payments by the implementing public body include corresponding amounts. The PPP-Purchaser-Model is similar to usual real estate project developments.

- The PPP-FM-Leasing-Model (design-build-lease-operate-transfer and/or maintain) is consistent with the PPP-Purchaser-Model. The main difference lies in the ownership of the assets. While the private partner owns the assets, the public body retains a call option to purchase the asset at the end of the contract term at a predefined price. In case that the public body does not make use his call option, the private partner remains the owner of the assets. Due to the design of this model, the private partner bears all of the ownership risks, including realization risks. Furthermore, the periodical remunerations by the public body do not cover the private partners' investment costs. Compared to common real estate leasing models, inside the PPP-FM-Leasing-Model the private partner may also take more responsibility for the operation of the assets. In summary, the life-cycle tasks design and construction are not part of the contract between the private partner and the public body, but a prerequisite to conclude the main contract after the PPP-FM-Leasing-Model.
- The PPP-Renting-Model (design-build-renovate-operate-transfer) is similar to common real estate renting, except for the fact that it features the operation of the assets by the private partner. The model assumes that the private partner owns the building ground, the assets and also designs, builds, finances and operates/maintains the assets. The PPP-Renting-Model is a PPP-FM-Leasing-Model without the public call option at the end of the contract term. Therefore, the periodical payments reflect common local rent levels and a premium for facility management services. In summary, the private partner will not be able to recover investment costs during the contract period, but by the means of utilization of the assets. Concluding, realization risks are fully borne by the private partner.

The following two models might be combined with the five models pointed out above. These two models might not be applied stand-alone:

- The optional PPP-Concession-Model (build-operate-transfer) can be applied to promote user financing (e.g. arenas, indoor swimming pools or exhibition centers or roads and fresh water supply). The concession given to the private partner, entitles him the right to levy charges from users of the service provided. Consequently, the private partner receives no regular periodical payments from the public body. Therefore, the private partner bears market risks.
- The optional PPP-Joint-Venture-Model features a common project company, of which the implementing public body and the private partner are joint shareholders. Rights and obligations of the partners are ruled inside the

shareholder agreement in despite of a PPP-Contract. This makes it a so-called 'horizontal' partnership instead of a 'vertical' partnership in other PPP contracts. The model is well suited to urban development projects where the public body provides building grounds, determines development objectives and the private partner develops, designs, builds, finances, operates and markets the assets.

As pointed out above, the models applied in public real estate and road infrastructure are different. The following models are applied in road infrastructure:

- A-Model
- F-Model
- Municipal-Roads-Models

The **A-Model** [(design)-build-operate-transfer] is a concession model in the German road sector. The designated projects have in common that existing stretches have to be replaced and/or widened. Hence, these projects are Brownfield developments. The private partner builds, operates, maintains and finances stretches on German highways. The underlying contracts have a term of 30 years after which the assets fall back to the public bodies. The devolution is determined to special conditions of the assets. In the A-Model, the private partner receives the revenues from the federal HGV-toll of the specific stretch. Because the toll is levied by a separate company (Toll Collect), the revenues are passed through to the VIFG, who distributes stretch-specific revenues to the operators of the A-Model-Projects. Depending on the specific project, the operator might receive initial funding from the federal budget, if the toll revenues do not cover incurring costs over the life cycle of the specific project. In contrary to F-Model projects, the private Partner is not entitled to levy tolls by himself (real toll). In conclusion, there is no link between A-Model-Projects and the Federal Road Private Funding Act (FStrPrivFinG). The benefits of the A-Models are in line with typical PPP targets such as faster delivery, life-cycle approach, budget relief and user finance (in part). After experiences made with the initial four A-Model projects, the framework was updated, focusing on remuneration mechanisms and now including availability payments.

The **F-Model** [(design)-build-operate-transfer] projects are based on the Federal Road Private Funding Act (FStrPrivFinG), since these models feature real toll levying by the operators. The F-Model-Projects are developed to design, build, operate and maintain crossings, such as bridges tunnels or mountain passes for a contract term of 30 years. The projects realized so far are entirely Greenfield projects that performed unsatisfying, as user financing in the German road sector is in desperate need for more acceptance. Unless the operator is entitled to levy toll from the users, he does not own the right to adjust tariffs. The tariffs can be adjusted upon requests to the responsible (toll ordinance) authorities. Analogous to the A-Model-Projects, the respective authorities can grant initial funding. The benefits of the F-Models are in line with typical PPP targets such as faster delivery, life-cycle approach, budget relief and user finance (in full).

Besides the A- and F-Model-Projects, there are several non-standardized initiatives for municipality roads. Realizing authorities are local municipalities and federal states opposing to the A- and F-Models that are realized by the federal states and the federal government. Basic characteristics of **municipal roads models** feature Brownfield characteristics with little demand for newly built assets and a strong focus on maintenance and sometimes operation. The models also feature availability payments, since the private operator or the local authority levies no toll. The benefits of the municipal road models are in line with typical PPP targets such as faster delivery, life-cycle approach and budget relief. Municipal roads models do not feature user finance and since they are focused on maintenance, they do not require high initial investments from the private partners. Realized projects so far own pilot project statuses.¹⁵

6 German PPP Market

The German PPP market is dominated by strategic investors such as building corporations, respectively their investment-specific corporate divisions. Especially HOCHTIEF AG and Bilfinger Berger SE (as the largest national construction groups) compete with numerous foreign building corporations in the German PPP market. Competitors to HOCHTIEF AG and Bilfinger Berger SE are Austria-based STRABAG AG, Vinci S.A. from France and Royal BAM Group NV from the Netherlands that operate heavily active branches in Germany. On international level they also compete—among others—with France-based Eiffage SA, Colas SA and Egis SA as well as with Dura Vermeer Group NV from the Netherlands, Skanska AB from Sweden, Balfour Beatty plc. From the UK and Sacyr Vallehermoso SA from Spain. The common concern of these companies is focused on direct business, operative and financial interest of the projects.¹⁶ Nevertheless, their equity investments are the means to an end in terms of the right to mandate their own construction branches to erect the physical assets of the projects. The same counts for SME's those are active in the PPP-Market as well. The big difference is that SME's are predominantly active in projects with forfeiting models and almost no need for equity investment. The corporations are focused on PPP-Projects that include project finance and seek for financial investors to take over equity investments partially. Active Germany-based SME-sized contractors in the PPP-Market are Goldbeck GmbH, Johann Bunte Bauunternehmung GmbH & Co. KG, Berger Holding GmbH, Otto Wulff Bauunternehmung GmbH & Co. KG, Theo Urbach GmbH & Co., Aug. Prien Bauunternehmung GmbH & Co. KG, Wiebe Holding GmbH & Co. KG, Bauunternehmen Gebrüder Echterhoff GmbH & Co. KG, Heitkamp BauHolding GmbH, A. Frauenrath Bauunternehmen GmbH, MBN Bau AG and Austria-based Alpine Bau GmbH and many more. Still, they

¹⁵ Korn (2008), pp. 61–62.

¹⁶ Tytko (1999), p. 23 and p.47.

predominantly invest in projects with forfeiting models or they are junior-investment-partners to building corporations in projects involving project finance.

Besides these strategic investors more and more institutional investors like e.g. assurance companies and pension funds show interest in investing in infrastructure by means of PPP. Against the background of the low level of interest rates and missing opportunities for lucrative investments corresponding to their requirements they seek for loopholes. The German Government seems to support the initiative by several coordinated efforts of the German Ministries of Finance (BMF), of Economic Affairs (BMWi) and of Transport (BMVI). A high level expert commission composed of leading representatives from companies and unions, central associations of the different economic sectors and science under the lead of Prof. Marcel Fratscher, President of Deutsches Institut für Wirtschaftsforschung (DIW) has been invited by the Federal Minister for Economic Affairs Sigmar Gabriel in order to work with him on a new investment strategy for Germany in general and for Germany's infrastructure in particular.

7 Deal Flow

Since 2003, the German market for PPP-Projects with a full life cycle approach has been growing constantly. Investments are focused on projects in the public real estate sector executed on municipal level, while only a few projects were realized on federal level. Regarding the specific sector, these investments are heavily concentrated on schools, also because bundled projects were realized in this sector. Major experiences in the German PPP-market were made in the public real estate sector. Inside the sector, about 200 projects with total investments of about 5.7 billion euros were realized since 2002.¹⁷ The major stake of these projects is already in operation and further projects are currently in tendering or in preparation. Considering the economic crisis in 2007, the deal flow in the German PPP sector remained intact, notwithstanding that the general development has abated since then. However, the time since the economic crisis showed that PPPs in the real estate sector have become an established procurement method among total public procurement. Table 1 shows that the past project pipeline had a total estimated investment value of approximately 5.7 billion euros.

Current estimations of the project pipeline in the public real estate sector result in approx. 100 projects that are either tendering, under preparation or under assessment.¹⁸ Table 2 shows the distribution of PPP-Projects among the different sectors in the German public real estate sector. The total number of awarded projects holds a remarkably high proportion of school and educational projects.

As already noted above, the road infrastructure sector is somewhat different from the real estate sector. Investments concentrated on federal level instead of

¹⁷ PD (2014), p. 5.

¹⁸ PD (2014), p. 6.

Table 1 Past PPP-Projects in the German real-estate sector as of 31.12.2014

	Projects, new (#)	Projects, total (#)	Investments, new (millions euros)	Investments, total (millions euros)
2002/ 2003	2	2	n/a	n/a
2004	12	14	350	350
2005	16	30	508	858
2006	23	53	594	1452
2007	38	91	1506	2958
2008	28	119	1432	4390
2009	26	145	1187	5577
2010	15	160	384	5961
2011	16	176	1151	7112
2012	8	184	150	7262
2013	8	192	189	7451
2014	6	198	990	8441

Source: PD (2014), p. 5

Table 2 Past PPP-Projects in the German real-estate sector as of 31.12.2014

Awarded projects	Total projects (#)	Total projects (%)
Nursery/schools/higher education	83	42
Administration buildings	34	17
Justice	6	3
Health care	12	6
Leisure/culture/sport	47	24
Security	10	5
Other	6	3
Total real estate projects	198	100

Source: PD (2014), pp. 13–14

federal state and municipal level. In addition, the continuity of projects in tendering and announced projects strengthen the role on federal procurement in the road infrastructure sector. Characteristics of these projects are a higher investment volume and the low number of projects, when compared to the real estate sector.

While road infrastructure projects initially took off with the so called F-Model projects in 2002, this type of projects has completely vanished today. The small number of F-Model-Projects and their poor performance were bound to the low acceptance of user financing and too optimistic traffic forecasts. Furthermore, these models did not feature an optimal risk allocation, since major construction risks and market risks remained with the private partner. Initially, the realized F-Model-Projects were pressed into the scheme, as no suitable projects were available at a point of time where PPP-Projects in road infrastructure should be realized. In conclusion, the political support of these projects was lacking. Finally, realizing authorities were open for renegotiations of the original contract, so that

bankruptcies were avoided. The adapted means were extensions of the contract terms up to 20 years, totaling in contract terms of up to 50 years.

Compared to the F-Model-Projects, the A-Model-Projects have proven to be successful inside the market. Developments reaching back to 2002, the A-Model-Projects are crucially linked to the German HGV-Toll and the separate toll collecting company Toll Collect. Since A-Model-Projects also feature partial market risks, the overall risk allocation and general package seems more attractive and thoroughly designed than F-Model-Projects. The seven projects that have been tendered so far were soaked up by the market and involved big interest from investors and contractors outside of Germany. The projects currently in tendering and in preparation feature re-designed contracts with higher levels of standardization and fierce competition for the projects. The average investment costs for one A-Model-Project amounts to approx. 500 million euros. Hence, international infrastructure investors seek for ways to invest into these projects. Past F-Model and A-Model-Projects in the German road infrastructure sector are included in Table 3.

In consideration of the financial market crisis from 2007 and induced developments, the German PPP market could not match up with expectations from the construction industry and financial investors. Some of the developments in the course of the financial market crisis have affected the German PPP market. Firstly, lower tax receipts impaired the financial situation of German municipalities and secondly, the impact of the federal stimulus packages, which promoted conventional procurement, ran out in early/mid 2011. In these years the urge, especially for municipal investments was relieved through other means than PPPs. This led to postponed or abandoned projects, as the private sector was experiencing problems to arrange debt financing for projects in the stage of implementation.

The pipeline for projects under design or preparation and with tender procedures on the way currently holds another six projects to hit the market in 2015 and beyond. Table 4 provides an overview to the planned PPP-Projects in the German road infrastructure sector on federal level:

8 Outlook

After the federal election in 2005, the 16th German government referred to PPP in its coalition agreement as an alternative procurement method of increasing importance that was expected to be applied to up to 15 % of the overall public procurement. The future deal flow remained hard to anticipate, since most of the projects in numbers are executed on municipal level in the public real estate sector. Currently not more than 3 % on municipal level and 5 % on federal and federal state level of the public procurement in public construction has been realized by a PPP approach.¹⁹ After the federal election in 2009, the 17th German government did

¹⁹ PD (2014), p. 9.

Table 3 Past PPP-Projects in the German road infrastructure sector as of August 2014

Awarded projects	Project investments (millions euros)	Construction costs (millions euros)	Concession value (millions euros)
F-Model Warnowquerung	215	157	n/a
A-Model Herrentunnel	n/a	180	n/a
A-Model A8 I (East)	n/a	250	730
A-Model A4	300	200	550
A-Model A1	650	540	1000
A-Model A5	670	350	850
A-Model A7 I (North)	n/a	600	n/a
A-Model A8 II (West)	400	n/a	1300
A-Model A9	300	105	n/a

Sources: VIFG (2008a, b), VIFG (2012a, b, c, d, e, f)

Table 4 Future PPP-Projects in the German road sector as of October 2014

Future projects	Status
A-Model A94	Tendering
A-Model A7 II (South)	Tendering
A-Model A6	Tendering
A-Model A1/A30	Announced
A-Model A44	Announced
A-Model A61/A650/A65	Announced

Sources: VIFG (2015) and HOCHTIEF PPP Solutions (2014)

not take up such a clear position in favor of PPPs inside their initial government declaration. It is rather that opponents to PPP models receive more attention in the media. Then, temporarily developments caused by the growing federal tax earnings are actually supporting the arguments of the PPP opponents. Their criticism leaves out the highly visible benefits of implemented PPP-Projects and achieved standardizations. Still, restrictions of public budgets on any administration level are growing. Because the positive development of public revenues did not change structures, the investment backlog in any infrastructure sector is still growing. Future concerns will definitely become bridges of federal and federal state roads. In conclusion, the pressure to apply alternative methods of public procurement, including PPP models, will grow. This is due to the consideration of the decreasing impacts of the financial market crisis and due to keener supervision of public debt limits, especially in the light of the Euro-crisis.

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