

Sustainable Finance

Karen Wendt *Editor*

# Positive Impact Investing

A Sustainable Bridge Between Strategy,  
Innovation, Change and Learning

 Springer

# **Sustainable Finance**

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# Foreword

## I Have a Dream

We are going into the blueprint of nature, take a deeper look, and accept this as a mirror to guide us. Forests have an intelligent hidden network, a connected intelligence through the entire root system which is building a united system in oneness. At the same time, each individual is respected and the root system together with an outstanding communication between the individuals through the leaves supports the weaker trees. In return, this social cohesion and solidarity supports the entire ecosystem of the forest keeping it in balance, thrive and wealth. (Proven by Peter Wohlleben, “The Hidden Life of Trees”)

Reflecting this into the business and corporate world we here find a blueprint of how positive and nourishing it is when we all take responsibility and open up all our grass roots of our entire potential as well as the shadows and gray areas in our companies and use this opening as a way not to expose weakness but instead to inspire each other to be more conscious and to together perform and implement the logical and needed conscious changes for the higher good of all that are involved.

In the corporate and business world, the companies still have hidden boxes around their roots and nobody knows what the other one is really doing. In this mind-set, a mutual support seems nearly impossible. If we released the boxes and opened up the systems and communication channels, showing weaknesses and strengths, a higher path would open up meeting the necessities of the earth and mankind. The companies are able to inspire each other to be more sustainable with a sense of dignity, honor, and respect. And when we take a clear and differentiated look at the corporate world and the effects of their work toward environment, health, wealth, and society, we cannot come to another conclusion.

Dropping being competitors and instead building up a network based on the higher good for all involved will make the entire system an inspirational pioneer creator business of the universe, bearing in mind not only the survival of the fittest or

short-term income increase but instead the thriving and well-being of the planet and the human race.

So, we can inspire and support each other to achieve something greater by understanding the network of all beings. People will be satisfied working in such a system every day and still have their vision and focus on the future creation and at the same time on the regeneration of the footprint of what they have left behind and what has been done to earth and mankind in the last decades.

I have a dream that I as a manager of a great honorable sustainable bank go to sleep at night after spending my day in the office feeling fulfilled and satisfied inside, completely content with life and the vision of my future and my future grandchildren. I am inspired by the thoughts of my future children. I can sleep well at night knowing that I and all my representatives have planted seeds consciously guiding other conscious companies' investors to grow strong fertile roots. I have planted seeds which will be becoming forests and some are forests already. That all who are touched by the impact of my own and my companies' decisions have had a positive impact on the families, neighbors, towns, the environment, and future children of this planet.

I have a dream to be a politician going to bed at night knowing that I took the higher road and was not swayed by the weakness and unconsciousness of the lobbyists who tried to seduce me through hollow jewels. I listened to my people and took responsibility for them. I became the voice of the higher consciousness of people, the environment, the entire ecosystem, and the Earth itself. Mother Earth spoke through me and through this voice I could make clear environmental sustainable decisions which energized the grass roots of the environment, children, families, and businesses for the future with nourishment. I am an incorruptible spirit for transparency and higher truth, dedication, consequence, visibility, and a higher purpose. I am going to bed with the vision of tomorrow's world in a complete ecological sustainable system with fulfilled and satisfied people living in. I am a healthy father standing up for my family and children in future, for the water they will drink, the food they will eat, the forest they will play in, the mountains they will be inspired by, and the sea and the waters that they will be enjoying.

I have a dream to wake up as a creator, a conscious child of the universe knowing that all in me is also around me. I totally understand the connectedness of the universe and all beings.<sup>1</sup> Feeling completely abundant knowing that all is inside me and that all I touch consciously or unconsciously will be inspired by me, carry my footprint, and will be transformed by me—and so will I. Higher consciousness is opening within the spaces. I know and feel connectedness, richness, and creativity, and materialization happens automatically in the space around everyone. Divine creation is evolving in this space. My focus and intention will be brought to a higher consciousness. With that knowledge, I am inspired and focus consciously on my part as being a creator of the universe. I am born into abundance, sustainability, and

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<sup>1</sup>See film “The connected universe”: <https://www.indiegogo.com/projects/the-connected-universe-film#/>

wealth enjoying healthy fruit, clean water, taking a fresh breath in the morning while looking out the window, and hearing the birds singing outside.

I am going into my school creating new visions for the future, in a think tank of heart intelligence of higher consciousness with interconnected heart-based learning.

I feel honor, love, and deep respect for my ancestors.

I know that this is an ideal, but keeping this vision as a light ahead of us will help us to go into a transparent, just, and balanced future for us all.

Berlin, Germany

Damien Wynne



# **Introduction: Investment Ideas and Examples for Changing the Financial System (A Personal Approach to Systemic Change)**

## **Introduction**

### ***1. Framing Our Journey***

We are at the beginning of an unprecedented global transition toward more holistic sustainability: economically, socially, environmentally, and spiritually—as humanity will have to learn how to live within the carrying constraints of a finitely resourced planet. All major systems will have to be re-conceptualized: the transportation system, the health care system, the education system, the food system, and—of course—the financial system. Impact investing is one important leverage point to change the financial system.

Macro-economists and modern portfolio theory refer to many of the systemic issues that have not been addressed by the existing system as externalities: climate change, social justice, inequality, global poverty, and many more. They believe that the invisible hand of the market will fix these. But it has not worked. The standard economic model has not addressed these market failures. In many instances, short-term profit maximization at the expense of long-term sustainability is part of the system. While investors are the beneficiaries of this model, society at large needs to deal with its negative environmental and social consequences.

Modern portfolio theory is not sophisticated enough to solve this! It does not take positive social and environmental impact into account. We don't buy into the old narrative of externalities. We are creating a new integrated narrative where these externalities are internalized into the system. Part of that narrative needs to be a reinterpretation of fiduciary responsibility, which takes the long-term consequences as seriously as the short-term implications. Pension funds and other institutional capital will have to be regulated accordingly.

For Lisa and me, our theory of change is that the financial system will have to change, and we are taking part in enabling this transformation. Many non-institutional impact investors have come to the same conclusion and are

working on this today. Deep and broad innovations are needed to accomplish and accelerate this transformation.

Not only do we believe that the financial system must change, but Lisa and I also believe that any transformation starts from within and that the quality and impact of our lives is a reflection of our inner state of being. When we became financially successful, our answer to the fundamental question of the meaning of wealth was “Wealth is a privilege that comes with responsibility and accountability. We are committed to using our financial and non-financial means to making a meaningful and positive impact for humanity and the planet.”

Let us keep these overall objectives in mind, as we explore new and innovative ideas about sustainable finance and the approach that Lisa and I have taken.

## ***2. Building the Impact Ecosystem***

In a broad sense, impact investing is a subset of the financial markets. The impact investing ecosystem is structured into three major parts: supply, demand, and intermediaries. Each market segment is shaped by different players, who can potentially play multiple roles.

- On the supply side of capital, high net worth individuals and family offices are most active since they have the necessary flexibility and autonomy. Other types of investors are foundations, philanthropists, charities, investment and commercial banks, as well as financial advisors. Institutional investors are entering the market now and are showing increasing interest in impact investing.
- The demand side of the market is currently shaped by social enterprises, charities, social venture funds, and for-profit organizations with a mission.
- Intermediaries connect supply and demand; they include networks, financial advisors, investment banks, exchanges and platforms, and rating and certification organizations.

New and innovative ideas are being developed in each one of these segments.

### **Our Engagement in Building the Impact Ecosystem**

In the early days of a market, innovators usually engage in many different segments of the ecosystem in order to help build it. This has been our approach.

On the supply side, Lisa and I have cofounded Toniic (see Toniic). Toniic is the global action community for impact investors. Toniic’s vision is a global financial ecosystem creating positive social and environmental impact. Its mission is to empower impact investors. Toniic’s members commit to discover, evaluate, nurture, and invest in financial products that promote a just and sustainable economy.

A subnetwork of Toniic is the 100% Impact Network, whose members have intentionally committed to deploy 100% of their portfolios to positive impact—across all asset classes. They are motivated by different intentions and impact themes. They see their portfolios as an expression of who they really are, as the change they want to see, not as an intellectual exercise of maximizing their profits.

They are motivated by the joy of making a positive contribution, not by the fear of losing their wealth. They are (ultra) high net worth individuals, family office principals, and foundation and endowments leaders. They control asset sizes from single digit million USD to triple digit million USD. And they are from all over the world.

Toniic's T100 Project is a multi-year study of the portfolios of over one hundred 100% Impact Network members. It reveals new insights about the various paths toward and feasibility of 100% impact investing. The T100 Project includes periodic reports, issue briefs, videos and podcasts, and the Toniic Directory, a peer-sourced directory of over 1000 impact investments across all asset classes.

On the demand side, Lisa and I have cofounded three accelerators that help social entrepreneurs become more impactful and raise the appropriate (blended) capital:

- In the early 2000s, we cofounded Dasra Social Impact in India.
- Five years ago, we cofounded the Central European Investment Ready Program in Vienna/Austria—focused on integrating social entrepreneurs from that region into the European value chains.
- Three years ago, we cofounded the Hawaii Investment Ready Program in Honolulu. There we focus on combining Hawaiian wisdom with modern business tools. We help entrepreneurs develop innovative and sustainable ways for solving social and environmental challenges in an island economy, which provides unique opportunities by virtue of its remote location and resource scarcity.

On the intermediaries side, we are investors in Sonen Capital (a pure-play impact investment management firm) and ImpactAssets (the impact platform for donor advised funds). We have collaborated and co-invested with Total Impact Capital (a new breed of impact merchant bank). We have helped the ImpactHub movement grow. And we regularly invest in first-time fund managers (like Zouk Ventures I, Beartooth Capital I, Aqua-Spark, Better Ventures, Global Partnerships, EKO Asset Management Partners, and MicroVest I), new financial instruments like social impact bonds (see below), and new impact platforms like Social Stock Exchange (see below).

### ***3. The Future of Impact Investing***

In this section, we discuss innovative approaches in three main areas: democratization of impact investing, new financing approaches, and research.

#### **3.1. Democratization**

Today, impact investing is mostly the domain of wealthy individuals, foundations, and endowments. Non-accredited investors and/or retail investors are not yet able to meaningfully participate in this new way of investing. This is because of a lack of products, a lack of access to products available to more affluent investors, a lack of

impact advisors serving that segment of the market, and a lack of transaction platforms.

Many innovative ideas are being implemented right now to connect retail investors and non-accredited impact investors to investments. Examples are the Social Stock Exchange, crowdfunding platforms, movement building platforms, and products specifically targeted toward the retail investor segment.

### **Social Stock Exchange**

The Social Stock Exchange provides access to the world's first regulated exchange dedicated to businesses and investors seeking to achieve a positive social and environmental impact. Its mission is to stimulate a vibrant public social investment market, enabling all impact businesses to have greater access to capital so that investors—both retail and institutional—can identify, transact, and realize their social, environmental, and financial goals.

All Social Stock Exchange members are required to produce an impact report which outlines their theory of change and how they intend to achieve it through their operations and activities.

We are investors in the Social Stock Exchange.

### **Crowdfunding Platforms**

Crowdfunding is the practice of funding a project or venture by raising monetary contributions from a large number of people. Kiva is an example of a crowdfunding platform. It is an international nonprofit organization with the mission to connect people through lending to alleviate poverty. By lending as little as \$25 on Kiva, anyone can help a borrower start or grow a business, go to school, access clean energy, or realize their potential.

We use Kiva to fund social entrepreneurs all over the world.

Equity crowdfunding is the offering of unregistered securities through a registered funding portal/platform to raise small amounts of money from a large pool of non-accredited and/or accredited investors. In the United States, in late 2011, the JOBS Act, the first equity crowdfunding bill, was introduced to the House of Representatives. In April of 2012, it was signed into law by President Obama. The JOBS Act paved the way for everyday citizens to invest in early-stage private companies alongside professional investors. While accredited investors are already able to transact on these platforms, the SEC still needs to pass the last piece of legislation enabling non-accredited investors to participate in these transactions as well.

Equity crowdfunding platforms are emerging all over the world: In the German-speaking region of Europe, Conda Crowdinvesting is gaining a lot of traction; in the UK, Crowdcube is one of the more prominent platforms; and many more crowdfunding platforms are emerging all over the world.

Toniic members have participated in impact deals on multiple crowdfunding platforms.

### **Movement Building Platforms**

Movement building platforms allow the creation of new movements, brands, and organizations from the ground up to address complex global challenges, tackling issues where mass participation and collective action can unlock big change. Examples of such change are the shifting perceptions on marriage equality, addressing America's gun violence epidemic, changing the food industry, building the sharing economy, or inspiring action around climate change.

We invested in [Purpose.com](https://www.purpose.com), one of the premier movement building platforms, which has been working on all of the complex and often global challenges mentioned in the previous paragraph.

### **Retail Products**

Even though many more impact products are needed for the retail segment of the market, here are three innovative and impactful products which are available today.

The Calvert Foundation's Community Investment Note is a fixed-income product that supports a diversified portfolio of social sector organizations and initiatives in the United States and globally. It has a minimum investment of \$20 online or \$1000 through a brokerage account or direct investments. The Calvert Foundation currently offers 15 different note investment options to align with the varied social impact interests of their investors.

The RSF Social Investment Fund (SIF) pools investment to finance nonprofit organizations and social enterprises. The SIF Note is a three-month investment product that provides retail investors with an opportunity to put their dollars into a diversified, direct loan fund doing impact fuel work. Investors earn monthly compound interest that is paid upon maturity. RSF focuses its efforts in the areas of food and agriculture, education, the arts, and ecological stewardship.

ImpactAssets recently brought two new notes products to the market, both of them accessible to non-accredited investors. The ImpactAssets Global Sustainable Agriculture Note is a 5-year private debt security that invests in grower's cooperatives and agricultural enterprises promoting sustainable agriculture practices that improve environmental performance and build food systems while benefiting small to mid-sized farmers. The ImpactAssets Micro Finance Plus Note is a 5-year private debt security that invests in microfinance institutions and other low-income finance institutions providing a range of financial services to poor populations in developing countries.

We are investors in the RSF Social Finance Investment Note as well as the ImpactAssets Global Sustainable Agriculture Note.

## **3.2. New Financing Approaches**

The desire for sustainable long-term impact with the appropriate financial return is driving much needed innovation in new investment vehicles like social impact bonds, new impact term sheets like the demand dividend, and innovative approaches

to blend different types of capital like commercial and subsidized capital or loan guarantees and loans.

### **Social Impact Bonds**

A social impact bond, also known as “Pay for Success Financing,” is the first financial instrument that explicitly ties the financial return to the social impact achieved, as validated by a trusted third party. It is a contract with the public sector, whereby it pays for better social outcomes in certain areas and passes on part of the savings achieved to investors. A social impact bond is not a bond, per se, since repayment and return on investment are contingent upon the achievement of desired social outcomes; if the objectives are not achieved, investors receive neither a return nor repayment of principal.

We invested in the first social impact bond, which was launched in 2011 in the UK by the Peterborough Prison. The bond raised 5 million pounds from 17 impact investors to fund a pilot project with the objective of reducing re-offending rates of short-term prisoners. The relapse or re-conviction rates of prisoners released from Peterborough are being compared with the relapse rate of a control group of prisoners over 6 years. If the re-conviction rates are at least 7.5% below the rates of the control group, investors receive an increasing return that is directly proportional to the difference in relapse rates between the two groups and is capped at 13% annually over an 8-year period.

Today, 60 social impact bonds have been launched in 15 countries, raising more than \$200 million in investment to address social challenges such as public safety and recidivism, rough sleeping and chronic homelessness, health care services for older people, services for communities in need, foster care services, and family support services.

### **Impact Term Sheets**

The venture capital community has standardized on term sheets which are optimized for maximizing one-time financial exits—with no discernible or intentional concern for social and/or environmental impact. The impact investing community strives for long-term sustainable positive social and/or environmental impact—with an appropriate financial return. The objectives of these two communities are clearly different, and the pure equity type of term sheet of the venture capital community many times does not fit the objectives of the impact investing community.

One innovation in the impact space is called “demand dividend,” (see Miller Center for Social Entrepreneurship) which is a variation on a debt royalty structure, modified to fit the realities of investing in frontier economy social enterprises. Demand dividend is designed to enable investors to generate a reliable, reasonable return while allowing social entrepreneurs to maintain control and efficiently deploy capital. Demand dividend has four central features: payments are tied to cash flow, a “honeymoon period” to allow capital to go to work, a fixed payoff amount (multiple of initial investment), and term sheet covenants focused on aligning incentives. These elements balance the needs of investors and social entrepreneurs.

We have deployed a demand dividend like structure with PBK Waste Management, one of our investments in India. Our investment in ImpactAssets was done as a

revenue royalty, a financial structure similar to a demand dividend, also designed to enable successful capital exits.

### **Blended Capital**

Many impact investors deploy different types of capital, preferably in partnership with others. They deploy blended capital either at the same time or over a period of time, but always with an objective to have a deeper and/or broader impact than a single type of capital would have. In this context, different types of capital refer to different financial risk/return and impact risk/return expectations. Philanthropic capital sits on one side of the spectrum: it does not expect any financial return, but deep impact. Market rate return sits on the other side of the spectrum: it expects competitive financial returns with an impact floor. And in between there is subsidized capital, which is primarily earmarked for impact, but also expects financial return—sometimes below market. Program-related investments (defined by the IRS for US Foundations) fall into this last bracket.

We believe deploying different types of capital over time makes a lot of sense for social enterprises which (a) will never create enough value to attract pure equity capital or (b) don't have a robust enough cash flow and/or don't have collateral to attract commercial debt. In this case starting them out with a grant, followed by a loan guarantee to help them access commercial debt, could make a lot of sense. We believe reaching impact at scale depends on a sustainable business model, which usually depends on access to commercial capital. Therefore, we help guide social entrepreneurs that we support to move from grants and/or subsidized capital toward more commercial capital over time.

We invest in accelerators for social entrepreneurs using our philanthropic capital. We then often use blended capital to support some of the graduates of these accelerators. A couple of examples are PBK Waste Management, a graduate of the Dasra Social Impact program in India, and Ma'o Farms, a graduate of the Hawaii Investment Ready program in Honolulu.

We also support smaller social venture funds that need blended capital themselves to support capacity building for their investees. Examples are our investments in Global Partnerships and Grassroots Business Fund.

An example of where we provide a loan guarantee to unlock much more capital is our investment in Microcredit Enterprises.

### **3.3. Research**

Three important research topics are (1) analyzing the behavioral aspects of impact investors, (2) advancing modern portfolio theory, and (3) developing a comprehensive framework for impact management.

Impact investors are driven by the notion of risk-adjusted financial returns that are additionally optimized for the creation of positive social and/or environmental impact. Because of lack of access to impact investors and/or their investment data, the research community has not been able to effectively explore the behavioral

biases of these investors and how these biases influence their “impact behavior” over time.

Modern portfolio theory only looks at risk-adjusted modeling of financial returns. It does not take social and/or environmental impact into account. One of the main reasons for the research community’s lack of progress in advancing modern portfolio theory is lack of access to impact investors and/or their investment data.

Impact investors want to know what the appropriate financial return should be for their impact portfolio, given their appetite for impact risk.

### **Our Engagement**

Toniic’s T100 Project (see Tonic T100) enables the research community to work with 100+ impact investors over multiple years to study their behavior and how it impacts their financial returns and social and/or environmental impact. It also enables studying their progress toward deploying 100% of their assets toward positive social and/or environmental impact.

This allows for deep exploration of correlation and/or relationship between impact risk and impact return and financial risk and financial return, taking into account different types of investors, different asset sizes, and different asset class allocations and impact categories/themes.

This research is necessary for the advancement of modern portfolio theory and the development of an analytical framework and mathematical models to explore how various means for pricing positive social and environmental impact and monetizing impact value could be integrated into the mathematical frameworks used in capital markets, investment economics, and business valuations. This could lead to a fair monetary cost assessment for the intentional creation of additional positive societal impact, e.g., what is the financial price that is appropriate to pay for a given amount of marginal impact premium?

## **Conclusion**

Lisa and I have used KL Felicitas Foundation, our family foundation (see KL Felicitas Foundation), to pioneer and participate in many of the ideas that we have mentioned above. KL Felicitas Foundation has been at the forefront of the 100% movement, having committed 100% of its assets to impact 10 years ago. Sonen Capital (see Sonen Capital) published the 10-year financial track record, and New Philanthropy Capital (see New Philanthropy Capital) published a comprehensive impact report of the foundation, which not only includes the impact of our investments but also the impact of our movement building work. Together with our partners Sonen Capital and New Philanthropy Capital, we have proven that you can build a 100% impact portfolio with competitive financial return and deep impact. We are grateful and humbled for the opportunity to scale these ideas with collaborators and co-creators from all over the world, including all the members of the Toniic Network.



We are not yet at an inflection point with respect to changing the financial system. But many innovative efforts are challenging the status quo, expanding the market, and providing new investment platforms, new investment products, and new financial instruments, like the Social Stock Exchange, social impact bonds, crowdfunding platforms, impact campaign management platforms, Community Notes products, impact term sheets, blended capital, and research to conceptualize postmodern portfolio theory.

At the beginning of a major systemic change, we are not capable of seeing the outcomes of that change; yet we are called to imagining the new system while still working in the old one. That's why impact investors today have to be bilingual: we have to speak the old language of modern portfolio theory while inventing the language of the new system with new paradigms and methodologies.

Let us not fall into the trap of extrapolating from the past, but let us imagine and co-create the future together.

We therefore welcome and contribute to publications and research on impact investing like this new anthology and advance the idea that impact investing becomes a permanent part of the academic curriculum in investment and finance, social research, and behavioral economics. We help creating pathways to sustainable markets and impact-driven investees, investors, and intermediaries and believe that *Positive Impact Investing and Organizational Culture* provides a sound basis for further discussion on creating sustainable markets and, in the long run, sustainable societies.

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## About the Editor



**Karen Wendt** Founder of Responsible Investment-banking, ECCOS Impact GmbH, Sustainable Finance Network, and PI Foundation, has started her career at the European Commission. Today, she has multiple roles—entrepreneur, futurist, philanthropist, lecturer, researcher, coach, and author and holds an MBA from the University of Liverpool. She has more than 20 years of experience in investment and banking in various roles. She has worked in high-level roles in Project Finance, where she managed the transition from conventional energy to a green energy portfolio, in export finance and in strategic asset management. In 2002, she co-created the Equator Principles. In latter years, she introduced the Principles within two Top-Tier Financial Institutions, where she has also been heading the Equator Principles Team and is a cofounder of the Equator Principles Financial Institutions Association (EPFIA). She has undertaken research on creating ecosystems of ethical culture in business and non-business organizations, the patterns of investment banking culture, the role of alignment of interests and values, the impact of leadership, and the role of environmental and social governance (ESG) criteria in driving innovation. Having worked as a team coach and senior management coach, she also offers mediation for international and national business organizations. With her peers in investment and academia she is working on models to incorporate

social, cultural, and environmental criteria into traditional investment decision making in a way that makes it compatible with the mainstream investment approach and removes the barriers between people, planet, and financial return.

She is editor of scientific books on the subject of responsible investment banking and positive impact investment and finance, innovation, cultural intelligence (CQ), organizational culture, and creation of entrepreneurial and ethical ecosystems.

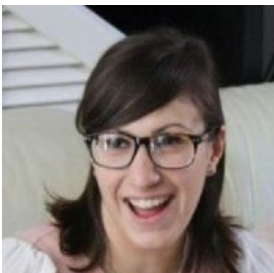
## Contributors



**Abigail Beach** is an experienced international business practitioner focused on sustainable and responsible global private capital investing. She has a nuanced understanding of diverse investment asset classes and strategies including private equity, venture capital, impact investing, private credit, and infrastructure.



**Mario Calderini** is Full Professor in Social Innovation at the School of Management of Politecnico di Milano, and he is Director of Tiresia, Centre of Research on Social Innovation and Social Impact Investments. He is President of the Scientific Committee of the Social Impact Agenda per l'Italia, and he was previously member of the Social Impact Investment Task Force. His main research areas are social impact investments and social innovation.



**Veronica Chiodo** is a PhD candidate at the School of Management of Politecnico di Milano. Her research interests include social impact bonds and social innovation.



**Frank Damerov** is a Portfolio Manager at Landesbank Baden-Württemberg (LBBW) (link is external) in Germany, a former head of ABS Syndicate at Standard Chartered Bank and at Commerzbank (link is external), and Member of the Advisory Board at GEXSI (link is external), a global exchange for social investment. Frank is a coauthor of the Climate Bonds Initiative proposal for Renewable Energy Covered Bonds.



**Patricia Dinneen** has focused on emerging markets for most of her 36-year career. She joined EMPEA in February 2014 as a Senior Advisor and was appointed Chair of the EMPEA Impact Investing Council in 2013, to help professionalize and scale the impact investing industry. Previously, she served as Managing Director at Siguler Guff & Company, a global private equity investment firm with over \$10 billion in assets under management. During her 9+ years at Siguler Guff, Dr. Dinneen built and managed the BRIC private equity business, focusing on Brazil, Russia, India, China, and select frontier markets. She has also held positions at Cambridge Associates, British Telecommunications, Hughes Communications, RAND Corporation, and the U.S. White House. Dr. Dinneen holds degrees from the University of Pennsylvania (B.A.), London School of Economics (M.Sc.), and MIT (Ph.D.). She is involved in multiple philanthropic and impact investing activities.



**Suzanne Fox-Buchele** has maintained diverse professional research interests; most recently, she has been involved in a blended learning project for pre-calculus preparation and developed and led a summer workshop in ICT for high school teachers. In the recent past, she has worked on and published course development innovations (cryptography and computer security, and discrete mathematics); investigated OLPC technology in Uruguay and Ghana; and rewrote the classic *Flatland: A Romance of Many Dimensions* to maintain the delightful mathematical adventure while eliminating the pejorative depictions of women. Her dissertation research was in the areas of computational geometry, computer graphics, and solid modeling.



**Markus Freiberg** For Markus, the special appeal of creating the financing agency was the opportunity to combine his strategic and financial expertise with his passion for social entrepreneurship. Markus studied economics at Witten/Herdecke (Dipl.-Ök.) and Cambridge (M.Phil) and promoted at the WHU Koblenz on investments by institutional investors in private equity funds (Dr. rer. pol.). Markus brings more than seven years of experience as a management consultant at McKinsey & Company, of which he spent more than four years doing pro bono consulting for social entrepreneurs.



**Mary Godwyn** teaches introductory and advanced courses in sociology, women's studies, gender studies, and the Nature and Environment Foundation course. She has lectured at Harvard University and taught at Brandeis University and Lasell College, where she was also the Director of the Donahue Institute for Public Values.

Professor Godwyn focuses on social theory as it applies to issues of inequality. Within the field of sociology, her areas of expertise include critical and classical theory, feminist theory, ethics and business ethics, diversity and inclusion, and the sociology of entrepreneurship.

She has published in journals such as *Symbolic Interaction*, *Current Perspectives in Social Theory*, *Gender and Management*, and the *Journal of Small Business and Entrepreneurship*. In 2008, her business ethics case *Hugh Connerty and Hooters: What is Successful Entrepreneurship?* won the Dark Side Case Competition sponsored by the Critical Management Studies Interest Group and the Management Education Division of the Academy of Management. In 2012, Professor Godwyn was given the Nan Langowitz Women Who Make a Difference Award at Babson College, and in 2013, she was the recipient of the Women's Leadership Award, World Corporate Social Responsibility Congress in Mumbai, India. She has also published three books: *Minority Women Entrepreneurs: How Outsider Status can Lead to Better Business Practices*, coauthored with Donna Stoddard, DBA (Stanford University Press and Greenleaf Publishing, 2011); *Sociology of Organizations: Structures and Relationships* co-edited with Jody Hoffer Gittel, PhD (Sage Publications, Inc., 2012); and *Ethics and Diversity in Business Management Education: A Sociological Study with International Scope* (Springer-Verlag, 2015).



**Jasmin Güngör**, Bakk., born in 1987, since 2014 impact investing manager at Don Bosco Finanzierungs GmbH, a subsidiary of the Vienna-based not-for-profit organization Jugend Eine Welt. 2007–2012, Master’s in International Economics and Business Sciences and Bachelor’s in European Cultural Anthropology from Leopold-Franzens-University Innsbruck. 2010–2011, twelve-month study visit at Boğaziçi University in Istanbul. 2011–2012, internships at Commercial Section of the Austrian Embassy in Ankara and Business Agency of Lower Austria in St. Pölten. 2013–2014, grants manager at Vienna University and lecturer for Wiener Börse AG.



**Kelly Hess** began her career in the financial sector in 2010. At SSF, she is responsible for developing communication tools, setting up member services, carrying out applied research, implementing different work streams, and liaising with members and other stakeholders.

Prior to joining SSF, Kelly spent the last 5 years at RobecoSAM in various positions related to sustainability indices. As part of her role, she was responsible for the development and commercialization of financial indices in the area of clean energy, water, waste management, transport, and health care. She was also responsible for the development and commercialization of new sustainability indices within the Dow Jones Sustainability Index (DJSI) family. Prior to RobecoSAM, Kelly worked in energy consulting for small organizations looking to achieve more favorable energy efficiency.

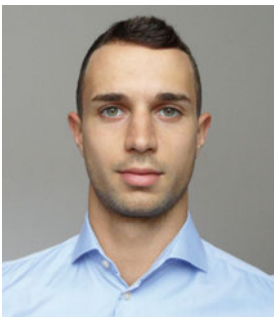
Kelly holds a Master of Environmental Sciences from the Swiss Federal Institute of Technology (ETH) Zurich and a Bachelor of Science from Rutgers, The State University of New Jersey.





**Maximilian Horster** is a partner at the South Pole Group, a global leader in measuring and reducing climate and sustainability impact. South Pole Group's 130 sustainability specialists service over 1000 companies, agencies, and governments out of 17 offices around the globe.

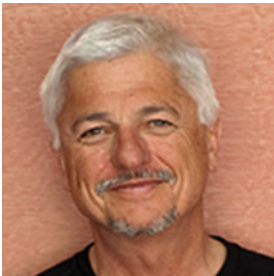
Max pioneered in 2010 the leading methodology to establish climate impact assessments of investment portfolios. Clients include some of the world's leading asset managers and institutional investors such as pension plans, foundations and trusts, as well as private banks and research institutions. Max currently leads two EU-funded investment-related greenhouse gas accounting projects and is working in several industry organizations dealing with financial greenhouse gas accounting. Prior to joining the South Pole Group, he worked in equity and fixed-income research capacities as well as in business development with Capital Group Companies in Los Angeles, Toronto, Tokyo, Geneva, and London. In his past, Max was an academic researcher and worked with a Member of the European Parliament. He holds a PhD in history from the University of Cambridge.



**Lukas Immervoll** is a Junior Investment Funds Analyst at the Austrian Financial Market Authority (FMA) for European and Austrian mutual and alternative investment funds. He contributed to the development of the internal database used for fund supervision and monitoring and has been involved in the approval of the first Austrian crypto investment fund.



**Olivier Jaeggi** is ECOFACT’s managing director. Prior to founding ECOFACT in 1998, he worked in credit risk control at UBS, where he was in charge of managing environmental risks. He graduated in environmental engineering from the Swiss Federal Institute of Technology (ETH) Zurich and completed executive education programs at Harvard Business School and at the University of Oxford. He is a member of PRMIA’s subject matter expert advisory group on reputational risk and since 2012 has been a contributor to the annual sustainability report produced by the MIT Sloan Management Review in collaboration with the Boston Consulting Group. He also regularly writes for the MIT Sloan Management Review sustainability blog. At the University of Zurich, he provides input for two sustainable finance programs and also for the university’s Executive MBA program.



**Charly Kleissner** is a philanthropic entrepreneur utilizing his high technology background in his venture philanthropy. He is cofounder of the KL Felicitas Foundation and the Social Impact Initiative and serves on the Advisory Board of multiple not-for-profit companies like Acumen Fund, Global Social Benefit Incubator, Alliance for a New Humanity, and Global Philanthropy Forum.

Charly has over twenty years of experience as a senior technology executive in Silicon Valley. He held executive and senior engineering management positions at Ariba Inc., RightPoint, NeXT Software Inc., Digital Equipment Corp., and Hewlett-Packard Company. Charly serves on the Advisory Board of multiple for-profit start-up companies like Papilia and Rearden Commerce Inc.

Charly is now focusing on breaking down the barrier between the for-profit sector and the not-for-profit sector by creating social enterprises as hybrid business structures, insisting that both vehicles can be effective for achieving social change. To that end, he has cofounded “Flowing Currents,” a for-profit entity in Sri Lanka, as well as “Aspira,” a not-for-profit entity in Sri Lanka, both focused on providing biomass and other renewable energy solutions to the rural population.

Charly earned his M.S. and Ph.D. in computer science specializing in distributed databases from the University of Technology, Vienna. He authored two software patents and published numerous articles. In 2004, Charly received the “Distinguished Alumnus” award from the University of Technology, Vienna.



**Lisa Kleissner** is joyfully aligning her family capital with her business acumen to help make the world a better place. An impact investor since 2000, Lisa advocates, teaches, writes, and muses about the impact experience.

Lisa cofounded the KL Felicitas Foundation ([www.klfelicitasfoundation.org](http://www.klfelicitasfoundation.org)) and Toniic Institute ([www.toniic.com](http://www.toniic.com)). These organizations are building a movement to bring down the barriers to impact investing while transforming how we define and create wealth. Lisa cofounded Social-Impact International ([www.social-impact.org](http://www.social-impact.org)) and Hawai'i Investment Ready ([www.HIReady.net](http://www.HIReady.net)) to identify, capacity build, and scale regional and indigenous social enterprise.



**Julian Kölbl** is a senior researcher at the chair of sustainability and technology (SusTec), within the business department D-MTEC of ETH Zurich. He defended his PhD at SusTec on January 2016, and in September, Julian will join the system dynamics group at MIT Sloan as a postdoc. Previously, he completed an MSc in Water Science, Policy and Management at the University of Oxford and a BSc in Environmental Science at ETH Zurich. Besides academia, Julian has been working as an analyst at RepRisk AG, as researcher at the Applied Research Institute of Jerusalem in Bethlehem (ARIJ), and as an auditor at Bank Vontobel's asset management.

Julian's research revolves around corporate sustainability, stakeholder management, and risk management. In his dissertation, he studied how stakeholders connect firms' impacts on the natural environment to financial risk. He also teaches courses on corporate sustainability and sustainable finance. His current research focus is on corporate risk and risk management concerning the global water crisis.



**Julia Meyer** works as postdoctoral researcher at the Center for Sustainable Finance and Private Wealth (CSP) at the University of Zurich. After her studies in economics, she worked for two years in financial consulting with a focus on compensation, value-based management and valuation. She joined the Center for Microfinance in 2011 to write her PhD on the social and financial performance of microfinance investment vehicles. Her research focus at the CSP is on investor motivations for different categories of sustainable investments and the resulting portfolio effects. She is also in charge of the Certificate of Advanced Studies in Sustainable Finance.



**Fania Valeria Michelucci** works as a Senior Consultant at Oliver Wymann. She holds a PhD from the School of Management of Politecnico di Milano, where she has served as a Research Fellow at TIREZIA—the Technology and Innovation Research on Social Impact.

She was staffed with the projects on policy report for the Italian National Advisory Board of the G8 Taskforce about Social Impact Finance that produced 40 policy suggestions for the Italian Government and a feasibility study about the first Italian social impact bond commissioned by one of the most prominent Italian foundations in the social investment sector. Fania has conducted interviews with executives/C-level at main financial institutions in Italy and abroad and contributed materially to a market report about the state of development of social impact investments in Italy.



**Christina Möhrle** started her own venture in the social finance sector five years ago by working as a freelance writer and journalist to promote social entrepreneurship and impact investing. Before, she gathered more than 15 years of experience in structured finance, venture capital, and investor relations with roles at the German-Israeli VC firm Star Ventures and DB Trust, a German subsidiary of Deutsche Bank. Christina holds a master’s degree in business administration from the University of Mannheim, Germany, and is a member of the German journalist association DFJV.



**Margarethe Rammerstorfer** has been a professor and researcher for more than 10 years, focusing on incomplete markets, energy finance, and alternative investments sector, developing new ideas with the aim of implementing them in practice. Her teaching portfolio includes courses on bachelor, master, PhD, and MBA levels.

Dr. Rammerstorfer has published numerous scientific articles in the field of energy finance and incomplete markets, ranging from empirical tests of theoretical models to real-world financial performance assessments.

In addition to her teaching responsibilities and research activities at the Vienna University of Economics and Business, she has an active role in the university's self-administration and is responsible for developing new as well as adapting existing study plans and strategies. In her former position at Modul University Vienna, she was responsible for the International Management program and worked as a Department Head at the same institute.



**Robert Rubinstein** For the past fifteen years, Rubinstein, the CEO of TBLI GROUP, has been instrumental in integrating ESG and TBLI into the culture and strategy of international corporate business and investment companies. He has taught courses in sustainable finance and currently delivers lectures at international business schools and provides TBLI consulting and training for investment firms, pension funds, hedge funds, and international businesses, through what is now TBLI CONSULTING™ and TBLI CONFERENCE™.



**Michael Sonntag** is a Medical Doctor, specialized in psychosomatic medicine and body-orientated psychotherapy. Since 1990, he is working as Bioenergetic Analyst, Supervisor, and Trainer and in leadership coaching. His main interests are in a neurobiological and energetic approach to create the right conditions for radical transformation on an individual and organizational level. He is working together with oikos international on developing a new framework for management education, as well as with the Zermatt Foundation and the Global Responsible Leadership Initiative (GRLI) on developing the principles of the common good globally.

For a more detailed CV, see [http://www.sonntag-consulting.ch/sites\\_en/curriculum.html](http://www.sonntag-consulting.ch/sites_en/curriculum.html)



**John Tobin-de la Puente** joined Cornell on March 1 as Professor of Practice in Corporate Sustainability and Impact Investing and has a joint appointment between the Dyson School of Applied Economics and Management and the Cornell Institute for Public Affairs (CIPA). Prior to coming to Cornell, John was Managing Director and Global Head of Sustainability at Credit Suisse, based in Zurich, Switzerland, where he had broad responsibility for managing environmental and social issues at the bank. Before working in the area of corporate sustainability, he practiced law at Credit Suisse, where he oversaw legal aspects of the bank's emerging markets business, with a focus on Latin America. He joined Credit Suisse from Clifford Chance in New York, where he was a corporate attorney focusing on cross-border financial transactions. Prior to that, he worked as a corporate attorney at Davis Polk & Wardwell in New York. John holds a PhD in evolutionary biology from Harvard University as well as a JD from Harvard Law School. He obtained his BS in biology from the University of California at Los Angeles. Among other appointments, he is a member of the board of directors of Forest Trends and a member of the Commission on Environment and Energy of the International Chamber of Commerce.





**Clara Vondrich** is the Global Director of Divest-Invest Philanthropy. In this role, she manages the foundation sector for the broader divest-invest movement, which now spans universities, sovereign wealth funds, cities, pension funds, insurance companies, health organizations, faith groups, and individuals.

Until June 2015, Clara served as Account Director for Climate & Energy at Fenton Communications. There, she led client efforts on a range of campaigns, including divest-invest, anti-fracking, defending climate science, and the clean energy transition. Before joining Fenton in June 2013, Clara was Director of Leadership Initiatives at the ClimateWorks Foundation, where she worked with thought leaders to further ClimateWorks' mission of promoting global and national policies to limit global warming to 2 degrees Celsius.

Clara is a frequent speaker and writer on climate change. She sits on the board of directors of 2 Degrees Investing Initiative, a multistakeholder think tank working to align the financial sector with 2°C climate goals.

An attorney by training, Clara served as Counsel to the President's Commission on the BP Deepwater Horizon Oil Spill, focusing on ecological restoration and environmental justice. Before that, she worked for three years at the Washington DC office of Arnold & Porter, where she focused on international arbitration and energy policy. Clara clerked on the U.S. Court of Appeals for the Tenth Circuit after graduating from the University of Virginia Law School in 2006. She continues to collaborate with visionary litigators Matt Pawa, who brought *Connecticut v. AEP* and *Native Village of Kivalina v. ExxonMobil* and David Bookbinder, former climate counsel for the Sierra Club now devoted to carbon pricing.



**Jochen Wermuth** is a member of the steering committee of “Europeans for Divest-Invest” a peer-to-peer investor network and the 100% Impact family office network. He is also Founding Partner and Chief Investment Officer of Wermuth Asset Management GmbH (WAM) and the principal of the Wermuth family office. WAM is a BaFin-regulated investment adviser, committed to alternative and sustainable investments with a positive impact on the environment and fighting corruption. Founded in 1999, it has launched and advised investment funds with peak assets in excess of \$1bn. The current flagship fund, the Green Gateway Fund 2, invests Euro 5-30m of equity in German and other EU firms in the resource efficiency and renewable energy space and helps them to grow internationally.

Previously, Jochen Wermuth was a Director at Deutsche Bank London and an EU-TACIS and World Bank-financed Head of the Economic Expert Group at the Russian Ministry of Finance. Born in 1969, he was educated at Brown and Oxford Universities in mathematics and economics. He speaks German, English, French, and Russian.



**Arthur Wood** has held senior positions in both mainstream banking and the social sector—in banking first in geopolitical analysis and then in product development/change management. He has been in the social sector since 2005—first as Global Head of Ashoka Financial Services based in US/UK but most recently as Geneva-based Founding Partner of Total Impact Capital (clients are the major foundations, UN entities, and companies) seeking in both roles to change the way global social capital markets are structured. He has been involved in many aspects of the social impact revolution—including being credited with the conceptualization of the social impact bond and innovative layered funding structures to new legal frameworks, metrics, and engaging major financial institutions in this space. Historically, he has or does hold board or advisory roles with the OECD, WEF, Big Issue Invest, and Ecolint. Educated at LSE (UK), HEC (France), and SDA Bocconi (Italy), trained in Finance by the Americans—he is married to a Norwegian who works for OHCHR.





**Damien Wynne** has worked as an engineer at home and abroad and was the owner of a real estate company. He has been reoriented after an accident from which he could completely heal and now works as a life coach and has set up his own seminar school.



**Gabriel Webber Ziero** Legal analyst, supports ECOFACT's E&S due diligence team with his expertise in international law and human rights. Prior to joining ECOFACT, Gabriel worked as a research assistant in the International Law Department at Leiden University. He is licensed to practice as a barrister by the Brazilian Bar Association and holds a Master of Laws degree from Leiden University. He is currently a PhD candidate at Roma Tre University, conducting research on the effectiveness of strategies for compliance with transnational regulations.



**Karen Wendt** Founder of Responsible Investment-banking, ECCOS Impact GmbH, Sustainable Finance Network, and PI Foundation, has started her career at the European Commission. Today, she has multiple roles—entrepreneur, futurist, philanthropist, lecturer, researcher, coach, and author and holds a MBA from the University of Liverpool. She has more than 20 years of experience in investment and banking in various roles. She has worked in high-level roles in Project Finance, where she managed the transition from conventional energy to a green energy portfolio, in export finance and in strategic asset management. In 2002, she co-created the Equator Principles. In latter years, she introduced the Principles within two Top-Tier Financial Institutions, where she has also been heading the Equator Principles Team and is a cofounder of the Equator Principles Financial Institutions Association (EPFIA). She has undertaken research on creating ecosystems of ethical culture in business and non-business organizations, the patterns of investment banking culture, the role of alignment of interests and values, the impact of

leadership, and the role of environmental and social governance (ESG) criteria in driving innovation. Having worked as a team coach and senior management coach, she also offers mediation for international and national business organizations. With her peers in investment and academia she is working on models to incorporate social, cultural, and environmental criteria into traditional investment decision making in a way that makes it compatible with the mainstream investment approach and removes the barriers between people, planet, and financial return.

She is editor of scientific books on the subject of responsible investment banking and positive impact investment and finance, innovation, cultural intelligence (CQ), organizational culture, and creation of entrepreneurial and ethical ecosystems.

# Positive Impact Investing: A New Paradigm for Future Oriented Leadership and Innovative Corporate Culture



Karen Wendt

## How to Connect Strategy, Culture, Impact and Investment

Why an anthology on Positive Impact Investing and Corporate Culture?—you may ask. The short answer is—because the topics are intertwined.

In the face of humanity's unsustainable journey, the current geo-political crises, and climate challenges, the implementation of both the 17 Sustainable Development Goals (SDG) of the United Nations and the Paris climate accord (COP21), have become an unavoidable obligation for the business and investment community as well. Yet, scientists, investors, entrepreneurs, business people, politicians, economists, the civil society, and political leaders are daunted by the task at hand.

While handling change is now part of everyday life for many companies, the question to be resolved is how make transition as smooth as possible while keeping up profitability. Companies expect their executives to be successful in day-to-day operations while at the same time aligning responsibility and profit with solving global challenges- moving to doing good while doing well. Our society can no longer be brought forward with the old means. Neither competition nor marketing nor allocation of power lead to any meaningful results. Moores's Law is no longer valid. In the meantime, global knowledge is doubling in less than a year, while industry 4.0, digitization and the Internet are transforming our world, the interdependence of processes and global networking are constantly increasing. However, the change of order patterns always means a transition from a stable macroscopic order pattern to another order pattern, which ultimately has to be better suited to ensure the survival of the company and maintain its ability to act and its ability to innovate. In this regard we can learn from biological systems. When an

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entrepreneur sends his company into an unstable phase, the search horizon should be the market, the value added of the future clearly identified, the ability to resonate with the world tested and the pain of transition to attractive market opportunities transformable. How to do this smoothly is an interesting and relevant question. Dr. Sonntag and Mr. Wynne show us all how we can learn from nature in creating functional and nourishing organizations and networks and moving from transition to transformation.

Integrating impact and impact measurement into investment decision making leveraging on management systems, multi-criteria decision analysis and applying systems approaches is the challenge requiring thought leadership and post heroic approaches. Positive impact investing is a nascent field of research. At the moment, it is mostly practitioners that are driving the impact assessment process and its integration into investment and finance. This has various reasons from managing risks effectively to protecting reputation and addressing stakeholder requirements. The process is most obvious on the lending side where collaborations between the World Bank, International Finance Corporations, other multilaterals and the private banking sector have contributed to the development of relatively consistent ESG standards which are often referred to as “Global Administrative Law” (McIntyre 2015). It has become increasingly the norm for international development banking institutions, including multilateral development banks (MDBs), and many private sector lenders, to adopt comprehensive environmental, social and governance (ESG) safeguard policies and standards to circumscribe the projects and activities they finance. This is particularly the case in the financing of major infrastructure projects in developing countries or economies in transition (McIntyre 2015). For International Banks it is today good practice to integrate environmental, social and governance considerations into the lending process. For project and structure finance, the Equator Principles offer a financial industry benchmark for determining, assessing and managing environmental and social risk in international finance activities (see [www.equator-principles.com](http://www.equator-principles.com)). For lenders such as the EBRD or IFC that focus on private sector lending, the performance standards of environmental and social governance (see [www.ifc.org](http://www.ifc.org) and [www.ebrd.org](http://www.ebrd.org)) are imposed upon private corporate entities, against which most requirements of international law could never be formally applied (McIntyre 2015). The Equator Principles Association website recognises growing ‘convergence around common environmental and social standards’, as well as the ‘development of other responsible environmental and social management practices in the financial sector and banking industry’, such as the Carbon Principles or the Cross-Sector Biodiversity Initiative (see [www.equator-principles.com](http://www.equator-principles.com)). Also the export credit agencies, through the 2012 OECD Common Approaches, are increasingly drawing on the same standards as the EPs’ (see [www.equator-principles.com](http://www.equator-principles.com)).

On the investment, wealth management and asset management side the process of integrating ESG has been fostered by a number of players, in particular the United Nations Environmental Programme. While it has been commonly argued for long that trustees may be acting unlawfully if they take any account of “non-financial” factors in their decision- making more recently legal research from Freshfields shows

the contrary. Berry and Scanlan (2014) quotes the following response from a pension fund to an enquiry from a member about the fund's management of an environmental risk:

The Trustees have a legal duty to not only invest, but to actively seek the best possible financial return . . . even if it is contrary to the personal, moral, political or social views of the trustees or beneficiaries. This was demonstrated in the Cowan and Scargill (1985)<sup>1</sup> court case (Berry 2015). The first major challenge to the conventional interpretation of Cowan v. Scargill came from the "Freshfields report", commissioned by the United Nations Environment Programme Finance Initiative (UNEP-FI 2005). This report argued that there was good evidence that environmental, social and governance (ESG) issues could have an impact on financial returns and therefore, that taking them into account clearly fell within the ambit of fiduciary obligations. Indeed, taking such issues into account was "clearly permitted, and arguably required" in all jurisdictions analysed. Specifically in relation to Cowan v. Scargill, the report concluded that "no court today would treat Cowan v. Scargill as good authority for a binding rule that trustees must seek the maximum rate of return possible with every individual investment and ignore other considerations that may be of relevance, such as ESG considerations" (UNEP-FI 2005). In 2005, a group of institutional investors met at the invitation of the then UN Secretary General Kofi Annan to formulate the principles for sustainable investment. The PRI were presented to the public in April 2006 at the New York Stock Exchange. The total of 68 initial signatories included the BT Pension Scheme, CalPERS, the Government Pension Fund of Thailand, Munich Reinsurance, the New York City Employees Retirement System and the powerful Norwegian Government Pension Fund. More than 1200 institutional investors, asset managers and financial institutions have committed themselves by recognising the Principles for Responsible Investment (PRI) to integrate sustainability criteria into their investment. Together they manage more than US\$30 trillion, representing a share of around 45% of global investments by end of 2014 (Hässler and Jung 2015).

There are a number of reasons for practitioners to consider integrating ESG into lending and investment decisions ranging from reputation, fiduciary duties, risk

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<sup>1</sup>Cowan v Scargill [1985] Ch 270 is an English trusts law case, concerning the scope of discretion of trustees to make investments for the benefit of their members. It held that trustees cannot ignore the financial interests of the beneficiaries. The trustees of the National Coal Board pension fund had £3,000 million in assets.[4] Five of the ten trustees were appointed by the NCB and the other five were appointed by the National Union of Mineworkers. The board of trustees set the general strategy, while day to day investment was managed by a specialist investment committee. Under a new "Investment Strategy and Business Plan 1982" the NUM wanted the pension fund to (1) cease new overseas investment (2) gradually withdraw existing overseas investments and (3) withdraw investments in industries competing with coal. This was all intended to enhance the mines' business prospects. The five NCB nominated trustees made a claim in court over the appropriate exercise of the pension fund's powers. Mr JR Cowan was the deputy-chairman of the board. Arthur Scargill led the NUM and was one of the five member nominated trustees, and represented the other four in person. See [1985] Ch 270, 276, per Megarry VC "with both courtesy and competence".

management considerations and last but not least the emergence of global administrative law which can be described as a mixture of voluntary and regulatory initiatives, that create global norms together. They normally include according to Kingsbury ‘intergovernmental institutions, informal intergovernmental networks, national governmental agencies acting pursuant to global norms, hybrid public-private bodies engaged in transnational administration, and purely private bodies performing public roles in transnational administration’ (Kingsbury et al. 2005, p. 5). An example are the OECD Guidelines for Multi-National Enterprises (OECD MNE Guidelines) for the financial industry that require the sector to respect human rights, international labour law and other international conventions on environmental and social issues (<https://mneguidelines.oecd.org/rbc-financial-sector.htm>).

Academic research has been done so far on the consequences of consistent implementation of ESG standards and their value in de-risking assets, managing reputation and preventing damage to communities and environment, which should finally show up in a better rating, lower operational risk or a higher good will (Reverte 2012; Simpson and Kohers 2002; Saltuk 2012; Saltuk et al. 2014; Richardson 2011). An open question as of today is whether components like lower risk, better rating, higher good will translate into a higher share price (Ammann et al. 2011; Barby and Gan 2014; Beiner et al. 2006; Benson and Davison 2010; Beurden and Gossling 2008; Bevan and Winkelmann 1998; Brammer et al. 2006; Busch and Hoffmann 2011; Cheung 2011; Clark et al. 2013, 2014; Darnall et al. 2008; Deng et al. 2013; Eccles et al. 2013; El Ghoul et al. 2014; Filbeck and Preece 2003; Fisher-Vanden and Thorburn 2011; Flammer 2013a, b; Fogler and Nutt 1975; Fulton et al. 2012; Garcia-Castro et al. 2010; Godfrey et al. 2009; Gompers et al. 2003; Hart and Ahuja 1996; Jensen 2002; Jiao 2010; Johnson et al. 2009; Simpson and Kohers 2002). Very few researchers look into the quality of data when applying ESG. An analysis how consistent the underlying ESG data set is, is missing. For some ESG is just a short exclusion list of one or two sectors for other ESG is a multi faced concepts including exclusion lists, best in class approaches and institutional credibility. Positive Impact investing shares the triple bottom line concept with ESG, but it makes the creation of a triple bottom line core of the business strategy applying a theory of change, creating additional assets and extending rather than reducing the investment universe. It is based on the concept of blended values and on the concept of long term investment approach (Harji and Hebb 2010; Harji and Jackson 2012; Harji et al. 2014; J.P. Morgan Social Finance 2013; Jackson and Harji 2012; Krlev et al. 2013; Lai et al. 2013; Laing et al. 2012; Lyons and Kickul 2013; Moore et al. 2012; Nicholls 2010; Nicklin 2012; O’Donoho et al. 2010; Porter and Kramer 2011; PWC 2010; PRI-UN Global Compact 2013; Rodin and Brandenburg 2014; Salamon 2014; Saltuk et al. 2014; Shiller 2013; Social Investment Research Council 2014; Wilson 2014). As always sustainability can be proven only in a long term horizon.

The upside view one can take on—ESG is its inherent potential to create innovation in the financial field based on political environmental, social technological and organizational analysis (PESTO analysis). The concepts of impact investing and ESG are sometimes confounded, but may merge in a future business cycle phase (Shiller 2013; Porter and Kramer 2011; McIntyre 2015; Moore et al. 2012; Loew

et al. 2009; Krlew et al. 2013; Harji 2008a, b; Harji and Hebb 2010; EMPEA 2015; Desjardins 2011; Bishop and Green 2010).

Positive Impact Investing is in its nascent stage. The number of purely academic and theory- building publications is still quite limited and a short overview of the so far existing literature is given in this document further down in section “What Vehicles for Impact Investments Are Available and What Asset Classes Are Preferred?”. Considering environmental and social impact while in first place emerging in order to deal with the enormous risk in foreign direct investment and in project finance stemming from PESTO context factors in order to de-risk assets and portfolios has turned into a more pro-active and forward looking process. While the notion that all investments are impactful has led to a growing body of expertise and the development of a community of practice among financial practitioners on the international lending side including in Export Credit Agencies and structured export and project financing dealing with such risks and negative impacts, it has not entirely captured the upside potential of looking into positive impacts beyond the creation of jobs or new consumption possibilities for customers. Since the economic crisis triggered in 2008 impact investing further stretched into the sphere of positive impact creation, “because governments, charities, philanthropists alone are no longer capable of dealing with the twenty-first century’s social and environmental challenges. Focussing on the act of charitable giving rather than on achieving social outcomes and a dependence on unpredictable funding hindered many charitable organizations from realizing their full potential concerning innovations, effectiveness and scale.” (Brandstetter and Lehner 2015). The World Economic Forum recently acknowledged the role the investment and finance sector can play in creating solutions to social problems and stated: “Given the nature of how resources are distributed in the world, private investors may have a special role and responsibility in addressing social challenges.” (World Economic Forum 2013). Yet apart from a small number of specialized forms of impact investing like social impact bonds, green bonds and mission related philanthropic investments little is known about the complex interplay between entrepreneurs or organizations, intermediaries, investor regulations and the successful use of instruments in the field. One important aspect often alluded to in impact investing is the approach seeking to generate both an eco-social and financial return at the same time. The dominant paradigm in financial markets today is the creation of financial returns solely and taking into consideration eco-social return is seen as sacrificing a certain amount of financial return, which misaligns impact investing with the principal—agent theory that posits that shareholder value is the indicator on how well the agent has managed the capital and ownership rights of the principal. Thus the logical constructs of mainstream investing and finance and impact investing appear to be incompatible with each other. Compatibility however is a prerequisite for the inclusion of impact considerations and therefore impact investment into the portfolios of traditional investors (Brandstetter and Lehner 2015).

The World Economic Forum in its 2013 Report states: “Despite the buzz, there is limited consensus among mainstream investors and specialized niche players on what impact investing is, what asset classes are most relevant, how the ecosystem is

structured and what constraints the sector faces. As a result, there is widespread confusion regarding what impact investing promises and ultimately delivers.” (World Economic Forum 2013). The development of a clear definition, clear measurement methodologies for describing and measuring impact and a credible value theory often referred to as theory of change have to be established in order to open the field for more traditional investors.

## How to Implement Impact Investing: Challenges and Solutions

How can impact investing be defined? How can it be evaluated? How should it be evaluated? In such a metrics-rich and increasingly data-driven industry, it could be argued that all stakeholders in the emerging field of impact investing are concerned with these questions (Jackson 2005). The most renowned definition is that of the Rockefeller Foundation: Impact investments are investments made into companies, organizations, and funds with the intention to generate social and environmental impact alongside a financial return (2007). They can be made in both emerging and developed markets, and across asset classes, including bonds, listed shares, and private equity. With this original definition impact investing is no different from Triple Bottom Line Investing, a term coined by John Elkington in 1994. In recent years the definition therefore has evolved and the elements of additionality, profitability as a prerequisite (to distinguish it from philanthropy) and theory of change (ToC) have been added. However, an important element is often underdeveloped in the discourse and practice on performance assessment in the sector. That element is theory of change (Jackson 2013). A construct and tool originating in the field of program evaluation, theory of change can, and should be a core element in the evaluation of impact investing (Jackson 2013). Fortunately, theory of change is already a part of the Global Impact Investors Network (GIIN)—definition. Nevertheless, there are two problems. First, in some areas of the field’s practice, theory of change is still invisible, not explicit or missing altogether (Jackson 2013). And second, there has not yet been an assessment of the overall state of play of this pivotal element in the field as a whole and how it can be applied to the maximum effect (2013). Currently ToC is currently more of a framework than a tool and not sufficient to understand the multiple levels and dimensions of the emergent field of impact investing and the success factors of interventions. Jackson refers this problem as a **leadership decision making problem** arguing, “Open-ended qualitative interviews with leaders, as well as closed-ended surveys can be deployed (Laing et al. 2012; Jackson and Harji 2012; Jackson 2013).”

In order to de-risk assets a theory of change that builds on organizational assessment tools like PESTO analysis that can be applied on individual, policy and universal level are important. Sets of tools able to build an overall integral assessment of organizational performance on the basis of three pillars (1) first the



external environment (legal and administrative, political, cultural and economic) (2) second, of its organizational ‘motivation’ (history, mission, rewards and incentives); and (3) third, of its organizational capacity (strategic leadership, human resources, program management, financial management, inter-organizational linkages may provide a good starting point for developing qualitative research when combining these three analyses to generate an overall assessment of the organization’s effectiveness, efficiency and financial viability (Canadian International Development Agency 2012; IDRC/Universalia, n.d.). This approach can be applied to organizations operating at any level across the industry’s spectrum.

Let us look at more traditional definitions on impact investing. Impact Investing has four distinct categories in the view of NPC and Cambridge Associates. It encompasses Responsible Investment or Socially Responsible Investments (SRI), Sustainable Investment, Thematic Investment and Impact First Investments (Cambridge Associates 2015). Note that this definition concentrates on the journey element leaving out the Theory of change element altogether. Many researchers in the literature recognize this journey undertaken by investors from responsible investment (applying some exclusion lists and criteria together with a best in class selection process for the remaining assets) to sustainable investment, which is understood by a majority of industry players as implementing sustainable management practices with regard to environmental, social and governance issues (ESG) to then turning ESG into an innovation driver and catalysing process while keeping the core of the ESG—value creation process leading to a thematic investment strategy and finally an impact first driven investment strategy (Cambridge Associates 2015, New Philanthropic Capital 2015). The following figure reflects this journey (Fig. 1).

Impact investing is also a process by which investment managers screen, evaluate and monitor investments using Environmental and Social Governance. Whereas Responsible Investment or Socially Responsible Investment” (SRI) screens to avoid portfolio exposure to socially or environmentally harmful investments, impact investing actively and intentionally seeks to create a positive, measurable impact through profitable businesses and at the same time applying systematically ESG practice to re-risk assets. Impact Investors achieve this by including into their due diligence and gap analysis process environmental, social and governance issues (ESG issues) as well as leadership and culture. They will normally start with a comprehensive gap report including ESG, leadership and culture gaps and actively address the gaps and influence the leadership of a company prior to investing into it, thus exerting influence as active owners over the full life-cycle of their investments. A good example for this is the integrated investment approach of AQUAL Capital (see Bodzesan 2015).



**Fig. 1** The impact investment journey. Source: Cambridge Associates and New Philanthropic Capital NPC (2015)

Impact investing is a lens through which investors consider investment options across asset classes, such as bonds, listed equities, and private equity (EMPEA 2015). Patricia Dinnen and Abigail Beach from EMPEA evolve on their former publication in this anthology. Impact investors aim to generate a financial return for themselves and measurable benefits to society and/or the environment (EMPEA 2015). Positive Impact Investing is looking to creating a triple bottom line performance, i.e. an environmental and social performance alongside with financial performance with the pro-active intention to create positive environmental and social outcomes. In many cases, Impact Investors do so by deploying capital to companies which sell products or services that improve the lives of low-income or vulnerable populations in a way that conserves and/or protects the environment (EMPEA 2015). Extending the traditional investment model, impact investing deliberately and fully integrates intentionality, measurement and accountability for social and environmental benefits into the investment process, in addition to and in equal measure to the emphasis placed on financial returns. As a result, private equity impact funds, unlike standard private equity funds, tend to invest primarily in businesses that sell essential products or services to low-income people. They seek to create compelling business propositions in markets where low-income consumers are willing and able to pay for certain products/services that are affordable, accessible, good quality, and competitive with those offered by other suppliers, including the government and foreign companies. Such businesses may operate in sectors that include sustainable agriculture, healthcare, education, housing, communication technology, and financial services. The positive impacts are created by expanding access to a wide range of critical goods and services for the low-income populations that can improve their health, education, and employment prospects. Another form of impact investing is addressing global challenges like climate change, water scarcity, waste reduction, resource efficiency, address climate adaptation risk, health care and nutrition problems, demographic change or education through product innovation. A good indicator of how E&S risk are becoming more material is the fact that five of the “10 Global Risks of Highest Concern in 2014” collated in the World Economic Forum’s “Global Risks 2014” report are related to E&S issues: water crises (ranked third); the failure of climate change mitigation and adaptation (fifth); the greater incidence of extreme weather events such as floods, storms, and wildfires (sixth); food crises (eighth); and profound political and social instability (tenth). The report was produced by the World Economic Forum in collaboration with a leading advisory firm, insurance and reinsurance companies, and academic institutions (Marsh and McLennan Companies, Swiss Re, Zurich Insurance Group, National University of Singapore, the University of Oxford, and the Wharton School of the University of Pennsylvania).

As can be seen from the most relevant ESG Risk Factors in the meta-analysis provided by Arabesque and the University of Oxford (Clark et al. 2014), the same ESG criteria can be used for creation of positive impacts and fostering innovation which is the aim of impact investors.

Other Impact Investing Funds target investments in small and medium size enterprises (SMEs) in view of their inherently impactful role in driving job creation,

GDP growth, and social stability. According to the International Finance Corporation, the private sector arm of the World Bank, formal SMEs contribute up to 45% of formal employment in developing economies. One such SME-focused fund is the TriLinc Global Impact Fund, a US\$14.3 million debt fund that has invested in South America and Indonesia (IFC 2010; The SME Banking Knowledge Guide). The Fund's strategy is driven by the belief that impact objectives such as better trained staff and energy efficiency can be intrinsic to the portfolio company's success as well as investor returns, in addition to creating societal benefits (EMPEA *ibid*).

## **What Vehicles for Impact Investments Are Available and What Asset Classes Are Preferred?**

Impact Investors use the following vehicles for activating impact investments. They set up Private Equity or Venture Capital Fund, use Direct Investment Strategies and to a lesser extent, they have been experimenting with Social Bonds and Green Bonds. However the analysis from J.P. Morgan Social Finance and the global Impact Investing Network (GIIN) shows that private equity is by far the most commonly used tool for impact investment (O'Donohoe et al. 2010; Saltuk et al. 2014).

J.P. Morgan Social Finance and the global Impact Investing Network (GIIN) further examine and explore Impact Investment dynamics in several publications, such as in "Perspectives on Progress: the Impact Investor Survey" (see: <https://www.missioninvestors.org/tools>).

The report reveals the experiences, expectations, and perceptions of 99 impact investors in 2012, and their plans for 2013. Investors surveyed for the report include fund managers, development finance institutions, foundations, diversified financial institutions, and other investors with at least USD10 million committed to impact investment. Respondents also reported the instruments that they use to make impact investments. Unsurprisingly, most of the respondents state using private equity and private debt instruments—83% use private equity and 66% use private debt. Interestingly, 44% of respondents use equity-like debt structures and 18% of respondents reported using guarantees, higher numbers than we expected.

In 2013 ACCENTURE conducted a survey of 1000 CEOs in 103 countries and 27 industries. They found that 80% of CEO view sustainability as a means to gain competitive advantage relative to their peers (Accenture 2013, p. 36), but only 33% of all those surveyed CEOs believe "that business is making sufficient efforts to address global sustainability challenges." (Accenture 2013, p. 15). One reason for this imbalance acknowledging the importance of sustainability and acting on it is pressure from the financial markets' short termism applicable for publicly listed stock companies (Accenture 2013; Barton and Wiseman 2014). Unilever under the leadership of its CEO Paul Polman has stopped giving earnings guidance and has moved away from quarterly profit reporting in order to transform the company's culture and shift management's thinking away from short term results (CBI 2012; Ignatius 2012). It seems that private equity and venture capital is able to look at

longer time horizons and therefore can embrace longer-term patient money and is less dependent on short term results. Private equity impact funds often invest in early or growth-stage businesses that are immature and have not been able to reach critical scale. These businesses can include start-ups and occasionally may involve supporting entrepreneurs in creating businesses; for example, Brazil-based private equity firm FIR Capital has been working to perfect business models for several pipeline companies in parallel with raising a new fund that will focus on healthcare, education, housing, and financial services. Preparing these companies and investing in their re-structured businesses requires discipline and patience (with long enough duration to yield returns), and risk tolerance (EMPEA, *ibid*).

Private equity is one investment approach within impact investing. It employs the traditional private equity model that intends to generate an attractive financial return for fund managers and their investors. The private equity process is one in which investors structure an investment vehicle (private equity fund) to raise capital from major institutional and individual investors (such as pension funds, endowments and high net worth individuals), committing the commingled capital into private businesses to expand and improve their operations, and ultimately, and usually after several years, to sell their stake in these businesses or to take them public on a stock exchange in many cases as an IPO.

An important attribute of private equity is that it can enable access to vast pools of financing through global capital markets. By comparison, funding sources such as government aid and philanthropic finance are often limited (and unpredictable) in low-income countries, and represent only a fraction of what is potentially available from the capital markets. Funding from Development Finance Institutions (DFI) may be significant in scale and can play a catalytic role, but is usually only available on the condition that additional private equity is put in at a certain quota and therefore private equity may in combination with DFI capital raise much more money than in isolation. On the other hand DFI funds will impose much more restrictions on impact investors' assets and normally is bound to a proven track record, which may not exist in the infancy stage in which many impact investment businesses find themselves.

For example, equity investment can be a more favourable capital base than debt for the many businesses with potential impact that are testing new business models to deliver products or services to consumers who have inconsistent and low incomes. "Some new business models require significant customer education, which can be capital intensive and can take some time to translate into revenues, which can make it challenging to service a debt investment", explained Yasemin Saltuk of J.P. Morgan Social Finance. In certain situations, particularly in frontier markets or early stage businesses, portfolio companies can face volatile cash flows, unpredictable supply chains, poor infrastructure, or inefficient regulation. This can translate into volatile cash flows for the businesses, making debt payments a burden, especially at high interest rates (EMPEA 2015).

## Impact Investment Criteria for Impact Investors

Impact Investors use a number of criteria which distinguish them from conventional investors: They proactively define and measure impact: Although many private equity funds in emerging markets generate a positive economic impact through their investments, this is not sufficient to qualify them as impact investors. These funds must define, analyse, integrate and manage impact through the whole life-cycle of an investment. They must also demonstrate that they have integrated impact considerations throughout their investment process from initial screening, through due diligence (including ESG), closing, and post-investment monitoring with measurable results. They are therefore differentiated from purely financially-driven private equity funds because of intentionality, measurement and accountability.

They display active ownership: Once a private equity impact fund makes an investment, it monitors impact closely. Funds typically interact with their portfolio companies on a quarterly basis, tracking metrics that vary across sectors and apply active ownership behaviour. Although multiple organizations are attempting to develop standardized metrics, such as Impact Reporting and Investment Standards (IRIS) and Global Impact Investing Ratings System (GIIRS), there is still no universally accepted approach. What is important is that the fund specifies to its investors the relevant metrics to track and is held accountable to this end (ibid).

They create a value statement and a theory of change, which they measure their investment against: To increase effectiveness, many impact investing PE funds embed this social mission in their investment thesis. According to TriLinc Global, integrating impact intent alongside financial goals allows funds to (1) integrate data gathering monitoring and analysis on both finance and impact performance; (2) formalize accountability to investors on impact, and; (3) mitigate the potential trade-off between return and impact.

They come in with the intention of Cleaning Up the House: Another way to improve business, according to FIR Capital's Marcus Regueira, is to "clean up the house" by improving management capacity, corporate governance, and legal compliance, so as to create a competitive advantage for the business. Arun Gore, President and CEO of Atlanta-based Gray Ghost Ventures, agrees that private equity funds inculcate discipline and execution—the hallmarks of private equity—in fast-growing businesses. The role of educating firms about private equity can be remarkably effective particularly in environments where informality is the norm. The educating role can, in Gore's words, "trigger a systemic change on how to develop an enterprise." (EMPEA *ibid*).

They improve the way firms do business by Changing the Business Model by Instilling Innovation and Additionality: Impact Investors offer more than capital to businesses; they seek to improve the way firms do business (Porter and Kramer 2011; Moore et al. 2012; Loew et al. 2009; Krlaw et al. 2013; Harji 2008a, b; Harji and Hebb 2010; EMPEA 2015; Desjardins 2011; Bishop and Green 2010). Any growth private equity fund—not just in the impact or emerging market space—seeks to transfer management and operational expertise to its portfolio companies. Impact

Investors in addition transform the business model. African- focused impact investing firm Vital Capital, for example, believes the operational expertise it brought to bear in financing Kora Housing, a 40,000 unit project in Angola, significantly enhanced the project's financial and impact performance. The fund understood the structural limitations of the Angolan housing market, and developed a unique approach involving a lease-to purchase mechanism, which increased the perceived value of housing to customers and therefore can be considered as a sustainable branding approach. It enabled local families to acquire housing units gradually, thereby making it possible for a larger percentage of the Angolan middle class to own a home, which ultimately has the effect of contributing to economic growth (Vital Cap. 2014). This form of additional growth would not have happened without transforming the business model.

## **What Do Impact Investors Do Differently from Conventional Investors?**

One pattern in studying positive impact investors and their approach appears to be the employment of active ownership strategies (voting, shareholders resolutions and management dialogue). They have an extended due diligence approach including ESG, leadership and culture and also apply a sound stakeholder analysis (Benson and Davidson 2010; Borgers et al. 2013; Clark et al. 2014; Deng et al. 2013; Freeman 1984; Global Reporting Initiative 2013; Hillman and Keim 2001; Jensen 2002; Jiao 2010). The involvement of the investors in setting the agenda for the strategy of the target seems to be an important difference to a conventional investor.

Impact Investors normally apply a theory of change: Their mission is to influence the financial markets by creating new sustainable assets by growing the eco-system of sustainable entrepreneurs, by growing the eco-system of financial intermediaries active in the field and by growing the investment community investing in positive impact. They normally choose an educate, innovate and incubate approach.

Another consistent pattern is focus on thematic issues. The quest is to find responses to the growing global challenges of the universe like water scarcity, climate change, increasing pollution, finding answers to the growing state failures to address social issues. While some social issues may be a consequential damage of the global financial crisis impact investors see it as part of their strategy helping to provide the necessary social aid in order to overcome the state budgetary limits existing under current austerity schemes. Foundations in particular desire to finance and invest into the creation of products and services for those at the bottom of the pyramid. They want to create wealth for others and themselves and do good while doing well.

Another commonly observed pattern is the application of CQ—cultural intelligence in investment decision through analysing and actively influencing Leadership and Culture of their investments.

They employ a systematic and consistent ESG driven investment strategy, investment policy and ensure the implementation of ESG systems policies and KPIs at the level of the investee as part of their active ownership strategy. While most ESG schemes used by companies differ in practice, impact investors employ and implement a rigorous ESG approach based on their value statement and theory of change and connect and exchange about the metrics used in order to create commons.

With its rigorous focus on building commercial, scalable and profitable businesses, the thematic approach impact investment uses though deployment of private equity, creating new customer value, it is well positioned to generate positive and sustainable impacts in such critical sectors as affordable housing, healthcare, and local food production. It is especially poised to do so compared to other funding sources that are not driven by profitability, including government, foreign assistance, and philanthropic capital. The Emerging Markets Private Equity Association writes that “combining profitability with impact objectives can lead to mutually beneficial outcomes if there is intentionality, measurement, and accountability” (EMPEA *ibid*).

A systematic analysis and further in depth analysis on the various forms of impact investing (financial first, impact first and layered structures) as well as on the role of philanthropy and ethical banks in nourishing the impact investing market and its reach can be found at Bridges Ventures at <http://bridgesventures.com/wp-content/uploads/2014/07/Investing-for-Impact-Report.pdf>.

## **What Are the Main Challenges Facing Private Equity Impact Investing?**

Attracting institutional capital remains a significant constraint to the development of impact investing. Although increasing in size and prominence in the past several years, private equity-style impact investing remains a “niche” investment strategy according to Bridges Ventures that mainstream institutional investors do not typically include in their portfolios. Attracting institutional investors will require evidence that it is possible to achieve both impact and financial returns, and education of investors about appropriate opportunities in which to invest. For instance, FIR Capital has raised awareness locally in Brazil by convening private wealth managers, the Brazilian private equity association, universities, pension funds and journalists, with the support of the Brazilian private equity association ABVCAP (EMPEA, *ibid*).

Another necessary milestone is the delivery of evidence that it is possible to achieve impact alongside risk-adjusted financial returns. Developing a comprehensive financial performance database would help enormously to identify critical success factors and to develop customized benchmarks. Many impact investments are first-generation and therefore early in their respective investment cycles. Impact Investors are working together and with partners to collect and analyse data on exits

in an attempt to quantify financial returns and key impact metrics (New Philanthropic Capital, KLF, Cambridge Associates, Aqal, PINEO, EMPEA).

Furthermore relevant and robust metrics are needed that demonstrate success in achieving social and environmental impact. The idiosyncratic nature of impact investing presents some specific challenges with respect to the development of metrics, including:

- **Time Scale.** Whereas financial returns to investors end once the fund has exited the investment, the social impact continues after a project has been completed. Some projects create impact throughout the life of the investment such as an insurance company, whereas others such as housing or infrastructure deliver impact over the longer term but in many cases only beginning in the final stage of the investment. Vital Capital thus suggests differentiating immediate and long-term impact projects and measuring them differently.
- **Differentiated value of outcomes versus outputs.** Outcomes, such as poverty reduction, reflect the ultimate impact objective of impact investments while output measure metrics such as units of housing constructed. Yet outcomes are more difficult to measure; to the extent that it is possible to determine a causal link between a firm's operations and the outcome, it is expensive to do so. Attributing the outcome to a particular investment in the firm is a further challenge.
- **Each company and product creates impact in its own idiosyncratic way** so generic indicators make it impossible to capture the complexity of the true impact. For example, one operational metric for insurance companies is the speed at which a claim is paid, which is not relevant for education where graduation rates would be a more appropriate measure. Even for metrics that appear on the surface to be comparable, variability in the methodology can create challenges. For example, a simple count of the number of jobs created obscures whether those were local workers or child labor or jobs offered at competitive wages and therefore need to be topped with rigorous ESG analysis criteria. Further, cross-comparisons are extremely difficult for certain units of value that have an inherently subjective component such as valuing the life of one patient or the value of reducing one unit of fuel consumption. To accommodate the wide range of metrics, IRIS has developed a repository of over 400 metrics, recognizing that no single combination will be right for all organizations.
- **Tracking Social and Environmental Portfolio Performance** across a number of Standards (Organization, Product; Financial Performance) is done by the Impact Reporting and Investment Standards (IRIS) managed by the Global Impact Investing Network GIIN, a network founded by impact investors back in 2008, namely the Acumen Fund, B Lab and the Rockefeller Foundation. This effort by IRIS (as well as GIIRS) is helpful, but one aspiration among the growing field of private equity impact investors is to simplify the process and make it more practical by focusing on the key "metrics that matter." (EMPEA *ibid*). FIR Capital's Marcus Regueira recommends 4–5 indicators per industry to provide a balance between comparability and overload of indicators.



- Finally, scale in impact investing is hindered by a mismatch between investors' preferences and realistic investment opportunities. J.P. Morgan Social Finance conducted a survey of leading institutional impact investors and found that absorptive capacity is a critical bottleneck. It is not unusual for mainstream pension funds, insurance companies, and asset managers to consider investing in only those funds that are of significant size (e.g. minimum of US\$500 million). Furthermore, many investors have minimum commitment sizes (e.g. they want to commit more than US\$100 million) and maximum ownership limits (e.g. they cannot represent more than 20% of the fund's interests). By way of comparison, the average impact investing private equity fund is US\$7 million, and the average underlying investment is US\$2 million (J.P. Morgan Social Finance 2013).
- Another gap lies between investor preferences for the stage of the business in which they would like to invest and where the majority of impact investees are in the growth cycle. The J.P. Morgan survey "Perspectives on Progress" revealed an overwhelming focus on growth stage businesses (78%), while only 51% indicated a focus on venture capital. Eighteen per cent of respondents indicated an appetite in seed or start-up capital.

## **What Does Science and Academic Research Tell Us About Impact Investing?**

There is little research on impact investing at least when it comes to impact first and thematic impact investing, theories of change or embedding impact into the strategy of traditional companies. There is a more to find on responsible and sustainable investment (see Meta-analysis provided by Clark et al. 2014). Responsible and Sustainable Investment is included in the impact investing definition in academia, but impact investors do differentiate between the two concepts clearly (Brandstetter and Lehner 2015).

Impact investments do not yet match the logic of traditional finance tools (Brandstetter and Lehner 2015). Measuring the potential social and environmental impact of investments in a generally accepted manner will thus be a key component of research to be undertaken since impact investing explicitly seeks to intentionally generate quantifiable social and financial returns. The World Economic Forum states in its report: "Although many exceptions exist, the leading asset owners that are allocating capital to impact investments today include development finance institutions, family offices and high-net-worth individuals. However, relative to other sources of capital, these investors hold only a small share of the global capital pool." (World Economic Forum 2013). Addressing the factors that constrain other types of asset owners from allocating capital to impact investments therefore is an important topic for investigation.

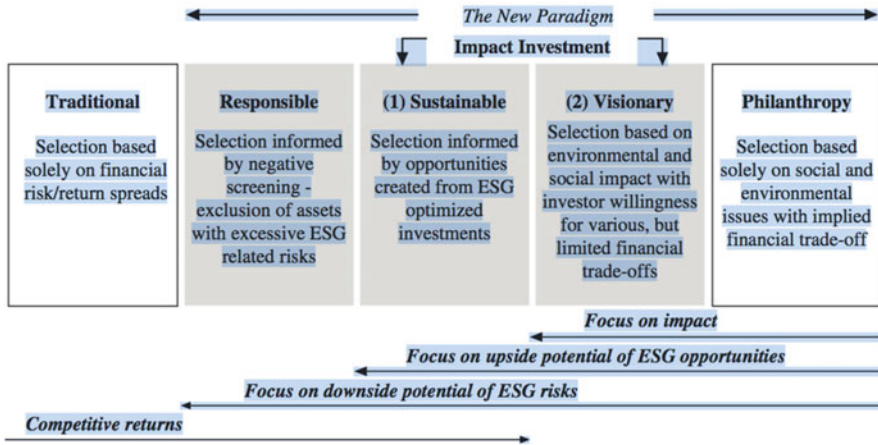
The few researches undertaken in the field provides early evidence that overall performance of mixed portfolios might profit because the experienced low correlation of impact investments to traditional markets reduces portfolio risk and increases sustainability (Hertrich and Schäfer 2015). In addition, more and more investors demand ESG (environmental, social and governance) criteria to be considered, in a consistent manner and so implemented mainly based on pressure from stakeholders and regulators. Those demands have fostered voluntary frameworks on a global scale, creating global level playing fields for eco-social criteria and standards and are considered by some authors to constitute “Global Administrative Law” (McIntyre 2015). Impact investments differ significantly from traditional investments through their hybrid goals (Doherty et al. 2014; Lehner 2012).

The rare authors from the academic field dealing with Impact Assessment will normally use the definition provided by the World Economic Forum “Impact Investing is generally understood in science as the proactive intention of an investor to create a measurable positive social and/or environmental impact (in the following referred to as eco-social impact) through investment or finance and to achieve (eco-) social returns alongside with financial returns. Impact Investing is an investment approach that intentionally seeks to create both financial return and positive social or environmental impact that is actively measured” (World Economic Forum 2013). However practitioners have provided a lot more disclosure on their “hybrid goals” and began to include Theory of change as an additional tool for creating impact.

It is important to stress, that impact investment is an investment approach and not an asset class. It is a criterion by which investments are made across asset classes. Second, intentionality matters. Investments that are motivated by the intention to create a social or environmental good are impact investments. Third, the outcomes of impact investing, including both the financial return and the social and environmental impact, are actively measured (World Economic Forum 2013).

A new way of categorizing various forms of impact investments has been developed by Bridges Ventures, Lehner and Brandstetter.

The following figure shows the scale up of impact from responsible to philanthropic and presents a different scheme of categorizing the various forms of impact investing. Whereas practitioners in Impact Investing have described Impact Investing as journey from Responsible Investment to Impact first Investment concentrating on thematic issues creating additional customer value (which can be compared to new products (see Fig. 1), the few sources in academia describe the journey leading through the responsible and sustainable investment process pillars to visionary and philanthropic, which appears to be a different definition than the one used by practitioners (focussing on thematic social issues and impact first structures). The journey described by Brandstetter and Lehner (2015) adopting and adjusting the model provided by Bridges Ventures leads from conventional risk/return driven investment through responsible and sustainable investment to visionary and philanthropic investment (see Fig. 2).



**Fig. 2** The spectrum of capital. Source: Own description based on Nicklin (2012), and Clara Barby, Bridges Ventures

## Comparing Science and Practice in Impact Investing

### *Difference in Focus*

There is agreement between practice and science though that Impact Investment is a journey that is starting with responsible investment, then adding ESG, leadership and culture (L&C) analysis and assessment for potential portfolio assets, providing ESG/L&C Gap Reports and ensuring systematic ESG implementation, leadership and culture management throughout the assessment, investment and management process.

There seem to be differing views about the way going forward. Whereas science represented by Lehner and Brandstetter describes the future path as visionary and philanthropic, impact investors themselves see impact investment as thematic and impact driven, based on clear measurement criteria they lend from international networks occupied with impact measurement like GIIRS, EIRIS, IRIS B Lab, GIIN. This distinction about the way forward may be relevant as ESG, leadership, culture and gap analysis are all elements that have to be defined in the investment approach and investment policies of the impact investor. The criteria visionary and philanthropic appear to be less clear and could in practice just mean that the investment complies with the internal investment house policy without any external stakeholder driven “assurance”, endorsement or license.

## Relevant Criteria and KPIs for Capital Allocation

According to Brandstetter and Lehner (2015) investors struggle to allocate capital towards the social sector, because the above proposed performance measurement metrics do neither fully assess risks associated with the generation of impact nor consider relationships and interdependencies between parameters of risks and return. This becomes an aggravated problem when looking at a portfolio level, due to inevitable co-variances that remain unaccounted for (Brandstetter and Lehner 2015). Portfolio models can only be applied in situations where risk and return metrics are accurately measurable and comparable. According to the academic research undertaken so far, some researchers find that “Unfortunately, such consistent metrics are largely absent within the emergent field of social finance” (Geobey et al. 2012). According to Brandstetter and Lehner (2015) “Therefore—since an optimized asset allocation is an indispensable necessity for institutional investors—the expected market growth of impact investing will be dampened as long as impact investments’ characteristics do not match conventional portfolio tools.” One question is how impact investment characteristics meet conventional portfolio tools.

Business seems to be searching for a how to implement impact investing into mainstream business be it from an ESG driven, good-will and branding driven or an investment philosophy standpoint. Some hope that an answer may come from the future fit business benchmark, which is developing for the true values network a benchmark to measure future fitness based on a branding approach. The tool is meant to be open source and it is organized through the true values network, a collaborative open source initiative led by The Natural Step Canada and 3D Investment Foundation. On the bases of a system of principles that are designed to describe future-fitness, the network will develop key performance indicators (KPIs) that can be used to tell how far away any company is from reaching the future-fit goals. In essence the goals are addressing the global challenges from resource scarcity, climate change, and ocean acidification to trust into business organizations. It includes the commitment to consistent ESG implementation and wants to show the relevance of ESG implementation. With this approach the future fit benchmark picks up the thematic issues approach that impact investors use and which has some similarities with good will branding.

At the same time scientific researchers acknowledge that “Across sectors, there are already a number of measurement systems in use, endorsed by various impact investing actors. Among them are the Impact Reporting and Investment Standards (IRIS), the Global Impact Investing Rating System (GIIRS) and the B Impact Assessment powered by B Lab” (Antadze and Westley 2012; Jackson 2013).

Social Responsible Investing (SRI) in distinction to Positive Impact Investing presents itself as a broad category in literature, consisting of a range of different investment activities based on negative screening of existing assets in various asset classes and negative selection of those assets that have been screened out. This approach is usually complemented by a Best in Class benchmarking approach for assets that have passed the negative screen and therefore are eligible for investment.

Best in Class approaches are meant to provide further support and guidance to the investor. SRI approaches are not designed to intentionally create assets with measurable positive environmental or social outcomes. Rather it is a negative screening and selection process reducing the investment universe of investors instead of intentionally increasing it by adding more sustainable positive impact driven assets driving the market in a desired direction. For a detailed elaboration on the issue of SRI, see, for example, Renneboog et al. (2008), Sandberg et al. (2008), Lee et al. (2010), and Harji and Hebb (2010).

## **Increased Research Interest in the Field of ESG, But No Final Consensus in the Conclusions About Its Effectiveness**

A new meta-analysis on ESG tapping into the practitioners as well as the academic field has been established by Arabesque fund management in collaboration together with well reputed pioneers in the field of ESG, Global Administrative Law, Triple Bottom Line Creators and Global Compact Senior staff. The main results of this meta-analysis and mapping exercise on the ESG landscape will be summarized below.

The meta-analysis conducted by Arabesques Partners together with the University of Oxford finds a strong business case for companies implementing sustainable management practices and systematically integrate ESG, in other words doing well while doing good. In “From the Stockholder to the Stakeholder. Clark et al. (2014) base their meta-analysis on more than 190 academic studies, industry reports, articles and books. The meta-study concludes that “case studies and academic literature are clear that environmental and social externalities impose particular risks on corporations (reputational, financial and litigation related) which can have direct implications for the costs of financing- in particular debt” (ibid: 18). According to the study companies with good sustainability standards enjoy significantly lower cost of capital and have better access to capital. This applies to both equity and debt. Good corporate governance structures such as small and efficient boards, good disclosure policies, good environmental management practices, such as the installation of pollution abatement measures and the avoidance of toxic releases, as well as environmental and social company policies lower the cost of capital (both equity and debt). They likewise conclude that Meta-studies generally show a positive correlation between sustainability and operational performance one of the factors being implementation of ESG Management Systems.

The findings seem to be supported by academic research for instance by Chen et al. (2011). They show that the governance index of Gompers et al. (2003) is significantly and positively related with a firm’s cost of equity. This implies that relatively better governed firms can benefit from lower cost of equity, relative to poorly-governed firms. This is not surprising, as good corporate governance translates into lower risk for corporations, reduces information asymmetries through

better disclosure (Barth et al. 2013) and limits the likelihood of managerial entrenchment (Derwall and Verwijmeren 2007). International evidence on Brazil and emerging market countries also supports the view that superior corporate governance reduces a firm's cost of equity significantly (Lima and Sanvicente 2013) (for evidence from Brazil and emerging markets). Attig et al. (2013) studied firms from 1991 to 2010 and used MSCI ESG STATS as their source for CSR information. Additional evidence is provided by Jiraporn et al. (2013): after correcting for endogeneity, the authors conclude that firms with a better ESG quality tend to have better credit ratings, pointing towards a risk-mitigating effect of ESG. Likewise, the adoption of proper environmental management systems increases firm performance (Darnall et al. 2008). Also it has recently been demonstrated that more eco-efficient firms have significantly better operational performance as measured by return on assets (ROA), see Guenster et al. (2011). It is further argued that corporate environmental performance is the driving force behind the positive relationship between stakeholder welfare and corporate financial performance measured by Tobin's Q (Jiao 2010).

The Arabesque/University of Oxford Meta-study concludes: "Given the evidence, it is clear that the social dimension of sustainability, if well managed, generally has a positive influence on corporate financial performance. What is missing in this strand of research is direct evidence of other types of corporate social behaviour, for example, corporations' worker- safety standards in emerging markets, respect for human rights, or socially responsible advertising campaigns." (Clark et al. 2014).

It has to be added that the meta-analysis while interesting and valuable in mapping the existing research and findings and well written, nevertheless it uses different studies with different criteria to come to the conclusions drawn. The question is whether it is really possible to compare such different criteria when drawing conclusions and cluster them into four different categories. It therefore remains under question whether the study is comparing like with like.

The following meta-analysis study results are stunning:

1. Despite the relationship between ESG on one hand and a better operational performance and lower costs of equity on the other hand, it is quite surprising that the relations between ESG implementation and stock prices appears to be less clear.
2. The same applies to research on Responsible Investment. Depending on the study and research question the results appear to be mixed. For instance Galema et al. (2008) argue that the reason some studies find no significant alpha after risk adjusting using the Fama-French risk factors is that corporate environmental performance significantly lowers book-to-market ratios, implying that the return differences between high CSR and low CSR stocks are created through the book-to-market channel because 'SRI results in lower book-to-market ratios, and as a result, the alphas do not capture SRI effects', p. 2653.
3. Flammer (2013a) investigates stock price reactions around news related to the environmental performance of corporations. Investigating environmentally

related news over the time period 1980–2009, the author concludes that on the 2 days around the news event (i.e. 1 day before the announcement of the environmentally related news and the announcement day itself), stocks with “eco-friendly events” experience a stock price increase of on average 0.84% while firms with “eco-harmful events” exhibit a stock price drop of 0.65%, which is regarded only weak evidence for sustained ESG benefit.

4. Eccles et al. (2013) classify the sustainability quality of firms based on a sustainability index, which evaluates whether corporations adopt several different kinds of CSR policies (e.g., human rights, environmental issues, waste reduction, product safety, etc.). The authors primarily investigate the stock market performance of both groups of firms and therefore circumvent any reverse causality issues. Their empirical analysis reveals that a portfolio consisting of low-sustainability firms shows significantly positive returns. Further, the high-sustainability portfolio displays positive and significant returns over the sample period. Importantly, the performance differential is significant in economic and statistical terms. The authors also find that the high-sustainability portfolio outperforms the low- sustainability portfolio in 11 of the 18 years of the sample period.
5. Outside the meta-analysis study Gasser, Kremser, Rammerstorfer and Weinmayer in Markowitz Revisited: Social Portfolio Engineering (2014) find that that investors opting to maximize the social impact of their investments do indeed face a statistically significant decrease in expected return. In their paper they revisit Markowitz’ Portfolio Selection Theory and propose a modification allowing to incorporate not only asset-specific return and risk but also a social responsibility measure into the investment decision making process. Together with a risk-free asset, this results in a three-dimensional capital allocation plane that allows investors to custom-tailor their asset allocations and incorporate all personal preferences regarding return, risk and social responsibility. We apply the model to a set of over 6231 international stocks and find that investors opting to maximize the social impact of their investments do indeed face a statistically significant decrease in expected returns. However, the social responsibility/risk-optimal portfolio yields a statistically significant higher social responsibility rating than the return/risk-optimal portfolio.

Therefore there seems to be need for on-going research to identify which sustainability parameters are the most relevant for operational performance, investment returns and to deliver competitive risk- adjusted performance over the short-, medium to longer term, appropriately de-risk assets through systematic implementation of ESG and—for Investment and pension funds to fulfil their fiduciary duty towards their investors.

With regard to the stock market: it is relevant to research which ESG components will provide sustained alphas and better sharp ratios.

We all hope very much that you will enjoy the diverse views and converging concepts presented in this anthology on the way to a sustainable society.



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# Growing Social Impact Finance: Implications for the Public Sector



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## Introduction

Social impact finance (SIF) is the provision of finance with the explicit expectation of a measurable social, as well as financial, return (Clarkin and Cangioni 2015; G8 Social Impact Investment Taskforce 2014; Höchstädter and Scheck 2014; Oleksiak et al. 2015). SIF is within the broader spectrum of social finance and is characterized by two distinguishing properties: first, social and environmental returns are not incidental, but they are pre-defined and ex-post measured; second, investors expect at least the repayment of the invested capital. The actual SIF market is notably smaller if compared with the traditional finance, but experts believe in its power to address the societal challenges of our century (Daggers and Nicholls 2016). For this reason, the participation of the public sector has been evoked since the beginning of the SIF movement. SIF is not about the unloading of public responsibilities nor a mean to withdraw public welfare's policies. Instead, given the urgency to review the government's spending, SIF should play an additional role both in terms of generated capitals and outcomes, wherever the government's budget does not fit the social demand. Moreover, governments might embrace the new investing approach to get efficiency from their social service providers. In addition, an enabling legal framework, i.e.: the definition of hybrid legal entities or certifications systems, could lower the information asymmetry in the market and open up new investment opportunities. Finally, advocates have often acknowledged the usefulness of running pilots to test new financial instruments that are able to attract a wider spectrum of investors with different risk/return preferences. In light of these potential benefits, the government could be a key partner in SIF, and even assume a role of director in the development

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of the market. However, up to date, there are sporadic pieces of evidence about how these recommendations have been operationalized in practice. Therefore, the aim of this research is to investigate the role that the public sector practically plays in the SIF market. In particular, the paper answers the following research question: what policies have been already enacted to promote SIF?

In order to achieve the aforementioned purpose, this work conducts a thematic analysis of the documental materials produced by the G8 Social Impact Investment Taskforce and its National Advisory Boards. Started in 2014 and still ongoing, the work of the Taskforce has connected hundreds of experts and prominent SIF players and has stimulated an organic thought around SIF, which flew into several regional and international reports.

The rest of this paper is articulated as follows. After the review of the roles that the public sector can theoretically play in the SIF market (section “Roles of Government in SIF Development”), we go through the methodology adopted (section “Methods”). Then, we outline the results and explain how the theoretical roles are being addressed in practice (section “Results”). Thus, we discuss the results and conclude by suggesting areas of further research (section “Conclusion”).

## **Roles of Government in SIF Development**

The SIF literature is still dominated by practitioners’ research, while academia has approached the topic only a few years ago (Hazenberg et al. 2014). In order to pave the way, this section reviews the academic and professional literature, which discusses the role of the public sector in the SIF market. About academic papers, we rely on the references identified by Dagers and Nicholls (2016), who realize a review of 73 papers about SIF. In doing so, they provide the most exhaustive picture to date about the existing academic literature on SIF. To what pertain practitioners’ research, we consider the reports written by the Global Impact Investing Network (GIIN), OECD and World Economic Forum. Indeed, they are devoted to producing a body of knowledge that synthesizes heterogeneous views, while at the same time being impartial. Moreover, they have played an essential role in establishing the concepts of SIF and giving the first evidence about SIF initiatives (Dagers and Nicholls 2016).

Both academics and professionals acknowledge that the public sector has a pivotal role in building the market (Addis 2015; OECD 2015). Addis (2015) resumes three main roles that governments can play to create the enabling conditions for SIF. They are market’s builder, steward, and participant. The first role—the market builder—consists in creating the demand for SIF by enabling the birth of new social enterprises or scaling existing ventures. Governments can launch capacity building initiatives to make social ventures investible recipients. The public sector can use its funds to set up incubation and acceleration programs and advise social organizations with a sustainable business model. Indeed, they usually suffer a lack of organizational and leadership skills and financial literacy (Addis 2015). A specific area that

shows a relevant demand for capacity building is the measurement of the social impact produced by SIF investments (Addis 2015; Clarkin and Cangioni 2015; Brandstetter and Lehner 2015; Geobey et al. 2012; Hebb 2013; Lehner and Nicholls 2014; Mendell and Barbosa 2013; Moore et al. 2012a; Oleksiak et al. 2015; Ormiston et al. 2015). Indeed, enterprises need metrics and standards to measure their social outcomes and demonstrate their performances to investors (Mendell and Barbosa 2013). The public sector should promote the cooperation among market actors in order to identify an agreed measurement framework and support its diffusion.

The second role—market steward—pertains to the strengthening of the market's infrastructure, by ensuring the suitable legal framework, removing the barriers and systematizing the existing efforts (Addis 2015). On the regulative floor, the most urgent issues are the reform of social organizations' legal status (Clarkin and Cangioni 2015; Mendell and Barbosa 2013; Ormiston et al. 2015), the clarification about the fiduciary duties of institutional investors (Glänzel and Scheuerle 2015; Mendell and Barbosa 2013; OECD 2015; Ormiston et al. 2015), the protection of retail SIF investors (Lehner and Nicholls 2014; Mendell and Barbosa 2013; Nicholls and Emerson 2015; OECD 2015).

In addition, governments can be a participant in the market by directly or indirectly investing (Addis 2015; Steinberg 2015; Wells 2012). Through direct investments, public authorities can lower the risk of SIF investments by co-investing with private actors (Hebb 2013). As an indirect investor, governments can give up a revenues' quota, for example in terms of tax incentives, or improve public procurement's procedures in order to favor the selection of social enterprises as service providers (Nicholls and Emerson, 2015).

Finally, the participation of the public sector in the market might have a signaling role and lower the risk for investors. Indeed, even if the involvement of pension funds and insurer is decisive to grow the market (Brandstetter and Lehner 2015; Oleksiak et al. 2015; WEF 2013), large institutional investors substantially remain at the margins and still report a lack of infrastructures in terms of intermediaries and financial products (Brandstetter and Lehner 2015; Glänzel and Scheuerle 2015; Hazenberg et al. 2014; Mendell and Barbosa 2013; Moore et al. 2012b). It causes high transaction costs and limits the entrance to the market (Geobey et al. 2012; Moore et al. 2012a; OECD 2015; Oleksiak et al. 2015; Ormiston et al. 2015; WEF 2013).

To sum up, different roles that governments should undertake emerge from the literature review: as market builder, the public player can reduce the level of information asymmetry and promote the development and diffusion of information; as market steward, it can adapt the existing legal framework and strengthen the market's infrastructure; as market participant, it should directly co-invest with private actors or indirectly support innovative social service providers through the public procurement. The extant literature depicts how the public sector can support the SIF market theoretically. However, there is not a structured analysis about how these roles translate into practice, apart from some anecdotal evidence.



## Methods

To the aims of this paper, we realized a thematic analysis (Marshall and Rossman 1999). It is an accessible and theoretically-flexible method to map an intellectual field into themes and sub-themes (Attride-Stirling 2001; Braun and Clarke 2006; Jones et al. 2011).

Indeed, it consists in the identification of latent and semantic findings recurring in the text, which can be summarized under thematic headings (Dixon-Woods et al. 2005). Marshall and Rossman (1999) suggest a protocol for the thematic analysis. The first step is the organization of data. The analyzed documents were written by the G8 Social Impact Investment Taskforce and its National Advisory Boards during the period 2014–2016. The Taskforce, instituted to catalyze a global SIF market, has engaged more than 200 people across the world, such as representatives of the social and private sectors, government officials, representative of Development Finance Institutions and OECD. Locally, this group<sup>1</sup> originated the National Advisory Boards (NABs), composed by domestic members, and Working Groups (WG), focused on specific topics such as measuring impact, asset allocation, the mission in business and international development (G8 Social Impact Investment Taskforce 2014). The output of their work was collected into reports and documents. In 2015, the Taskforce was transformed into the Global Steering Group (GSG). This transition has also entailed the entrance of new countries such as Brazil, Israel, India, and Mexico. We classified documents by type, which can be report produced by NABs and WGs, state of the art of SIF diffusion country by country, recommendations' trackers of the status of application of the Taskforce's advice, minutes of the Taskforce's meetings; geography, which is local if documents mainly refer to a special geographic area, or global if they analyze the SIF phenomenon worldwide. Documents were organized in the classification matrix reported in the following Table 1:

Then, we defined the codes of analysis. They were deduced from the literature: the roles that the public sector can play to structure the market as a market builder, market steward and market participant (Addis 2015; Clarkin and Cangioni 2015; Mendell and Barbosa 2013; OECD 2015; Ormiston et al. 2015). Thus, in the following steps, documents were coded through the software NVivo. After a literal reading, we did an interpretative reading, searching for recurring patterns in data. Firstly, we coded separately. Then, we compared our coding and discussed any discrepancy. Finally, we searched explanations for the results and triangulated them with the standing theory.

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<sup>1</sup>It became G7 after the desertion of Russia.



**Table 1** Document’s classification matrix

	National AB report	State of art	Recommendations’ tracker	Meetings’ minutes
Local focus	1 Australia 1 Brazil 1 Canada 1 France 1 Germany 1 Italy 1 Japan 1 Portugal 1 UK AB 1 US AB	3 Brazil 1 India 2 Israel 2 Mexico 2 Portugal 1 South Africa	3 Australia’s updates 2 Brazil’s updates 3 Canada’s updates 5 France’s updates 5 Germany’s updates 2 Israel’s updates 4 Italy’s updates 4 Japan’s updates 2 Mexico’s updates 2 Portugal’s updates 6 UK’s updates 5 US’s updates	–
Global focus	1 WG asset allocation 1 WG measuring impact 1 WG international development 1 WG mission alignment 1 G8 international report 1 G8 Explanatory notes for Governments	–	–	6 G8 meeting’s minute

## Results

Results are organized according to the two main themes emerged in the analysis. Before going deeper into them, we provide a brief overview of the state of the SIF market as revealed by this investigation.

It is still not easy to understand the dimension of the SIF phenomenon and quantify the market’s size. When the G8 nations have tried to figure the actual size of the market, they ended up with “first attempt” estimations. SIF market size ranges from 42 billion dollars in the US, to 247.7 million dollars in Japan, 10.6 billion dollars in Portugal and 300 million dollars in Mexico. Although the discrepancy in figures, assessors foresee a tantalizing positive growth of this market that at the moment is still immature and small if compared with the mainstream finance. Indeed, general interest from investors and number of initiatives are signs of an increasing growth of the SIF market. However, they are often counterbalanced by a significant discretion and heterogeneity in instruments that prevents replication and scaling. Generally, SIF market appears highly disconnected and “different types of intermediaries are needed to developing new ways of financing social organizations”, in several nations. Debt generally prevails over equity and is provided by banks, funds and foundations, rarely by peers through crowdfunding. Currently, investors are mainly well-established organizations with a high philanthropic

imprint. SIF appears still biased toward grantmaking, with foundations and charity that are the champions of SIF market and have played a pioneering role in its development, especially in US and UK. Besides philanthropy, also some innovator financial intermediaries are embracing the SIF approach, with banks leading the development of products or services for social enterprises. Thus, banks and foundations are heading the SIF practices, but there are also some exceptions. In Japan and US, large corporations “play a significant role in the development of social investment”. Moreover, new experimental patient funds have been set, with the capacity to attract capitals and commit them to SIF. Thus, the resulting picture is that of a disconnected niche but extending market, led by foundations, banks and new pioneering funds, which offer mainly debt over equity. The analysis of the documents also revealed the ambition to open the market to insurance companies, pension funds and to capture the interest of HNWIs. Besides the general information about the state of the SIF market, two main themes emerged from the analysis, in regard to the role that the government can play in fostering SIF: *public leader* and *outcome buyer*.

### ***Public Leader***

Currently, with the exception of US and UK, the SIF market is led by the private initiative. The public sector has done little to catalyze the market, and government’s leadership arose as a priority. Governments have remained substantially neutral to SIF and, in particular, several documents call for a “removal of legal barriers”, such as restrictions about the retails’ involvement, constraints on profit’s distribution by social enterprises and adaptation of the fiduciary duties of pension funds. Thus, one way through which governments might take the SIF movement’s leadership is promoting smart regulation. At the moment, governments have mainly intervened on the demand side, regulating hybrid legal forms of social businesses: Israel has defined the parameters that identify a company as a social business; in Italy B-corporations have been introduced by law, special benefits has been appointed to tech start-ups which have also a social aim, and the Social Enterprise Bill is a few steps from the approval; in Japan the new legal form labelled “Local Management Company” is under discussion; in US “28 States have passed legislations authorizing new social enterprise enabling corporate forms”; in Canada, the Ontario Not-for-Profit Corporations Act aims to change the legal framework of non-profit organizations; in France, the Social and Solidarity-based Economy Act “sets out new legal forms based on commercial company status which meet a number of requirements compatible with equity financing”.

On the supply side, instead, an emerging trend is the creation of tax incentives for investors in social purpose organizations. This could be realized through the proposal of tax credits in favor of social enterprises or authorization of tax reliefs convenient to social investors. Only the UK and the US have made a move: in the UK, the government has approved the Social Investment Tax Relief, which

offers tax breaks to whom invests in social sector organizations; the US has discussed the extension of the New Market Tax Credit, which incentivizes investments in underserved communities and the Congress is also on the path to “provide tax incentives that lower corporate tax rates for qualified impact businesses”. A third action could be the adjustment of pension funds’ fiduciary responsibility, to compel pension funds’ managers to offer their clients at least one alternative solidarity choice by law. In France, through the 90/10 Rule, managers of corporate employees’ pension funds have to offer the opportunity to invest in funds that allocate the 5–10% of their capital into social enterprises. In the US, the new guidance on the Employee Retirement Income Security Act (ERISA) admits that private pension funds consider environmental, social, and governance factors in the investment decisions. However, besides these two pioneering examples, “in many places pensions funds are yet to get involved because of restrictions, perceived or statutory, on their trustees around fiduciary duties”.

Beyond regulation, governments have additional levers at their disposal to facilitate the SIF diffusion acting as market-building leaders. They entail the coordination of works and platforms to develop guidelines; the realization of feasibility studies and successful case-study analysis; information’s sharing and communication; aggregation of networks and hubs; diffusion of SIF culture; creation of dedicated departments able to provide technical assistance. A less diffuse practice is that of capacity-building programs: they involve public guarantee funds inspired by the experience of the UK government which, in early 2015, launched the Impact Readiness Fund. The Impact Readiness Fund provides grants and helps social organizations to showcase their impact. In Portugal for example, the Portugal Inovação Social is expected to launch a capacity-building program during 2016. Countries, such as Canada, Germany, Israel are evaluating similar programs.

Lastly, governments can invest in the market directly or indirectly, with the objective to “provide catalytic capital, matching investments and assume first loss layers’ positions”, stimulating the intermediary market playing a matching role in investments and creating funds of funds. In Italy for example, the creation of a Social Fund is under approval by the Parliament. Several other initiatives are grant programs: in Japan, under the New Public Initiative, government committed 86 million dollars to support social start-ups; in the UK, through the Investment Readiness Programme, £10 million were allocated on the Investment and Contract Readiness Fund, which helped social ventures to access impact investments, and £10 million on the Social Incubator Fund, which supports early stage social ventures; in Portugal, the Fund for Social Innovation is expected to “co-finance the creation of new social innovation funds by market players”; in Israel, a government tender offered 22 million dollars to match funds from private investors; in the US, the Impact Investment Small Business Investment Company Initiative (SBIC) has “committed 1 billion dollars in matching capital for funds managers who invest more than 50% of the fund in impact deals”. Other remarkable examples are the Chantier de l’économie sociale Trust’s endowment, made up by investment from the Government of Canada, Government of Quebec and a group of foundations, and the 1 billion dollars Social Innovation Endowment Fund which is going to be launched by the government of

Alberta. Governments can invest also indirectly through agencies or public-owned wholesalers. However, the unique reference model is that of Big Society Capital in the UK, where the government regulated the use of unclaimed assets to establish a market wholesaler.

### ***Outcomes Buyer***

The second theme that came out from the analyzed documents concerns how changing the existing public commissioning's procedures might advance the SIF market. Also in this case, the UK practice is the landmark, where "more than 80% of government funding received by charities is in the form of contracts for delivering services rather than grants". The analysis has pinpointed two main approaches to this issue.

A first growing trend is that of local or national governments that commit their resources to experiment pay for success bonds (PFS), such as in UK, US, Israel, Portugal, Germany, Mexico, Canada, Australia. In this form of contract, the buyer pays for significant social outcomes. "Pay for success" (PFS) implies a contract between the government and a private provider of social services where the government pays when results are obtained as opposed to up-front payments for services. A specific financing mechanism to support PFS contracts is Social Impact Bond (SIB) (Arena et al. 2016). In the reference model, non-government, private investors agree to provide the upfront capital to finance the delivery of a social program by service providers. Then, they enter a contract with the government commissioner, which commit itself to repay their principal plus interests only if the intervention is successful, i.e., the social program accomplishes certain pre-defined and agreed social outcomes. On the contrary, if the outcomes are not reached, investors do not recover their investment. An independent assessor is in charge of defining the evaluation methodology, assessing and reporting on the target outcomes. Israel has launched four social impact bonds (SIB); in Japan, "several local governments are in the process of securing the budget for SIB from 2017" and some pilots have been put in the pipeline; the Portugal Inovacao Social has finalized the design of a central outcome fund for SIBs' experimentation; the UK has already launched 32 SIBs; in US 7 deals currently "channel over 80 million dollars of private capital to solve social problems", by adopting PFS. Australia has launched the Newpin Social Benefit Bond that in summer 2014 returned to investors with a yield of 7.5%. Japan, Israel and France expect the launch of new SIBs in the short term.

A second rare trend is the adjustment of traditional bilateral procurement's contracts into new forms that embed social criteria in the selection process. Again the UK is pioneering the way: at the end of 2015 the government announced a renewed focus on the Social Value Act, which requires who commissions public services to secure also wider social, economic and environmental outcomes. However, besides the hype, outcome-based procurement seldom has achieved a sustainable dimension and usually remains in the form of pilots and experimentations. This

is typically ascribed to a lack of specific skills in the public sector. However, the analysis showed another factor causing this problem is the difficulty of quantifying social costs and, as a consequence, the outcome achieved. After that UK government has filled in and published a public database of the main social costs, other countries want to follow this example.

## Conclusion

Through a thematic analysis of 77 documents produced over the period 2014–2016 by the G8 SIF Taskforce and its National Advisory Boards, this paper identifies two themes that describe the actions that the public sector can put in practice to advance SIF market.

At the state of the art, SIF appears still a niche and disconnected market, whose economic and financial estimations are often imprecise. However, results show that market operators and experts recognize a positive trend of growth in terms of investors' interests, number of initiatives and investments' value. However, even though SIF is usually described as a set of new financial instruments (Moore et al. 2012b), till now, results showed that, with the exception of SIB, there is a lack of financial instrument's innovation and SIF is largely implemented through well-established instruments and investment schemes across a variety of asset classes.

Thus, against the fragmentation of the debate about the future of SIF, this paper tried to move beyond pure anecdotal evidence and to provide a structured interpretative framework of how public sector is supporting the SIF market. It unveils several policies that are influencing the development of SIF market and shows several practices that policymakers have put in place in order to address them.

The findings of this research show that the public sector actually can assume two main roles to build the SIF market. The first, taking the leadership of the movement, consists in endorsing the growth through regulation, incentives and subsidies, thus setting a positive institutional environment for the SIF development. Secondly, it can play a role through the innovation of its procurement's procedures, experimenting innovative models and securing social criteria in the purchasing processes.

The first theme emphasizes the governments' neutrality to SIF (Addis 2015; OECD 2015). With the exception of the Anglo-Saxon example where the Prime Minister has endorsed the SIF cause and the government has supported the market's development through wholesalers, regulation, investments and procurement, in the other countries the public sector has done very little to catalyze the market. Thus, the current trend is the prevalence of the private initiative, with investors and investees that together experiment some piloting tests in an adverse and tricky regulative environment. However, the actual picture is expected to change, given that several governments have accessed the path towards fiscal reforms, regulation of company's hybrid legal status, and regulation of unclaimed assets' use, such as Italy, Canada, France, Japan, Portugal, Israel and Mexico. Furthermore, while since now fiduciary restrictions have limited pension funds' commitment to SIF, there is a growing

interest around pension funds' involvement, for example by clarifying the fiduciary responsibilities of pension funds' managers by law, as happened in US and France. Finally, the UK Impact Readiness Fund is inspiring other governments worldwide to launch capacity-building grants or programs.

The second theme discusses PFS diffusion and use (Arena et al. 2016; Fox and Albertson 2011; Jackson 2013). Results show that PFS mechanisms are still in an embryonic phase of testing, but their diffusion is growing, with new countries that are incrementing the pipeline and the first cost databases published. In particular, SIB resulted to be the mainstream approach to social public procurement. Furthermore, a less prominent trend emerged from our results, that is the use of traditional procurement's contracts enriched with social criteria for the selection's procedures.

In conclusion, the lack of large-scale private initiatives, which still prevents the market to move forward to the next level, is only partially compensated by public policy initiatives, notwithstanding the relatively high degree of attention that most governments are paying to SIF. Public support can be potentially articulated in many different forms but now it is still confined to prototypes and small-scale initiatives. With the sole exception of Anglo-Saxon countries, worldwide governments are still very cautious in endorsing the SIF market development, whilst it would benefit from a public intervention directed to lower the level of risks of SIF and provide capacity building funds. In the Anglo-Saxon practices, public sector supports the SIF development also by improving its social services' procurement process. Following this example, other governments are undertaking a more innovative approach testing the instrument of SIB, the diffusion of which is growing worldwide.

The themes highlighted in this paper help to outline the SIF research agenda for the next future. Indeed, the authors suggest that this paper contributes to the academic literature on social impact finance by providing practice-based, structured insights for future research. Researchers are offered a restricted set of open issues relevant for policymakers and relatively uncovered by academic research with the aim to produce actionable knowledge to increase the ability of the public sector to intervene in the SIF market. Few of specific topics deserve urgent attention. The first theme *Public leader* calls for studies aimed to understand the effects of changes in the legal and administrative framework for SIF. For example, would the presence of an ad hoc discipline or regulation for hybrid organizational forms help in building a more robust pipeline? The second theme *Outcomes buyer* calls for academics' contribution to developing accounting and performance measurement systems of social value. The degree of sector-specificity in measurement standards and governance schemes are two crucial future research themes and the advancements of knowledge in this field are likely to determine the pace of diffusion of outcome-based instruments and to ensure the comparability of deals in SIF market.

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# Understanding Sustainable Finance



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and Julian Fritz Kölbel

## Introduction

Sustainable finance experts can be proud of their achievements. In a little over 20 years, they have created a global movement which encompasses hundreds, if not thousands, of initiatives. Many of these have been launched in collaboration with some of the world's most prestigious organizations: the United Nations Environment Programme,<sup>1</sup> the World Bank Group,<sup>2</sup> the Financial Stability

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<sup>1</sup>In 1991, the United Nations Environment Programme Finance Initiative (UNEP FI) was set up by the UN and a group of financial institutions. They launched the UNEP Statement by Banks on the Environment and Sustainable Development in 1992. This was last updated in 2011 as the UNEP Statement of Commitment by Financial Institutions on Sustainable Development. The UNEP FI contributed to the launch of the Principles for Responsible Investment (PRI) in 2006, and developed the Principles for Sustainable Insurance (PSI), which were introduced in 2012.

<sup>2</sup>The International Finance Corporation (IFC) developed a set of Environmental and Social Performance Standards, which eventually led to the launch of the Equator Principles, a voluntary environmental and social risk management framework for project-related transactions. The Equator Principles have been adopted by many financial institutions.

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Board,<sup>3</sup> and the University of Cambridge,<sup>4</sup> for example. Several academic journals<sup>5</sup> now address sustainable finance topics, or have been created specifically to explore the related research questions. Both The Boston Consulting Group<sup>6</sup> and McKinsey<sup>7</sup> recently released research reports discussing sustainable finance from a practitioner's perspective. KPMG has worked with the World Wide Fund for Nature (WWF) to evaluate the sustainability performance of banks.<sup>8</sup> Several WWF country offices have engaged with financial sector regulators to address sustainability challenges through regulatory frameworks.<sup>9</sup> Last, but not least, many other non-governmental organizations (NGOs) now work on sustainable finance issues, and some NGOs have even been founded with the sole purpose of making the financial sector more sustainable.<sup>10</sup>

But what does *sustainability* mean for the financial sector? What is *sustainable finance*?

The purpose of this paper is to give initial answers to these questions by providing a comprehensive overview of the different components of sustainable finance. In particular, it aims to:

1. Provide *frameworks* that help the reader to understand better what sustainable finance can be, and to disseminate this understanding, both within and beyond the financial sector. This paper can also serve students as a starting point from which to explore sustainable finance.<sup>11</sup>
2. Propose *questions* that aim to advance academic research in the field of sustainable finance. The overall objective is to work towards strategies that allow financial institutions to address sustainability challenges more effectively, i.e. by mitigating risks and benefiting from opportunities.

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<sup>3</sup>See footnote 16.

<sup>4</sup>In 2010, a group of banks created the Banking Environment Initiative (BEI), which is convened by the University of Cambridge Institute for Sustainability Leadership (CISL).

<sup>5</sup>For example, see Haigh (2012).

<sup>6</sup>See Unruh et al. (2016); the report is part of an MIT Sloan Management Review research initiative in collaboration with and sponsored by The Boston Consulting Group.

<sup>7</sup>See McKinsey (2016).

<sup>8</sup>For example, see KPMG (2015).

<sup>9</sup>For example, see WWF (2015).

<sup>10</sup>For example, see WWF and BankTrack (2006), which also discusses the Collevocchio Declaration of 2003, which “remains the benchmark by which civil society will measure the banking sector’s commitment to sustainable development.”

<sup>11</sup>To support students in exploring sustainable finance, the footnotes contain suggestions for further reading.

## Why Sustainable Finance Strategies Matter

Although sustainability experts can be proud of their achievements, ultimately the world is not on a sustainable development path. In 2008, Dennis Meadows, one of the key authors of the Club of Rome's ground-breaking 1972 publication "The Limits to Growth", spoke at the University of Zurich.<sup>12</sup> He was shockingly pessimistic. In his view, no relevant progress had been made in the intervening 36 years. When he was criticized for neglecting the tremendous achievements made in sustainable investing, his answer was blunt: he didn't care. The only thing he was interested in was the bottom line, the status quo: humankind was using more resources and causing more emissions than ever before.

Unfortunately, this is still true in 2016. Although sustainable finance strategies have gained significant momentum, they have not been effective enough to achieve their goals. This observation is also confirmed by academic research.<sup>13</sup>

There are at least three reasons why this should be of concern for financial institutions and the financial sector as a whole:

Firstly, financial institutions potentially face significant risk. In a 2014 report,<sup>14</sup> the University of Cambridge Institute for Sustainability Leadership (CISL) and the United Nations Environment Programme Finance Initiative (UNEP FI) assessed whether or not the Basel Capital Accord<sup>15</sup> adequately addresses systemic environmental risks. The study raised the concern that, although "systemic environmental risks may be amongst the biggest risks that humanity faces today," the regulatory framework "was not being used to its full capacity," and "with some notable exceptions, systemic environmental risks appear to be in the collective blind spot of bank supervisors." This might have started to change in September 2015, when the UK's Prudential Regulation Authority (PRA) issued a Climate Change Adaptation Report that has since triggered further regulatory initiatives.<sup>16</sup> When the report

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<sup>12</sup>This paragraph is derived from the editorial of the fourth issue of the ECOFACT Quarterly (ECOFACT 2013).

<sup>13</sup>For example, see Busch et al. (2015): when discussing sustainable investment, the authors ask "to what extent do financial markets foster and facilitate more sustainable business practices?" They conclude that "their current role is rather modest," and that sustainable investment "does not actually spur sustainable development."

<sup>14</sup>See CISL and UNEP FI (2014).

<sup>15</sup>The Basel III framework is a comprehensive set of reform measures, developed by the Basel Committee on Banking Supervision, to strengthen the regulation, supervision, and risk management of the banking sector. The Basel Committee is the leading standard-setter for the banking sector. See <http://www.bis.org/bcbs/>

<sup>16</sup>The PRA report was a factor in the initiation of the Green Finance Study Group (GFSG) by the G20, and the Task Force on Climate-Related Financial Disclosures (TCFD) by the Financial Stability Board (FSB). Both the GFSG and the TCFD are now gaining significant attention within the financial sector. For more information on how financial market regulators have started to address sustainability challenges see Alexander (2016).

was launched, Mark Carney, the Governor of the Bank of England and the Chair of the Financial Stability Board, stated in a groundbreaking speech<sup>17</sup>:

Our societies face a series of profound environmental and social challenges. The combination of the weight of scientific evidence and the dynamics of the financial system suggest that, in the fullness of time, climate change *will threaten financial resilience and longer-term prosperity*. While there is still time to act, the window of opportunity is finite and shrinking.

In short: the future revenue growth of financial institutions will depend on sustained global economic expansion. It is therefore in their utmost interests to understand and manage these risks, in both their own and their clients' investment portfolios, and to help preserve a global system that provides a stable basis for that long-term economic growth.

Secondly, and as importantly, financial institutions are still linked with many of the activities that are at the root of the challenges to sustainability. Both banks and insurers play an important role in the economy by providing essential services that support and sometimes enable the activities of actors that cause detrimental impacts—which then in turn lead to risks for those financial institutions. Therefore, they should think about how they can foster positive impacts, and help reduce the negative effects that they might be enabling through the products and services they provide to their clients.

Thirdly, there is a revenue opportunity to address. Resolving sustainability challenges will require huge investment (see section “Opportunities Related to Sustainability Challenges”). Some of this will be made or supported by financial institutions. New business opportunities are emerging in both banking and insurance. In 2013, Thomas Vellacott, then the newly appointed CEO of WWF Switzerland, encouraged financial institutions not to forgo these opportunities. Otherwise, he said, other organizations would step in and make these investments, benefit from the growth opportunities, and eventually become the future market leaders. He supported his statement by referring to the second half of the nineteenth century, when the railways were built in Switzerland. Their construction was not financed by existing banks, but by newly founded financial institutions—those that are Switzerland's leading banks today. The conclusion: by taking a more active role in shaping new markets to address sustainability challenges, financial institutions will eventually benefit from new investment opportunities—and avoid these markets becoming dominated by new players.<sup>18</sup>

Taking their own interests into account, financial institutions should ask themselves how they can increase the effectiveness of sustainable finance strategies. This will require broader and more integrative approaches. In the next section, we provide

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<sup>17</sup>Speech by Mark Carney given on 29 September 2015: “Breaking the Tragedy of the Horizon—Climate Change and Financial Stability”. Emphasis added by the authors. See <http://www.bankofengland.co.uk/publications/Pages/speeches/2015/844.aspx>

<sup>18</sup>For insights into what happens in the early phases of the development of a new market, see Geroski (2003).

frameworks that aim to help scholars and practitioners gain an initial, yet broad view of sustainable finance.

## Understanding Sustainable Finance

One of the key challenges is that there is little understanding of how a *sustainable* financial sector would look. In one of the few academic papers that aims to provide an overview of sustainable finance *definitions*, Haigh (2012) finds that “defining sustainable and responsible finance and investment” is tricky, and that this is partially related to the fact that it is also difficult to define its opposite, i.e. “what *unsustainable* or *irresponsible* financing and investing activity might mean.”

Although it is hard to define what sustainability means for the financial sector, we can observe *sustainability challenges* (see section “Addressing Sustainability Challenges”). It then becomes easier—and more practical—to ask pragmatic questions, such as: how do sustainability challenges impact financial institutions and their clients? How do financial institutions and their clients contribute to the causes of sustainability challenges? What are the expectations that financial institutions face in relation to sustainability challenges, and how can they meet them? How can financial institutions benefit from the opportunities which might arise when addressing sustainability challenges?

These questions address the *relationships* between financial institutions and sustainability challenges. Understanding *sustainable finance* therefore requires an understanding of (a) what the term “sustainable” means, (b) the products and services financial institutions offer, and (c) their interplay with sustainability challenges.

Unfortunately, few attempts have been made to provide such an understanding.<sup>19</sup> In initial research we conducted for a forthcoming publication,<sup>20</sup> we noticed that the vast majority of papers that use the term “sustainable finance” did not define it, and often used it in a limited way, for example as a synonym for sustainable investment,

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<sup>19</sup>A notable exception in the world of practitioners is the *UNEP Inquiry into the Design of a Sustainable Financial System* (UNEP Inquiry), which has researched best practices, financial market policy, and regulatory innovations that would support the development of a “green financial system”. One of the recent reports, *The Financial System We Need*, “describes a ‘quiet revolution’ as sustainability factors are incorporated into the rules that govern the financial system. (...) In moving from design to delivery, the Inquiry will support the scale-up, broadening, and exchange of policy options, advance new critical research areas, and continue its national, regional, and international engagements to embed sustainability into financial architecture.” See <http://web.unep.org/inquiry>

<sup>20</sup>[Forthcoming publication].

or to describe an approach to ensuring the long-term financial viability of certain projects.<sup>21</sup>

Below, we first provide some initial insights into the term “sustainable” (section “Understanding “Sustainable””), as well as how “finance” works (section “Understanding “Finance””). We then present a set of frameworks to explore the interplay between these terms, and propose an initial definition and a thematic scope for sustainable finance (section “The Interplay Between “Sustainable” and “Finance””). This section ends with a brief discussion of the role that financial institutions play in the context of sustainable finance (section “The Role of Financial Institutions in Sustainable Finance”).

## ***Understanding “Sustainable”***

There are two fundamentally different understandings of “sustainable”: first, the long-standing notion of long-term stability (e.g. financial or political) and, second, the more modern use in the context of sustainable resource use and sustainable development. It is important to differentiate between the two views, as they cover largely different issues, might aim for divergent objectives, and require different strategies.<sup>22</sup>

### **The Traditional Understanding of “Sustainable”**

Traditionally, “sustainable” is a term which simply means that something is “able to be maintained at a certain rate or level”.<sup>23</sup> It is a concept found in business, economics, and politics alike. The Oxford Dictionary illustrates this use with sentences such as: “Monetary policy alone cannot achieve high and *sustainable* rates of economic growth.” “Sustainability” is simply the corresponding noun, defined by the Oxford Dictionary as “the ability to be maintained at a certain rate or level”,<sup>24</sup> and illustrated by examples such as “schemes to ensure the long-term *sustainability* of the project”, in which “sustainability” corresponds to the notion of *long-term financial stability*.

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<sup>21</sup>For example, see McNeely (1997), who discusses mechanisms for sustainable finance for protected areas.

<sup>22</sup>There are other colloquial uses of the term “sustainable”, for example in the context of “environmentally friendly” or “ethically produced” products. We focus on the two usages primarily found in academic papers.

<sup>23</sup>Oxford Dictionaries. Oxford University Press. <http://www.oxforddictionaries.com/definition/english/sustainable>

<sup>24</sup>Oxford Dictionaries. Oxford University Press. <http://www.oxforddictionaries.com/definition/english/sustainability>

## A Second Understanding Emerges

An early link between the traditional understanding of “sustainability” and the natural environment evolved in the early eighteenth century in discussions surrounding the protection of natural resources from overuse. In forestry, for example, sustainability can be achieved by adapting timber yields to the rate of natural regrowth.

In biology and ecology, the term “sustainability” often refers to a state in which extinction is avoided and survival ensured.<sup>25</sup> In “The Limits to Growth”,<sup>26</sup> mentioned above, the authors made the case that humanity was at risk of following a development pathway which was not *sustainable* and would eventually put the *survival* of entire societies at risk.

In 1987, the World Commission on Environment and Development (the Brundtland Commission) proposed the concept of “sustainable development”.<sup>27</sup> The “Our Common Future”<sup>28</sup> report defines sustainable development as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” This definition is related to the earlier understanding of the importance of natural resources and the ecosystem services they provide.<sup>29</sup> It also addresses the notion of intergenerational fairness.<sup>30</sup>

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<sup>25</sup>For example, see Costanza and Patten (1995).

<sup>26</sup>See Meadows et al. (1972). The authors conclude that, “if the present growth trends in world population, industrialization, pollution, food production, and resource depletion continue unchanged, the limits to growth on this planet will be reached sometime within the next 100 years. The most probable result will be a rather sudden and uncontrollable decline in both population and industrial capacity.” The authors state that the sooner humanity begins to alter these growth trends, the more likely it will be possible “to establish a condition of ecological and economic stability that is sustainable far into the future.”

<sup>27</sup>See Gómez-Baggethun and Naredo (2015) for a discussion of the evolution of sustainability policy since the publication of “Limits to Growth”, and how the Brundtland report “followed a new guiding notion for global environmental governance.” See Hopwood et al. (2005) for a classification and mapping of trends in thinking on sustainable development. The authors believe that sustainable development “provides a useful framework in which to debate the choices for humanity.”

<sup>28</sup>See WCED (1987). The report uses the definition in three different ways. We have used the definition from the beginning of the second chapter.

<sup>29</sup>For example, see Lant et al. (2008), who describe ecosystem services as supporting functions (e.g. soil formation), regulating functions (e.g. water purification, pest regulation), some cultural functions (e.g. aesthetic enrichment), and provisioning functions (e.g. capture fisheries, fuel wood).

<sup>30</sup>For example, see Howarth (1997).

## Addressing Sustainability Challenges

Since then, many more milestones have been reached<sup>31</sup> but—as indicated above—most sustainability challenges remain unresolved, and their number is ever-increasing. Consequently, most academics believe there is an urgent need to address these challenges, which are linked to a broad variety of issues such as climate change, biodiversity loss, deforestation, the depletion of marine fish stocks, and water scarcity. Their concerns are described by Jerneck et al. (2011) as follows:

In synthesis, anthropogenic influences on global life support systems have reached a magnitude unprecedented in human history, levels that now jeopardise the well-being of humanity. This demands action in many domains of science and society.

The authors explain the fundamental differences between old social problems and the new sustainability challenges. They point out that hunger, disease, and poverty are nothing new, and have been addressed on both the individual and societal levels for millennia. By contrast, society as a whole is only just beginning to get to grips with sustainability challenges, which rather than being experienced at the personal level have been identified and communicated by the scientific community as imminent or future problems. They state:

Human effects on the planet have escalated to a point that we may reasonably speak of the Anthropocene, i.e. a geological epoch when humans dominate the shaping and reshaping of the planet (Crutzen 2002). In the Anthropocene, key environmental parameters have moved well beyond the range of natural variability experienced over the last million years to enter a non-analogue state (Crutzen and Steffen 2003), where several thresholds (Haines-Young et al. 2006) or ‘planetary boundaries’ (Rockström et al. 2009) are overstepped.

Jerneck et al. (2011) borrow from Rittel and Webber (1973) in referring to these challenges as “wicked problems”, i.e. persistent, pervasive problems characterized by complex interdependencies. Apparent solutions may fail to satisfy the many (contradictory) requirements, and may uncover or even create a more complex problem. Jerneck et al. use the example of biofuel, the promotion of which drives land use changes which may themselves jeopardize biodiversity, food security, and local incomes.

In view of the urgency and complexity that *sustainability challenges* present, it makes sense to pay attention to them. For the purpose of this paper, we will therefore use the term “sustainability challenges” when we speak about sustainability issues.<sup>32</sup>

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<sup>31</sup>For example, the UN Conference on Environment and Development in Rio de Janeiro in 1992, the Johannesburg Summit on Sustainable Development in 2002, the UN Conference on Sustainable Development (Rio+20) in Rio de Janeiro in 2012, and the UN Sustainable Development Summit at UN headquarters in 2015, when the Sustainable Development Goals were formally adopted.

<sup>32</sup>That is why this article aims to work towards strategies that allow financial institutions to address *sustainability challenges* more effectively. One might criticize that the focus on *sustainability challenges* is too narrow and depicts a negative understanding of what sustainability might mean. Nevertheless, this approach is practical and probably sufficient owing to the following assumption: if humanity manages to respond appropriately to current and future sustainability challenges, it will most likely follow a sustainable development pathway automatically.



As financial institutions obviously interact with the world that surrounds them, it quickly becomes clear that questions related to the interplay between sustainability challenges and finance must be of relevance.

## *Understanding “Finance”*<sup>33</sup>

### **Asset Management and Investment Advisory**

Often, in discussions surrounding sustainable finance, both practitioners and academics place considerable emphasis on sustainable *investment*.<sup>34</sup> This emphasis is surprising, as it is not clear that this area offers the most effective sustainable finance strategies. Sustainable *investment* strategies are mostly executed in secondary markets, i.e. those in which investors buy and sell securities that are already in circulation (see Fig. 1).<sup>35</sup> In such transactions the companies which initially issued the securities do not receive any new cash.

Without doubt, sustainable investment strategies matter. An investor might—or even should—aim to (a) mitigate financially material risks, (b) avoid benefiting from controversial business practices applied by companies that infringe international standards, and (c) be an active owner who engages with companies on questions related to their sustainability performance. Additionally, investors use sustainable investment strategies to (d) aim for better returns and/or (e) align investments with certain values or priorities.

That said, sustainable *finance* strategies should pay more attention to all lines of business at the heart of financial institutions’ operations. Particularly interesting are those in which financial institutions establish direct relationships with corporate clients. Through the financial products and services they provide, the former become key enablers<sup>36</sup> of most of their clients’ business activities.<sup>37</sup>

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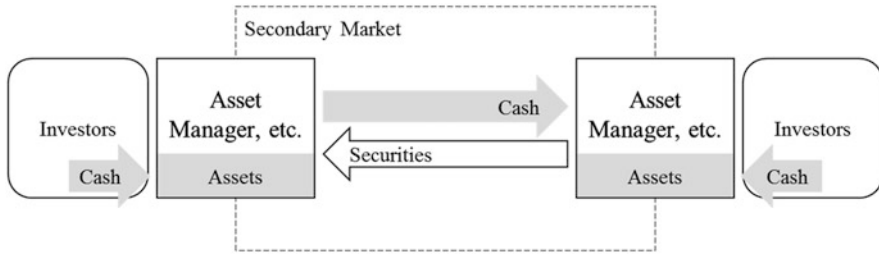
<sup>33</sup>We thank Dr. Benjamin Wilding, Managing Director Finance and Teaching at the Department of Banking and Finance, University of Zurich, for reviewing section “Understanding “Finance””.

<sup>34</sup>The forthcoming publication briefly mentioned above will provide a quantitative analysis of this observation.

<sup>35</sup>Sustainable investment strategies focus not only on securities issued by companies, but also on those issued by other organizations, such as municipalities and government entities. In addition, such strategies span multiple asset classes that range from sustainable real estate to microfinance.

<sup>36</sup>This is the case for both banks and insurers. This statement is derived from one made in a report published by the CRO Forum, a risk management think-tank that primarily represents European multinational insurance companies (CRO Forum 2010).

<sup>37</sup>This section focuses on business with corporate clients, as it is here that financial institutions are most directly linked with those companies that are at the root of sustainability challenges. Conversely, corporate clients may also have the means to address sustainability challenges.



**Fig. 1** Asset management and investment advisory are the lines of business in which sustainable investment strategies are applied. Financial institutions sometimes trade on their own accounts, but mainly act as intermediaries that manage their clients' assets, provide advice to them, or simply execute their clients' instructions. As stated above, investments are generally made on secondary markets, which are significantly larger than primary markets, i.e. those on which securities are sold to investors for the very first time (see Fig. 3). In secondary markets investors sell securities to—and buy them from—other investors

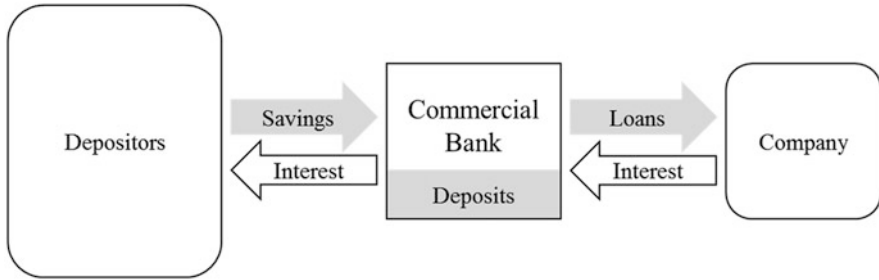
Therefore, when formulating sustainable finance strategies, the following lines of business<sup>38</sup> should receive the same level of attention as asset management and investment advisory:

1. Lending, e.g. real estate and commercial lending, export finance, commodity trade finance, syndication, project finance, and Lombard lending to operating companies in private banking;
2. Underwriting, e.g. equity and debt underwriting, for both public and private placements;
3. Trade finance, e.g. letters of credit and guarantees;
4. Advisory, e.g. M&A and risk engineering services; and
5. Corporate insurance, e.g. property and casualty.

## Lending

One of the key functions of *banks* is to help companies to secure the funds they need to operate and grow their businesses. Not all companies raise cash from financial institutions. If they do, most of them take a loan from a commercial bank (see Fig. 2). The bank functions as an intermediary between entities that deposit cash and those that borrow it. When discussing the roles and responsibilities of banks in the context of sustainability challenges, it should be remembered that companies meet an important share of their financing needs by themselves, for example with their retained earnings. Banks are just one additional, yet still important source of funding. In most cases cash is provided for *general corporate purposes*, and not for specific

<sup>38</sup>For banking, the lines of business are derived from the example mapping of business lines that was provided by the Basel Committee on Banking Supervision in a consultative document in 2001 (BCBS 2001). For insurance, the lines of business are derived from the CRO Forum publication mentioned above (CRO Forum 2010).



**Fig. 2** Lending. Banks match those clients, both private and corporate, who want to safely deposit spare cash, with clients who need it. The bank retains some of the deposits to make sure that it has sufficient liquidity to serve those clients who withdraw money from their bank accounts. The bank charges a higher interest rate to those who borrow money than they offer to those who deposit it. The bank earns money from this interest rate spread, as well as from fees

projects. This makes it more difficult for banks to assess risks related to sustainability challenges.

### Underwriting

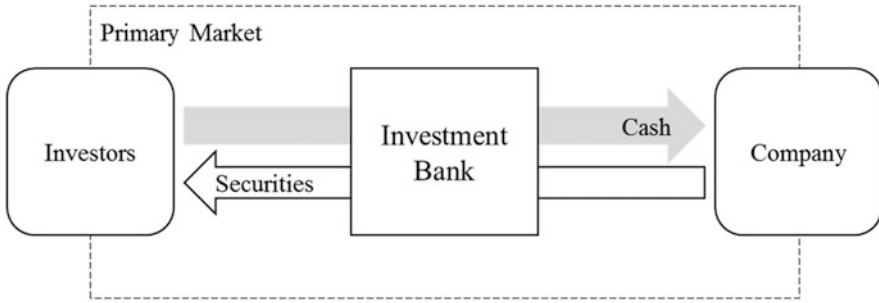
If a company is large enough it can also raise cash from investors directly (see Fig. 3). In such a transaction the bank, normally an investment bank, functions as a matchmaker between the company that needs cash and investors that want to invest in newly issued securities, both equity and debt.

### Trade Finance

Another important role of *both banks and insurers* which has not yet received the attention it deserves<sup>39</sup> is their facilitation of global trade and business through their trade finance departments. Jaeggi and Santos (2015) observed:

Trade finance is an important cog in the global economy. The World Trade Organization (WTO) estimates that 80–90% of world trade relies on trade finance. Trade finance is conducted primarily by commercial banks and insurers, which support importers and exporters, as well as traders, in a number of ways: by issuing letters of credit or other guarantees such as performance bonds, and through short-term lending to cover transaction costs, such as when commodities are being shipped from sellers to buyers. Depending on the type of trade finance transaction, reputational risks and (less likely, but not impossible) liability risks [for the financial institution] exist at several levels. These levels include the good itself (e.g. asbestos fibers, which are banned in many countries), the conditions under

<sup>39</sup>An exception is the work of the Banking Environment Initiative (BEI) on a sustainable shipment letter of credit, which aims to create solutions to integrate “sustainability standards associated with individual commodities [...] into Letters of Credit”; see CPSL (2014).



**Fig. 3** Underwriting. This is one of the key functions of investment banks, which match companies and other organizations, such as municipalities and governmental entities, that need cash with those individuals and organizations that are seeking investment opportunities. Usually, this happens in private placements or in capital market transactions, i.e. those in which a company issues a security that is bought by investors on the primary market and eventually traded on secondary markets. In such transactions the investment bank earns money from fees

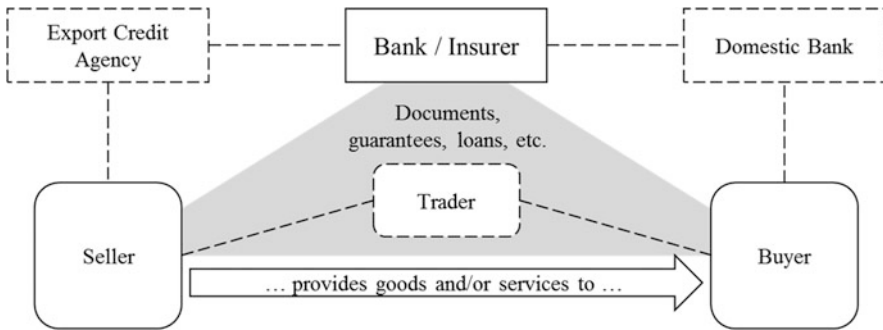
which the good has been produced (e.g. palm oil from non-certified sources), the means of transport (e.g. crude oil spills that result from ship, rail or truck accidents during shipping), and the purpose for which the good is to be used (e.g. equipment used in controversial projects). Even when there is no good involved, risk may still be present—for example, with a performance bond related to the construction of a controversial project.

A wide variety of trade finance products exist, which is why Fig. 4 is rather generic.<sup>40</sup> In sum, financial institutions play an important role in facilitating global trade. Some of these transactions might be linked to goods or companies (both producers and purchasers of goods and services) that are linked to sustainability challenges.

### Advisory

*Both banks and insurers* also provide advice to their clients. In the advisory segment, banks primarily help their clients to acquire or sell business entities or other assets such as real estate. They also advise them during mergers. Insurers help clients to prevent losses with risk engineering services. (No figure is given owing to the simple nature of this relationship.) With advisory services, financial institutions support their corporate clients in operating and growing their businesses. The importance of this relationship is in its nature: during the advisory process, the financial institution gains significant insights into the client's business practices. This creates the chance to identify and to address both risks and opportunities related to sustainability challenges.

<sup>40</sup>For an introduction to the financial products and services used in international trade see (Platt, n. d.), for example.



**Fig. 4** Trade Finance. The client of the financial institution is a trader, a seller, or a buyer of goods and/or services. In some transactions the seller and the buyer enter into a direct business relationship and no trader is involved. In some transactions other banks and/or export credit agencies are involved. Depending on the type of product, a loan forms part of the transaction. Loans are necessary in commodity trade finance transactions, for example, when a bank provides a loan to a trader who purchases goods from a seller, ships them, and then sells them to a buyer. In such a transaction the good serves as collateral. Other products are documents or guarantees, such as payment guarantees

### Corporate Insurance

*Insurers* help companies to manage their risks, including the risks of projects in which they are engaged. The crucial role of insurance is often neglected in the sustainable finance context. In comparison to banks, insurers play a similar, and perhaps even more important role as enablers of business.<sup>41</sup> Jaeggi (2013) observed:

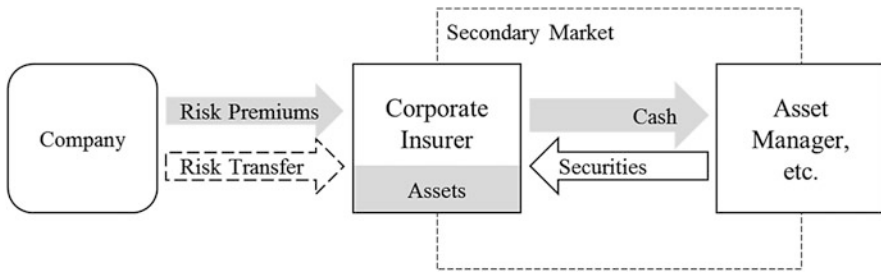
It is likely that most projects (...) that are financed are also insured. In some cases, having the appropriate insurance can even be a prerequisite for credit. Both banks and insurance companies acquire comparable insights into the activities of their clients. They both tend to have long-lasting business relationships with them. Both also have a strong interest in truly understanding the risks of their clients. As with banks, the clients’ risks are likely to translate into business risks for the insurer.

Figure 5 illustrates the two key functions of insurers: risk underwriting and investment.

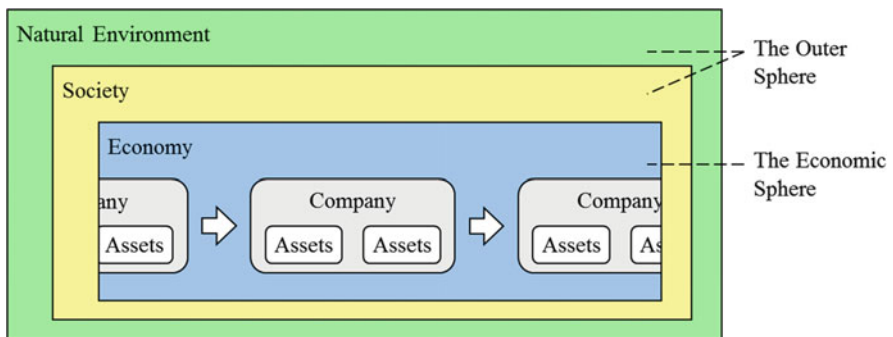
### *The Interplay Between “Sustainable” and “Finance”*

Figure 6 depicts a simple model of the world. Companies that own assets (such as mines, production facilities, and office buildings, for example) are connected through value chains. They form part of the economy, which can be seen as a subset

<sup>41</sup>This paragraph is derived from Jaeggi (2013).



**Fig. 5** Corporate insurance. Insurance companies usually have two revenue streams. In exchange for premiums, corporate clients can transfer some of their risk to the insurance company. The insurer will then pay for damage and loss should they occur. Insurers can do this as they can pool risks more widely. Similar to banks, insurance companies enable their corporate clients to operate and grow their businesses. In addition, insurers generate revenues by investing some of the premiums they collect in assets such as real estate or securities. Through their investments, insurers are linked to sustainability challenges, just like any other investor (see Fig. 1)



**Fig. 6** A simple model of the world (I). Companies that own assets are connected through value chains that form part of the economy. The economy is a subset of society which is embedded in the natural environment. The five elements can be separated into two concentric but intermingled spheres. The sustainability challenges discussed in the context of this paper first materialize in the outer sphere that consists of the natural environment and society, but are affected by—and may affect—the economic sphere which contains companies and the assets that they own

of society. Society is embedded in the natural environment and depends on its ecosystem services.<sup>42</sup>

When looking at the two spheres, the following observations can be made:

- The initial understanding of sustainability (long-term financial stability) primarily concerns the economic sphere. However, in this sphere we must ask whether or not sustainability, in the sense of longevity, is even *wanted*. Of course, it is best to avoid major disruptions in the economy. Nevertheless, many economists believe that companies and sectors that have become obsolete need to fail so that

<sup>42</sup>See section “A Second Understanding Emerges”.

resources are freed up for new innovations—a process Joseph Schumpeter<sup>43</sup> called “creative destruction.”

- When discussing sustainable development, the discussions primarily focus on the outer sphere, and on how the sustainability challenges that are observed in the outer sphere might affect or be affected by the economic sphere and the entities it contains.
- There is a difference in the expertise needed to tackle economic challenges and sustainability challenges: expertise gained in business schools and economics departments is required to work towards longevity in the economic sphere. The sustainability challenges in the outer sphere require new and non-traditional sustainability expertise, which is often interdisciplinary and spans natural and social sciences.

Sustainable finance should therefore not be understood as addressing challenges related to the longevity of the financial sector itself. These challenges should be looked at through the lens of *financial sustainability* or *financial stability*. Although interdisciplinary approaches will likely help to advance the related research, this ultimately requires the involvement of experts with a thorough finance background.<sup>44</sup>

There are, however, commonalities between the two sustainability concerns in the financial sector, between the prudent management of environmental and social issues (focusing on the outer sphere and sustainability challenges) and the stability of the financial system itself (focusing on the inner sphere and economic challenges). There are conceptual and normative overlaps, particularly in the long-run, as well as common objectives, such as maintaining a stable basis for long-term economic growth. Still, the scope of sustainable finance must be clearly defined to avoid confusion and make it easier to design the corresponding strategies. Furthermore, effectively addressing sustainability challenges might not necessarily require a financial sector which consists of today’s incumbents and structures.

In short, according to the definition put forward by this paper, sustainable finance should address the *interplay between the financial sector and sustainability challenges*. It can then be understood as a collective concept that encompasses sustainable finance strategies, i.e. strategies that aim to mitigate the risks and benefit from the opportunities that exist and emerge from this interplay.

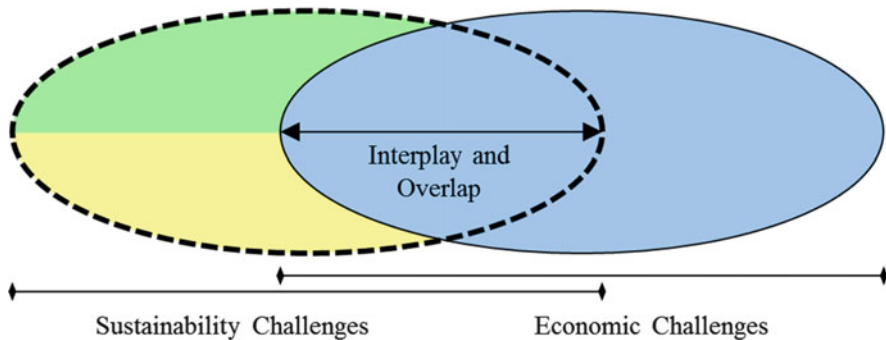
Figure 7 illustrates the scope on which sustainable finance should focus: the areas in which sustainability challenges and economic challenges are interconnected and overlap are those where material financial risks are attached to sustainability challenges. Addressing them will likely require interdisciplinary approaches. Note that sustainability challenges which do *not* present material financial risks still require

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<sup>43</sup>For example, see Perelman (1995) or Diamond (2006).

<sup>44</sup>For example, Naifar (2014) who uses “sustainable” in its traditional meaning when discussing approaches towards “a more sustainable financial system”, or Anderson (2015) who explores the role of banks in society and the economy, without addressing the sustainability challenges discussed here.

## The Scope of Sustainable Finance



**Fig. 7** How sustainability challenges and economic challenges overlap. Sustainable finance should focus on addressing sustainability challenges and the economic challenges that are connected with them. Note that addressing both of these often involves normative and ethical questions, not just financial ones

attention, one reason being rapidly evolving regulatory expectations in relation to *responsible business conduct*.<sup>45</sup>

### *The Role of Financial Institutions in Sustainable Finance*

As defined above, sustainable finance can be understood as a collective concept that encompasses sustainable finance strategies—strategies that aim both to mitigate *risks* and to benefit from *opportunities*. Why these risks and opportunities matter to financial institutions was discussed briefly in section “Why Sustainable Finance Strategies Matter”.

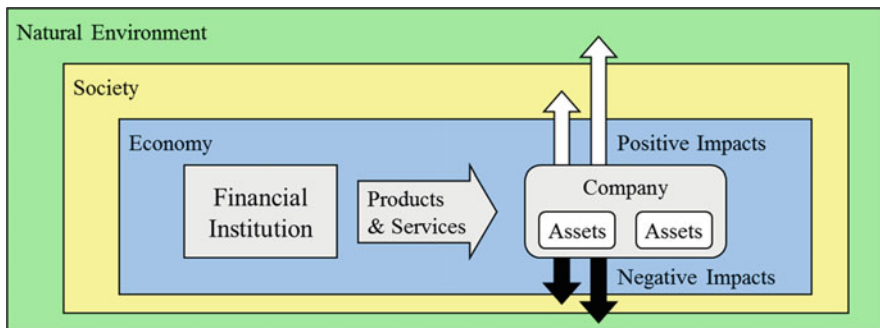
### **Risks Related to Sustainability Challenges**

In Fig. 8 we introduce a financial institution into the simple model of the world presented above. The financial institution offers products and services to a corporate client.<sup>46</sup> In common with all companies, the client will probably have certain

<sup>45</sup>For example, see Jaeggi and Webber Ziero (2016). Although the article discusses the regulatory expectations that investors face, the same expectations are valid in any other line of business where there are direct relationships between financial institutions and clients.

<sup>46</sup>Financial institutions also purchase goods from companies. Although suppliers are often covered by a financial institution’s sustainability management system, supplier relationships are normally not an element of sustainable finance because (a) financial institutions have supplier relationships that are comparable to those of other industries and, (b) the relationships are not characterized by financial products or services.





**Fig. 8** A simple model of the world (II). The model now includes a financial institution which provides financial products or services to companies. All companies have—to some extent—positive and negative impacts on society and the natural environment

positive and certain negative—or even detrimental—impacts on society and the natural environment.<sup>47</sup>

When clients are linked to controversial issues, risks emerge for the financial institution. Following Jaeggi et al. (2015), we refer to issues as “controversial” when they are associated with detrimental (negative) environmental and social impacts. In the context of risks, Jaeggi et al. (2015) describe this relationship as follows<sup>48</sup>:

Some of these clients are associated with controversial business practices (e.g. illegal logging), sectors (e.g. the defence industry), projects (e.g. large dams), and/or countries (e.g. autocratic regimes). [...] the adjective controversial [is used] as a general term to describe business practices, sectors, projects, and/or countries that are—directly or indirectly, allegedly or actually—associated with detrimental environmental and social impacts.

Controversial issues are often summarized under the term “environmental and social” (E&S) issues. The term “social” normally also covers issues related to labor standards and human rights. In sustainable investment strategies in particular, E&S issues are often combined with additional non-traditional issues under the umbrella term “environmental, social, and governance” (ESG) issues. The “G” component may be corporate in nature (e.g. poor corporate governance) or refer to national-level issues such as sociopolitical instability.<sup>49</sup>

<sup>47</sup>This is also true of financial institutions, but the focus of sustainable finance is on the positive and negative impacts to which financial institutions might be linked through their own investments and the financial products and services they provide to clients.

<sup>48</sup>Jaeggi et al. (2015) focus on investment banks. For the purposes of this article, the concepts and wording have been adapted to include other lines of business. Some of the following paragraphs in this section are also derived from this article.

<sup>49</sup>When working with corporate clients in banking and insurance, in contrast to asset management and investment advisory, *governance* issues have traditionally been assessed in compliance (e.g. money laundering), in risk management (e.g. corporate governance), or in political risk teams (e.g. crisis potential). Consequently, at least in banking, the term E&S is still more common (as in “environmental and social risk management”).

E&S—or ESG—risks are those that occur when financial institutions are exposed to sustainability challenges. In this paper we describe them as *risks related to sustainability challenges*. There are at least two main sources of such risks for financial institutions:

- They occur when financial institutions provide financial products or services to companies that are associated with controversial issues. When financial institutions do not appropriately identify and assess these issues at the level of client relationships, they can expose themselves to multiple financial risk categories, such as credit risk, underwriting risk, investment risk, operational risk (including legal risk), and reputational risk. Jaeggi et al. (2015) describe the business case for managing such risks as follows:

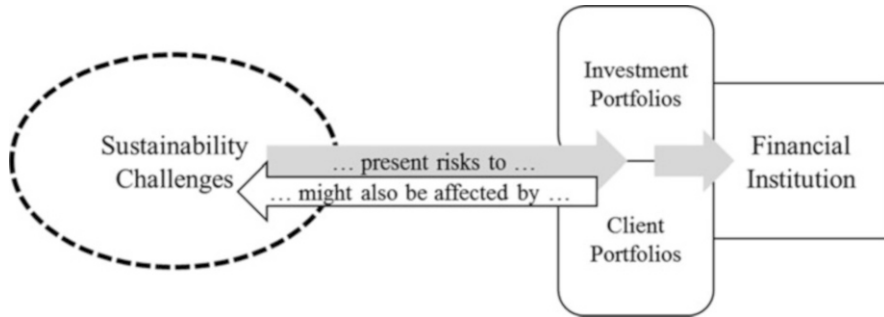
[First,] the risks a client is exposed to can translate into risks for the financial institution [. . .], such as credit risk. Imagine a firm operating a mine in Latin America that loses its operating license because it does not meet the expectations of the regulator. Second, the business case also builds on the assumption that financial institutions expose themselves to risk if they engage in business relationships with entities that disregard (voluntary) minimum environmental and social requirements. Such requirements have been defined by supranational and multilateral institutions such as the World Bank Group (e.g. the IFC Performance Standards), the United Nations (e.g. the 10 principles of the UN Global Compact), and the OECD (e.g. the OECD Guidelines for Multinational Enterprises). Other minimum requirements are defined by voluntary initiatives, often driven by non-profit organizations or by sector associations (e.g. the Roundtable on Sustainable Palm Oil, or the Equator Principles).

- Through their client relationships, financial institutions are also exposed to risks *which result from* sustainability challenges, such as the economic and political implications of climate change.

Figure 9 illustrates this interplay between sustainability challenges, financial institutions, and their clients. In short, clients expose the financial institutions they work with to risks, by linking them either (a) to the controversial issues that they themselves cause or are linked to through their business activities, or (b) to the financial risks to which the clients are exposed (by increasing credit risk, for example). These two sources of risk can also occur simultaneously, especially if the controversial issues present material financial risks to the client and therefore to the financial institution.

Jaeggi et al. (2015) describe how five drivers are making it increasingly necessary for financial institutions to address these risks more actively<sup>50</sup>: (a) the growing materiality of sustainability challenges (b) influences how these challenges are perceived by the public and, therefore, influences expectations of financial institutions. (c) Greater transparency, (d) new and stricter minimum requirements, and

<sup>50</sup>Although Jaeggi et al. (2015) focus on investment banking activities, the same drivers affect the risk landscape of other lines of business in the financial sector. For information on legal pressure points see, for example, Berkey (2016).



**Fig. 9** Risks related to sustainability challenges. The arrows illustrate how sustainability challenges present *risks to financial institutions*—primarily through the companies in which they invest (investment portfolios) or through the companies to which they provide financial products and services (client portfolios). They also show how, simultaneously, *sustainability challenges might also be affected by the activities of these companies*. Note that the focus here is on the links between financial institutions and their corporate clients. Other entities may also cause negative impacts that contribute to the causes of sustainability challenges. Such client segments may cover a variety of entities, such as private individuals, municipalities, and governments. While much attention is paid to the risks that sustainability challenges present to financial institutions, it is often forgotten that financial institutions are also linked to a variety of client segments that have significant adverse impacts, and therefore are at the root of sustainability challenges. These impacts in turn create risks for the financial institutions themselves

(e) advances in business practices, particularly those by peers, further increase the need to act.

### Opportunities Related to Sustainability Challenges

Sustainability challenges are associated with huge investment needs that also present growth opportunities for financial institutions. Examples, which also illustrate the variety of the issues concerned, include: (a) climate change mitigation: for the period through to 2035, the IEA estimates the cumulative investment needed to keep the world on a path that could limit global warming to 2 °C at USD 53 trillion<sup>51</sup>; (b) nature conservation: Credit Suisse, McKinsey, and WWF estimate the annual funding gap at USD 200–300 billion<sup>52</sup>; (c) infrastructure in developing countries: the WEF estimates the annual investment gap at USD 1 trillion<sup>53</sup>; (d) food security: UNCTAD estimates the annual investment gap for the 2015–2030 period at USD 260 billion in the developing world<sup>54</sup>; (e) women-led SMEs in emerging

<sup>51</sup>See OECD/IEA (2015).

<sup>52</sup>See Credit Suisse et al. (2014).

<sup>53</sup>See World Economic Forum (2016).

<sup>54</sup>See UNCTAD (2014).

markets: an IFC report estimates the global credit gap for this underserved market at USD 206–320 billion<sup>55</sup>; (f) universal access to schooling: UNCTAD estimates the annual investment need at USD 80 billion (see footnote 55).

Although it is unlikely that all of these funding needs can be served by the private sector, some will be. As a result, sustainability challenges present vast investment opportunities to financial institutions—and their clients—because they can help shape the corresponding markets and bring appealing products and services to those markets.<sup>56</sup>

In addition, financial institutions can create positive impacts by working or engaging with organizations that have the capacity to influence sustainability challenges, whether positively or negatively. Companies that create positive impacts can be supported by helping them to further increase such impacts. Companies that create harm can be supported to help them address these impacts, which might in turn mitigate the reputational risks to the partner financial institutions.<sup>57</sup> Such strategies might also allow new business opportunities to be created.

And last but not least, financial institutions can create value for their clients when supporting them in navigating the risks and opportunities that result from sustainability challenges.

## Conclusions and Questions for Further Research

This section summarizes the takeaways from this paper. For each takeaway, a set of questions is proposed that aims to advance academic research in the field of sustainable finance. Although this paper provides initial answers to some of the questions, all of them require further study.

(A) As outlined in the first two sections, sustainable finance has displayed impressive momentum, but humanity is still on an *unsustainable* development path.

- How can the achievements of sustainable finance be better understood? What methods can be used to measure and communicate the effects and benefits of sustainable finance strategies? Is it true that they have not been effective

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<sup>55</sup>See International Finance Corporation (2011).

<sup>56</sup>Credit Suisse, for example, has been working with several partners to shape a market that makes it easier to invest in nature conservation, see Credit Suisse et al. (2014) and Credit Suisse and McKinsey (2016). Roughly a decade ago, Credit Suisse had a similar role as market innovator when it helped to create the opportunity for investors to access microfinance markets.

<sup>57</sup>Engagement is also in line with current approaches to addressing human rights risks. One change in paradigm that the UN Guiding Principles on Business and Human Rights brought along is that a company should not just walk away from a business partner when it observes that it is linked to human rights violations. Instead, the company is expected to first try to help remedy the situation and, if necessary, to increase its leverage, by joining forces with peers and regulators, for example. See Human Rights Council (2011) and Jaeggi (2014).

enough? Have they become more effective over time? How effective can they be?

- What can the financial sector realistically achieve in the context of sustainability challenges? What are the goals for which sustainable finance strategies should aim?

(B) We have outlined three reasons that financial institutions should ask themselves how they can increase the effectiveness of sustainable finance strategies: firstly, they face risks related to sustainability challenges. Secondly, they are also linked to many of the activities that are at the root of sustainability challenges. This presents both risks and opportunities. Thirdly, sustainability challenges also promise significant revenue opportunities. Actively shaping the corresponding markets presents growth opportunities and may avoid other players dominating these markets.

- Are these valid reasons? Are there other reasons? To what extent and on what grounds can such action be expected from financial institutions? To what extent is such action in their interest?
- How can the risks and opportunities that sustainability challenges present to financial institutions be better understood and measured? How can these risks and opportunities be effectively communicated to financial institutions, their clients, investors, and/or regulators?
- Can the limited effectiveness of sustainable finance strategies be explained by the observation that sustainable finance strategies are mainly implemented by (a) innovative, but ultimately small players and (b) large, but ultimately few leading financial institutions? How important is it that a larger number of financial institutions adapt sustainable finance strategies? How can this be achieved? Will voluntary initiatives be sufficient or should regulators take a more active role? Will more regulation in the field of sustainable finance be effective? Would it create negative incentives and/or adverse implications?

(C) From the paper we derive four tactics to work towards more effective sustainable finance strategies. The first is to foster a broader and more precise understanding of the term “sustainable finance.” This paper proposes sustainable finance as a collective concept that encompasses *sustainable finance strategies*. These strategies aim to mitigate the risks and benefit from the opportunities that exist and emerge from the interplay between sustainability challenges and finance.

- Is this understanding helpful and practical, for both academics and practitioners? How can it be developed further? How can the scope of sustainable finance be defined clearly?
- How can sustainable finance strategies which are more effective in addressing sustainability challenges be identified?
- How can financial institutions collaborate with peers and other actors to create markets and regulatory environments that will make sustainable finance strategies more effective?

- (D) The second tactic is to focus on sustainability challenges. This because of their urgency and complexity, but also based on the assumption that appropriately responding to current and future challenges is sufficient to preserve a global system that provides a stable basis for long-term economic growth.
- Is this tactic reasonable? If so, on which sustainability challenges should the financial sector focus and where do financial institutions find effective instruments?
- (E) The third tactic is linked to the need for broader and more integrative approaches to sustainable finance strategies. More attention should be paid in particular to the lines of business in which financial institutions *maintain direct relationships* with (primarily corporate) clients.
- How can the effectiveness of sustainable finance strategies be measured, and how can they be compared across different business lines? Where is there most room for improvement?
  - Which sustainable finance strategies are currently in place for the different lines of business? What is best practice in those different lines of business? How effective are they in (a) mitigating risks for financial institutions and their clients, (b) reducing the causes of sustainability challenges, and in (c) creating positive impact in relation to sustainability challenges?
- (F) The fourth tactic is to address the “wicked problems” that sustainability challenges present (see section “Addressing Sustainability Challenges”) with interdisciplinary work and research, and an intensive dialogue between academics and practitioners.
- How can different research methods (e.g. quantitative and qualitative) and concepts from different areas of expertise (e.g. economics, environmental sciences, law) be combined to contribute to more effective sustainable finance strategies? On which questions should they work together?

This paper set out to provide initial answers to the question of what sustainable finance is? Firstly, sustainable finance is about financial institutions addressing the risks and opportunities related to sustainability challenges such as climate change, water scarcity, and other systemic problems. At this point it is unclear whether sustainable finance has been able to move the needle. However, effectively addressing these challenges is in the interest of financial institutions.

Secondly, sustainable finance is more than sustainable *investing*. Currently, researchers and practitioners often limit their focus to asset management. There is great potential in opening up that scope. Sustainable finance strategies should cover all lines of business, particularly those in which financial institutions establish direct client relationships. This might give financial institutions greater insight, with the corresponding potential to influence the business practices of clients and industries.

Thirdly, sustainable finance is about linking the economic viability of the economy to the viability of its social and environmental surroundings. Financial institutions have a responsibility, and an incentive, to monitor and understand the

corresponding connections. In practical terms, sustainable finance is about identifying ways to mitigate risks that emanate from sustainability challenges, at the individual company level, at the portfolio level, and also at the broader societal level. Equally, sustainable finance is about profiting from innovative solutions to sustainability challenges, particularly the scaling of those solutions and the creation of market mechanisms that foster them.

Taken together, the field of sustainable finance holds great potential to generate positive results for both financial institutions and the planet.

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# Could a 100% Portfolio Beat the Market?



Lukas Immervoll and Margarethe Rammerstorfer

## Introduction

Over the last 10–15 years an increasing number of investors, institutions, and foundations changed their views on earning the appropriate risk return reward, as they do no longer solely care about financial returns, but rather try to “do good while doing well” (Brest 2013) which is often summarized under the term social finance. Its origins trace back to corporate social responsibility activities which seeds social consciousness in the minds of CEOs, investors, and other professionals. Nowadays, the positive benefits from CSR activities are well accepted and common practice. However, for social investments this does not necessarily hold true.

Current social impact investors are still primarily philanthropic investors who wish to create social benefits while earning moderate returns (Emerson 2003). Ethical or socially responsible investing (SRI) strategies intend to generate both, a social and an economic value, by investing directly or indirectly in firms or funds that create a social and and/or environmental impact. The market for impact investing is still at the outset and constantly grows as investors and institutions perceive the potential of the SRI market and its capabilities to create significant environmental and social benefits, while delivering financial returns. Nevertheless, in the literature is still an ongoing debate whether social investments are able to beat or even meet conventional assets.

Hence, the following article contributes to this discussion by analysing the performance of a portfolio consisting of 100% social and environmental indices. Herein, we analyze the following questions in detail:

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- Can a portfolio entirely devoted to generate social and environmental impact (100% portfolio) outperform non-screened conventional benchmarks—even by simple strategies?
- Is a unified impact investment strategy able to create additional value to non-impact investment portfolios by generating a comparable return and beyond that a social and environmental value? Therefore, the article is organized as follows. The next section provides the reader with an overview of the relevant literature. Section “Data” describes the data followed by the model and analysis. The final section draws together the main findings and concludes.

## **Performance of 100% Portfolio**

### *Studies on Fund Performance*

Several studies conducted in the 1990s and in the early 2000s have examined the performance of SRI investments in the US, UK and other European countries. Among others, the studies by Hamilton et al. (1993) and Mallin et al. (1995) looked at the performance of socially screened investments. While the former examined investment funds in the US, the latter concentrated on the UK ethical screened investment market. Both studies compared risk-adjusted returns of socially screened mutual funds with non-screened funds and found that the market is not pricing the social screening of investable companies properly. UK ethical funds show a lower mean return compared to the market, but out-perform conventional mutual funds when considering Jensen’s alpha, Treynor measure and Sharpe Ratio. The findings of Mallin et al. (1995) confirm the results of an earlier study on the same market and conducted by Luther et al. (1992) who also discovered a weak evidence of out-performance of ethical funds in the UK. Several years later, Gregory et al. (1997) extended this analysis by applying a two-factor model to overcome the small size effect of UK Ethical Unit Trusts and observed indications of an underperformance compared to conventional trusts. As a consequence, they suggested the use of small cap benchmarks for the evaluation of Ethical Trust returns. The authors further recognised no significant impact of the book-to-market factor on the returns of UK stocks. These results were also confirmed by the Dutch market by Scholtens (2005) who considered Carhart’s multi-factor model on Dutch socially responsible investment funds. In a more recent study Gregory and Whittaker (2007) applied the Treynor-Mazuy test. For this they refer to a conditional model to test for market timing skills and time-varying performance of ethical UK Trusts. They concluded that ethically screened funds show no significant under- or over-performance compared to their conventional benchmarks.

In opposite to the country specific studies mentioned above, Kreander et al. (2005) examined the performance of ethical funds in more than one country. They investigated ethical screened funds in seven European countries with respect to performance and risk measures. By applying a matched pair wise analysis which

uses four matching criteria (age, size, country and investment universe) they show that socially screened funds can have the same returns as conventional funds and do not inherit greater risk than their non-screened counterparts. However, the study, detected a non-significant inferior market timing ability of ethical fund managers, which might be explained by diverse investment decisions and longer time horizons of investments. Bauer et al. (2005) analyzed 103 social investment funds from the US, UK and Germany. With respect to Carhart's four-factor model they compared portfolios of socially screened funds with portfolios of non-screened funds in each country. Furthermore, they applied a conditional model of performance evaluation which includes publicly available information to respond to time-varying factor sensitivities that occur in dynamic investment strategies of investment funds. The results display a small (not significant) underperformance for US and German funds and an over-performance of UK funds, yet the results are not statistically significant. Interestingly, they detected that German and UK funds are more invested in small cap companies compared to their conventional peers, whereas the US funds are tilted to large market cap stocks. Bauer et al. (2007) and Cortez et al. (2009) applied a conditional model to evaluate time varying risk measures for SRIs from Canada and Europe, respectively. For the Canadian SRI market no significant difference in the performance of ethical funds and conventional funds can be found. Instead, Cortez et al. (2009) studied European social funds from seven European countries that invested globally or in the EU. The authors considered 88 socially invested funds and distinguished three groups regarding their investment universe: Globally, European, and European Balanced. In line with previous studies, they confirmed the neutral fund performance. However, quite astonishing in both studies ethical/socially responsible investment funds show a higher correlation with conventional benchmarks than with ethical market indices. Nofsinger and Varma (2014) have recently assessed the financial performance of SRI mutual funds during the financial market crises. The study demonstrates that social responsible investment funds seem to provide investors with a downside protection during recessions.

### ***Studies on Bond Performance***

Another research strand deals with the performance of SRI bond indices. One of the first studies addressing the performance development of SRI bond portfolios is Hutton et al. (1998), who constructed a portfolio of corporate bonds of all companies included in the Domini 400 Social Index and compared it to a conventional benchmark. They ascribed the findings to modest higher returns and duration towards the premium for credit and interest rate risk as their portfolio was tilted towards BBB rated bonds. Goldreyer et al. (1999) measured the performance of SRI bonds and balanced investment funds. They had a look at Jensen's alpha and the Treynor ratio and detected no significant abnormal performance of either bond or balanced funds. D'Antonio et al. (2000) created different portfolios of the Domini 400 Social Index

and an SRI bond index using various asset allocations. They inferred that the socially screened portfolio had a superior performance compared to the non-screened portfolios throughout all asset allocations. Fernandez-Izquierdo and Matallin-Saez (2008) considered the Spanish ethical investment market. They examined a set of 13 mixed SRI bond funds using multi-factor models with style analysis and the bootstrap method for homogenous groups. They came up with no significant differences in the performance of SRI funds compared to conventional fund performance. Derwall and Koedijk (2009) extended the research on SRI bond fund performance by looking at US fixed income funds. They applied various multi-factor models to explain bond returns introduced earlier by Elton et al. (1995). The unconditional models contain stock and debt market variables as well as macroeconomic factors e.g. the term structure. The authors extended the five-factor model to a seven-factor model by considering changes in the annual inflation rate and in industrial production. In a third setting they account for errors in the explanation of alternative passive fixed income returns by adding two statistical factors which they derived from a principal components analysis. They found a significant underperformance of fixed income SRI funds in comparison to a set of benchmarks. Instead, balanced funds show a negative performance, which is not statistically significant.

Most recently, Leite and Cortez (2016) compared the financial performance of British, French and German SRI fixed income and balanced funds. The obtained results are diverse, while SRI bond funds in France and Germany tend to be neutral or slightly out-perform their conventional peers, British SRI bond funds experience a significant underperformance. Balanced SRI funds exhibit no abnormal performance compared to conventional balanced funds. They further investigated the performance during expansion and recession periods. During expansion periods funds from all three countries significantly underperformed the market, while German and French bond funds matched the market returns during recessions. The results invert when considering balanced SRI funds. The neutral performance of French and German funds during expansions diminishes, while the returns of balanced funds from Britain improved. The comparison of SRI bond and balanced funds against their conventional counterpart revealed evidence that German SRI fixed-income funds out-perform conventional bond funds during recession and expansion periods.

### *Studies on Index Performance*

In contrast to the large amount of studies dealing with the performance of ethical investment funds, only a few studies deal with the performance of ethical equity indices. In opposite to the performance of actively managed investment funds, indices do not exhibit the market timing effect of the fund managers thereby provide a more revealing insight into the performance of social responsible investments. DiBartolomeo and Kurtz (1999) and Statman (2000) refer to the Domini 400 Index for their studies. The former showed that return deviations are effected by the exposure to the overall economy and sector. Their results suggested that social

responsible indices do not display an under- or over-performance due to a socially screened investment universe. Statman (2000) identified a neutral performance of the DSI compared to the S&P 500. Garz et al. (2002) examined the DJSI Index and detected a significant small over-performance of the social index compared to a conventional benchmark. These findings were not confirmed by more recent studies as for example Schröder (2004) and Le Maux and Le Saout (2004) who compared the performance of multiple SRI indices with their conventional counterparts and observed a minor underperformance for some SRI indices, yet there is no significant proof of a distinct performance to conventional market indices. Sauer (1997), for example, examined the effect of social screenings on the performance. For this, he compared the returns of the Domini 400 Social Index (DSI) with two conventional market indices. He did not detect significant evidence of effects traced back to screening when performance is considered. In another study, Schröder (2007) recognized that SRI indices inherit a higher risk than non-ethical indices by using a multi-equation system. In Consolandi et al. (2009), the authors looked at the performance of the DJSI and examined the returns of single stocks after exclusion or induction to the SRI index and observed negative and positive abnormal returns, respectively.

The majority of the studies trace back to the beginning of the social responsibility movement. The growing demand for social impact investments in the last decade has increased the supply of social/ethical investment funds providing more and longer return series for performance analysis. In the following we will base our analysis on the model developed in Schröder (2007). In opposite to this study, we refer to more than 100 SRI Indices worldwide with a time horizon up to 10 years. From this, we construct both, single asset and multi-asset portfolios of indices to imitate an investment portfolio that is 100% invested in SRI investments. The procedure for this is aligned to D'Antonio et al. (2000).

## Data

The sample considered here includes 69 equity indices and 8 fixed income indices. The equity indices have been constructed and published by 23 different companies. The fixed income indices are distributed by five different suppliers. From the MSCI Global Index Series are seven indices used, three are from the World Index Series and one is from All World Index Series. S&P Indices included in this study are the Global Clean Energy, Global Economy, the International Environmental and Socially Responsible index as well as the 1200 Fossil Fuel Free Index. Nasdaq offers five indices, Clean Edge Green Energy, Green Economy Global, OMX CRD Global Sustainability, OMX Global Agriculture and OMX Global Water Index. Four Index series of FTSE are combined in this study. The FTSE4Good Global Index, four indices from the Environmental Opportunities Index series, the FTSE ET 100 and the FTSE All World Alternative Energy Index. From the Dow Jones Sustainability Index series, we have incorporated six indices from the World Index

series and one from the MAC index series. ECPI provides eight indices for this study, seven of them are from the Global Index series and the other one is the ECPI World Equity Index. The remaining SRI Indices are distributed by smaller issuers or individual banks. The investment department of Société Générale has constructed three global indices that are included in our dataset. Other indices that are distributed by banks are the ING Socially Responsible Investments Index by Credit Suisse, the Climate Change Index by HSBC. The bank of America/Merrill Lynch and Royal Bank of Scotland have each launched a global renewable energy index. Other indices included in this study are from Wilderhill (3), S-Network (3), Solactive (2), Calvert (2), STOXX (3) and the Global Challenges and Global Compact Index from the stock exchange of Hannover in cooperation with Oekom research. The other five indices considered in this research are DAX Global Alternative Energy Index, Ethibel Sustainability Index, Naturaktienindex, NYSE/Bloomberg Global Solar Energy Index and World Renewable Energy Index (RENIXX).

The fixed income indices are distributed by five different investment companies. ECPI has launched five bond indices both of corporates and sovereign bonds that passed the ECPI ESG Screening. The German index engineering firm Solactive and Bank of America/Merrill Lynch have each issued a green bond index, which invests infixed-income securities that raise capital for projects and activities that support climate or environmental sustainability. S&P has launched together with sustainability investing specialist RobecoSAM the ESG Pan-Europe Developed Sovereign Bond Index that includes sovereign bonds of European countries that have the highest ESG grades. It is also the only index in this study that has its investment universe only in Europe as the index was not expanded until 2015.

Table 14 in the appendix summarizes the information on the distribution company, the investment universe, the length of the time series of the applied SRI equity and fixed income indices.

The 69 equity indices cover four different investment themes, social responsible investment (18), clean and renewable energy (28), environmental social governance (8) and environmental technology (14). In the index selection process the focus was set on a global investment universe, still 40–50% of the index constituents are located in North America. Reasons for that might be that the most developed market for environmental and social investments lies in North America and, especially, in the US.

Most of the SRI indices have a focus on a specific region or market and for that reason were not applicable for this study and excluded. In order to track the performance of indices we require the complete set of return series for the time under consideration. When the history is too short or incomplete, the index's entire performance history is removed from the database. The exclusion of certain indices might lead to survivorship bias which lead to a distortion and overestimation of past index returns (Brown 1992). The nature of market indices can actually help limit this survivorship effect. While underperforming investment fund managers simply close a fund, indices are constructed to display a certain market with possibility to invest.

Underperformance of an index is not only caused by the poor performance of the managers, but rather the covered sectors. Therefore, we expect that this bias may be rather low for indices.

The majority of indices applied in this study are price return indices, only the MAC Global Solar Energy Index and the ING Socially Responsible Investments Index are total return indices. All indices are denoted or converted into USD to assure that currency disparities are not affecting the return series. The risk free rate is the 4-Week US Treasury Bill Rate.<sup>1</sup> Data on the SRI Indices and benchmarks are obtained from Thomson Reuters Datastream and Bloomberg.

In contrast to Schröder (2007), we construct equally weighted portfolios of SRI indices. These portfolios of indices are compared to conventional benchmark indices that cover the same investment universe.

For the index portfolio consisting of equity SRI indices the S&P Global 1200 and the MSCI ACW Index are chosen. The S&P Global 1200 covers around 70% of the global market capitalization and is composed of the 1200 largest companies traded on a stock exchange in. The MSCI ACWI is designed to cover large- and mid-cap companies in both developed and emerging equity markets. It is comprised of 2480 companies. This corresponds to approximately 85% of the global equity market. Both market indices are suitable benchmarks to display the global public equity market and are appropriate to make an accurate point about the performance of SRI indices.

To take into account that the fixed income portfolio comprises sovereign debt and corporate debt securities two benchmark indices have been chosen to cover both sovereign-debt and non-sovereign debt with a focus on global allocation. The Barclays Global Aggregate Index includes sovereign, government-related, corporate and securitized fixed-rate bonds in various currencies from both developed and emerging markets. The second benchmark is the J.P. Morgan Global Aggregate Bond Index. The index captures the performance of investment grade government debt and corporate fixed income securities from developed to emerging countries.

While the indices in the equity and bond portfolios are equally weighted, the balanced portfolio has a somewhat different asset allocation. To attain consistency with weights of balanced portfolios we consider the benchmark composition of the Morningstar Global Allocation Index and the average asset allocation in the market. The Global Allocation Index has an allocation of 60% equities and 40% fixed income securities, which is in consensus with the market average. The balanced portfolio of SRI equity and fixed income indices has been created by equally weighting the returns of all equity indices and let them enter the Portfolio with 60%. The same procedure has been applied to the fixed income indices and assigned them a weight of 40%. The Global Allocation Index comprises global equities and global sovereign and non-sovereign debt.

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<sup>1</sup><https://www.federalreserve.gov/releases/h15/update/> retrieved on 10.05.2016.



## Methodology

The 69 equity indices and 8 fixed income indices are ranked according to the length of the available time series. We then group the indices in three groups regarding three different time horizons: a long period (5/2006–4/2016) a medium time period (5/2011–4/2016) and a short time period (5/2013–4/2016). To be included, an index has to provide a return series at least as long as one of the periods under consideration. Every index with a time series of 10 years or longer is included in all three groups. Indices with a time series between 5 and 10 years are included in the medium and short term group etc. Indices with a time series of less than 36 months are not considered in this study. To counteract a so-called backward-looking bias that often occurs for indices when the publishers are calculating the return series backwards from the introduction date we only included indices that publish return data since their inception. We also capped the return series at 10 years in order to not include indices with a backward calculated time series. We end up with nine groups three equity groups, three bond groups and three groups of a balanced returns portfolio that consists of a mix of equity and fixed income returns and which deems as the proxy portfolio for our 100% impact portfolio.

Table 1 presents an overview of the different groups of Index families. The time horizon of each group depends on the longest common period of return data within the sample.

The portfolios are equally weighted such that:

$$w_{i,t} = \frac{1}{N} \text{ for } i \in 1, \dots, N \quad w_{i,t} = 1N \text{ for } i \in 1, \dots, N$$

with  $N$  being the number of assets included. Hence, the return of the portfolio is given by:

**Table 1** Families of SRI indices

Distribution company	Period	Nr. of indices
Culvert Investments Responsible Indexes	05/2005–04/2016	2
Société Générale Indexes	05/2005–04/2016	3
S-Network Global Indexes	05/2005–04/2016	3
Dow Jones Sustainability Indexes	11/2008–04/2016	6
E. Capital Partners Indices	03/2011–04/2016	8
FTSE Indices	02/2010–04/2016	7
MSCI Indices	08/2011–04/2016	11
Nasdaq Indices	10/2011–04/2016	5
Standard and Poor's Dow Jones Indices	02/2012–04/2016	4
Wilderhill Indices	12/2006–04/2016	3
Börse Hannover Indices	11/2007–04/2016	2
Solactive Indices	07/2011–04/2016	2
STOXX Indices	06/2011–04/2016	3

$$R_{p,t} = \sum_{i=1}^n w_{i,t} r_{i,t}$$

Where  $r_{i,t}$  is the return of index at time  $t$ . The balanced portfolio has been calculated of 60% equity returns and 40% fixed income returns to represent the composition of the benchmark index. The returns are given by monthly log returns.

Table 2 shows an overview of the mean excess returns, the standard deviation and statistical distribution measures. It also contains the Sharpe ratio of the portfolios and benchmarks for the same time horizon. The Sharpe ratio (Sharpe 1994) is a measure for risk-adjusted return and is calculated by dividing the mean excess return by the standard deviation or total risk of the returns:

$$S = \frac{\mu - r_{f,t}}{\sigma}$$

Where  $\mu$  is the annualised mean log return,  $r_{f,t}$  is the risk-free interest rate and  $\sigma$  is the standard deviation of returns.

In order to determine the relative performance of the SRI index portfolios to the conventional market indices, we calculate Jensen’s alpha (Jensen 1968) which is a measure of over- or under-performance. A statistical positive alpha is suggesting an out-performance of the index relative to the chosen benchmark. A negative alpha indicates an under-performance compared to the benchmark. In the first condition we are performing a single factor OLS regression of the portfolios excess returns.

$$R_{p,t} - r_{f,t} = \alpha_i + \beta_i(R_{m,t} - r_{f,t}) + \varepsilon_{i,t} \tag{1}$$

**Table 2** Descriptive statistics of group of SRI indices portfolios

Portfolio	Avg. monthly returns	Mean excess return	Std. dev.	Sharpe ratio
<i>10 Years</i>				
Equity	-0.0019	-0.0322	0.2033	-0.1583
Bond	0.0041	0.0397	0.0383	1.0170
Balanced	0.0005	-0.0035	0.1205	-0.0289
<i>5 Years</i>				
Equity	-0.0017	-0.0211	0.1489	-0.1310
Bond	0.0054	0.0640	0.0351	1.5256
Balanced	0.0011	0.0128	0.0916	0.1320
<i>3 Years</i>				
Equity	0.0057	0.0674	0.1261	0.4998
Bond	0.0042	0.0498	0.0321	1.2399
Balanced	0.0197	0.0604	0.0802	0.7142

Summary statistics on the various portfolio groups of SRI indices are reported. The reported statistics are avg. monthly return, mean excess returns (considering monthly continuously compounded returns), standard deviation and sharpe ratio

where  $R_{p,t}$  is the return of the index portfolio at time  $t$ ,  $R_{m,t}$  the return on the chosen market portfolio in month  $t$  and  $\varepsilon_{i,t}$  is a random error term. Beta  $\beta_i$  is the coefficient and represents the systematic risk of the index portfolio.

In the following, we use two different settings to measure the performance of SRI indices. First, we apply a simple unconditional single-factor model with two different market indices as benchmark. Herein, we use two different benchmarks for the same portfolio in order to see if results are sensitive towards the choice of the appropriate benchmark. In contrast to previous studies on the performance of mutual funds we do not consider a conditional model as indices are not actively managed. This implies that the decision on inclusion or exclusion of companies in an index is not based on market timing or publicly available information (e.g. economic factors).

For the second setting we extend the regression model by applying additional factors to analyze the robustness of tests in line with for example Schröder (2007). For the portfolios consisting of equity indices we add two factors, a small cap factor and a growth-value factor. The small cap factor is calculated by orthogonalizing the return of the MSCI ACW Small Cap Index to account for the high correlation with the MSCI ACWI. This allows us to extract the uncorrelated elements of the common factors and leads to unbiased evaluations of the systematic risk, even in small samples, as shown by Klein and Chow (2013).

The growth-value factor is the differential of the returns of the MSCI ACW Growth Index and the MSCI ACW Value Index.

In addition to the one factor model (model 1) we use the MSCI ACWI as benchmark in the second setting. The MSCI ACWI is a pure equity index. Hence, this regression analysis is only conducted with the equity SRI index portfolios. The extended model for the equity SRI indices portfolio is:

$$\begin{aligned} R_{p,t} - r_{f,t} &= \alpha_i + \beta_{1i}(R_{m,t} - r_{f,t}) + \beta_{2i}Small_t + \beta_{3i}HML_t + \varepsilon_{i,t} \\ Small_t &= \kappa_i + \delta_i(R_{m,t} - r_{f,t}) + \delta_{2i}HML_t \end{aligned} \quad (2)$$

To account for the distinctions in influential factors of fixed income returns we refer to a four-factor model proposed by Elton et al. (1995) and applied in previous studies by Leite and Cortez (2016) or earlier Derwall and Koedijk (2009). For this model we include a bond market factor, a default factor, an option factor and an equity factor. The bond market factor captures the fund's broad market sensitivity to the investment grade bond market. The default factor deems as measure for default risk and the fund's exposure to high-yield bonds. The option factor accounts for potential option-like features that can be identified in mortgages as proposed by Blake et al. (1993). The last variable is the equity factor which captures a possibly exposure to the equity market due to convertible debt. The extended model (model 3) to measure the financial performance of portfolios of SRI bond indices is given by:

$$R_{p,t} - r_{f,t} = \alpha_i + \beta_{1i}Bond_t + \beta_{2i}Default_t + \beta_{3i}Option_t + \beta_{4i}Equity_t + \varepsilon_{i,t} \quad (3)$$

where  $Bond_t$  represents the excess return of the Barclays Global Aggregate Bond Index over the 4-week US T- bill rate,  $Default_t$  is the return spread between the Bank of America Global High Yield Index and the Merrill Lynch Global Government Bond Index, is the difference in returns of the a mortgage backed index and the government bond index, denotes the excess return of the MSCI ACW Index over the risk-free rate and  $\varepsilon_{i,t}$  is the residual term.

For the balanced portfolios consisting of equity and bond components, we merge both factor models and obtain a seven-factor model as follows:

$$R_{p,t} - r_{f,t} = \alpha_i + \beta_{1i}(R_{m,t} - r_{f,t}) + \beta_{2i}small_t + \beta_{3i}HML_t + \beta_{4i}Default_t + \beta_{5i}Option + \beta_{6i}Equity_i + \beta_{6i}Bond_t \tag{4}$$

where  $R_{m,t} - r_{f,t}$  is the excess return of the Morningstar Global Allocation Index and  $\varepsilon_{i,t}$  is the residual term. The application of equity and bond variables allows us to capture the fund’s exposure to the respective factors.

To obtain more accurate results the regression residuals are tested for normality using the Jarque-Bera Test. The residuals are further tested on heteroskedasticity using the Breusch-Pagan test and White’s general test. A Durbin Watson test was conducted to test for autocorrelation and for all tests the standard errors have been corrected using either the correction of White for constant heteroscedasticity or the Newey West standard error estimators for autocorrelation and heteroscedasticity.

### ***Empirical Results***

Table 2 displays the descriptive statistics of the various portfolios consisting of equity, fixed income and a balanced mix of equity and fixed income social responsible indices. The highest returns can be observed in the period between May 2013 until today in which all three portfolios have a positive mean excess return. Especially, the equity and the balanced portfolio have an annualised return of over 6%. The longer the time horizon, the lower is the average excess returns. The 5-year balanced portfolio earned on average a return of only 1.28% in the last 5 years which implies a drop of almost 80% in performance. Overall, the balanced portfolio earned a return lower than the risk free rate. The same process can be seen for the equity portfolio of SRI indices. The average excess return for the period from May 2011 until now is 8 percentage points lower and the 10-year portfolio is even almost 10 percentage points down compared to the portfolio with the short horizon. Whereas the bond SRI index portfolio was able to increase the average excess return up to 6.4% in the medium horizon and is the only portfolio that has a distinct excess return over the 4 Week US treasury Bill rate in the period from May 2006 until April 2016.

To see how the portfolio performed in terms of risk and return, we consider the Sharpe ratios. The bond-portfolios carry the most favourable risk-reward ratios above one for all time horizons. This can be explained by relatively low standard deviations throughout the three portfolios.

Both, the equity and the balanced portfolio show that the Sharpe ratio is smaller, the longer the time horizon is, which goes along with decreasing excess returns. The negative excess returns for the equity portfolio and the balanced portfolio are reflected in a negative risk-reward ratio for both, the 5-year and the 10-year portfolio of equity indices and a negative ratio for the long term portfolio of balanced indices, respectively.

The skewness and kurtosis of the return series of the different portfolios is given in Table 3. Obviously, the portfolios with the lowest Sharpe ratio also exhibit the highest kurtosis and skewness in the return series. The returns of the 10-year equity and balanced portfolio have a kurtosis above six which implies that the distribution of the returns is highly peaked with fat-tails. Additionally, both portfolios show a negative skewness, meaning that the distribution of the returns skews to the right. In contrast, the fixed income portfolio shows a modest positive skewness for the 10-year period and a minor negative skewness for the medium and short period. The distribution is peaked as well. The non-normality of the portfolios has also been verified by using a Jarque-Bera test for normality.

Table 4 presents the summary of the descriptive statistics for the conventional market indices. Almost all benchmarks present positive mean excess returns, only the Barclays Capital Global Aggregate index performs on average inferior than the risk free rate over the last 10 years. The standard deviation is—throughout all time

**Table 3** Summary statistics of the groups of SRI indices portfolios

Portfolio	Jarque-Bera (p-value)	Kurtosis	Skewness	Period	Nr. of indices
<i>10 Years</i>					
Equity	105.5141 (0.0000)	6.7015	-1.3603	05/06-04/16	31
Bond	0.3189 (0.8526)	3.1914	0.0824	05/11-04/16	2
Balanced	101.3537 (0.0000)	6.6538	-1.3153	05/13-04/16	33
<i>5 Years</i>					
Equity	5.1254 (0.0771)	3.5801	-0.6680	05/06-04/16	64
Bond	0.9030 (0.6367)	2.7636	-0.2763	05/11-04/16	6
Balanced	4.6893 (0.0959)	3.5890	-0.6182	05/13-04/16	70
<i>3 Years</i>					
Equity	0.2874 (0.8661)	2.6952	-0.1571	05/06-04/16	68
Bond	2.4014 (0.3010)	2.4056	-0.5585	05/11-04/16	8
Balanced	0.3175 (0.8532)	2.6806	-0.1656	05/13-04/16	76

Summary statistics on the various portfolio groups of SRI indices are reported. The reported statistics are the probability of the Jarque-Bera test. Kurtosis. Skewness and the period under consideration

**Table 4** Descriptive statistics of market indices

Benchmark	Monthly return	Mean excess return	Std. dev.	Sharpe ratio
<i>10 Years</i>				
MSCI	0.0015	0.0079	0.1737	0.0455
S&P	0.0017	0.0106	0.1701	0.0620
J.P. Morgan	0.0037	0.0350	0.0561	0.6265
Barclays	0.0007	-0.0010	0.0261	-0.0357
Morningstar	0.0043	0.0424	0.1085	0.3899
<i>5 Years</i>				
MSCI	0.0021	0.0247	0.1371	0.1803
S&P	0.0029	0.0340	0.1330	0.2554
J.P. Morgan	0.0014	0.0169	0.0399	0.4249
Barclays	0.0010	0.0116	0.0238	-0.0404
Morningstar	0.0034	0.0403	0.0869	0.4641
<i>3 Years</i>				
MSCI	0.0026	0.0301	0.1191	0.2528
S&P	0.0032	0.0384	0.1166	0.3292
J.P. Morgan	0.0009	0.0103	0.0424	0.3993
Barclays	0.0001	0.0012	0.0266	-0.0361
Morningstar	0.0033	0.0395	0.0770	0.5131

Summary statistics on the various groups of SRI index families are reported. The reported statistics are avg. monthly return, mean excess returns (considering monthly continuously compounded returns), standard deviation and sharpe ratio

periods—lower than the risk of the index portfolios. Especially, the equity portfolios possess a relatively high standard deviation compared to the equity benchmarks. The other portfolios exhibit nearly the same risk measure as their conventional benchmarks.

Compared to the standard deviations, the Sharpe ratios are partially diverging apart from the measures of the portfolios. While the equity benchmarks of MSCI and S&P are showing higher Sharpe ratio values when compared to their SRI equivalents the fixed income market indices induce low Sharpe ratios. The portfolios of fixed income SRI indices are performing better in relation to the risk inherited. The Morningstar Global Allocation Index has an equally poor performance relatively to its risk, yet its ratio is higher in the medium and the long term.

### ***Single Factor Regression***

The empirical results of the unconditional regression are presented in Table 5. Panel A contains the estimates for the relationships of the equity SRI index portfolios to the MSCI All World or the S&P Global Index. The results show that the alpha of portfolios of equity SRI indices is statistically insignificant. The estimated beta values are statistically significant for all portfolios at the 0.01% level. When

**Table 5** Estimates of unconditional SRI index performance

Portfolio	MSCI ACWI			S&P Global 1200		
	$\alpha$	$\beta$	$R^2$ (%)	$\alpha$	$\beta$	$R^2$ (%)
<i>Panel A</i>						
10 Year Equity	-0.3394	1.0849***	86.10	-0.3639	1.0966***	84.32
5 Year Equity	-0.3914	1.0422***	78.17	-0.4786	1.0685***	77.31
3 Year Equity	0.3155	0.9815***	74.36	0.2426	0.9971***	73.53
Portfolio	Barclays			J.P. Morgan		
	$\alpha$	$\beta$	$R^2$ (%)	$\alpha$	$\beta$	$R^2$ (%)
<i>Panel B</i>						
10 Year Bond	0.3400**	1.0753***	54.786	0.2850**	0.1578*	5.108
5 Year Bond	0.3929***	1.4470***	67.17	0.4893**	0.3103**	8.684
3 Year Bond	0.4024***	1.2462***	68	0.3929**	0.2609*	7.576
Portfolio	Morningstar global allocation index					$R^2$ (%)
	$\alpha$	$\beta$				
<i>Panel C</i>						
10 Year Balanced	-0.3846*		1.0093***	82.831		
5 Year Balanced	-0.2226		0.9800***	76.64		
3 Year Balanced	0.1912		0.9474***	74.408		

Panel A presents regression estimates for equally weighted portfolios of SRI equity indices using unconditional models. Alphas ( $\alpha$ ) expressed in percentage, systematic risk ( $\beta$ ) and the adjusted coefficient of determination ( $R^2$ ) are reported. To obtain more accurate results the regression residuals are tested for normality using the Jarque-Bera Test. The residuals are further tested on heteroskedasticity using the White test for non-normal and the Breusch Pagan approach for normal distributed residuals. A Durbin Watson test was conducted to test for autocorrelation and for all the tests the standard errors have been corrected using either the correction of White for constant heteroskedasticity or the Newey West standard error estimators for autocorrelation and heteroskedasticity. Panel B reports the same type of estimates for the portfolios of fixed income SRI indices and Panel C for the balanced portfolio of SRI indices

Significance levels: 0.001 '\*\*\*', 0.01 '\*\*', 0.05 '\*', 0.1 '.'.

considering the long-term portfolios, they can be characterised by a significantly high risk relative to conventional non-SRI market indices. Only the short term portfolio displays a lower relative risk. Based on the Jensen's alpha, we cannot reject that a statistically significant difference exists in the performance of SRI equity index portfolios and their equivalent non-SRI benchmarks. The adjusted  $R^2$  values are for all portfolios relatively high and indicate that the performance of the portfolios can be explained quite well by the conventional market indices.

In Panel B of Table 5 the estimates of the SRI fixed income index portfolios are shown. Jensen's alphas show on average a significant outperformance of the SRI fixed income indices of around 0.04% compared to their conventional market proxies. The detected alphas (0.034, 0.039, and 0.04, respectively) are statistically significant at the 1% Level. When we compare the performance of the portfolio with the index of J.P. Morgan, the significance levels decrease, but are still significant at the 5% and 1% level. These results disagree with the findings of Derwall and

Koedijk (2009) and Leite and Cortez (2016) who observed significantly negative alphas for SRI fixed-income funds.

The beta coefficients for all portfolios are significant. While the index portfolios have a high beta values (above 1) compared to the Barclays index, the relative risk is lower when using the J.P. Morgan index with an average beta below 0.32. The significance levels also increase for the Barclays index as seen for the alpha estimates. Interestingly, both benchmark indices cannot sufficiently explain the SRI portfolio returns. The J.P. Morgan index has a very low  $R^2$  of around 5 for the long term portfolio; the explanatory power of the Barclays index is considerably higher with 54–68%. This is consistent with earlier findings in for example Bauer (2005) and Cortez (2009).

The results indicate that the benchmark of J.P. Morgan might cover a rather different investment universe as the SRI fixed income indices. In terms of the performance outcomes, we can reject the hypotheses that social responsible investment indices do not outperform conventional benchmarks. That could be explained by factors like a higher exposure to foreign currencies or foreign interest rates.

The results of the unconditional regression for the balanced SRI index portfolio that serve as our proxy for the 100% impact portfolio are displayed in Panel C of Table 5. The long term portfolio has a significantly minor underperformance compared to the market index. While the negative alpha of  $-0.038\%$  improves with a shorter time horizon the significance at the 5% level disappears. In contrast to the fixed income benchmarks that are not satisfactory in explaining the returns, the adjusted  $R^2$  values are substantially higher for the balanced asset benchmark with explanatory power of up to 82% for the long term portfolio. Estimates for the beta imply that the balanced SRI index portfolio is fully exposed to the market benchmark. All beta coefficients are significant at the 0.01% level.

### ***Multi-factor Regression***

There is considerable evidence in prior studies that the single factor asset pricing model cannot fully explain social responsible returns. The explanatory power of the unconditional models increases by applying a multivariate setting. As mentioned earlier, we use the MSCI All World Index as single benchmark for the performance measurement of portfolios covering the groups of equity SRI indices as well as families of equity SRI indices by means of a three-factor model. The performance of portfolios consisting of SRI bond indices is measured in relation to the Barclays Global Aggregate Bond Index and the Morningstar Global Allocation Index is applied for the SRI balanced index portfolios.



**Table 6** Two-factor estimates of unconditional SRI equity index performance

Portfolio	Factor model				
	$\alpha$	$\beta$	Small	HML	$R^2$ (%)
10 Year Equity	-0.5084*	1.0912***	0.2138***	0.3613***	87.67
5 Year Equity	-0.5218	1.1110***	0.7130***	0.029	84.47
3 Year Equity	0.1371	1.0862***	0.6179***	0.1240	83.40

This table presents regression estimates for equally weighted portfolios of indices computed for each time horizon using unconditional models (Eq. 2). Alphas ( $\alpha$ ) expressed in percentage, conditional beta coefficients and the adjusted coefficient of determination ( $R^2$ ) are reported. Unconditional beta estimates  $\beta_0, \beta_1, \beta_2$  are the coefficients of the MSCI ACWI and the respective predetermined information variables: small-cap factor and growth-value factor. To obtain more accurate results the regression residuals are tested for normality using the Jarque-Bera Test. The residuals are further tested on heteroskedasticity using the White test for non-normal and the Breusch Pagan approach for normal distributed residuals. A Durbin Watson test was conducted to test for autocorrelation and for all the tests the standard errors have been corrected using either the correction of White for constant heteroskedasticity or the Newey West standard error estimators for autocorrelation and heteroskedasticity

Significance levels: 0.001 '\*\*\*', 0.01 '\*\*', 0.05 '\*' 0.1 '.'

## Equity Portfolios

The results of the equity portfolios are reported in Table 6 which shows the estimates of the three-factor model for the groups of SRI equity index portfolios. The model estimates for the portfolios consisting of SRI indices of the same group are displayed in Panel B. When considering the results for the portfolios of equity indices, we observe an increase in the adjusted  $R^2$  for the three-factor model, compared to the single factor model. The explanatory power for the short term portfolio improved by around 10%. Moreover, the negative alpha for the long term portfolio is statistically significant at the 5% level. In addition, the underperformance of the medium-term portfolio increased, while the positive alpha for the short-term portfolio declined. None of the alterations is significant. The portfolios indicate a higher market exposure, when talking about the beta coefficients. The equity SRI indices show a significant small cap effect which is in line with, for example, with Bauer et al. (2005) who discover the same small cap effect for SRI funds in the UK and Germany. While the long-term portfolio is significantly tilted to value stocks, the factor estimates for the medium- and short-term portfolio show an insignificant exposure to growth companies.

## Bond Portfolios

The results of the multi-factor regression estimates for the portfolios of SRI bond indices are shown in Table 7. We experience the same increase of  $R^2$  when using a multi-factor model for the bond portfolios as observed for the equity portfolios. All estimates have increased substantially with an increase by more than 8% in the long-

**Table 7** Multi-factor estimates of unconditional SRI bond index performance

Portfolio	Four-factor model					
	$\alpha$	$\beta_0$	Default	Option	Equity	$R^2$ (%)
10 Year Bond	0.4050***	1.1906***	-0.0402	0.2037***	-0.0015	62.9600
5 Year Bond	0.3914***	1.5357***	0.0365	0.1440	-0.0159	70.5500
3 Year Bond	0.4201***	1.2955***	-0.0662	0.2134*	0.0473	74.3200

The table presents regression estimates for equally weighted portfolios of bond indices computed for each time horizon using unconditional models (Eq. 3). Alphas ( $\alpha$ ) expressed in percentage, conditional beta coefficients and) the adjusted coefficient of determination ( $R^2$ ) are reported. Unconditional beta estimates  $\beta_0, \beta_1, \beta_2, \beta_3$  are the coefficients of the Barclay Global Aggregate Bond Index and the respective predetermined information variables: default factor, option factor and equity factor. To obtain more accurate results the regression residuals are tested for normality using the Jarque-Bera Test. The residuals are further tested on heteroskedasticity using the White test for non-normal and the Breusch Pagan approach for normal distributed residuals. A Durbin Watson test was conducted to test for autocorrelation and for all the tests the standard errors have been corrected using either the correction of White for constant heteroskedasticity or the Newey West standard error estimators for autocorrelation and heteroskedasticity  
 Significance levels: 0.001 \*\*\*\*\*, 0.01 \*\*\*, 0.05 \*\* 0.1 \*

term portfolio. The relatively high outperformance of the bond portfolios can also be observed when using a multi-factor model. While the significantly positive alphas are higher for the 10-year and the 3-year portfolio, the superior performance of the medium term portfolio has slightly declined.

What is striking is that the market sensitivities of all three bond portfolios have surged compared to the single-factor models, with betas greater than one. Regarding the exposures to various factors, the results vary considerably among the portfolios. In particular, the long-term and short-term portfolios exhibit a negative exposure to the default factor whereas the medium-term portfolio has positive exposure to low grade bonds. All exposures are statistically insignificant. All three portfolios show a positive exposure to the option factor, but only the exposures of the long-term and the medium-term portfolio are significant at the 1% and 5% level respectively. The positive exposure of SRI Bond indices to the option factor implies that SRI bonds are tilted towards mortgage-backed securities. These results are consistent with the findings of Leite and Cortez (2016) who have experienced significantly positive exposures of SRI bond funds to the option factor.

**Balanced Portfolios**

The results of the unconditional regression using a multi-factor model for the balanced portfolios of SRI indices are presented in Table 8. The performance of the balanced portfolios is significantly varying with the time horizon. While the 10-year portfolio exhibits an underperformance compared to the benchmark, the 5-year and the 3-year portfolios outperform its conventional benchmark. The t-statistics corresponding to the intercepts indicate that the out-performances is only significant below the 0.1% cut-off level for the short-term portfolio.

**Table 8** Multi-factor estimates of unconditional balanced SRI index performance

Portfolio	Seven-factor model							$R^2$ (%)	
	$\alpha$	$\beta$	Small	HML	Default	Option	Equity		Bond
10 Year Balanced	-0.1025	-0.1237	0.1203***	0.1673*	0.0287	0.0581	0.7067***	0.4431*	86.67
5 Year Balanced	0.0201	-0.3408	0.4809***	-0.1234	-0.2797*	0.3418	1.0211**	0.5756	83.19
3 Year Balanced	0.3971***	-0.3286	0.4288***	-0.1497	-0.1768	0.3645	0.9641*	0.5305	82.37

This table presents regression estimates for equally weighted portfolios of balanced indices computed for each time horizon using unconditional models (Eq. 4). Alphas ( $\alpha$ ) expressed in percentage, conditional beta coefficients and the adjusted coefficient of determination ( $R^2$ ) are reported. Unconditional beta estimates  $\beta_0$ ,  $\beta_1$ ,  $\beta_2$ ,  $\beta_3$ ,  $\beta_4$ ,  $\beta_5$ , and  $\beta_6$  are the coefficients of the Morningstar Global Allocation Index and the respective predetermined information variables: small-cap factor, growth-value, default factor, option factor, equity factor and bond factor. To obtain more accurate results the regression residuals are tested for normality using the Jarque-Bera Test. The residuals are further tested on heteroskedasticity using the White test for non-normal and the Breusch Pagan approach for normal distributed residuals. A Durbin Watson test was conducted to test for autocorrelation and for all the tests the standard errors have been corrected using either the correction of White for constant heteroskedasticity or the Newey West standard error estimators for autocorrelation and heteroskedasticity

Significance levels: 0.001 ‘\*\*\*’, 0.01 ‘\*\*’, 0.05 ‘\*’, 0.1 ‘.’.

When looking at the exposures to the different factors, we can see that the balanced portfolios have higher exposures to the equity and the bond factor than to the balanced factor which is not rather astonishing, as we created the portfolio with pure equity and bond indices. The performance of the balanced portfolio can be partially explained by equity return variations. This is consistent with the results of Derwall and Koedijk (2009), who identified higher exposure to equity returns than to the balanced returns. However, the negative exposure to the balanced benchmark is surprising. A possible justification for this could be the greater heterogeneity of fixed income instruments in the benchmark.

The substantial investment in small cap stocks of SRI indices is displayed in a significant exposure of the portfolios to small caps. The sensitivity of the balanced portfolios relating to high-yield and option-like instruments is on average very low across all portfolios, only the medium term portfolio has a marginally significant exposure to investment grade instruments and mortgage backed securities. The  $R^2$  of the regression indicate that the multi-factor model does a good job in explaining the returns of balanced SRI index portfolios. The explanatory power of the returns increases significantly in comparison to the single-factor model. These types of results are consistent with those of most empirical studies using multi-factor performance measures.

### **Families of SRI Indices**

To see whether the respective screening process is decisive, we analyze the results for the groups of index families. The indices in each group exhibit similar characteristics, whereas the groups are distinct in their applied screening processes and their investment universes. The descriptive statistics for the various index family portfolios are presented in Table 9. While the mean excess returns of the majority of the portfolios are generating medium or low excess returns the returns, for the ECP index family are standing out. The portfolio of SRI indices distributed by E. Capital Partners earned on average a return of 10.4% above the risk-free rate over the last 5 years. Only one portfolio has nearly no excess return (0.0002), three index family portfolios performed even inferior than the US-Treasury bill rate. While the Calvert and FTSE indices realized a negative excess return of 0.8% and 0.04% respectively, the SRI indices of Wilderhill underperform with  $-7.8\%$  on average.

The Sharpe ratios for the index family portfolios are comparable to the values of the index group portfolios. The total risk is on average higher than for the portfolios with mixed index families. While in the groups of different SRI indices, various screening criteria are used, the family portfolios apply only one screening criteria for different investment universes. Hence, the increase of risk could be a screening bias which results in a diversification loss. Wilderhill displays the worst performance of

**Table 9** Descriptive statistics of groups of family SRI indices

Index families	Mean excess return	Std. dev.	Sharpe ratio
Calvert Indices	-0.0080	0.1466	-0.0548
SGI Indices	0.0396	0.1507	0.2624
S-Network Indices	0.0397	0.1899	0.2091
DJSI Indices	0.0281	0.1681	0.1669
ECPI Indices	0.1045	0.1003	1.0411
FTSE Indices	-0.0004	0.1804	-0.0020
MSCI Indices	0.0300	0.1462	0.2051
Nasdaq Indices	0.0330	0.1673	0.1973
S&P Indices	0.0641	0.1336	0.4798
Wilderhill Indices	-0.0787	0.2893	-0.2723
Börse Indices	0.0178	0.1728	0.1025
Solactive Indices	0.0002	0.2104	0.0011
STOXX Indices	0.0266	0.1192	0.2235

Summary statistics on the various groups of SRI index families are reported. The reported statistics are avg. monthly return, mean excess returns (considering monthly continuously compounded returns), standard deviation and sharpe ratio

all family portfolios with a standard deviation of around 29%. The performance measures of the ECPI family are again convincing. The portfolio of ECP indices has amongst all the lowest risk measure and together with the highest return it has by far the highest Sharpe ratio (1.0411). Overall, the measures are within the scope of the non-SRI benchmark measures.

The measures for the kurtosis and skewness of the return distribution for the portfolios of family indices are matching the measures of the mixed index portfolios. All distributions are more peaked and skewed to the left.

Meaning that the bulk of returns is concentrated on the right hand side of the distribution. While most of the distributions are only moderately negatively skewed (-0.12 to -0.88), the distribution of the Wilderhill index portfolio is far from symmetrical (skewness of -1.146). Calvert indices display a modest positive skewness of 0.437. The estimates are similar to those for the market indices.

We test the distributions of the return series for normality, the results are shown in column 2 of Table 10. For the majority of portfolios the normality of their distributions can be confirmed. For the portfolios of SGI, Wilderhill, S-Network, MSCI and STOXX the hypotheses of normally distributed returns has to be rejected. The distributions of the benchmarks are mostly normal for short and medium terms. The normality disappears for 60% of the market indices in the long run.

**Table 10** Summary statistics of groups of family indices

Portfolio	Jarque-Bera (p-value)	Kurtosis	Skewness
Calvert	26.8272 (0.0000)	5.1448	0.4373
S GI	55.0290 (0.0000)	5.9902	-0.7184
S-Network	38.6968 (0.0000)	5.1585	-0.8775
DJSI	19.3256 (0.0001)	4.6391	-0.7762
ECPI	4.5170 (0.1045)	3.4648	-0.6133
FTSE	4.3831 (0.1117)	3.3831	-0.5562
MSCI	3.1956 (0.2023)	3.5867	-0.4945
Nasdaq	5.9035 (0.0522)	4.0213	-0.6097
S&P	2.6751 (0.2625)	3.4346	-0.5172
Wilderhill	70.8321 (0.0000)	6.1073	-1.1463
UN	29.1688 (0.0000)	5.2133	-0.6888
Solactive	0.3845 (0.8251)	2.6824	-0.1178
STOXX	2.0609 (0.3569)	2.9774	-0.4538

Summary statistics on SRI indices for the various groups are reported. The reported statistics are the probability of the Jarque-Bera test, Kurtosis, and Skewness

### Single Factor Regression

In this section we look at the estimates of the single-factor unconditional regression of portfolios constructed of social responsible indices grouped by the same distributor with non SRI market indices MSCI All World and S&P Global 1200. The results are shown in Table 11.

The performance of the family portfolios compared to the MSCI All World is fairly neutral based on the outcomes of positive and negative alphas, with 7 out of 13 having a negative alpha, whilst 6 show an outperformance. However, the observed alphas are only significant for four portfolios. Two of the SRI index portfolios show a significant negative Jensen’s alpha (one at the 10% level and one at the 5% level). The ECPI index has a statistically significant outperformance of 0.72% on average at the 5% level and the index portfolio of S-Network delivered a significant positive alpha at the 10% level. The high outperformance of the ECPI is faced with a significant underperformance of the Wilderhill indices with -0.75% on average compared to the benchmark. This is not unexpected as Wilderhill reported negative mean excess returns over the last 10 years.

The estimates for the unconditional regression with the S&P Global Index show a more distinct picture of out- and underperformance. In fact, the amount of negative alphas has increased to 9 (and only 4 positive alphas have been observed). In contrast to the previous regression with the MSCI benchmark, 5 alphas are statistically significant. Three are negative and two are positive. The underperformance of Wilderhill is significant at the 5% level, while the other two are significant at the 10% level. The positive alphas are significant at the 10% and 5% level, respectively. The results of the S&P regression confirm the previous results of the MSCI index. Wilderhill indices have an inferior performance compared to conventional market proxies and the indices of ECP outperform two different benchmarks. Since we

**Table 11** Estimates of unconditional SRI index performance for families of indices

Portfolio	MSCI ACWI			S&P Global 1200		
	$\alpha$	$\beta$	$R^2$ (%)	$\alpha$	$\beta$	$R^2$ (%)
Calvert	-0.0955	0.4318***	26.181	-0.1055	0.4398***	26.04
S&P	0.2914	0.5861***	45.602	0.2799	0.5954***	45.111
S-Network	0.2644 .	1.0105***	85.561	0.2412 .	1.0253***	84.446
DJSI	-0.0786	0.9126***	96.743	-0.1036	0.9272***	96.944
ECPI	0.7229*	0.5022***	45.672	0.6785*	0.5249***	47.225
FTSE	-0.4574 .	1.1593***	88.135	-0.5241 .	1.1695***	87.107
MSCI	-0.0404	1.0078***	91.220	-0.1317	1.0390***	91.074
Nasdaq	-0.2771	1.1759***	90.61	-0.4013 .	1.2139***	89.936
S&P	0.0541	1.0037***	80.593	-0.0324	1.0202***	79.54
Wilderhill	-0.7500*	1.481***	82.5289	-0.7741*	1.4919***	80.34
Solactive	-0.2671	1.064***	48.4826	-0.3598	1.0947***	48.242
UN	0.1862	0.8733***	86.737	0.1588	0.8913***	86.646
STOXX	0.5614	0.8023***	85.157	-0.0126	0.8285***	85.457

This table presents regression estimates for equally weighted portfolios of indices computed for each family of indices using unconditional models. Alphas ( $\alpha$ ) expressed in percentage, systematic risk ( $\beta$ ) and the adjusted coefficient of determination ( $R^2$ ) are reported. To obtain more accurate results the regression residuals are tested for normality using the Jarque-Bera Test. The residuals are further tested on heteroskedasticity using the White test for non-normal and the Breusch Pagan approach for normal distributed residuals. A Durbin Watson test was conducted to test for autocorrelation and for all the tests the standard errors have been corrected using either the correction of White for constant heteroskedasticity or the Newey West standard error estimators for autocorrelation and heteroskedasticity

Significance levels: 0.001 '\*\*\*', 0.01 '\*\*', 0.05 '\*' 0.1 '.'

obtained revealing results we cannot truly reject the hypotheses that SRI indices do not deviate systematically from their direct non-social responsible counterparts.

The adjusted  $R^2$  estimates are consistently high with values above 80%. Four index portfolios exhibit a lower explanatory power of both benchmarks. While the values are particularly low for the Calvert indices, the  $R^2$  increases for the SGI, ECP and Solactive index portfolios. Interestingly, the ECPI portfolio has a positive significant alpha, but this outperformance can only be approximated by the benchmarks with 45.67% and 47.23% respectively. An explanation for the high significant out-performance and the low  $R^2$  estimates for the ECP indices could be the emphasis on the information and healthcare sector, which have performed better over the last few years than the rest of the market. An argument for this are the high Sharpe ratios and the above average mean excess returns of the index portfolio.

The beta coefficients for the various portfolios of index families are also displayed in Table 11. As observed in the previous section, the estimates are significant for all portfolios. When considering the beta values, the majority of the portfolios can be characterised as moving with the market. There are only few portfolios of index families that exhibit a relatively low risk and one has a statistically significant high relative risk. The  $\beta$ -coefficients that are significantly below one are estimated only for the Calvert, the SGI and the ECP index portfolios. The

portfolio consisting of Wilderhill SRI indices is displaying a relative risk measure of above 1.48.

### Multi-factor Regression

Considering the portfolios of index families displayed in Table 12, we find that the number of negative alphas decreases and the number of positive alphas increases compared to the estimates of the single-factor model. While the number of significant positive alphas decreases to one remaining, the significance levels of the alphas increases. The results are in line with Gregory et al. (1997). The balanced out- and underperformance measured by the single-factor asset pricing model has shifted towards a negative performance when applying two more factors. Wilderhills' negative alpha increases to  $-1.24\%$  on average.

The market risk exposure has experienced a remote increase for most of the portfolios. The beta coefficients are extending the distance to unity compared to the single-factor model. The difference in betas is highly significant.

**Table 12** Two-factor estimates of unconditional performance of index family portfolios

Portfolio	Factor model				
	$\alpha$	$\beta$	Small	HML	$R^2$ (%)
Calvert	-0.2274	0.4367***	0.1643	0.2855	27.86
S&P	0.1135	0.5935***	0.1932	0.4225	48.38
S-Network	0.0934	1.0166***	0.2260*	0.3524**	87.31
DJSI	-0.0243	0.9090***	-0.0522	-0.1021	96.87
ECPI	0.6586*	0.5035***	0.0185	0.1818	46.48
FTSE	-0.5865*	1.2051***	0.5268***	-0.0711	90.70
MSCI	-0.1475	1.0479***	0.4219***	0.1234	93.99
Nasdaq	-0.3843*	1.2246***	0.4604***	0.0693	93.08
S&P	-0.1277	1.0707***	0.4617***	0.2614	85.26
Wilderhill	-1.2361***	1.4984***	0.5095***	0.9222***	86.80
Solactive	-0.5912	1.1827***	1.2512***	0.3928	60.14
UN	0.0740	0.8711***	0.2058*	0.0510	87.39
STOXX	0.1144	0.7981***	-0.0532	-0.1719	85.74

This table presents regression estimates for equally weighted portfolios of family indices computed for each time horizon using unconditional models (Eq. 2). Alphas ( $\alpha$ ) expressed in percentage, conditional beta coefficients and the adjusted coefficient of determination ( $R^2$ ) are reported. Unconditional beta estimates  $\beta_0, \beta_1, \beta_2$  are the coefficients of the MSCI ACWI and the respective predetermined information variables: small-cap factor and growth-value factor. To obtain more accurate results the regression residuals are tested for normality using the Jarque-Bera Test. The residuals are further tested on heteroskedasticity using the White test for non-normal and the Breusch Pagan approach for normal distributed residuals. A Durbin Watson test was conducted to test for autocorrelation and for all the tests the standard errors have been corrected using either the correction of White for constant heteroskedasticity or the Newey West standard error estimators for autocorrelation and heteroskedasticity

Significance levels: 0.001 '\*\*\*', 0.01 '\*\*', 0.05 '\*', 0.1 '.'



## Conclusion

The empirical literature is addressing the topic of socially responsible investing in depth over the last few years and the results have shown that investment funds and indices of both equity and fixed income instruments do not sacrifice economic performance when social and responsible screens are applied. In particular, some socially screened investment fund event demonstrate a superior performance compared to conventional market benchmarks.

While the previous research focused on SRI and ethical investing, the performance of impact investments is far less explored. In fact, there is not much literature dealing with the performance of impact investment funds or similar investment portfolios.

Therefore, using a global database of 77 equity and fixed-income market indices covering the major industry sectors for potential impact creation such as renewable energy, health care, agriculture and green real estate, this paper analyses impact investment fund performance by creating proxy portfolios for impact investments. It can be argued that indices are including companies based on positive and negative screening criteria and therefore are no accurate proxy for impact creation, albeit the heterogeneity in screening criteria which allows to cover more aspects of impact investments. The selected indices include smaller local markets and organisations that are able to actively create a positive social and environmental value.

In accordance to previous research, we use both single-factor and multi-factor performance evaluation models. Multi-factor models do not only improve performance measures but also enable us to evaluate sensitivities to several market factors. Pooling indices together that are constructed by the same distribution company indicates the diversity of screening criteria used by index providers and the impact they seem to have on the performance of market indices.

The results show that differences in performance between socially screened indices and conventional indices differ significantly across investment instrument, time period, and the composition of portfolios. In particular, fixed income indices show a statistically significant out-performance compared to their non-screened counterparts and as a whole the groups of indices perform better than the portfolios consisting of the family indices. While the group portfolios on average performed better compared to their benchmarks, the family portfolios showed a clear underperformance. In order to conclude, Table 13 reports the number of individual portfolios presenting positive and negative alphas which are statistically significant (between the 1% and 10% level) are reported in brackets.

**Table 13** Summary of unconditional portfolio performance

	Single-factor model		Multi-factor model	
	$\alpha$	Sig.	$\alpha$	Sig.
<i>Group of portfolios</i>				
Number of positive $\alpha$	9	[6]	6	[4]
Number of negative $\alpha$	6	[1]	3	[1]
<i>Family portfolios</i>				
Number of positive $\alpha$	10	[4]	5	[1]
Number of negative $\alpha$	16	[5]	8	[3]

In case of equity indices, the performance measures vary substantially. While the portfolios comprising of equity indices are not able to beat the market indices, the family portfolios of E. Capital Partner and S-Network significantly outperform their conventional peers. The residual family indices show no significant differences in performance. For the balanced portfolios the conclusion is not that clear. The long-term portfolio is significantly underperforming the market benchmark, whereas the performance of the short-term portfolio is superior, but not significant compared to the benchmark.

The shift from under to out-performance can be observed for all index portfolios across asset classes. With regard to the equity portfolios, the indices have performed better over the last 3 years than over the last 10 years, which can be explained by the effects of the financial crisis and the effect of the emerging markets for impact investments or social finance in general. Considering the bond portfolios, the performance improved only marginally since the start of the crisis, but the out-performance is still significant and considerable. An explanation for this could be the period of very low interest rates and the volatility of equity investments observed over the last few years.

Focusing on the differences in performance between family portfolios we find significant differences in screening criteria. The significant out-performances of ECP and S-Networks indices are neutralised by the significant underperformance of the FTSE and Wilderhill indices.

When adding additional factors to the performance evaluation, the abnormal significant performances are diminishing with the exception of the fixed income portfolios. The significant out-performance increased. We also find evidence of more significant alphas, both positive and negative. The improvement of the  $R^2$  estimates when using a multi-factor models are consistent with previous studies.

In terms of risk factors, the results show that the exposure to systematic risk is consistently in line with the benchmarks. The only exceptions are the fixed income indices and the family portfolios with significant alphas. While the first ones imply a higher market risk, the beta estimates are lower for the latter. The portfolios of socially responsible fixed-income indices are more invested in investment-grade bonds such as corporate and government bonds and have a low default risk exposure.

Overall, we find no evidence that portfolios of SRI/ethical indices are underperforming conventional market benchmarks. In fact, the performance is

neutral and there seems to be no significant disadvantage of investing in indices targeting social and environmental issues.

## Appendix

This appendix describes the sample of SRI equity and fixed-income indices. For each index we indicate: provider, fund name, investment type, ticker, applied time horizon, legal domicile (*GER* Germany, *ITA* Italy, *SUI* Switzerland, *BEL* Belgium, *GBR* Great Britain, *FRA* France), investment region and the source of data.

**Table 14** Description of SRI equity and fixed-income

Provider	Index name	Type	Ticker	Time horizon	Country	Region	Source
Bank of America/ Merrill Lynch	Renewable Energy Index	Equity	MLEIREND	04/2006–04/2016	USA	World	Bloomberg
	Green Bond Index	Bond	GREN	01/2011–04/2016	USA	World	Bloomberg
BörsC Frankfurt	DAX Global Alternative Energy Index	Equity	DXAEUSD	04/2006–04/2016	GER	World	Bloomberg
BörsC Hannover	UN Global Challenges Index	Equity	GCXP	09/2007–04/2016	GER	World	Bloomberg
	UN Global Compact 100 Index	Equity	GC100	04/2006–04/2016	GER	World	Bloomberg
Calvert Investments	Social Index	Equity	CALVSCI	04/2006–04/2016	USA	World	Bloomberg
	Social Global Alternative Energy	Equity	CSCBEAU	04/2006–04/2016	USA	World	Bloomberg
Credit Suisse	ING Socially Responsible Investments Index	Equity	ISRIITR	04/2006–04/2016	SUI	World	Bloomberg
DJSI	World Developed Composite Index	Equity	DJSDVCS	09/2008–04/2016	USA	World	Datastream
	World 80 Price Index	Equity	W180	04/2006–04/2016	USA	World	Bloomberg
	World Enlarged Composite Index	Equity	DJSWECD	04/2006–04/2016	USA	World	Bloomberg

(continued)

**Table 14** (continued)

Provider	Index name	Type	Ticker	Time horizon	Country	Region	Source
	World Ex ALL	Equity	WISUS	04/2006–04/2016	USA	World	Bloomberg
	World Index	Equity	WISGI	04/2006–04/2016	USA	World	Bloomberg
	World Enlarged Ex ALL/AE	Equity	DJSWEX4D	01/2012–04/2016	USA	World	Bloomberg
Dow Jones	MAC Global Solar Energy Index Total Return	Equity	SUNIDX	04/2006–04/2016	USA	World	Bloomberg
E.Capital Partners	ECPI Global ECU Real Estate and Building	Equity	GALPERPER	11/2007–04/2016	ITA	World	Bloomberg
	ECPI Ethical Global Composite Bond Index	Bond	ECAPGCMB	04/2006–04/2016	ITA	World	Bloomberg
	ECPI Euro Ethical Government Bond	Bond	ECAPEGB	04/2006–04/2016	ITA	World	Bloomberg
	ECPI Global Climate Change	Equity	GALPHACC	04/2006–04/2016	ITA	World	Bloomberg
	ECPI Ethical Global Government Bond Index	Bond	ECAPGGB	01/2012–04/2016	ITA	World	Bloomberg
	ECPI Global Agriculture Liquid	Equity	GALPLAGR	01/2011–04/2016	ITA	World	Bloomberg
	ECPI Global Renewable Energy Liquid	Equity	GALPLRWR	01/2011–04/2016	ITA	World	Bloomberg
	ECPI World Equity Index	Equity	GALPHPWR	01/2007–04/2016	ITA	World	Bloomberg
	ECPI Global ESG Healthcare Equity	Equity	GALPHHCP	01/2007–04/2016	ITA	World	Bloomberg
	ECPI Global ESG Technology Equity	Equity	GALPHGTR	01/2007–04/2016	ITA	World	Bloomberg
	ECPI Global Science for Life	Equity	GALPHSLP	01/2007–04/2016	ITA	World	Bloomberg

(continued)

**Table 14** (continued)

Provider	Index name	Type	Ticker	Time horizon	Country	Region	Source
	ECPI Global Developed ESG Corporate Bond	Bond	ECAPGCB	01/2007–04/2016	ITA	World	Bloomberg
	ECPI Global Developed Governance Govt. Bond	Bond	ECAPDGB	01/2007–04/2016	ITA	World	Bloomberg
Ethical	Sustainability Excellence Global Index	Equity	ESIXEWM	04/2006–04/2016	BEL	World	Bloomberg
FTSE	All-World Alternative Energy Index	Equity	AWAEU	12/2009–04/2016	GBR	World	Bloomberg
	EO Water Technology Index	Equity	FTROWT\$	11/2008–04/2016	GBR	World	Datastream
	EO Renewable and Alternative Energy Index	Equity-	EORE	11/2008–04/2016	GBR	World	Bloomberg
	EO Waste and Pollution Control Technology Index	Equity	EOWP	11/2008–04/2016	GBR	World	Bloomberg
	ET100 Index	Equity	FET100	10/2007–04/2016	GBR	World	Bloomberg
	Environmental Opportunities 100 Index	Equity	EO100	06/2008–04/2016	GBR	World	Bloomberg
	4Good Global Index	Equity	4GGL	04/2006–04/2016	GBR	World	Bloomberg
HSBC	Climate Change Index	Equity	HSCCB	04/2006–04/2016	GBR	World	Bloomberg
IWR	Renewable Energy Industrial Index (RENIXX)	Equity	RENIXX	04/2006–04/2016	GER	World	Bloomberg
MSCI	World ESG Index	Equity	GSIN	10/2007–04/2016	USA	World	Datastream
	Global Climate Index	Equity	MSGLOC\$	09/2010–04/2016	USA	World	Datastream
	Global Pollution Prevention Index	Equity	MSGLPP\$	09/2009–04/2016	USA	World	Datastream
	Global Alternative Energy Index	Equity	MSGLAE\$	09/2009–04/2016	USA	World	Datastream

(continued)

**Table 14** (continued)

Provider	Index name	Type	Ticker	Time horizon	Country	Region	Source
	Global Clean Technology Index	Equity	GECT	09/2009–04/2016	USA	World	Datastream
	Global Green Building Index	Equity	MSGLGB\$	09/2009–04/2016	USA	World	Datastream
	Global Sustainable Water Index	Equity	MSGLSW\$	09/2009–04/2016	USA	World	Datastream
	World Socially Responsible Index	Equity	MXWOSOCR	06/2011–04/2016	USA	World	Bloomberg
	World Socially Responsible Net Index	Equity	M1WOSOCR	06/2011–04/2016	USA	World	Bloomberg
	ACWI Low Carbon Target	Equity	MSAFCT\$	04/2011–04/2016	USA	World	Datastream
	Global Environment Index	Equity	MSGLOE\$	04/2009–04/2016	USA	World	Datastream
Nasdaq	Clean Edge Green Economy Index	Equity	NASCEUL	11/2006–04/2016	USA	World	Bloomberg
	Green Economy Global Benchmark Index	Equity	QGREEN	09/2010–04/2016	USA	World	Bloomberg
	OMX Global Water Index	Equity	GWATERL	08/2011–04/2016	USA	World	Bloomberg
	OMX Global Agriculture Index	Equity	QAGR	07/2008–04/2016	USA	World	Bloomberg
	OMX CRD Global Sustainability	Equity	QCRD	06/2009–04/2016	USA	World	Bloomberg
NYSE/ Bloomberg	Global Solar Energy Index	Equity	SOLAR	04/2006–04/2016	USA	World	Bloomberg
Royal Bank of Scotland	Clean Renewable Energy Index	Equity	RBSZNRGY	04/2006–04/2016	GBR	World	Bloomberg
S&P	Intl. Environmental and Socially Responsible Index	Equity	SPIESREP	10/2007–04/2016	USA	World	Bloomberg
	ESG Pan-Europe Developed Sovereign Bond Index	Bond	SPESPEUT	05/2008–04/2016	USA	Europe	Bloomberg

(continued)

**Table 14** (continued)

Provider	Index name	Type	Ticker	Time horizon	Country	Region	Source
	Global Clean Energy Index	Equity	SPGCLE\$	04/2006–04/2016	USA	World	Datastream
	Global Economy index	Equity	SPGECOS\$	04/2006–04/2016	USA	World	Datastream
	1200 Fossil Fuel Free Carbon Efficient Select Index	Equity	SPGFCUP	01/2012–04/2016	USA	World	Bloomberg
Securvita	Natur Aktien Index	Equity	NAI	04/2006–04/2016	GER	World	Bloomberg
S-Network Global Indexes	Ardour Solar Index	Equity	SOLRX	04/2006–04/2016	USA	World	Bloomberg
	Global Water Index	Equity	JGI	04/2006–04/2016	USA	World	Bloomberg
	Water Technology Index	Equity	JWT	04/2006–04/2016	USA	World	Bloomberg
Société Générale	Global Environment Index	Equity	WEXP	04/2006–04/2016	FRA	World	Bloomberg
	Global Waste Management Index	Equity	SGIXGWM	04/2006–04/2016	FRA	World	Bloomberg
	World Alternative Energy Index	Equity	WAEXPD	10/2006–04/2016	FRA	World	Bloomberg
Solactive	Alternative Energy Index	Equity	SBOXAE	10/2006–04/2016	GER	World	Bloomberg
	Global Renewable Energy Index	Equity	SOLGRE	05/2011–04/2016	GER	World	Bloomberg
	Green Bond Index	Bond	SOLGREEN	01/2012–04/2016	GER	World	Bloomberg
STOXX	Global ESG Leaders	Equity	SGESGLE	04/2011–04/2016	SUI	World	Bloomberg
	iSTOXX Global ESG Select 100		SXESLVUP	04/2006–04/2016	SUI	World	Bloomberg
	Global ESG Leaders Diversification Select 50	Equity	SGESGDSP	04/2006–04/2016	SUI	World	Bloomberg
Wilderhill	Progressive Energy Index	Equity	WHPROE8	10/2006–04/2016	USA	World	Datastream
	Clean Energy Index	Equity	ECO	04/2006–04/2016	USA	World	Bloomberg
	New Energy Global Innovation	Equity	WHNEGIS	04/2006–04/2016	USA	World	Datastream

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# Climate Change as a Topic for Impact Investing



Maximilian Horster

## Introduction

... investors need to know how the impacts of climate change can affect specific companies, sectors and financial markets as a whole. These risks must be more clearly disclosed.<sup>1</sup>

Ban Ki-moon, United Nations Secretary-General

Over the past few years, the topic of climate change has been propelled to the top of the investors' agenda all around the world. This is an encouraging sign that the historically conservative and structurally slow-moving financial industry is capable of quick, decisive action. The challenge and pace of climate change leaves little room for idling, and investors have a crucial role in financing the transition from the current brown economy to one that is greener and cleaner.

With so many developments taking place within the financial industry, academia is facing the challenge of keeping up with the steady stream of new updates on various investors integrating climate change considerations into their investment strategies. When discussing topics ingrained in the current dynamic, fast-paced environment it seems necessary to provide a practitioner's view on the state of the market in the spring of 2018—acknowledging that this view will most likely be terribly outdated in a year from now.

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Some topics covered in this article have been discussed in the report Fossil Free Indexes/South Pole Group: The Carbon Underground 2016: Managing the Climate Risks of Fossil Fuel Companies in Investment Portfolios (July 2016) and CSSP/South Pole Group: Top 100 Study Carbon (September 2016).

<sup>1</sup><https://www.un.org/sg/en/content/sg/statement/2016-01-27/secretary-generals-remarks-investor-summit-climate-risk-delivered>

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This article argues that climate change as a theme is decoupling from impact or ESG investing and becoming a mainstream topic for investors, due to it posing increasingly material investment risks and opportunities. This article also aims to reveal the current mindset of the different actors—civil society, international organisations, countries, investors—in approaching the role of the financial industry to limit climate change. Finally, it showcases different investment solutions—from mainstream to impact investing—to tackle climate change from an investor’s perspective, by voiding risks, seizing opportunities, and creating positive impact.

## Climate Change as an Investment Risk

When investors consider risks related to climate change, their risk structure is often very different than that of the general public. While the public discourse focuses typically on physical risks of climate change, investors tend to concentrate on transitional risks.<sup>2</sup>

### *Physical Versus Transitional Risk: A Simple Framework*

**Physical risks** describe the long-term effect of climate change on the environment and societies. This includes the increase of extreme weather events such as storms, floods, droughts and the consequences on nature and society, including humanitarian catastrophes, migration and destruction of habitat. These risks should be of concern for investors. They bear consequences and costs for assets and companies in investment portfolios that produce goods and services or have their supply chain or client base in affected areas and might lose value. However, there is hardly any investor out there actively measuring these risks for their investments. Reason for not integrating such risk approaches into investment decisions can only partially be attributed to the lack, complexity, and uncertainty of data. Comprehensive data can be obtained via risk modelling databases such as the one used by re-insurance giant Munich Re. It is more likely that the general short-termism of investors prevents them from integrating risk scenarios that are 15–20 years long and develop gradually. This notion has been coined as the “tragedy of the horizons”, where investment horizons are too short to capture climate change scenario horizons.<sup>3</sup>

**Transitional risks**, on the other hand, describe the short and mid-term risks that come with the political and societal will to move to an economy that is compliant with the target to limit global warming to an average of 2 °C (or less) than

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<sup>2</sup>This risk framework is in line with the Task Force on Climate Disclosure by the Financial Stability Board, [https://www.fsb-tcfd.org/wp-content/uploads/2016/03/Phase\\_I\\_Report\\_v15.pdf](https://www.fsb-tcfd.org/wp-content/uploads/2016/03/Phase_I_Report_v15.pdf)

<sup>3</sup>Mark Carney, 2015, Tragedy of the horizons. <http://www.bankofengland.co.uk/publications/Pages/speeches/2015/844.aspx>

pre-industrial levels. These risks are more imminent as they come with political interventions or societal shifts that can happen any time. If the global economy should shift from a current pathway of 4 °C warming to a 2 °C warming scenario, certain economies, companies, but also societies will have to go through a significant transition. For companies and their products—if climate intense—this might mean compromising the way products are produced, or even a reinvention of the actual product itself. It can also impact entire assets that might lose part or all of their value. This can happen due to regulators no longer allowing certain business practices, or societies no longer accepting certain types of products and moving to substitutes. For investors investing in affected businesses, this implies the necessity to check current and future investments for the potential impact of such transitional risks as they can imply considerable investment risks.

While the risk framework presented above is by no means a new one, it should be noted that mainstream investors have only started to embrace it actively in late 2014. Prior to 2014, climate change was part of the overall Environmental, Social and Governance (ESG) debate that mainly concerned just a subset of investors due to their stronger ethical considerations regarding investment decisions. Today, climate change is decoupling from ESG and becoming a risk parameter for mainstream investors as well. The main driver for this is the evolution of societal and political will around climate change into practical plans. These decisive actions make the unfolding of transitional risks both more likely and more material.

### ***Transitional Risk Becoming Material***

While climate change has been a dominant topic for civil society, NGOs, and international politics since the beginning of the new century, the role of investors in this has not been in focus. Around 2010, however, increasingly loud voices pointed out that it is the financial industry that not only finances the economy and its green or brown impact, but also made the case that this very same industry might suffer huge losses from the effects of climate change and climate change legislation. This “divestment movement” grew significantly around the notion that pension plans or university endowments run into a contradiction by investing in a fossil fuel-based economy to secure future wealth while destroying that very future. This thinking fueled the growth of organisations like [350.org](http://350.org), and NGOs such as WWF and Greenpeace also took on the topic.<sup>4</sup>

Around the same time, research organisations provided the necessary framework, background information, and means of communication that made the topic easily digestible for the financial industry. Carbon Tracker and the University of Oxford’s Smith School made the case for a “carbon bubble”, explaining that—in a 2 °C compliant world—a wide range of assets will “strand” as they will not be able to

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<sup>4</sup>Van Renssen, S., 2014. Investors take charge of climate policy. *Nature Climate Change*.

keep operating in the way they have been expected to and therefore lose part or all of their value.<sup>5</sup> The underlying message of this case is that fossil reserves will have to remain in the ground (“unburnable carbon”), although companies’ portfolio valuation are based on the expectation that these reserves will be extracted. The think tank 2° Investing Initiative has, with this backdrop, deployed research on the means available for investors to measure and quantify investment risk.<sup>6</sup>

One of the early groups of investors dedicated to act upon climate change has been religious organizations. According to [350.org](http://350.org), 26% of the institutional investors who have committed to divestment today are faith-based groups.<sup>7</sup> The Vatican, while not officially committing to divest the holdings of the Catholic Church, has been very vocal in its insistence on the protection of the environment, including the decrying of the burning of fossil fuels. On May 24, 2015, Pope Francis released the encyclical letter *Laudato Si’—On Care for Our Common Home*.<sup>8</sup> The document covers a variety of environmental topics, and includes the issue of human-induced climate change in several paragraphs.<sup>9</sup> The document stresses the importance of international agreements in setting limits on greenhouse gas emissions, underlining the urgency for wealthier and more industrialized countries to take the lead on decarbonisation.<sup>10</sup> Just as in the investment world, different faith-based groups have adopted different strategies for addressing the issue of climate change, and these statements and actions have had a global impact.

## The Paris Agreement: A Game Changer

The year 2015 ended with a landmark event—the Paris Agreement at the Conference of Parties (COP21), which had the goal of limiting global warming to well below 2 °C inked in by global leaders. Since then, the agreement has been ratified by every country in the world, including the world’s biggest emitters of greenhouse gases, the

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<sup>5</sup>Carbon Tracker, 2011, *Unburnable Carbon – Are the world’s financial markets carrying a carbon bubble?* Caldecott, B., Tilbury, J., & Carey, C., 2014. *Stranded assets and scenarios. Smith School of Enterprise and the Environment, Stranded Assets Program, University of Oxford.*

<sup>6</sup>Dupré, S., & Hugues C., 2012, *Connecting the Dots between Climate Goals, Portfolio Allocation and Financial Regulation*, 2° Investing Initiative.

<sup>7</sup><http://gofossilfree.org/commitments/>

<sup>8</sup>[http://w2.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco\\_20150524\\_enciclica-laudato-si.html](http://w2.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si.html)

<sup>9</sup>From Chapter Five in *Laudato Si’—On Care for Our Common Home*, paragraph 165: “We know that technology based on the use of highly polluting fossil fuels—especially coal, but also oil and, to a lesser degree, gas—needs to be progressively replaced without delay. Until greater progress is made in developing widely accessible sources of renewable energy, it is legitimate to choose the less harmful alternative or to find short-term solutions.”

<sup>10</sup>From Chapter Five, paragraph 171.

United States and China. Chinese President Xi stated on the occasion that China will “unwaveringly pursue sustainable development”.<sup>11</sup>

China’s statement is part of a bigger picture that goes beyond establishing the case for an imminent low-carbon transition: Every country in the world has agreed to fully transform the global economy. For investors, this scenario has surfaced many relevant questions: do current investments still make sense under such a scenario? Where might the largest risks be located within the portfolio? Where can the greatest opportunities be found? Building on the scene set by the Paris Agreement, in January 2016, UN Secretary General Ban Ki-Moon stated, “. . . investors need to know how the impacts of climate change can affect specific companies, sectors and financial markets as a whole. These risks must be more clearly disclosed.”<sup>12</sup> This statement points to the systemic role of the financial industry: Article 2c of the Paris Agreement explicitly mentions the alignment of financial flows with a transition towards a low-carbon economy as a core target. This goal places considerable emphasis on the role of the financial sector in combatting climate change.

Around the world, local, state, and national governments have already made visible progress in enacting the necessary climate policies called for by the Paris Agreement. National capitals such as Stockholm,<sup>13</sup> Berlin<sup>14</sup> and Washington D.C.<sup>15</sup> have recently declared their intent to purge their investment portfolios of fossil fuel stocks. Others have crafted climate change plans, with San Diego<sup>16</sup> becoming the largest US locality to release a legally-binding roadmap for transitioning to 100% renewable energy. Cities, meanwhile, have been entering into transnational partnerships; the Compact of Mayors and the Covenant of Mayors have recently united to form The Global Covenant of Mayors for Climate and Energy,<sup>17</sup> a partnership of 7100 cities worldwide representing over 600 million people. With these initiatives, municipalities are recognising that their positions as productive and creative nodes of economic activity also make them critical parts of the solution to fight climate change.

In addition to city-level action, national governments are also increasingly proactive of taking stock of where they stand with regards to their climate impact and of the climate change-related opportunities that can be pursued. The Swiss government

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<sup>11</sup>The Guardian, 2016, <https://www.theguardian.com/environment/2016/sep/03/breakthrough-us-china-agree-ratify-paris-climate-change-deal>

<sup>12</sup>Ban Ki-Moon, 2016, Remarks at Investor Summit on Climate Risk <https://www.un.org/sg/en/content/sg/speeches/2016-01-27/remarks-investor-summit-climate-risk>

<sup>13</sup><http://cleantechnica.com/2016/06/16/swedish-capital-stockholm-divests-fossil-fuel-investments/>

<sup>14</sup><http://cleantechnica.com/2016/06/26/berlins-parliament-voted-divest-fossil-fuels/>

<sup>15</sup><https://insideclimatenews.org/news/06062016/washington-dc-pension-fund-announces-divestment>

<sup>16</sup>The New York Times, 2015, <http://www.nytimes.com/2015/12/16/science/san-diego-vows-to-move-entirely-to-renewable-energy-in-20-years.html>

<sup>17</sup>The Guardian, 2016, <https://www.theguardian.com/sustainable-business/2016/jun/22/michael-bloomberg-global-covenant-links-600m-people-and-7000-cities-fight-against-climate-change>

is investigating the financial performance of low-carbon investment strategies,<sup>18</sup> and different Swedish,<sup>19</sup> Dutch<sup>20</sup> and German authorities<sup>21</sup> have published reports on the relation between climate change and financial stability for their countries. Austria has followed its European counterparts by initiating a call for a similar assessment—a mandate that all signatories of the Paris Agreement will have to see to. On the other side of the globe, Australia has taken action by hosting a Senate inquiry on the topic of carbon risk disclosure.<sup>22</sup>

Investors have been sensitive to these developments as they are typically part of a fact-finding phase before regulators decide to take action. The first regulatory pieces around climate change that have already come into force or are currently in the making have so far been more focused on climate transparency as opposed to aspects influencing actual investment decisions. A recent example of such legislation was the French energy transition law passed in 2015, which required institutional investors to report on their investments' climate impact under article 176 of the law. The Swedish minister of financial markets has led Swedish investors to disclose their climate impact by encouraging self-governance of the topic, which the industry took on also in order to prevent regulative action from the government. Similar measures are planned for corporate pension funds at the EU level with the IORP regulation.<sup>23</sup> In Switzerland, a recommendation for investors to report on climate risk is being introduced.<sup>24</sup> On the other side of the Atlantic, the Californian governor for the insurance industry made reporting on exposure to the fossil fuel industry mandatory for insurance companies in his state, and issued a recommendation for investors to divest from thermal coal.<sup>25</sup>

The exception to the raising post-Paris ambitions around the globe is the administration of President Trump in the USA. Once a unifier for a global climate agreement, the current US administration threatens to withdraw from the agreement that it considers harmful to the US economy. That notion is countered by surprisingly strong voices from US business, civil society and the mentioned US cities and states that sees the Paris agreement as an important and binding agreement—nearly half of all large US corporates have climate targets in place and not a single US state

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<sup>18</sup>Swiss Federal Office for the Environment, 2016, <http://www.bafu.admin.ch/klima/13805/16344/16717/index.html?lang=de>

<sup>19</sup>Finanzinspektionen, 2016, <http://www.fi.se/Folder-EN/Startpage/Press/Press-releases/Listan/Climate-changes-and-financial-stability/>

<sup>20</sup>DeNederlandscheBank, 2016, Time for Transitions, an exploratory study of the transition to a carbon-neutral economy, Occasional Studies, Vol. 14-2.

<sup>21</sup>Environmental Finance, 2016, <https://www.environmental-finance.com/content/news/german-finance-ministry-launches-inquiry-into-climate-change-risks.html>

<sup>22</sup>Parliament of Australia, 2016, [http://www.aph.gov.au/Parliamentary\\_Business/Committees/Senate/Economics/Carbon\\_Risk\\_Disclosure/Terms\\_of\\_Reference](http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Economics/Carbon_Risk_Disclosure/Terms_of_Reference)

<sup>23</sup>EU Commission, 2016, [http://europa.eu/rapid/press-release\\_IP-16-2364\\_en.htm](http://europa.eu/rapid/press-release_IP-16-2364_en.htm)

<sup>24</sup>Swiss Federal Office for the Environment, 2016, <http://www.bafu.admin.ch/klima/13805/16344/16717/index.html?lang=de>

<sup>25</sup>[https://interactive.web.insurance.ca.gov/apex\\_extprd/f?p=250:1:0](https://interactive.web.insurance.ca.gov/apex_extprd/f?p=250:1:0)

sees a majority of people in favour of leaving the Paris agreement.<sup>26</sup> This counter-movement to the Federal approach manifested itself at a successor conference to COP21, the COP23 in Bonn in 2017: Under the banner #WeAreStillIn, a US delegation consisting of hundreds of representatives including iconic US corporates such as Coca-Cola, Bank of America and S&P took a stand against the official US delegation consisting of low-ranking government representatives at this high-rank event.<sup>27</sup> The US remains a source of uncertainty at least until 2020. The first day the country could indeed legally withdraw from the Paris Agreement will be a few weeks after the next presidential election and therefore heavily influenced by the outcome.

## Investors Stepping Up

Investors are increasingly acting on climate change due to two main reasons: Firstly, the industry is held under a magnifying glass and is faced with increasing pressure when it comes to transparently disclosing how their actions finance climate change. This has led to a pro-active self-governance on climate transparency. The Montreal Pledge<sup>28</sup>—a commitment to measure and publicly disclose the carbon footprint of investments on an annual basis counted 150 signatories in spring 2018, up more than 20% from the previous year and representing at present USD10 trillion assets under management (AuM).<sup>29</sup> These investors have committed to disclose the GHG emissions of their portfolios. In parallel, the Taskforce for Climate-related Financial Disclosure (TCFD) founded by the Financial Stability Board, has worked jointly with investors including AXA, UBS, BlackRock and Barclays to develop reporting and disclosure frameworks for companies, investors and intermediaries regarding climate change-related indicators.<sup>30</sup>

The second reason for taking action stems from investors' acknowledgement of climate change related risks followed by their propensity to react upon this notion. Recent market developments give them all the reason to be concerned: The value of coal companies has declined dramatically over the past years, with numerous mine closures and bankruptcies, particularly among US mining companies. The sharp decline and subsequent rise in the price of oil highlights the vulnerability of oil

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<sup>26</sup>Yale University 2017: [http://climatecommunication.yale.edu/publications/paris\\_agreement\\_by\\_state/](http://climatecommunication.yale.edu/publications/paris_agreement_by_state/)

<sup>27</sup><https://www.wearestillin.com/COP23>

<sup>28</sup>([montrealpledge.org](http://montrealpledge.org))

<sup>29</sup>A good summary can be found in Novethic/PRI: Montréal Carbon Pledge – accelerating investor climate disclosure (September 2016).

<sup>30</sup><https://www.fsb-tcfid.org/>



companies, particularly those focused on upstream activities, to changes in the supply and demand for crude oil.<sup>31</sup>

In addition to the Montreal Carbon Pledge, other significant coalitions have sprung up to mobilise the financial markets to drive economic decarbonisation: The 25 members of the Portfolio Decarbonization Coalition with USD600 billion AuM, seek not only to disclose but to also reduce the greenhouse gas (GHG) emissions of their portfolios with a wide variety of taxonomies.<sup>32</sup> The most dominant one at present is that of divestment.

The divestment movement, led by the activities of [350.org](http://350.org) and Divest-Invest, continues to gain global momentum: Between September 2014 and December 2015 alone, the value of assets committed to divestment rose from \$50 billion to \$3.4 trillion.<sup>33</sup> The movement has been a critical component in drawing public and investor attention to the risks of fossil fuels.

The dramatic increase in the value of assets committed to divestment was driven in part by a large number of divestment commitments announced in the run up to the COP21. In addition, the variety of institutions divesting has increased, and the typical size of such institutions has grown. Arabella Advisors finds that “in 2014, institutions pledging to divest held \$349 million in assets, on average. Today, such institutions hold \$9.8 billion in assets, on average.”<sup>34</sup>

Divestment also continues to be a hot topic on college campuses: As of June 2016, 35 universities and colleges in the US, and 43 schools in Europe and Australia, have committed to either partial or full fossil fuel divestment. Public pension funds, which have more substantial market power, are also considering divestment. According to The Smith School of Enterprise and the Environment at the University of Oxford, “of the \$12 trillion assets under management among university endowments and public pension funds—the likely universe of divestment candidates—the plausible upper limit of possible equity divestment for oil and gas companies is in the range of \$240–600 billion (2–5%) plus about half that amount for debt.”<sup>35</sup> A striking example came in July 2016, when the California State Teachers Retirement System (CalSTRS) committed up to \$2.5 billion to low-carbon strategies in US and non-US developed and emerging equity markets.<sup>36</sup>

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<sup>31</sup>Financial Times, 2016, <http://www.ft.com/cms/s/0/1aaa8762-2d8c-11e6-bf8d26294ad519fc.html#axzz4KobA5uq8>

<sup>32</sup>[www.unepfi.org/pdc/](http://www.unepfi.org/pdc/)

<sup>33</sup>These values represent the total assets controlled by individuals and institutions that have chosen to divest, according to Divest-Invest. <https://www.bloomberg.com/news/articles/2015-12-02/fossil-fuel-divestment-tops-3-4-trillion-mark-activists-say>

<sup>34</sup>Arabella Advisors, 2015, “Measuring the Growth of the Global Fossil Fuel Divestment and Clean Energy Investment Movement.”

<sup>35</sup>Ansar, A., Caldecott, B., & Tilbury, J., 2013. Stranded assets and the fossil fuel divestment campaign: what does divestment mean for the valuation of fossil fuel assets. *Stranded Assets Programme, Smith School of Enterprise and the Environment, University of Oxford*.

<sup>36</sup>CalSTRS, 2016, <http://www.calstrs.com/news-release/calstrs-commits-25-billion-low-carbon-index>

## Investment Climate Impact Assessments

While divesting from fossil fuels and investing into the green economy has gained ground, the recent development of sophisticated investment climate impact assessment methods have enlarged the toolbox for investors. The quantification of GHGs is the first step to understanding the impact of investors on climate change. Investment GHG accounting provides the basis for emissions management. The calculation of the carbon footprint relies on measuring and/or estimating the quantities and assessing the sources of various GHG emissions that can be directly or indirectly attributed to the activities of the underlying holdings. The measure is expressed as tonnes of CO<sub>2</sub> equivalents emitted, usually on an annual basis.

This analysis reveals each individual holding's carbon footprint and aggregates it on a portfolio. In other words, it provides a measure of the impacts of each underlying holding on the environment in terms of the GHG volume it produces in its operations. This exercise provides the basis for constructing or optimising an investment portfolio based on emission exposure, as well as for reporting and positioning an investment product or house towards stakeholders. Measuring progress on the portfolio emission exposure is achieved by repeating the carbon footprint assessments over time. It also provides valuable input to the strategic planning process in terms of evaluation of the effectiveness of the climate change investment strategies and of rebalancing.

A rapidly growing group of investors measuring their climate impact and risk are already looking at the next logical step in their journey—that of managing their climate impact and associated risks. Many have turned to tools such as [YourSRI.com](https://yoursri.com),<sup>37</sup> which provides a platform to screen mutual funds and ETFs for their carbon footprint. Another tool by CleanCapitalist<sup>38</sup> allows users to “decarbonise” portfolios with a click of a mouse, and to back-test how a portfolio would have performed financially if it had been decarbonised 3 years earlier.

The scope of the climate impact assessment of investments is more and more extended beyond public equity investments. Most importantly, the carbon footprint of corporate bonds and private equity portfolios is increasingly assessed, along with other asset classes, such as real estate, infrastructure and sovereign bonds.<sup>39</sup>

The depth of currently available assessment methods is also broadened to include other metrics in addition to a carbon footprint. An investment carbon footprint—is a crucial first step to create a “heatmap” for further drill downs. Such measurement can include an analysis of a company's fossil fuel reserves and its resulting potential financed emissions, electricity produced from coal or renewables and forward-looking indicators such as the climate strategy of companies and scoring of sector specific risk factors.

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<sup>37</sup><https://yoursri.com/>

<sup>38</sup><http://cleancapitalist.com>

<sup>39</sup>An example is the Swedish Pensionfund AP6 <http://www.thesouthpolegroup.com/clients/ap6-case-study>

More recent developments linked to climate impact assessments are being channeled into practical tools for the financial industry: CLIMETRICS, a project financed by the European Union's Climate-KIC initiative and led by ISS-Ethix and CDP has, for example, created the first climate impact rating for equity funds.<sup>40</sup> Other emerging initiatives include the Sciences Based Targets projects helping companies to set themselves emission reduction targets in line with a 2 °C pathway.<sup>41</sup>

In sum, the currently established methods allow to measure the status quo of investment climate impact and risk, the decarbonisation and de-risking of investment portfolios, as well as the progress on decarbonising the real economy. The assessments include setting a baseline for existing portfolios to decarbonise in the future and measuring them against an existing or a 2° compliant benchmark. Investors are finally able to understand their investments' climate impact and associated risks as well as identify potential winners and losers from a transition to a low carbon economy.

## **From Measurement to Action: Investment Strategies**

The current investment landscape is witnessing the emergence of a wide range of strategies to de-risk mainstream investment portfolios from climate change impact, enable the investment in activities that generate positive climate impacts, as well as new types of sophisticated products that address the issue of carbon exposure, carbon risk and climate change adaptation.

### ***Climate Friendly Equity Strategies: Active and Passive Approaches***

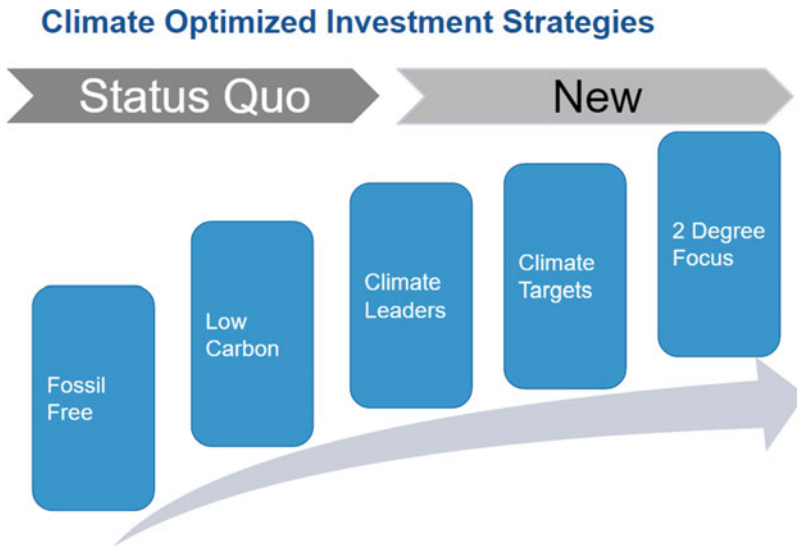
The first group of investment strategies emerged around the notion of climate friendly public equity strategies. The core idea is to take a basket of companies as base universe, for example an index, and remove all companies that do not comply with certain climate standards. The very basic logic would be a "divestment" strategy that excludes companies owning fossil reserves or remain behind a certain threshold with regards to revenue from fossil fuel related activities. In addition, there are strategies that only invest in companies that have a lower carbon footprint and therefore a lower carbon exposure.

Both approaches, and combinations thereof, are suitable to reduce climate change-related risks: If the coal industry feels the effect of climate change, a divested

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<sup>40</sup><http://www.climetrics-rating.org/>

<sup>41</sup><http://sciencebasedtargets.org/>



**Fig. 1** Climate optimized investment strategies overview

investor will be less exposed to potential decline in value. Such strategies also help to decarbonise a portfolio as similar exposure can be achieved at significantly reduced greenhouse gas emissions.

These approaches, however, do not decarbonise the real economy. This scale of decarbonisation can only be achieved by investing into companies that are transitioning to thrive in a low carbon economy. For such investment approaches, the data and the necessary products are presently already available in different levels of granularity and climate ambition. The deepest ambition can be found in strategies trying to align a portfolio with a 2° investment target (Fig. 1).

There are examples available for both **active and passive strategies** in this space. However, the index and passive space are at present leading in this area. A multitude of low-carbon and climate friendly investment strategies have started to emerge, with index providers such as [STOXX](https://www.stoxx.com/lowcarbon),<sup>42</sup> [Solactive](http://www.solactive.com/low-carbon)<sup>43</sup> and [EDHEC](http://www.scientificbeta.com/)<sup>44</sup> at the forefront with their families of indexes sensitive to climate-change-related factors. Some of these indexes are broad based benchmarks across industry sectors and use a company's carbon footprint as the primary factor to weight index holdings (those with a lower footprint would receive a higher weighting and vice versa).

These indexes are also available to retail investors through ETFs and commingled vehicles and are often referred to as “smart beta” products: State Street and Blackrock have launched ETFs in the US, while Amundi and BNP have launched

<sup>42</sup><https://www.stoxx.com/lowcarbon>

<sup>43</sup><http://www.solactive.com/low-carbon>

<sup>44</sup><http://www.scientificbeta.com/>

ETFs in Europe based on first generation low carbon indexes.<sup>45</sup> These four ETFs combined had assets in excess of \$500 million as of July 1, 2016. Institutional investors are also taking initiatives to adopt low-carbon investing. The California State Teachers' Retirement System (CalSTERS) committed \$2.5 billion to low-carbon strategies in US, non-US developed, and emerging equity markets. The Fourth Swedish National Pension Fund (AP4) allocated \$3.2 billion to low-carbon investments,<sup>46</sup> as it continues its long-term strategy of decarbonising its entire global equity portfolio by 2020.<sup>47</sup>

An ambitious decarbonisation has been proven to pay off financially: The analysis by Corporate Knights of 14 major funds with a total \$1 trillion in assets, based on available data, showed that carbon-intensive investments may have cost investors \$22 billion in reduced returns, and decarbonising portfolio holdings produced a better financial outcome in every case but one (Table 1).<sup>48</sup>

The possibilities of such climate friendly strategies with different angles are almost endless due to great data availability and different appetites in the tradeoff between impact ambition and universe reduction. However, in reality, the current investment options only scratch the surface and much more depth and variety can be expected in the future.

### ***Direct Investments***

An obvious approach, also advocated by the "Divest-Invest" movement, is to investment directly into infrastructure assets that reduce greenhouse gas emissions. Much research has been published on this asset class, so only one high level observation shall be provided here.

The regions where direct investments are most needed and have the highest climate impact, developing countries, are the ones that see the least investments. The present challenge is that while infrastructure investments in the developing world are most needed, and reducing greenhouse gas emissions there is actually much cheaper than in a developed country, these countries are often unstable. This means that investor involvement is often obstructed by political, exchange rate, and other risks. The developed world, on the other hand, offers safer and more stable revenues due to reliable political context, subsidies such as feed-in-tariffs, and sophisticated and mature investment vehicles. Reducing emissions is, however, not as cost efficient in such countries. This unfavorable situation could be remedied by impact investors willing to take the investment risks associated with developing

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<sup>45</sup>Based on the MSCI World Low Carbon Leaders Strategy Index and the Low Carbon Europe 100 respectively.

<sup>46</sup><https://www.irmagazine.com/articles/sustainability/21442/esg-growing-impact-investors-and-iros/>

<sup>47</sup><http://www.ap4.se/en/esg/climate-change-a-focus-area/ap4s-low-carbon-investments/>

<sup>48</sup><http://www.thesouthpolegroup.com/uploads/media/151116-decarbonizer-media-release-south-pole-group.pdf>

**Table 1** Overview cost of decarbonisation by fund

Fund	Size of fund in USD	Estimated cost of not decarbonizing 3 years ago <sup>a</sup>
Algemeen Burgerlijk Pensioenfonds (ABP): “Dutch Civil Servants Pension Fund”)	\$382,344,000,000	\$9,366,211,873
Australian National University Endowment <sup>b</sup>	\$686,980,602	\$53,850,841
Canada Pension Plan Investment Board	\$199,825,920,000	\$7,025,528,323
Future Fund (Australia)	\$83,152,631,000	\$1,546,602,354
Bill & Melinda Gates Foundation Trust Endowment	\$40,564,000,000	\$1,897,962,806
Harvard University Endowment (Harvard Management Company)	\$37,600,000,000	– <b>\$206,290,976</b>
London School of Economics Endowment	\$147,939,674	\$3,062,919
McGill University Endowment (McGill Investment Pool) <sup>b</sup>	\$990,520,320	\$32,330,177
New York City Employee Retirement System (NYCERS) <sup>b</sup>	\$54,451,000,000	\$1,618,154,962
Ontario Municipal Employees Retirement System (OMERS) <sup>b</sup>	\$54,374,400,000	\$756,153,815
Ontario Teachers’ Pension Plan (OTPP)	\$115,081,907,200	0
University of Toronto Asset Management Corporation	\$5,588,480,000	\$419,418,629
Vermont Pension Investment Committee	\$4,020,000,000	\$79,387,949
Wellcome Trust	\$27,448,424,600	\$352,680,885
Total	\$1,006,276,203,396	\$22,945,054,557

Source: Corporate Knights, December 2015. <http://www.corporateknights.com/reports/portfolio-decarbonizer/fossil-fuel-investments-cost-major-funds-billions-14476536/>

<sup>a</sup>[https://www.sicm.com/docs/CDP\\_SICM\\_VF\\_page.pdf](https://www.sicm.com/docs/CDP_SICM_VF_page.pdf)

<sup>b</sup><http://www.mercer.com/services/investments/investment-opportunities/responsible-investment/investing-in-a-time-of-climate-change-report-2015.html>

countries, or other viable solutions to enable easy financing of obvious climate solutions.

## *Green Bonds*

One of the new investment vehicles with the potential to finance energy efficiency or renewable energy are green bonds. These bonds, issued by sovereigns, corporates, super or supra national emitters, have the commitment to use the proceeds for financing “green” initiatives. What is astonishing is the success of this new investment vehicle: while the fixed income market is overall on decline, green bonds issuance has grown to almost USD900 billion since 2009.<sup>49</sup> While widely seen as an

<sup>49</sup><https://www.climatebonds.net/resources/publications/bonds-climate-change-2016>

important instrument to finance the green economy, green bonds have yet to prove their additionality and a commonly agreed standard to measure and report impact in a comparable way. Overall, green bonds have so far succeeded in bringing the topic of climate friendly investments into the spotlight.

### *Sophisticated Climate Friendly Structuring*

The financial industry has a tendency to engineer new, sophisticated investment vehicles on an ongoing base, and green investing is no exception to the rule. In 2016, BNP Paribas structured an investment note on a Green Bond of the World Bank, where the interest is invested in a low-carbon index. The promise is therefore a downside protection of getting the principal back with potential equity-like upside returns. By financing a World Bank Green Bond, sustainable projects are financed directly, while the interest invests in companies with a climate strategy.<sup>50</sup>

### *Climate Neutral Investments*

With the logic of pricing in externalities, there is a trend of putting a price on carbon—also for investors. This concept assumes that investments create an environmental damage that future generations have to pay for, except if the investor “offsets” these emissions by financing projects that reduce greenhouse gas emission. The underlying logic is to calculate an investment carbon footprint and reduce the equivalent amount of greenhouse gas emissions via a project in a developing country—a true decarbonisation of the economy while using carbon pricing as a disciplining mechanism for the asset manager.

Examples of this approach include the Australian superannuation fund Future Super,<sup>51</sup> Swedish asset manager Öhman Fonder<sup>52</sup> and the European Climate Value Property Fund, a real estate strategy of Credit Suisse.<sup>53</sup>

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<sup>50</sup><http://treasury.worldbank.org/cmd/htm/World-Bank-Announces-Its-100th-Green-Bond-Equity-Index-Linked-Note-US-Retail-Investors.html>

<sup>51</sup><http://www.myfuturesuper.com.au/>

<sup>52</sup><https://www.ohman.se/en/>

<sup>53</sup><https://www.credit-suisse.com/ch/en/asset-management/solutions-capabilities/real-estate-ch/investments/cs-lux-european-climate-value-property-fund.html>

## **Conclusion**

The topic of climate change is rapidly decoupling from other impact and sustainable investment topics. The main driving force behind this is the growing political will and momentum to reduce greenhouse gas emissions globally. This poses significant transition risk for investors, which might unfold in the form of investment performance risk. At the same time, due to short-termism, investors have not embraced the means to account for the physical risks of climate change. A measurement of such physical risks would be necessary for a holistic understanding of investment climate risk, and can already be carried out given the availability of new solutions and reliable data.

The twenty-first century investor can not only measure the different facets of climate change and impact in multi-asset class portfolios—they can also manage the impact. A wide variety of approaches and investment strategies is increasingly becoming available and pioneering organisations have already adopted many of them. However, this is only the beginning of a wide variety of options and actions to widen and deepen climate friendly impact investment.



# Green Bonds: A Key Catalyst Within the Broader Subject of Climate Finance Post COP21



Frank Damerow

## Green Bonds Market Overview

### *Size of Green Bond and Climate Aligned Bond Market*

In its fifth consecutive annual report “Bonds and Climate Change—The State of the market in 2016” the Climate Bond Initiative (CBI) published its most recent assessment of the climate bond market, providing detailed analysis of global trends including which sectors are funded by green bonds.<sup>1</sup>

CBI estimates that the climate aligned bond universe represents USD694 billion of climate-aligned bonds outstanding, an increase of USD96 billion compared to the previous year (Fig. 1).

The ‘climate aligned’ bond universe includes unlabeled or climate aligned as well as labelled green bonds, accounting for 694 billion euros. Currently, the climate aligned bond universe constitutes less than 1% of all bonds outstanding globally.

Labelled green bonds use explicit “use-of-proceeds” language in the bond documentation, detailing the green projects the proceeds from a bond sale either finance or re-finance, such as wind-, or solar power facilities, rail infrastructure and others.

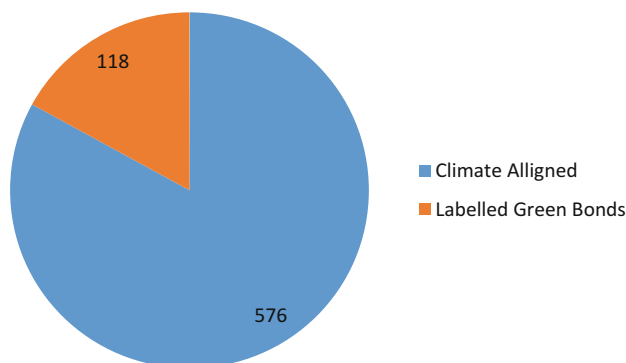
With “green-use-of-proceeds bonds”, investors are exposed to the senior-unsecured credit risk of the respective financial or corporate issuer, not directly the risks of the underlying green projects. Other types of green bonds, where investors also take on green project and respective credit risk include green use of proceeds revenue bonds, “green project bonds”, or “green securitized bonds”.<sup>2</sup>

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<sup>1</sup>Climate Bonds Initiative (2016), Bonds and Climate Change: State of the Market 2016.

<sup>2</sup>See also Green Bond Principles, updated 2016.

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**Fig. 1** Climate aligned bond universe totals USD694 billion in 2015. Source: Climate Bonds Initiative

The larger universe of bonds financing climate-aligned assets which do not carry a green label also finance low carbon projects. The language in the bond documentation is typically “general purpose” where projects are determined at the discretion of the treasurer of the issuing entity. Transparency with regards to green credentials is typically much lower.

The total universe of climate aligned and labelled bonds are made up of approximately 3590 bonds from 780 issuers across the following major climate themes: Transport, Energy, Buildings and Industry, Water, Waste and Pollution and Agriculture and Forestry.

#### **Key findings are:**

In the USD694 billion universe (2015), the dominant theme is transport (67% of the total amount outstanding), followed by energy (19%) and multi-sector (8%).

In the climate-aligned bond universe, the Chinese currency is dominant (with 35% of the total amount outstanding), followed by the US dollar (24%) and the Euro (16%).

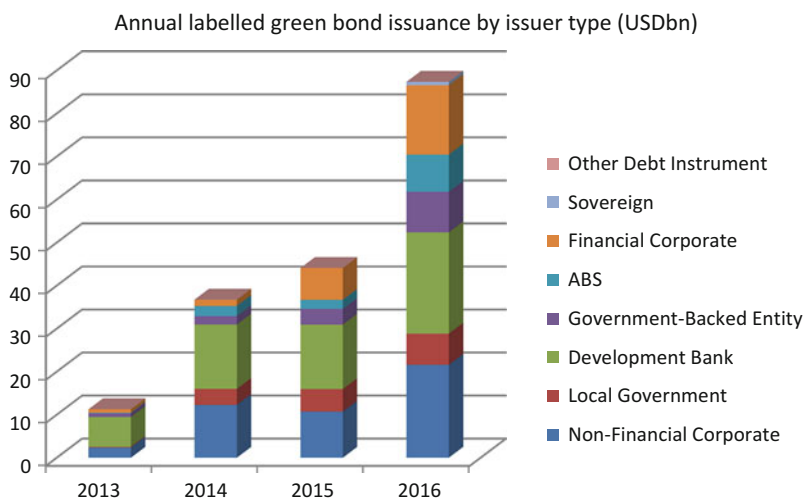
Seventy-eight percent of the universe is investment grade; the majority of bonds have tenors of 10 years or more; the majority is also government-backed.

Labelled green bonds outstanding account for USD118 billion.

### ***General Growth Trends***

The market for green/climate bonds was created in 2007 with the first issuance of a green bond by European Investment Bank, followed by The World Bank. Development banks were the only active issuers of green bonds until 2012.

Since 2012, the market has seen an increased diversification of issuer types from different sectors, including corporates, commercial banks, cities, municipals and regions.



**Fig. 2** Growth by issuer type. Source: Climate Bonds Initiative

Since 2014, bankruptcy remote asset backed securities (ABS) structures are also featuring again, mostly financing wind energy in the US.

Labelled green bond issuance is growing, as investors seek use of proceeds investments to meet their responsible investment mandates which have been increasing in volume. Labelling and use-of proceeds achieve meeting rising demand.

The two main growth areas are corporate and commercial bank issuance. Over 45 different corporate and bank issuers issued green bonds in 2015, up from 30 in 2013 and less than 10 in 2012 (Fig. 2).

The labelled green bond market within the climate themes has featured significant innovation from a broad range of issuers, financing a diverse range of projects ranging from energy efficiency, adaption to the expansion of low carbon transport capacities.

Noteworthy examples in the table may be regarded as pilot transactions that could be appealing to a broader range of prospective issuers in their respective area (Table 1).<sup>3</sup>

### ***Sectors Financed by the Climate Aligned Bond Universe Along Scientific Criteria<sup>4</sup>***

Guided by the [Climate Science Advisory Panel](#), the aim of the taxonomy is to encourage common definitions across global markets, supporting the growth of a

<sup>3</sup>for a full list of labelled green bond data: <https://www.climatebonds.net/cbi/pub/data/bonds>

<sup>4</sup><https://www.climatebonds.net/standards/taxonomy>

**Table 1** Selected labelled green/climate bonds

Issue date	Issuer	Currency, volume, maturity, rating	Financing purpose/use-of-proceeds, other remarks
2016	Nederlandse Waterschapsbank N.V. (NWB Bank), The Netherlands	USD1.25 billion, 10 years	Mitigation of climate change: waterway management; Adaptation to climate change: investments in climate-resilient growth (flood protection, flood defences pumping stations) Water-related biodiversity: sanitation and dredging of waterbeds, water treatment, transport, cleaning of wastewater, disposal of sewage sludge
2016	NY Metropolitan Transport Authority, USA	USD588 million, AA	Sustainalytics (verifier) found that an amount of USD11.3 billion of projects included in MTA's 2010–2014 transit and commuter capital program, conform to the Low Carbon Transport criteria of the Climate Bonds Standard
2016	City of Gothenborg, Sweden	SEK1 billion, 6 years, AA+	Mitigation projects, including investments in low-carbon and clean technologies (i.e. energy efficiency and renewable energy) Adaptation includes investments in climate-resilient growth Max 20%: projects that related to a sustainable environment rather than directly climate-related
2016	Apple, USA	USD1.5 billion, 7 years, AA+	Renewable energy, energy storage, energy efficiency projects, green buildings and resource conservation
2016	EIB, Luxembourg	500 million euros, 21 years, AAA	Renewable energy, energy efficiency <sup>a</sup>
2016	EDF, France	1.75 billion euros, 10 years, A–	Hydropower assets modernisation and upgrade, construction of new wind and solar projects
2015	Berlinhyp, Germany	500 million euros, 7 years, AA+	First ever green covered bond financing low carbon commercial real estate
2015	Yes Bank, India	INR10 billion, 10 years	Renewable energy, energy efficiency <sup>b</sup>
2015	Ile de France, France	500 million euros, 12 years, AA	Buildings and facilities for education and leisure, public transport, renewable energy and energy-efficiency, biodiversity, social initiatives aimed at assisting vulnerable population groups, social housing, economic and socially inclusive development

(continued)

**Table 1** (continued)

Issue date	Issuer	Currency, volume, maturity, rating	Financing purpose/use-of-proceeds, other remarks
2015	Transport for London (TfL), UK	GBP400 million, 10 years, AAA	London rail capacity and enhancement projects, station upgrades and station capacity, new Routemaster buses and bus fleet upgrades, cycling improvements

Source: Climate Bonds Initiative

<sup>a</sup>See <http://www.eib.org/attachments/fi/cab-statement-2015.pdf> for more details and assurance framework

<sup>b</sup><http://www.eib.org/attachments/fi/cab-statement-2015.pdf>

cohesive thematic bond market in the sectors covered by the taxonomy. The sectors of the Taxonomy comprise the following sectors: Energy, Low Carbon Buildings, Industry and Energy Intensive Commercial, Waste and Pollution Control, Transport, Information Technology and Communications, Nature Based Assets, and Water (Fig. 3).

The Climate Bonds Taxonomy has been developed to be consistent with the Intergovernmental Panel on Climate Change (IPCC) AR5 report for:

- a. The emissions signature of a low-carbon economy required to avoid dangerous climate change
- b. Selection of technologies and practices consistent with that signature

A central element in CBI's work is to ensure that eligible project categories certified under the Climate Bond Standards represent effective mitigation actions that current climate science finds most relevant in order to keep global warming below 2 °C above preindustrial levels.

The Climate Science Framework project establishes a scientifically robust and transparent link between the latest climate-economic science data and CBI's project universe along its Taxonomy. The Framework is based on a joint research effort between Climate Analytics (lead research) and the Potsdam Institute for Climate Impact Research (PIK).

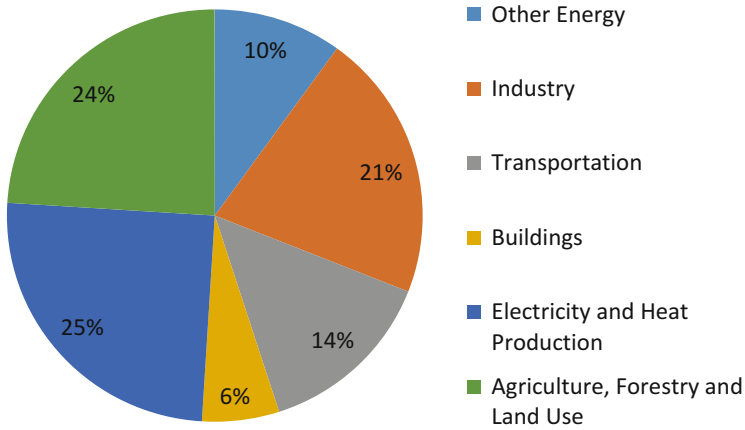
The scope of work is based on analyzing the existing research and data on emission pathways and related technology alternatives and mitigation impacts outlined in IPCC's 5th assessment report.

Wherever possible the Taxonomy references existing and widely recognized standards (Fig. 4).

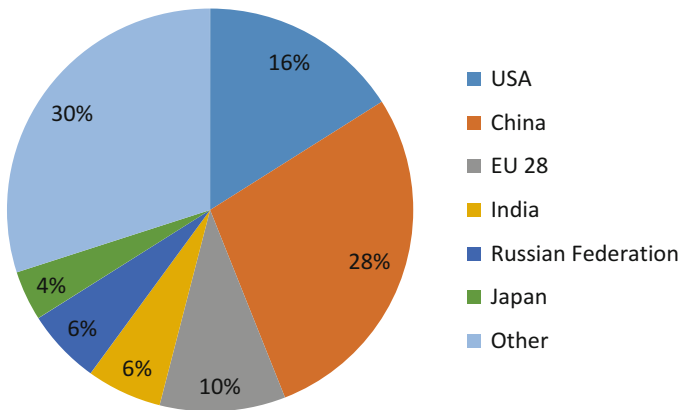
Estimates of GHG budgets can still vary. The building sector, according to UN PRI accounts for up to 30% of global green house gas emissions and consume 40% of global energy demand [UN PRI (2016), Sustainable Real Estate Investment, Implementing the Paris Climate Agreement: An Action Framework]. Agriculture and transportation sector each account for a quarter of global emissions (Fig. 5).



**Fig. 3** Climate Bond Taxonomy—assets considered low carbon. Source: Climate Bonds Initiative



**Fig. 4** Global Greenhouse (GHG) gas emissions by economic sector (2014). Source: <https://www.epa.gov/ghgemissions/global-greenhouse-gas-emissions-data>, based on IPCC AR5 report



**Fig. 5** Global CO<sub>2</sub> emissions from fossil fuel combustion and some industrial processes by region/country (2011). Source: <https://www.epa.gov/ghgemissions/global-greenhouse-gas-emissions-data>, based on IPCC AR5 report

The global CO<sub>2</sub> emissions break down by regions illustrates relative emission shares derived from cross sector activity that differs in relative weights from country to country.<sup>5</sup>

An increasing number of institutional investors have indicated their support for action to address the negative externalities of climate change and governments and regulators recognize the necessity to channel capital at scale into decarbonisation efforts and better understand climate risk in various sectors of the economy.

<sup>5</sup>Other GHG emissions with higher CO<sub>2</sub> equivalents (i.e. methane with a factor 2400) by source (industrial, geological, biochemical) are accounted for in different analyses.

Investors traditionally focused on credit—credit ratings help investors to assess credit risk of a broad range of range of issuers from the corporate, financial, regional, municipality or city, sovereign and national level. In addition to that, there are many more sources of information available from public sector and other research sources to conduct deeper analysis. Comprehensive environmental ratings currently do not exist to the same degree. Investors currently have a limited set of tools and data to assess whether their investments are really making a significant impact and what the exposure to climate risk is. The market is early stage, but rapidly developing. Rating agencies and other research providers are increasingly consolidating environmental and climate relevant information of various market participants.

Investors need independent, expert-led guidance and internationally broadly accepted standards on which investments are part of a low-carbon economy. This facilitates decision making processes, leads to institutional learning, and helps to focus on credible climate change solution opportunities and better understand risk in existing portfolios. The green bond market can grow more rapidly under a structured and coordinated effort and knowledge sharing of major stakeholders and facilitators from the private and public sector.

CBI Certification Criteria for the most relevant sectors in Energy, Low Carbon Buildings and Transport have been approved, while other Standards in the taxonomy are in development phase.

The climate aligned bond universe and their significance in respective funding volumes along the taxonomy of CBI is lead by transport, other sectors are developing in relative volumes.

## **Transport [USD464 billion Outstanding (2015)]**

Transport features biggest in the climate aligned bond universe, dominated by rail bonds (93% of all bonds outstanding). China Railway Corporation with a USD equivalent of USD194 billion outstanding is the largest single bond issuer, followed by UK Network Rail (USD40.3 billion) and France's SNCF (USD34 billion equivalent). Among transportation authorities, London TfL is the largest with USD4.8 billion outstanding, followed by New York's Metropolitan Transportation Authority with USD3.6 billion issued.

The remainder of the market includes bonds issued by bicycle manufacturers Ideal Bike and Sun Race Sturmey-Archer, or Chaowei, a battery developer for e-bikes.

Tesla Motors issued USD2.9 billion to finance its electric car business.

Transport also featured securitisations. Toyota first came to market in 2014 with a green ABS structure designed to finance leases and loans for a new low carbon vehicles and since has issued two labelled green abs. Hyundai also issued a USD500 million abs financing hybrid and electric vehicles.

As alternative technologies evolve and mature, low carbon transport solutions are expected to be funded by bonds as maturing technologies and respective business models support potential bond issuance.



## **Energy [USD130 billion Outstanding (2015)]**

Energy also continues to be a significant growth area with remarkable green bond issuance potential, as global energy demand is rising and commitments to renewable energy production targets are set by central governments around the globe.

USD130 billion of the existing climate aligned-bond universe finance renewable energy.

Historically, bonds have been used to finance mature technologies such as hydropower. Increasingly, more recent technologies are financed, including solar, and wind. Conventional energy companies are also increasingly developing renewable assets financed through labelled bonds. Examples include bond issues by EDF, GDF Suez and Iberdrola. USD33 billion are labelled and largely backed by renewable energy.

Other issuers include commercial banks with renewable energy portfolios as well as development banks (like EIB and KfW, a significant lender in the renewable energy space).

Criteria for wind, solar and geothermal have been released and are available for Climate Bond Certification. Other criteria in this theme are currently in development, including Bioenergy, Marine Energy as well as Hydropower.

## **Multi-sector [USD57 billion Outstanding (2015)]**

The multi-sector segment is entirely labelled, with use-of-proceeds going to a broader range of sectors.

The multi-sector segment is largely dominated by multilateral development banks such as European Investment Bank (EIB), World Bank, and IFC, whose bonds proceeds finance a broad range of projects and sectors across different climate related themes. EIB has the largest volume outstanding with a total volume of USD15 billion.

Development banks typically provide a detailed account of environmental impact in their bond reporting to investors, also detailing how funds were allocated among various sectors.

Other examples include green bond issues from NRW Bank and City of Gothenburg.

Exact allocation of proceeds is hard to estimate as detailed data is not available. However, over 90% of all bonds issued have either renewable energy, energy efficiency or both defined as eligible projects while 60% of bonds have defined Agriculture and Forestry projects as eligible.

## **Water [USD18 billion Outstanding (2015)]**

As a result of climate change, the incidence of drought and floods is increased both in frequency and severity. Rainfall patterns are also changing, putting pressure on conservation and production of fresh water resources and infrastructure.

While water security and access to water has long been recognized as a priority social public good, in climate finance it has been developing only slowly. The example of the more recent “exceptional drought” situation in California and many parts of the world has had severe consequences for agriculture, water resources and wildlife.<sup>6</sup>

The challenge in water bonds is that in order to qualify as green infrastructure needs to be climate resilient, requiring a deep level of disclosure not yet common across water utility companies.

Water bonds can be categorized as follows:

- Water treatment (bond proceeds used to fund waste and drinking water upgrades—these bonds are popular in the municipal bond markets)
- Flood protection—investments in levees, storm sewers, sea walls, and other flood defences. Examples include a bond transaction from Dutch bank Nederlandse Waterschapsbank where proceeds from a bond sale are partly used to fund a scheme set up by the Dutch government to upgrade water management and flood protection in anticipation of future climate shifts
- Conservation and restoration—investments in restoration of natural water and the conservation of water supply. Although generally considered very important, it is the smallest subsector within the water bond segment. Cadiz issued a water recovery and storage project in the Southern Californian desert.

CBI is in the process of developing CBS Certification and intends to provide certification, if prospective investments meet the following criteria:

- Investment delivers greenhouse gas mitigation
- Promote adaptation to climate change
- Facilitate increased climate resilience in the social, economic and environmental systems that are affected by water assets

## **Energy Efficiency: Buildings and Industry [USD14 billion Outstanding (2015)]**

The Buildings and Industry theme captures bonds financing improvements in energy efficiency in buildings or products.

Sixty-seven percent of bonds in this theme are associated with financing Low Carbon Buildings (LCB).

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<sup>6</sup>[sitn.hms.harvard.edu](http://sitn.hms.harvard.edu)

CBI has published a Climate Bonds Standard (CBS) for LCBs, also including energy efficiency upgrades of existing residential and commercial buildings. CBS certification is awarded, if the energy efficiency of an existing building is in the top 15% of comparable buildings in the same city, a challenging task as frequently data availability is poor.

For that reason, the criteria also allow for usage of approved building codes such as BREEAM and LEED as a proxy for a 15% threshold.

Australia's ANZ Bank was the first to issue a bond certified using the Climate Bonds LCB Criteria in May 2015. A number of other banks have followed including ABN AMRO (Netherlands), Axis Bank (India), Berlinghym (Germany), Westpac (Australia) and Obvion (Netherlands). US municipalities more recently have also entered the market with bonds to improve the energy efficiency of academic institutions such as Massachusetts Institute of Technology and University of Texas.

A significant growth area is expected to be energy efficiency in commercial and residential real estate property from bank issuers who increasingly flag energy efficient residential and commercial property for (re-)financing purposes through green bonds.

Energy efficient buildings for bank lenders are attractive also they are believed to have a better risk profile than conventional properties, as re-letting is often easier and running costs are lower, and as a result may attract lower capital charges in the future.

### **Agriculture and Forestry [USD6.2 billion Outstanding (2015)]**

De-forestation and agriculture is a large contributor to climate change. Yet it is a small theme accounting for less than 1% of the total climate-aligned universe. Investment in sustainable land use, forestry and agriculture is regarded as critical to remain within a 2° global warming scenario, yet this segment remains underfunded.

Only a significant carbon tax would change relative prices in favor of nature based assets as an important carbon sink at comparatively low abatement costs, if broader GHG accounting was in place.

At present it is unclear which types of bonds may be able to make a significant contribution to reduce externalities. Forest bonds have been a recurring subject over many years but never taken off, as the revenue streams are not clear, particularly in avoided deforestation. Governments which are short of meeting their NDCs should consider the comparatively low abatement costs to pay for carbon offsets through nature based assets.

Currently, the majority of bonds are from the paper and pulp industries. Recent bond issues include American paper company WestRock for its fully certified paper products, as well as Swedish state-owned forest company Sveaskog.

### **Climate Bonds Standard**

The Land Use Technical Working Group was convened by the Climate Bonds Initiative in 2014. It brings together international experts in the agriculture and forestry space to develop robust criteria for sustainably-managed forests, agriculture and other lands. Phase 1 of the Land Use Criteria has been released for public consultation and is now in the final stages of review prior to submission to the Climate Bonds Standard Board for approval. These Criteria focus on the mitigation opportunities of land use assets and projects. Phase 2 Criteria are currently under development. These will focus on climate adaptation and resilience impacts of those assets and projects.

### **Waste and Pollution Control [USD4.8 billion Outstanding (2015)]**

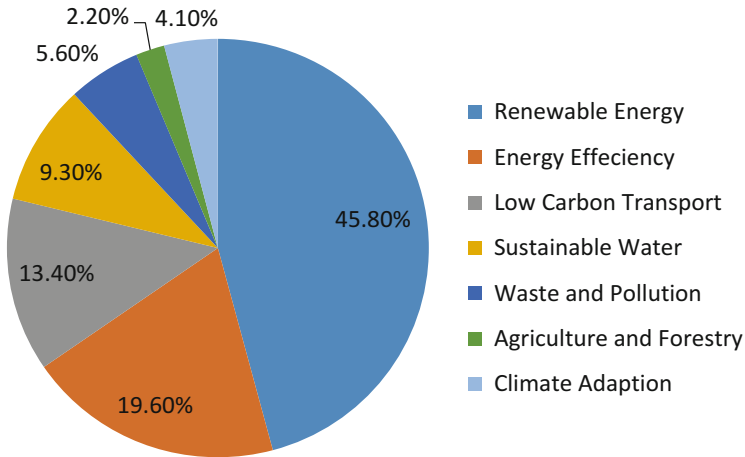
Waste and Pollution Control is by far the smallest sector within the climate aligned bond universe, but expected to become of increasing importance as non-sustainable resource use and pressing environmental problems are moving up on the political agenda.

The Waste and Pollution Control theme currently includes bonds linked to recycling, resource recovery and waste to energy (WTE). Labelled green bonds account for USD0.5 billion, representing one transaction issued by French waste management company Paprec to finance its recycling plant.

### **Future Themes**

CBI intends to expand its Criteria to include new sectors relevant in the climate economy. Sectors that are intended to be developed further are:

- **Marine:** energy (tidal and wave), transport, marine infrastructure, sustainable fisheries
- **Information, Communications and Technology:** it has the potential to reduce GHG emissions significantly. Greater connectivity can reduce the necessity for international travel. Improved technological processes can facilitate greater efficiency in electrical power management and improve resource and process efficiency.
- **Industrial Energy Efficiency:** Climate Bond Criteria are being developed for Industrial Energy Efficiency in highly energy intensive sectors such as steel manufacturing and other industrial processes.



**Fig. 6** Use-of-proceeds by sector. Source: Climate Bonds Initiative

### Sector Distribution in Labelled Green Bond Issuance

Aggregated use-of-proceeds distribution of labelled bonds in 2015 illustrates that renewable energy, energy efficiency and low carbon transport account for 79% of funds collected to finance low carbon assets (Fig. 6).

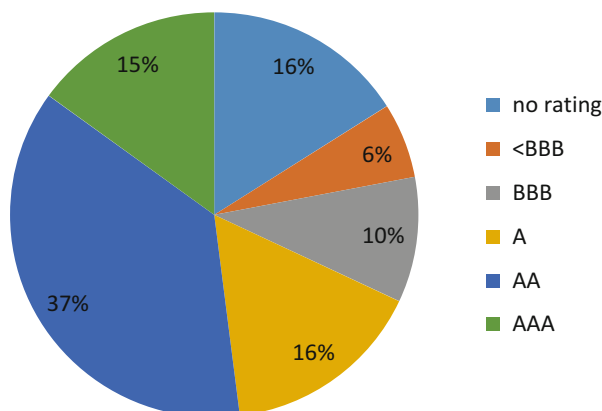
## *Other Features*

### Credit Rating Distribution of Climate Bonds

The vast majority of bonds issued are investment grade, qualifying for a broad range of institutional capital pools, including pension funds, insurance companies and asset managers as natural buyers of long term projects (Fig. 7).<sup>7</sup>

With respect to maturity profiles, 70% of the unlabeled universe have maturities of more than 10 years, accounting for financing modalities in the capital intensive, state-backed rail sector with comparatively long investment horizons. In the labelled bond space, maturities are generally shorter with average tenors of between 5 and 10 years, typical for corporate and financial issuers.

<sup>7</sup>United Nations Principles for Responsible Investment (UN PRI) have got 1500 signatories representing USD59 trillion in assets. Many signatories are looking at the broader subject of ESG integration, and what it means for their investment and asset selection process. Carbon has become a topic that is increasingly considered by a broad range of investors, for example in the context of investor climate change reporting. For more information: <https://www.unpri.org/>



**Fig. 7** Range of ratings available for climate-aligned bonds—78% is investment grade. Source: Climate Bonds Initiative

### Geographic Spread

Climate Bonds are issued in an increasing number of countries. The geographic scope of issuance has started to shift from developed nations to developing countries, as the generation of deal flow from developing nations is encouraged through various initiatives. In some jurisdictions, frameworks or laws have been established aimed at regulating climate finance in an integrated approach, such as China and India (Fig. 8).

### Climate Finance to a Large Extend Is Derived from Future Infrastructure Investment Which Needs Decarbonised<sup>8</sup>

Annual global infrastructure investment is estimated to be USD5.9 trillion to 2030—the investment needs for infrastructure the next decades are huge in both developed countries and emerging economies even without taking climate change mitigation and adaptation into account.

Developed economies like the EU and the US have massive infrastructure upgrade needs, while rapidly growing emerging market economies and cities face a need to build extensive infrastructure, particularly in cities, which account for a large majority of emissions.

Emerging economies account for the majority of investment required the next decades.<sup>9</sup>

<sup>8</sup>CBI, Inquiry: Design of a Sustainable Financial System (2015): Scaling up Green Bond Markets for Sustainable Development; Consultation Paper.

<sup>9</sup>PWC, Oxford Research (2014), Capital project and infrastructure spending: Outlook to 2025.

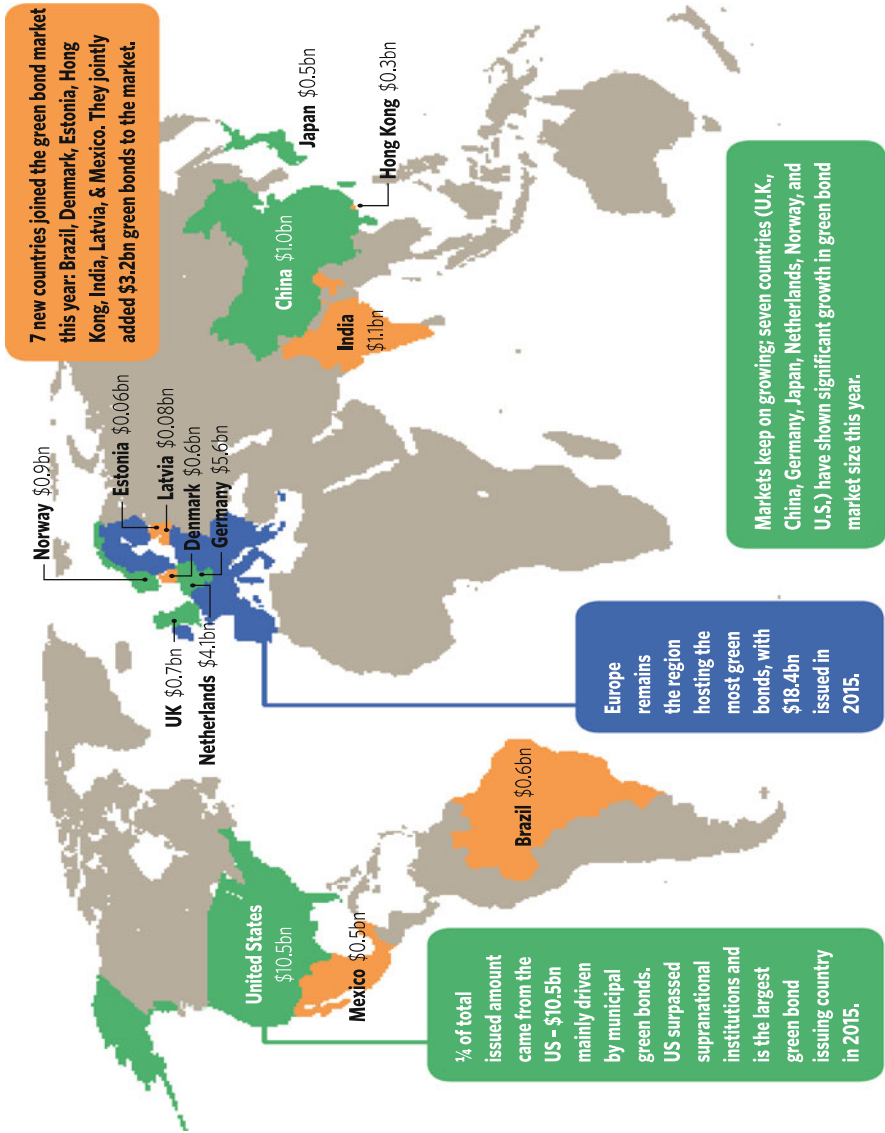


Fig. 8 World map of climate bonds issuance (2015). Source: Climate Bonds Initiative

Climate change mitigation and adaptation present huge challenges for infrastructure projects. Anticipated climate adaptation will require additional investment over time as climate related adaptation requirements become evident. Presently there is considerable uncertainty as to how much financing is needed. To a large degree this depends on what actions are taken on the mitigation side in the coming years, as adaptation costs are an inverse function mitigation activity.

The United Nations Environment Program (UNEP) has estimated USD150 billion in adaptation investment is needed annually by 2025/2030 and USD250–500 billion per year by 2050 for a 2 °C scenario.<sup>10</sup>

If temperatures continue to increase beyond the 2 °C trajectory, adaptation costs are expected to rise overproportionally.

Despite the urgent need to build climate resilient infrastructure suitable for a low-carbon economy, these massive investment needs are not being met.

Funding for infrastructure is around USD5 trillion each year, leaving an annual gap of more than USD1 trillion. Only 7–13% of current infrastructure projects are estimated to be low-carbon and designed to deal with the extra impacts of a changing climate.

As a consequence, the policy and implementation objective is to meet low-carbon and climate resilient infrastructure needs, and minimize the carbon lock-in over the lifetime of an investment. These considerations should form a major part of NDC financing plans which are only gradually developing.

### **Financing solutions that can help increase financing flows in developing countries**

The first section has illustrated the current state of the market, with issuance from developed countries generally dominating. The main reasons for this are established capital markets, supporting regulation, a sound legal framework and the fact that investment grade financing can potentially mobilize large amounts of capital.

The challenge however remains how to create and facilitate a low carbon deal flow in and to developing countries.

The following options exist with regard to supporting and increasing deal flow, particularly from emerging markets and developing countries:<sup>11</sup>

1. “Blend public and private finance to improve risk-return: Government buy-in for projects that will last for decades is essential. In addition, the unique risks in emerging and developing countries require reduction. Subordination of government investments (or government guarantees), securitization of real assets,

(continued)

<sup>10</sup>UNEP (2016), Adaptation Finance Gap Report.

<sup>11</sup>IIGCC, Climate finance for developing and emerging countries: Five recommendations to catalyse institutional investment September 2015.



insurance, currency swaps and government seed capital for new funds can all help bring more investment into the countries concerned.

2. Provide predictability and transparency on future public climate finance flows: In order to signal the size of low-carbon infrastructure markets in emerging and developing countries, developed country governments should provide predictability and transparency on future climate finance flows. This allows institutional investors with low carbon mandates to dedicate strategic resources to this deal flow.
3. Aggregate infrastructure assets: To tap into the market for large investments, infrastructure in emerging and developing countries needs to be aggregated, for example through blended funds and warehousing models.
4. Put in place a powerful national infrastructure development plan to implement the Intended Nationally Determined Contributions (INDCs): The INDCs need to guide the design of national infrastructure development plans, which should be fully aligned with the need to reduce emissions.
5. Make sure key transaction enablers are in place: A focus on project preparation, robust project pipeline (supported by enhanced technical assistance and project preparation facilities), efficient capital markets, good bank intermediation and a favourable macro-economic environment with political stability are essential.”
6. Development of local capital markets

## Challenges for Investors and Requirements

An increasing number of investors are looking at the broader subject of ESG integration. The United Nations Principles for Responsible Investment (UNPRI) now represent more than 1500 signatories with over USD60 trillion Assets under Management (AuMs), who increasingly integrate and expand ESG analysis when managing their assets (Fig. 9).<sup>12</sup>

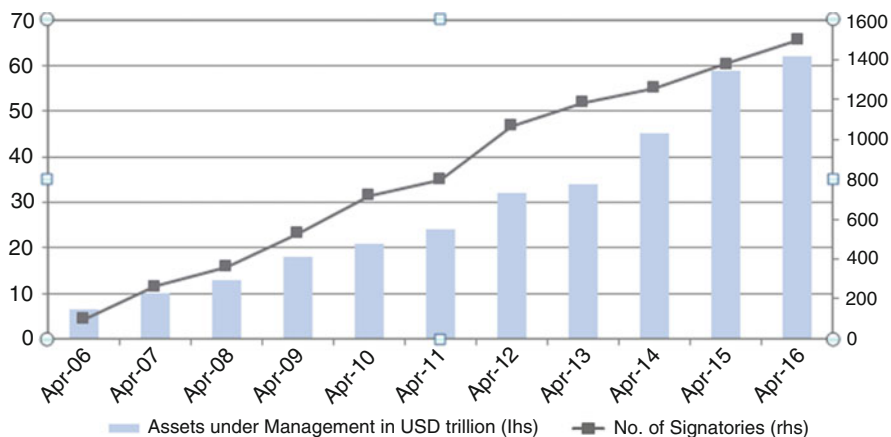
Post COP21 ratification, climate risk is rapidly entering the agenda of a broad range of institutional investors for a variety reasons, including regulation (i.e. in China, France), fiduciary duty considerations<sup>13</sup> Fiduciary duty has come under scrutiny as short-term profit maximization can be in contrast to longer-term societal goals which are addressed in broader ESG analysis.

Public commitments (i.e. fossil fuel divestments for risk and reputational reasons), and increasingly climate risk considerations in the emerging stranded assets debate are also potent factors that increasingly drive capital.

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<sup>12</sup>Typically, only a fraction of total AuMs of the majority of signatories are strictly managed in accordance with the principles. However, that share is growing.

<sup>13</sup>UNPRI (2015), Fiduciary Duty in the 21st Century, <https://www.oecd.org/environment/rethinking-fiduciary-duty-for-a-more-sustainable-planet.htm>



**Fig. 9** UNPRI signatories and total AuMs. Source: UNPRI

### *Stranded Asset Risk, Climate VAR*

The economics of climate change has laid the groundwork to assess and estimate economic social costs associated with not addressing climate change through effective policy measures.<sup>14</sup> Global capital pool assets and investments are also exposed to risks related to climate change. This is frequently referred to as stranded assets risks—investments that need to be fully or partially written off as the underlying value of the investments (i.e. unburnable coal/fossil fuels in the ground,<sup>15</sup> land use affected by droughts/extensive land use, asset holdings that may depreciate should a carbon tax be instated) leads to lower valuations or can only be sold in the market at a deep discount, leading to the realization of significant losses.

Carbon Tracker Initiative introduced the concept of stranded assets providing research, predominantly in the energy sector about the implications of not adjusting investment in line with the emissions trajectories required to limit global warming, providing the following risk categories, which investors should consider in their risk management frameworks<sup>16</sup>:

- Regulatory stranding: due to a change in policy/legislation
- Economic stranding: due to a change in relative costs/prices
- Physical stranding: due to distance/flood/drought

The stranded assets potential across different sectors is expected to increase as climate related stresses occur at different intensities across alternative global warming scenarios.

<sup>14</sup>Stern (2006)

<sup>15</sup><http://carbontracker.live.kiln.digital/Unburnable-Carbon-2-Web-Version.pdf>

<sup>16</sup><http://www.carbontracker.org/resources/>

Implications for asset owners can be significant, if they are not sufficiently considered:

The Economist has estimated a climate value-at-risk (climate VaR) for global manageable assets under different climate change or global warming scenarios, highlighting that tail risk determined by extreme events is significant:<sup>17</sup>

Assuming an estimated USD143 trillion of total global manageable assets (outside the banking sector) the discounted climate VAR until 2100 is valued at USD4.2 trillion as an average expected loss (Japanese annual GDP, or the total value of the oil- and gas industry.)

Climate VAR may be underestimated as severe droughts, floods or storms mark extreme events, not reflecting significant tail risks associated with such events.

Climate VAR is estimated to be USD7trn at 5° global warming and 6° warming USD13.8 trillion, approx. 10% of global manageable assets.

The concept of climate VAR illustrates, that depending on the warming scenario assumed, different valuation impacts on asset holdings of institutional investors can be expected. These are significantly dependent on the relative sector composition of individual capital pools.

As a result, investors aiming to reduce portfolio Climate VAR need to alter their asset allocation under climate risk considerations. Labelled green bonds, depending on their structure, can potentially help investors to better manage Climate VAR.<sup>18</sup>

Climate related risks have also been addressed at the level of the Financial Stability Board under the G20 with the speech by Marc Carney “Tragedy of the Horizon” in September 2015, outlining the costs of delays or inaction (such as significant costs to future generations, financial crises) and suggesting a framework that overarches the political, business and technocratic horizon. Carney calls for an increase in transparency “considering recommending to the G20 summit that more be done to develop consistent, comparable, reliable and clear disclosure around the carbon intensity of different assets”. “Companies would disclose not only what they are emitting today, but how they plan their transition to the net-zero world of the future. The G20—whose member states account for around 85% of global emissions—has a unique ability to make this possible.”

Further development of an understanding and the quantification of climate related risks and transition risks are expected to move up on the agenda of regulators, affecting publicly traded corporate companies in the G20.

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<sup>17</sup>The Economist Intelligence Unit (2015), The cost of inaction: Recognising the value at risk from climate change.

<sup>18</sup>See UN PRI (2014), Fixed Income Investor Guide, for factors to consider managing fixed income assets under ESG criteria.

## ***Institutional Investors Require Investible Instruments, Which Assure High Credibility and Standardisation***

Over and above the standard credit assessment of any given fixed income security, investors need guidance as to what constitutes a credible investment as the asset allocation shifts towards low carbon.

The Climate Bonds Taxonomy is a scientific approach and provides the foundation of for the Climate Bond Standards and Certification Scheme.<sup>19</sup>

It is a public good resource that provides guidelines for prospective green and climate bond issuers and investors. The aim is to encourage common definitions across global markets that can support the growth of a cohesive thematic bond market. It identifies broad areas of inclusion (e.g. low carbon infrastructure, renewable energy, low carbon mortgages, low emissions vehicles, etc.) that are subject to clear criteria and consistent with a 2° global warming scenario.

Stakeholder and market confidence in green credentials of green bonds is key to the development of a scalable market.

Transparency to the underlying asset level is important to allow investors to carry out due diligence. Credible, science-based, widely recognized and supported guidelines about what should and should not be considered a qualifying investment help investors to make informed decisions about the environmental credentials of a green bond.

### **The Importance of Credibility**

- If issuers are claiming benefits from green aspects of the bond, need to protect investors from greenwashing
- Need a system of ‘environmental due diligence’ to review key environmental attributes, to complement existing financial due diligence
- Investors can’t do this themselves
  - Specialist expertise needed regarding what counts as green
  - Costly to assess and verify themselves
- Principles for a good system of environmental due diligence:
  - Scientifically robust
  - Transparent
  - Consistent

In addition to standards, sound and auditable processes that track the use of proceeds are of critical importance.

<sup>19</sup><http://www.climatebonds.net/standards>

**Table 2** Box comparison Green Bond Principles versus Climate Bonds Standards

Content—Climate Bonds Initiative	Process—Green Bond Principles
<i>CBI develops a taxonomy of EPs</i>	<i>Capital markets players to set basics</i>
–Types of projects/assets/technologies	–Set up by leading US underwriters
–Exclusions of controversial assets	–Subscribed to by issuers, investors, intermediaries, i.e. sell-side
–Technical demands for a net climate benefit	–Managed by International Capital Market Association (ICMA)
<i>CBI issues a Climate Bonds Standard</i>	<i>Focus on process</i>
–Requirements for consistency and uniformity, in line with Green Bond Principles	–What do you intend to spend the money on? (use of proceeds)
–Technical demands for net climate benefits consistent with 2 °C	–How are you going to find eligible projects? (project evaluation and selection)
–Ready for solar, wind, bus rapid transit, buildings	–How do you assure the money gets there? (management of proceeds)
–Almost finalised: transport, agriculture/forestry/land use, water, geothermal	–What has it achieved? (reporting)
–In progress: bio-energy	

Source: Climate Bonds Initiative

Green Bond Principles (GBP) are process oriented and constitute voluntary process guidelines that recommend transparency and disclosure, and intend to promote integrity in the development of the Green Bond market.

They are intended for broad use by the variety of actors participating in the market and are designed to provide relevant information needed to achieve an increased capital allocation to environmentally sustainable assets (Table 2).<sup>20</sup>

There have been widespread concerns in the market that ‘green washing’ may make its way into green bonds.<sup>21</sup> However, public scrutiny, ESG rating agencies and the potential loss of reputational capital of an issuer contain green washing. Issuance along internationally aligned and widely recognised standards can also mitigate these concerns.

In addition to a standard credit assessment, most institutional fixed income investors typically require the following to consider green bond investments viewed as best practice:

- Second Party Opinion (SPO), including issuer assessment (typically an ESG rating agency)
- (Pre-issuance) certifications (i.e. adherence to a certain standard in relevant sectors, such as Climate Bonds Standard)
- Increasingly: third party verification (ESG rating agency, auditors), auditing use-of proceeds

<sup>20</sup>See <http://www.icmagroup.org/Regulatory-Policy-and-Market-Practice/green-bonds/green-bond-principles/> for a recent copy of the principles.

<sup>21</sup>WWF (2016) Green bonds must keep the green promise! – A call for collective action towards effective and credible standards for the green bond market.

Investors managing large pools of capital typically do not have the resources to conduct due diligence at the underlying asset level, second opinion providers and verifiers provide a cost-effective way of outsourcing due diligence.

### **Benefits for Issuers**

Treasuries of prospective issuers should consider the benefits of issuing labelled green bonds for the main following reasons:

- A broad range of stakeholders want labelled green bonds
- Investor diversification, as sustainable investment mandates show as new accounts and increase the order book of green bonds in the syndication process
- Dialog engagement, proactive investor relations in respect to issuer's ESG strategy at senior management level
- Increase in reputation (first mover advantage)
- Possible funding advantage for issuer should compensate for up-front/running costs. There is first empirical evidence, that the ability to issue green bonds can increase treasury flexibility in volatile markets, potentially providing a funding advantage

Issuing green bonds requires that green assets or loans financed are flagged in the origination process. This typically requires cross divisional consent of treasury, the sustainability department and risk management.

Depending on transaction structure (programmatic or portfolio approach subject to defined eligibility criteria versus a defined number of assets) and whether the issuer intends to report once at issuance or more frequently during the live of a transaction, certain environmental metrics suitable to describe the performance of a green asset should also be integrated into the operational process, so environmental benchmarking is possible.

Labelled green bonds can also help prospective issuers to formulate and adopt a low carbon business strategy for the future. This is of particular relevance for financial institutions, which in their capacity as aggregators can develop or extend their expertise in low carbon lending, and increase green bond issuance in their overall funding mix (Fig. 10).

### **Impact in the Context of Green Bonds**

Reporting on Green Bonds is vital to prove environmental impact. In the context of climate finance, ideally this is achieved by qualitative and quantitative metrics in a coherent framework that are applied at a project level as well as in aggregate to account for avoided greenhouse gas emissions, for example in the context of renewable energy production.



**Fig. 10** Investor and issuer benefits of green bonds. Source: Climate Bonds Initiative

Eleven development banks have jointly developed a “Green Bond Reporting Standard”, aiming at increasing transparency and facilitating investor’s effort to account for the carbon impact in their investments.<sup>22</sup>

IFC, KfW, EIB and other development banks have issued Green Bonds reports on their outstanding Green Bonds. Most of them report in accordance with the developed standard.

The standard promotes key environmental performance indicators, such as annual energy savings and/or annual GHG emissions reduced/avoided.

IFC covers many sectors along the taxonomy and therefore is a useful example how use-of-proceeds reporting across various sectors practically works (Fig. 11)<sup>23</sup>:

The IFC figures reported show environmental impact that has been achieved in various sectors at the eligible project level financed by green bonds, as well as committed and allocated capital providing quantitative and descriptive information (Fig. 12).

Depending on taxonomy sectors financed, over and above annual energy savings and/or annual GHG emissions reduced/avoided, issuers are reporting on other social and environmental impacts. Using the example of KfW, EUR1Million investment in its green bonds yields the following impact<sup>24</sup>:

- 1271 t of CO<sub>2</sub> equivalent in greenhouse gas emissions are saved per year,

<sup>22</sup>Statement can be retrieved under <https://www.kfw.de/PDF/Investor-Relations/Pdf-Dokumente-Investor-Relations/Harmonized-Framework-for-Impact-Reporting.pdf>

<sup>23</sup>Full report can be retrieved under <http://treasury.worldbank.org/cmd/pdf/WorldBankGreenBondImpactReport.pdf>

<sup>24</sup>[https://www.kfw.de/KfW-Group/Newsroom/Aktuelles/Pressemitteilungen/Pressemitteilungen-Details\\_350977.html](https://www.kfw.de/KfW-Group/Newsroom/Aktuelles/Pressemitteilungen/Pressemitteilungen-Details_350977.html)

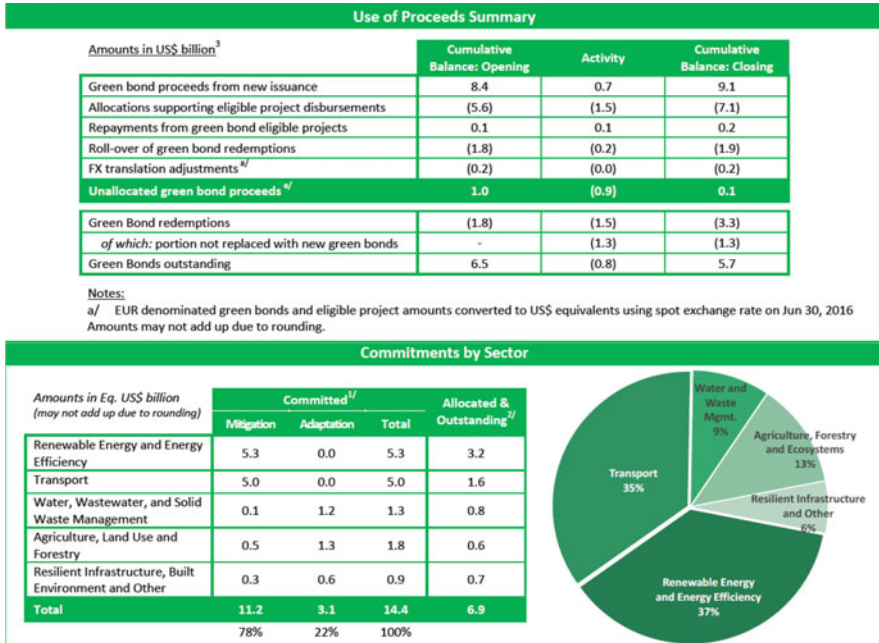


Fig. 11 World Bank use-of proceeds green bond reporting. Source: World Bank

- The costs for energy imports to Germany and for fossil fuels are reduced by 67,155 € per year, and 129,606 € is saved in external costs every year—for example, by avoiding environmental and health damage
- The construction and operation of the supported plants create or secure 25 jobs.

It is evident, that impact reporting is only at the beginning, and broader comparability is not necessarily given at this stage, as issuers apply different methodologies and verification methods when assessing and calculating impact. The complexity rises in sectors other than energy and energy efficiency, where impact is not yet easily measurable.

## The Environment for Rapid Growth of the Green Bond Market Within the USD100 trillion Global Fixed Income Market Is Very Supportive

Supportive of the market segment in general are historically low yields, providing favorable cost of capital conditions for low carbon projects at scale. In addition, solar energy now is cheaper than capital intensive thermal coal, which is expected to have a significant ripple effect across the globe that to a large degree can be financed by Green Bonds. Here are many private and public initiatives around the globe that






#	Link to more information	Project name (number approved) and description	A/M	Project life			Target results <sup>16</sup>			Committed US\$ mil <sup>14</sup>	IBRD share <sup>6</sup>	Allocated US\$ mil <sup>15</sup>
				Annual energy savings <sup>6</sup> MWh	Annual energy produced MWh	Renewable capacity added MW	Annual GHG emissions avoided tons of CO <sub>2</sub> eq.	Other results				
14		<b>Jamaica - Energy Security and Efficiency Enhancement Project (P112780   FY11):</b> increase energy efficiency and security by promoting greater participation of renewable energy and gas-based generation in the energy mix.	M	na	~	~	~	~	15.0	100%	11.2	
15		<b>Mexico - Efficient Lighting and Appliances Project (P106424   FY11):</b> promote the efficient use of energy and to mitigate climate change by increasing the use of energy efficient technologies in the residential sector.	M	5	2,000,000	na	664,000	na	250.6	35%	250.6	
13		<b>Indonesia - Indonesia Geothermal Energy (P113078   FY12):</b> increase power generation from renewable geothermal resources.	M	30	na	1,210,000	150	1,100,000	175.0	30%	67.6	

Fig. 12 Project names and loans approved, impact

encourage increased issuance with significant growth potential over the years to come. The following sections describe major initiatives driving market development from the legal and regulatory side. They are not yet fully comprehensive and internationally aligned.

## ***COP21***

COP21 was widely regarded as a success introducing Intended Nationally Determined Contributions (INDCs) under UNFCCC.<sup>25</sup>

195 UNFCCC participating member states agreed to reduce emissions through INDCs. The members promised to reduce their carbon output “as soon as possible” and to do their best to keep global warming “to well below 2 °C” and “Making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development”.<sup>26</sup>

This requires that the financial system has to be adjusted to facilitate low carbon capital allocation. Private capital markets and their main agents are attributed a key role in achieving these targets for example by the UN, the OECD,<sup>27</sup> governments and NGOs. The following examples are expected to strongly support green bond market growth:

### ***France***<sup>28</sup>

In France, Article 173, Law for the Energy Transition and Green Growth, introduced the first mandatory requirements also for the financial industry to support climate goals by the national government. It requires asset owners and asset managers to report on their portfolio’s integration of environmental, social and governance (ESG) factors, climate risks, and contribution to the transition to a low-carbon economy, or explain why they have not done so.

The French government announced that it will issue several billion green sovereign OAT bonds from 2017, which will be the first sovereign green bond issuance.<sup>29</sup> This is a pilot transaction programme that can be expected to be copied by other governments, providing the basis for significant growth potential in the sovereign green bond space.

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<sup>25</sup>See <http://www.wri.org/indc-definition>

<sup>26</sup>UNFCCC (2016), Paris Agreement.

<sup>27</sup>OECD (2015)

<sup>28</sup>UNPRI (2016), French Energy Transition Law – Global Investor Briefing.

<sup>29</sup>[http://www.developpement-durable.gouv.fr/IMG/pdf/2016-09-02\\_-\\_SR\\_-\\_MS\\_-\\_Greenbonds-2.pdf](http://www.developpement-durable.gouv.fr/IMG/pdf/2016-09-02_-_SR_-_MS_-_Greenbonds-2.pdf)

## *China*

Given the significance of China in the broader climate change debate as greenhouse gas emitter it is noteworthy to describe the latest developments in respect of the attributed role of green bonds.

China's central bank, the People's Bank of China (PBoC), and its macroeconomic management agency, the National Development and Reform Commission (NDRC) published green bond guidelines in December 2015 and January 2016.

The investment areas covered by the PBoC endorse a catalogue of green projects that are based on existing national policies for green industry and climate change mitigation and adaptation, and are broadly aligned with international standards. The alignment of green definitions with international standards is only partially given.<sup>30</sup>

More recently, on 31 August seven Chinese state ministries jointly released new "Guidelines for Establishing the Green Financial System".

The meeting that passed the Guidelines was chaired by President Xi Jinping, emphasizing and signaling the significance of China's ambition to green the economy. The guidelines lay out a set of steps to improve how capital markets should allocate resources towards serving China's transition to a green economy.

The Guidelines were issued jointly adopted by all relevant institutions for effective implementation. (People's Bank of China (PBoC), Ministry of Finance, National Development and Reform Commission (NDRC), Ministry of Environmental Protection, China Banking and Regulatory Commission (CBRC), China Securities Regulatory Commission (CSRC), and the China Insurance Regulatory Commission (CIRC)).

Given the previously different green bond approaches taken by different regulators in China, this is a major development setting a precedent for other countries to follow a similar, fully integrated approach.

The Guidelines define Green Finance as "financial services provided for economic activities that are supportive of environment improvement, climate change mitigation and more efficient resources utilization", promoting "environmental protection, energy savings, clean energy, green transportation, and green buildings".

The Guidelines state that financial instruments such as green bonds are central to achieving the institutional arrangements of a green financial system in China on the basis of unified definitions for green bonds along international standards, such as the GBPs.

They also encourage rating agencies to evaluate the green performance of the issuers and the 'greenness' of the projects. They should also "evaluate the impact of environmental costs on creditworthiness".

The Guidelines highlight the need to establish and improve a mandatory environmental information disclosure system for bond issuers.

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<sup>30</sup>Climate Bonds Initiative, International Institute for Sustainable Development, Foreign & Commonwealth Office (2016), Roadmap for China: Green Bond Guidelines for the Next Stage of Market Growth.

To improve market transparency, green bond issuers will be “required to disclose information that investors are seeking and improve investors’ confidence in the environmental credentials of the green bond”.

The Guidelines note that regulatory registration and approval processes for green bonds need to be efficient to encourage issuance.

Local governments are asked to promote the development of green bonds, including being asked to support issuance with specialized guarantees and credit enhancement mechanisms to reduce financing costs.

The Guidelines state that action needs to be taken to “encourage long-term investors such as pension funds and insurance funds to make green investments”.

The comprehensive framework and approach to greening an economy and the strong political will to implement quickly already made China the most dominant issuer in 2016 and is expected to dominate issuance by country over the next few years.

## *India*<sup>31</sup>

In January 2016, the Securities and Exchange Board of India published its official green bond requirements for Indian issuers. India is the second country after China to provide national level guidelines. The Reserve Bank of India (RBI) is developing a framework that allows for international rupee-denominated bonds (RDBs) issuance that provide open access to international investors for India’s clean energy projects.<sup>32</sup>

The recent Green Masala Bond by India’s largest power utility NTPC Ltd (NTPC) is an international model of ‘brown to green’ financing. The giant public power utility has issued an INR20 billion (USD299 million) **Certified** Climate Bond, dual listed on the London Stock Exchange (LSX) and Singapore Exchange (SGX), with the **use of proceeds** allocated to solar and wind power projects and associated transmission infrastructure in India.

As per October 2016 Indian green bond issuance has reached USD2.7 billion equivalent proceeds of which finance renewable energy (62.5%) and low carbon transport (17.5%). It is a small contribution to the estimated USD2.5 trillion required to meet India’s climate change mitigation targets by 2030 and approximately USD1 trillion investment in mostly green infrastructure every 5 years.

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<sup>31</sup>see also <https://www.climatebonds.net/bonds-and-climate-change-2016-india-edition>

<sup>32</sup>National India Resource Defence Council (2016)

## ***Brazil***

In order for Brazil to meet its commitments under the Paris agreement, it has the opportunity to focus on its vast natural resources. Brazil has got significant potential for it to be among the global leaders in green finance and could be an innovator in forestry, sustainable agriculture, food production and clean energy at scale.

It has been estimated that the low carbon investment potential of meeting Brazil's NDC commitments to 2030 requires investments of USD152 billion.

"Guidelines for Issuing Green Bonds in Brazil 2016" have been released by the Brazilian Federation of Banks and the Brazilian Business Council for Sustainable Development that also assess the market potential for green bonds in the nature based asset sector, providing important indicators how in the land-use and forestry space environmental benefits can be reported in a green bond context.<sup>33</sup> Forthcoming expected issuance is expected to bring higher sensitivity on nature based assets to capital market participants.

Future Brazilian issuance is expected to come from issuers from the agricultural forestry and energy industries as well as development and commercial banks with comparably high international credit ratings.<sup>34</sup>

There are many more initiatives including civil society, supranational institutions, NGOs, government bodies and market participants that support green bonds as a key instrument for climate finance solutions. Nigeria and Sweden are considering sovereign green bond issuance for 2017, with several other countries investigating the same option. Many initiatives also focus on issuance at the municipal or regional level, all providing positive prospects for large scale issuance.

## **Summary**

The green bond market, compared to the vast global climate finance requirements, is still in its infancy state and has been enjoying significant growth rates typical for early stage market development.

It now is gaining significant further growth momentum on the back of the first integrated regulatory approaches (i.e. China, India, France) supporting green bonds as a central tool in a decarbonisation effort bonds. A Stakeholders including governments, global capital pools and civil society also focus on quick and scalable climate finance solutions.

Climate risks in broader economic activity are expected to move up the agenda of central banks, as climate risks in the financial system currently cannot be properly

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<sup>33</sup>[http://cebds.org/wp-content/uploads/2016/10/Guia\\_emissa%CC%83o\\_ti%CC%81tulos\\_verdes\\_ING-2.pdf](http://cebds.org/wp-content/uploads/2016/10/Guia_emissa%CC%83o_ti%CC%81tulos_verdes_ING-2.pdf)

<sup>34</sup>Climate Bonds Initiative (2016) Bonds and Climate Change - State of the Market in 2016, Brazilian edition

assessed due to a lack of transparency with respect to carbon exposure and decarbonisation strategy at the company level.

Green Bonds have been recognized as one central tool to mitigate climate related externalities. They illustrate environmental impact along the taxonomy and are now widely recognized as a key catalyst that are attributed a major role mobilizing financing from the USD100trn bond market for the transition to a low carbon economy. The ratification of the Paris Agreement has reinforced the potential of green bonds, as NDCs are translated into financing plans including the private and the public sector.

Institutional capital pools ready to invest in low carbon projects are also rapidly increasing post COP21 ratification, supported by a change of the understanding of fiduciary duty, which is increasingly accounting for ESG factors in regulated frameworks. Rising green bond demand is expected to outweigh and absorb green bond supply for the years to come.

CBI estimates that green bonds will be playing a pivotal role in shifting capital to a low carbon economy and could reach USD1trn of issuance per year by 2020.

For the market to develop successfully and scalably it is key to ensure consistency—how common and climate aligned standards and criteria meet the target of generating large scale low carbon finance capacities in carbon intensive sectors and the natural capital space at an accelerated pace. A quick implementation of integrated frameworks and strong political signals are regarded as a pre-requisite for that.

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# Compelling Reasons and Growing Evidence of Positive Impacts from Private Capital Investing in Emerging Markets



Patricia Dinneen and Abigail Beach

In 2013, EMPEA, the global industry association for private capital in emerging markets,<sup>1</sup> established an Impact Investing Council to provide a forum for thought leadership and to play a leading role in professionalizing and scaling the industry, focusing specifically on market-based solutions to major global social and environmental challenges. The Council members were convinced that the skills, intelligence, experience, rigorous, financial discipline and entrepreneurial spirit that have enabled private capital investing in emerging markets to achieve high levels of scale, professionalism and financial performance could be mobilized to advance impact investing. Furthermore, the Council recognized the need for emerging markets impact investors to experiment with bold, new business models and radically low cost technologies, and to unlock new sources of private, philanthropic and public capital that can be combined in innovative and effective financial structures to accelerate development across the entire lifecycle of impact investments.

While acknowledging that charity and grants can help to solve some of society's serious social and environmental issues, the Council believes that rigorous private capital investing is critical for building scalable, profitable, and sustainable solutions. In particular, the Council has deliberately chosen to focus on those investors seeking market-based financial returns, with institutional quality fund management teams, using cost-effective, practical social and environmental metrics. The Council designates this segment of the industry as Institutional Quality Private Capital (IQPC) Impact Investing, defined below, with descriptions and examples throughout the following text.

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<sup>1</sup>EMPEA is *the* global industry association for private capital in emerging markets, with over 300 members representing assets under management of approximately US\$1 trillion.

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Finally, to demystify the myth that to achieve social and environmental benefits it is necessary to sacrifice financial returns (the infamous “tradeoff” argument), the Council members set out to document and communicate quantitative and qualitative evidence demonstrating that not only can investors achieve attractive market-based returns but in some cases can outperform comparable market benchmarks. The results of the research and analysis to date are summarized in this essay and will be part of our plans for further activities.

## **What Is Institutional Quality Private Capital (IQPC) Impact Investing in Emerging Markets?**

The Council defines IQPC Impact Investing in emerging markets as those investors which: (1) have verifiable performance data, (2) have a credible strategy for sustainability, (3) have institutional limited partners (LPs), (4) seek to achieve attractive risk-adjusted financial returns and (5) aim to generate social and environmental benefits. Private capital includes private equity, venture capital, real assets, infrastructure and private credit; however, the following content will focus primarily on private equity and venture capital.

By focusing on this segment of the market, investors differentiate themselves from self-identified “Impact First” investors who seek below-market returns or merely return of capital. This “Impact First” strategy may increase the risk that the investee will not be competitive and sustainable, unable to achieve scale and profitability, and, therefore, will have much less impact. Similarly, IQPC Impact Investing is distinguishable from traditional investors who seek to maximize profit regardless of the social and/or environmental consequences. If traditional investors do not incorporate high environmental, social and governance (ESG) standards, the investee will most likely not be sustainable or competitive and they may not be able to attract capital from increasingly demanding ethical investors. IQPC Impact Investors like traditional investors, have exercised a multitude of different fund strategies across all regions, providing LPs with a universe of investment opportunities as diverse as that of traditional private investment (see Table 1). Perhaps a reflection of the wide range of opportunities, IQPC Impact Investing has attracted a similarly varied set of LPs—including, but not limited to public pensions, high net worth individuals and development finance institutions (see Table 2).

**Table 1** Representative impact investing Fund Managers active in emerging markets<sup>a</sup>

Fund Manager	EMPEA Member	Strategy	Geographic focus
Convergence Partners	EMPEA Member	Growth	North Africa, Sub-Saharan Africa
Encourage Capital	EMPEA Member	Growth	Pan-Emerging Markets
Equator Capital Partners	EMPEA Member	Growth	Asia, Sub-Saharan Africa
EXEO Capital	EMPEA Member	Buyout, Growth	Sub-Saharan Africa
FIR Capital Partners	EMPEA Member	Growth, Venture Capital	Brazil
Flint Atlantic Capital	EMPEA Member	Growth, Venture Capital	Ghana, Kenya, Nigeria, Sub-Saharan Africa
Gray Ghost Ventures	EMPEA Member	Venture Capital	East Africa, South Asia, Southeast Asia
idacapital	EMPEA Member	Growth, Venture Capital	Turkey
Injaro Investments	EMPEA Member	Growth, Direct Lending	West Africa
Investisseurs & Partenaires (I&P)	EMPEA Member	Growth	Cameroon, Cote d'Ivoire, Ghana, Madagascar, Mauritius, Senegal
LeapFrog Investments	EMPEA Member	Growth	South Asia, Southeast Asia, Sub-Saharan Africa
Lok Capital	EMPEA Member	Growth	India
Media Development Investment Fund	EMPEA Member	Growth, Venture Capital, Mezzanine	Pan-Emerging Markets
MicroVest Capital Management	EMPEA Member	Growth, Direct Lending, Mezzanine	CEE & CIS, Latin America, Sub-Saharan Africa
Phatisa	EMPEA Member	Buyout, Growth	Sub-Saharan Africa
Quona Capital	EMPEA Member <sup>b</sup>	Venture Capital	Pan-Emerging Markets
responsAbility Investments	EMPEA Member	Growth, Venture Capital	Pan-Emerging Markets
Ronoc	EMPEA Member	Growth	CEE & CIS, Mongolia
Schulze Global Investments (SGI)	EMPEA Member	Growth, Direct Lending, Infrastructure	Brazil, Ethiopia, Georgia, Mongolia, Singapore
Small Enterprise Assistance Funds (SEAF)	EMPEA Member	Growth	Pan-Emerging Markets
TriLinc Global	EMPEA Member	Direct Lending	Asia, Latin America, Sub-Saharan Africa

(continued)

**Table 1** (continued)

Fund Manager	EMPEA Member	Strategy	Geographic focus
TVM Capital Healthcare Partners	EMPEA Member	Buyout, Growth	India, MENA
Vital Capital Investments	EMPEA Member	Buyout, Growth	Sub-Saharan Africa
Aavishkaar Venture Management	–	Venture Capital	Bangladesh, India, Indonesia, South Asia, Southeast Asia, Sri Lanka
Creation Investments Capital Management	–	Buyout, Growth, Venture Capital	Pan-Emerging Markets
IFMR Investment Managers	–	Direct Lending	India
IGNIA Partners	–	Venture Capital	Mexico
Incofin Investment Management	–	Growth, Direct Lending	Asia, CEE & CIS, Latin America, MENA, Sub-Saharan Africa
Goodwell Investments	–	Growth, Venture Capital	India, South Africa, Southern Africa, West Africa
Kandao	–	Growth	Colombia, Mexico, Peru
Unitus Impact	–	Venture Capital	East Asia, South Asia, Southeast Asia
XSML	–	Growth, Mezzanine	Burundi, Central Africa, Central African Republic, Congo, Democratic Republic of the Congo, Uganda

Source: EMPEA. Data as of 30 June 2016. Published 18 August 2016

<sup>a</sup>Based on EMPEA's research methodology refer to <http://empea.org/research/data-and-statistics/data-methodology/>

<sup>b</sup>Membership affiliated through Accion

## What Advantages Does IQPC in Emerging Markets Bring to Impact Investing Compared to Other Funding Sources?

Private capital is specifically designed to take an active role in improving the long-term business operations, managerial capability and financial performance of an investee company. In contrast, other funding sources such as government, foreign assistance, and philanthropic capital are often only short-term investments and generally not driven by profitability. Combining profitability with impact objectives can lead to mutually beneficial outcomes if there is accountability and measurement. Furthermore, relative to public funding sources seeking profitability—such as equities and fixed income securities—private capital, especially private equity (PE) and venture capital (VC), typically plays a much more active role in the strategy, operation, human resource development, governance and financial management of the investee company. Fund managers can influence their portfolio companies via

**Table 2** Representative LP commitments to impact investing private funds

<ul style="list-style-type: none"> <li>• Aabar Investments</li> <li>• Accion</li> <li>• Adolf H. Lundin Charitable Foundation</li> <li>• African Development Bank</li> <li>• AfriCap Sweden</li> <li>• Alliance Trust</li> <li>• Arabian Gulf Investments</li> <li>• Asian Development Bank</li> <li>• AXA Investment Managers</li> <li>• Bank fuer Kirche und Caritas</li> <li>• Belgian Investment Company for Developing Countries (BIO)</li> <li>• Bill &amp; Melinda Gates Foundation</li> <li>• Bill Gates</li> <li>• Blue Haven Initiative</li> <li>• Calvert Foundation</li> <li>• CDC Group</li> <li>• Christian Super</li> <li>• Cisco</li> <li>• Corporacion Andina de Fomento (CAF)</li> <li>• Corporacion Mexicana de Inversiones de Capital (Fondo de Fondos)</li> <li>• DEG</li> <li>• Department for International Development (DFID)</li> <li>• Deshpande Foundation</li> <li>• Diego Piacentini</li> <li>• DOEN Foundation</li> <li>• Dutch Good Governance Fund</li> <li>• Ebay Foundation</li> <li>• European Bank for Reconstruction and Development (EBRD)</li> <li>• European Investment Bank</li> <li>• European Investment Fund</li> </ul>	<ul style="list-style-type: none"> <li>• Finnish Fund for Industrial Cooperation (FINNFUND)</li> <li>• Fonsis</li> <li>• Front Street Re</li> <li>• GE Healthcare</li> <li>• Global Energy Efficiency and Renewable Energy Fund (GEEREF)</li> <li>• Gray Ghost Microfinance Fund</li> <li>• Gray Matters Capital Foundation</li> <li>• Hana Bank</li> <li>• Hivos-Triodos Fund</li> <li>• Inter-American Development Bank Multilateral Investment Fund (MIF)</li> <li>• International Finance Corporation (IFC)</li> <li>• International Monetary Fund Retirement Plan</li> <li>• Japan International Cooperation Agency</li> <li>• JP Morgan</li> <li>• Kazyna Capital Management</li> <li>• KBC Bank</li> <li>• KfW Entwicklungsbank</li> <li>• King Abdullah II Fund for Development</li> <li>• Kotak Old Mutual Life Insurance</li> <li>• Lemelson Foundation</li> <li>• LGT Capital Partners</li> <li>• Lundin for Africa</li> <li>• MetLife</li> <li>• Michael &amp; Susan Dell Foundation</li> <li>• Multilateral Investment Fund (MIF)</li> <li>• National Industries Group</li> </ul>	<ul style="list-style-type: none"> <li>• Netherlands Development Finance Company (FMO)</li> <li>• Norwegian Investment Fund for Developing Countries (NORFUND)</li> <li>• Omidyar Network</li> <li>• Overseas Private Investment Corporation (OPIC)</li> <li>• Pensionskassernes Administration (PKA)</li> <li>• Potencia Ventures</li> <li>• PREVI</li> <li>• Proparco</li> <li>• Prudential Insurance Company of America</li> <li>• RGA Reinsurance</li> <li>• Rockefeller Foundation</li> <li>• Sanlam Life Insurance</li> <li>• Sarona Asset Management</li> <li>• Saudi Health Investment</li> <li>• Second Swedish National Pension Fund (AP2)</li> <li>• Shell Foundation</li> <li>• Sorenson Impact Foundation</li> <li>• Soros Economic Development Fund (SEDF)</li> <li>• Steve Singh</li> <li>• Storebrand</li> <li>• Swiss Investment Fund for Emerging Markets (SIFEM)</li> <li>• Swiss Oasis Fund</li> <li>• The Kellogg Foundation</li> <li>• TIAA Global Asset Management</li> <li>• United States Agency for International Development (USAID)</li> <li>• Varma Mutual Pension Insurance Company</li> <li>• XL Group</li> <li>• Zurich Insurance Group</li> </ul>
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Source: EMPEA. Data as of 30 June 2016. Published 18 August 2016 (Based on EMPEA's research methodology refer to <http://empea.org/research/data-and-statistics/data-methodology/>)

representation on the investee company's board, advisory to management, extensive monitoring and evaluation and global networking. Fund managers can also help promote mission preservation through the selection of exit options.

IQPC is a particularly strategic way to benefit from the enormous growth in emerging markets, predicted by the IMF to represent nearly two-thirds of total global

growth by 2020.<sup>2</sup> By carefully selecting the fastest growing and highly impactful sectors—such as healthcare, education, agribusiness, financial services targeting the “unbanked” and “uninsured” populations, and affordable housing, among others—IQPC investors can gain direct access to companies generally not (yet) represented in publically available securities.

### **Spotlight on LeapFrog**

#### *Profit with Purpose: Reaching the Emerging Consumer*

As a private equity firm, LeapFrog Investments was founded on the compelling idea of investing in profit-with-purpose businesses, tapping the vast market opportunity of four billion emerging consumers.

With over US\$1 billion in commitments and investments, LeapFrog invests in companies that serve emerging consumers with essential tools. Investments span 21 markets in Africa, Asia and Latin America, and portfolio companies reach more than 126 million people, 106 million of whom are emerging consumers earning below US\$10 a day based on Purchasing Power Parity (PPP).

BIMA, a leading global mobile insurer and LeapFrog investment, shows how innovative, purpose-led businesses can reach the unreachable. The company offers insurance policies from as little as US\$0.24 per month. In just over 5 years, BIMA has reached over 10 million people. A customer survey revealed that 97% of customers were low-income, earning below US\$10PPP per day, and 77% of global customers were first time users of insurance.

## **How Does IQPC Impact Investing Generate Positive Outcomes?**

Institutional quality PE impact investing builds on the value add, which seeks to generate attractive financial returns by creating positive business outcomes, such as sustainable revenue and profit, operational efficiency and productivity, improved governance, loyal and expanded customer base, higher quality and more affordable products, etc.

### **Spotlight on TriLinc Global**

#### *Financing SMEs in Emerging Markets*

TriLinc Global is an investment company dedicated to launching and managing innovative products intended to offer investors the potential to achieve both competitive financial returns and positive, measurable economic,

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<sup>2</sup>International Monetary Fund, World Economic Outlook Database, October 2015.

social and/or environmental impact. TriLinc's flagship fund, the TriLinc Global Impact Fund, makes debt investments in growth-stage small and medium enterprises (SMEs) in select developing economies.

Among other investments, TriLinc recently provided financing to an electronics assembler in South Africa that specializes in the production and assembly of electronic components for the telecommunications industry. As an equal opportunity employer, and a registered and independently-certified Black Economic Empowerment Enterprise, the electronics assembler supports local employment opportunities and the advancement of historically disadvantaged groups, with 95% of its telecommunications labor force belonging to minority or previously excluded groups and 90% of its workforce comprised of women.

Offered at affordable price points, the electronics assembler's finished cellular phone and television products aim to satisfy the growing demand of South Africa's low-income population for access to modern communication and technology. Beyond a commitment to equal opportunity and new access to technology, the borrowing company financially supports locally-run institutions, such as the community hospice facility and the town's resident soccer team.

Many of these outcomes also have positive social and environmental benefits (as explained below). Fund managers will invest in a range of businesses in various stages of development, from small- and medium-sized companies (SME) in need of start-up and/or growth capital, to larger and more profitable companies in need of expansion capital. The traditional lifecycle of a fund manager begins with an investment vehicle (PE fund), which raises capital from major institutional and individual investors (such as pension funds, endowments and high net worth individuals). This investment vehicle will then invest that capital into private businesses. The fund manager will hold these businesses (also referred to as portfolio companies) for a number of years, during which the fund manager aims to expand and/or improve operations. Ultimately, these improvements will allow the fund manager to sell their stake in these businesses (either privately or through a public exchange) for a profit. Institutional quality PE impact investing incorporates many of the traditional value-added services. However, institutional quality PE impact investors go further: they deliberately and fully integrate intentionality, measurement and accountability for social and environmental benefits into the investment process, in addition to, and in equal measure to, the emphasis placed on financial returns. Institutional quality PE impact funds tend to invest primarily in businesses that sell essential products or services to low-income people. They seek to create compelling business propositions in markets where low-income consumers are willing and able to pay for certain products and services that are affordable, accessible, good quality, and competitive with those offered by other suppliers, including the government and foreign companies. Such businesses operate in sectors such as sustainable agriculture,

healthcare, education, water and sanitation, housing, communication technology, and financial services. Positive impact is created by expanding access to a wide range of critical goods and services for low-income populations, which improve their health, education, employment prospects or other tangible aspects of improved quality of life. In some cases, VCs play an active role in supporting entrepreneurs in creating entirely new products and services for the social and environmental benefit of local populations, by funding seed stage, start-ups and early growth-stage businesses that are immature and have not been able to reach critical scale. The range of value-added services can be expensive and time-consuming including support for writing business plans, marketing strategies, creating financial accounts, recruiting staff, raising capital and other vital functions. In addition to the traditional model, VC impact funds incorporate social and environmental objectives from the beginning of the start-up process and monitor extensively to ensure compliance across the business as it expands.

As impact investors continued to expand their reach to more types of businesses, many began investing via private credit, which is oftentimes a more suitable type of capital, especially for SMEs. Private credit is part of the larger private capital ecosystem and consists of different strategies including mezzanine, direct lending and special situations/distressed. While offering a similar exposure to emerging markets as growth or VC impact investing, private credit impact investing also offers investors tailored risk mitigants, including built-in exits, downside protection and interim liquidity.

One approach that seems particularly well designed to create positive outcomes is innovative mezzanine financing for small cap SMEs. According to a report in June 2016 by the Dutch Good Growth Fund (DGGF), a growing number of mezzanine providers are adapting existing models to address some of the main risks associated with small cap SME investing. Mezzanine is a broad strategy within private credit that refers to a range of investment structures somewhere between pure equity and straight debt. More debt-like mezzanine instruments are typically characterized by their relatively risky return profile, (partially) uncollateralized, flexible and long-term loans, and often capture “upside” opportunities—meaning if the company is successful, investors share in the profits. This is contrary to a conventional loan with a fixed interest rate. More equity-like mezzanine instruments usually involve equity instruments with a self-liquidating mechanism.

These innovative approaches can create positive business outcomes for the “missing middle” SMEs in emerging markets and thereby, generate positive social and environmental outcomes for the markets in which they operate.<sup>3</sup> However, there is still a vital need for scalability to enhance impact and improve fund economics,

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<sup>3</sup>Small and Medium Enterprises (SMEs) play a major role in most economies, particularly in developing countries. Formal SMEs contribute up to 45% of total employment and up to 33% of national income (GDP) in emerging economies. Source: World Bank Group, “Small and Medium Enterprises (SMEs) Finance,” September 2015.

possibly through the use of evergreen structures and product and process standardization.

### **Spotlight on the Abraaj Group**

The Abraaj Group is a leading private equity investor in global growth markets, currently managing over US\$13 billion across ten sectors. Abraaj has invested over US\$1 billion in 28 healthcare businesses across growth markets since 2003. Given the growing need for health systems serving the low and middle income populations of Africa and South Asia, Abraaj established the Abraaj Growth Markets Health Fund (“AGHF”), which aims to use Partnership Capital to build health ecosystems that improve access to affordable, high quality healthcare in these markets—providing investors with superior financial returns and sustainable benefits to Abraaj’s the partners and impact on the people they serve.

AGHF recently invested in Care Hospitals, a leading hospital group in India operating over 2000 beds in 17 hospitals, 11 of which are in tier II and III cities. Care has a reputation for excellence in quality, research, and training and takes a patient-centric approach which targets underserved populations, including over one million rural patients who have been served to date.

## **Evolution of IQPC Impact Investing**

The rise and expansion of IQPC impact investing is a result of a confluence of developments, most notably the increased professionalization and scaling of the space, growing evidence of attractive risk-adjusted financial returns, new entrants including mainstream institutional investors, engagement with diverse stakeholders, and the effective communication of commercially-successful investment activities.

### ***Mainstreaming and Professionalizing the Space***

In recent years the impact investing space has experienced an accelerating pace of commercialization as evident by the evolution in the type of investors. According to the GIIN’s “2016 Annual Impact Investor Survey,” institutional asset owners including pension funds, insurance companies and diversified financial institutions (such as banks) are now the largest providers of capital to the space—the same type of investors as in mature markets. This is a progression from the 2013 report in which Development Finance Institutions (DFIs) and high net worth individuals were the top investors in the space.<sup>4</sup> The report captured additional mainstreaming

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<sup>4</sup>GIIN, “2016 Annual Impact Investor Survey,” May 2016.



developments, including advancements in available research and data, improvements in the accessibility of trained professionals and more high-quality investment opportunities<sup>5</sup>. The results from the Monitor 360 and Omidyar Network's 2016 "Narrative Analytics on Impact Investing" report serves as further evidence that the space is becoming more mainstream. The report's overwhelmingly positive narratives on impact investing show that many traditional and social media outlets in the US and the UK recognize the power of impact investing.<sup>6</sup>

### **Spotlight on MicroVest**

MicroVest is an asset management firm dedicated to applying a commercial framework to investing in unbanked and under-served markets. The firm maintains a focus on a sustainable investment process that provides private capital to low-income financial institutions. These institutions then extend productive loans to micro, small and medium businesses.

MVII, MicroVest's 2009 vintage private equity fund, has successfully signed a sales agreement for its Grama Vidiyal position in India, to IDFC Bank. Grama Vidiyal was MVII's first investment in March 2009. Driven by the company's robust growth and earnings generation over the years, Grama Vidiyal managed to outgrow the challenges it faced, namely the Andhra Pradesh crisis and devaluation of the local currency. Furthermore, it grew to more than one million clients from 650,000 in 2014, mostly in Tamil Nadu.

Grama Vidiyal confirms MicroVest's belief that funding good businesses is good business.

In order to further professionalize the space, practitioners need to deepen and broaden the managerial talent pool and local sector expertise. Several recruitment firms are already building specialized teams focusing on talent acquisition and management. In particular, Korn Ferry, a global leadership and talent consulting services provider, conducts periodic surveys on compensation for impact investing professionals at entry level to top executives and is generating valuable information about trends and gaps in the management pool.

### ***New Entrants***

From across the spectrum of capital sources, there have been many new entrants, notably:

<sup>5</sup>GIIN, "2016 Annual Impact Investor Survey," May 2016.

<sup>6</sup>Monitor 360, "Narrative Analytics™ on Impact Investing," February 2016.

1. Traditional institutional investors, largely evolving from ESG compliance. For example, in 2015, BlackRock, the world's largest asset manager, launched a new business unit designed to create a global platform which can deliver impact investing products to their clients in all geographies. The platform will build upon BlackRock's impact investing activity which comprises over US\$225 billion in assets under management.<sup>7</sup> Additional important entrants include Zurich Insurance and AXA Investment Managers, Morgan Stanley's Institute for Sustainable Investing and Investing with Impact Platform, and Goldman Sachs' Asset Management 2016 acquisition of impact investing platform Imprint Capital.
2. Philanthropic family offices and high net worth individuals (HNWI) largely evolving from charitable donations and grants. For example, members of the "Giving Pledge" billionaires club, Mark Zuckerberg (founder of Facebook) and his wife, launched Chan Zuckerberg Initiative, in 2015, establishing a legal structure that enables their foundation to make impact investments.<sup>8</sup> Another "Giving Pledge" member, Bill Gates, helped launch the world's first global accelerator for impact funds, Capria, in 2016. In addition, many millennials who are beginning to inherit wealth from their "baby boomer" parents (expected to total US\$30+ trillion) are increasingly demanding social and environmental accountability for their investments.<sup>9</sup>
3. Faith-based Organizations (FBO), largely evolving from grants, donations and Socially Responsible Investing (SRI). For example, the Catholic Church held its second major Impact Investing Conference at the Vatican in 2016 and Pope Francis in 2014 publicly called on world leaders to support impact investing, citing impact investing as a vitally important tool to improve the livelihoods of the poor. In 2016, A group called "Catholic Impact Investing Collaborative" comprising Catholic institutions with over US\$50 billion in assets under management announced that it is expanding its scope and membership to help build a movement for Catholic impact investing. Other faith-based organizations with a long history of supporting economic development have evolved to include impact investing, including the Mennonites and the Aga Khan Foundation.

### **Spotlight on Gray Ghost Ventures**

Gray Ghost Ventures (GGV) has been active in impact investing since 2003, when it established the Gray Ghost Microfinance Fund. It moved beyond

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<sup>7</sup>Pensions & Investments Online, "BlackRock's Winshel discusses the firm's new impact investing unit," June 2015.

<sup>8</sup>Kerry A. Dolan, "Mark Zuckerberg Explains Why the Chan Zuckerberg Initiative Isn't a Charitable Foundation," *Forbes*, December 4, 2015.

<sup>9</sup>Michael P. Regan, "Wall Street Has Its Eyes on Millennials' \$30 Trillion Inheritance," *Bloomberg*, March 3, 2015.

microfinance to build a portfolio of mission related investments on behalf of Gray Matters Capital in 2006. GGV's Gray Ghost DOEN Fund (2008 vintage), has a total of nine investments, with five investments in financial services, which intend to provide security, savings, opportunity, transactional reach and access to financial products.

The firm has invested in such firms as:

- bKash, the largest mobile money platform in the world. Based in Bangladesh, the company has been providing a mobile wallet for its 20+ million banked and unbanked customers since 2011.
- M-Kopa, a mobile technology company based in Nairobi, Kenya. Since 2010 the firm has helped Kenyans acquire solar powered products by offering innovative payment plans and a distribution model tailored to the needs of its 400,000 customers.

### *Diverse Stakeholder Engagement*

As a multi-stakeholder issue, impact investing has benefited greatly from recent diverse stakeholder engagements. Notable engagements include:

- Social Impact Investment Taskforce

Established in 2014 under the UK presidency of the G8, the Social Impact Investment Taskforce created a platform for public and private sectors to engage around policies and regulations that would create environments conducive for impact investing.<sup>10</sup> The Taskforce and its subsequent working and advisory groups, including the US National Advisory Board, also helped to raise the industry's profile and continue to provide greater global credibility to the practice.

- Regulatory update

The change in regulatory policies governing the investment activities of federally regulated U.S. pension funds not only helped to encourage greater capital flows into the space, but also epitomizes the value of engagement between private and public sector stakeholders. In 2015, the U.S. Department of Labor (DoL) issued new guidance for pension funds interested in pursuing "economically targeted investments" (ETI), a specific type of impact investment that seeks certain social or environmental objectives in conjunction with a market rate financial return. This guidance is intended to encourage more ETIs.<sup>11</sup>

<sup>10</sup>Global Social Impact Investment Steering Group, "Successor to and incorporating the work of the G8 Social Impact Investment Taskforce," Accessed July 2016.

<sup>11</sup>US Department of Labor, "New Guidance on Economically Targeted Investments in Retirement Plans from US Labor Department," Accessed July 2016.

### **Spotlight on Schulze Global Investments**

Schulze Global Investments is a private equity firm focused on frontier markets in Asia and Africa. Its investors include institutions like OPIC, FMO, DEG, and Finnfund, as well as leading family offices from the United States, Europe, and Asia. The firm considers impact at three levels:

- **Market:** Schulze Global picks markets that are underserved from a capital standpoint, providing much-needed financing to help grow the private economy.
- **Sector:** Schulze Global picks sectors that are sustainable and meaningful for the country's economic development.
- **Company:** Schulze Global builds a portfolio of companies that are committed to impact and helps them introduce international best practices across the ESG spectrum.

Schulze Global's portfolio includes dozens of companies across various sectors including FMCG, building materials, healthcare, private education, and clean energy.

## ***Growing Evidence of Financial Performance from Private Capital Impact Investing***

Though research on the impact investing performance is still nascent, there is a growing body of evidence challenging the “tradeoff argument” that it is necessary to sacrifice financial returns in order to achieve social and environmental benefits. In fact, emerging evidence indicates that the financial returns of impact investing can compare favorably with relevant public market indices and cohorts of similar traditional private capital investors.

- **Wharton Social Impact Initiative (WSII) Study**

In its 2015 report, “Great Expectations: Mission Preservation and Financial Performance in Impact Investments”, the Wharton Social Impact Initiative (WSII) analyzed the role of financial returns and mission preservation in impact investing. Evaluating the financial performance of 53 impact investing private equity funds, the report found that in certain market segments—investors might not need to expect lower returns as a tradeoff for social impact. Key findings from the report include<sup>12</sup>:

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<sup>12</sup>WSII, “Great Expectations: Mission Preservation and Financial Performance in Impact Investments,” October 2015.

- Impact funds in the sample that reported seeking market-rate return demonstrated that they can achieve results comparable to market indices.<sup>13</sup>
  - Impact funds did not have to make concessions in order to preserve the portfolio companies’ missions upon exit.<sup>14</sup>
  - Additional quantitative information is required to understand the causal mechanisms driving double and triple bottom line returns, including additional metrics on social impact pre and post exit, and further clarity on long-term impact.<sup>15</sup>
- Cambridge Associates/The GIIN Benchmarking Report
 

Recognizing a paucity of robust research on financial performance in the impact investing space, Cambridge Associates and the Global Impact Investing Network (GIIN) launched the Impact Investing Benchmark in 2015. The benchmark, which at launch comprised 51 private investment funds, is designed to analyze the financial performance of market-rate seeking PE and VC impact investing funds. The report provided evidence that market rates of return for impact investments are possible. Key findings include:

    - Strong performance relative to conventional private investment (PI) funds. In aggregate, impact investment funds launched between 1998 and 2004—those that are largely realized—have outperformed funds in a comparative universe of conventional PI funds. Over the full period analyzed, the benchmark returned 6.9% to investors versus 8.1% for the comparative universe, but much of the performance in more recent years remains unrealized.<sup>16</sup>
    - Superior performance of smaller impact funds. Impact investment funds that raised under US\$100 million returned a net IRR of 9.5% to investors, outperforming similar-sized funds in the comparable universe (4.5%), impact funds over US\$100 million (6.2%) and funds over US\$100 million in the comparative universe (8.3%). Emerging markets impact investing funds outperformed developed markets impacting funds. Specifically, emerging markets impact investment funds returned 9.1% to investors versus 4.8% for developed markets impact investment funds. Funds focused on Africa performed even better, returning 9.7%.<sup>17</sup>

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<sup>13</sup>WSII, “Great Expectations: Mission Preservation and Financial Performance in Impact Investments,” October 2015.

<sup>14</sup>WSII, “Great Expectations: Mission Preservation and Financial Performance in Impact Investments,” October 2015.

<sup>15</sup>WSII, “Great Expectations: Mission Preservation and Financial Performance in Impact Investments,” October 2015.

<sup>16</sup>Cambridge Associates, “Introducing the Impact Investing Benchmark,” June 2015.

<sup>17</sup>Cambridge Associates, “Introducing the Impact Investing Benchmark,” June 2015.

While both of these reports are promising, the sample sizes are still small and solid evidence of over performance has yet to be achieved. More research is needed in order to refine the methodology, specifically inclusion and exclusion criteria.

## **What Are the Challenges of Impact Investing and How Can They Be Addressed?**

### ***Appropriate Capital Across the Investment Lifecycle***

Within impact investing, there is a spectrum of capital that caters to diverse impact and return preferences. The remaining challenge is ensuring there is enough capital to support various investors' interests. EMPEA Council member, Omidyar Network, explored this challenge in its 2015 "Frontier Capital" report, focusing on very early-stage investments targeting the low and lower-middle income segment.<sup>18</sup> This pioneering report identified appropriate business models, key stakeholders and suggested actions for catalyzing capital into this vitally important segment.

### ***Building the Evidence Base***

As an asset class, private capital investing is inherently opaque, which means that IQPC Impact Investing can seem impervious to some investors.

Although the space has benefited greatly from the recent influx of robust research, additional inquiries into financial performance, drivers of financial and impact returns, and mission preservation is needed to further mainstream IQPC Impact Investing especially in the following areas:

- Unlocking new sources of capital
- Innovative business models and radically low-cost technologies
- Innovative investment structures
- Risk management including implementation/execution risk

### ***Metrics***

Without relevant and robust metrics, it is difficult to demonstrate success in achieving social and environmental impact. The idiosyncratic nature of IQPC Impact

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<sup>18</sup>ON, "Frontier Capital Report," October 2015.

Investing presents some specific challenges with respect to the development of metrics, including:

- **Time Scale.** Whereas financial returns to investors end once the fund has exited the investment, the social impact continues after a project has been completed. Some projects create impact throughout the life of the investment—such as an insurance company—whereas others—such as housing or infrastructure—deliver impact over the longer term but only after an extended period of the investment. Vital Capital, which has developed its own metric system, has overcome this problem by differentiating immediate and long-term impact projects and measuring them differently.
- **Differentiated value of outcomes versus outputs.** *Outcomes*, such as poverty reduction and improvement in livelihoods, reflect the ultimate impact objective of impact investments while *outputs*, such as units of housing constructed, number of jobs created, do not adequately measure the level of satisfaction of the beneficiaries, nor the unintended (negative) consequences. Outcomes are clearly more difficult to measure; to the extent that it is possible to determine a causal link between a particular investment and the outcome, it is expensive to do so. Even after an outcome is established, the firm must then attribute that outcome to the firm’s involvement, which is often an even bigger challenge.
- **Lack of comparability across impact investments.** Each company and product creates impact in its own idiosyncratic way, so generic indicators make it impossible to capture the complexity of the true impact. For example, one operational metric for insurance companies is the speed at which a claim is paid, which would clearly not be relevant for an education company. Even for metrics that appear to be comparable, variability in the methodology can create challenges. For instance, using the number of jobs created as a sole metric obscures the quality of those jobs. (Were those jobs for local workers? Were the wages competitive? Were the workers treated with dignity and respect?) Furthermore, cross-comparisons are extremely difficult for units of value that have an inherently subjective component. Should the life of one patient and reducing greenhouse gas emissions by one unit be equally valued? To accommodate the huge diversity of impact, IRIS has developed a repository of over 400 metrics, recognizing that no single combination will be right for all organizations. This effort by IRIS (as well as GIIRS) is helpful, but one aspiration among EMPEA Impact Investing Council Members is to simplify the process and make it more practical by focusing on the key “metrics that matter.” FIR Capital’s Marcus Regueira recommends 4–5 indicators per industry to provide a balance between comparability and overload of indicators.

### **Spotlight on Vital Capital**

Vital has been demonstrating a No Trade-Off approach, by investing at-scale in the most impactful, community building sectors such as affordable housing,

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healthcare, water, agriculture and renewable energy. Vital's investments are providing solutions to previously unmet needs for millions of local citizens while being on track to achieve its 20% IRR target.

In parallel to traditional PE financial underwriting and evaluation, Vital screens investments for impact potential using its proprietary *Vital Impact Diamond* tool. The *Vital Impact Diamond* is used to profile investments' impact across four complementary dimensions:

1. **Essentiality:** The extent to which the investment addresses an essential, previously unmet need
2. **Beneficiaries:** Assessing the socio-economic segmentation of beneficiaries and the scale of influence
3. **Locality:** Evaluating the degree at which an investment engages with and creates benefit in the local community (e.g. employment and training)
4. **Intrinsic Impact:** Assessing the correlation between financial and business growth and generated impact.

In addition, Vital utilizes standardized impact measurement tools such as IRIS and GIRS, as well as, self-developed indicators to comprehensively monitor and oversee the impact aspects of its portfolio.

## Conclusion

With compelling reasons and preliminary evidence of positive impacts from IQPC Impact Investing in emerging markets, documented throughout this essay, we expect further growth in scope, scale, significance and success in the space. As investors continue to build track records of attractive financial returns and credible social/environmental outcomes, it is critical to the development of the IQPC Impact Investing industry to keep communicating this success.

It remains difficult, however, to build sustainable, profitable businesses, to recruit and retain talented professionals and to achieve gainful exits that preserve the mission of the company. These are major challenges which still need to be overcome in order to realize the full potential of IQPC Impact Investing.

EMPEA, with the help of its Impact Investing Council, will help advance the IQPC Impact Investing space by providing a forum for knowledge exchange, engaging with industry stakeholders and producing independent, rigorous industry research and thought leadership. This will include webinars and presentations at global conferences; systematic tracking and reporting of IQPC Impact Investing activity via EMPEA's proprietary database FundLink; and research content around the current investment landscape, key drivers of financial, social and environmental returns, environmental and social metrics, and innovative investment structures and



business models. Further information is available at the EMPEA website: [www.empea.org](http://www.empea.org).

## EMPEA Impact Investing Council Members

*The following individuals are members of the EMPEA Impact Investing Council, as of August 2016. For the current list of members, please go to the website at [www.empea.org](http://www.empea.org). The examples and perspectives in this article do not represent the views of all Council Members.*

Pat Dinneen, Chair, EMPEA Senior Advisor

Mike Kubzansky, Vice Chair, Vice President of Intellectual Capital, Omidyar Network

- The Abraaj Group, Tom Speechley, Partner, EMPEA Board of Directors Representative
- FIR Capital, Marcus Regueira, Founding Partner and Chief Investment Officer
- The Gates Foundation, Representative pending
- Gray Ghost Ventures, Arun Gore, President and CEO
- Investisseurs & Partenaires, Jean-Michel Severino, CEO
- Leapfrog Investments, Jim Roth, Co-Founder and Partner
- MicroVest Capital Management, Gil Crawford, CEO
- Morgan Stanley Alternative Investment Partners Private Equity Fund Group, David Wilton, Managing Director
- Quona Capital, Monica Brand, Co-Founder and Partner
- responsAbility Investments AG, Rik Vyverman, Global Head Ventures Equity
- Schulze Global Investments, Gabriel Schulze, Founder and CEO
- Trilinc Global, Gloria Nelund, Chairman and CEO
- Vital Capital, Eytan M. Stibbe, Founding Director
- Encourage Capital, Adam Wolfensohn, Managing Director Investment Committee Member
- Zurich Alternative Asset Management, Wolf Witt, Associate Director

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- Arun Gore, President and CEO, Gray Ghost Ventures
- Jim Roth, Co-founder and Partner, LeapFrog Investments
- Gil Crawford, CEO, MicroVest Capital Management
- Gabriel Schulze, Founder and CEO, Schulze Global Investments
- Gloria Nelund, Chairman and CEO, TriLinc Global
- Eytan M. Stibbe, Founding Director, Vital Capital

# Impact Investing and the “New Green Industrial Revolution”: How to Stop Climate Change Through the Divest-Invest Movement



Jochen Wermuth and Clara Vondrich

## The Divest-Invest Movement: A Brief History

The Divest-Invest Philanthropy defines the concept of Divest-Invest as investors pledging, over 5 years, to sell holdings of fossil fuel shares and investing instead in climate solutions, such as centralized and distributed renewable energy, clean tech, sustainable water and food projects, climate justice programs that bolster community ownership in the new energy economy, resilient infrastructure, smart cities and energy efficiency.

The first divestment campaigns had their origin in the United States. The Divest-Invest Philanthropy was launched in 2011. The movement began on college campuses where students demanded that their college endowments divest from energy sources that harmed the climate. Not all movements had put a focus on fossil fuels in general, some only targeted coal. Students' campaigns argued that institutions of higher learning should not be supporting or profiting from industries that undercut the climate. Aside from the moral argument the economic logic was also powerful: coal had been in a steady decline. As a result, several dozen active coal divestment campaigns had started within a year across the USA.

The publication of American environmentalist Bill McKibben's article "Global Warming's Terrifying New Math" in the Rolling Stone magazine in 2012 gave the divestment movement a real push forward. In his article, McKibben has called for full fossil fuel divestments by colleges. He linked the ethical side of divestment with the financial risks of the so called "stranded assets" laid out by the Carbon Tracker

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Initiative. Its analysis pointed out the risk that the value of fossil fuel assets is inflated. The think tank had taken into account the world's coal, oil and gas reserves and compared them to the global carbon budget.

The result: we cannot continue to burn fossil fuels the way we do if we want to restrict the increase of the average global temperature to 2 °C. In order to preserve a hospitable and habitable planet, roughly 80% of the known fossil fuel reserves must remain in the ground.<sup>1</sup> These are the by-now-famous “stranded assets”: the fossil fuel industry has been historically a source of strong returns for shareholders. It had now become clear that their economic potential would be much less than previously thought. In other words, institutional investors had hidden climate risks in their portfolios.

Since McKibben's call to action the movement has grown exponentially—not just in the United States but also in Europe, Australia and beyond. In addition to university campuses, the campaign reached other sectors as well, such as cities, community-based activists, pension funds and retirement accounts.

The risk that fossil fuel reserves may become stranded assets has further increased in the past years:

1. Rapid progress in energy efficiency—which had led to a slowdown of demand;
2. Falling costs of renewables—the latest record has been a March 2016 tender in Dubai, won at 2.99 cent/kWh by a solar power provider; at this price oil can only compete if it can be sold below \$5/barrel;
3. The net costs of electric cars with vehicle-to-grid charging capacities that allow their batteries to be used as storage plants has dropped below the cost of cars with combustion engines.

Financial arguments have thus bolstered the ethical. Fossil investments were volatile in the short term and potentially very risky in the long term. The decline and high volatility of coal and oil prices have exposed the financial risks of these assets. When markets began to internalize climate risks one day the carbon bubble would burst.

The issue of stranded assets quickly became a hot topic in the financial sector. This gave a boost to divestment commitments. It took off as financial concerns began to align with ethical considerations. Universities and churches took action, followed by local communities and states. They began to pass legislation and rules calling for divestment. Hospital endowments began to look at the health risks of a polluted environment—and at their own fossil fuel investments. Foundations have also started to align their portfolios with the demands of their sponsors who usually emphasize ethical investment strategies.

At the same time, several institutions began to invest in renewable energy, energy efficiency, clean tech and energy access—the energy transition was increasingly regarded as the new growth sector. The Rockefeller Brothers Fund, the largest

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<sup>1</sup>McKibben, B. (2012). Global Warming's Terrifying New Math. *Rolling Stone*, August 2nd, 2012 issue. <http://www.rollingstone.com/politics/news/global-warmings-terrifying-new-math-20120719>

pension fund in Norway, Axa Insurance, Allianz Insurance, the California pension fund system, dozens of new universities, hospitals and church endowments have committed to divest ever since.

And the commitments for divest-invest are growing further. In September 2015 the global Divest-Invest Initiative has reported an enormous increase in investor pledges to divest from fossil fuel companies. According to an Arabella Advisors report published at that time, a total of 436 institutions and 2040 individual investors from 43 countries, with combined assets under management of 2.6 trillion dollars, had made commitments to withdraw their capital, thus eliminating climate change risks from their investment portfolios. Just a year before, in September 2014, such pledges totalled just 50 billion dollars.

The total assets of investors committed not only to fossil divestment but to reinvestments into climate-friendly alternatives is 785 billion dollars.

The enormous increase had been largely attributable to pledges from pension funds, family offices and other major investors who together made up 95% of the total. There has also been a marked rise in the number of universities, municipalities, churches, healthcare organisations and foundations which are selling their participations in the 200 exchange-listed companies with the largest carbon-based fuel reserves (Carbon 200); they have been switching to climate-friendly firms.<sup>2</sup>

## Fossil Fuels as Stranded Assets

The Carbon Tracker Initiative has stated in its 2011 analysis that 60–80% of the fossil fuel reserves cannot be burned if the global warming target of less than 2 °C above pre-industrial times is to be reached.<sup>3</sup> This insight has underpinned the economic arguments of the Divest-Invest movement.

In addition, extraction costs are likely to exceed market prices for fossil fuels. Both new and existing investments are increasingly not making economic sense anymore—they will need to be written off; expected income from future sales of fossil fuels have to be revised down.

Carbon Tracker estimates that this adjustment could be as much as \$21 trillion, or 50% higher than the amount of US mortgage-backed securities that needed to be written off and caused the 2008 financial crisis. If we are to prevent catastrophic climate changes, the bulk of reserves on the books of both state-owned and publicly-traded coal, oil and gas companies are “stranded assets” whose economic value

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<sup>2</sup>Arabella Advisors (2015). Measuring the Growth of the Global Fossil Fuel Divestment and Clean Energy Investment Movement. <http://www.arabellaadvisors.com/wp-content/uploads/2015/09/Measuring-the-Growth-of-the-Divestment-Movement.pdf>

<sup>3</sup>Carbon Tracker Initiative (2011). Unburnable Carbon – Are the world’s financial markets carrying a carbon bubble?. <http://www.carbontracker.org/wp-content/uploads/2014/09/Unburnable-Carbon-Full-rev2-1.pdf>

cannot and will not be realized. Investors should divest before the carbon bubble bursts.

According to the Divest-Invest Philanthropy, stranded assets are associated with a three-fold risk:

1. Regulatory—as governments impose policies to limit global warming, the unburnable reserves of listed fossil fuel companies will become liabilities, i.e. stranded assets; investors are sitting on a carbon bubble.
2. Market forces—carbon assets will be stranded by market forces as renewables continue their explosive growth, energy use becomes more efficient, and new technologies emerge; the cost of renewable energy has rapidly declined and, in many areas, matches or out-competes fossil fuels on price without subsidies, leading analysts to argue that the energy transition will be primarily driven by economics, particularly as battery storage becomes cheaper—solving the intermittency problem—renewable energy will become the obvious mainstream choice.
3. Socio-political pressures—stranding is being accelerated by socio-political pressures, such as the Divest-Invest movement, grassroots protests and changing public opinion; these forces work to revoke the social license of fossil fuel companies to operate, while promoting clean and equitable alternatives.

It is clearly prudent to move investments from fossil fuels to resource efficiency, renewable energy and other climate solutions. It is also increasingly recognised as the ethical choice for investors, be it foundations, pension funds, insurance companies, family offices or private households.

## **To Divest or not to Divest**

Most human efforts, commercial or charitable, could be in vain without sufficient capital. Time is running out, though. In the coming 5 years or so the world must be put on track towards a sustainable future. The deterioration of the climate is still accelerating. If this is not stopped, the earth will be largely uninhabitable for humans. The later they fight back in earnest the harder will it be to adapt to the changes in the environment.

On the other hand, it is evident that a clear commitment to certain impact targets is essential to achieve a better risk-return profile. It is not, as some people believe, a drag on performance. Adherence to a zero tolerance policy on corrupt practices and a focus on greater resource efficiency, long-term sustainability and profitability could be a suitable strategy for divestment.

There may of course be areas of impact investing with trade-offs between a positive impact and financial return, but this is not the case if the focus is on anti-corruption policies and resource efficiency. As these factors help to improve corporate governance and societies in general, slow the exploration of scarce resources, and cut energy consumption as well as CO<sub>2</sub> emissions, they are also good for profits.

Note that not just professional investors but every human being with as little as a penny on a bank account or a mobile phone is an investor with an impact. Banks may lend this penny either to solar power or coal power projects—in this sense, the investor has an impact one way or another.

Therefore, according to the Divest-Invest Philanthropy, the theory of change behind divestment is threefold:

- First, the ethical call for divestment stigmatizes the fossil fuel industry and starts to undercut its social license to operate.
- Second, by calling for both divestments and investments, institutional investors shift capital flows away from the problem and into the solution, accelerating a transition to a future fuelled by sun, wind and water.
- Third, and most significantly, by activating campuses, foundations, community leaders and so on, a broad-based constituency for climate action is born, emboldening politicians and international organizations to seek increasingly ambitious policy solutions.

### ***Positive Financial Performance by Investing in Climate Solutions***

The financials of divestment are strong. MSCI, the world’s leading market index company, launched a fossil-free version of its All Country World Index (ACWI) in October 2014. One year later, ACWI ex Fossil Fuels had outperformed its parent index by 60%, with a gross return of 6.5% compared to 4.1% for the ACWI. MSCI had previously published a comparison of the indexes over 5 years using a back-test (i.e. how the fossil-free index might have performed if it had existed). Investors who dumped holdings in coal, oil and gas boosted their annual average earnings by 1.2 percentage points over that period. In September 2015, US-based Trillium Asset Management released an analysis of the California public pension fund system that showed beneficiaries lost \$5 billion in 1 year due to bad fossil fuel investments.<sup>4</sup>

Perhaps the biggest disruption came in November 2015, when the Canadian research group Corporate Knights released a new tool, the Decarbonizer, that essentially automates the Trillium analysis—allowing anyone to plug-and-play to see how a fossil-free version of an endowment would have fared over a set time window. Of the 14 major endowments featured at the time of the tool’s release, all but one would have performed better had it divested. The Bill and Melinda Gates Foundation, for example, left \$1.9 billion on the table over the past 3 years. Together, the combination of funds worth roughly \$1 trillion would have been \$23

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<sup>4</sup>Trillium Asset Management (2015). CalPERS & CalSTRS Carbon Reserve Holdings in Fiscal Year 2014/2015.

billion better off had they divested. With results like these, the case for Divest-Invest starts to become straightforward.<sup>5</sup>

### *Climate Solutions as Investment Tools*

Investors engaged in the divest-invest movement commit themselves to investing in “climate solutions, broadly defined.” Climate solutions include renewable energy, climate justice initiatives, resilient infrastructure, sustainable agriculture, water projects, and more. The options are diverse to reflect the fact that every sector of the economy must pivot to meet our existential challenge.

Beyond financial gains, investment in climate solutions will benefit human prosperity through job creation, energy access for those that have none, improved air quality and reduced health costs. Sigmar Gabriel, Germany’s Minister of Economics and Energy, has thus called the energy transition, the “Energiewende”, a jobs and profit machine.

Investment in communities most impacted by climate change, and with few resources to cope, is a target area for many Divest-Invest signatories, who seek to bolster local ownership in the new economy and advance principles of climate justice. Investments in community banks and credit unions that offer equitable loan terms, jobs programs to help move workers from brown to green industries, microfinance, green revolving funds for energy-efficiency retrofits, solar leasing and direct investment in communities themselves, are among the options investors have. They have plenty of means to ensure that the energy transition is just and equitable, that it benefits the many and not just the few.

Opportunities to divest and invest exist across every asset class of a portfolio, opening the door to rich and exciting diversification strategies. In addition to the two major asset classes—equities and fixed income—, climate-friendly investment opportunities also exist in all other asset areas such as private equity, real estate, infrastructure and cash equivalents. Moreover, the movement is catalyzing new investment products and opportunities.

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<sup>5</sup>Corporate Knights (2015). Fossil fuel investments cost major funds billions. New tool analyzing Gates Foundation, Wellcome Trust, ABP, CPPIB and others shows high costs of not divesting from fossil fuels. [http://www.corporateknights.com/wp-content/uploads/2014/07/CKPressRelease\\_Decarbonizer.pdf](http://www.corporateknights.com/wp-content/uploads/2014/07/CKPressRelease_Decarbonizer.pdf)

## **A New Industrial Revolution: From the Fossil Fuel Age to a Climate-Friendly Economy**

A new green industrial revolution, characterised by ever increasing internet-enabled resource efficiency, competitiveness of renewable energy and electric cars with vehicle-to-grid charging capabilities, is now under way.

While it has taken a lot of political will and subsidies to get to where we are today, there is now in many cases a pure economic case for renewables and electric vehicles if their batteries can be used as storage power plants thanks to vehicle-to-grid charging capabilities. If there is a level playing field and neither fossil fuels nor renewables are subsidised, this means we could be headed for a period of exponential growth in these sectors, which are no longer as dependent on government subsidies and politics. Such exponential growth could mean that renewable power, just a fraction of global energy supply today, could provide all of global power in the medium term. There will be regions and sectors which embrace the new more competitive economic models and technologies which are now available and benefit from this transition, while others will fall behind or disappear altogether.

Is this conceivable? Yes, just as regular mobile phones were largely replaced by smartphones in a few years this can happen quickly even for larger assets: in the first industrial revolution steam engines replaced manual labour. In the last industrial revolution, at the turn of the nineteenth to the twentieth century, horse-drawn carriages were replaced by cars with combustion engines powered by fossil fuels in a matter of a few years. Now combustion engines are likely to be replaced by renewable energy-powered highly efficient and thus highly competitive vehicles with electric drive trains. Whole industrial sectors, like fossil-fuel-driven combustion engines will thus disappear as did most of the horse-whip-makers and steam engine rail companies at the beginning of the twentieth century. That occurred after they had been the dominant industrial sector making up 13 out of 14 names in the first Dow Jones Index of 1884. In fact, the only surviving company of the original index is Western Union. It is hard to imagine today that household names like BMW, Daimler, Volkswagen could ever disappear, but as Mark Twain is supposed to have said: “History does not repeat itself, but it often rhymes”.

In addition to major changes to the world’s economy due to this new green industrial revolution, climate change is also here to stay. It will definitely remain an issue, unless significant action is taken in the coming 5 years to make a major impact on the global economy. Global investment institutions, such as those surveyed by the consulting firm Mercer for their 2015 report “Investing in the Time of Climate Change”, appreciate this risk and the large impact it will have on the expected investment returns for different sectors.<sup>6</sup>

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<sup>6</sup>Mercer LLC (2015). Investing in a time of climate change. <http://www.mercer.com/content/dam/mercer/attachments/global/investments/mercer-climate-change-report-2015.pdf>



## *New Industrial Sectors and Champions Will Emerge*

Given the structural changes under way in the global economy, some sectors will disappear but new ones with new champions will emerge, just as Rockefeller, Carnegie and JP Morgan appeared during the last industrial revolution at the beginning of the twentieth century.

Solar power for example is the fastest-growing power source, as solar module prices have fallen 75% in just 5 years. Solar has thus achieved grid parity in many places. We may also be on the cusp of cracking the code on affordable battery storage, the final barrier to total power sector disruption. Some analysts predict widespread “battery parity” by 2020—the point at which renewables plus storage technology is as cheap as grid power.

The International Energy Agency’s World Energy Outlook 2015 reports that: “Renewable energy is now the second-largest generator of electricity in the world and will overtake coal, currently the largest, by 2030—if not before.”<sup>7</sup>

Africa, China, parts of South America and India could potentially leapfrog the West as they skip the dirtier and now more expensive fossil-based linear economic development of the West and move directly to more sustainable, renewable energy-powered and waste-free circular economic models. This coupled with Pope Francis’ call in his 2015 encyclical letter to bring 1.3 billion people out of energy darkness<sup>8</sup> presents a stunning opportunity for investors to do good while capitalising on the new growth industries.

It is not just the power sector that’s being disrupted. A research report on Global Utilities, Autos and Chemicals of 20 August 2014 by investment bank UBS noted that “the market is not yet looking at the topics of solar, EVs and stationary batteries with a holistic view. Our proprietary model shows it is the combination of the three that makes solar fully competitive (. . .). As a consequence, we expect transformational changes in the utility and auto sectors.”<sup>9</sup>

## **The Investment Opportunity of the New Industrial Revolution**

The combination of fast population and consumption growth puts pressure on natural resources. In fact, our global economy’s ecological footprint already exceeds the earth’s capacity to regenerate. The pressure on natural resources generates an

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<sup>7</sup>International Energy Agency (2015). World Energy Outlook 2015.

<sup>8</sup>The Holy See (24 May, 2015). Encyclical letter *Laudatio Si’* of the Holy Father Francis on care for our common home. [http://w2.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco\\_20150524\\_enciclica-laudato-si.html](http://w2.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si.html)

<sup>9</sup>UBS (2014). Q-Series. Global Utilities Autos & Chemicals. Will solar, batteries and electric cars re-shape the electric system?, pp. 4.

immediate and commercially viable need for resource efficient products and CO<sub>2</sub>-efficient technologies, such as renewable energy generation through wind, solar, geothermal and second generation biomass (from waste—not competing with food production), storage and battery systems, electrical and self-driving vehicles, process automation (industry 4.0) and online platforms, optimising logistic chains, decentralised and local solutions, water and waste management, urban mining, sustainable agriculture and replacing some scarce natural resources with innovative materials such as bio-based plastics. At the same time “linear” economic models (take, consume, discharge) are being replaced by “circular” economic models where there are only “users” rather than “consumers” and waste is seen as a valuable resource as it is in nature and has been for most of human history excluding the last 150 years or so.

Also, as incomes grow, citizens usually become increasingly concerned about the environment. Governments around the world are under pressure from all parts of society—churches, NGOs, health providers, business—to reach global agreements to reduce emissions. In September 2014, more than 340 institutional investors managing \$14.5 trillion in assets, called on governments to set a meaningful price on carbon emissions, stating their readiness to move investments into clean energy, provided the right incentives were in place. The climate conference COP21 that took place in Paris in December 2015 resulted in an agreement for each country to commit to concrete and controllable CO<sub>2</sub>-emission reduction measures.

By April 2016, there were more than 1500 signatories to the UN supported Principles of Responsible Investments collectively managing over \$60 trillion in assets, all committing to follow “Environmental, Social and Governance” principles in their investment approach. There is thus more and more capital that can be invested responsibly, with a positive impact on the environment. By December 2017 the member of the “Institutional Investor Group on Climate Change” had Euro 30 trillion under management.

At the same time, increasingly frequent and stronger weather phenomena and natural disasters will call for protection, remediation and reconstruction technologies, solutions and services. Also, by 2050 around 80% of the world’s population, around 6.5 billion people, may live in megacities, in which case products and services will need to satisfy this demand locally in a sustainable fashion.

### ***Good Timing for Early Stage Growth Stage Private Equity in Germany and the EU***

Traditionally, the European market for higher-risk early-stage/venture capital and later-stage/larger buy-out private investments has seen lots of private “angel investor” and large traditional private equity investor interest, such that there are many funds active in this space. The late-stage venture and early-stage growth financing e.g. for interntaional expansion been dominated pe-2008 by commercial banks, in

particular in Germany. They provided the loans to “growth stage” or “mid-market” companies in the “Mittelstand” to finance their expansion.

This changed in the wake of tighter regulations after the 2008 financial crisis and the introduction of “Basel III”. Banks are often reluctant to lend to Small and Midsize Enterprises (the “SMEs”), in particular when it comes to financing growth when the company is not profitable yet and in new local or emerging markets. There is thus a shortage of capital in the late-stage venture early-stage growth space, where companies have proven technologies and business models which if scaled could make a major contribution to solving the global private issue. There is thus an under-exploited business model where EU companies are providing with financing and assisted in expanding into growth markets at home and abroad.

This market niche has also been recognized by Germany’s government and its development bank KfW. The bank has returned to investing in growth stage private equity funds via a fund of funds after having stopped its fund of funds program earlier—the German government had recognized the financing gap for growth-stage SMEs.

For resource efficiency companies, growth markets in emerging markets are particularly attractive places. Some of the larger countries, such as China, India and Russia, use as much as four times more energy and cause eight times more CO<sub>2</sub> emissions per unit of GDP than Germany does, while their average energy consumption is expected to double again by 2040. It is thus highly profitable and highly impactful to sell goods and services to these markets. As a result, they are likely to leapfrog the West. Already 250 million Chinese travel to work with 100% electric bikes, scooters or cars by the end of 2017. China is about to register more new electric cars every month as Germany’s total stock by early 2018.

## **Case Study: Private Equity Can Finance Structural Changes in the Energy Industry**

The German family office and BaFin-regulated investment adviser Wermuth Asset Management (WAM) is committed to impact investing, in particular to a profitable move towards a sustainable economic model, as well as doing business in an ethical fashion. Thus the firm set up various investment strategies under the theme of divest-invest. WAM pledged in early 2014 to divest from all of its fossil fuel production assets over the course of 3 years and to invest in resource efficient and renewable energy companies instead.

Below is a case study outlining the process of divest-invest through a private equity fund vehicle.

## ***Financing European Growth Companies Through the Green Gateway Fund 1***

The private equity fund called Green Gateway Fund 1 (GGF 1) has been launched by WAM in 2013. The fund focuses on financing European growth companies and supporting them until they reach commercial maturity. GGF 1 also actively supports the SMEs in its portfolio to sell their goods and services globally. Their target markets can be in the EU or abroad. An example for a target market is China which not only consumes several times more energy relative to GDP than Germany, it also emits eight times more CO<sub>2</sub>. This strategy is thus highly profitable and has a strongly positive impact on the environment.

GGF 1 is currently invested in four portfolio companies which have, on average, been growing at a rate of 30% annually since investment entry and, in just 3 years, quadrupled their income. The estimated value of the fund's portfolio is, after just 3 years, now 2.6 times invested capital, based on third-party offers for the portfolio companies. The fund is thus well on track of achieving an IRR on invested capital of over 20% per annum.

Among the fund's holdings is Aquarion Water Group, an international provider of advanced water systems, solutions and technologies. Through its business locations in Germany, Italy and the UK, the company follows a buy-and-build strategy as it constantly expands its own portfolio of businesses, for example through the acquisition of MFT GmbH in 2015, a German company specialising in membrane filtration technology.

The fund's second portfolio company, The Mobility House, is one of the leading electric mobility service providers in Europe which has rapidly expanded from its original business of recharging stations and installation services to broader energy solutions. The company has established cooperation arrangements with various car manufacturers and energy providers, such as Daimler and GETEC, to build recharging station networks and to make intelligent use of electric vehicle batteries for energy storage, allowing an electric vehicle to earn money selling a portion of its battery storage capacity to the grid. In the view of Wermuth Asset Management, these “technologies of the future” will become ever more important as the global energy revolution proceeds.

The third company, Primekss, based in Latvia, has developed into one of the leading Northern European builders of industrial concrete floors. Its technology enables it to construct joint-free, crack-free concrete floors of any size 30% quicker than traditional methods using up to 40% less concrete than conventional suppliers, thereby reducing the floor's CO<sub>2</sub>-footprint by 160 kg per cubic meter. Primekss is working to expand its business into new markets in infrastructure and building construction, as well as to grow internationally. Globally cement production makes up a significant portion of global emissions and we are building every month as many new square meters as New York City buildings have. Bringing such growth stage companies to the global market is thus key to reducing CO<sub>2</sub> emissions.

Finally, OTI Greentech specialises in sustainable cleaning, recovery and waste treatment solutions, primarily for the oil and gas industry, with an established base of international customers including not only leading producers but also ship operators. The company, with headquarters in Switzerland, has three business segments: Maritime Solutions, Energy Solutions and Industrial Solutions. Its products are both cheaper and more environmentally friendly and “just” need to be introduced globally.

## Conclusion

For professional or private investors, to divest or not to divest should not be a question of if, but of how and when. The carbon bubble will definitely burst. We should do all we can to mitigate the effects of climate change. We must move from “uncontrolled capitalism” and attempts at “capitalism controlled by a social market economy” to “civil capitalism”. In this “new world order” the billions of people who are the ultimate owners of the capital managed by pension funds, insurance companies and banks must take “ownership” of their investments, supported by modern technology.

It resembles the process by which people around the globe have taken ownership of their governments and their destinies through democratic elections rather than being enslaved or simply victims of their masters. The majority of people, if asked, would not only expect healthy financial returns from their assets but also an allocation into projects and securities that do not destroy the basis for life on earth.

It is the job of the impact investment and the divest-invest movement to help that “civil capitalism” to emerge. It is up to every person to stand up and make sure that they are fully aware of where their money goes and what its impact is, positive or negative. Everybody needs to make sure that his or her view about the impact they want to achieve is reflected in the portfolios they own, including money on their bank accounts. They must control the managers of these funds, just as they expect governments to act within the set of rules and in line with the will of the people.

There are many strong lobbies interested in continuing to extract profits at the expense of the planet and society in general. People must stand up to them in a professional and successful fashion, using the tools and the language of the financial sector. They must demand more attractive risk-return models than what they are getting today, or rather insist on “risk, return and impact” as the new normal, demanding transparency on the impact of their investments. On the other hand, this will and has already led to people joining the divestment movement. Self-interest, even greed is a very important and useful driver for humans—much more powerful than the “we-should-do-good movement”. This fact cannot be ignored even if the origins of divestment have ethical roots.

For the original divest movement against Apartheid to be successful, investors had to divest from 40% of businesses in the S&P500—they were doing business with and in South Africa. For the divest-invest movement to be successful, it has set

as a first target the “Carbon 200”, the 200 listed companies with the largest fossil fuel reserves: they make up just 7% of the S&P500 and are thus relatively easy to divest. Of course, a careful investor would note that there are many other companies which are likely to lose the basis of their business model. We are living through the end of the fossil fuel age and are moving into a “new green industrial revolution”, driven by market forces.

It was in Germany that the global energy revolution originally began, triggered by its laws, dating to the early 1990s. Renewable energy producers were guaranteed unrestricted access to the power grid as well as guaranteed prices for their electricity output. Germany can also continue to be a leader in the global revolution in green industries. The possibility of a second “green economic miracle”, analogous to Germany’s “economic miracle” of the 1950s and 1960s, with lower energy and transportation costs, new sources of economic growth, lower taxes and secure jobs is there. The only thing that is needed is a level playing field for renewable energy and electric mobility, particularly the legal basis for electric cars to feed power into the grid. Germany may, however, also end up like Kodak which invented the digital camera, rejected it and went bankrupt. If Germany now falls behind on the green industrial revolution it may be faced with one million unemployed with nowhere to go from the combustion engine sector alone.

Last but not least, global capital flows need to be redirected—and this must be done quickly, as time is of the essence. There needs to be an immediate and far-reaching change in thinking by oil, gas and coal producers. They need to take responsibility, adjusting their business strategies to the changing political environment and economic realities. This means, in hard terms, that some 80% of the world’s proven reserves of coal, gas and oil which are now being carried on company balance sheets will never be economically used and have to be written off. Proceeds from current fossil fuel production should no longer be invested into senseless new projects, with production costs of more 5 € per barrel, but rather be distributed to shareholders or directed into opportunities for renewable energy and resource efficiency.

# Investments for Development in Switzerland: A Sub-type of Impact Investing with Strong Growth Dynamics



Julia Meyer and Kelly Hess

## Introduction

Historically, Switzerland has a strong track-record in fostering development in less privileged countries, be it through public-sector activities, NGO work or—more recently—through financial service providers channelling private funds into developing countries. Switzerland has become an important hub of specialised investment teams, where extensive know-how has been built up on investing in less developed markets to service basic needs (i.e. access to financial services, energy infrastructure or education) while at the same time seeking market returns.

The role of private companies in addressing global pressing issues was especially emphasised in 2015 at four important international conferences,<sup>1</sup> making it imperative to analyse what investment approaches can be best used to foster an inclusive economy and protect natural resources. With its strong background in supporting

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The results of this survey were also used by the authors for an article published in the book “Sustainable Financial Innovations” (Meyer and Hess 2018).

<sup>1</sup>At the conference in Sendai (March, 2015) the first framework for disaster risk reduction was adopted, in Addis Abeba (July, 2015) the international community finalised a framework on “Financing for Development”, New York saw the adoption of the ambitious Sustainable Development Goals and the Agenda 2030 (September, 2015) and lastly, in Paris the decision to limit Climate Change to 1.5°–2° was finally agreed on by all nations (December 2015).

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development, we take Switzerland as an example to better understand the mechanisms currently used in this field in the private sector.

Given the growing need for investments to finance sustainable development, the role of the financial sector has gained public attention, both on an international and national level—particularly via the advocacy of projects such as the UNEP Inquiry.<sup>2</sup> At the same time, financial service providers increasingly recognise the opportunities resulting from such investments.

The financial sector has the fundamental role to develop tools and instruments that build a bridge between the real economy, looking for affordable and stable funding, and investors, seeking long-term investments and attractive returns. As many of the required investments, i.e. in infrastructure or education, are at the intersection of public service and private business, the public sector also plays a crucial role in making such endeavours attractive for private investors on a risk/return level. While in the long term it is prices—and with that public policy—that are key, there are already mechanisms in the form of technical assistance, de-risking or co-investing at hand for the public sector to create a fertile ground for private investments and contribute to an efficient cycle for more sustainable development.

This chapter is meant to give an overview of how Swiss financial actors are tackling issues around investments for development. The information presented was collected through a Swiss market survey<sup>3,4,5</sup> of investments for development and includes unique data on the size, dynamics and characteristics of sustainable investments managed by specialised asset managers, banks or institutional investors. Also included in this chapter are four case studies, which illustrate the diverse products, actors, partnerships and benefits in the field.

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<sup>2</sup>The UNEP Inquiry into the Design of a sustainable Financial System, established in 2014 by the United Nations Environmental Programme, looks into how the financial system can contribute to a green and sustainable economy.

<sup>3</sup>The survey was outlined by the SSF workgroup “Investments for Development”, and refined by Kelly Hess (SSF) and three workgroup: Frédéric Berney (BlueOrchard), Julia Meyer (University of Zurich’s Center for Microfinance) and Marina Parashkevova (Symbiotics). Data collection was organized by Symbiotics. Survey guidelines were partially based on the CGAP MIV guidelines and can be found at: [http://www.sustainablefinance.ch/upload/cms/user/20151019\\_SSF\\_Inv\\_for\\_Dev\\_Survey\\_Guidelines.pdf](http://www.sustainablefinance.ch/upload/cms/user/20151019_SSF_Inv_for_Dev_Survey_Guidelines.pdf)

<sup>4</sup>The full data and methodology can be found in the Market Study at: [http://www.sustainablefinance.ch/en/swiss-investments-for-a-better-world\\_content---1--3043--1962.html](http://www.sustainablefinance.ch/en/swiss-investments-for-a-better-world_content---1--3043--1962.html)

<sup>5</sup>The results of this work are also currently under review for publication within a special issue of the Journal of Sustainable Finance and Investment.



## Investments for Development

### Definition

The idea behind the analysis of this specific market segment was developed within a workgroup established by Swiss Sustainable Finance (SSF)<sup>6</sup> in 2015. The workgroup facilitated the exchange and collaboration between experts from different types of investment vehicles, academia and the public sector. Aiming to gain a better overview of this fast-growing segment and the different tools and instruments available, the definition developed and used for “investments for development” highlights three necessary elements: intention, target region and return.

Investments for development must:

- Demonstrate a clear intention to improve the social, environmental and/or economic situation within the investment region;
- Target countries in developing or so-called low- and middle-income frontier countries<sup>7</sup>; and
- Target a performance in line with market return.

This definition is more focused than the concept of impact investing (e.g. Hebb 2013), adopted by institutions such as the Global Impact Investing Network (GIIN) or Eurosif. Figure 1 illustrates the definition of investments for development in comparison with other forms of impact investments.

		REGION	
		Industrialised	Developing
FINANCIAL RETURN	Market	Products focused on industrialised economies that generate competitive returns	<b>Investments for Development</b> Products focused on developing economies that generate competitive returns
	Below Market	Products focused on industrialised economies that require a below market return	Products focused on developing economies that require a below market return

**Fig. 1** Investments for development as a sub-category of impact investing—Investments with a clear intention to improve social/environmental/economic situation

<sup>6</sup>SSF is an association founded in 2014 with the aim to strengthen the position of Switzerland in the global marketplace for sustainable finance by informing, educating and catalysing growth. SSF has representation in Zurich, Geneva and Lugano, and unites over 90 members and network partners from financial service providers, investors, universities and business schools, public sector entities and other interested organisations. More information can be found at [www.sustainablefinance.ch](http://www.sustainablefinance.ch)

<sup>7</sup>The classification published on the website of the World Bank as of 10.1. 2016 is used to distinguish low-income, (lower and upper) middle-income and high-income countries.

Whilst no specific market return is defined, this choice excludes venture philanthropy and similar investments that focus on impact while sacrificing returns. Similarly, all investments targeting developed countries are not considered in this new investment category.

The investors involved in this segment include most investor groups, such as institutional asset owners, retail investors, public entities, family offices and high net worth individuals (HNWI). Investments are made directly into institutions in the respective industries, or indirectly through financial intermediaries using standard instruments such as funds or mandates. They may come purely from the private sector, from public entities only or can involve public-private partnerships (PPPs), and are typically based on asset classes such as private debt, private equity and/or real assets.

The value proposition of such investments clearly resides in the fact that there is a dual outcome. Firstly, a market financial return is paid back to the investors, whilst secondly, the investments offer a benefit in the form of a tangible contribution to development, often measured by specific key performance indicators (KPIs). The investment cycle which creates a return and repays capital at the end of the investment period allows continuing subsequent investments and therewith continual impact.

#### **Case Study 1: Impact Investing Focus SME (IIF SME)**

The “Impact Investing Focus SME” (IIF SME) is UBS’ first impact fund dedicated to investing in small and medium-sized enterprises (SMEs) in emerging and frontier markets. Its core mandate consists of providing growth capital to SMEs with the aim of fostering economic growth, increasing living standards, and reducing poverty. This mission is supplemented by IIF SME’s flexibility to invest in sectors that provide access to the core impact areas of access to finance, agriculture, education, healthcare, basic infrastructure, and clean technology and clean energy. Since 2013, the fund has made strong progress in deploying its mandate by committing to nine private equity funds. In turn these have invested over USD622 million into 55 SMEs across 22 countries as per year-end 2015 (Algeria, Angola, Cape Verde, China, Costa Rica, Egypt, El Salvador, Ghana, Guatemala, Honduras, India, Kenya, Mexico, Morocco, Mozambique, Nigeria, Philippines, Senegal, South Africa, Thailand, Tunisia, and Vietnam). Some of these companies focus on employment creation within local industries, while others additionally expand much-needed basic healthcare and education services. The fund provides socially-minded investors the unique opportunity of investing in these high impact sectors, while at the same time achieving sound financial returns.

The investment portfolio of “IIF SME” is managed by Obviam, an independent investment advisor specialised in long-term investments in emerging and frontier markets, according to best practice environmental, social and

(continued)

governance (ESG) standards. The manager can offer private investors opportunities for parallel co-investment as they also advise public development finance.

The investment manager collects sector-specific data from all of the invested funds' portfolio companies. As of year-end 2015, the fund's underlying investee companies were active in the healthcare, education, clean technology and clean energy, agriculture and sustainable forestry, and basic infrastructure sectors. KPIs are identified and collected for these five sectors to measure the impact of the fund. The table below summarises the results for 2015.

IIF SME sector-specific impact results 2015
<i>Healthcare</i>
322 healthcare facilities served
3,301,598 patients reached
11,710 caregivers employed
<i>Education</i>
2123 educational facilities served
3922 teachers employed
5,341,255 students trained
<i>Clean technology and clean energy</i>
139 MW clean energy installed
2100 MWh clean energy produced
<i>Agriculture and sustainable forestry</i>
7665 tonnes of food produced and/or processed
458 farmers reached
<i>Basic infrastructure</i>
60 MWh of energy delivered to offtakers (in addition to clean energy produced)

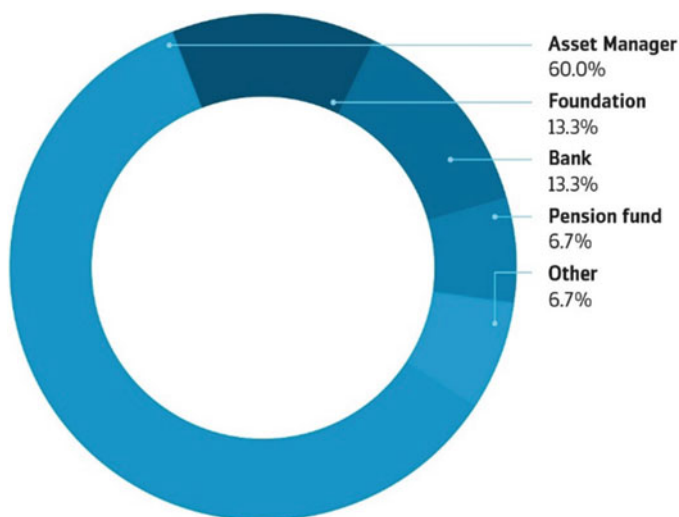
Source: Obviam, September 2016

## Swiss Market Characteristics

### *Switzerland's Leading Role and Specialized Players*

The survey respondents (Fig. 2) report a total of USD9.85 billion (n = 14) assets under management (AuM) for investments for development as of September 2015,<sup>8</sup> with the size of the investments differing largely, ranging from USD6.5 million to

<sup>8</sup>Figures are collected for December 2014, except for the total AuM, where respondents also indicate the level for September 2015.



**Fig. 2** Investments for development survey respondents by type of organisation (n = 15)

**Table 1** Total assets under management by survey respondents (n = 14)

Category	Volume (billion USD)	Share of investments for development (%)
<i>Assets managed directly by respondents</i>		
Managed funds	4.00	46.1
Managed mandates and accounts	1.14	13.1
Assets invested directly	0.40	4.6
<b>Total direct investments</b>	<b>5.54</b>	<b>63.8</b>
<i>Assets invested through intermediaries</i>		
Externally managed funds	2.87	33.0
Externally managed mandates and accounts	0	0
<b>Total indirect investments</b>	<b>2.87</b>	<b>33.0</b>
<b>Unspecified</b>	<b>0.27</b>	<b>3.2</b>
<b>Total investments for development</b>	<b>8.68</b>	<b>100</b>
<b>Additional assets under advice</b>	<b>2.33</b>	<b>n/a</b>

USD3.1 billion (Table 1).<sup>9</sup> USD8.68 billion AuM were reported at the end of December 2014. This indicates a considerable growth rate of 13.5% over the first 9 months of 2015, which would imply a compound annual growth rate of 18.4% for 2015. Of the total reported assets as of 2014 (USD8.68 billion), USD5.54 billion was invested directly by the respondents into products, USD2.87 billion indirectly

<sup>9</sup>All currencies are converted to USD using the exchange rate for December 2014 and September 2015 respectively, source: [www.oanda.com](http://www.oanda.com)

through intermediaries and USD0.27 billion was not specified. Additionally, the respective institutions advise<sup>10</sup> on USD2.33 billion assets (Table 1).<sup>11</sup>

Among 13 respondents, the majority (9 respondents) indicate between 90% and 100% of total firm-wide assets are devoted to investments for development. Three investors have below 20% of their total assets in investments for development and one between 20% and 40%.<sup>12</sup> This data shows the important presence of specialization within this industry in Switzerland and its potential competitive advantage in the global market.

On a global level, J.P. Morgan (2015) reports USD60 billion AuM, including all types of impact investments as well as investments by development-finance institutions. When narrowing down the analysis to investments for development, a total of USD30 billion is currently expected to flow into the sector on a global level.<sup>13</sup> This indicates that with USD8.68 billion, almost one third of the global market for investments for development is managed through institutions in Switzerland.

This is further supported by the 2015 FNG market study, which reports USD8.82 billion AuM in impact investments for the Swiss market by the end of 2014. Bearing in mind that investments for development are defined more narrowly for this study than impact investments, the estimated Swiss market size (USD8.68 billion) compared to the FNG results, indicates that this survey manages to cover a large part of the Swiss investments for development market.

### **Case Study 2: Regional Education Finance Fund for Africa (REFFA)**

BlueOrchard Finance's Regional Education Fund for Africa (REFFA or "the Fund") is the first education fund of its kind targeting the African continent and having an objective to increase equal access to secondary, vocational and higher education, as well as to enhance education quality. Due to the fact that the quality of public school education is often undermined by teacher strikes or absenteeism, successful private education providers are key to enabling access to quality education for a broader number of students, including low income families. In providing financing to partner institutions, the Fund intends to foster the ability of final beneficiaries to profit from:

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<sup>10</sup>Assets under advice are not included under total assets under management (AuM) for this study.

<sup>11</sup>Indirectly invested assets imply a risk of double-counting. However, due to the structure of the respondents, with less than a quarter being asset owners, it is unlikely that a large share of third-party managed assets are also represented within the direct investments of the banks and asset managers. Furthermore, in case indirectly managed assets flow through non-Swiss intermediaries, double-counting is not an issue. It is therefore fair to assume that double-counting is negligible and total investments for development in 2014 amount to USD8.68 billion in Switzerland.

<sup>12</sup>Two respondents did not provide this information.

<sup>13</sup>This number is based on estimations by responsAbility Investments and GIIN Impact Base.

- Loans to education providers to satisfy working capital and fixed assets funding needs;
- Education finance products for learners and their families with Micro, Small and Medium Enterprises (MSMEs) as well as salary income;
- Education finance products for learners with a focus on students.

The Fund has been structured as a public-private partnership driven by the German Development Bank (KfW) and the German Ministry for Economic Cooperation and Development (BMZ). The objective is to have bilateral donors in the junior tranche, development financial institutions in the mezzanine tranche, and private investors in the senior tranche and notes. Senior tranches benefit from the credit enhancement provided by the subordinated tranches.

In parallel to the Fund investments, a Technical Assistance Facility (TA) has been established to procure and finance specific and tailored assistance to ensure that partner institutions are supported in the development of their education finance portfolios and activities. As of today, the TA amounts to around USD1 million.

The impact measurement of the goals and objectives of the REFFA Fund are carefully monitored. Education portfolio indicators are collected on a quarterly basis from partner institutions. These indicators measure the outreach of the Fund in terms of borrowers financed and types of borrowers (schools, students from families with salary income, students from families with business income and students directly). Other indicators include number of students enrolled in schools supported via REFFA funding and types of investments made by the schools financed (e.g. working capital, fixed assets, overdraft financing).

Source: BlueOrchard Finance SA, September 2016

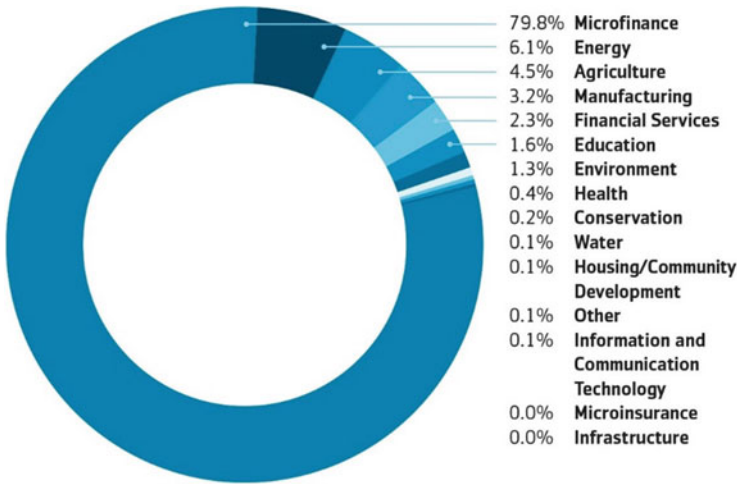
## ***Asset Allocation***

### **Sector and Industry**

The majority of AuM of the respondents (80%) flow into the financial services sector, with a focus on microfinance (Fig. 3).<sup>14</sup> Ten of the fifteen respondents report activities in microfinance, of which five are currently specialised in the field, having over 97% of their investments in microfinance. The following industry sectors are

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<sup>14</sup>Microfinance was not defined in detail for the purpose of the survey. The distinction between financial services to micro-customers as opposed to SMEs (small and medium enterprises) lacks clarity and probably both types of services are captured in this category.

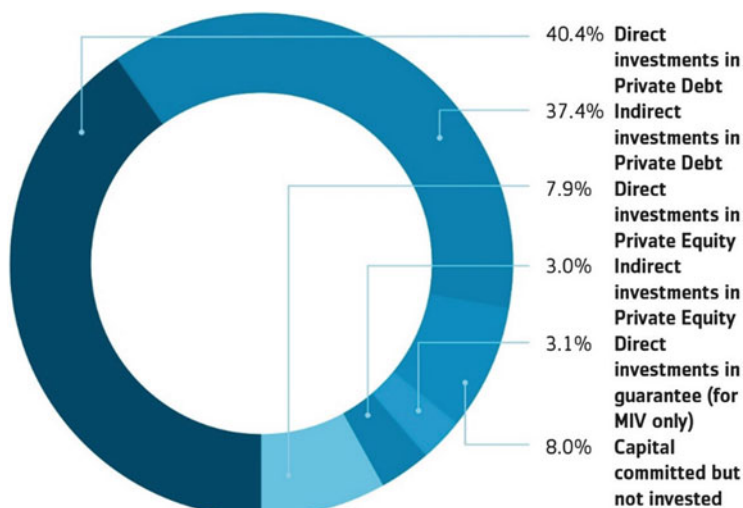


**Fig. 3** Sector and industry exposures (% of assets under management) of survey respondents (n = 14)

also important in Switzerland: energy (6.1%) with seven respondents, agriculture and food (4.5%) with six respondents, and manufacturing (3.2%) with three respondents being invested. Six respondents are engaged in investments in education, but with rather small exposures leading to a share of only 1.6% of all investments for development.

In comparison, the study by Eurosif (2014) finds that 55% of impact investments in Europe are made in microfinance, while the global J.P. Morgan (2015) report finds housing to be the largest sector with 27%, followed by microfinance with 16% of all global impact investments reported. One reason for the lower prevalence of microfinance internationally, compared to Swiss data, is that the international studies also include investments in the developed/industrialised countries where the need for microfinance is lower. Similarly, housing investments likely represent a higher percentage of total investments in the international studies, as low-income housing projects are common forms of impact investments in developed/industrialised countries.

The results confirm that microfinance is an important theme for Swiss institutions focusing on investments for development. This is consistent with the latest Swiss Microfinance Investments Report, describing solely investments through Swiss microfinance investment vehicles (MIVs), and finding that Switzerland manages 38% of global microfinance investments (Symbiotics and CMF 2015). Unlike the Swiss Microfinance Investments Report, survey respondents of the current analysis also included institutions not specialised in microfinance (i.e. institutional investors, general asset managers).



**Fig. 4** Structure of the managed portfolio of survey respondents: Share of aggregated assets under management (n = 10)

### Structure of Portfolio

The majority of assets are invested through direct investments in private debt (Fig. 4), followed by indirect investments in private debt (together totalling 77.8% of all AuM). Comparing the findings of this survey with the global impact investing market, according to the J. P. Morgan survey (2015), two aspects can be highlighted: Firstly, the share of private debt of 40% found for the global impact investment market is significantly lower than the above-mentioned 77.8% for the Swiss market. Secondly, the global impact investing market has a stronger focus on private equity, with a share of 33% of all AuM. By contrast, the Swiss market is characterised by a much smaller fraction of private equity investments (7.9% direct and 3.0% indirect).<sup>15</sup>

#### Case Study 3: responsAbility Fair Agriculture Fund

The Fair Agriculture Fund, managed by responsAbility Investments AG, targets private and institutional investors, and aims to provide financing to the diversity of actors along the agricultural value chain such as suppliers,

(continued)

<sup>15</sup>This result is driven by the above-mentioned fact that Switzerland is one of the pioneer markets for microfinance. Its leading position in this industry clearly affects the distribution of funds between private debt and private equity, considering that microfinance largely involves investments in private debt.



producers, farmer cooperatives and retailers in developing countries. This investment strategy is based on the rationale that 70% of the world's low-income population live in rural areas with agriculture as a main source of income and employment. Consequently, strong developmental impact can be achieved by financing organisations that provide this population with access to higher-paying markets, improved inputs, services and added-value capabilities. In order to select its clients, the fund has developed strong internal tools and processes to maximize the impact of its investments. The eligibility of potential counterparties is reviewed during the investment process, using a list of obligatory eligibility criteria: creation of economic opportunities for low-income population in rural areas, sustainable business model, commitment to environmentally and socially responsible production, owner and management integrity, and a real financing need. Furthermore, the counterparty must have operational systems in place to ensure compliance with responsAbility's environmental and social guidelines.

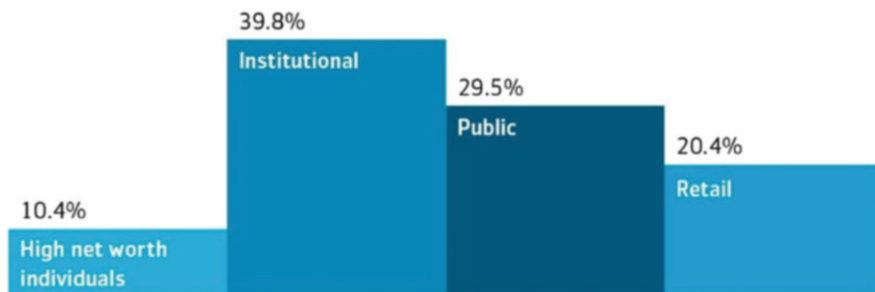
In order to measure the effects of the invested capital, the following KPIs are currently measured on a monthly basis: number of smallholders farmer suppliers (December 2015: 275,158), number of permanent employees (December 2015: 10,463), of which women (December 2015: 2167), number of countries (December 2015: 47), number of commodities (December 2015: 51), number of hectares under certified cultivation (December 2015: 201,474)\* Further development related indicators across all agriculture investments are measured and published in the annual company publication "Perspectives."

\*This data is purely indicative and is not a guarantee of future results, and there can be no guarantee that the fund will achieve the same or similar results in the future.

Source: responsAbility Investments AG, September 2016

### *Characteristics of the Investments*

The majority of the invested volumes originate from institutional investors (39.8%) followed by public investors (29.5%) (Fig. 5). Retail investors represent a considerable average share across the respondents, with 20.4%. This result is noteworthy, as retail investors typically invest smaller amounts than institutional or public investors. Consequently, the number of retail investors involved must be large. This is explained by the inclusion of two asset manager respondents in the survey, which have issued products particularly attractive for retail investors (i.e. easy to invest, liquid etc.). Retail investors are not targeted by all the institutions participating: three survey respondents largely focus on public investors, two target solely high net worth individuals (HNWIs), and one only concentrates on private institutional investors. Generally speaking, all survey respondents, except three, have a narrow focus, managing assets from one or two types of investors.



**Fig. 5** Distribution of investor types among survey respondents according to the value of investments (n = 12)

The results demonstrating the importance of institutional and public investors in this market, with a combined share of approximately 70%, are comparable to the findings of the study on overall Swiss sustainable investments (63%) (FNG 2015). The global study on impact investments finds private investors (HNWIs, family offices, retail investors) to have a smaller stake in the market, with 21% (J.P. Morgan 2015). These findings could indicate that Swiss private investors are more interested in the sector of investments for development, or that the market is easier to access for them than in other regions.

Questions regarding the portfolio quality, in particular the level of provisioning and write-offs,<sup>16</sup> were answered by 8 of the 14 respondents. Those eight institutions have used provisioning in 2014 with an average of 3.82%, with a minimum of 0% and maximum levels over 25%. With regards to write-offs during the period, the average was 1.9%, again with large differences ranging between 0% and over 15%.

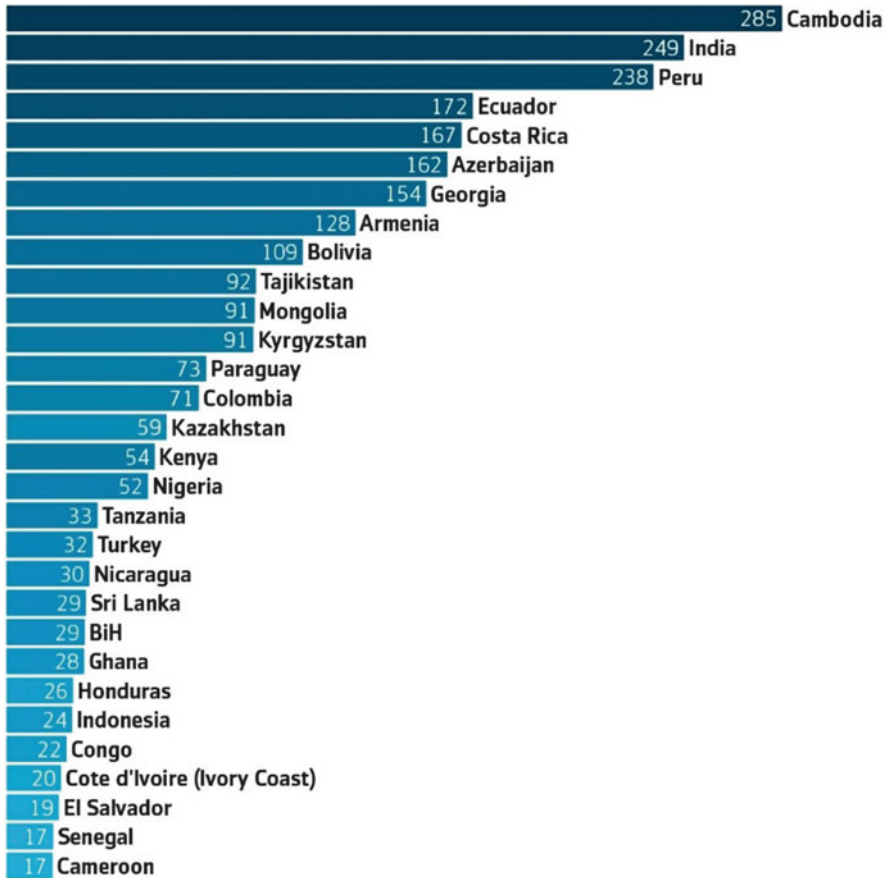
## Regional Allocation

Among the 15 survey respondents, seven provide information on the regional allocation of their assets (USD2.9 billion<sup>17</sup>) on a country level. In total, the reported investments for development are very well diversified regionally and flow into 96 different countries.

Nevertheless, the assets are largely concentrated in the top 10 countries (60% of all assets) respectively the top 20 countries (80% of all assets). Figure 6 shows the 30 largest country exposures by volume in USD million. Cambodia receives the largest share of assets invested by the seven institutions (USD285 million) followed

<sup>16</sup>Provisioning is the accounting process used when an expense is recognised to reflect critical investments that are expected to (partially) fail. As soon as the failure of an investment is certain, a write-off occurs, where an investment (earning asset) is removed from the books and its book value is written down to zero (Fitch 2000).

<sup>17</sup>Some of the seven respondents did not provide the regional allocation for their whole portfolio in investments for development.

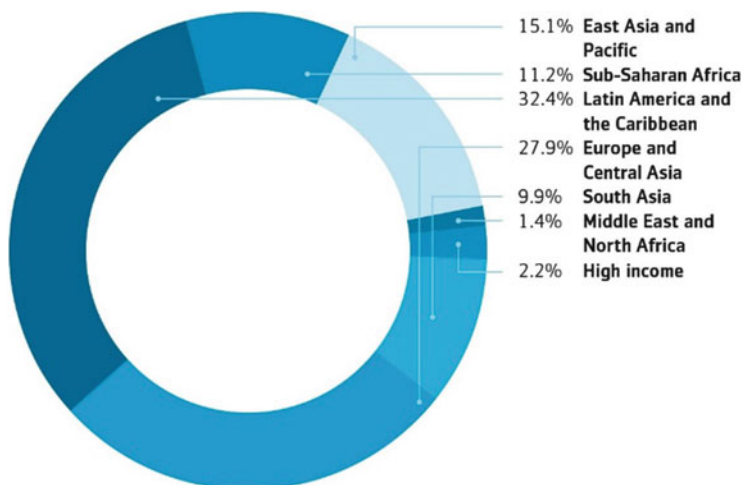


**Fig. 6** Largest 30 country exposures of survey respondents, USD million (n = 7)

by India (USD250 million) and Peru (USD238 million). The large share of microfinance in the data used for this section probably explains the focus on those three countries as they all receive top scores with regards to the regulatory environment for financial inclusion (Economist Intelligence Unit 2015).

All 30 top countries targeted are categorised as low-income, lower middle-income or upper middle-income countries according to the classification listed on the website of the World Bank (as of 10.1.2016). Looking at the volume invested in those countries, the majority of the assets (51.2%) flow into lower middle-income countries, 35.5% into upper middle-income countries and also a share of 13.2% into low-income countries.

Regarding the regional distribution of AuM (in terms of investment volumes), the majority flows into the regions Latin America and the Caribbean (32.4%), Europe and Central Asia (27.9%) followed by East Asia and the Pacific (15.1%) (Fig. 7). According to the global study on impact investments, the majority of global assets flowing into developing countries target Sub-Saharan Africa, followed by Latin



**Fig. 7** Regional distribution of survey respondents' assets under management (%) (n = 7)

America and the Caribbean and Eastern Europe, Russia and Central Asia (J.P. Morgan 2015). 2.2% of reported investments flow into high-income countries, which are not applicable for this report. Nevertheless, the volume flowing into high-income countries is small and only 14 such countries were targeted, with the largest exposure in Hong Kong, followed by Russia, Poland and Switzerland with an average exposure of USD4.5 million. Furthermore, all the respondents active in high-income regions have very small exposures in those countries.<sup>18</sup>

## Social and Environmental Indicators

According to the definition coined in this report, investments for development should involve a clear intention to improve the social, environmental and/or economic situation within the investment region. Similar to other fields of sustainable investments, it is very difficult to measure and capture this intention and even more so, the resulting impact. In fact, there are international organisations (i.e. Global Social Impact Investment Steering Group, OECD<sup>19</sup> social impact investment project) currently dedicated to developing common definitions and standards and facilitating data collection. In the microfinance sector approaches to evaluate social performance at the level of the investment fund are undertaken (e.g. SPI 4 ALINUS<sup>20</sup>), but there is currently no widely-accepted consensus on a set of metrics or standards to be applied across different fields of impact investments.

<sup>18</sup>Examples of exposures in high-income countries would also include investments in larger institutions with activities in different countries being headquartered in a high-income country.

<sup>19</sup>[http://www.keepeek.com/Digital-Asset-Management/oecd/finance-and-investment/social-impact-investment\\_9789264233430-en#page14](http://www.keepeek.com/Digital-Asset-Management/oecd/finance-and-investment/social-impact-investment_9789264233430-en#page14)

<sup>20</sup><http://www.cerise-spi4.org/alinus/>

Therefore, the questions on non-financial performance in the survey were kept rather general, especially because they should be applicable for different types of institutions and investment sectors.

Results show that all but one respondent (not stating an answer) have a tool or methodology in place to assess social and/or environmental performance. Seventy-one percent of those also have a specific team responsible for social performance measurement. The majority of those respondents measure social performance using proprietary metrics (40%). Others use metrics in line with IRIS<sup>21</sup> (20%) or other methodologies (33%). On a global level, IRIS indicators seem to have even more importance, with 60% of respondents being involved in impact investments stating to have their metrics aligned with IRIS (J.P. Morgan 2015).

Similarly, environmental issues seem to be closely monitored by survey respondents, with 78.6% of the respondents (n = 14), having defined an environmental exclusion list that they comply with, and almost all respondents (92.3% or 12 of the 13 institutions replying to this question) stating that they review environmental issues of investee companies. The majority of the respondents (69.2%) also actively inform their investors about ESG issues (n = 9).

The survey captures the types of social performance indicators that are measured at the product levels for 15 products.<sup>22</sup> Typically, respondents analyse two to three indicators to assess the social impact of their products. Most frequently, the indicators used focus either on the share of female clients or employees, or the number of beneficiaries served, by counting either end-clients (borrowers, jobs, beneficiaries) or institutions (facilities) served.

The results also include the absolute value of these indicators, but this information is not examined in detail here due to lack of comparability or aggregation across different products. It is very difficult to compare social performance measurement across investment vehicles in one sector (Krauss and Meyer 2015) and so it is even more challenging and would require a large data base to compare social performance across different sectors and investment product types. Nevertheless, it is remarkable that for almost half of the products reported (45.5%), specific social performance metrics are measured at the product level. Three of the metrics mentioned are clearly specified for the microfinance sector only, one for education and one for health, and the remaining six indicators would be applicable for different sectors (Table 2).

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<sup>21</sup>IRIS metrics are managed by the Global Impact Investing Network (GIIN) with the intent to measure social, environmental and financial performance (<https://iris.thegiin.org/metrics>).

<sup>22</sup>More information at the product level is available in the report published by Swiss Sustainable Finance and CMF (2016) and the article submitted to the Journal of Sustainable Finance and Investment.

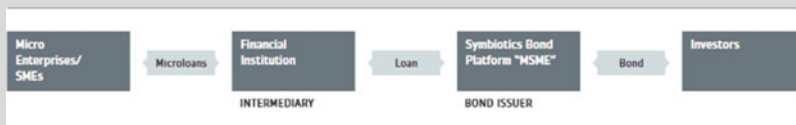
**Table 2** Social indicators for different sectors

Sector	Indicators
Microfinance	Female active borrowers as percentage of total active borrowers Number of active borrowers financed Median loan size of end-borrower
Education	Educational facilities served
Health	Healthcare facilities served
Different sectors	Total number of female employees Total number of employees Private capital mobilised Number of end-beneficiaries pro rata Jobs supported Taxes paid

**Case Study 4: Symbiotics’ Microfinance Bond Platform**

MSME Bonds contribute to sustainable development by providing access to capital in underserved markets to the benefit of micro-, small and medium enterprises (MSMEs), and low- and middle-income households. By investing in the real economy, the investment aims to promote the social function of finance and seeks long-term value creation. The investment universe for this product is composed of the 100–200 leading microfinance institutions worldwide. With growth rates of about 20–40% per year for the past decade, these institutions require substantial financing to develop their activities. They have progressively diversified their funding structure, evolving from mainly international funding to local savings—some also developed local capital markets. MSME Bonds SA provides these institutions with access to international capital markets. This is done at low costs and in an efficient manner, as each bond is cleared and settled through Euroclear/Clearstream, the most common clearing system for European bonds.

This private initiative effectively expanded access to microfinance beyond fund investments to include direct debt exposure, which previously was not part of the traditional microfinance offer (see figure). The bond issue program is intended for volumes of USD10 million and above and is not only suitable for microfinance asset managers and impact investors, but also emerging or traditional fixed income asset managers looking for diversification. The bonds can be listed at the Luxembourg Stock Exchange, the largest bond listing platform in Europe.



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Symbiotics uses an internal social responsibility rating tool to evaluate the contribution of financial intermediaries to the sustainable socio-economic development of their end-clients. This consists of >100 indicators that cover the following seven dimensions: social governance, labour climate, financial inclusion, client protection, product quality, community engagement and environmental policy. Afterwards a weighting system is applied in order to rate the overall social performance of the microfinance institution. Each financial intermediary must prove an appropriate track record, sound governance and a sustainable approach to growth and society.

Source: Symbiotics SA, September 2016

## ***Performance and Projections***

Financial performance data was collected at the product level in order to ensure comparability of data. In total, information on 33 products was supplied, among them 29 funds, three direct investments and one managed account. Target returns differ largely across the 22 different products providing information on this question, ranging between 3% and 7%, with an average of 4.5% per annum and one private equity product targeting a return of 20%.

The survey respondents involved in investments for development are optimistic overall about the future growth of this market segment. Out of 13 responses received, a majority of 53.8% expect that the performance of this market will slightly or clearly improve above the current level, while 38.5% expect a stable development over the next 3 years. Furthermore, all expect their own AuM to grow considerably over the next 3 years. Total assets are expected to grow to USD14.1 billion in 3 years, equivalent to a compound annual growth rate of 15.9% over the next 3 years. This seems to be a conservative estimate, as the growth rate measured last year was higher (18.4%).

## **Conclusions and Outlook**

This first analysis of the Swiss investments for development market gives a general overview of a diverse and growing market, focusing specifically on asset allocation, investment characteristics and performance of certain investments.

Overall the Swiss market for investments for development is worth around USD10 billion, with a compound annual growth rate of 18.4% for 2015. These results point to the following conclusions: firstly, the considerable growth, which has perpetuated since a few years and largely exceeded growth figures of other asset classes; and secondly, the important market position of Switzerland, holding about 30% of the global market of investments for development.

A very large portion (approx. 80%) currently flows into microfinance, as this sector is one of the most established sources for investments for development, and Swiss institutions have been pioneers in this field. With Switzerland managing about one third of all global microfinance assets (Symbiotics 2015), it is well positioned to

build on this experience and expand even further into investments for development. Compared with the global investments for development market, the Swiss market is less diversified regarding sector and asset class exposure, with high exposures to microfinance and private debt. There would be room for innovative Swiss players to re-orient towards other sectors and/or other asset classes—which again, could provide significant growth potential. An example of this growth potential is the increasing importance of syndicated loans, seen for instance in the recent landmark USD250 syndication loan to Sri Lanka's Lanka Orix Leasing group, where three Swiss players had an important role.<sup>23</sup>

The regional spread of investments over 96 different countries is a positive sign that these types of investments can be widely applied. There is a large concentration within countries with sound regulatory environments conducive to foreign investments. Thus, supportive local regulatory frameworks and stable economic and political environments are important factors for investors to channel their funds towards those countries. Based on this, it will be interesting to see the regional distribution of Swiss investments for development as foreign markets evolve over time.

Swiss investment products in this segment manage to attract a fair share of retail investors (more so than in other countries). Yet, against the backdrop of tightening financial regulation it has generally become more difficult to establish products that are authorised for public distribution. In order to further meet the apparent demand from retail investors for such investments, it is crucial not to build up more regulatory hurdles for public distribution, but instead to eliminate some of the existing ones.

The average reported target return of 4.5% per annum illustrates that investments for development can be an interesting add-on to an investment portfolio. In the current low interest environment investors are looking for new opportunities. An increasing appetite for investments for development is therefore a logical consequence, which is reflected in above-average growth rates.

Lastly, information on the product level, especially the non-financial information, was difficult to access. There is a lack of consensus regarding the environmental and social performance of products and adequate indicators. It will be imperative for products in this area to be transparent and have clear reporting to investors in order to track and communicate measurable outcomes. The success will strongly depend on the ability of the industry to provide evidence that its efforts lead to concrete benefits to local economies, contributing to sustainable development while providing returns to investors.

This current report covers 15 different Swiss actors, the majority being specialised asset managers in this area. In time, more players will enter the market and there will be further growth within larger financial organisations. A future study will therefore most likely cover more actors, both because of a growth in the number of players and due to an even higher response rate.

There is a wide gap between the variety of investments undertaken by the practitioners and the research and knowledge being gathered on a national and global level. This study contributes to further insights into this interesting emerging investment segment, aiming to raise awareness of the importance of this sector for

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<sup>23</sup>LOLC plc. 2016 (<http://www.lolc.com/news.php?id=225>).



the current Swiss financial market, as well as the notable growth potential and chances to innovate and create further investment opportunities.

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# Non-rated Impact Bonds on the Austrian Capital Market: The Example of the Don Bosco Ecuador Bond



Jasmin Güngör

## History of Don Bosco Non-rated Impact Bonds

The organisation *Jugend Eine Welt* has been active in the field of impact investing since 2006 as one of only a handful of organisations in Austria. In that time, it has experimented with a number of different forms of funding. In particular, it is in the issue of non-rated impact bonds that the organisation has done pioneering work. With the aid of several individuals from the financial and banking sector who supported *Jugend Eine Welt*'s efforts it was possible to achieve an impressive track record. The financial crisis of 2007, the most significant event in recent history, promoted awareness and acceptance of this type of investment on the market.

### *The Beginnings Before the 2007 Financial Crisis*

*Jugend Eine Welt* was founded in 1997 with the aim of supporting the projects run by the Salesians of Don Bosco and the Don Bosco Sisters all over the world. Reinhard Heiserer, one of the founder members and Director of *Jugend Eine Welt*, had previously worked for four and a half years as a development aid worker on a

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project for street children run by the Salesians of Don Bosco in Ecuador. There, the order is known first and foremost for its schools and social facilities. The current president, Rafael Correa, was also a volunteer for the Salesians of Don Bosco on the *Zumbahua* project in the Andes (Presidencia República del Ecuador 2016).

The order's founder and patron saint of the young, Giovanni Melchiorre Bosco (1815–1888), lived and worked in northern Italy, especially in the city of Turin, an up-and-coming industrial city that found itself faced with a growing problem in the form of street children as a side-effect of industrialisation. *Don Bosco* devoted himself to these children and adolescents, giving them an education and looking for potential employers. His activities initially met with disapproval on the part of the Turin authorities. But over the course of the years he succeeded in establishing links with many parts of society, including the business and political sectors. This broad base of supporters enabled him to conduct bigger projects such as construction of vocational training institutes and churches (Birklbauer 2015). In 1859 he founded the *Society of St. Francis de Sales*, an independent congregation, also known as the *Salesians of Don Bosco*, which today ranks among the three biggest Roman Catholic religious orders for men along with the *Jesuits* and the *Franciscans* and, with its approximately 15,000 members, currently ranks second (Ordensgemeinschaften Österreich 2016; Deutsche Provinz der Jesuiten 2016; Franziskaner Österreich und Südtirol 2016). As of the end of 2015, the order of the Salesians of Don Bosco was divided into 84 regional provinces and active in 133 countries. The order's head office, the Generalate, is in Rome (Salesians of Don Bosco 2016).

The first Salesians of Don Bosco began working in Ecuador as early as 1888 (Salesianos Ecuador 2016). The private university *Universidad Politécnica Salesiana* (UPS) was founded by the order in 1994 pursuant to the Ecuadorian act no. 63, since demand for tertiary education was very high. Buildings and facilities were already available for this university because the order already owned technical and academic schools thanks to its past activities. Article 1 of its statutes describes the UPS as an autonomous educational institution of higher education that has a Catholic background and is co-financed by the government of Ecuador. It has the form of a legal person under private law pursuing non-profit objectives. According to Article 2 of its statutes, the Province of the Salesians of Don Bosco in Ecuador is the patron of the UPS, and the Provincial (head and authorised signatory of the province) selects a rector from among the Salesians of Don Bosco in Ecuador and a management team for the University as well as the vice-rectors and general secretary (Article 69 of the statutes, *Universidad Politécnica Salesiana* 2015).

In the 2006/2007 academic year, the number of students at the UPS had already reached 13,130 and a first major phase of expansion was planned because the capacity of the existing buildings was no longer sufficient (Jugend Eine Welt 2009). Since its foundation in 1997, Jugend Eine Welt had been in contact with the Province of the Salesians of Don Bosco in Ecuador and had played an ever-increasing role in providing funds for its projects. In the context of the university, however, it was clear that a soft loan could have greater impact than a donation. Specifically, the objective was to establish an economically sustainable structure by means of financing so that the order's activities in the social sector, hitherto

conventional donation-aided projects and as such subject to a certain *donor-dependency*, could be sustained autonomously. At the same time, the UPS had already started supporting students with scholarships and access to loans and subsidised accommodation. When planning the timetable, the needs of students who worked during the day were taken into account, and a conscious decision was taken not to build new buildings in upmarket parts of the city, but in areas inhabited by low-income residents to facilitate their access to the university (Calle Ramírez et al. 2011).

As a private university, the UPS obtains income from tuition fees. Furthermore, it has direct connections with a well-known religious order, and this can give potential creditors additional security over and above the institution's economic viability. The difference in interest rates between Ecuador and Austria allowed the assumption that it would be possible to obtain a loan from an Austrian bank at a favourable rate of interest. In 2006, Jugend Eine Welt began negotiations with Investkredit Bank AG, which has since become part of Österreichische Volksbanken-AG. The chairman of the time, Dr. Wilfried Stadler, who is also one of the publishers of the weekly newspaper *Die Furche* which adopts a Catholic stance, was willing to listen. That same year a bank loan of over USD 5.2 million was granted. Regarding the basis of this cooperation, Dr. Stadler says:

In the group we had an older employee who had specialist knowledge in the field of international schools. (...) He was well-versed in this field and I knew Mr. Heiserer owing to my esteem for what Don Bosco does for young people, from public events that interested me and from conversations we'd had in connection with the weekly newspaper *Die Furche* (...) and we started talking about funding this school in Ecuador which is the subject of your bond. Following a fairly lengthy process of trying to convince the committees responsible for granting loans at the former bank group, ÖVAG-Investkredit, a positive decision was fortunately reached and a loan of over five million US dollars approved. By the way, this was also the first promise to grant a loan that the bank had made that was countersigned by the head of the order in Rome on behalf of the borrower. A highly unusual procedure, so to speak. Only a short time later, such a thing would no longer have been possible because one year later the financial crisis broke out. (...) From that point of view I'm very glad in retrospect that this initiative was a success, and all those involved behaved with absolute integrity which culminated in complete repayment of the loan. (...)

Investkredit Bank AG granted the loan on the basis of an efficiency audit of the UPS. The project was nevertheless an exceptional case since the bank's remit, as a specialised commercial bank, was to ensure the long-term funding of industry (Investkredit 2003). The loan to the UPS was the only one that Investkredit Bank AG ever granted outside Europe. Says Dr. Stadler:

In this case it wasn't a sponsorship project, but had passed through all the usual commercial banking procedures with the sole exception that the extra premium that should have been stipulated as a premium for risk on a project in South America owing to the country risk (...) was deliberately waived. So that was the only exceptional and sponsor-like aspect of the transaction. (...) Nowadays, any bank funding such a project with a loan would probably have to justify waiving the difference more explicitly than we were able to do at the time.

Dr. Stadler reports that the bank's decision-makers were convinced not just by the feasibility of the project, but also that they were making a useful contribution:

There was a conviction that this was a cause worth supporting outside the usual rules and constraints, that one could do something special. (...) So all those involved were simply convinced they were doing something useful, although no one did it without giving it careful thought.

Following the outbreak of the financial crisis, new regulations made it increasingly difficult for banks to become involved by means of impact investing the way Investkredit Bank AG had done. As a result, Jugend Eine Welt deemed it necessary to look for new forms of financing. At the same time, SMEs and start-ups were receiving fresh impetus because until the new Alternative Funding Act was passed in the autumn of 2015 alternative forms of financing and above all collecting capital from several individuals had been a legal grey area that had become the centre of public attention in 2012.

### ***The First Don Bosco Ecuador Bond 2009–2015***

When people in Austria do not give away capital they have received from various sources, but invest it in projects with an environmental or social impact, without interest or in anticipation of a return to cover the costs, they quickly come up against legal limitations. For this reason, it is necessary to examine closely at least two legal pitfalls in Austria in the field of impact investing: *deposit business for which a licence is required*, and *credit transactions for which a licence is required*.

Organisations that accept capital from several natural and legal persons come into conflict first and foremost with the Austrian Banking Act (BWG) which stipulates in § 1 Section 1 Item 1 that such transactions are deposit business for which a licence is required and may be carried out only by financial institutions authorised to conduct bank business. This restriction in the BWG came to the public's attention thanks to Heinrich Staudinger, an Austrian shoe manufacturer, who collected money from private individuals to finance his business. When the Austrian financial market supervisory body, FMA, threatened legal consequences in the Staudinger loan case, the industrialist went public, triggering widespread discussion of crowdfunding in Austria. The lawsuit was settled by converting the loan contracts to subordinated loan contracts, which, however, treated the creditors as subordinates in the event of insolvency. This was felt to be an acceptable solution in the interests of investor protection since a certain fundamental risk is admitted from the outset (Wilfing and Komuczky 2016).

The next problem arises when capital is to be passed on to natural and legal persons. Extension of at least two loans constitutes a so-called credit transaction, which under § 1 Section 1 Item 3 of the BWG is likewise reserved for banks with appropriate authorisation, especially when this is carried out over a sustained period with the intent to generate revenue (Wolfbauer 2013).

In 2009, Jugend Eine Welt and Raiffeisen-Landesbank Tirol AG prepared the issue of a bond with a view to being able to name church investors in Austria specifically and clearly as lenders of capital. By issuing a bond it was legally

permissible to collect capital from several investors, a procedure which, outside the context of securities, is permitted solely to banks with the appropriate licence (§ 1 Section 1 Item 3 BWG). Again the aim was to provide capital for further expansion of the UPS, and to this end Jugend Eine Welt founded *Don Bosco Finanzierungs GmbH* which was given the role of issuer. Raiffeisen-Landesbank Tirol AG participated as lead manager and managed the sale of the bond with a coupon of 3.875% p.a. over 6 years. The capital collected was forwarded to the university in Ecuador via Don Bosco Finanzierungs GmbH in the form of a non-subordinated loan which was at that time the only loan that the organisation had granted.

A greater obstacle facing non-profit and other organisations wishing to issue a bond is the so-called securities prospectus requirement. Under § 2 Section 1 of the Austrian Capital Market Act (KMG) a public offer may be issued within Austria only when an approved prospectus<sup>1</sup> has been published no later than one bank working day beforehand. Such a prospectus relates to costs amounting to a medium to high five-figure sum. Since exceptions to the securities prospectus requirement exist, the compilation of a prospectus could not be justified by Don Bosco Finanzierungs GmbH as a non-profit-organisation for reasons of cost. Several exemptions from the securities prospectus requirement are provided for under § 3 Section 1 of the Capital Market Act, two of which Don Bosco Finanzierungs GmbH gave closer consideration to:

1. The offer is made to fewer than 150 natural or legal persons per EEA Agreement signatory state.
2. With a minimum investment of EUR 100,000.00 only qualified investors will be contacted.

In the end, Don Bosco Finanzierungs GmbH chose a private placement with a minimum denomination of EUR 100,000.00 since the offer was directed at church investors who are perfectly capable of investing such a sum.

The Roman Catholic church was a pioneer in the field of ethical investment not just in Austria. In 2002, the Diocese of Innsbruck was one of the first Austrian dioceses to publish investment guidelines relating to the use and investment of funds (Hofer-Perktold 2012). Josef Brandauer, Director of Institutions at Raiffeisen-Landesbank Tirol AG and responsible for clients from the church, reports that he was already looking for a non-profit financing project to place in the form of a bond. He was aware that this could develop into an interesting product for church investors:

I had the idea of private placement of social facilities and had been looking for about a year for a template that we could use. I wanted it to be attractive to my church clients in particular so that they could fund their projects themselves using these bonds. (. . .) Before oekom and sustainability ratings came into being, [my clients] had already always been careful with

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<sup>1</sup>Public notification approved by the FMA and “containing sufficient information on the conditions of an offer of securities or investment to enable an investor to decide whether to buy or subscribe to these securities or investments” (Bundeskanzleramt Rechtsinformationssystem 2016, §1 Section 1).

their investments and who they gave their money to. It was simply always a matter of great interest to them who they gave their money to.

With the Don Bosco Ecuador bond, church investors provided a sum of EUR 6.3 million. Bearing in mind that ethical investment is important to these clients and that they are well informed about the economic structure of religious orders, this is not surprising. Despite that, this bond was the only one at that time in German-speaking countries that helped church investors to fund a religious order's project with impact investment on a larger scale. In November 2015 the bond was repaid, marking a successful example of cooperation between the NGO sector, the finance industry and the Roman Catholic church in Austria. It attracted the attention of several people, including Dr. Klaus Gabriel, CEO of the Corporate Responsibility Interface Center (CRIC), an association that promotes ethics and sustainability in investment and is headquartered in Frankfurt (CRIC 2016). He lectures at a number of universities and educational institutions and is also active as a consultant to companies, committees, advisory boards and commissions, also at several banks. In 2011 Dr. Gabriel visited the UPS in Ecuador along with Jugend Eine Welt:

One of the projects [of Jugend Eine Welt] that I got to know more closely was the Ecuador bond for the university in Ecuador, and I joined the group that travelled there on a project visit. We were there for 14 days during which we inspected aspects of the project very closely, and it gave me an impression of what really goes on behind the numbers. It was very impressive (...) and we can say that the project has been a success. A bond was issued, and a second is in the pipeline.

Jugend Eine Welt starting planning a follow-up bond to finance the UPS in 2014. Raiffeisen-Landesbank Tirol AG informed the organisation that because the legal and regulatory stipulations were becoming increasingly stringent, the bank was unable to support a further Don Bosco bond. It goes without saying that the search for a bank willing to carry out this type of project took time. In the end, Jugend Eine Welt managed to recruit Erste Bank Group AG, a leading financial services provider in Central Europe, as a partner. Starting in 2015, two new bonds—one denominated in euros and one in US dollars—were issued, both of which run until 29 June 2021 and carry an annual coupon of 1.5%.

### ***The Don Bosco Ecuador Bond from 2015***

The interest of Erste Bank Group AG in managing a second issue of Don Bosco Finanzierungs GmbH can be explained by the bank's history and its commitment with regard to the so-called *Zweite Sparkasse*. Günter Benischek, head of Social Banking at the bank, says:

The objective was always to see where social assistance can be provided with bank services and involvement in a bank service. The objective is help towards self-help. The incentive to do this was all the greater because at the time the success of the *Zweite Sparkasse* was becoming particularly apparent. We have, I believe, over 400 newspaper and television reports about the *Zweite Sparkasse* worldwide. The press were there, from CNN downwards,

to take a look at this experiment of a social bank. Now the Zweite (Sparkasse) is a social bank that does not need to make a profit and is run exclusively by volunteers. It's impossible to set up an ideal structure like this a second time, so we said, okay, Erste Bank is a listed bank, what can it do? And we thought, there are always smaller initiatives emerging that a large bank normally wouldn't even look at because the sums are too small, the risk is too great or the procedures can't be standardised. Normally a listed bank says, "That doesn't interest us". And that I think is the difference, that we said, 'This interests us, and we'll expend some energy on it'. That's why we've been doing work in this direction for six years now.

On 29 June 2016, a bond denominated in US dollars was issued with a volume of USD 12 million and a coupon of 1.5% p.a. In keeping with the decision to perform another private placement, the minimum denomination was fixed at USD 150,000. The issue was conducted as it had been with Raiffeisen-Landesbank Tirol except that this time Erste Bank Group AG is not lead manager but paying agent, which obviates any liability risks. Says Günter Benischek:

Thomas Uher [CEO] said at the time that when this bond is issued the bank will participate with technical support as well as with direct subscription. What we didn't want was to be drawn into the liability risk of the whole issue.

This difference meant that Jugend Eine Welt took on the new role of actively selling the bond. For the first issue, Raiffeisen-Landesbank Tirol AG had contacted customers. Now it was necessary to invest in marketing and customer acquisition. This led to the realisation that many church investors are unwilling to take risks with foreign currencies. Consequently, the issue of 29 June 2015 was followed by a second one on 29 February 2016, this time denominated in euros, with a volume of EUR 10 million and once again with a coupon of 1.5% and a minimum denomination of EUR 100,000. Jugend Eine Welt aims to provide the UPS with capital, both in US dollars and in euros, amounting to approx. EUR 10 million.

## **Non-rated Impact Bonds on the Austrian Capital Market**

Despite positive developments such as the introduction of a new Alternative Funding Act in the second half of 2015 to regulate alternative forms of funding for SMEs, and increasing awareness of the need for more ethics and sustainability in investment that has set in among many stakeholders since the financial crisis, our own experience seems to indicate that it is becoming increasingly difficult to place an impact investment in the form of non-rated impact bonds not covered by the securities prospectus requirement and requiring a minimum investment of EUR 100,000. These and other structural conditions constitute a relatively large obstacle, although there is unquestionably a new post-crisis trend towards sustainable investment and finance. Overall, the various pull and push factors currently appear to balance each other out with the result that impact investing has yet to find acceptance among institutional and private investors as a new asset class.



### **Crowdfunding: The Alternative Funding Act (AltFG)**

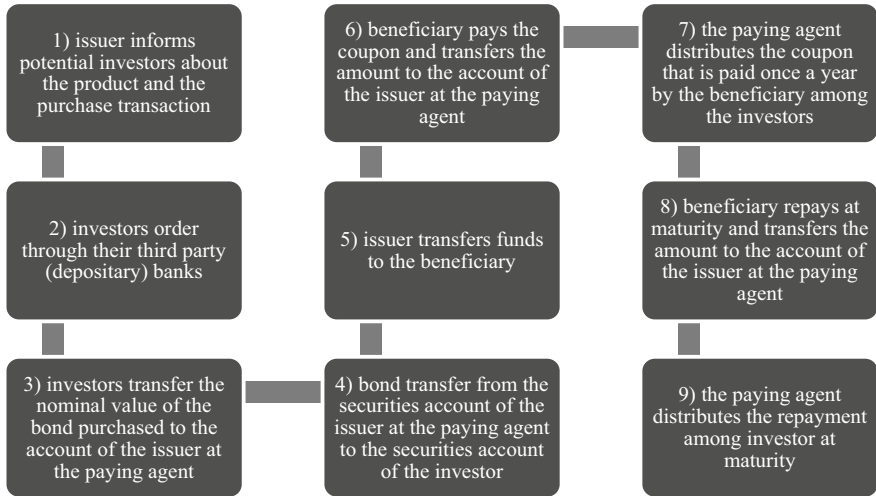
Since autumn 2015 the Alternative Funding Act (AltFG) has brought changes with regard to capital market financing that apply only to SMEs and entail a relaxation of the securities prospectus requirement and consequently a reduction of external costs. For issues exceeding EUR 250,000, where the securities prospectus requirement begins to apply, an information sheet as described in the Alternative Funding Act (Item 2) is mandatory up to a volume of EUR 1.5 million. From EUR 1.5 million to EUR 5 million a prospectus “light” as defined in Item 3 of the Capital Market Act (KMG) must be compiled. The information sheet and the “light” version of the prospectus are to be put together externally, by a solicitor or a chartered public accountant. However, the costs of this are lower than those of creating a proper capital market prospectus. The AltFG also regulates the rights and obligations of internet platforms authorised to act as brokers between investors and issuers looking for alternative funding instruments. Under the terms of the AltFG, small investors can also be contacted for investments not exceeding EUR 5000 per project and year (Wilfing 2016).

### ***Structure of the Don Bosco Non-rated Impact Bond***

The revised bond structure from 2015 meant that new fields of responsibility were transferred to Don Bosco Finanzierungs GmbH. It now became necessary to contact clients selectively and inform them of procedures. In practice, the purchase of the Don Bosco Ecuador bond comprises nine steps which entail the following (see Fig. 1):

Don Bosco Finanzierungs GmbH (issuer) contacts potential investors and informs them about the product and the purchase transaction. Having decided to purchase the bond, investors order through their third party (depository) bank. The investor transfers money to the issuer’s bank account at Erste Bank Group AG (paying agent). The issuer then transfers the bond from his own securities account at Erste Bank Group AG to the securities account of the investor. The issuer transfers the invested capital to the account of the UPS (beneficiary). At the end of the interest period the UPS makes the coupon available and this is distributed to investors by Erste Bank Group AG. At maturity, the UPS makes the total capital available for repayment and this is distributed to investors by Erste Bank Group AG. The UPS orders transfer of the annual coupon and repayment of the total capital to the account of Don Bosco Finanzierungs GmbH at Erste Bank Group. The process flow chart of purchase of a Don Bosco Ecuador bond is illustrated in Fig. 1.

Apart from the lack of a financial rating and the high minimum subscription rate, this procedure represents an obstacle because the transaction takes place between the issuer and the investor. Each third party bank fulfils the customer’s wish even though they are highly unlikely to advise purchasing the Don Bosco Ecuador bond owing to



**Fig. 1** Purchase of the Don Bosco Ecuador bond in nine steps

risks relating to questions of liability. Furthermore, this procedure means that the banks earn no commission since they are not actively selling, and for banks that do not support our efforts this makes the Don Bosco Ecuador bond a product that reduces returns because customers’ money is lost in a completely new niche.

***Sustainable Investment and Finance: A New Post-crisis Financial Trend***

Despite a number of conflicting interests, Don Bosco Finanzierungs GmbH receives support from several banks and individuals in Austria and Germany who are interested in the topics of impact investing and ethics and sustainability in the financial sector. One result of this is that Dr. Herbert Ritsch, Director of Business Ethics and Responsibility for Creation at Bankhaus Schelhammer & Schattera AG, accompanied Jugend Eine Welt to Ecuador in 2015 to visit loan projects run by Jugend Eine Welt there as the second reference person. From 2008 onwards, foundations also began to show interest in the social undertakings of the order in Ecuador, and besides the UPS two Don Bosco print shops and a programme of microloans were supported with direct loans.

Dr. Ritsch describes how he moved from portfolio management to Austria’s so-called church bank Schelhammer & Schattera which until the end of 2014 was majority-owned by members of the Conference of Superiors of Male Religious Orders in Austria. Following the decision to sell, the majority share was transferred to Capital Bank GRAWE-Gruppe AG (Bankhaus Schelhammer & Schattera 2014). The decisive moment came with the financial crisis of 2007:

I've been working in the financial sector since 1997, and to begin with, ethics was not something I even thought about. My background is completely different. I carried out portfolio management examinations and was a portfolio manager, but ethics and sustainability didn't mean a thing to me until 2008, when I moved to pioneer investments. (...) 2007, 2008 and 2009 are well known as the beginnings of the crisis in the financial sector and it was really the provision funds that made me aware of the sustainability issue and the cause that you have embraced. Because of the severance pay reform, new criteria, in particular exclusion criteria, were introduced. (...) I thought to myself that that is really the issue, (...) to find answers for the disintegration of the financial sector that started in the years 2007 to 2009. To find answers that help us do better in future. But that is not what happened at all. (...) In reality there was only a small sector, the provision funds, that concerned themselves with this, and of course church organisations, as is their tradition.

In the years following the crisis, ethics and sustainability in investment has nevertheless emerged from its niche and become a trend. Intensive awareness-raising was a crucial factor in this:

[In] 2010, 2011 and 2012 [it] was a gradual process, but it wasn't being pushed so much yet. In 2013 the trend started to be really noticeable. This is shown by the steadily growing number of applications for the Austrian Ecolabel which is granted by the consumer protection society on behalf of the Ministry of Life. To begin with there were only a few, then in 2012/13 there were about twenty. In 2013/14 there were about thirty, and then came the sudden jump in 2016 when we have over a hundred. Three years ago the figure was still around thirty. So the momentum has increased considerably and this is at least partly due to greatly increased awareness in 2015 which was brought about by well-publicised events. Publication of the encyclical *Laudato si* on 18 June 2015, then the G7 summit (...) with the resolution to abandon the use of fossil fuels completely by 2100 and to cut it by 50% by 2050, then the UN Sustainable Development Goals in September, the seventeen goals that have now been set for 2030, and then of course the big climate conference in Paris. (...) So a great deal has been done in this field and it has helped the concept of sustainability to emerge from being a niche issue to a mainstream one. (Herbert Ritsch)

The events of the crisis that were triggered by the upheaval on the financial market have thus been accompanied by social awareness and the realisation that investment can steer social processes and that ethics and sustainability serve as moral guides in decision-making processes. Dr. Gabriel, CEO of CRIC, who also spent the first 10 years of his working life in a bank, describes how this paradigm shift in the financial sector came about:

The financial crisis brought about a rethink both in banks as institutions and among their employees. Many people in banks began thinking about what actually went on there and what their role in the system is. The banks realised that something had now come to an end. We have yet to overcome the financial crisis; in other words, we're still in the middle of it. (...) The ECB is still printing money to prevent this system from collapsing. (...) At this stage I think the banks realised, some earlier than others, that the business model pursued until 2007 cannot be continued as it was and that the banks need a complete overhaul and must completely restructure their business model if they want to generate revenues in future. Other, more recent developments also came along such as the zero-interest phase that we're still in. (...) Bit by bit people started to realise, including the banks themselves, that they would not be able to develop any further with the business model they had followed up to then. (...) So then many banks all over the world began studying alternative concepts and ethical banks—I wouldn't say that they appeared, because some had existed before—really gathered momentum because of the financial crisis.

Besides the upheavals caused by the financial crisis, the current low interest rates are another factor that influences the decision to attach greater importance to ethics and sustainability when investing:

There are two reasons for this rethink: firstly, the financial crisis and secondly, interest rates. (...) Current interest rates are already making clients say that if they aren't getting any interest they can at least make sure that their money is doing something useful, generating social returns. This has definitely become more important recently. (Günter Benischek)

Even before the financial crisis, Jugend Eine Welt launched its first large-scale funding project and was in personal contact with several decision-makers in the Austrian financial sector who were willing to listen to new ideas. In addition, the organisation has a Catholic background which facilitated contact with people in the Church who had started thinking about ethics and sustainability in connection with investment at an early stage. From this point of view, Jugend Eine Welt was well placed when a general paradigm shift took place in the wake of the financial crisis among all stakeholders, from the banks themselves to international political strategies. At the time of the new Don Bosco Ecuador bond from 2015, the low interest rate was an additional sales argument because in the ethics and sustainability sector a coupon of 1.5% p.a. can comfortably compete with, for instance, the 10-year green bond issued by the Austrian electricity-generating company VERBUND which also has a coupon of 1.5% (VERBUND 2016). In addition, the public debate in Austria about crowdfunding that began in 2012 caused Jugend Eine Welt's efforts to be viewed in a positive light (Fercher 2012). Terms such as *impact investing*, *social entrepreneurship* and *philanthropy* entered the discussion and a variety of events focusing on these topics have been held in the recent past.

## **Impact Investing: A Pull and Push Factor Analysis**

The experience gained with the Don Bosco Ecuador bond and consideration of the most recent developments following the financial crisis lead to the unequivocal conclusion that the incipient impact investing market is being strongly influenced by a variety of pull and push factors. A pull factor is defined as something that draws to an action, place or investment, whereas a push factor involves a force that drives actors away from an action, place or investment. As mentioned above, these pull and push factors are currently balancing each other out. In the following discussion, the most important of these factors are brought to light. There is reason to suspect that these factors are relevant not just to the Don Bosco Ecuador bonds, but to the impact investing market as a whole and especially to smaller issues for which an appropriate legislative framework must still be created that calls for far more latitude than the relatively new Alternative Funding Act in Austria can currently guarantee.

## Impact Investing in Its Infancy: Key Pull and Push Factors

Since the topic of ethics and sustainability is moving increasingly out of its niche into the mainstream, banks are becoming more willing to create new offers (pull factor no. 1). This applies particularly to securities such as sustainability funds for which there is usually also a market. However, the increasing number of offers is also creating increasing confusion as to what *ethical* and *sustainable* actually are (push factor no. 1):

Sustainability per se doesn't exist. There are various forms and approaches. This makes it all more interesting, but also more difficult because the mainstream produces the side-effect that now everyone is entering the market, so to speak, and saying, 'Oh, we've always worked with sustainability anyway'. And they create their own definition from various perspectives (...) so that they can sell. (...) Every investment company and every bank says anything and everything on the subject and that means it's extremely difficult to make a distinction. (...) That's the other side of the coin as far as ethics and sustainability in the financial sector is concerned. (Herbert Ritsch)

It used to be difficult to convince people that sustainability with the same returns is the better type of investment and that it can be used to genuinely influence the capital markets. No one believed it at the time. And now we have to convince people that not everything that says it includes sustainability does in fact include it and that products have to be examined much more scrupulously than in the past. (Joseph Brandauer)

But where exactly do so-called impact investments fit into this market? According to Loman et al. (2015) and Wendt (2016) the *impact investing spectrum* is best described by the journey that impact investors undertake. Figure 2 illustrates

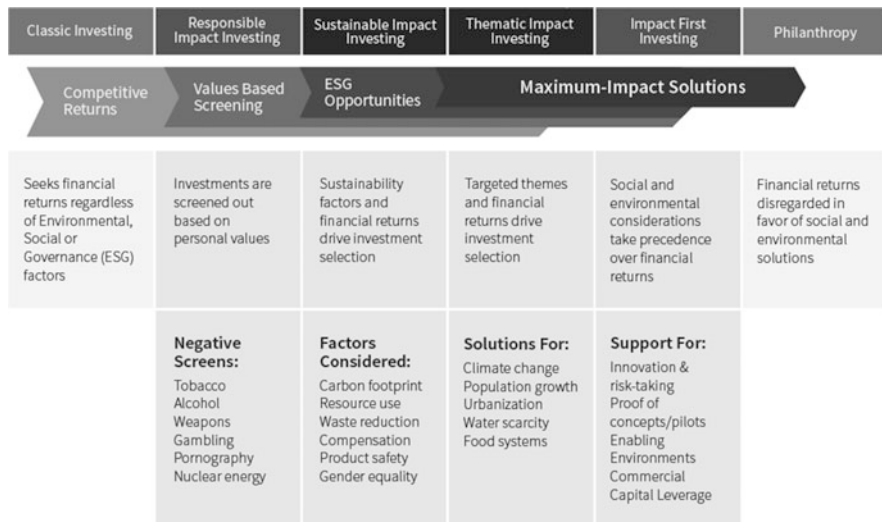


Fig. 2 Impact investing investment spectrum. Source: Sonen Capital (2016)

this journey as described by Sonen Capital, an impact investment management firm based in California that has been in the market for five decades:

The figure shows a spectrum with *Classic Investing* where profit maximization is emphasized at one end and *Philanthropy* where financial performance is disregarded in favor of positive impact creation at the other end. Between these two divisions lies impact investing consisting of four categories: *Responsible Impact Investing*, *Sustainable Impact Investing*, *Thematic Impact Investing* and *Impact First Investing*. Impact is growing from *Responsible Impact Investing* towards *Impact First Investing*.

Unlike sustainable investment funds, which fit into the first four categories (classic investing to thematic impact investing) depending on their orientation, a Don Bosco Ecuador bond is best described by the term *impact first investing*. This is because the coupon of 1.5% is not aligned to the risk, and especially the country risk, so that it must be assumed that the social yield and certainty about where and how the invested money is working are more important to the investors than financial returns.

In this particular case it must be borne in mind that the Don Bosco Ecuador bonds have so far been issued as private placements with a relatively high denomination and have been aimed solely at qualified investors who invest more than EUR 100,000 (push factor no. 2). Moreover, there is no financial rating (push factor no. 3) or possibility of trading the security in question at a stock exchange which, in a portfolio, makes the product a buy-and-hold position (push factor no. 4). These components convey an elevated risk and in many instances conflict with investor protection (push factor no. 5). The liability risks that banks would have to accept when selling a product of this type currently prevent them from actively providing support for the purchase of such impact bonds:

This type of bond (. . .) as you first invented it, as it were, is a real alternative to credit financing; instead of going to a bank I go to a private investor who finances it for me by means of the bond. In reality, the parameters in which a bank operates (. . .) greatly restrict the kind of loans it can grant, and there is also investor protection for the other party. So I'm forced to say that we can't give you a loan because of your organisational structure and if we issue a bond with you, we have to take investor protection into account. (. . .) That limits us enormously. It doesn't help either if the private placement regulations have been relaxed and a prospectus is only needed if the volume is higher than a certain amount because there are always conflicts [with consumer protection]. Stipulations for banks when deciding whether to accept risks and investor protection. It doesn't leave much room for manoeuvre for this kind of experiment in bringing private capital into impact investing more directly. (Günter Benischek)

Under the pretext of consumer protection the investor is deprived of the right to make a decision and we as a bank are forbidden from offering him products, even if he wants them, because if we did we'd assume the market risk, even if we only have it in our programme. So in my opinion, this decision is wrong because a customer can buy options, shares, hedge funds or whatever which entail far greater risks. In this respect, we in Austria are heading in completely the wrong direction. (Josef Brandauer)

What is more, it is not possible to incorporate the Don Bosco Ecuador bond in a fund. Pension funds and insurance companies are also forbidden as large institutional investors from investing their clients' money in non-rated bonds or securities

(push factor no. 6). If impact investing is really to be a success, new legal provisions relating to investor protection are required in these areas. But the willingness of the people involved to do something special and give innovations a chance also plays a role:

Investment with a purpose will come, or is already (...) a trend and (...) is growing, and we're working hard to see what can be offered in this field because there are now very many different possibilities for direct participation. (...) There are many customers looking for this because they're saying (...) the interest rate isn't so important to me. (...) It should be useful and a lesson learned from the financial crisis that we are already asking where exactly does the money go and what happens to it. More and more of our customers are becoming interested in this and we must try to offer them something. Possibilities do then emerge, of course, but the bonds can't be made part of a fund. These are the difficulties, because we could contact the institutions (...) the pension fund and so on. (...) [But the product] must be rated. (Günter Benischek)

For it [impact investing] to be successful, the attitudes of those involved and of the decision-makers in the companies and institutions concerned [would] first [have to][change]. Of course we would wish that a legal provision could be found so that these impact bonds were tolerated, as it were, in portfolios if certain criteria were met. I don't think this will happen, because apart from the probability of default there's (...) also the validity, and objective criteria would have to be defined for effectively examining this validity. (...) Possibilities do exist, but they would have to be asked for from the legislators. How the FMA inspects this in portfolios for institutional clients, pension funds, insurance companies and so on to ensure that they are adhered to and can be reconstructed. (...) But it still remains difficult. (...) The positions are too small for companies of this size to make the effort to include them and ultimately justify them to the auditors. And that's the point. (Herbert Ritsch)

Banks currently face challenges relating to new requirements put in place following the financial crisis and the low-interest period (pull factor no. 2). Although awareness is increasing, as is banks' willingness to offer new products in the field of ethics and sustainability, it may be that the basis for making impact investing acceptable to institutional and private customers as part of classic banking in the current market environment is missing:

For the banks it's a very challenging time because they have to fight on several fronts. One of these is the regulatory front. Here, the political will has emerged to regulate and control banks more closely in the wake of the financial crisis. (...) In some areas, this does in fact go a bit too far. Small banks in particular suffer from the number of regulations. These concern things like regulatory reporting and much more besides. They apply to all banks, but small ones are affected most. (...) It can no longer be compared to banking as it was ten years ago. (...) The type and quality of work done by consultants has changed enormously. (...) Another challenge for the financial world is the situation regarding interest rates because the classic business model of banks, generating revenue from the interest margin, practically no longer exists. (...) Money doesn't cost anything any more. That's the problem. As a bank, nothing can be earned from interest rate deals and that means for many banks, as can be seen in their balance sheets, that in two or three years they're heading for zero (...) and then into losses. (...) Another big challenge for banks is what is happening on the fintech market. Fintechs are new financial companies that pick out individual sectors of classic bank business and restructure them using new technologies, especially internet-based technologies, and can offer them much more cheaply and far more efficiently than banks. (...) These are things that are starting to replace classic bank services meaning that the banks' business model is crumbling away on all fronts. (Klaus Gabriel)

In fact, I believe that the classic bank, whether a commercial and all-purpose bank with a conventional business model or an investment bank, is not the appropriate partner for impact investing. I believe that these activities are best conducted where capital can be used more freely and autonomously as opposed to capital in a bank balance sheet that has been entrusted to a bank by investors. So I would split these two areas. (. . .) That means that family offices would be a good target group. Foundations are a good target group, as are personal assets looking for investment possibilities. Investment banks, too, of course, which advise private individuals on which projects would or would not be suitable for this. (Wilfried Stadler)

In the past, foundations funded projects of the Salesians of Don Bosco in Ecuador by granting direct loans. One particular reason for the decision to issue a bond was the desire to attract target groups other than foundations, namely church bodies or companies that would purchase the bond using their own capital. This would also be something provision funds and insurance companies could do, since invested customers' capital in particular is subject to legal restrictions and, according to the FMA's stipulations, a financial rating is required here. A key point is the freedom to do as one wishes with the capital. However, our experience has shown us that some institutions adhere to formal procedures when taking investment decisions, and the lack of a financial rating in particular is often seen as a reason to decide against this approach. It should be noted here that it is de facto impossible for a small impact emission to be given a rating by the major rating agencies. That said, the Universidad Politécnica Salesiana was granted a sustainability rating by the Austrian sustainability rating agency *rfu—Mag. Reinhard Friesenbichler Unternehmensberatung* in September 2015. Currently, however, sustainability ratings can hardly be regarded as a replacement for classic financial ratings:

Of course any rating is desirable, especially from Moody's, Standard & Poor's or Fitch, but this is not going to happen. To begin with, these emissions are far too small, and above all much too expensive for this type of investment. So that takes them out of the running for a start. I think that the sustainability ratings as they're applied by the major sustainability agencies oekom research, Friesenbichler in Austria and so on really speak for themselves. After all, these agencies analyse the economic side and not just the ecological or social aspects. That means that a company's stability is equally important to them, it's just that additional factors come into play. (. . .) At Schelhammer, for instance, we have made it mandatory in our terms and conditions for funds that only products with an oekom research rating can be included in a portfolio. (. . .) In this world, [sustainability] ratings are important. (Herbert Ritsch)

Perhaps a kind of rating agency [for financial and sustainability ratings] needs to be set up first. Those that are in the best position are the existing [sustainability agencies] of course (. . .) But I think it simply depends on the financing of this kind of rating activity. Rating large companies is possible now because there is sufficient demand from investors who wish to invest in them. That of course means that this great demand isn't there for small companies. What is important about the rating is that it's not paid for by the company, as is the case with the classic financial rating, but by the investors, so the interests are kept apart and you don't get caught in a conflict of interests. (Klaus Gabriel)

So many bonds are issued that carry far more risks and serve no useful purpose, yet are granted a rating. And every investor who represents a customer from an institution has an instruction; such and such a rating means you can invest, without a rating, you can't. And that's what's wrong, that we say we'll put everything inside a system so it can all be



monitored, but no one has to think or take a personal decision for which he is then responsible. Those are the problems. (...) What is clear is that if there were a system that made it possible to obtain a rating for a private placement, which would then be backed by liabilities, the market would become much bigger. If we as a bank could offer that, the volume would already be placed. (Günter Benischek)

It will probably not be realistic to try to secure it with external ratings, (...) so in the end there is no way round the element of personal trust. (Wilfried Stadler)

Church investors in particular have this element of personal trust because they know Don Bosco and are willing to invest without a financial rating and bear the default risk themselves (pull factor no. 3). This target group is also more prepared to hold a single position longer. Apart from to this group of church investors, sale of the bond has proved difficult.

### ***Pull Factors for the Don Bosco Non-rated Bond***

The following three pull factors were decisive for the successful placement of the Don Bosco bond:

- (a) The increased awareness among all stakeholders after the financial crisis which led to banks' becoming willing to create offers that contain elements of ethics and sustainability.
- (b) The low-interest-rate period that presents challenges to banks and prompts them to look for new business models and, at the same time, the growing feeling among investors that they can support useful projects with their money for lower returns.
- (c) The profitable investment case with the connection to Don Bosco which invites trust among church investors who are also a target group that is very receptive to impact investing and, above all, has considerable resources.

All in all, the project is based on a convincing and sustainable business model that illustrates how the target groups shall be reached, which social programmes will be provided to reach desired impact goals and how revenues will be generated in order to pay back investors. Beginning in 2009, the UPS was able to offer places to 7660 additional students. At the start of the 2015/2016 academic year, 23,557 students were enrolled at three sites in Quito, Cuenca and Guayaquil. UPS's mission of making it possible for underprivileged population groups to study is implemented with sufficient management capabilities, resources and leadership. There is a well-grounded financial plan and financing model that supports this path, and a proof of concept showing that the business model and the impact work in practice.

### ***Push Factors for the Don Bosco Non-rated Bond***

The push factors cited below are unquestionably linked to the structure of this impact investment as a non-rated bond. Despite this, issuing a bond is one of the few possibilities to attract capital legally from several groups of investors in a standardised way. Chronologically following the points set out under Section “Impact Investing in its Infancy: Key Pull and Push Factors” there are six factors:

- (a) Confusion as to what *ethical* and *sustainable* actually are. Since there is no legal definition of ethics and sustainability in investment, their character remains a matter of interpretation and this can sometimes lead to distrust if the product fails to provide what the investors’ own values and standards led them to expect.
- (b) The high minimum subscription rate, a result of Austrian legislation, which above all eliminates small investors and consequently the entire retail market.
- (c) The lack of a financial rating, which cannot be obtained for an emission of this size in any case, but is nevertheless often demanded by investors since decision-makers are unwilling to buy this kind of product on their own responsibility.
- (d) The lack of a market, in other words the illiquidity of the product that is not traded and therefore represents a buy-and-hold position in a portfolio. This eliminates all investors who only hold their positions for shorter periods.
- (e) The strict investor protection which makes it unattractive for banks to advertise or sell this kind of product because of consultants’ liability. Regulations imposed on and requirements made of banks have generally become more and more stringent following the financial crisis.
- (f) The fact that institutional investors such as insurance companies, pension funds or other funds, which are financially very strong, are forbidden by legislation pertaining to trusts from subscribing to products of this type.

Although most of the factors are linked to the product’s structure of impact investment cases as non-rated bonds, it is difficult to find alternatives here, especially for the retail market and institutional investors. It is the combination of these factors that means that impact investing on the Austrian capital market is still in its infancy. There is reason to suspect that other non-profit organisations and even SMEs would find it difficult to put standardised products on the market that would be distributed by banks and bought both by customers at institutions and private customers. Even if private placement rules were to be relaxed or a capital market prospectus can be offered, small emissions have fewer opportunities to reach a larger market if they do not have a financial rating. Unquestionably, new legislation is required here. If the political community really wants to push impact investing, policy must focus on this field of tension, perhaps providing a rating mechanism and/or easing for advisers with respect to approved impact investing products.

Placing a Don Bosco Ecuador bond is also a challenging task and requires a great deal of persuasion and patience. The product’s success can be explained first and foremost by the fact that it serves to finance a large-scale project administered by a

very well-known and socially-oriented Catholic religious order for men which is economically viable and has a track record going back years.

## Summary

This paper analyses the current situation of an emerging impact investing market in Austria and focuses primarily on the efforts of smaller-scale funding projects for which there is not yet an appropriate legislative framework which would make financial products from this market wholly acceptable to both institutional and private investors. This acceptability could be achieved by the direct sale of such products by banks or financial services providers and their inclusion in funds and portfolios of pension funds and insurance companies.

The case chosen for this study was the track record of the so-called *Don Bosco Ecuador bonds* each of which was put on the market as a private placement with all the obstacles for banks and investors described here. Although an impact investment can be conceived differently, with regard to the minimum subscription rate or factors such as existing default liabilities, for instance, doubts remain as to whether smaller emissions will be able to achieve this acceptability across the board in the near future. Individual projects depend on the trust of those who support it and consciously take risks to promote a particular cause. In the case of the *Don Bosco Ecuador bonds* these, with a few exceptions, were the group of church investors who had started thinking about ethics and sustainability in connection with investment at an early stage, know Don Bosco and invest capital long-term.

Despite these difficulties, there is great potential for non-profit organisations to enter into successful cooperative ventures at the point of contact with the world of finance and business in a wide variety of areas such as development cooperation and social entrepreneurship. The international financing system sees itself in a period of transition, and not just because of recent calls for divestment. Some investors have already been incorporating ESG-based approaches into their investment decision-making for years. The economic crisis has triggered a process of growing awareness which is only just beginning. So far, methods of financing impact investments via crowdfunding platforms or fintechs have hardly been tried. The new Alternative Funding Act was introduced in 2015 on the initiative of several SMEs, start-ups and social entrepreneurs who advised political decision-makers to develop new funding strategies. In solidarity with this group, further positive legislative changes may be possible in the coming years. In Austria, a political willingness to do this is evident because apart from the so-called Alternative Funding Act a new Non-profit Act was passed and philanthropy was cited in the public debate as a means of funding social change not with state funds, but private ones. This accords entirely with the purpose of a successful impact investment.

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# Building a Thriving Ecosystem for Social Enterprise Finance



Markus Freiburg and Christina Moehrle

## The Social Finance Market: State of Play

Social finance is on the rise. Lately, the ecosystem experiences a slow but steady evolution. In Germany, *impact investing* has “strongly benefited from more attention as well as national and international initiatives” as a study confirms (Bertelsmann Foundation 2016).<sup>1</sup> Yet the market infrastructure is far from being perfect. In an ideal world, all types of capital suppliers would join forces to support social organizations while they attack the most pressing social and environmental problems. And all target investees, most prominently social enterprises, would be *investment-ready* and well prepared to take on such capital to truly reach scale.

But reality looks a bit gloomier. On the one hand, the estimated assets investible for positive impact have almost tripled to EUR 70 million in Germany between 2013 and 2016. On the other, this trend is largely due to a relatively small number of pioneers, among them two social venture capital funds, several business angels, family offices and foundations as well as specialized intermediaries such as the Financing Agency for Social Entrepreneurship (FASE). There is much to be done if the market is to reach true scale. Worldwide, impact investing accounts for just a fraction of the assets available for investment. The Global Impact Investing Network (GIIN) estimates that while its more than 200 large-scale members manage trillions of USD in total assets, only USD 114 billion went into impact investments so far (GIIN 2018).<sup>2</sup> Thus, impact investing is “a niche market in most developed countries, with

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<sup>1</sup>Bertelsmann Stiftung: “Social Impact Investment in Deutschland 2016: Kann das Momentum zum Aufbruch genutzt werden?” <https://www.bertelsmann-stiftung.de/de/publikationen/publikation/did/social-impact-investment-in-deutschland-2016/>

<sup>2</sup>Global Impact Investing Network (GIIN), <https://thegiin.org/impact-investing/need-to-know/#s8>

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limited evidence of its financial performance” (FASE, Ashoka and McKinsey 2016). But it is strongly gaining traction, especially among wealthy millennials.<sup>3</sup>

*Social finance* is a vital component in making the ecosystem evolve. Like a hub, it connects the three main spokes—private, public and people sectors—by creating innovative forms of investment capital that include social and financial considerations. If the social ecosystem is to thrive and “pick up the pieces left behind through the misdeeds, negligence, or oversight of the state and enterprise ecosystems” (Cheng and Mohamed 2010),<sup>4</sup> it urgently needs to overcome the barriers between capital supply and demand. New finance solutions are very important in this: They serve as a lubricant to make the wheel of innovation run more smoothly. Yet to find out how to exactly achieve this goal means understanding the market actors first.

Today, impact investors target a wide range of investment strategies and risk-return-impact profiles. In essence, these capital suppliers can be divided up in two major groups: *impact-first investors* and *financial-first impact investors*. The vast majority—more than 80% according to the latest GIIN survey<sup>5</sup>—belong to the second group. Its members expect risk-adjusted market-rate or near-market financial returns on top of an attractive, measurable impact. However, this is a profile that most social enterprises cannot fulfill at this stage of the ecosystem. While there are many different kinds of vehicles, sectors, geographies and dimensions for impact investing, *social enterprises* represent a very specific type of investee: They are double bottom line businesses, developing innovative approaches, models or practices for resolving societal challenges in an entrepreneurial way. Their main objective is “to have a social impact rather than make a profit for their owners or shareholders”,<sup>6</sup> a defining characteristic that most investors don’t find too appealing—at least not yet. In addition, many financiers view direct investments in early-stage social enterprises as complicated, costly (in terms of transaction fees) and high-risk.

Poor access to finance for social enterprises is a well-known problem. Several pan-European studies have outlined the current imperfections in the social finance market.<sup>7</sup> The European Commission’s *Social Business Initiative*<sup>8</sup> is trying to address this very challenge with several calls for action to improve the framework. What

<sup>3</sup>Toniic: “Millennials and Impact Investment”, 2016.

<sup>4</sup>Willie Cheng, Sharifah Mohamed: “The World that Changes the World: How Philanthropy, Innovation, and Entrepreneurship are Transforming the Social Ecosystem”, 2010.

<sup>5</sup>Global Impact Investing Network (GIIN), JPMorgan Chase & Co: “Annual Impact Investor Survey”, 2017, <https://thegiin.org/knowledge/publication/annualsurvey2017>

<sup>6</sup>European Commission, [http://ec.europa.eu/growth/sectors/social-economy/enterprises/index\\_en.htm](http://ec.europa.eu/growth/sectors/social-economy/enterprises/index_en.htm)

<sup>7</sup>For example: Wolfgang Spiess-Knafl, Stephan A. Jansen: “Imperfections in the social investment market and options on how to address them”, an ecosystem report on behalf of the European Commission, 2013, <https://www.zu.de/info-wAssets/forschung/dokumente/cisoc/Final-Report-Imperfections-in-the-Social-Investment-Market-ZU-vfinal.pdf>

<sup>8</sup>European Commission: “The Social Business Initiative”, 2014, [http://ec.europa.eu/internal\\_market/publications/docs/sbi-brochure/sbi-brochure-web\\_en.pdf](http://ec.europa.eu/internal_market/publications/docs/sbi-brochure/sbi-brochure-web_en.pdf)

makes the situation worse is that even existent market players do not seem to cooperate very well. Different suppliers of financing apply a broad range of mostly incoherent and unrelated eligibility criteria, return expectations, conditions for repayment as well as requirements for accounting and reporting. This often leaves social enterprises lost between various financing planets, struggling to find the right sources that give them leeway to survive and thrive. Lack of growth capital is a serious market failure: If unsolved, it prevents social enterprises from thinking big and creates a vicious circle for society. Not enough capital, not enough social innovation.

Given limited budgets, the public sector alone won't be able to finance the necessary solutions. In Germany, to "fully tackle the lack of affordable housing, the increase in lifestyle diseases, the shortage of care for the elderly, and long-term unemployment reveals a projected shortage of nearly EUR 50 billion by 2025—a sixth of the 2015 federal budget".<sup>9</sup> Recent challenges such as the refugee crisis will add to this immense challenge. Mobilizing private capital for impact investing has therefore become a top priority on the global agenda and a pillar of the *blended finance* movement.<sup>10</sup>

With respect to social enterprises, the challenges vary at different stages of the life cycle. The most serious gap is ajar in the segment of early-stage financing. Social enterprises in Europe typically require EUR 100,000–500,000 to approach the market and prove that their business models and expectations for impact are valid. But in order to do so, they need to invest: teams have to be built up, products and services enhanced and new infrastructure developed. Without external growth capital, this is hard to achieve. Most social enterprises are not able to cover more than 75% of their operating costs with revenues at this stage. At the same time, relatively small deals and high-risk development phases require risk sharing among investors. This is an "asset" that is currently hard to come by: The majority of capital suppliers prefers to wait at the end of the pipeline. There, risk and return seem to be much more appealing, since mature investees have typically reached break-even and therefore represent less risky targets. As a result, early-stage social enterprises often find themselves on the edge of a precipice: a strategic financing gap where the needs for funding tend to be "too big for donations/philanthropist and too small and risky for institutional (social) investors" (FASE 2015). This gap is illustrated in Fig. 1.

For the ecosystem as such, this is a catch 22 situation: If social enterprises fail to survive this *valley of death*,<sup>11</sup> the pipeline for later-stage investors will sooner or later

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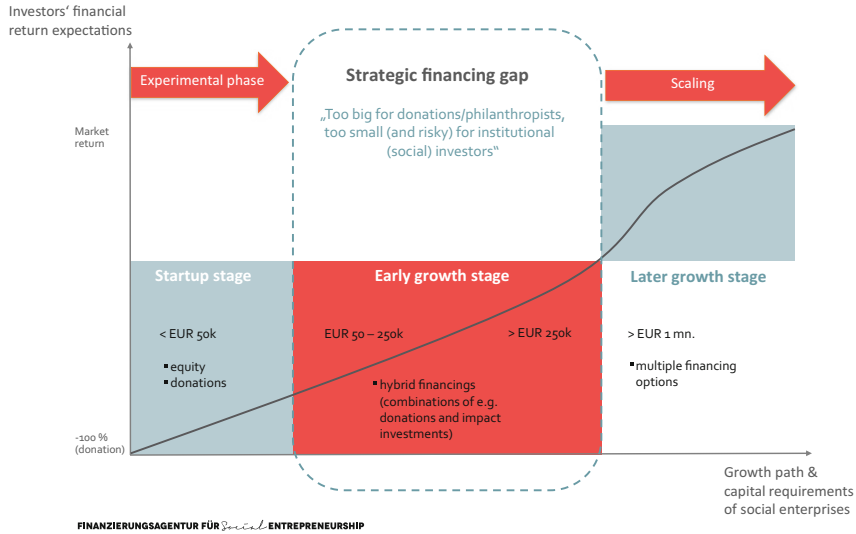
<sup>9</sup>FASE, Ashoka, McKinsey: "Achieving impact for impact investing—a roadmap for developed countries", 2016, [https://www.mckinsey.de/files/report\\_impact\\_investment.pdf](https://www.mckinsey.de/files/report_impact_investment.pdf)

<sup>10</sup>World Economic Forum, OECD: "Blended Finance Vol.1: A primer for development finance and philanthropic funders", 2015, [http://www3.weforum.org/docs/WEF\\_Blended\\_Finance\\_A\\_Primer\\_Development\\_Finance\\_Philanthropic\\_Funders\\_report\\_2015.pdf](http://www3.weforum.org/docs/WEF_Blended_Finance_A_Primer_Development_Finance_Philanthropic_Funders_report_2015.pdf)

<sup>11</sup>Rainer Höll and Felix Oldenburg, Ashoka: "Wie überwinden wir Hürden für soziale Problemlöser?"

Sechs Ansätze zur Verbreitung von sozialer Innovation und Social Entrepreneurship in Deutschland", 2010, [http://germany.ashoka.org/sites/germanysix.ashoka.org/files/Ashoka\\_SozialeInnovation.pdf](http://germany.ashoka.org/sites/germanysix.ashoka.org/files/Ashoka_SozialeInnovation.pdf)





**Fig. 1** The strategic financing gap (Source: FASE)

dry out. For society at large, not addressing this missing link will leave social enterprises incapable of fulfilling their roles as agents of innovation. Much is at stake: If the Europe 2020 targets, the Sustainable Development Goals and the Paris climate accord shall be achieved, these double bottom line actors need to be part of the solution. They have to be equipped with the resources they need to tackle the problems at hand.

To summarize, the social finance ecosystem has to overcome the following failures in order to flourish:

1. a limited investor base,
2. too few (or too small) specialized intermediaries,
3. an insufficient availability of investment products,
4. a weakness in social enterprises' investment readiness, and
5. a need for dedicated impact investment and social enterprise advisors.

In the following chapters, we will address a number of important building blocks and examples how to better shape the ecosystem. In addition, we will share a case study that puts our learnings and blueprints for replication into a more practical perspective. This will hopefully assist more impact actors in entering the stage and contribute to an evolution of the social enterprise finance market.

## Building an Ecosystem for Social Enterprise Finance

### *Understanding the Needs*

A key to overcoming barriers is to understand the needs of all market participants. Across Europe, these barriers have a varying degree of importance, but there are several shared hurdles:

On the capital supply side, *impact-ready* investors are still a rare breed. Most financiers willing to tap into social enterprise finance miss the appropriate knowledge how to assess—and measure—the dimension of social impact. In addition, they often fail to grasp the unusual double bottom-line business models of their potential investees. Innovative financing models, on the other hand, are a second missing link. These models are capable of blending funders from different financing planets, for example philanthropists and impact investors, and enable more effective solutions. A third market failure prevails with respect to facilitators such as qualified intermediaries and specific market places. These actors are important links that provide practical knowledge and to make both sides meet and match.

On the demand side, most social enterprises still heavily depend on grants. This hinders them in becoming self-sustainable and capable of accessing capital markets. The legal frameworks are another stumbling block. For example, legal forms do not cater well to the specific needs of social enterprises. In order to scale and attract different types of funders, some social enterprises thus adopt hybrid organizational structures: They separate their activities into those that are more business-like and generate income, and those that are high-impact but can't be paid for by their target groups or beneficiaries. As a result, a combination of non-profit and for-profit entities (*structural hybrid*) is quite common in the German social entrepreneurship scene.

In general, the market for social finance is rather intransparent. Demand and supply do not match very well. One of the reasons for this phenomenon is that a vast number of social enterprises are not yet *investment-ready*: They need substantial time, money and effort to get to a point where they become attractive investment candidates. For suppliers of repayable capital, a social enterprise has to have “the capacity and capability to seek and utilize investment”.<sup>12</sup> This so-called *investment readiness* involves a number of essential elements, for example:

- (a) a compelling *theory of change*<sup>13</sup> that articulates how the enterprise exactly intends to achieve positive impact on society,
- (b) a convincing and sustainable business model that illustrates how the target group (s) shall be reached, which products or services provide an effective solution to the problem and how they generate revenues,
- (c) sufficient management capabilities, resources and leadership to implement the enterprise's mission,

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<sup>12</sup>Investment and Contract Readiness Fund, <http://www.beinvestmentready.org.uk/about/glossary/>

<sup>13</sup>For more details visit <http://www.theoryofchange.org/>

- (d) a well-grounded financial plan and financing model that supports this path, and
- (e) a proof of concept, showing that the business model and the impact work in practice.

Accelerators, incubators and other specialized supporters are therefore important to make the ecosystem function. They allow social enterprises to receive the right kind of help, making them ready to attract the right kind of capital at the right time.

When looking more closely at the investor side, the annual impact investor survey by GIIN<sup>14</sup> provides sobering insights: 66% of the respondents continue to target risk-adjusted market rate returns. Those investors seek to achieve the same financial outcomes as compared to financial engagements in commercial, privately-held enterprises with identical risk profiles. Positive impact just comes on top of this expectation. Additional 18% of global impact investors target lower returns but still want to see close to market-rate IRRs. Only a fraction of 16% is fine with financial returns that range closer to capital preservation. Yet this is precisely the profile that most social enterprises represent when searching for growth capital—at least in developed countries. While there is enough investment capital around, European markets therefore remain imperfect. “There is a significant mismatch between the available financing volume, investors’ expectations and the actual needs of social entrepreneurs” (Oldenburg and Struwer 2016).<sup>15</sup>

Many social enterprises typically operate with business models offering a potential return range of minus 100% and plus 5% per annum. Although these models may generate significant positive external effects—for example creating substantial savings for the state or welfare system—they tend to be too commercial for philanthropists and too social and financially unattractive for impact investors. It may sound absurd, but social enterprises often sit between two stools. Classic philanthropists become suspicious once their targets earn income and “threaten” to pay back capital. And traditional investors are less than thrilled when facing moderate financial returns and a lack of liquid exit markets. New approaches such as *hybrid financing models* or *blended finance* are therefore necessary to allow firm mindsets to jump ship and head for more effective solutions. A recent wave of next-generation “philanthropreneurs”<sup>16</sup> already proves that classic philanthropy is outdated for many wealthy millennials with an entrepreneurial mindset. They look for more “hands-on” and lasting ways to engage.

When further slicing down the capital supply side, foundations, HNWI and family offices dominate the scene. Other stakeholder groups face individual barriers

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<sup>14</sup>Global Impact Investing Network: “Annual Impact Investor Survey 2017”, 2016, <https://thegiin.org/knowledge/publication/annualsurvey2017>

<sup>15</sup>Oldenburg, Felix, and Struwer, Bjoern, in *Philanthropy Impact: “Full spectrum finance—how philanthropy discovers impact beyond donation and investments”*, 2016, <http://philanthropy-impact.org/article/full-spectrum-finance-how-philanthropy-discovers-impact-beyond-donation-and-investments>

<sup>16</sup>The designation was coined by several publications, among others: <https://www.theguardian.com/sustainable-business/2014/dec/08/new-age-of-philanthropy-philanthropreneurship>

to entry. Institutional investors typically can't invest as they often miss large enough investment opportunities. Corporates seem to be unprepared for impact investing and mostly refrain to Corporate Social Responsibility (CSR) activities or in-house foundations. Retail banking customers need specifically structured investment products for smaller pockets, a task that mainly falls to their banks. A paper by Bertelsmann Foundation and the University of Stuttgart (Germany)<sup>17</sup> tries to guide German financial institutions into developing such offerings. Yet if banks want to move to products with measurable impact and position themselves for the values of millennial customers, they need to change mindsets as well as organizational structures—a paradigm shift. Thus, to activate the retail segment on a large scale will probably take more time if left to incumbent banks alone.

In 2014, FASE prepared an in-depth analysis of the unmet investor needs in each of the major stakeholder groups. This paved the way to define a targeted approach as well as to come up with several innovative solutions. Figure 2 illustrates the main results:

The ecosystem: needs of major stakeholders not fully addressed in early-stage social finance in Germany

Investor types	Tickets (EUR k)	Return expectation			Risk potential	Financial expertise	Engagement		Currently addressed?
		Donation	Impact	Financial			Active	Passive	
1. Active social business angel	50-100	✓	✓	✓	●	●	✓	✓	✓
2. Passive social business angel	50-100	✓	✓	✓	●	●	✓	✓	✓
3. Social venture funds	250-1'000	✓	✓	✓	●	●	✓	✓	(✓)
4. Private philanthropists	50-100	✓	✓	✓	●	○	✓	✓	✗
5. Classical foundations (PRI)	50-200	✓	✓	✓	●	○	✓	✓	✗
6. Classical foundations (MRI)	50-200	✓	✓	✓	○	○	✓	✓	✗
7. Progressive foundations (PRI/MRI)	50-200	✓	✓	✓	●	○	✓	✓	✓
8. Public authorities	>200	✓	✓	✓	●	●	✓	✓	✗
9. Institutionals	>500	✓	✓	✓	○	○	✓	✓	✗
10. Corporates	50-200	✓	✓	✓	●	○	✓	✓	✗
11. Banks	100-500	✓	✓	✓	○	○	✓	✓	✗
12. Crowd	<200	✓	✓	✓	●	○	✓	✓	(✓)

Fig. 2 The needs of major stakeholders not yet addressed in the German ecosystem for early-stage social finance (Source: FASE)

<sup>17</sup>Bertelsmann Foundation: “Social Impact Investment in Deutschland—Chancen und Potenziale für Banken und Sparkassen”, 2016, <https://www.bertelsmann-stiftung.de/de/publikationen/publikation/did/social-impact-investment-in-deutschland/>

### New Building Blocks

When imagining an ideal ecosystem, regulators, investors, intermediaries and investees would integrate seamlessly. Their mindsets would change to 4D, i.e. include the dimension of social and environmental impact. Institutional investors would massively join the market and account for more than 50% of it. Retail customers would have free choice of impact products for small pockets. Foundations would get rid of the habit to only give grants but invest with their capital stock or engage in blended finance solutions. Corporates would go beyond CSR and establish corporate social venture and/or investment activities. Social enterprises would be ready to scale and offer competitive risk-return assets. Banks would commit to act as facilitators and make social capital supply and demand meet. Specialized intermediaries and market places would become abundant. And the legal, tax and regulatory framework would be spotless and supportive.<sup>18</sup>

However, as long as this dream is not reality, much remains to be done. Figure 3 offers some findings outlined by a study by FASE, Ashoka and McKinsey on “achieving impact for impact investing”<sup>19</sup> in developed countries. It describes a detailed roadmap—based on the example of the German market—that includes

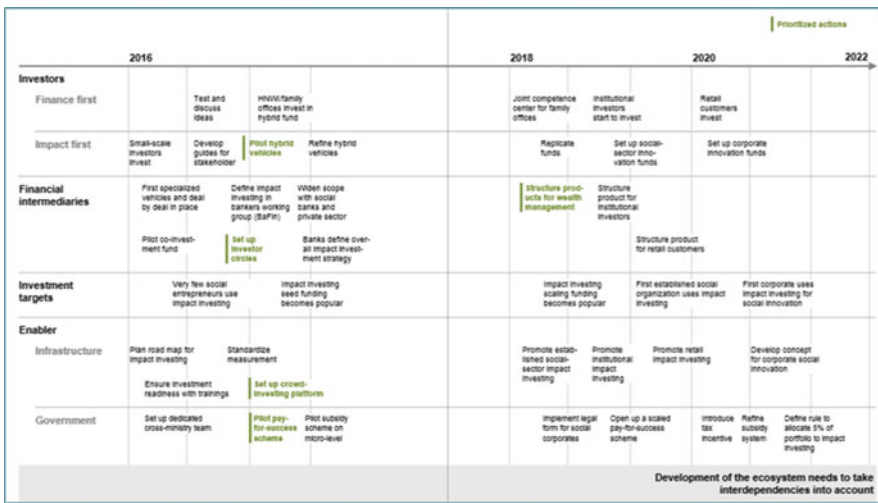


Fig. 3 Roadmap for concerted actions of all stakeholders to create an established social finance market in Germany (Source: FASE, Ashoka and McKinsey)

<sup>18</sup>See also FASE, Ashoka, McKinsey: “Achieving impact for impact investing—a roadmap for developed countries”, 2016, [https://www.mckinsey.de/files/report\\_impact\\_investment.pdf](https://www.mckinsey.de/files/report_impact_investment.pdf)

<sup>19</sup>See footnote 18.

concerted actions of all market participants to address the missing links in the ecosystem:

To date, FASE created several building blocks that help to positively shape the framework for early-stage social enterprise finance. The following are some examples:

**Innovative Cooperation Models**

Whether it is about solutions that effectively blend different types of investors, or those that combine various financing instruments to meet the needs of individual investees, *hybrid finance* is key. To date, FASE designed seven innovative cooperation models within three different groups: (i) tailored financing models, (ii) hybrid cooperation models, and (iii) innovative financing vehicles. Figure 4 gives a brief overview of these solutions. While the first two groups apply to individual transactions with just one social enterprise, the third group, *innovative financing vehicles*, aims to address market failures on a broader scale:

- (i) Tailored financing models: In social finance, there is no such thing as a “one fits all” solution. Several financing instruments and additional features can help to effectively match expectations between a social enterprise and its future investors. They also allow to incentivize the enterprise for impact performance and/or to have investors participate in its profit or revenues. Smartly combined and fine-tuned, these instruments and features form tailored models that are able to meet the social enterprise’s needs while at the same time satisfying a diverse mix of investor profiles. One example will be illustrated with a case study in Chapter “Understanding Sustainable Finance”.
- (ii) Hybrid cooperation models: There is often a rift between different types of funders from various financing planets. To effectively combine these “species” in one transaction was the driver to develop this specific group of models. Philanthropic or crowd funders are bundled with impact investors to create a hybrid cooperation model for the benefit of better social enterprise finance.



**Fig. 4** Innovative cooperation models developed by FASE (Source: FASE)

Details to this group of models as well as several case studies are available in a special report issued by FASE in 2015.<sup>20</sup>

- (iii) Innovative financing vehicles: Systematic gaps in the social finance market call for broader and more diversified solutions. One of them is an *early-stage co-investment fund*. It aims to solve the lack of early-stage finance for social enterprises in Germany and Austria and thereby reduce the risk that the pipeline for later-stage investees will dry out. To be effective and appealing, such a vehicle needs a high-quality deal flow of investment-ready enterprises and a smart design of the underlying fund economics. FASE initiated the fund to become a diversified portfolio of social enterprise investments that are linked to FASE's pipeline of transaction support mandates. The fund will invest at the identical terms and conditions defined by the lead investors of each transaction ("pari-passu") while being passively managed to create an attractive economic profile for fund investors. This project is currently in the stage of marketing. More information to the design of the second solution, the *non-profit investment vehicle*, can be found in the above-mentioned report.

### New Pay-for-Success Solutions

Another important building block are innovative *pay-for-success models (PFS)*. In general, they incentivize investors or social enterprises by providing payments for positive social and measurable outcomes achieved. New PFS solutions are especially relevant for social enterprises that operate in market areas where it is almost impossible to establish business models that can structurally reach break-even (e.g., early-child programs). Here, "classical" repayable financial instruments cannot be leveraged for further growth. Since government funding for social welfare services diminishes, there has been considerable attention for this new approach.

As opposed to another PFS model, the *Social Impact Bond (SIB)*, recent solutions are less complicated and more direct since they remunerate the social enterprise—not the investors—for the achievement of pre-defined outcomes. The plan of FASE is to design and pilot rather small and lean PFS projects where a private philanthropist or foundation assumes the role of the outcome payer. In the case of SIBs, this role typically falls to governmental bodies. One example of a recent innovation are *Social Impact Incentives (SIINC)*.<sup>21</sup> This is a catalytic instrument created by *Roots of Impact* and the Swiss Agency for Development and Cooperation and specifically designed for bringing together high-impact social enterprises, impact investors and public or philanthropic funders. SIINC is planned to be part of the pilots mentioned above. Concrete discussions with suitable social enterprises in Germany are ongoing.

<sup>20</sup>FASE: "Creating Collaborative Funding Models for Social Enterprises—a final report by the Financing Agency for Social Entrepreneurship (FASE) on a project mandated by the European Commission", 2015, <https://77cf4b2b65d8e527a5ddeb5f-piconda.netdna-ssl.com/static/uploads/sites/225/2015/12/FASE-Final-Report-EU-Project-July-2015.pdf>

<sup>21</sup>More information under <http://www.roots-of-impact.org/siinc/>

Other activities of FASE to build the ecosystem for social enterprise finance stretch beyond these models.

## Hybrid Models in Practice

### *The Importance of Hybrid Models*

Models that are able to combine different types of investors, risk-return-impact profiles, financing instruments, impact incentives and/or various requirements on the part of the investees are important in today's ecosystem. To make the right funders match with the right social enterprises, highly tailored individual transactions are a very effective means to improve the social finance ecosystem.

Beyond the existing hybrid models designed, there are a number of ideas and innovations that have the potential to further improve the state of play. They can be grouped in two basic categories: (1) de-risking, and (2) boosting financial returns.

For category (1), philanthropic funders such as foundations, donor organizations, private philanthropists or governmental bodies play a vital role. By providing grants or guarantees for social finance transactions that would otherwise fail to attract investors due to high risk, such donors are able to improve the risk profile of investees and mobilize more private investment. Typical applications for this type of *catalytic capital* are first-loss capital/junior loans, or loss guarantees such as the EaSi guarantee program of the European Commission.<sup>22</sup>

The previously described pay-for-success solutions fall under category (2). By monetizing social outcomes achieved, high-impact transactions are becoming financially more appealing to investors.

The following case is an example of a hybrid model applied to an individual transaction with a social enterprise. Here, several financing instruments and additional features were smartly combined to tailor the transaction to the needs of the target investee and its investor(s). The transaction was successfully closed in 2015 with the support of FASE.

### *Case Study Disability Performance (DP)*

DisAbility Performance (DP)<sup>23</sup> is a social enterprise founded by Ashoka Fellow Gregor Demblin with the vision to create a barrier-free economy. Around 630,000 people in Austria are disabled or have special needs. Yet only 40% of them are actively participating in the labor market. Companies do not yet recognize disabled

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<sup>22</sup>More information: [http://www.eif.org/what\\_we\\_do/microfinance/easi/](http://www.eif.org/what_we_do/microfinance/easi/)

<sup>23</sup><http://www.myability.org/>



people as a specific customer group and therefore lose billions of EUR due to unused talents and unserved clients. For disabled people, this structural weakness leads to an exclusion from society and an inability to lead a life based on equal rights and opportunities. Many of them are willing to work and to consume, but they are underestimated due to a perceived lack of competences or deeply rooted prejudices. Simultaneously, their numbers are growing as a consequence of demographic change. The problem is therefore not a social burden but an economic challenge that has to be addressed by the economy itself.

### **The Solution**

DP solves the problem by positioning itself at the gateway between economy and people. It is an innovative social consultant supporting corporate players to understand and identify the potential of people with disabilities as future employees and clients. At the same time, it connects best practice companies with each other in order to facilitate a knowledge transfer within the economy. The idea is simple: an ageing society will see an increasing number of people with special needs. If companies are able to build the necessary knowhow and flexibility to make use of this potential, they will be well equipped to cope with fundamental changes. To succeed in this, all corporate divisions need to be involved: from recruiting and design of work spaces, to products and services, barrier-free construction and management strategy. Since many companies already have initiated excellent projects for disabled people, one of the main tasks of DP is also to increase visibility and to promote best practice examples through an economy-wide knowledge exchange.

### **The Social Entrepreneur**

Gregor Demblin was born in 1977 and sits in a wheel chair following an accident. In 2009, he co-founded Career Moves, a non-profit company that successfully integrates disabled people in the labor market. The company received many awards, among others the First European Award for Social Entrepreneurship and Disability, and is considered to be a unique light house project across Europe. Gregor is an Ashoka Fellow, a Global Associate of the Business Disability Forums UK, and an internationally renowned expert in the field of economy and disability. With the establishment of DP, he built on his substantial experiences with Career Moves by meeting the needs of corporates for a professional disability consulting.

### **The Financing Model**

DP operates as a for-profit limited liability entity which receives payments for its consulting and networking services. As a consequence, there is an opportunity for a financing model that is sustainable and secure. To build DP, the company needed EUR 330,000. After the necessary repayments to the investors, future profits will be used to fuel the company's growth and to scale its proprietary non-profit job platform Career Moves. The financing model uses quasi-equity, i.e. *mezzanine capital with revenue participation and social impact incentive* ("model 1"). The basic ingredients and characteristics of this model can be described as follows:

Quasi-equity without loss participation is combined with a revenue share. This share comes as a maximum percentage plus a fixed return. The basic intention is to

define a target return for the investors but to cap the amount of the revenue share in the beginning. This enables the social enterprise to develop its business first, without initially paying too much for the freshly raised capital. A typical mechanism to achieve this is to set a cap. This cap is a certain percentage on the nominal value of the investment amount. Each year, revenue share and cap are compared. If the cap is lower, then the investors receive the lower payment but are entitled to catch-up on their claims in future years so that they are finally able to achieve the target return.

The effect of such a model is positive: the burden of the social enterprise to meet the investors' return claims is partly postponed to a later point in time when the company is more developed. This illustrates why such financing structures are often called "patient capital": they give the company leeway to focus on growth for a certain number of years. Another important twist to this model is that it includes incentives for the enterprise to meet their social and/or ecological impact targets. Impact investors are ready to waive a certain part of their target returns if a pre-defined impact goal is fulfilled. These impact goals are typically defined by quantity and by timing. Altogether, this is a model that provides the necessary flexibility to the social entrepreneur while making sure that investors are rewarded appropriately with respect to financial return as well as social impact.

### The Investors

In 2014, FASE approached almost 120 investors with the opportunity to provide growth capital to DP. In the course of the transaction process, the group of interested investors was narrowed down to four—two business angels, one bank and an institutional social venture fund. All of these went through detailed discussions and management presentations. At the end, the social venture fund decided to provide the entire financing amount. The term sheet was signed and the transaction successfully closed in March 2015.

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# The Biological Foundation of an Evolutionary Economy and its Implications for Organizational Culture and Leadership: A New Framework for Strategic Decision-Making



Michael Sonntag

## The (Global) Challenge

The future interests me far more than the past, as I intend living in it.  
Albert Einstein

How much understanding of the past do we need for the future? This question was originally the title of a lecture I had in a psychotherapeutic context years ago. In our everyday understanding, we would naturally agree that it is of utmost importance to understand the cause of what went wrong in the past, in order to learn from mistakes and avoid them in the future. But: Did we learn from climate change, banking crisis and migration fast enough?

And: What happens when we realize that our past was built on false assumptions, when we learn that radical change happens far beyond controllable processes, and when we accept that urgently needed change in our world and economic system doesn't leave us time to contemplate our mistakes but rather demands immediate action? Today it is no more sufficient to just solve problems—we need to create new solutions.

Scientifically it is very clear: The 'new' and 'healthy' will only happen when we create the right conditions. To decisively and actively create said conditions we must first have a very thorough understanding of what a healthy individual, society, ecological system, company and economy look like and what principles healthy systems are built on.

Defining these salutogenetic principles of a sustainably healthy, vibrant, productive, efficient and flourishing, even self-healing system and describing them in a rather condensed way is the aim of this article. It will provide a new framework for decision-making aimed at enabling us to take responsibility on academic, political,

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economic, global leadership, management educational and everyday practical management level to actively tackle global challenges and to govern the required change towards the right direction: To sustainably co-create a maximum of shared value for all involved stakeholders. This is what I call ‘The foundation and principles of a new evolutionary paradigm based on the theory of living systems’ (Sonntag 2017; Sonntag et al. 2018). Or in our context: ‘The Biological Foundation of an Evolutionary Economy’.

In accordance with Douglas McGregor (1960) I also believe, that “possibilities are not recognized, innovating efforts are not undertaken, until theoretical conceptions lay a groundwork for them”.

## Diagnosis First

As just discussed you could seriously argue, that analysing the past will not help us build the needed future let’s nevertheless take a quick look back—hopefully without turning to stone.

Last centuries assumptions

A persistent call has been made in the last decades to radically rethink our scientific assumptions and prevent us from future economic, social and ecological disaster. This call comes from a broad range of global economic, ecological, political and scientific thought leaders.

They all agree that we must burrow out of our very narrow understanding and exploitative manner of dealing with humans and our environment—not only for humanistic and ecologic reasons, but also for economic motive. We must find ways to maintain sustainable growth and profit while respecting the triple bottom line. These thought leaders all stress that it is not enough to fix the current system but that we need to rethink our basic assumptions and replace them with a new scientific and theoretic framework first.

Our current economic and management teaching as well as our consulting practices are still based on principles established by Frederic W. Taylors’s in “The Principles of Scientific Management” published in 1911. The scientific assumption behind this approach is the conviction that analysing every single process in detail allows us to gain control over all processes and eventually, over life. This, then, by extrapolating to a linear, if-then, algorithm, would even enable us to predict and manipulate the future. To see where this system of purported control and power has led us should leave us deeply frightened. And though we perhaps are not (yet) frozen to stone, the fact is that we have put our social, environmental and economic systems as well as ourselves under tremendous stress. We know from neurobiology, that under chronic stress our brains capacity to think clearly declines dramatically. Under stress we also regress. This means: under stress we tend to go back to our old assumed proven behavioural patterns. This reinforces the pre-existing sick and dysfunctional practices (Rööslü et al. 2015). We then try to reinforce our aim to gain control via denying the reality, manipulating information, dehumanization,

digitalization, alignment, standardization and leaning processes and interactions; centralizing processes and political systems; and reinforcing and perverting individual and economic competition. This is putting the whole system into a highly self-destructive treadmill, which leads to organizational burn-out, economic and individual depression and often to uncontrollable violence in the aim of escaping this self-created impotence or, on the contrary, to maintain the system by those, who stand to profit from it. This exploitative approach has ruptured our system and created a still growing gap between economy, ecology and society.

Behind this dynamic and the stress caused is a deep anthropological dilemma: As homo sapiens we have lost our big carnassial teeth and also become quite slow at running away: we have become helpless as individuals. We had to find new ways to detect and deal with threats around us. We learned that we can only survive as a social group and developed a huge social brain, basically enabling us to manage all the very complex social interactions in an extremely quick and efficient manner. We learned to survive through cooperation, diversity and long-lasting relationships. These strategies are rooted in the need to accept and deal with existential interdependency. In our western culture we left this path, as we know, through the split of mind and body by Rene Descartes; introducing pure mathematical principles to philosophy by Isaac Newton; by declaring primacy of mankind over Nature in the age of enlightenment; and by building on genetic determinism, competition and survival of the fittest by natural selection (Charles Darwin).

Assuming that we could control the environment, including other human beings, we became nearly omnipotent. We didn't have to deal with helplessness any more. However, in order to gain this control we had to act as if our environment is based on controllable and closed, not inter-acting and not interdependent systems. So we began to manipulate our reality as if we were dealing with closed systems. We built our scientific systems, our culture, pedagogical approach, and our social and political systems on this assumption. This dynamic is still going on and even accelerating dramatically. Just looking at the money and scientific resources still spent in the aim of detecting more details on genetic processes, digitally analysing human interactions, detecting financial shifts with complicated algorithms, building on the promise of big data or exploring the potential of artificial intelligence and synthetic biology. This is happening even though we all know from every day experience that this doesn't work—we know that social interactions are not a linear factor of sent Tweets, or Facebook 'Friends' and that analysing digital data doesn't really enable us to know what will happen in the future.

The point is that in our (meanwhile global) reductionist-linear mind-set we deeply deny the reality of our natural environment. This is fatal. Not only has reducing our natural environment to virtually closed systems given us only minimal additional insight, even worse, we today know that every statement we make within a virtually closed system is fundamentally wrong! The reality of living systems is not just 'more than the sum of its parts'; the whole is fundamentally different than the single parts. And further—in living systems the 'whole' changes all the time. Of course this applies as well to organizations, enterprises and associations.

We must embrace the fact that to really become a vital and sustainably vibrant system, adjusting our mechanistic worldview will prove insufficient—no mechanic duck will ever become alive (also nor really intelligent) even with endless computing capacities. We need a brand-new operating system based on a radically new understanding of our living environment and reality. To be able to do this we must redefine our scientific assumptions completely.

## Towards a New Paradigm Built on the Science of Living Systems

Let us plunge headlong into the solution and confront us with the reality of our natural environment.

Our natural environment or ‘Natural Reality’ is built on five fundamental characteristics—as demonstrated in Fig. 1:

– **Unpredictability**

In living systems, elements interact with one another in non-linear, non-deterministic, non-trivial ways.

– **Openness**

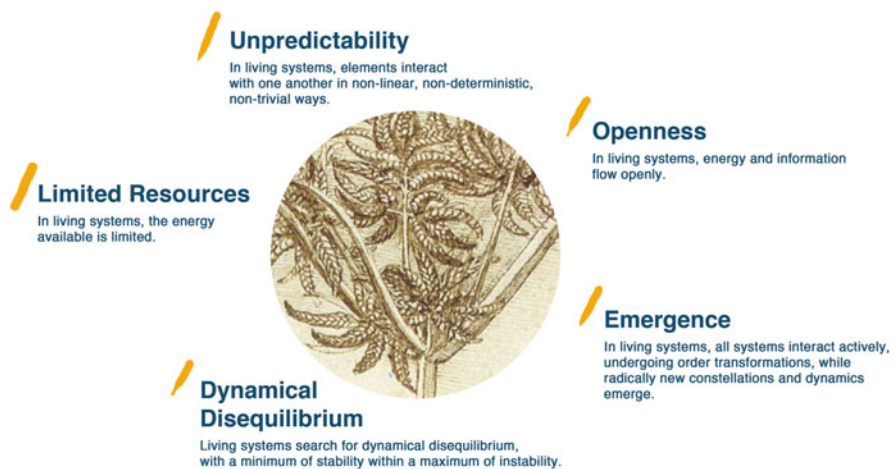
In living systems, energy and information flow openly.

– **Limited Resources**

In living systems, the energy available is limited.

– **Emergence**

In living systems, all systems interact actively, undergoing order transformations, while radically new constellations and dynamics emerge.



**Fig. 1** The characteristics of our natural reality

### – Dynamical Disequilibrium

Living systems search for dynamical disequilibrium, with a minimum of stability within a maximum of instability. They continuously and actively maintain their states as far away from thermodynamic equilibration as possible.

In the face of this reality, not only do business leaders and investors resign themselves, but scientists are also in danger of conceding when trying to manage these facts with traditional reductionist scientific methods.

Interestingly the first attempts to rethink the current scientific assumptions came from physics, where it was found that within each action lies a variational principle that continuously adjusts and changes trajectories towards a final configuration: not all details of physical processes are determined within a given physical condition! This ‘least action principle’ is seen as the quantum revolution and provides the scientific basis of a non-deterministic type of spontaneity existing in the physical world (Grandpierre et al. 2014). It introduces a fundamental uncertainty into the scientific world. Thus the freedom and spontaneity observed in living systems no more contradict physics. But then a big gap remains open: although this quantum indeterminism operates on small, nano scales, the whole organism functions in a non-random way, synchronizing all spontaneous activity into a coherent action according to biological demands.

Following Grandpierre and Kafatos, living systems use all their biologically governable form of energy or “free energy” to increase the organism’s capacity to do “biologically useful work”. Their final aim is to flourish. Living systems are not only autonomous and spontaneous in continuously adjusting the trajectories of their actions, but they actively and creatively influence their environment with the aim of performing their “biological useful work” in the most efficient way. Grandpierre and Kafatos call this the “greatest action principle” in biology and define it as the “first principle of natural science” (Grandpierre et al. 2013).

This brings goal-orientation and purpose (back) into science, from where they were exiled for the last four centuries.

Hector Sabelli called this the “Biotic Logic of quantum processes”: processes in living systems involve action; coexisting and interacting opposites; and causal creation of novelty, diversity and increased complexity (Sabelli and Kauffman 2012).

When focussing not only on single living organisms, but whole ecosystems and accepting the fact of existential co-dependency as well as knowing that living systems do continuously and actively influence each other in the purpose to maximize their capacity to do biological useful work cooperatively in finally serving their common biological purpose to sustainably flourish, we can apply the “greatest action principle” to large systems and organizations:

The ultimate purpose of any sustainably healthy and productive living system is to enhance and utilize all free energy for the sake of the biological purposes of the whole system.





**Fig. 2** The first law of an evolutionary economy

Healthy living systems actively contribute to an evolutionary process, sustainably co-creating shared value for all involved stakeholders with the minimum energy invested, while reaching an optimal evolvability through continuously generating diversity, novelty and complexity.

You may recognize, that this greatest action principle of living systems in fact is the scientific foundation of any theory of purpose. It provides the scientific foundation of what Aristotle called the “causa finalis”, as well as the ethic, philosophic and economic concepts of “The Common Good”. It can also be seen as the scientific foundation of the Stakeholder Theory (Freeman et al. 2007a, b; Freeman 2010).

Although superficially there can be seen some similarities to Michael Porters’ concepts on “Shared Value” and “Competitive Advantage”, the greatest action principle goes much further and deeper.

Applying the greatest action principle to economy we can now define the First Law of an Evolutionary Economy:

As Fig. 2 emphasizes, depending on your set focus, “all involved stakeholders” includes local, co-local and sometimes global economic and ecosystems with their social, cultural and governance issues and, of course, local, co-local and global partners and customers.

This is a radically new paradigm based on the biological need of evolutionary cooperation. That’s why I call it the ‘Evolutionary Paradigm’ (Sonntag 2017).

The defined “1st Law of an Evolutionary Economy” is the foundation of a new economic paradigm and a new understanding of “Scientific Management” (Taylor 1911) based on the science of living systems.

Within the Evolutionary Paradigm the gap between social, economic and ecologic welfare, being created virtually by the traditional scientific management and economic models, fades away and gets closed: the new features become the triple future line in sustainably co-creating shared value, shared wealth and new opportunities. It creates a self-reinforcing, autocatalytic, highly resilient and even self-

healing system, where social, economic and ecologic welfare enhance each other (Sonntag et al. 2018).

Similar to the first principle of natural science, from this First Law of an Evolutionary Economy all other rules and principles can be derived from, as we will see in the following chapter.

Of course this new paradigm is far beyond any standard economic theory, fighting for survival, with competition for scarce resources, where opposites exclude each other, driven by biological determinism and natural selection of the fittest.

It is also far beyond any traditional scientific and economic assumptions in which, basically, building on the theory of closed systems and driven by thermodynamic laws, any action leads to increasing entropy: In the traditional scientific mind-set any interaction is basically negative, because one would lose energy, ending up in chaos and heat death. In contrary the Evolutionary Paradigm is built on the science of living systems. Living systems follow the law of ‘syntropy’ (Di Corpo 2005; Vannini 2006): Through interaction diversity and complexity is created. They follow the “Biotic Logic of quantum processes” (Sabelli and Kauffman 2012), causally generating novelty, diversity and increased complexity (reduction of entropy). Releasing trapped energy and perhaps even creating new energy through “spontaneous generation of virtual particles” (Grandpierre et al. 2014), the energy in the system is enhanced.

Adjusting merely a few single symptoms or dysfunctions, such as abandoning yearly budgeting processes, reducing bureaucratic hurdles, giving more autonomy to some teams or not building on fixed performance contracts will not only fail, but also lead to a big confusion and even accelerate the pre-existing stress in the system.

Initiatives like Impact Hubs, REconomy, social entrepreneurs like [betterplace.org](http://betterplace.org) and Transition Network, B-Corps, Reinventing Organizations or Blue Economy are going into this direction, but often are missing a coherent economic, management and leadership concept.

To build on the paradigm of evolutionary cooperation takes a radical and integral change in mind-set: We have to rebuild the operating system, dropping the old assumptions, principles, practices and tools completely. We need to define a new epigenetic code for economy, management and leadership.

In the following chapter we want to take a look at the principles of this new operating system.

## Designing the Operating System of an Evolutionary Economy

The natural system is not a stakeholder in our businesses; it is the ultimate foundation of the rules.

The 1st law of Globally Responsible Leadership, [GRLI.org](http://GRLI.org)

As we have seen, living systems are not only able to survive within given conditions of our Natural Reality, but they are able to use these conditions proactively and creatively to sustainably enhance their free energy to do biological useful work.

**Fig. 3** The generic principles of living systems

Natural Reality	Generic Principles
Unpredictability	Self-organization
Openness	Connectivity
Limited Resources	Co-location
Emergence	Co-creativity
Dynamical Disequilibrium	Coherence

Scientifically studying living systems and understanding which principles they follow to achieve this goal, allows us to design a radically new set of five operational principles. These five principles are essential, irreducible conditions ‘sine qua non’, meaning that they are all interrelated and one cannot be implemented without the others.

That’s why I call them “Generic Principles”. Together they define what I like to call the epigenetic code of any living system, able to sustainably maximize the co-creation of shared value with a minimum expenditure of energy, while maintaining an optimal evolvability.

Figure 3 shows the Generic Principles of Living Systems. These five Generic Principles are the scientific foundation of the operating system of an evolutionary economy, as well as the foundation of any healthy, human-built organization such as any company, enterprise or organization.

Table 1 explains the features of the five Generic Principles and their interdependence in greater detail.

As mentioned, the Generic Principles of the new operating system are all interconnected and interdependent. That is, as an example, to build on radically self-organizing teams with decentralized, real-time decision-making, one must have a completely open information system working simultaneously in multiple, open, self-organizing information networks. To have maximal energy mobilized, one must work in radically decentralized, locally acting networks. Going through continuous, sometimes deep transformational processes, letting go old patterns, enabling new ideas, solutions and products to emerge, needs not only a “secure base leadership”

**Table 1** The features of the five generic principles of living systems

The characteristics of our natural reality	Generic principles of living systems
Unpredictability	<p>Self-organization</p> <p>The principle of building on autonomous, self-organizing entities is Nature’s way of producing order within complexity with a minimum of energy expenditure and at the same time to regain a maximum of evolutionary capacity (<i>evolability</i>). In living systems there is no central controller. Rather control is decentralized and distributed to every part, which acts itself with the maximum possible autonomy</p>
Openness	<p>Connectivity</p> <p>Living systems connect and ‘co-operate’ together spontaneously and openly. They exchange energy and complex information easily internally and between each other. Thereby they are able to build and amplify resonance broadly to energize the whole system or parts of it. In living systems ‘information forms energy’</p>
Limited Resources	<p>Co-location</p> <p>Nature organizes itself in the most efficient way by building on self-organizing, local networks, coordinated in self-similar patterns and synchronized with natural rhythms. Through local interaction, organizational structures appear spontaneously: local interaction forms the organization!</p>
Emergence	<p>Co-creativity</p> <p>Living systems, through wide-ranging interactions allow radically novel solutions to emerge. In this ‘systems meeting’ process energy is released, while order and higher forms of organization emerge: diversity, novelty and complexity arise; evolability and resilience grow</p>
Dynamical Disequilibrium	<p>Coherence</p> <p>Living systems are contained within boundaries. They provide coherence through governing all free energy towards evolutionary cooperation, while maintaining the integrity and identity of the whole system. The boundaries are dynamic within themselves, adapting to their environment and internal processes continuously. Their main purpose is to enhance the vitality and self-organizing capacity within the system</p>

(Kohlrieser et al. 2012), but a system that is build on long-term, personal, trusting relationships between all stakeholders.

Some of the designed Generic Principles of living systems are already being developed, discussed and applied on organizational levels. Good examples are the Swedish Handelsbanken, Morning Star, W. L. Gore, Semco Partners, Valve Software, Buurtzorg or Gangplank ([www.whatisgangplank.com](http://www.whatisgangplank.com)).

Gary Hamel (Hamel and Breen 2007; Hamel 2012) with his engagement platform “Management Innovation eXchange” is moving strongly into this direction, although not having a coherent concept. The same is true for Stephen Denning (2010) mostly focussing on self-organization and Scrum processes. Frederic Laloux (2014) with Reinventing Organizations, developing “evolutionary-teal

organizations” and also having living systems as a metaphor in mind, is already having a very broad and detailed set of practices, although also missing a coherent framework. A similar situation we have with Jurgen Appelo’s great summary of agile tools and processes in his book *Management 3.0* (2011). A lot of already tested experience is condensed in the Beyond Budgeting Roundtable, [BBRT.org](http://BBRT.org). In their book ‘Beyond Budgeting’ (2003) Jeremy Hope and Robin Fraser, inspired by the Swedish Handelsbanken case, already started to develop a new mind-breaking management model based on radical decentralization. Companies of the Beyond Budgeting Roundtable developed the concepts and gained a tremendous experience in implementing new management aspects (Bogsnes 2016; Hope and Player 2012; Hope et al. 2011; Morlidge and Player 2009).

All these examples are trying to connect different, more agile and dynamic approaches to management. Integrating them into a coherent theory and understanding of an evolutionary economy and paradigm, based on the science of living systems, will give them the impact to really start to change our investment strategies and business world, leading us into an evolutionary economy.

It is important to understand that the defined new operating system based on the five Generic Principles of living systems, as well as the mentioned examples on a management or business level are on a pure technical, operational and process level. Understanding the “greatest action principle”, we know that healthy living systems always follow a very clear and unbiased purpose: to govern all free energy in the system towards *maximizing its capacity to co-create shared value for all involved stakeholder* (Sonntag 2017). Just implementing a new operating system on a technical and management level is not sufficient to become sustainably vibrant and healthy. This is the case on an organizational and even more on an economic level.

Therefor to follow the First Law of an Evolutionary Economy, the five Generic Principles need to be framed into two *Governing Principles*.

In Fig. 4 the Governing Principles of Evolutionary Systems are defined on the strategic and leadership level:

**Fig. 4** The governing principles of evolutionary systems





**Fig. 5** Governing towards the common good

Only when adding these two Governing Principles we will not only have a well functioning living system, but a sustainably flourishing, self-reinforcing and resilient evolutionary economic system. Without the two Governing Principles the whole self-organizing system will fall apart.

In the centre of this Evolutionary Paradigm is the sustainable co-creation of shared value in decentralized, autonomous operational units and engagement platforms in direct contact with their natural environment, stakeholders and customers. We must understand that this interactive, co-creative process in direct contact with the environment is THE locus of any sustainable value creation. This is especially true on a business and economic level (Gulati 2010; Prahalad and Ramaswamy 2004;).

Putting this value creating, customer- and stakeholder-centred process in the centre of the economic system and the enterprise’s design (Freeman 2010; Ramaswamy and Gouillart 2010a, b; Freeman et al. 2007a, b; Sonntag et al. 2018), one can understand the designed Generic Principles together with the two Governing Principles as the conditions that enable and optimize this core value-creating process.

Digging even deeper towards a synthesis of the necessary framework yields the following Fig. 5: An evolutionary economic system should enable and enhance the sustainable co-creation of ‘The Common Good’ (Zermatt Summit Manifesto; Centesimus Annus Pro Pontifice Foundation) in the most efficient way.

There are several points that would have to be discussed more deeply to really understand this new operating system. Lets have a look at the two most important:

1. One crucial point is the underlying human nature assumption:

The Evolutionary Paradigm requires a clear concept of human beings able and willing to continuously collaborate in an open manner and take personal responsibility, while building long-lasting relationships that permit a mutual

transformation. This demands a human nature theory that goes further than pure Type Y (McGregor 1960) or Type I (Pink 2010) assumptions: neither acknowledge the fact of existential interdependency, including the need to build long-term relationships. I thus suggest using a different term, a 'Y2Y' *Human Nature Concept*: understanding humans as not only willing to take initiative and responsibility if given the opportunity, but to really engage with each other in an existential, interdependent relationship, able to go through crisis and deep, order-order shifts together, while not losing the overall purpose to co-create the "Common Good".

This Y2Y Human Nature Concept is scientifically built on the fusion of the theory of intrinsic motivation, especially Deci and Ryans work on "the performance of the task" and "self-determination"; the theory of Prosocial Motivation (Grant 2011); and the Bonding theory (Bowlby 1990; Mahler et al. 2000; Winnicott 1965). It casts us as not only maximizers of individual performance, but as intensely social creatures that have a deep and existential need to belong and connect with others. Beneath these attitudes there are deep neurobiological forces helping us to create empathy and maintain these social bonds so as to comprehend, share and respond appropriately to others' emotional states (Panksepp 2011). This is going much deeper and further than just being altruistic. It is our human capacity to deal actively with the fact of interdependency. Not only between humans, but with our whole environment. It is the biological answer to our need to sustainably co-create shared value if we want to live and flourish. This concept of Y2Y is in fact the basis of any really meaningful CSR or social entrepreneurship. It also is the foundation of any secure base leadership theory truly enabling and enhancing high and sustainable performance, such as applied in the IMD High Performance Leadership Program (Kohlrieser et al. 2012).

The Y2Y Human Nature Concept is the precondition for continuous evolution and the ability for innovation: Real innovative processes happen between the systems or when systems meet. The Y2Y Human Nature Concept can also be seen as the neurobiologic foundation of the stakeholder engagement theory, of stakeholder capitalism (Freeman et al. 2007a, b) and the concepts of conscious capitalism ([www.consciouscapitalism.org](http://www.consciouscapitalism.org)).

2. The second immense topic that needs to be understood deeply, is the question of control:

As we have seen, in living, evolutionary systems there is no central control—nature builds its operational processes radically on decentralized, self-organizing principles. This does not mean that there is no control at all and that everything is based on chaos and randomness. It means that control is also radically decentralised, and built in every single autonomous and locally organized operational process and action. From Affective Neuroscience (Panksepp and Biven 2012) and Affect Logics (Ciompi 1991, 1994) we know that our brain has ancient and extremely powerful systems that allow us to govern the whole body with all its simultaneously happening, self-organizing activities including all interactions with our environment into coherent and purposeful actions. It is able to do this in an extremely effective way with the absolute minimum energy invested.



As an example, our intense natural urge to search for “nuts and knowledge” has its neurobiological substrate in a system called the SEEKING System (Panksepp 2004; Panksepp and Biven 2012). Neurobiologically it is the most important motivational system. An activated SEEKING System is the precondition that any predatory aggression, in the sense of active movement or drive can occur. The SEEKING System is able to overrule even very strongly trained and learned behavioural patterns. It is the basis for what Deci and Ryan call “the performance of the task” and the cornerstone of any intrinsic motivation and innovative drive. The SEEKING System is dramatically reinforced as soon as it is combined with supportive co-seeking human relations. On the other hand it breaks down immediately in the case of social deprivation or marginalization as well as social unfairness. It also breaks down in the moment when consummatory needs are activated. The specific positive affective characteristics the SEEKING System promotes—anticipatory euphoria—is different to any pleasure of consumption. Neurobiologically there is a clear on-off-principle: either you are in a consummatory mode or you are in an active seeking mode. You cannot be in both at the same time—this explains why any extrinsically rewarding consummatory motivation, e.g. financially rewarding systems, although also creating an enthusiastic (greedy and hungry) state of mind, are radically contradictory to an activated SEEKING System. This on-off-principle seems to be true for the other affective motivational systems as well.

Also the ability to maintain long-lasting, co-dependent relationships has its biological roots in a combination of several neurobiological systems that correlate with empathy. Even our social value system is deeply embedded as primary affective processes within our brains.

These neurobiological systems are the foundation of strong goal-directed emotional processes, which have the purpose to steer the whole self-organizing system into the direction of sustainably co-creating a maximum of shared value for all involved stakeholders with a minimum energy expenditure.

In its very roots it is about positive and negative feelings:

An overall positive emotion occurs when we feel that we are able to govern our limited free energy (and limited life time) into a sustainably purposeful work with the minimum of energy invested while even opening new opportunities (evolvability).

This evaluating and deciding process happens continuously on every level at any time—concerning strategic decisions or any smaller operational decision and action. We will deepen this in the following chapter. The described neurobiological affective systems are the way we as humans learned to actively manage the dependency on our complex environment and each other in a very efficient way, while maintaining the integrity of each individual and of our environment. The described affective motivational neurobiological systems enable us reduce the complexity of cognitive inputs by appropriately regulating the focus of attention and perception, and directing our actions into coherent, goal-directed movements. In the end it’s about our *ability to actively maintain our integrity*. The overall steering feeling that emerges when we are on this path of actively and sustainably maintaining our integrity, is a feeling of *Grace and Pleasure* (Lowen 1966). Any action that does not lead to a feeling of Grace and Pleasure does not add value to the purpose of sustainably co-creating shared value. This is how the self-organizing chaos is governed towards a coherent, purposeful action.

On the other hand, when we are not able to manage our limited energy cooperatively and co-creatively in the described way, we feel helpless and stressed. Our



behaviour will be dominated by avoidance. The resulting emotions are fear, panic and pain. It ends in a systemic breakdown and depression.

This gives an entirely different view on what we normally would call our gut feelings or what Daniel Kahneman calls “System 1” (Kahneman 2011). Our affective systems are not just unspecific, archaic, rough emotions, which must be controlled by higher brain functions or “System 2”. They are in fact detailed information- and steering-systems, enabling us to actively deal with the immense complexity of our natural environment, including social interactions, in a highly specific, efficient and effective way.

From Affective Neuroscience and Affect Logics we know that these affective motivational systems are much stronger than any behavioural patterns. They in fact steer our cognitive capacity in a certain direction. These concepts not only overrule cognitive processes, but as scientific facts, they out-rule anything we learned about cognitive behavioural processes, cognitive neuroscience, learning organizations and behavioural economics. And they put homo sapiens economics definitely into the storeroom.

## **Implication on Organizational Culture, the Management Model and Strategic Decision-Making**

Although, looking at affective processes as the steering system of evolutionary systems and stating that Grace and Pleasure are the most important KPI's and even when talking about the co-creation of The Common Good being the core value creating process, we must keep in mind that this is not about a humanistic approach to business, but the result of a very clear scientific standpoint and framework with the simple aim to increase the capacity and ability to do biological useful work and sustainably produce the maximum of shared value with the minimum of energy invested while maintaining the optimal evolvability within the given natural reality. There is absolutely no stochasticity in this process—each step or sub-process is built on very clear economic and causally-generated creative patterns, deeply embedded in the DNA of every living system.

In its basic attempt, this is a very pragmatic and emotionally unbiased approach to economics and business.

This will only work efficiently if the organisational culture and the management model, including all levels, from operations to processes, to organizational structure and transformation processes as well as leadership and the governance principles are fully congruent with the described Generic Principles. Otherwise the free energy will not be flowing into the production of shared value, but will be absorbed and destroyed through internal, dysfunctional, complicated, resource-consuming control and micro-management procedures. Good employees, as well as customers, and even investors, will be prompted to flee.

As Edgar Schein (2010), Timo Meynhardt (2016) and others claim, the cornerstones of any organizational culture are its purpose and values. On a deeper level, the

purpose and values are driven by our often unconscious scientific, economic and human nature assumptions. Shifting from an organizational culture being led by the traditional mind-set with its presumption of controllable variables to a culture actively coping with the Natural Reality of our world, the economic purpose and the values must be redefined completely.

Learning from Nature we know that living systems, operating on the edge of chaos, are extremely dependent on the conditions created. In fact these evolutionary systems are only governable through the boundaries and conditions one sets actively. This makes the organizational culture extremely important. In a living, evolutionary system the culture is not just a side effect or secondary result of the operations and the management system. The organizational culture is the governing system! Its only aim is to create the right conditions or secure base for the core process: self-organizing, sustainable value creation together with all involved stakeholders (for more detail and a practical business case see Sonntag 2017).

Again let's keep in mind that the overall strategic goal is to govern all free energy towards evolutionary cooperation and putting this goal or core process into the centre of the enterprise's design.

The leadership's responsibility is to create the right conditions through building an organizational culture that is able to release "the power of co-creation" (Ramaswamy and Gouillart 2010a, b) through enabling and enhancing evolutionary cooperation.

Building on the Generic Principles of living, evolutionary systems we can define the conditions that have to be created on a cultural level to reach this goal:

Figure 6 depicts the cohesion between the five principles

**Fig. 6** Organizational culture based on the evolutionary paradigm



## ***Organizational Culture Built on the Evolutionary Paradigm***

### *Coherence*

The goal is to maintain the integrity of all involved stakeholders through

- Building on the Y2Y Human Nature Concept
- Governing every decision and action in the direction of sustainably co-creating shared value
- Engaging all involved stakeholders actively

### *Connectivity*

The goal is to perceive and actively share complex information continuously by

- Providing open, informal and dynamic information systems
- Requiring organizational and interpersonal security which enables everyone to stay in an open, connecting and actively sharing, cooperative state
- Creating as much direct physical contact with the environment as possible, letting resonance occur spontaneously

### *Co-creativity*

The goal is to build long-term, caring relationships through

- Building any interaction on mutual interdependency
- Letting people develop empathy and concern
- Enabling co-creative and transformative processes

### *Self-organization*

The goal is to enable autonomous decision-making through

- Radically decentralizing decision-making
- Building on small, diverse, agile and autonomous teams
- Interacting intensely and directly with their stakeholders

### *Co-location*

The goal is to build a radically decentralized, network organizational structure by

- Building on local, self-organizing, autonomous operational units and engagement platforms
- Using and actively co-creating local, easily scalable synergies
- Growing diversity, novelty and complexity

If we put the sustainable co-creation of shared value into the centre of the enterprise's or our economy's design, working with a system that functions completely on self-organizing processes with radical decentralized decision-making in direct contact with stakeholders and customers, leading to a network organizational structure, we must first be very conscious and clear about our human nature assumptions. We must build our leadership, processes and decision-making radically on the Y2Y Human Nature Concept. This includes learning to let go of individual power and centralized control. As stated in the introductory chapters, this is a deep

anthropological challenge, which needs to be taken seriously, including not only corresponding leadership training, but also providing continuous support and coaching. The Y2Y Human Nature Concept is also the precondition to be able to work with a stakeholder engagement model, which is, as we have seen, one of the fundamentals of the Evolutionary Paradigm. Decentralizing decision-making will release a lot of personal engagement, human potential and organizational energy, which has been blocked by the traditional management system. It will lead to increased diversity, novelty and complexity. These features have to be decisively incorporated into the organizational culture (Sonntag 2017).

The same principles that create the right conditions for the sustainable co-creation of shared value within a company or an organization are the foundation of every operational and strategic decision (Sonntag et al. 2018).

As we have seen, every motivational system works on an on-off principle: either the system is activated or it breaks down if the right conditions are missing. Although biology creates a wide range and variation of evolutionary opportunities, in applying the Generic Principles it is very rigid!

The same is true for strategic decision-making within the Evolutionary Paradigm: each basic condition has to be actively and properly applied—no compromises accepted. Each of the following questions must first be deeply understood and then answered with a clear ‘Yes’. Otherwise the whole system will fail. No action should ever be taken before all of the criteria are met.

### ***The New Framework for Strategic Decision-Making***

Again the overall purpose is to enhance the free energy and to govern the energy towards evolutionary cooperation.

First the two Governing Principles must be met:

- Strategy
  - Are we decided to govern all free energy in order to increase the capacity of evolutionary cooperation while sustainably co-creating shared value for all stakeholders?
- Leadership
  - Are we able and willing to proactively, co-responsibly and continuously build the right conditions within which the co-creation of shared value is enabled and enhanced?

Then the Generic Principles must be applied:

#### A. Coherence

- A1 Do we base all our decisions and actions on an Y2Y Human Nature Concept?
- A2 Are we willing to build our decisions on a stakeholder engagement model (only win-win decisions are accepted)?

- A3 Are we willing to maintain the Integrity of all stakeholders even during crisis?

#### B. Connectivity

- B1 Do our processes enable the perceiving and active sharing of complex information?
- B2 Are we providing information systems that are open, informal and dynamic, adaptable to a given situation?
- B3 Are we providing direct physical contact with the stakeholders allowing resonance to occur spontaneously?

#### C. Co-creativity

- C1 Are we willing to build our interactions on mutual interdependency?
- C2 Are we willing to let everyone become strongly engaged and develop long-term relationships built on empathy and concern?
- C3 Are we conscious and willing to accept that any co-creative process can involve transformational dynamics in which both interacting parts, including ourselves, can go through transitions?

#### D. Self-organization

- D1 Are we radically decentralising decision making?
- D2 Are we building on diverse, small, agile and autonomous teams?
- D3 Are these teams connecting actively, dynamically and intensively with the stakeholders?

#### E. Co-location

- E1 Are we thoroughly building a decentralized network organizational structure with locally and autonomously acting operational units and engagement platforms?
- E2 Are we using and actively co-creating local, easily scalable synergies?
- E3 Do we aim for a growth in diversity, novelty and complexity?

Exactly the same decision making framework is applied in everyday operational decisions and any decisions across the value chain of enterprise activities. This is what decentralizing controls means: in living systems we see that every micro-process follows the same basic principles. They are never centrally controlled, but directly implemented into the operational processes.

It may look simplifying to repeat the same principles on every level. But behind this there is a biological code: this recursive pattern creates a highly energy-efficient, fractal structure, which allows scaling processes quickly without any central control and with investing a minimum of energy. Today we know that most biological processes are based on such fractal, recursive patterns.

As an example, a scrum team deciding at its daily stand-up meeting on how to proceed in a specific situation will check each part of the decision making framework, like:

- Will our decision lead to create a maximum of free energy and lead to the co-creation of shared value? Yes or No.
- Are we building our decision on an Y2Y Human Nature Concept? Yes or No.
- Are we engaging the involved stakeholders? Yes or No.
- Are we sharing all relevant information openly? Yes or No.
- Are we building on our local network and partners and using synergies? Yes or No.
- and so on.

One could argue that this decision making process is much too complicated and slow. But that is not the case. We are doing this procedure on an unconscious level constantly in any everyday action. We always try to optimize our energy and continuously adjust the trajectories to decide which action will have the greatest impact with the least energy invested and enable us to stay adaptable (greatest action principle). Any action that will inhibit us in our autonomy, will lead to a chronically depleted energetic state and will give us a bad feeling, and will therefore force us to find better solutions. If this is not possible in the moment, we will decide to take some time to think (or sleep), get more information, try to deepen the relationship with concerned stakeholders, or get help or advice from our peers or elders. This is the most healthy and most efficient way of moving forward, creating a maximum of shared value and flourish sustainably within the given natural environment. As we have seen, we as human beings have acquired the capacity to deal with our complex, continuously changing environment including all (often very) complex social interactions in an extremely quick and efficient way. In using our affective capacity we have the possibility to quickly decide if something feels right or not. This information processing capacity in humans has been calculated by Grandpierre et al. (2013) to be as huge as  $10^{22}$  bits/s. This “organismal unconsciousness” is defined as the number of decisions made at the cellular and supra-organismal level (e.g. including collective unconsciousness). Our normal mental, conscious processing capacity is about 100 bits/s or less. This includes the slower cognitive decision making parts, which had been described by Kahneman (2011). They indeed are slow and not really helpful in daily business.

But again: this way of quick and highly integrative continuous decision making within a complex environment works efficiently and sustainably if the right conditions have been established in the organizational culture.

These conditions must be created actively on a strategic level. This new comprehensive framework for strategic decision-making, based on neuroscience and the science of living systems will enable us to move proactively into the future (Sonntag et al. 2018). It enables us to leave the strategic world as we know it with its very limited and in fact incorrect understanding of competitive advantage behind us (McGrath 2013) and start to build our economy on “natural cooperation”—as we know: the population with the highest proportion of co-operators has the highest average fitness (Nowak 2006).

To reach this goal, we have to become brutally strategic.

## Implications for Positive Impact Investment and Globally Responsible Leadership

As we have seen in the previous chapter, implementing an evolutionary culture is in a first instance driven by hard economic reasons. The traditional system not only fails to create sustainable value, but it is also highly inefficient concerning human and physical resources. It also fails to be adaptive; inhibits innovation and disables the personal and professional engagement of the employees and the leadership. Even in the short term it fails completely, as we know from history.

Any investor will reasonably look for a maximum and continuous value-creation, with a minimum of financial resources invested, knowing that the company is able to easily adapt to a quickly changing economic environment. This is the final aim of any sound investment strategy (Sonntag et al. 2018).

As a company or investment fund engaged in Positive Impact Investment you will already know that this is only possible when integrating social, environmental and economic considerations actively in your evaluating process. The strategic decision-making process defined in the previous chapter provides a comprehensive, tight and clear framework to make your investment decisions:

Basically respecting the triple bottom line and providing long reports on CSR or ESG will definitively no longer be sufficient. It's no more acceptable to just try to prove, having made some incremental progressive steps. You will want to be sure that the company you are investing in is really working on radically different strategic and operational levels, allowing them to maximize their free energy and actively invest in the co-creation of shared value for all involved stakeholders. This attempt must be embedded in the DNA of their organizational culture. It will no longer be sufficient to have these visions and goals and a quiet diplomacy with top management—you will want to see that they have abounded any hierarchical structures, fixed budgeting, traditional performance management and inadaptably, linear process management with fixed targets. Also just having implemented some “Teal” aspects (Laloux 2014) on an organizational level will not be sufficient. You will want to know who their local stakeholders are and how these are integrated in daily and strategic decision-making. Without having a decisive position towards an Y2Y Human Nature Concept (which goes much deeper than just accepting human rights), you will not invest any time in even investigating a company. Also being lean and agile in the processes will not be enough—the incorporation of the whole Evolutionary Paradigm in the DNA of the company's culture is required. A CEO claiming that his company is customer oriented, when still working with the old, traditional mind-set of centralized micro-managing processes, will just prove, that he hasn't understood the new principles at all.

Finding or selecting such companies is one part. As a Positive Impact Investment company or fund you will want to go further. You will want to support the creation of such companies. This is already happening internationally on a wide scale (e.g. in the Triple Bottom Line Investment Conference, see [tbligroup.com](http://tbligroup.com)). You will want to be sure the companies have deeply understood the Generic Principles of

evolutionary systems and have incorporated them into their strategy and management model. You will also want to be sure that, as this highly self-organizing, agile, dynamic and locally strong start-up company will grow, they will not fall into traditional management strategies and corporate culture as they become bigger or when the founder leaves the company. You will also want to preclude that a new CEO, Head of group strategy or a new Board member is assigned with the attempt to get “more structure and control” into this seemingly chaotic company.

The other, even much more challenging and interesting question is, whether it is possible to transform a traditionally organized company into a highly dynamic organization, built on the principles of the Evolutionary Paradigm.

My answer is: YES. This kind of transformation is possible, but it will take a radical and top-down approach. Any incremental reorganizational attempt will not only fail and end up in a tremendous waste of financial and human resources, but it will be destructive. In my understanding any incremental approach is clearly contraindicated. This is especially the case when the transformational attempt is coming from within, even with its best objections, but without being strongly understood and wanted by the company’s owners (for more detail about transformation in living systems see Sonntag et al. 2018).

There are many reasons why an incremental approach fails. Again we can learn a lot from the biology of living systems. The good news from recent science is: Yes, it is possible to change and transform very complex, living systems radically in a safe way within short time! This process of transformation in living systems follows very clear concepts and principles and is far away from any traditional change management concepts and definitely far beyond experimentation, which is strongly emphasised in recent management literature. Nature doesn’t take the risk of incremental transformation—“God doesn’t gamble” as Einstein said (Sonntag et al. 2018).

The bad news is that this kind of transformation only works when one is able and willing to change the whole operating system at once. This means to radically abandon and erase the old way of functioning and managing processes. This can start within well-defined segments within the company, but it has to be carried through in a comprehensive way, incorporating all transformational and operational principles from the very beginning.

For a Positive Impact Investment company or any other investment company or fund manager this means:

1. Yes it is possible to radically transform a traditionally organized company safely and within a short time and with only a minimum of energy and financial resources invested.
2. It will only work when the transformation is organized under the condition of radically abandoning all traditional control mechanisms.
3. It has to be initiated and, in an initial phase, tightly governed top-down.
4. It will only be possible if the owners, in our case the investors, understand the new model and take full responsibility for governing the transformational process them selves.



5. To be able to do this, the investment company must have incorporated the Evolutionary Paradigm in their own culture and strategy.

To be able to do this kind of deep transformation as an Investment Company you will first need a very clear and deep understanding of the scientific and economic assumptions and principles of evolutionary systems. You first need to know how a healthy organism, company or economy works and which principles it follows, before you can start to transform and cure the sick system.

In this article I started to define and describe these new principles built on the science of living, evolutionary systems. Its aim is to show how we can overcome the virtual split between social welfare, sustainable environmental development and culture on one side, and financial profit on the other side. The Evolutionary Paradigm goes much further than just showing that applying ESG criteria's can provide some per cent of added profit. It provides a completely new and comprehensive theory of sustainable co-creation of shared value and wealth. The Evolutionary Paradigm not only closes the mentioned gap, but provides a system where financial profit and social welfare as well as environmental sustainability become an autocatalytic process, continuously self-enhancing the sustainable co-creation of the Common Good, thereby growing resilience and even developing self-healing dynamics. It shows how we really can place people at the centre of our future vision of economy and society and how an economic system can generate inclusion as the fundamental measure of its success (Archbishop Diarmuid Martin in 'Finance and the Common Good', *Cetesimus Annus—Pro Pontifice Foundation 2016*). This is not only the business of investors, although I believe that global transformation will have to be driven by them. It is true for any Globally Responsible Leadership. Understanding the principles of the Evolutionary Paradigm as a coherent system will enable all the existing good attempts on a global leadership, economic and management educational level to really accelerate their energy and gain the impact we need to change our world (see [GRLI.org](http://GRLI.org), [50plus20.org](http://50plus20.org), [commitnow.org](http://commitnow.org), [unprime.org](http://unprime.org)).

Applying the Evolutionary Paradigm, to transform our current economic system we do not need much understanding of the past—we can start “Working from the Future backward” (Hamel and Breen 2007).

Or: “Rather you need to focus primarily on getting the initial conditions right. If you start from a good place, then the choices that lead to success will look like the right choices.” (Christensen and Raynor 2003).

Let's close by opening a new challenge:

The Evolutionary Paradigm will only work when, as we have seen, all free energy flows into sustainably co-creating shared value. Shared value also means co-owned and shared wealth! So as an investment company you will perhaps have to redefine your strategic goal . . .

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# Management Education as a Crucible for Ethical Social Change



Mary Godwyn and Suzanne Fox Buchele

## Purpose, Significance and Impact

This chapter is an exploration of an aspirational ethics program for undergraduate students that carries an optimistic set of goals for their potential to act as **agents of social change**. Ashesi University College is a private not-for-profit, 501(c)3 organization, undergraduate-only university college in Berekuso, Ghana. Founded in 2002, its mission is to train a new generation of ethical, entrepreneurial business leaders in Africa and to nurture excellence in scholarship, leadership and citizenship. Students graduate with degrees in Business Administration, Management Information Systems, Engineering and Computer Science, all based on a liberal arts model. When compared with institutions around the world that offer business and management degrees, there are *three* main defining aspects that make Ashesi distinct and reflect its commitment to ethical standards. The first is the commitment to gender and economic class diversity: 47% of students are female; 55% of students receive some level of scholarship funding (<http://www.ashesi.edu.gh/>), and 25% receive a full scholarship.

This level of commitment to a diverse student body is quite unusual in institutions of higher learning generally, and in African nations and Ghana specifically (Atuahene and Owusu-Ansah 2013). It is even more unusual in institutions that focus on subjects associated with traditionally male-dominated fields such as business, computer science, and engineering. For instance in the United States, women earn fewer than 20% of undergraduate engineering degrees (Yoder 2016), and in the

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UK under 15% of those earning an engineering degree and only 5.5% of engineering professionals are female (<http://www.wes.org.uk/statistics>). The first impact therefore is access to an engineering degree for females in Africa.

The second distinguishing characteristic of Ashesi is the high employment rate of graduates, the impact therefore being successful attainment of employment: According to records kept by the College, 96% of its students are employed 3 months post-graduation, and 90% of students remain in Africa, either in Ghana or their home country. In Ghana, like much of Africa, pervasive unemployment of college graduates is a major national concern and obstacle for economic growth (Kokutse 2011; Owusu 2014); the level of post-graduate employment for Ashesi students presents a dramatic exception. The third characteristic is the commitment to the Honor Code: Ashesi has an examination Honor Code and a Code of Ethics. Though honor codes governing behavior during examinations are commonplace at institutions of higher learning in the United States and Europe, they are virtually non-existent in African colleges and universities. In this way, Ashesi is not only exceptional, but unique among Ghanaian educational institutions of higher learning. The origin, implementation, and continued employment of the precepts in Ashesi's Honor Code are the focus of this chapter.

On a scale where "0" is the *most corrupt* and "100" the *least corrupt*, New Zealand ties with Denmark as having the least corruption in the world with the highest score of 91; Afghanistan has a low score of 12, and Ghana falls in the middle with a score of 46 (<http://www.transparency.org/country>). Among the goals for Ashesi graduates, administrators pointedly identify **social change through ethical leadership**, specifically the reduction of corruption in Ghana and on the African continent generally. Patrick Awuah, President of Ashesi, articulates this goal:

I believe that when people think in an ethical way, they have empathy. They have a conscience, and they are better citizens and better leaders, which is what Ashesi is all about. I also hope that it will become clear to other universities and their student bodies that people can be successful and ethical in our country and that Ashesi students will demonstrate this. They have a big responsibility to be ethical leaders... I hope that institutions that frown on cheating and unethical behavior will become the norm in Ghana.

Using a justice-based ethical system to prioritize diversity in gender and socioeconomic class and inviting students to experience and implement ethical behavior on personal and interpersonal levels, the intention is to create and educate honorable business leaders who then change the expectations for honesty and integrity in the larger culture. The plan is for Ashesi graduates to work in private sector initially (they are currently not embraced by the public sector). Overtime, as graduates become leaders in the private sector business community, the hope is that they will be in the position and have the inclination to join and influence the public sector, and therefore ultimately transform the current commonplace corruption in Ghana into a culture that reflects honesty and integrity. One Ashesi graduate explains:

Most Ashesi students would leave public institutions or we would get kicked out anyway. We are doing good work in private institutions. . . Eventually some [Ashesi graduates] will become wealthy enough to participate [in the public sector]. For that it is just time. You need someone who has enough clout who says I want to make the public systems work. Once you get more Ashesians in civil service, change will come. It will come with time. As a country do we have that time? I would say we have to wait because it has to happen sometime even if it happens in the next 50 years.

The aspiration is that ethically-trained business people in the private sector will raise the standards of the public sector, indeed of the culture generally; this is both idealistic and staggeringly ambitious. By using in-depth interviewing techniques to explore the lives of Ashesi graduates and hear whether and how these aspirations follow them into their workplace and personal interactions, this research builds on earlier interviews with students and faculty members (Godwyn 2015). Previously conducted interviews with Ashesi students and faculty members were overwhelmingly positive about the life and culture-changing possibilities of the educational interventions employed at the College. This continued research seeks to ascertain whether the ambitions behind the educational interventions are realized in post-graduate life as former students become workplace participants.

The significance and benefits of this research are twofold. First, it adds to the research literature that examines whether or not educational interventions carry over once undergraduate students begin their lives as young adults outside the educational organization. An increasing number of studies demonstrates that long-term success measured in post-graduate degree attainment and job placement (Treisman 1992), and salary, personal life satisfaction, and community involvement can be affected by educational interventions when the interventions are conducted within certain parameters (Langowitz et al. 2013; Godwyn 2009; Godwyn and Langowitz 2015). Here the question is whether ethics training received at the undergraduate level is manifest in workplace behavior, mindset, and identity after students graduate. The case of Ashesi is especially compelling as these interventions are unique among African institutions of higher learning. Ashesi intends the intervention to ignite a cultural shift in ethical behavior, and Ashesi students are potentially positioned to do so as they have an extraordinarily high rate of employment despite the current crisis of unemployment for many Ghanaian college graduates (Kokutse 2011; Owusu 2014).

The second area of significance to explore is whether those employed in the private sector can become ethical leaders in the public sector and influence and raise cultural standards of ethical behavior. As discussed in the literature review below, ethical leadership by corporate executives often engenders skepticism in developed nations such as the U.S. and Western European countries where corporate actors are largely viewed as instrumentalizing and vitiating ethical standards in the public sphere through outright fraud and deception or through manipulation of information in campaigns associated with greenwashing and corporate social responsibility. Philanthrocapitalism is also viewed with suspicion curtailing the avenues where positive impact investment can be made with credibility. However, in areas where governments are relatively unstable and public corruption is rampant, the private sector might well be a crucible for raising civil and ethical conduct in public life.

The focus in this research is to what degree the ethical standards of a private undergraduate college can be maintained in workplaces that are situated within a culture rife with corruption. Even further, can an ethical culture in education be extrapolated to achieve social and environmental goals alongside with financial performance? Can an ethical code learned and adopted in an undergraduate educational environment sustain and persist when students graduate and enter the world of business and commerce? Is it possible for these graduates to ameliorate entrenched corruption by enacting the ethical guidelines they have adopted?

## Methods

We use qualitative methodology to explore the Honor Code from the perspectives of approximately 20 Ashesi graduates. We also interviewed some core faculty members and administrators who were able to give background regarding the origin, vision, and ambition behind the Honor Code. One author of this research (Buchele) was a member of the administrative team when the Honor Code was launched at Ashesi. Graduates were asked to describe the transition from using the Honor Code at Ashesi to their post-graduate life in the workplace. We solicited graduate interviewees on a volunteer basis through disseminating information about the study with the help of the Alumni Office. Administrators in the position to offer institutional history and knowledge helped make sure that the study was not skewed toward opinions held by a few, but that our sample would be widely representational. To this end, the list of the graduates who volunteered to be interviewed was vetted to ensure they were not merely individuals who came back to Ashesi to act as guest speakers on the benefits of the Honor Code.

The data collection methods are qualitative survey questions and in-depth interviews. Emergent themes are compared to extant literature and analysis is primarily qualitative interview data research using data analyzed by applying an iterative process to search for key words and themes (Charmaz 2001; Yin 1984; Emerson 1983). Interviews were conducted with 23 graduates remotely by written questionnaires, and by phone and Skype. Interviews began with open-ended questions (see Appendix A for the recruitment solicitation and examples of interview questions for graduates) tailored to elicit narratives: the interviewer listens and responds by asking for clarification of the respondent's descriptions of her/his experiences. In this way, the interactional and relational approach creates another opportunity for the respondent to develop interpretations and build on existing narratives. All interviews were tape recorded and transcribed.

The research questions around which the interviews are conducted are: (1) How are ethical theories and practices are incorporated into student life? and (2) To what degree, if any, are graduates able to maintain these ethical standards in their workplace and personal lives once they leave Ashesi? We were granted approval to work with human subjects by the Institutional Review Boards of both Babson College and Ashesi University College.



## Literature Review

The literature review below samples three main areas of scholarship relevant to this study: (1) The continued use and success of educational interventions on students after they graduate; (2) First-hand accounts of ethical standards in organizations; and (3) Private sector ethics as a guide for public sector policies.

### *The Use and Success of Educational Interventions*

There is a deep and rich literature of studies identifying educational interventions and how these interventions affect students while they are attending school. Fewer studies follow students after graduation to examine what, if any, effect educational interventions continue to have. The group of studies we draw from here spans almost four decades of research, and each study finds that, when certain parameters of delivery are met, educational interventions with a wide range of goals such as increase in mathematical (Treisman 1992) and standardized test performance (Steele 1997), increase in successful entrepreneurial activity (Godwyn 2009), and increase leadership, income, and life satisfaction (Langowitz et al. 2013) can positively affect the performance and success of the targeted group of students within the institution. The two studies described in depth below also report that educational interventions can follow students into post-graduation life. The first study is authored by Uri Treisman (1992) on mathematical success of African American students in undergraduate calculus classes, and the second is a study by Langowitz et al. (2013) on women's leadership. Both describe increases in student performance that travel with them after graduation. Finally in this section, some of the key elements of educational interventions are also listed in order to explore their applicability to the Ashesi Honor Code.

### **African American Student Success in Undergraduate Calculus Courses**

In the mid-1970s, as a graduate student in at University of California, Berkeley, Uri Treisman noticed a demographic peculiarity with regard to success in undergraduate calculus classes: Asian students had very high grades and African American and Hispanic students did very poorly. In fact, in a 10-year period, 60% of the African American students had received grades of D or F, and in no year did more than two Black or Hispanic students earn more than a B (Treisman 1992: 364). To compare the ethnic group with the poorest performance to the one with the best, Treisman randomly selected 20 African American students and 20 Chinese students to investigate the performance discrepancy. Treisman found that both were groups of

motivated students; each group of individuals spent about 8 hours a week on calculus work; each group had family support and had strong high school records in mathematics. The salient difference between the groups was the *way* they studied. Chinese students studied together, asked for help from their professors when needed, and created what Treisman referred to as, “something like a truly academic fraternity” (1992: 366). African American students, on the other hand, tended to study alone, avoid practice sessions with teaching assistants, and were hesitant to reach out to instructors when they had questions or problems. Treisman reasoned that African American students did not seek help because they feared confirming the stereotype that African Americans are intellectually inferior. Furthermore, that stereotype seemed substantiated by the pattern of poor grades earned by African Americans.

Treisman created an educational intervention wherein he replicated the study groups used by Chinese students and welcomed African American students to partake—not as students who needed remediation for mathematical or intellectual inferiority, but as particularly talented students. African American students were invited to join the groups based on their talent and interest in mathematics. The groups were therefore accreditation and honorific rather than remedial. With regard to the impact of this educational intervention, Treisman reports:

The results of the program were quite dramatic. Black and Latino participants...*substantially outperformed not only their minority peers, but their White and Asian classmates as well.* Many of the students from these early workshops have gone on to become physicians, scientists, and engineers. One Black woman became a Rhodes Scholar, and many others have won distinguished graduate fellowships. (Treisman 1992: 369, emphasis added)

Treisman set up similar programs for the University of Texas at Austin and City University New York. As a result of these programs, the grade point average for minority students became higher than that of non-minority students and higher than the class average. At University of Texas, minorities earned a 3.53 compared to a 1.66 average GPA for non-minority students, and at CUNY, minorities earned a GPA of 3.2 compared to the 1.8 class average (Treisman 1992: 371–372).

## Women’s Career Outcomes: Salary and Life Satisfaction

In an attempt to address the continuing wage and status gap between women and men in late-stage business careers, Langowitz et al. explore whether undergraduate educational interventions might impact early-stage career outcomes with respect to gender. Similar to the fallacious stereotype of intellectual inferiority that surrounds African Americans, women are often erroneously typecast as inferior in the workplace, especially in business management and in leadership roles. Langowitz et al. write:

Indeed, despite many years of research and changing social norms, studies find that the persistent stereotype “think manager—think male” remains entrenched (Schein 2007) and

behaviors continue to be interpreted differently in the workplace based upon gender and minority status (Westphal and Stern 2007; Langowitz et al. 2013: 115).

Similar to Treisman's study, Langowitz et al. examined the post-graduate effects of forming "anti-remedial" (Treisman 1992: 368) accreditation groups that provided ways that the targeted population could acquire expertise despite social expectations that work against them. In addition to the standard business curriculum, gender specific, accreditation experiences were included under the co-curricular honorific Women's Leadership Programming (WLP) for a group of female undergraduate business students. Sample activities included mentorship "by experienced women business professionals, talks by women leaders and entrepreneurs, volunteer service activities, and discussions; all of which provide an opportunity to consider issues around women's leadership and careers, as well as a strong social connection" (Langowitz et al. 2013: 118).

Post-graduate surveys with undergraduate women who experienced the Women's Leadership Program found that these women still earned less money than their male counterparts; however, they experienced significantly *less of a pay gap* when compared to their female peers who had not been similarly exposed to an accreditation group. The wage gap for those women in the WLP was \$9633 less than male graduates versus \$16,945 for all women versus men (Langowitz et al. 2013: 123). Additionally, after graduation the female students included in the accreditation group not only reported more life satisfaction than the female undergraduates not included in the WLP intervention—they experienced more life satisfaction than did their male counterparts (Langowitz et al. 2013: 126). Langowitz et al. write: "The good news is that we have evidence that educational interventions can have a countervailing impact. Both gender studies coursework and women's leadership support ameliorate the salary differential. In particular, we find that [Women's Leadership Programming] can significantly narrow the gender pay gap" (Langowitz et al. 2013: 129).

Some commonalities across studies of successful educational interventions, including those with effects that continue after graduation, are: (1) Creating learning communities that provide both academic and peer social support; (2) Constructing honorific and accreditation programs in which membership becomes a source of pride rather than remedial programs that assume inferiority at the task; and (3) Ascribing success to effort, desire, and practice rather than to natural inborn talent. To the degree that Ashesi's ethical standards continue to be implemented by graduates in their work and personal lives, we would expect that this educational intervention would have some elements in common with others in the literature.

### ***First-Hand Accounts of Ethical Standards in Organizations***

The central role of ethics at Ashesi and the goal of initiating ethical social change are quite an unusual combination in undergraduate institutions. Additionally, first-hand

accounts from students and graduates who have participated in honor systems is also scarce. The extant research literature using qualitative methods tends to explore workplace organizations rather than educational institutions. Studies of the ethical codes in schools most often use quantitative survey data rather than interview data. Additionally, in these studies, faculty members and administrators, rather than students, are most often surveyed see Davies et al. (2009) and Yar et al. (2009). The ethical codes studied tend to concentrate narrowly on academic honesty rather than, as at Ashesi, codes of conduct that also guide interpersonal behavior. Aspirational codes of conduct intended to create large scale social change exist in some religious universities, but there are no supporting evaluations of the long-term efficacy of these ethical programs in the available research.

As mentioned, studies using ethnographic research, (i.e., in-depth interviews and participant observation to reveal and develop narratives about the ethical codes, as we do here) tend to focus on employees in the workplace. For instance, Robert Jackall (2011) and Jana Craft (2013) focus on corporate executives; Craft specifically interviews those who are in prison for ethical and legal violations. Arlie Hochschild (1983) and Martin Tolich research service workers (1993), and Jennifer Pierce (1995) studies attorneys. Morris and Feldman and Tolich (1997) examine the emotion work necessary to negotiate workplace ethics when these ethics are at odds with personal and/or social and cultural ethical values and behavior. Though these studies are situated in the workplace, they provide a basis to explore how individuals narrate the negotiation and incorporation of ethical codes in their daily activity. We used this research to guide us in developing interview questions and analysing interview data.

### ***Private Sector Ethics as a Guide for Public Sector Policies***

It is not a new idea that private sector ethics, that is, ethics within privately funded entities such as companies, foundations, and universities, can influence wider cultural values and public policies. Though this is often interpreted as a deterioration or degradation of public sector definitions of civil order and integrity, there is also the notion that in situations where social values in the public sphere from organizations such as governments, unions, and religious groups reach a critical mass of corruption or impotence, the private sector can act to raise the level of ethical behavior in the larger culture.

Twentieth-century U.S. history for instance, reveals widespread corporate policies from the 1950s through the 1970s that sought to balance productivity and profit with respect for governmental regulations and workers' rights. Elisabeth S. Clemens argues that during this relatively short time, corporations, like governments, were judged in part by their degree of social responsibility (2009) indicating that social welfare and public opinion were powerful predictors of private sector success. This arrangement resulted in the "sharing of prosperity" (Marens 2009: 112).

However, as the U.S. economy began to stagnate in the 1980s, and governmental support for labor unions decreased, social good was increasingly entrusted to the decision-making executives in private corporations. In this context, Edward R. Freeman (1984) proposed stakeholder theory. In its ideal implementation, stakeholder theory instructs managers to consider every stakeholder's interest along with corporate goals, as opposed to merely making decisions that will maximize profit. In this way, the corporation, and the decision-making managers, became a substitute for the roles once played by union protections and government regulations; executives at private companies were therefore expected to act as ethical leaders and guide the social mores.

The private sector as social custodian is, however, generally met with skepticism and suspicion.

Most recently the phenomenon of philanthrocapitalism has been on the rise in the United States, and has received very mixed reviews. The American economist James Surowiecki admits that, "It's reasonable to lament the fact that a small number of billionaires have so much power over which problems get dealt with and which do not. But they have that power precisely because they are spending so much of their money to solve global problems. We, as a country, are not" (2015: 40). Surowiecki commends Bill Gates for investing in public health and education measures as a "vital" contribution from which we will all benefit. On the other hand, Matthew Reisz warns of the perils of philanthrocapitalism,

The Gates Foundation now contributes about 10 per cent of the total budget of the World Health Organisation, leading to allegations that it has undue influence on the organisation's policies: a worry all the more serious given the contentious positions it has taken on, for example, the right balance between treatment and prevention in addressing HIV/Aids (2015).

Moreover, in some cases charitable contributions funnelled through private foundations serve as tax shelters and deny governments millions of dollars in revenue. Along with charitable contributions, foundation funds fuel for-profit companies such as media outlets that act as uncritical reporters of the foundation's unbridled generosity (Reisz 2015). Jane Mayer also reports that though billionaire philanthrocapitalists David and Charles Koch make huge donations to cultural organizations such as the Metropolitan Opera, the American Ballet, and the American Museum of Natural History, they are probably best known for funding right-wing political causes and giving large contributions to conservative political candidates, who "believe in drastically lower personal and corporate taxes, minimal social services for the needy, and much less oversight of industry—especially environmental regulation" (2010). Koch Industries has been named one of the top ten air polluters in the United States (Mayer 2010). The concern is that the mega rich, rather than representatives chose by the electorate, are determining public policy, and this can have devastating effects on the democratic process.

## Philanthrocapitalism and Positive Impact Investing at Ashesi

Described by CNN as a “millionaire who left Microsoft to educate Africa’s future leaders” (Duthiers and Ellis 2013), in some ways, President and Founder of Ashesi University College, Patrick Awuah, is a typical philanthrocapitalist. Unlike Bill Gates or Mark Zuckerberg, however, Awuah is not merely giving large sums of money to a cause, he is living it. Born in Accra, Awuah was educated in the United States and then returned to Ghana with a mission: to change the African continent by producing the next generation of leaders who exemplified the highest level of ethical conduct. Awuah saw education as the beginning of a movement that could resituate Africa on the world stage and inspire pride, hope, and honor in all those of African descent:

In this country, only 5% of college-age kids go to college. . . And there’s two problems with that number: one, is it’s too small, but the second is that everyone who goes to college by definition is going to be running this country one day, the 5%—they’re going to be running the courts; they’re going to be designing roads and buildings and infrastructure; they’re going to be running the hospitals, the schools, the businesses. So when I look at universities I see Africa fast-forward 30 years. When this 20-year-old is now in his or her 50s, that person is going to be a leader. And so I felt that engaging how that leadership, that future leadership core, is educated could be catalytic. . . The world needs to change in this way, and I strongly believe that people like me who have had the privilege of a great education need to be part of the solution; that I need to be really actively involved in helping to drive this change in Africa so that 30, 50 years from now, the world will be a different place for all people of African descent in the world. (Duthiers and Ellis 2013)

Though Awuah envisioned an ethical ecosystem that would inspire and educate the next generation of leaders, he admits the Honor Code was not his idea.

I had the vision of having an ethical body and educating ethical people, yes. But the Honor System was not mine. It came about on campus from the executive team. We don’t want the Ashesi Code of Conduct owned by me or the administration. We want the students to own it. We had a conversation about a student-run Honor System. Then the Dean of Students and the Student Government stepped in.

The logic was sustainability. If it is going to last, there has to be an institutional culture around it. Without culture, then all we are doing at best is ensuring students won’t cheat if they think they will be caught. They are not holding themselves accountable. The goal was to have a culture of integrity embedded in Ashesi and really owned. It then became a core part of the institution that everyone holds dear.

An example of CSR, and Impact Investing, the MasterCard Foundation is the major donor of financial aid and supplies the vast majority of Ashesi scholarship funding. In 2015, they provided full scholarship, room, board, laptop, transportation to and from home and Ashesi, and summer programming to 60 students per year. This number is expected to increase next year. Several other private foundations including the Ashesi University Foundation, Old Mutual, and the African American Institute are also donors. The funding from private foundations allows Ashesi to fulfil its commitment to a diverse student body. Currently, there is no record that Ashesi students have become employed by MasterCard or other donors, but that might be changing. One administrator commented that she thought MasterCard would like to hire Ashesi graduates.

Disputing the notion that private executives could and should act as ethical leaders for the wider culture, Subhabrata Bobby Banerjee invokes Michel Foucault's concept of subjectification (Foucault 1979, 1980). In this context, subjectification theorizes that managers become subjects of the corporation and develop their sense of meaning and reality through their identification with the interests of the firm. Banerjee therefore argues that managers are not free to make socially responsible decisions as these are often in conflict with profit maximization (2008: 58). Muhammad Yunus agrees. Yunus states that because of the mandate to maximize shareholder interests, there is little dispute that social responsibility is a distant second to profit accumulation: "What about when the demands of the marketplace and the long-term interests of society conflict? What will companies do? Experience shows that profit always wins out. (Yunus 2007: 17).

The relevant question for this research is whether those Ashesi alumni in the private sector can maintain ethics that reflect and prioritize public welfare and deontological objectives, especially when social considerations and ethical principles conflict with private sector interests, including the short-term interests of individuals. As one graduate notes:

Currently, people don't like to deal with Ashesians because we try to fight a corrupt system, and then you are stepping on people's toes. And you might be robbing them of their livelihood. They are not going to thank you for that even if it is in the best interest of the nation in the long run.

## **The Origin and Implementation of the Honor Code at Ashesi University College and Beyond**

The Honor Code was voted into force by students at Ashesi in January of 2008. The purpose of the code was to create community with shared ethical principles and for students to adopt and enact those principles through self-monitoring: "The Honour System at Ashesi provides an avenue for students to practice doing the right thing even when no one is watching. In other words, they develop a habit of honourable behaviour that is internally driven" <http://www.ashesi.edu.gh/images/about/the%20honour%20system%20at%20ashesi%20university%20college%20-%20white%20paper.pdf>

Through the entire first year of study at Ashesi, students are introduced to the specifics of the Honor Code. In their second year, each class of students has the opportunity to vote on whether the class as a whole will adopt and live by the Honor Code. In this way the Honor Code is a living and emerging set of ideas and practices that are given life, or not, through the will and actions of students. Two-thirds of the class must vote to adopt the Honor Code, otherwise class exams will be proctored, as is traditional in Ghana, and ethical behavior will be externally enforced by school administration. Each class except one has so far embraced the Honor Code. Awuah explains that not everyone has the confidence the Honor Code is viable:

[The class of] 2009—did not join the Honor Code. They were not convinced it would work. We need a 2/3 majority. That class didn't vote because they were not eager to join.

However, the decision not to join the Honor Code is not interpreted as permission to violate the code. The Honor System White Paper states:

Not joining the honour system does not constitute a license to cheat; it only means that members of the class will be less trusted than others in this community. The university will continue to hold students individually responsible for complying with the university's code of ethics. <http://www.ashesi.edu.gh/images/about/the%20honour%20system%20at%20ashesi%20university%20college%20-%20white%20paper.pdf>

The first graduating class to fully experience the Honor Code was the class of 2012 (3 years prior to the gathering of the research for this article). The graduating classes of 2010 and 2011 did vote to accept the Honor Code, but later than the first semester of their sophomore years. The Honor Code is therefore relatively new to Ashesi and remains groundbreaking, and currently a unique, educational innovation in African institutions of higher learning. Graduates who experienced the Honor Code have recently entered the labor force.

The first part of the Honor Code is the Examination Code of Conduct that describes acceptable behavior during unproctored exams. The Ashesi Administration explains the purpose behind the code is to imbue the community with trust and to give students ethical autonomy and responsibility for their conduct: “The adoption of the Examination Honour Code marks a significant step in the history of Ashesi University. The code is intended to build a high-trust community, to put students in charge of their ethical posture and the reputation of their alma mater, and by so doing, to take a significant step in Ashesi's mission to educate a new generation of ethical leaders in Africa” <http://www.ashesi.edu.gh/about/ashesi-at-a-glance/honour-code-16.html>.

At the end of each exam, students sign a statement verifying they have received no unauthorized assistance and that they have not violated any of the conditions of the Examination Code of Conduct. Conditions include leaving books and other aids outside the classroom when taking a test and turning electronic devices off. Perhaps the most difficult condition is that students commit to reporting violations or obstructions of the Honor Code made by themselves and by other students. Over time, students have expanded the Examination Honor Code at Ashesi to include a general code of conduct covering behaviour such as honesty in interpersonal relations.

### *Ashesi Graduates' Comments on the Honor Code*

The graduates interviewed here were uniformly enthusiastic about and committed to the Honor Code. In the 23 interviews conducted, the primary repeated themes were: (1) The Honor Code became a “lifestyle;” (2) Graduates think about the world differently than they did before attending Ashesi; and (3) It can be a struggle to



enact the Honor Code in their adult lives and to reconcile it with the behaviour of those around them. However, all of the graduates voiced an ongoing committed to maintaining the Honor Code in both their personal and work lives and were readily able to give examples of how they did this.

### **The Honor Code as a “Lifestyle”**

Demonstrating the internalization of the Honor Code, many interviewees, termed it a “lifestyle.” The Honor Code had become so inculcated and graduates identified with it to such a strong degree that after graduating from Ashesi, abiding by the Honor Code was no longer experienced as a choice, but a given. Representative comments are:

So it’s more of a lifestyle. It is good to do the right thing and not just cheat to get to where you want to get to. It does affect my day-to-day activities.

My understanding of the Honour Code has grown since my days at Ashesi. It is not just about exams; it’s a life decision. To live and act in a way that is honourable at all times. Why is it so necessary for us? Someone who cheats on an exam might be prone to doing the same at work: taking credit for work they didn’t do, using information against people or slacking as a team member on a project and expecting others to cover for them. Now when I encounter people who say ‘Ashesi students don’t have invigilators, and I don’t understand why,’ I say to them, the Honour Code is not about examinations and has never been. It’s a pillar we live by.

Having experienced the impact of the Honour Code myself, I believe it is a wonderful mission and should be an action every institution should practice. The Honour Code goes beyond a student being ethical in taking examinations; it is a way of life. If schools, businesses, government can build and hold to ethics and integrity within their sectors, one can imagine the impact it will have on the Ghanaian economy as a whole.

### **Thinking about Ethics Differently**

Many students reflected on their development of an ethical self through their experiences of the Honor Code at Ashesi. They described looking at the world differently and reevaluating their own options for behavior within various environments. These narrative accounts focus on becoming aware of a dimensionality of assessment and action they had not been conscious of prior to becoming part of the Ashesi community. Comments include:

Ashesi gave me a direction and structure. I was never confronted with that situation. It made me more aware. . . Now I realize I am more reluctant to compromise my position, and I would only do it with great reluctance and try not to. In an exam situation I never did it. But now I am less able to ignore situations and make an effort not to compromise my integrity because now it is more important to me than it was before Ashesi.

It’s certainly a noble goal. It was introduced in my second year and I thought it was a cool thing to be able to write a paper without anyone looking over my shoulder as if I couldn’t be trusted. Initially, I even thought we would be able to listen to music while writing papers!

The actual weight of what was required hit me when my friends cheated in the very first exam we had under the Honor Code. I reported it, and when they found out, I was ostracized for a time. Nevertheless, I continued to act honourably; not just in exam cases, but in all other aspects of my life. It was (and is) always a struggle, but one I feel is worth it.

## Challenges of Implementing the Honor Code Post-graduation

While voicing a strong continuing commitment to the principles embodied in the Honor Code, one of the most prevalent themes among graduates was the difficulty of maintaining their ethical position in both in their work and personal lives.

It is more challenging outside school because you come across things when you don't know what is right. I used to work for [a company] where you can't get the business for the company unless you pay a kickback. This was a serious challenge. How is this possible? It goes against what I believe in and what I learned in school. But, I was able to get the contract without promising a kickback. It is challenging to decide what exactly to do.

It was hard because here I was, 'ready to conquer the world' with what I had learnt, but people on the outside felt differently about almost everything I did. I kept getting attacks from the people I worked with. Names like 'Holier than thou' became my second name. I was accused of trying to impress when I was merely doing what was expected of me. But gradually, some people begin to side with you and you stand out at the end of the day. That is what really matters.

Dealing with the systems and the people outside of Ashesi was not so easy in the beginning. After 4 years of being surrounded by people who were all aiming at excellence, stepping into a world of bureaucracy, where individuals were set in their ways was a shock. I believe Ashesi students should be primed for this and know that they will be stereotyped. More importantly an introduction to leading and managing change in their own small way can help to make a difference.

My feelings for the Honor Code have not changed. In fact, they have been reinforced. The world outside school is radically different and no amount of schooling can adequately prepare you for it. Practicing integrity in your work is frowned upon in almost all circumstances as individuals are always looking out for the quickest means to cheat the system and line their pockets. Even though there are laid down rules on how things are supposed to be done, hardly anybody does them because no one is ready to bear the responsibility.

In Ghana we are having power problems. Some guys want to do an illegal connection and [my parents] said, "Why don't we do it?" I don't feel comfortable doing this because it is using more electricity and that won't work in the long run. Initially my parents were doing it, and then my mother thought about it, and said, 'You are right.'

The Honor Code as an educational intervention is consistent with the successful interventions detailed in the literature review earlier in this paper (Treisman 1992; Steele 1997; Godwyn 2009; Langowitz et al. 2013). As mentioned, the common elements of successful educational interventions are:

1. Creating learning communities that provide both academic and peer social support: While students are on campus, Ashesi provides both academic and peer support for the Honor Code. Social support also continues after graduation.

According to Awuah, 90% of the students are connected to the college and one another through social media.

2. Constructing honorific and accreditation programs in which membership becomes a source of pride rather than remedial programs that assume inferiority at the task: The Honor Code represents a remedy to the corruption associated with Ghana and gives students and graduates of Ashesi the power to enact a corrective to the national stigma. Similar to other educational interventions detailed, the Honor Code serves to credit Ashesi students and alumni and give them a source of pride. One student writes:

We who have the honour and privilege of working in an institution run by the Honour Code System are filled with a sense of hope, faith and gratitude because every day, practicing the Honour Code and living under it, Patrick Awuah, faculty and staff of Ashesi University College tells us the student body that they know and believe that we are capable of changing the status quo. They believe that we can be better than our fathers; we can be people who are trustworthy, people of integrity and honour. They in short tell us that we are better than our society thinks us to be.

3. Ascribing success to effort, desire, and practice rather than to natural inborn talent: Ethical conduct at Ashesi is represented as a set of behaviors that are learned and developed rather than as innate understandings or inborn character traits. This means that each student has the potential to become an ethical person and that mistakes do not indicate some underlying failure or inability, but rather a step in the process. One faculty member remarks:

We are humans, and we are fallible. We all make mistakes. We all need second chances as well. Your mistakes shouldn't be that end point. So I want students to know they did wrong, but they are still welcome if they do right.

## **Debate: Is an Honor Code Possible in an Institution of Higher Learning in Ghana?**

Despite interview narratives from Ashesi graduates that demonstrate a strong and consistent commitment to and identification with the Honor Code, the reception from the National Accreditation Board (NAB) in Ghana has been much less enthusiastic. In fact, within Ghana, the Honor Code at Ashesi has been so controversial that the NAB, composed of African academics, has threatened to withhold Ashesi's accreditation. At the heart of the controversy is the belief that Ghanaians might not be capable of consistent ethical behavior. A cynical view held by some members of the NAB is that rather than promoting ethical behavior, the Honor Code provides a shield for Ashesi students to cheat. This perspective is rooted in the traditional practice in Ghana of proctoring exams and the widespread cheating that one student says "starts in secondary school and just gets worse."

## *Education in Ghana: Cheating as the Norm*

Many of the students and administrators at Ashesi reported that in the public domain in Ghana, among not only government employees such as police officers, passport office workers, health and building inspectors, but also teachers and school officials, there is rampant corruption and the expectation of dishonesty. Favoritism, nepotism, and bribes routinely play a central role in commercial exchange and interpersonal behavior. This dishonesty can be used to strengthen or undermine relationships.

Many Ghanaian students grow up in a boarding school culture. By most accounts from Ashesi students and administrators, boarding schools reflect and maintain the expectation of corruption that permeates the larger culture. Representative comments include:

There is a rigidity around extended family loyalty. Ghana has a boarding school system and peers become almost like family. There is a strict hierarchy in this culture, maybe stronger than in other cultures and systems. As if you have two competing rules: I saw my friend and could report her, but she is my friend. Therefore, what she does is not wrong—it is the right thing to do. People become numb to justifications of corruption and bribery.

Teachers at boarding schools will ask students to help their friends. So is “helping,” cheating, portrayed as a bad thing? Not as much stigma as giving or taking a bribe. As a teacher you would get in more trouble if you colluded. They know it’s wrong, but it also makes it easier if students “help” each other, so that is what they do.

You have learned something wrong for 20 years. And the Honor Code means that you will unlearn it. It’s an ongoing conversation. So the other day, I said to students. You know what, go back into your childhood and high school. At what point did you internalize unethical behavior? . . . Boarding schools are based on a military model and so there is system of favors reinforcing unethical behavior. Kind of like prisoners—do what you have to do to get by. The boarding school system is a great reinforcer for unethical behavior. Students say they all loved boarding school, but when you poke into their stories you realize that boarding school teaches them to be independent through bullying. Extrinsic ethics, not internally generated. The internal system of rewards is not getting built up. Students are not self-motivated or self-disciplined. So when they come here and learn they might have to snitch on someone. You don’t do this in boarding school; you don’t do this in prison.

Here in Ghana and most places in Africa, we are not used to going against the status quo and changing things. So having exams without proctors was very alien. It is still thought of as a joke (Godwyn 2015: 63).

The debate between Ashesi University College and the NAB over whether then Honor Code is viable has been ongoing since 2010. In some ways, the debate reveals the struggle over the definition of Ghanaian identity and Ghanaian culture. This debate is described by some at Ashesi as the conflict within Ghana between those who want a progressive position on the international stage and those who are comfortable with a more parochial and insular colonial past. A staff member comments:

This was a colonial university system intended to produce people for the civil service who would never get their hands dirty or do anything except carry out orders. Then we came along with a model that’s for changing Ghana and being ethical. We are a threat. At some

point in the deliberations, I just said, ‘The Board is stuck back in the time of the British Empire. I was born in Ghana!’ (Godwyn 2015: 65).

The threat of loss of accreditation elicited a passionate defence of the Honor Code from the Ashesi community including conversations on campus attended by virtually the entire student body, administration and faculty members, and about 300 parents (Godwyn 2015: 64). An administrator recounts:

Mostly parents were saying, ‘Look, my kid was changed completely since they started using the honor code. You are doing something right.’ A parent stood up and sang the national anthem of Ghana, with the words ‘make us cherish fearless honesty.’ There are a couple of lines too that talk about defending a just cause. This parent said, ‘You should go and you should tell the board this is the only university that argues our national anthem. This is a fearless anthem. For young people to take this position is something the accreditation boards has no business trying to stop.’ So at the end of this conversation, the head of student government said, ‘We need a show of hands. A vote. How many feel we should disregard the directive from the national accreditation board? And remember, history favors those who fight hard for a good cause.’ Every hand goes up. And there is a standing ovation. I am thinking to myself, there is no way a phenomenon like this should be allowed to fail. It is done. We will do this thing. (Godwyn 2015: 64–65).

The campus conversations in 2010 inspired letter writing campaigns and press coverage, including student interviews on television and radio.

At times, the debate has been filled with vitriol with some of the members of the NAB vigorously rejecting the claim that by denying Ashesi the right to have its Examination Honor Code, common to so many institutions of higher education in the U.S. and Europe, they are condemning Ghana and Ghanaians to second-class status. Clearly offended, one NAB member wrote that Ashesi should “never to assume that members and staff of the National Accreditation Board are not conversant with developments in tertiary education in the world around us.” In an effort to engender support, Awuah wrote to administrators of Ashesi’s mentor institution, the University of Cape Coast:

As you know, the National Accreditation Board (NAB) has expressed reservations about Ashesi’s Honour System—a reservation that is principally predicated on the belief that Ghanaian students cannot at this time be trusted to work without examination invigilators. The Ashesi Community is very passionate about this matter and is doing all it can to maintaining the Honour System. I myself have received copies of over 170 individual letters that students, faculty, and administrators of this institution have written to the NAB. . . Clearly this is an important matter for us here at Ashesi.

Perhaps the most representative student sentiment in a letter written to the NAB about Ashesi’s Honor Code is captured in the quote below:

It came as a great shock to me that the National Accreditation Board thought it wise to stop the running of the Honour Code System. I asked myself what the Honour Code meant to me and many positive things flooded my mind. The Honour Code signifies the dawn of a new era in Ghana, Africa and the world as a whole. It signifies the age of a new kind of leader, a new kind of employer, a new kind of entrepreneur, a new kind of mother; in essence a new crop of human beings released into Ghana and the world at large.

So why I wonder, would the National Accreditation Board want to take away this hope that we have for Africa? This chance that Africa will be able to lose the title of being a

continent of corruption. If we Ghanaians do not have faith in our ability to be people of integrity, people who can be trusted, then what do we expect the outside world to think?

## Discussion

There is undoubtedly enough unscrupulousness, insincerity, and profiteering to legitimately fuel doubts around whether private sector ethics in the forms of Corporate Social Responsibility programs, Impact Investing, Philanthrocapitalism, and in this case, university Honor Codes can effectively create sustainable and beneficial change for many in the public realm. However, these doubts should not blind us to the possibility that there are well-intentioned and well-functioning programs that do in fact create positive social and environmental change. By all first-hand accounts, the Honor Code at Ashesi University College is one such intervention that carries ethics from a private institution into the public realm and has raised the standards of conduct by training a group of competent, committed, and educated workers who are positioning themselves to be the next leaders of Ghana. These graduates are young and currently in the junior levels of employment. Like all programs, vigilance over ever-emerging trends is the only safeguard to ensure that initial aspirations and ambitions are achieved. At the time of this research, there is strong evidence that this educational intervention has been effective in influencing post-graduate behavior in the workplace and in wider social interactions. Longitudinal monitoring of Ashesi graduates as they grow in their professional capacities is essential to continue the documentation of the effects and implementation of the Honor Code and will provide additional evidence of the breadth and depth of the influence of the Honor Code on the culture, economy, and international standing of Ghana.

## Appendix A

### Questions for Ashesi Graduates

When did you attend Ashesi?

Why did you choose this school?

Can you describe some of your most memorable experiences?

Do you keep in touch with classmates?

Do you participate in alumni events?

The exam honor code and codes of conduct are central to Ashesi's mission to train the next generation of ethical business leaders in Africa. What are your thoughts on this mission?

Please describe your feelings about and experiences with the honor code as a student. Please describe your feelings about and experiences with the honor code after you graduated.

Did your education at Ashesi prepare you for your life after graduation? If so, how? If not, how could it have been improved?

Please feel free to write any thoughts and feelings about your experiences at Ashesi that were not covered in the survey questions.

Thank you very much for participating in this survey. Your participation is very valued and appreciated!

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# Impact Investment: The Real Issue Not Money or Innovation But Change Management



Arthur Wood

The Chinese expression from 1627 of Feng Menglong “宁為太平犬,莫做亂離人” (*nìngwéitàipíngquǎn, mòzuòluànlí rén*), is usually translated as “Better to be a dog in a peaceful time, than to be a human in a chaotic period” and is generally shortened to what is known as the “Chinese Curse”—“May you live in interesting times”.

It is hard to not have those words ringing in your ears after Brexit, posturing between China and Japan, the wholesale slaughter of families out to watch fireworks on July 14th on the Promenade des Anglais in Nice following on from the indiscriminate bloodbaths earlier this year at Brussels airport and on the streets of Paris—the policy response—as I type this a US presidential candidate suggesting that the US guarantee of NATO should be dropped and in the same breath suggesting the wholesale burning of civil liberties in Turkey is perfectly acceptable—suggesting moral bankruptcy and military impotence from the world’s leading democracy.

What you may ask has this got to do with Impact Investing and ultimately does crisis = opportunity?—to invoke another misappropriated Chinese phrase.

To understand the question one has to understand the crisis in the context not just of the markets, or state and military power, but also as the Council of Foreign Relations noted the demographics of the Youth Bulge<sup>1</sup> or indeed as a Pincer of demographics. A youth bulge creating greater uncertainty in the developing world’s—compounded by an ageing of populations in G7 (plus China).

Together this pincer of demographic problems is creating an inability to fund social causes in traditional grant and aid models in the developed world; which will in turn cannibalise funding in the developing world where the social problems will grow as youth populations age—as an academic Bradley Taylor noted in a recent

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<sup>1</sup><http://www.cfr.org/world/effects-youth-bulge-civil-conflicts/p13093>

A. Wood (✉)  
Total Impact Capital, Geneva, Switzerland

Royal Society Publication—*“The tectonic plates of population change are shifting . . . and the resultant analytical and policy earthquakes will remake the features of international politics in this century”*.

Indeed that the ageing of populations in the developed world—which to a large extent are unfunded liabilities in both Health and Pensions, means that the social capital we can allocate from Government is at best limited. This is further compounded by a private sector social capital market currently dominated by a financing mechanism (The Foundation system) invented in 1903 that controls over \$1 trillion of global assets—yet 98% of their core assets are unaligned with social mission. To make matters worse the system of grants/aid further incentivises a lack of collaboration and scale and this in the face of issues we all intuitively understand are systemic social issues.

This lack of scale and self imposed capital famine is a detriment not only to allowing the social sector to address these issues—but also to Government that outsources the solving of issues into a fragmented social market, which ironically is in part due to its own tax policy that incentivises the act of giving over the achievement of tangible social outcomes.

To the corporate sector (ignoring from one moment what could be called the FT/Guardian divide—ergo cultural mistrust on both sides) it has created a highly fragmented market lacking for the most part inscale—making risk and commercial assessment difficult.—This is reinforced by a bipolar tax code that reinforces a mind set of “for profit” morally bad—“not for profit” morally good which is not only conceptually wrong but reinforces in peoples mind the reputational and political risk

Critically for companies, they are now faced with issues traditionally that had been seen as social—such as water, waste management, climate, education or resilience—which threaten their bottom line specifically in their growth markets of the future.

The bottom line for all stakeholders is that the current paradigm is bankrupt—this is not because people don’t care, or because of a lack of innovation, or perhaps most controversially of all, nor because there is not enough capital. To be cynical it may well be that the players in the current social capital market continue comfortably along—but in the context of demographic trends quite simply the financial framework relative to the social problems we all face both domestically and internationally will fail judged by the ability to mobilise capital to address them.

**So if the current social capital market will fail—what are the trends and opportunities that one can note emerging and do we need to go beyond the current view of Impact Investing as a Venture Capital model towards thinking about broader systemic opportunities and hard wiring the social mission in a new Social Contract?**

Indeed to be a tad controversial, enabled by the three drivers of all historical change in any market place—Technology, Finance and Legal frameworks—are we in danger because we add the word Social—encouraged by the bipolar language of a tax code (Not for profit and For Profit) and the vested interests of the status quo—of thinking that a social capital market is so unique and morally superior?

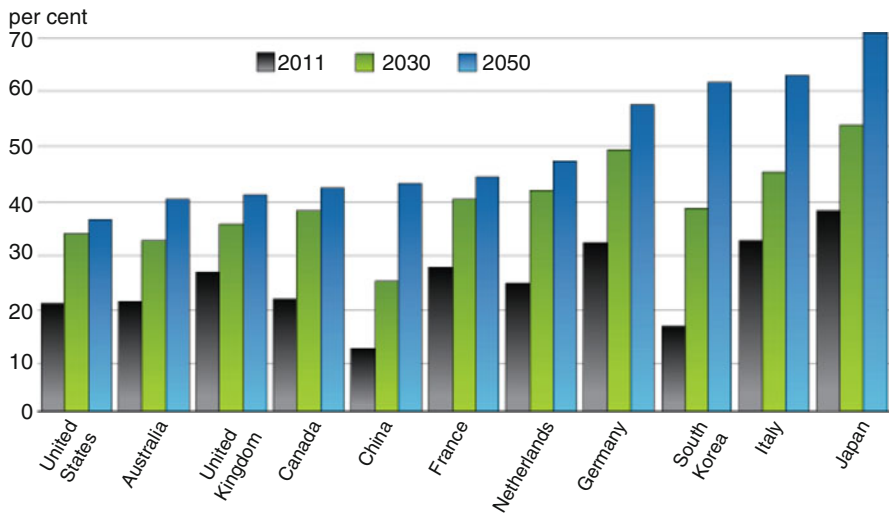
Or is the solution simply the application of existing capital, business models and commercial tools for social purpose but also hard wiring the social mission agenda and margin into a broader social contract in a win-win for all society’s stakeholders?

What is clear about the status quo in the current social market place is that there is no more capital coming from Government whilst the current Private sector social capital market solution imposes a self inflicted capital famine on itself.

Key elements of its own core capital is the \$1 trillion plus in the core funds of Global Foundations. One suspects it would be a surprise to most members of the general public that for the most part this capital is unaligned with their Social Missions, and by the time you look at “frictional” costs, there is a credible case—as will be noted later—that only 1–2% of that \$1 trillion actually makes it to the front line in the myriad of social ventures annually—whilst the current banking sector in one product—asset management (and in my old bank we called it without a touch of irony—the Charity Team)—makes exactly the same margin on the management of the core funds of these same social entities.

### The Demographic Pincers

The demographic challenge can perhaps be best seen pictorially. Attached below as Fig. 1 from the UN and Canadian Treasury is an indication of the ratio of people aged between 15 and 64 to those aged over 64 in the major economies. The case is compelling increased ageing populations related to a relative decline in the number of people in work—a declining tax base with increased unfunded liabilities.



**Fig. 1** Ratio of populations—15–64 age group to over 64 years of age. Source: UN/Canadian Treasury

In some senses the welfare reforms of the mid twentieth century are victims of their own success—with increasing elderly populations as folk have lived longer—longevity and better health is in itself good—the policy failure has been in the unwillingness to create funding for these future liabilities. These are now substantive. In the best case scenario of the G7 countries—the US, the US unfunded pension liabilities out to 2050 are estimated to be \$3–\$9 trillion dollars with pessimists noting that health liabilities may be ten times that figure.

It is worth noting in the EU context (where Italy and Germany are amongst the worse demographic profiles) that this was also enshrined/ignored in the Maastricht agreement—and indeed the current EU prognosis assumes higher levels of productivity that may be at askance with an increasingly elderly population.

In Asia, historically post war seen as the dynamic engine of growth of the more mature economies, Japan has the worse demographic profile of any major economy—with one caustic observer noting there are “no more nippers for the nips”. China has substantive problems as the one child policy comes home to roost and South Korea is in equally challenging straits.

The bottom line is that the domestic budget strains will in all probability constrain the amount available for international aid development—and as the response to the migration crisis (allowed under OECD rules) is cannibalising existing aid budgets—this is already happening. As will be noted later, the cuts made by the Swedes, Danes and Dutch in the last year are symptomatic—indeed the proposed realignment of UK aid on key issues suggested recently by the UK PM—Mrs. May—at the UN is also a clear marker of this risk to traditional aid budgets.

To give you a longer term perspective as to why this is a critical policy consideration; if you look at the UK—which is one of the better positioned countries—here one notes that before these demographic strains hit the interest on the current national debt with interest rates at a 160 year low is 50% of the annual budget of the NHS. As the Office of National Statistics noted in a report in 2013 by the Intergenerational Foundation total UK pension liabilities are already £7.1 trillion of which about £5 trillion are currently unfunded.<sup>2</sup>

This also notes that some of the suppositions implicit in the assumptions made by the EU as to longevity, productivity and discount rate, and assumed economic growth rate may be overly optimistic. . . .

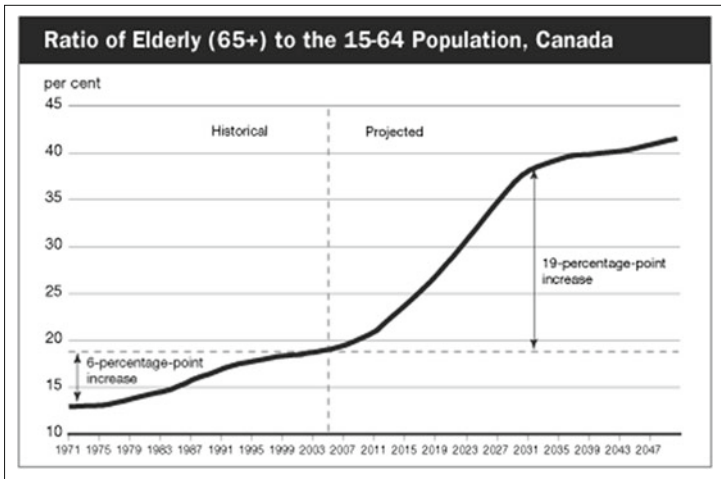
The Canadian Treasury figures on the Ratio of Elderly seem to confirm this. Again looking at the Canadian Treasury figures presented in Fig. 2 one can see the extent of the historical trend (applicable to all G7 countries) and given health and pensions are usually about 50% of Government expenditure—you can see how the trend will impact Governments priorities as these liabilities climb over the next 15 years.

To round off the toxic mix of public finance is quantitative easing which to quote Goldman Sachs (and George Osborne as I write) is creating asset inflation making the rich richer and creating greater inequality. In 2008 it was estimated that 60 million

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<sup>2</sup><http://www.if.org.uk/archives/2031/ons-reveals-full-uk-pension-liabilities>

**PLUS IN WESTERN WORLD TAX BASE DECLINES NOW WITH DEMOGRAPHIC RATIO – ERGO PROBLEM BECOMES STRUCTURAL NOT CYCLICAL**



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**Fig. 2** Ratio of Elderly compared to the population. Sources: Historical Values from Statistics Canada; Projections from the 21st Actuarial Report on the Canada Pension Plan

people owned more than the bottom 3.5 billion people—last year Oxfam noted that the top 62 people now owned more than the bottom 3.5 billion.

<https://www.oxfam.org/en/pressroom/pressreleases/2016-01-18/62-people-own-same-half-world-reveals-oxfam-davos-report>

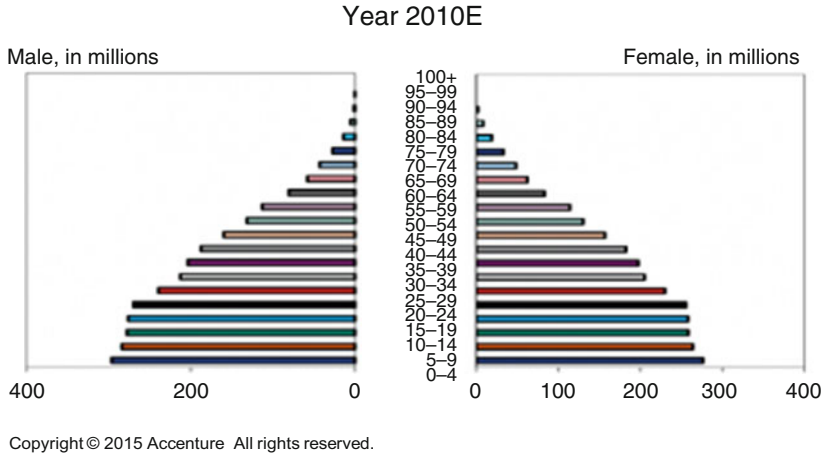
Even to conservative observers one cannot but help note the comment by the Victorian Conservative Prime Minister Benjamin Disraeli—“When the Cottages are not happy—the Palace is not safe”—and some would argue Trump, Sanders, Le Pen and Brexit are a political reaction to the negative impacts of globalisation made worse by the policy reaction to the 2007 crisis; which through quantitative easing has created asset inflation rather than retail inflation.

In the developing world with the youth bulge shown in Fig. 3, we are faced if not addressed with increased economic migration and/or increased political unrest/radicalisation.

The geo political question this poses is this: Are these developing countries the markets of the future where 70% of corporate growth will come from; or an increasing source of political instability in the developing world; reflected amongst other things in increased economic migration to the North? The danger is that a vicious cycle arises if migration results in cuts to projects, which then result in funding cuts to initiatives that address the causes of the migration

The problems of climate, environmental degradation, food and WASH (water, sanitation and hygiene) compound a negative feedback loop, and as Kofi

### Demographics – Growing youth bulge in developing world – economic opportunity but social problems getting worse



**Fig. 3** Demographics—Growing youth bulge in developing world—Figures taken from Accenture

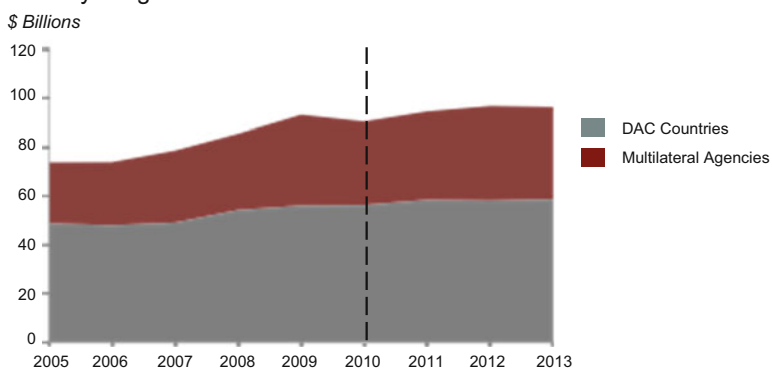
Annan—the former UN secretary general—noted, the problem is leveraged by the effect of social media to Youth that makes transparent the income inequalities in the world.

Indeed the logical reaction by youth which we are now seeing is a large scale economic migration to the north for the better life as we are now witnessing on the borders of Europe. In this year alone one to two million people this year will seek entry to Europe.

Add to this a frustration and envy reflecting itself in a perverted philosophical turning of local values towards extreme Islamic fundamentalism exploited by some players and is at odds with Western values. The result is the bloodshed in the Arab world, and the resulting indiscriminate violence historically seen on the streets of New York, London, Madrid and this year in Paris, Nice and Brussels and Munich. As noted earlier, the two demographic trends have now combined this year to directly impact on aid budgets with OECD rules allowing the domestic migration issue to be funded from aid budgets—with Denmark, Finland Holland and Sweden all cannibalising and cutting aid budgets to fund the domestic migration issues. Even the British who have committed to maintaining the 0.7% of GNP on Development have seen a restructuring of how they look at traditional aid funding with DFID funding dropping to around 75% of this 0.7% commitment—the increased share now taken by the MOD and the Foreign Office—this would appear to reflect a clearer realisation of the use of soft and hard power in pursuit of British interest. Perhaps the clearest indicator on the soft power side was the reversal of the BBC

## Foreign Aid is Hitting a Plateau

### Country Programmable Aid: Actual and Planned



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**Fig. 4** Country programmable aid. Source: OECD

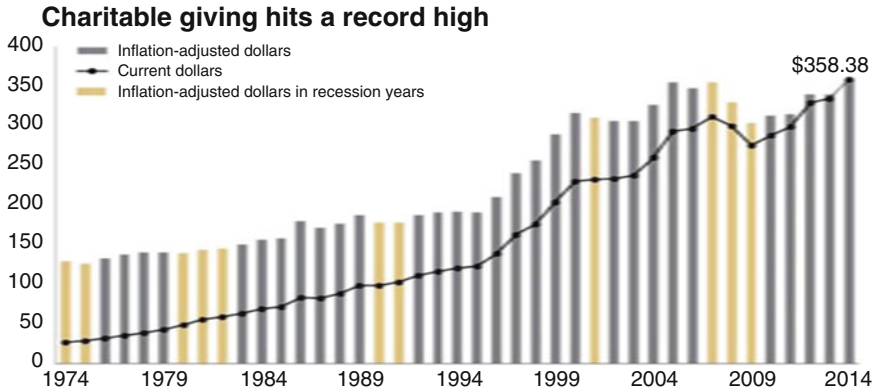
World Service cuts last year—which to put in context were about the cost of one to two Eurofighters—and the increased funding for MI6. Yet in Impact Investment despite the rhetoric DFID since 2012 has committed just 0.23% of its budget to Impact Investment.

Foreign Aid is hitting a plateau. This fact is illustrated in Fig. 4 as multinationals alone cannot take the full burden. Equally in the US as one of my former CEOs was keen on noting, “It does not take the brains of an Archbishop” to realise that should there be a President Trump, US aid budgets may also be slashed—the brute reality is that at best aid budgets are flat (as can be seen below). The traditional Breton Wood agencies are now looking nervously over their shoulders to their traditional sources of funding and beginning to think how else they may raise funds in pursuit of their missions.

The above analysis of course also ignores the fragmentation of the existing agencies where high levels of duplication and fragmentation occur—as but one example (and they are legion) in WASH there are an estimated 30 UN Agencies engaged: many with decisions taken at the regional level—negotiating with about 30 governments who again have about two or three agencies a piece. The “net net” effect is that in the UN system alone you have upwards of 50 entities negotiating with 50 plus agencies in a fragmented un-coordinated manner—and in the absence of incentives to collaborate or metrics to draw them together—they often see each others as competitors for limited and declining pools of grant/aid capital.

If one wants to see the issue most graphically and shockingly, it is perhaps demonstrated in the response to international disasters—where the issues of lack of collaboration and scale are crystallised. But it is symptomatic of the sector as a whole where incentives to collaboration and scale are completely misaligned and distorted by the Grant and aid model—as in the recent response to the Ebola crisis—too slow to mobilise, at the outset limited collaboration and slow to act, then after the

**Despite Headlines - i - Flat in real terms; ii – Social orgs grow 40% in ten years; iii- Fragmented and only 5% to Intl Projects ; iv - Under this paradigm \$41 trillion of US inheritance = Only \$50bn pa of new money...**



**Fig. 5** Charitable giving—Figures taken from Giving USA 2015. Source: Giving USA Foundation, Giving USA 2015

crisis continued spending on the Ebola problem out of kilter with the health challenges of the effected countries.

Or as another example, the Centre for Global Development noted after the Haiti crisis drawing on the reports of the UN Special Envoy—“*Official bilateral and multilateral donors pledged \$13bn and. . . 50 percent of these disbursed. Private donations are estimated at \$3 billion (together the equivalent of Haiti’s GNP). Where has all the money gone? Three years after the quake, we do not really know how the money was spent, how many Haitians were reached, or whether the desired outcomes were achieved.*”

It goes on—“*We found that about 94 percent of humanitarian funding went to donors’ own civilian and military entities, UN agencies, international NGOs and private contractors. In addition, 36 percent of recovery grants went to international NGOs and private contractors. Yet this is where the trail goes cold. . . it is almost impossible to track the money further to identify the final recipients and the outcomes of projects.*”

This is the reality of a market defined by the pursuit of Inputs—ergo spending the 0.7% and Outputs—bilateral funding process of programmes rather than by the achievement of tangible auditable systemic social Outcomes.

**So if the public sector solution if as some would argue is inefficient and fragmented, difficult to reform and unlikely to grow given structural deficits—is the Private sector solution of donations and Foundation grants any better?**

When looking at Fig. 5 below the answer when matched against the challenges the sector and society face is unfortunately also an emphatic No.



Despite headlines announcing this year that giving in the US was at an all time high. Indeed supporters of the status quo would point to the demographic backdrop and note given the ageing of populations that this will mean the largest transfer of wealth in Human History—with an estimated \$41 trillion being transferred in the US between generations according to the Boston College research<sup>3</sup> (between now and 2050)—so why worry?

The headlines speak to record highs and indeed the market may grow comfortably for the Foundation status quo—but as an efficient capital capable of addressing the issues that imperil us all or even the moral imperatives of our age—the answer must also be a resounding No—given the market and the size of the challenges.

The headline figure for giving in the US last year was \$358.38 billion announced as a record high but as the chart above notes; that figure in real terms has more or less been flat for 10 years—meanwhile the number of 501c3 (registered philanthropic entities under this US tax code) has increased by 40% in the same time period. Around 70% of the giving is accounted for by domestic Education and Religion and Human Services, around \$275bn is accounted for by generous but fragmented Individual giving and around \$50 billion from foundations—the amount allocated to International causes is about 5% of the total spend. Non Foundation giving is virtually by definition fragmented.

Of what could be called the strategic giving of the US Foundations of around \$50 billion—this is based off an asset base (core funds) of the US Foundations of around \$750 billion. US Foundations must make a minimum allocation primarily grants of 5% of their value every year to maintain their tax status.

Of that \$750 billion only however around 2% of those core funds are actually aligned with social mission of which again only about 2% of that figure is in Social Finance products—the vast majority of those funds primarily being in US housing bond structures So the amount of their core capital aligned with Social Mission is very low—resulting in one leading commentator referring to Foundations as Asset management organisations that give 5% away a year for a tax break.

Or to phrase differently and in perspective—TOTAL US Foundation core funds are roughly equivalent to the annual expenditure of the US defence budget—the amount given away in primarily grants (95% of the 5% they have to give away) being about the same as the proposed cost of just the USAF B21 Stealth bomber program of about \$45 billion.

The annual give away amount invested in for profit Social Equity from the core funds of Foundations is probably equivalent to 5% of the cost of one B2-1 Bomber. This is of course compounded by high fragmentation and even the Gates Foundation annual grant making is roughly what the Pentagon spends in 36 hours.

Indeed as the Director of the CIA John Brennan noted in a speech in November 2015—“In many developing societies, growing pessimism about the prospects for economic advancement is fuelling instability. Regions with burgeoning youth

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<sup>3</sup><http://givingusa.org/giving-usa-2015-press-release-giving-usa-americans-donated-an-estimated-358-38-billion-to-charity-in-2014-highest-total-in-reports-60-year-history/>

populations, such as the Arab world, have been unable to achieve the growth needed to reduce high unemployment rates. Perceptions of growing inequality have resulted in more assertive street politics and populism. At the same time, slower growth has left these nations with fewer resources to devote to economic, humanitarian, and peacekeeping assistance to address these challenges. . . Mankind's relationship with the natural world is aggravating these problems and is a potential source of crisis itself."<sup>4</sup>

Now as a former defence analyst I believe the first duty of the state is to protect its citizens, but one has to ask fundamental questions about the use of soft and hard power to achieve that objective when as a society in the Cold War we could mobilise 5% of GNP to ensure against the possible destruction of New York or London in 13 min—and yet in a Warming Peace cannot mobilise a fraction of those assets to address the probable loss of many major coastal conurbations from climate instability in a range of states by the middle of this century and the resultant political turbulence—when my kids are my age.

Now in all this I have probably also sounded like a former banker specialising in creating new financial products which indeed I was for much of my career—but after over 10 years in the social sector I have learnt that we “tell stories”—so if you will permit me perhaps I can illustrate the above with one of my own experiences. For part of my time in the Social sector I focused on the Sanitation issue—which resulted in publishing with Dr. Guy Hutton of the World Bank probably the first UN report on Impact Investing and the move to Outcome models—using Sanitation as a case study.<sup>5</sup>

As a result of this ongoing work back in 2010, I was invited by the Ecuadorian Government and the Lindblat/National Geographic to the Galapagos Islands for a meeting on board the Endeavour to discuss the sustainability of the Galapagos. My flight was kindly funded by the CEO of Ryanair, and it was a gathering of the great and good. It is of course hard to turn such opportunities down. On a personal level, a distant relation of mine Sir Joseph Banks had been the Scientist on the original Endeavour (Captain Cook's first voyage). At a practical level I considered it an opportunity to structure a financial opportunity—after all for Private Bankers—and in brand terms, courtesy of Charles Darwin, who has not heard of the Galapagos Islands—and its criticality to Conservation? Indeed they are small islands, and I expected the issues would be well known and that the community actors must know each other well.

However what shocked me when I arrived at the event was the following, and at the risk of not telling a good story I will bullet point it:

- This was the first meeting between the key stakeholders—Central and local government; The tour operators; the NGO community; and the local community

<sup>4</sup><http://www.cnsnews.com/news/article/cnsnewscom-staff/cia-director-cites-impact-climate-change-deeper-cause-global>

<sup>5</sup><http://www.unescap.org/sites/default/files/Development%20Financing%20for%20Tangible%20Results-A%20Paradigm%20Shift%20to%20Impact%20Investing%20and%20Outcome%20Models.pdf>

- Although they must have lived cheek by jowl—the major NGO players had limited understanding of what the other NGO players were doing and their strategy
- There was no universal metric for what environmental success or degradation looked like
- A local politician was shipping in folk (10,000 plus) to the Islands to secure his own political position, and what was worse is the housing that had been provided for them had no Sanitation facilities—hence their sewage was being directly deposited into the sea
- Impressive plans were presented—with a focus on what happens in 10 and 30 years—when I asked what would happen in a 3 and 5 year time frame there was a deadly silence
- Equally I asked how they intended to pay for it and was told the Government of Ecuador would pay, followed by another deadly silence.
- Subsequent experience in trying to inject innovative solutions has met resistance/lack of a framework for innovative ideas to be implemented

Now to be fair since then the Galapagos has now been removed from a World Heritage site at risk list—despite ICUN’s recommendation that it not be—but unfortunately the above scenario will be all too familiar to many players in many areas of Philanthropic endeavour.

A fragmented sector, starved of capital, with incentives misaligned, lack of collaboration and incentives on bilateral rather than systemic interventions.

Under the current paradigm, there is clearly an issue of mobilisation of capital—however when you also view the current social funding paradigm and analyse it in the same way a bank would identify the cash flows, opportunities and assess risks, you find a capital market that is not of a required scope to address the issues we all face, and also one that is highly inefficient.

The chart below in Fig. 6 indicates the money flows from the \$1 trillion in assets currently under the control of global foundations

As we noted the Government sector is unlikely to grow in funding, and structurally is highly fragmented, but equally the Private sector solution is in much the same bind.

This also tells the social sector that they need to ensure that they do not lump the Finance sector into one broad category called “Bankers”—but instead understand that different elements of the capital market players will be driven by differing objectives—indeed as we will argue later, the focus on just applying a Venture Capital methodology to Impact Investing risks sub optimising the returns and imposes risks to society, the social sector and indeed to the banking sector itself.

What is also clear from this chart is that Impact Investing is a two edged sword for Asset managers—potentially cannibalising a \$10–20 billion income flow for the banks in traditional Foundation and Asset management structures—yet an opportunity as Assets Under Management (AUMs) since Impact portfolios are growing at about 17%.

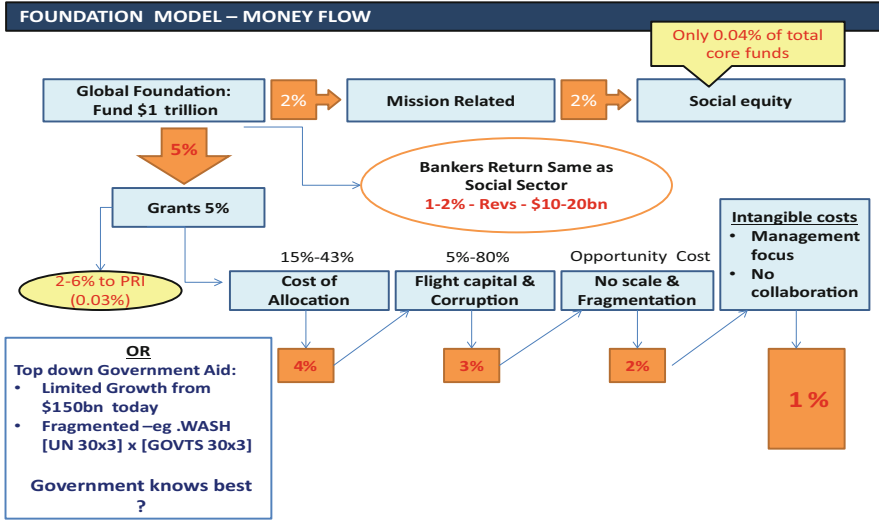


Fig. 6 Foundations models money flow

**INVESTMENT MODEL TODAY: Foundation Model is broken**

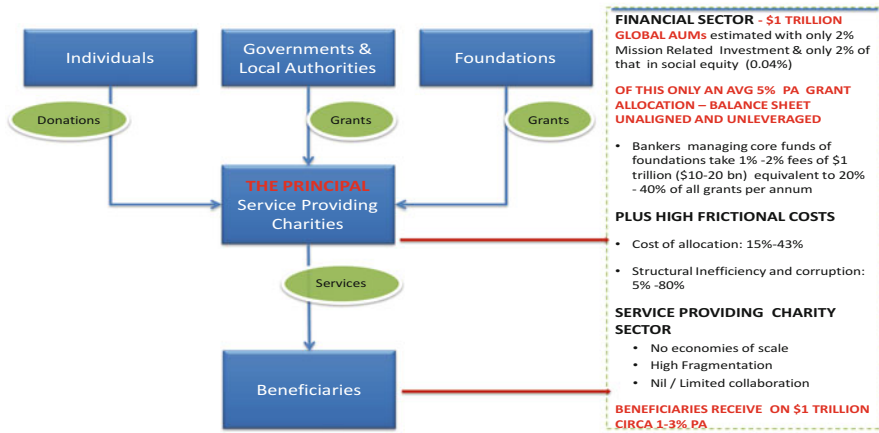


Fig. 7 Investment model today

Let’s perhaps look at this same chart not from a cash flow perspective but from an organisational perspective in Fig. 7.

Comparing Figs. 6 and 7 we can realize that the model of intermediation has not changes fundamentally.

## The Growth of Impact Investing

When Dr. Max Martin (then head of Global Philanthropy at UBS) and myself (then Global Head of Ashoka Social Financial Services) wrote *Market Based Solutions to Philanthropy*<sup>6</sup> in 2005—before the phrase Impact Investing was coined 3 years later by the Rockefeller Foundation—we noted the structural inefficiency of the sector and the opportunity to engage capital markets for Social Good.

The last 10 years have seen a transformation of interest in the sector, with a growth in VC models of about 17% a year to circa \$65 billion. This has been driven by a number of factors:

1. A need by Western Governments to consider how they engage capital markets for social good for both domestic and international purpose
2. In International development—the issue being brought to ahead by the migration crisis—and with aid budgets being cut
3. The corporate sector looking to the growth in the developing markets and moving beyond Corporate Social Responsibility and grants to how social impact investing approaches may impact their whole value chain from brand, cost of capital, marketing, product innovation and competitive profile
4. Bankers seeing an opportunity to apply their skills profitably as the margins/stickiness on the traditional products declines
5. With funding drying up from traditional sources—the existing agencies looking to Impact Investing tools
6. A different view from the Millennials on Impact Investing and how to manage social issues
7. Cyclical Attractiveness of the Emerging Markets and low interest rates
8. The growth of Social Entrepreneurship and Impact Investing models filling the gap of a retrenching government
9. Increased openness to look at new models—reflected also in Technology, Financial and Legal innovation
10. Government focus on the issue as recognised by the G8 Report on Impact Investing

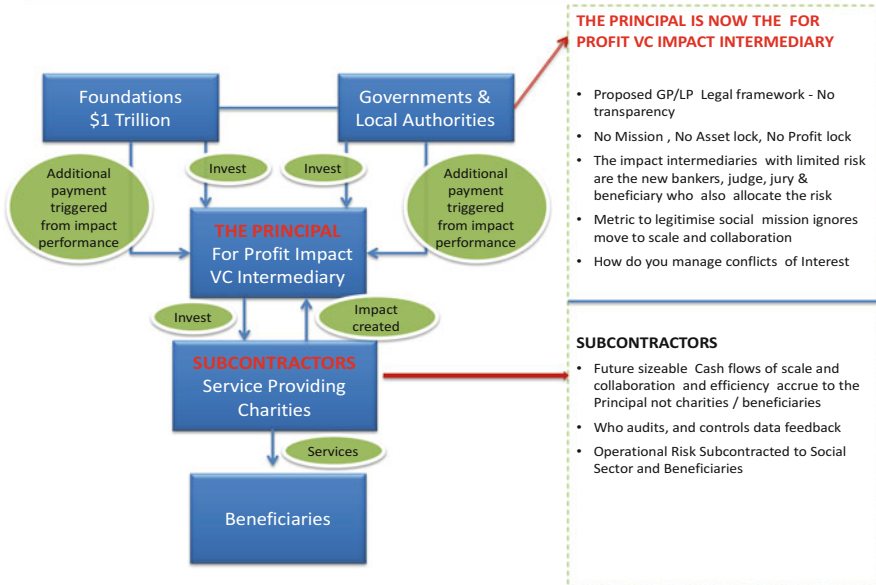
## So Impact Investing Is Growing: But Have We Gone Down One Financial Path to the Exclusion of Other Opportunities—And Does This Hold Risks?

The support of the British Government culminating in the G8 Social Impact Investment Forum in June 2013 has been a high point of the development of the impact market—and is to be lauded. It aimed to catalyse the development of the global

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<sup>6</sup>[http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=980097](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=980097)

**NEW MODELS NOW - PROPOSED FOR PROFIT VC MODEL – (THE G8 IMPACT REPORT)**



**Fig. 8** Impact investing—New model as proposed by the G8 Impact Report

social impact investment market and has brought both key players and credibility into the market. In the UK, post Brexit and Cameron’s departure, it remains to be seen how this will play out—but the reallocation of the Department of Civil Society out of the Cabinet office to the Ministry for Media, Sports and Culture is not a positive sign—as is the change of strategy for Big Society Capital from the creation and support of a deeper and diverse dynamic competitive impact intermediary sector to the support of current financial institutions and paradigms.

The result of the UK G8 process was to frame Impact Investing in a Venture capital paradigm as shown in Fig. 8—now there are clearly examples of great Venture Capital Impact Investing and notable success stories and it is a critical and important element in the development of the market.

However, the focus on an individual financial approach potentially threatens an ability to blinker the deployment of other financial solutions and approaches and throws up clear governance issues when applied to other financial tools.

The process is legitimised by reference to a social metric—the social sector is of course content that a definition of social value is being applied to financial judgements made by bankers. The thinking is that subsidy should be applied to the social metric—that is fine as far as it goes and one can see the logic if looked through a pure bilateral Venture Capital model.

When this thinking is applied to other financial innovations—such as the Social Impact Bond (which is not a Bond but actually fits directly under the SEC definition of a Structured product) the issue becomes more complex.—Unlike most financial models in the social sector which focus on funding innovation—these vehicles are

specifically designed to create outcome models—and create and capture the value of Collaboration and Economies of scale—which along with Innovation are the drivers of capitalism.

The problem under the proposed model is that you then have a governmental subsidy applied and justified by reference to a social metric that measures the current level of inefficiency—but indeed the impact across a range of issues.

That leaves on the table the value of collaboration and economies of scale (plus Asset management). Under this model, the subsidy is paid directly to an Impact Intermediary. It is worth noting that in nearly all cases these are for profit entities or have no mission lock—ergo their controlling shareholdings are held by a foundation as a Mission related Investment—and can of course be quite legitimately sold to maximise the economic return to the Foundation.

Furthermore, these impact entities subcontract the collaboration roles to the social players. The intrinsic danger of such a structure is that it places a for profit entity at the heart of the transaction, which given their for profit nature will be tempted to structure any deal so that they get the upside of collaboration and scale—and to subcontract the risk to the social sector players. The key question is who is the principal and how is the social mission hardwired.

The dangers of such an approach can be seen in the earlier attached chart:

In the G8 process, this approach was legitimised in the side report of the G8 Impact report on Mission alignment.<sup>7</sup>

This on a close reading (on p13/14) indicates that it is not necessary to have an asset, mission or profit lock. The implication being that you will be potentially more heavily regulated giving your money away in a Foundation at a guaranteed negative 100% return, than participating in a for profit social venture vehicle—intuitively flawed and open up the whole impact sector to potential criticism from the left. The key point here to reflect is that this is a fundamental issue if public private subsidies are in play.

Furthermore the report—despite claiming to be a comprehensive overview of the legislation in Impact Investing—ignored the Program Related Investment code in the US—legislation originally passed by Congress in 1968—and on the Statute books for over 50 years; indeed with a wide body of case law that defines exactly the terms on which a Foundation can apply/invest with and in a for profit investment with social purpose, *i.e. there is a body of law that already defines how a foundation (and a corporate working with a Foundation) can participate in Impact Investment* in multilayered structures.

These structures are often in classic philanthropic thinking confused with B Corps—where the social mission is hard wired at a bilateral level. In these

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<sup>7</sup><http://www.socialimpactinvestment.org/reports/Mission%20Alignment%20WG%20paper%20FINAL.pdf>

multilayered structures it is proposed the social mission is hardwired and indeed regulated by the IRS.

Furthermore in parallel with the development of the Social Impact Bond—a legal project was instigated from 2006 in both the US and the UK to ensure that there was a legal framework which mirrored the financial development of a SIB—ergo a financial structure that creates a multistakeholder collaboration needs a mirroring legal structure.

The proposal to simplify this for Foundations/Investors was created by the Former head of the Exempt Unit of the IRS (the US philanthropic regulator) by integrating the PRI rules into an LLC/LLP<sup>8</sup>\*—called an L3C—(which to declare an interest I was involved from its conception at the Aspen Institute in 2006) and was actually adopted in the following years by 11 US jurisdictions before being for the most part integrated into the 2012/2016 revisions of the IRS PRI code.

The logic of the L3C (and the mirror structure called the SELLP in the UK) logic can be seen in the videos below by probably the two leading lawyers in Impact Investment—UK and US—Mark Owens and the late Stephen Lloyd.

[https://www.youtube.com/watch?v=FDNGFEjR\\_Ac](https://www.youtube.com/watch?v=FDNGFEjR_Ac)—Interview with Marc Owens—Former Head of Exempt Unit IRS (25 years with IRS, ten as its head)

<https://www.youtube.com/watch?v=jU0BUu8TevE>—Interview with the late Stephen Lloyd—Advisor of Lord Hodgson on UK charity reform.

The bottom line is that when public private subsidies are in play, in governance terms the metrics framework cannot be separated from the regulatory and legal framework.

Secondly the danger of applying a single financial paradigm to everything in Impact Investment, is that it creates frameworks that although may provide the Venture capitalists the opportunity to apply their skills to the privatisation of the government balance sheet—may well result in the social sector getting a lower return. There are higher levels of risk—and in a worst case scenario—may create a political backlash that will tarnish Impact Investment more broadly—and impact on a range of solutions that can and need to be applied to social need.

The attached article in the New York Times<sup>9</sup> in a deal structured by Goldman Sachs highlights these concerns—I am making no judgement on this specific structure—but at a political level it all too easy to see how this can create scepticism.

None of this is to deny that there are very good Impact Investing VC solutions that should, can and have been applied by exceptionally committed folk to achieve substantive social good—but that as the sole model to be universally applied as THE model to Impact Investing risks ignoring or distorting other financial models—and raises concerns in Governance terms specifically when one places for profit

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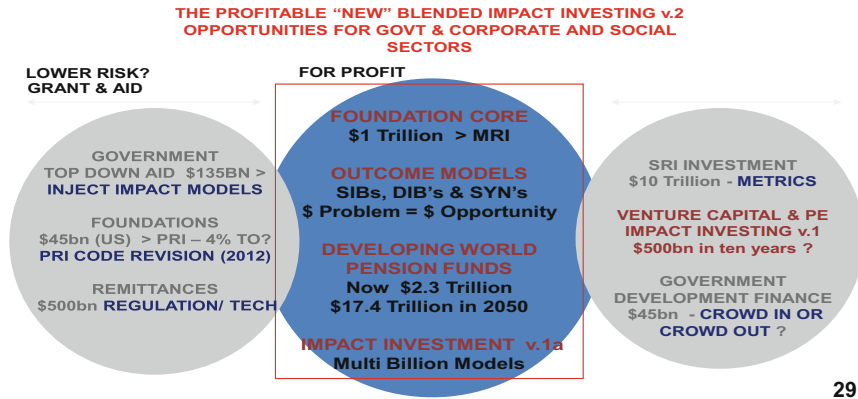
<sup>8</sup>As an aside an LLP/LLC (effectively the same concept should not be confused with a LP (Limited Partnership structure) which is often used by Venture Capital entities and is notoriously un-transparent and can quite often define the power relationship to the benefit of the VC entity

<sup>9</sup>[http://www.nytimes.com/2015/11/04/business/dealbook/did-goldman-make-the-grade.html?\\_r=0](http://www.nytimes.com/2015/11/04/business/dealbook/did-goldman-make-the-grade.html?_r=0)





THE OPPORTUNITY – THE MISSING MIDDLE - IMPACT INVESTMENT v.2



29

**Fig. 9** The mission middle—The new blended impact investing. Sources: TIA, Hudson Institute, McKinsey, AMF, WHO, WSP

intermediaries or social intermediaries without mission lock as judge jury and beneficiary of such structures.

In the same way the sector rejected the argument that Impact Investing was a single asset class—the sector should be wary of arguments about single bilateral metric structures which will be used to justify subsidy—and as ever in all financial services we need to ask what is the governance structure—qui custodiet ipsos custodes—who Guards the Guardians

Indeed a reading of history will tell you the same dynamic was played out colourfully—in the early years of the Foundation world (allocation of capital at negative 100%) resulting eventually in the demand for a framework that hard wired the social mission by a regulatory framework—one wonders why we do not see the same necessity for modern day Impact Investment with multiple returns?

This is surely ultimately in the interest of all stakeholders—Government, Social Sector and indeed corporate and banking interests.

## So What Are the Other Solutions in Impact Investment

As a rookie in Finance in the early 1980s with Merrill Lynch, I remember fondly my New York training manager—he was an American smoother than extra pressed virgin olive oil and whose email in later years I recall was Bigdog—on our first day of training I recall the three phrases he drilled into us—(1) KISS—keep it simple

**Table 1** Impact investments taken from the JP Morgan 2013 Impact Report

## The PE / Venture Capital Opportunity

- JP Morgan estimates that a total of between US\$400.6 billion and \$987 billion could be invested over the next ten years in “impact investment” to fund the capital needs of the BoP. ...but 40% Growth ??
- Sub-sectors include urban housing, clean water for rural communities, maternal health, primary education and microfinance.

Sector	Potential invested capital required USD bn	Potential profit opportunity USD bn
Housing: Affordable urban housing	\$214-\$786	\$177-\$648
Water: Clean water for rural communities	\$5.4-\$13	\$2.9-\$7
Health: Maternal Health	\$0.4-\$2	\$0.1-\$1
Education: Primary Education	\$4.8-\$10	\$2.6-\$11
Financial Services: Microfinance	\$176	Not measured



stupid; (2) Whenever faced with a complaining client—make sure you say “I am so happy you mentioned it”; and (3) Follow the money.

The first I must admit I regularly fail, the second I wish I used more with my wife, and the third I will attempt to do for this market. So let’s follow the money.

Compiled below in Fig. 9 is an outline of the different sources of capital—it does not claim to be exhaustive—it is probably “more roughly right than precisely wrong”—but hopefully gives you a feel of the capital that can (and should) be aligned in the social capital market.

These are of course the current potential sources of social capital—which are noted in the traditional silos of for profit and not for profit—a perhaps interesting question is also where we shed our beliefs that there is a direct negative correlation between economic and social good and that we cannot create structure where different players take different economic social return.

If you can—and I suggest you do—this means you must ask the question how can this social capital be used to leverage further for profit capital into this market—reinforcing the point that this not about a shortage of capital, but how we leverage that capital for social and economic return.

As can be seen from Fig. 8 the traditional view of Impact Investment is the PE/VC model (v.1 on the chart) and attached below in Table 1 is the social breakdown of the \$500bn that was identified by JP Morgan and Monitor as to the financial opportunity.

This is the market that people traditionally consider Impact Investing which is currently growing at 17% pa—although this is not the 40% that was originally implied given the 10 year target—but it is a growth rate clearly much higher than the essentially flat growth in standard investment portfolios—hence the growing interest by main stream asset managers. Though one cannot but think that there is

green washing going on with some funds designated now as Impact whereas before they would have been say developing equity markets.

There have clearly been other major drivers recently in the market with the growth of the Green Bond market to nearly \$100 billion in 7 years indicating that where we package Social Investment in a consistent way that the market understands, that a market for social capital can grow very fast.

Or the disinvestment from the coal and dirty oil by main stream investors driven for the most part by the work of Mark Campanale at Carbon Tracker<sup>10</sup> (picked up by Mark Carney—the UK Governor of the Bank of England) which termed the concept of “Stranded assets”—the concept notes the cost of the externalities of the coal and oil industry (6% rise in global temperatures if it is all consumed)—which means the stock valuations driven by an analysis of the value of their reserves of many dirty polluters are effectively “Stranded assets”—ergo they have no financial value if 3% of global warming (as the head of the World Bank notes), “is catastrophic” for the global economy.

This analysis has resulted in the last 18 months in wide spread disinvestment in dirty energy companies and a reduction in the cost of capital for clean energy companies and much higher returns for them.

There is a broader issue in here that it raises some interesting questions as to how externalities to society should be priced to create the same impact on other social issues.

If you look at the centre of the image you will note a number of large scale markets of social capital—I will not go into in this article about realigning the current sources of capital—and the opportunity is large—but look namely at the large scale opportunities in what is often called the Blended finance space:

#### 1. Asset Reallocation of existing Foundation funds

- (a) As noted earlier the core Funds—the \$1 trillion that sits on the balance sheets of global Foundations—moving up from the current 2% of asset allocation. This is referred to as Mission Related Investment—and organisations such as Heron and KL Felicitas have moved to 100%
- (b) Currently of the 5% that is given away—only about 3% of that 5% is in for profit instruments—the 97% is in Grants. This allocation to for profit vehicles with social impact is allowed to be done under a legal code called Program Related Investment

The long term acid judgement on Foundations is not the programs they support in research into the Impact market—but the allocation of core programmatic funds to Impact—the clearest way of doing this is to look at the amount of MRI and PRI an institution does.

To give an idea of the impact 20% of core funds in MRI by 2020—a 3% annual change in asset allocation—would create a capital pool of about \$125 billion that in turn could be leveraged three times—creating a capital pool of nearly \$400 billion.

<sup>10</sup><http://www.carbontracker.org/about/>

2. The ultimate implication of the Social Impact Bond model (and the DIB) is the move towards Multi-stakeholder Collaboration models and a model where Social Equity = Financial Equity—this potentially could create liquid tradable opportunities—where the achievement of a tangible auditable social outcome is a market opportunity—indeed reflects *pari passu* the structure of a normal capital market. When one notes that the WASH market alone has according to WHO/World Bank research around \$650 billion in social externalities—indeed monetising just 10% of that market would be equivalent to the total size of the current annual grants of all US foundations.
3. Local Currency pension Funds—there is approximately \$9 trillion in the local capital markets today in the developing markets in local currency—effectively unaligned with their own essential sustainable development—very often in just cash or local government bonds—how about South–South capital alignment ? Again to give a sense of the size developing market pension funds alone are estimated to be around \$2 trillion—with the World Bank research indicating that this figure will rise to \$17 trillion by 2050.
4. Other Impact Investment tools v.2—anyone with a cursory engagement with Impact Investing will know there is a huge range of tools that are now being developed from Infrastructure to Blended models to Intellectual Property models and beyond. When we first did this exercise nearly 7 years ago at Ashoka we identified nearly 50 Ashoka Fellow models and of course the market has exploded since this.

With the current players such as the Breton Woods institutions now facing cuts and asking how these models change their role as Intermediaries; and companies now asking the question of how these tools impact their whole value chain—you are seeing the development of what could be called value chain financing with models having a focus from Infrastructure to Manufacturing to Innovation to redefining the nature of the terms of trade. IP structures in Africa alone are measured in tens of billions. I could go on but you get the point looked at through this prism the challenge is not money or even innovation but change management—as we look around our world we intuitively we can feel the storm clouds gathering—the post war consensus is breaking down driven by demographic forces beyond our control—the challenge have we the will to change the way we deal with these issues?

As Cassius says in Shakespeare’s *Julius Caesar*—“The Fault dear Brutus lies not amongst the stars but amongst ourselves”.

# TBLI Makes Dreams Come True: But We Are Not in Cosmetics



Karen Wendt and Robert Rubinstein

## Editor's Interview with Robert Rubinstein Founder of TBLI Group

When I started Triple Bottom Line Investing (TBLI) nearly 20 years ago, I wanted TBLI Group's mission to create an inclusive values based economy. The Triple bottom line approach. All investments should provide a financial, social and environmental return, and not only a financial return. Since 1996, the Triple Bottom Line Group (TBLI) has been building the ecosystem for the Impact Investing and Environmental, Social and Corporate Governance (ESG) community, providing advisory, educational services and networking events. One of the star products is the TBLI CONFERENCE, which is the longest-running global forum bringing together investors, asset managers and thought leaders in sustainable finance.

Reflecting on the past 20 years, I feel proud of the impact that TBLI has had on integrating sustainability in the way the financial sector looks at investment. It is nearly impossible to say how much money, jobs, opportunities has been created directly and indirectly but it is massive.

Robert, you have more than 20 years experience in living your mission: Why have you created TBLI and why are you sticking to the idea of Triple Bottom Line investment?

I saw the necessity to engage the corporate sector in order to create an inclusive value based economy, which is my vision. I then asked myself. How do you create an engagement policy with the corporate sector? Corporates respond to pain, so I

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began to influence their pain point. The main pain points for corporates are Finance, Personal and Reputation and you have to press those pain points in order to engage them for an inclusive value based economy. So I chose where I can most effectively influence their pain points, and have been doing that for the past 20 years with the financial sector. In the 1990s, 20 years ago I considered that I would have to connect with the top 100 asset owners and managers world-wide, as they had direct or indirect control over 25% of the assets, globally.

**“Strategy, plan, goal:** So I decided to convince only 100 CEO’s or CIO’s, controlling around 25% of assets to bring about a change toward a value based economy. This seemed more doable for a small company like ours.

I realised that trying to influence all MBA students globally (personnel) would be resource prohibitive (take far too long). Reputation would be even more challenging.”

### **So how did you go about the mission?**

I started with capacity building. I have used TBLI conference as a tool to engage and bring about change. So the conference was the means to build an engagement strategy. And I was clear about one thing: you have to do it over and over and over again in a farming approach. Investors and investment bankers are hunters and some are predators, building an inclusive value based economy is a farming exercise, not a hunting exercise. The financial sector has a short term focus with incentives reinforcing that short term behaviour. If asset managers hit or surpass their benchmark, they are rewarded, and punished (fired) if they don’t. Quite simple. Sustainable investment is more long term in nature (farming) making it challenging for the financial sector (hunters) to embrace.

I saw influencing the TOP 100 in the financial sector as the most effective way for my mission, because power and influence is in the hands of so few people. This was all done with little to no resources. I had no money, I had no staff and I was providing my company with my own seed money. My first conferences were with the Rotterdam School of Management. I signed a contract with them and they made me liable for all losses that such a Triple Bottom Line conference would bring about. We made money with the first conference, so that was a shock for them. A small percentage of the profit for this first event with RSM, went to TBLI. I continued for a while the conferences with the Rotterdam School of Management, until I scaled up and could move to other financial centers, that appealed to mainstream financial players, and get more global in my conferencing approach.

### **So that was a great start already making money out of no resources for a great idea and mission. But how did you scale?**

I knew, that I had to scale with institutional investors. My approach is somewhat different from the approach of many sustainable finance conferences. I am doing conferences for the mainstream investors, not the socially responsible investors. TBLI focusses more on the “I am interested in engaging with the “irresponsible” investor and “criminals”, because they have more money, are predictable, open to practical arguments, and most important they have a good sense of humour. I am an excellent quality connector. I know how to connect people that fit professionally and

culturally. I was one of the first to “invest” into a first class Customer Relationship Management (CRM) System from the beginning and we have continuously improved it. I looked for the best affordable CRM system and made sure we maintain all the relationships we need for our ecosystem. The CRM helps us a lot in working effectively and maintaining effective relationships, we can track the history of the relationship, we code every relationship and we possess a huge history of data by now. So this was our way to build up social capital and to transform it into a market movement.

**So is it correct to say, you transformed social capital not only into a market movement, but also into financial capital like a Tesla?**

I know people speak much about transforming social capital into financial capital today, but this was not my primary focus. Of course I wanted TBLI to grow and have funds to scale up, but my primary focus was to have the funds to make change happen. And then the financial crisis and all its collateral damage came. It was a body blow to the gut for everyone TBLI’s Conference income dropped by 90%! Until the time we had built an ecosystem that was nurturing the TBLI approach. In spite of the financial challenges, we continued to impact the industry and innovate. Since the crisis, banks and investors spend money on compliance, regulation, Basel II and Basel III and are happy for the remainder to make the CEO look good. Little to nothing was going towards capacity building. Everyone wanted us to continue convening our TBLI events, but weren’t providing the resources.

This challenge actually helped us tremendously, by making us much much stronger. We refocussed, adapted, innovated by working with leading business schools and further refined our message. The financial sector started to realise that ESG and Impact was in their interests, and in particular in the interests of their clients.

The Triple bottom line approach is easy to understand. The challenge is getting the message through to asset owners and decision makers, passed the gate keepers who are more often blocking the door or guarding the mote. This behaviour change and attitude change towards ESG and Impact Investing is happening, big time, in spite of the gate keepers. This is in part due to all the farming TBLI has done.

So how do you position TBLI now following the financial crisis and how can you move on?

## **TBLI Is Not Conflicted**

TBLI is one of the few independent organisations only focusing on our mission integrating sustainability into the financial sector. TBLI is investing every penny into our efforts of building an economy based upon well being; focusing on the financial sector. **TBLI does not manage money.** This is to avoid any conflict of interests. TBLI is also quite critical of many of the fund managers who claim to have all the answers (“master of the universe”). Look at Warren Buffet advice to his wife: “When I die put your money into an index fund.” Do you think we need all these well paid fund managers, if we can do as well by investment in index funds? Index funds are

agnostic to values and inclusion. As I said, capacity building is not something investors or bankers invest in any more. But Wealth Management is something banks are still going for, as this is still going reasonably well for banks and clients money is quite sticky (doesn't move much). The banks have a major advantage over others as they have access and relationships over a long time with wealth clients. They can engage with them. For traditional banking services (cash management), which is what most clients want in the way of banking services, banks will struggle. Fintech and fintech startups are a major disruptive force in the banking sector. That is why many are investing or buying these companies.

TBLI found, the model for scaling up capacity needs to be adapted post crisis, given the amended circumstances. TBLI is creating a Sustainable Finance forum integrating all of our entire eco-system and tools that we have developed.

TBLI has 20 years of capacity building experience and the largest network of ESG and Impact Investors and thought leaders. Now we will take our whole ecosystem not only TBLI Conference, but also, TBLI Club, TBLI investor salon, TBLI training, TBLI expert meetings, TBLI dinners, and TBLI retreats. Basically, everything we have done over the 20 years to focus in one centre (geographic area) to make it the centre for sustainable finance in the region supported by strong media outreach. This will provide a networking and exchange platform for asset managers, asset owners and financial service providers. Ultimately, creating a significant financial impulse in AUM's and employment, which is what the financial sector wants. TBLI will be the Consigliere or Rabbi for banks and asset managers in helping them to help themselves.

## **Growth, Prosperity, and Sustainability**

### **What exactly will the Centres for Sustainable Finance be doing?**

I have strong connections with the cities of Stockholm and Zug. Switzerland, Sweden and Tokyo are more open to innovation than many other developed cities.

Now TBLI is working on making these cities into Sustainable Development Goals Centers.

I am looking at some places in North America, Latin America, and Africa. TBLI believe in social inclusion and are partnering with a network of 12 major faiths through the Alliance for Religions and Conservation:

Islam, Christianity, Shintoism, Judaism, Daoism, Confucianism, Buddhism, Hinduism, Bahai, Jainism, Sikhism, Zoroastrianism. These faiths are creating guidelines on how to manage the faith's assets (cash, buildings or land) in line with the Sustainable Development Goals (SDGs). That would be one of the deliverables that we would bring this event to the location and ultimately may call the final guidelines after the city that hosts the Sustainable Finance Forum.

It's a 3 years fully funded programme, with funds coming from various players that present and position themselves with the help of the TBLI world wide network as Centre of Sustainable Finance. These Centres will apply for and provide the



funding, whereas we provide the complete TBLI capacity building programme. We are in discussions with Stockholm, Tokyo, Zug, Hong Kong, Singapore, Toronto, Nairobi and Bogota. Switzerland, Sweden and Japan have responded favorably.

These Centers using our ecosystem and our tailor made Capacity Building blocks will thrive and allow rapid growth of money flows into ESG and Impact Investing.

TBLI has successfully created a multitude of tools to raise awareness of the financial sector, with the TBLI Conference as a star. We will leverage on our ecosystem for the next step.

### **What will be the impact?**

The idea is to take one location, and very intensively, do this on an on-going basis and ultimately this will create the products and services, which will generate lots of jobs and assets under management and money flows. That is different than organising one conference. People come and they exchange business cards but there is no follow up. No one is managing that process. That is the critical part. Creating or partnering with a non-profit to carry out the Capacity Building will provide the missing part to scale rapidly. I am quite far with two locations and hopefully this will allow TBLI to scale and do this as a non-profit initiative. The business that comes out of that will be a great deal of advisory work.

### **So you are going to work more with cities and asset managers, so players that want to position themselves in sustainable finance?**

Yes, our partners are associations or non-profit foundations and I proposed that TBLI can do the deliverables, and they manage the organisation locally, and apply for the funding, with assistance from TBLI. The timing is right as there is significant interest in ESG and Impact Investing, and interest to grow the financial sector of a particular city. With our vast network and experience, TBLI is able to bring a team together in any country. It is not that hard for TBLI, due to our vast experience and reputation in doing this type of work. The funders (city, stock exchanges, financial associations, asset managers, law firms, etc.) have what TBLI needs (funding) and TBLI have what they need (deliverables).

At the moment everybody is worrying about US elections, BREXIT etc. but I feel the timing is ideal. It is the right time. Intermediaries have been slowing the process of asset allocations towards ESG and Impact as well as often not informing or educating their clients, until now. They feel that the best business model is to keep the client ignorant and not allow ESG and Impact Investing product to get through to their asset owner clients. They feel they have something to lose by not pushing ESG and Impact, but it is the complete opposite. Those that don't embrace ESG and Impact Investing, will lose. The asset owners are the ones to engage, yet this is far more difficult to negotiate access to them rather than to the intermediaries.

### **So the core question is “How do you get access to asset owners.?”**

The financial sector is not that seriously committed to the topic as they claim to be. TBLI is changing that.

### **So when you talk about ecosystems what do you mean by that?**

## What is for you the difference between an eco-system and a forum?

A forum is regional or local and is often one event, an ecosystem can be local or global and entails everything related, such as networks, events, partnerships, sponsors, clients, IP (intellectual property), technology infrastructure, etc. One thing is absolutely essential. It has to speak one language. “Don’t scream in French to someone who speaks Chinese. They still won’t understand you if you shout.” What I am doing is to take the attitude and language of farming and translate it to hunters.(financial sector). As TBLI is independent, it does not need to be politically correct. We can confront people when they say stupid things and this is what we do. As we are not part of a political organisation, we can cross connect people. In addition, we are not an asset manager ourselves, so can avoid conflict of interests and focus entirely on clients and society long term interests, like a true Consigliere or Rabbi.

## So what is your intrinsic motivation for getting up each and every day and continuing with TBLI?

“My wife’s snoring”.

Just kidding.

I like what I am doing. When I have time to farm, rather than chasing, things go smoothly and easily with little effort. We are the Consigliere/Rabbi of Financial Sector, creating a level playing field and mobilising capital for sustainable investment.

Ultimately, an economy based upon well being fuelled by a financial sector that wants a financial, social and environmental roi.

## TBLI GROUP: Toolkit

**TBLI is the most influential and successful network in inspiring the financial community and mobilising capital towards ESG & Impact Investing!**



**International networking and education event – the world’s largest Conference on sustainable investment for financial professionals**



**Regional networking and educating tool - launched for BENELUX, France**



**Advisory services for financial sector: Education, Training, Advisory Board creation**



**High-level, effective matchmaking tool for investors and projects**

- TBLI EXPERT NETWORK- Connecting decision-makers to a global network of ESG and Impact Finance experts
- TBLI VIP Dinners-Private dinners for knowledge sharing
- TBLI Investor Council-Retreats on Future of Finance
- TBLI Learning Journeys

## Overview of TBLI Group Work Over 19 Years

Since its inception over 19 years ago, TBLI GROUP has been an educator and curator. In addition, we have provided a network to institutionalise sustainable investing, that has been contributed directly and indirectly to the growth of Sustainable Investment (liquid and illiquid).

Professional global network of 30,000+

- TBLI CONFERENCE™ gathers financial professionals for dialogue and debate on all aspects of ESG and impact investment
  - 31 Events over 19 years on three continents
  - Attendees represent ~\$50 trillion US AUM
- TBLI CONSULTING™ advises companies and individuals who wish to institutionalise sustainability
- TBLI CLUB™ is a regional, initiative in Benelux and France, offering quarterly learning and networking events

### Achievements

It is hard to keep track of all the people and companies that have gotten benefit through direct introductions by TBLI to a strategic partner or investor, here are some memorable moments that come to mind. The carbon disclosure project got started through quality connections to institutional investors like Allianz and Munichre, when CDP had no signatories and was just starting as an idea. TBLI connected a us micro finance fund manager to Daiwa that led to 250 million dollar mandate. RENGO (Japanese Trade Union) announcing a 450 billion euros commitment to ESG at TBLI Japan. APG asked TBLI to train staff, managing 30 billion euros, about why ESG is important to a pension fund. This training program led to APG committing to integrate ESG in all their assets.

Pre qualifying connections between two or more parties has always been the hallmark of TBLI. People want to meet people that are Kosher. We perform that as a kind of “pre-qualified linked in and Rabbi”, all rolled up in one.

### Testimonials

“As CDP was first developing in 2001, Robert Rubinstein and TBLI stood by us, attending key meetings with key investors such as Allianz. We ended up representing Allianz in 2002, helping CDP start with over \$1 trillion. Robert and TBLI were pivotal to getting CDP off the ground and we will always be in their debt.”

Paul Dickinson  
*Executive Chairman*  
*Carbon Disclosure Project*  
*Zayed Prize Winner 2012*

“TBLI [is]—first and foremost—an investment conference. There are many other venues for advancing pure social and environmental activism. TBLI is different because your time is spent on investment fundamentals, new research on

maximizing alpha, and meeting with investors who have similar levels of fiduciary responsibilities to manage and/or guide large investment portfolios. . .TBLI creates a safe-place for real financial professionals to ask questions and rethink long-held ideas of managing investments

You (Robert Rubinstein) have led great changes in this world. While climate and social equity are practically mainstream now, you were a leader when there were few in the business world who took these issues seriously. I was at COP21, in part to assist my Chairperson, who was a delegate, and to also attend a few things on my own. I thought many times about the people I had met at TBLI and the influence you and it have made in my understanding of the world.

Robert, YOU, personally, made COP 21 and the agreement possible. You are like the guy who breaks the path in the snow after a big storm. It is hard to be an early adapter.”

Toni Symonds (*Chief Consultant, Assembly Committee on Jobs Economic Development and the Economy California State Legislature*)

“TBLI Conference stands out from other conferences in the standard of value I received during my attendance. The topics covered, quality of contacts made, deals executed and community generated are noticeably better than other conferences I’ve attended. Thank you Mr. Rubinstein for your vision and execution”

Ibrahim AlHusseini (*The Hussein Group LLC*)