Hasan Dincer
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Globalization of Financial Institutions

A Competitive Approach to Finance and Banking

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Preface

The concept of financial globalization refers to the increasing interdependence of financial markets across national economies through a significant increase in transnational movement of financial instruments, services, capital, and information. Within the globalizing world economy, a country's financial system is attached to the globalization process of financial institutions which have been contributing to global financial integration. The latest turmoil in the global financial system has once more demonstrated that the impact of globalization is associated with risk and vulnerability. The process of globalization on financial markets relies on the economic integration across national economies; whereas, international trade, banking, and supported financial systems are the pillars of successful integration.

The process of globalization on international institutions and financial systems is facilitated by the dissemination of investment opportunities and the elimination of boundaries for capital movements. Global financial crisis demonstrated that globalization of the financial system has posed both opportunities and threats bearing some risks for advanced and emerging economies simultaneously.

The subprime mortgage crisis which started in the USA affected international capital movements and portfolio investments across the globe. Financial risk in capital markets were globalized while financial stress in advanced economies spread into emerging economies. Consequently, international financial institutions briefly experienced liquidity issues in financial markets. The 2008–2009 financial crisis had many impacts on global economic activity within the structure of the globalized financial system. In developed and emerging economies, economic stimulus packages, which exceeded $7 trillion, were aimed at stabilizing the world economy via rescuing large industries. However, the progress of economic recovery has been stalling, which is affecting global economic activity.

The main purpose of this book is to discuss the related issues of globalization and the financial system from an interdisciplinary perspective. The unique approach of this publication brings together the globalization of financial institutions, innovative solutions for risk assessment, and models as well as reflective behavioral approaches simultaneously.

The authors of the chapters in this publication have accepted inclusion of their respective manuscripts. This book, consisting of 19 chapters, is divided into four Parts: *Globalization and Financial Crisis, International Trade and Banking,*

Financial Innovations and Regulations, and Behavioral Finance and Risk Assessment.

In the first part, the contributors have also accepted a challenge for developing ideas for introducing the globalization process on the financial system.

In the second part, the authors discussed the pertinent issues related to the effects of globalization on international trade and banking.

In the third part, an innovative approach to financial competitiveness and risk management in capital markets has been developed through assessing ideas of improving service quality and implications of innovation strategies on financial institutions.

Consequently, in the last part of this book, the authors formulated a unique approach by developing distinguishing solutions to behavioral issues in finance and risk management.

Chapter 1 focuses on the role of state in a globalizing world economy. In this chapter, it has been aimed to assess the transformation process within the framework of globalization in terms of the responsibilities by the state in economy. This study, which provides a theoretical framework, discusses the roles the globalizing economy assigns to the state and how the state changes the governing and financing tools. In this study, the role of the state in the transformation process has been analyzed.

Chapter 2 focuses on financial globalization and the effects of monetary policy. The aim is to discuss the impact of globalization and monetary policy on different markets and parts of the economy. In the first part of the paper, the main instruments of monetary policy are explained. The question of how global factors will become an important part of domestic nations will be one of the main focuses in this part. Also, the role of central banks and their policies on developed countries is another issue that will be put forth. In the second part, the main focus will be on the volatility of the foreign exchange rate. Moreover, the 2008 financial crisis will be analyzed in perspective of Euro area countries. Finally, the main arguments for recovery from the financial crisis are another issue that will be discussed.

Chapter 3 evaluates the second recession and its impact on the US Economy and Global economic activity. This chapter advocates that the global economy has not yet fully recovered from the financial crisis of December 2007 and that second recession known as the *double dip* recession has affected the world economy. This chapter examines the major factors responsible for the emerging trends and its impact on the US economy in particular and the global economy in general.

Chapter 4 shows the impact of globalization on Sub-Saharan Africa (SSA). This chapter also examines the connection between the process of globalization and SSA with emphasis placed on its impact on growth and poverty reduction in relation to other regions. Within a theoretical framework, the existing literatures on the implications of globalization on economic growth and poverty were reviewed. This chapter argues that SSA has not fared so well in spite of the high integration of its member countries. This chapter suggests that SSA economies should try to maximize the benefits of globalization by adopting and developing strong production bases that are predicated on value-added products, export

structures diversification, development of manufactured export capacity, and the political-will to implement these policies among others.

Chapter 5 is based on the claim that there is a strong relationship between the process of globalization and the transmission of financial risk. The 2008–2009 financial crisis which began in the USA was one of the greatest economic crisis in history. Although the crisis started in 2007 in advanced economies, its effects still linger and no one can foresee the end of crisis. This chapter aims to illustrate the linkage between the globalizing process of the financial system and the roots of the global economic crisis. This chapter evaluates the roots of the global economic crisis and illustrates that liquidity redundancy, credit defaults, securitization, the lack of transparency; the poor evaluations of rating agencies and weak supervisory entities were some causes of the global economic recession.

Chapter 6 develops a historical overview on the issue of political instability for Turkish banking system. This chapter discusses changes in the structure of the economy, financial system, and banking sector since the Ottoman Empire up until today's modern Turkey. This chapter provides the reader with an overview of the political instability, financial crises experienced in the country, and what has changed in the banking sector over the past 700 years.

Chapter 7 demonstrates the impact of augmented FDI on the performances of Turkish Banks. This chapter investigates the relationship between foreign investment and bank productivity in Turkey from 1992 to 2010 by examining and dissecting the DEA Malmquist index scores of 17 commercial banks. Four questions are posited at the center of this study: What are the productivity scores of foreign invested private commercial banks? How was it affected by increased FDI? Did foreign investors target more productive and profitable banks to invest in? What are the most important components of productivity growth: technical progress, efficiency gains, better management, or the realization of scale economies? In this chapter, major results of this study include (i) productivity scores of foreign invested banks are higher than domestic banks before the time of foreign investment, (ii) the most significant factor on the total factor productivity change (TFPC) is the technological change (TC) and bank-specific factors are important, and finally (iii) no significant relationship found between FDI and the Malmquist components.

Chapter 8 analyzes the role of financial determinants on the bank profits in the Turkish Banking Sector. A comparative analysis has been conducted to predict the bank profits using Support Vector Regression (SVR) and Linear Regression (LR) models. The results illustrate that *Net Interest Income After Specific Provisions / Total Operating Income, Non-Interest Income / Non-Interest Expense, Provision For Loan or Other Receivables Losses / Total Assets* predictors have the most relative importance on SVR while *Non-Interest Income / Non-Interest Expense, Provision For Loan or Other Receivables Losses / Total Assets predictors* have it on LR. On the datasets containing these predictors, performances of SVR and LR models were compared based on Root Mean Square Error (RMSE) and Mean Absolute Error (MAE) metrics. The findings present that SVR predicts the level of bank profits better than classical LR model based on both metrics.

Chapter 9 underlines the importance of calculating Turkey's trade potential in the OIC Market through the Estimator Selection Process. This chapter argues that computing the actual trade potential can not only account for the dynamic change in trade orientation of the country but also presents a guideline for policy makers and firms. This chapter describes a gravity model estimated by multiple alternative estimators to assure the econometric credibility. This chapter focuses on (i) choosing the most adequate estimator possible for the case through an estimator selection process, (ii) computing the trade potential of Turkey in the OIC market, and (iii) revealing to what extent the trade potential has been actualized up to now.

Chapter 10 discusses the evolution of the European Union as a trade bloc. This chapter shows the role of the European Union as an enormous power in world trade and argues that the huge size of its market, its experience in negotiating international trade agreements, the creation of the single market and the creation of the single currency-Euro have turned the European Union into one of the most important trade blocs in the world. This chapter examines the historical development and evolution of the European Union as a trade bloc. First the concept of trade bloc and regional economic integration are examined. In this study, the establishment of the Single Market and European Monetary Union has been evaluated. Finally the impacts of the Euro on the Single Market, the current and future strategies for the Single Market have been discussed.

Chapter 11 builds on the application of Lean Six Sigma methodology in design and improvement of financial services. This chapter builds on the insights of practitioners regarding the relationship between competitiveness and the improvement of financial services based on Lean Six Sigma methodology. This chapter underlines that Six Sigma is not only applicable to manufacturing but also to the services sector. With growing competition in the financial services sector, Six Sigma principles can be used to cut costs, increase efficiency and thereby help companies to stay afloat in the global economy. This chapter outlines how Lean Six Sigma principles can be used to continuously improve service operations with special emphasis on financial institutions such as Banks, Insurance Companies, Individual Pension Systems, Brokerage Firms and others. A demonstrative case is also provided on how the principles can be applied in the context of a Pension Company.

Chapter 12 is based on the pros and cons of financial innovation. This chapter gives an overview of how financial innovation has been one of the most influential factors in shaping today's financial system and the world economy. It starts with a brief review of financial innovative literature and addresses the determinants of financial innovation. The next section examines the current debate regarding financial innovation and concludes with a discussion for the future of these new financial products and processes.

Chapter 13 addresses the impacts of information technologies on financial institutions. This chapter illustrates the tools facilitating the Exchange of goods and services between economic units and information technological systems comprising of an institutional and organizational roof, operative processes and communication networks that are important for the effective functioning of the

financial system and economy. This chapter aims to analyze the role of information technology and its impacts on the performance of financial institutions. As a conclusion, in this research, it has been revealed that the primary target of financial institutions, using information technology at various levels is to ensure the most appropriate data flow within the institution by these technologies, ensuring interdepartmental information exchange and coordination, swift and cheap access to information, following up on innovations, and ensuring communications with service sectors.

Chapter 14 includes information about the development of the regulatory framework of securities market supervision, Post-GFC. The objective of this chapter is to analyze changes in securities market supervision and regulation by investigating the impacts of the 2008 global financial crisis (GFC) on the conceptual framework of securities market supervision (SMS). First, this chapter identifies the theoretical framework of the SMS prior to the GFC. Next this chapter observes some key developments of SMS post-GFC. Finally, this chapter concludes that the philosophy of the SMS has experienced substantial evolution post-GFC. Accordingly, a new conceptual framework of market supervision is recommended. The twin-peak model is identified as the preferred model due to a wider view of systemic risk mitigation.

Chapter 15 explores the impact of globalization on bank guarantees. The author discusses the changing role of the *Letter of Guarantee* in banking industry. In this chapter, it has been shown that traditional guarantees such as mortgaging or accessory guarantor could not reduce the risk in the international trade and might put the business life in danger. This chapter evaluates the effect of financial globalization on attempts for unification of the rules on bank guarantees. *United Nations (UN) Convention on Independent Guarantees and Standby Letters of Credit* and *URGR "Uniform Rules regarding the Guarantees at Request"* has been criticized in this chapter.

Chapter 16 discusses and examines the financial distress and health from a behavioral approach. The purpose of this chapter is to explore the relationship between financial distress and health and financial behaviors among families in Ankara, controlling for socioeconomic characteristics, financial discussion with parents, negative financial events, and risk tolerance. The major findings of this study illustrated significant differences in financial distress levels by socioeconomic factors and financial behaviors. In addition, regression analysis showed that saving and self-reported health status was significantly related to financial distress when taking into account other factors.

Chapter 17 focuses on psychological factors affecting stock prices and related theories. The author of this chapter argues that globalization and the pervasiveness of Internet usage enabled investors to move their funds from market-to-market. This reality leads to a more diverse universe for investors and in order to better understand their varying rationales, it is essential to take factors influencing their decision making process into account. Behavioral finance explains some of these factors and this chapter examines and discusses some of the most important factors and theories affecting investor behavior in the literature.

Chapter 18 takes a contrary view of a board's involvement in risk management practices. This chapter bridges the gap between theory and practice of risk management in banks incorporated in Saudi Arabia. The main objective of this study is to investigate the risk management process by assessing the level of involvement of boards in risk management practices (RMPs). This study illustrates practical implications for boards in banks incorporated in Saudi Arabia by explaining the adoption of certain risk management strategies, and helping them understand how risk management behavior can maximize operating performance. In addition, it would help regulators and policy makers to develop a coherent and acceptable set of risk management tools and techniques.

Chapter 19 demonstrates the role of leadership and innovative strategies in the banking industry. This chapter focuses on the importance of leadership and developing competitive innovative strategies in the banking sector during the 2008–2009 financial crisis. This chapter illustrates the linkage between leadership and developing effective competitive strategies in the financial system. The most important issue for institutions in the financial system is to achieve a competitive advantage in a turbulent environment. In this chapter, leadership and innovative strategies in banking are closely connected to the success and sustainability in a competitive environment.

The roots of the 2008–2009 financial crisis and its reflections on capital markets were prior to previous studies in literature. However, the fluctuating nature of the capital markets pertaining to financial globalization has not been sufficiently connected to behavioral issues in finance yet. Therefore, it is important to develop an innovative and behavioral approach to issues in globalization of financial institutions. In this regard, the impact of financial globalization and crisis on investors' perceptions and institutional competitiveness has been assessed from an interdisciplinary perspective. The authors of these chapters in this book developed models for innovative solutions to issues in finance and banking by assessing critical case studies. Finally, this book includes colleagues and professionals from multicultural communities across the globe to design and implement innovative practices for the entire global society of banking and finance.

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Hasan Dincer
Ümit Hacioglu

Contents

Part I
Globalization and Financial Crisis

Chapter 1
An Assessment on the Changing Role of State in Globalizing World Economy

Hale Kırmızıoğlu and Kürşad Zorlu

Abstract This study aims at assessing the transformation undergone within the framework of globalization in terms of the tasks assumed by the state in the economy. This study, which provides a theoretical framework, discusses the roles the global economy assigns to the state and how the state changes the governing and financial tools. In this study, the transformation process concerning the role of the state in economic life is taken up as of the 1980s and the aftermath, which is named as the neoliberal globalization period. Initially, conceptual information is introduced, with the importance of the nation and welfare state put forth and the approaches recognized in literature are assessed. Then, the roles assigned to the state are explained in the transformation of the state with policies suggested for the solution of problems arising in 1970s and the problems attributed to the state caused by the failures of international entities undergone in the 2000s. Starting with the overall judgment that globalization wears the welfare and nation state out, it is possible to set forth that the state's political, governmental and economic role and effectiveness vary at a certain level and especially the nation state is one of the most important actors of globalization and also one of the modest contributions of the study.

1.1 Introduction

The notions of globalization and the state are among the mostly debated topics. Although, nowadays globalization is being assessed as an ongoing process, it is understood that a common view on this matter has not been reached. The state

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however, is a structure which has existed since ancient times, and therefore debated and having different definitions in ideological, political and economic senses. While one encounters views on the state with respect to administration, organization and citizenship in political science, it is possible to encounter an array of different views in respect to duties being assigned and not assigned to the state in the field of economics.

Although globalization is assessed as a debated process, we continuously encounter its relation to the period we live in, so it is not an entirely new notion. The years from 1870 to 1913 are the first evidenced period in which globalization was tracked (Yeldan 2003: 431; Şenses 2004: 2). Moreover, another notion we encounter in English texts while the notion or process of globalization is being discussed is "internationalization," which is used most often synonymously with globalization. According to Şenses (2004: 12–13), although these two notions are similar to one another, there is a serious difference between the two. In fact, internationalization does not include the meaning in line with the promised notion of globalization. Namely, globalization in the view of its supporters defines globalization as the liberalization of labor, capital and goods in circulation. However, the results yielded from observable examples are that globalization has not kept its promises with more obstacles arising in the labor market even though the circulation of capital and goods has become liberalized. Therefore, while the term globalization is used as the liberalization of these three economic elements in circulation, the term internationalization is defined as the liberalization of only two elements in circulation.

Although stated as capitalism's golden age, the nearly twenty five year period after the first era of globalization following the Second World War is not accepted as a period of globalization due to the closed general structure of the economy. Therefore, the second period of globalization started with the development in the 1980s, arising after the difficulties in the world economy in the 1970s. This process, which started with the intense implementation of neoliberal policies by international entities, is named as neoliberal globalization. Now, the process of debating begins with trying to establish states' economic duties. The welfare state, which is one of the notions that gained significance after the Second World War means that the increasing social services and the welfare of citizens were assumed by the state instead of the market. However, in the neoliberal process of globalization, the state was regarded as the main reason for the economic problems endured in the 1970s and it has been pushed out of the market. Thereby, views that the welfare state has been damaged in this process have gained preponderance.

The notion of globalization has brought about deep changes in economic, social and political life. These changes have led all organizations, big and small, to swiftly alter the principles, values and decisions directing them. The state however, which is the legitimate authority is among the strongest witness of such change. The relation between the State and economic life has put the state's regulatory and controlling functions at the forefront instead of its interfering function. In our contemporary world, where globalization comes to the fore front, parallel changes in the understanding of the state have emerged and different

functions and duties have come to be attributed to the notion of the state. Nevertheless, the information and financial revolution experienced in the same process, the emergence of multinational firms, individual and national security assuming new meanings, regionalization and the operability of the free market economy and the presence of global public goods are some of the results generated by globalization (Ener and Demircan 2008: 58–60).

The final purpose of this study analyzes the evolution of duties assumed by the state in the economy within the process of globalization. However, since doing such analysis with respect to all historical periods would overly exceed the subject of a single study, the evolution process concerning the role of the state in economic life will be taken up as of the 1980s and thereafter, which is the neoliberal globalization process. Of course, in terms of the subject's integrity, some information about previous processes will also be applied as part of the overall study. Primarily, the definitions of globalization and state will be given in the study and a special focus will be given on the emergence of the nation and welfare state. Subsequently, the policies suggested for the solution of problems arising in the 1970s, the functional evolution of the state and the roles assigned to the state in the problems caused by the failures of international institutes in the 2000s will be taken up.

1.2 The Matter of Globalization and the State

1.2.1 Globalization Debates

In the literature of economics, there are two periods mentioned within the period of globalization. One of the reasons why the first period between 1870 and 1913 is called the first globalization period is because of the recognition of the gold standard by many states. Moreover, in line with this development, the emergence of new states with accumulated capital started to compete with Great Britain and Great Britain's gradual loss of its hegemony are counted among other factors. The bottom-line is, as a result of all the world commercial volume, capital accumulation and capital circulation have shown significant levels of increase. The gradual transition to a gold standard and systematized liberal trade from protectionism and the bimetal system[1] has brought about the laissez-faire theory and the birth of its theory. In the first few centuries of commercial capitalism, the mercantilist economic policy was in search of increasing exports to yield gold and silver. During this period, the state used to play a central role in the encouragement

[1] Until 1870s, in most European countries there was double metal monetary system, silver standard or banknotes unconvertible to metallic currency. Therefore most currencies were not convertible to one another and this in turn was a great obstacle for the development of foreign trade (Berend 2011: 16).

of domestic production, legalization of commerce and the increase in the revenues of the Treasury. Mercantilism was a dynamic view accepting that domestic industry had to develop to increase the country's export capacity. The notion of laissez-faire was first set forth in mid-18th century by d'Argenson. He stated, "in order to rule better, one must rule less". This statement has later come to be expressed by Bentham as the necessity to undertake nothing by the hands of the state and no ventures by it (Berend 2011: 16–17).

In fact, the first steps of this process started in early 18th century. The obligation to remove the barriers of free trade was acknowledged and bilateral agreements started to be signed between countries. Thereby, the idea to depend on custom taxes for financing state budgets was abandoned and there was a significant decrease in custom taxes collected. In the course of time, the sphere of these bilateral agreements was enhanced and other countries also applied such deductions for commerce. Moreover, another reason bringing about this process was the technological developments and new investments from the spread of electric tramways, the innovation of internal combustion engines and the establishment of railway networks in countries coupled with great advancements in communications and transportation. Employment in the service sector increased and significant progress was made in the banking sector due to the increased capital circulation (Hobsbawn 2008: 208–212; Berend 2011: 20–28). Although it is expressed that during this period, we mention this as the first globalized period where liberalization became intense[2] and increases were made in commerce and capital movements. It is useful to state that developments to the contrary in Great Britain have taken place due to the emergence of new economic powers within the process. In other words, since the mid-1870s the benefits of free trade were being discussed in Great Britain. Starting with this period, significant increases occurred in the state's public expenses. Great Britain not only increased its military expenditures to preserve its economic power but at the same time it started to vest the state with different duties along with the poverty law (Hobsbawn 2008: 218–220).

If we go back to the debates made on globalization, we see that many problems are caused by the attitudes towards globalization. These different views also give many varied definitions of globalization. Defining the notion of globalization indeed is not a simple task. This is because the prime definition of globalization and the globalization arising in practice are not coherent. Meryem Koray mentions this distinction in her article titled, "Real Globalization and the Reality of Globalization." One of the issues not to be neglected is that globalization is not a process to be perceived only from an economic perspective. In as much as globalization can be defined through both economic and technological elements, it may also be defined with cultural notions; social adaptation, loss of the notion of identity or its recreation. According to Koray (2005: 14), it is possible to classify

[2] When one looks at the share of current account balance in national income as an indication of the intensity of financial flows, one sees that the globalization wave in the second half of the 20th century has yet not reached the pre-1913 level (Yeldan 2003: 436–437).

the definitions of globalization in connection with four basic elements. Accordingly, globalization and economic development can be taken up as a new phase in capitalism; a crisis of modernity with a liberal-pluralist understanding and the result of a differentiating culture and changes in the international relations system. To sum up, he defines globalization as a multi-variant process and states it is normal that different effects arise for different countries. Of course, what is meant here is that, as can be seen in the debates in literature, there are consequences emerging from central and peripheral countries.

Stiglitz (2006: 21, 266) defines globalization as an economic process requiring the integration of world countries through increasing capital, services and flow of goods. In fact the main element causing the emergence of neoliberal globalization is shown in literature as the immense progress in information technologies. However, it must be mentioned that also this view is only the result of a technical analysis and that political and social elements must not be ignored. In a broad sense, the notion of globalization is perceived as the interconnection of social and economic parts forming the world economy and gradually with world markets (Yeldan 2002: 19). According to Şenses (2004: 5–11), the main parameters of globalization are the unbalanced power relations between developed and less developed countries, ideological approaches to the problem of development, depoliticization, democracy and the failure of international entities. Unbalanced power relations emerging with respect to developed and less developed countries must be considered as national and international problems caused by the progressive strengthening of capital against labor. The ideological discrepancies in the matter of development, however, are rooted in the debate that development will be realized with the implementation of a strong state and protective policies or liberalization and the downsizing of the state as international entities demand. The depoliticization process is perceived as the amalgamation of Third World Countries around common interests and the weakening of syndicates in states. Democracy, however, comprises of avoiding a country's governmental continuance by oppressive governments and the incorporation of independent boards and civil society entities in the 2000s to ensure good governance.

The permeable nature of cultural, political, socio-economic, and traditional national boundaries is the key element of globalization. Economic deregulation is the main, albeit not only, part of the drive towards globalization. Giddens states that the notion of globalization is almost always expressed in only economic terms but that this is a mistake. In as much as globalization is an economic process, it is at the same time a political, governmental, technological and cultural process. Critiques on globalization are based on the assumption that it has two basic traits: The solidarity of the global society and the generation of a globally homogenous culture based on cooperative consumer values (French 2002: 136–137). For example; it is possible to argue that the notion of social globalization has significant consequences such as the weakening of the national awareness and the welfare state.

1.2.2 State Definitions

The state has various definitions in conceptual and structural terms. In some cases states have somehow formed, where after its theories have been put forth, while other primary theories have been formed and the state structured according to this theory afterwards. It is understood that the production of philosophical thoughts on the state has started with Plato and Aristotle. The notion of state put forth by them defines the structuring of the polis-state and differentiates from the notion of the modern state (Çağla 2010: 249–256). The state fulfills certain common functions of social institutions such as dwellings, clans and blood tie groups can't. The state is the first systematic formation of confiscating and organizing redundant production at least in the form of social or public force (Wood 2008: 48–49). As seen, the notion of the state is taken up in the social context and a structured based on political and economic notions. In its entirety, the state is perceived as a type of government and a structure regulating all kinds of complex social relations.

1.2.2.1 Nation State

Different disciplines have different recognitions as to the date on which the sovereign nation state emerged. However, in literature, the 1648 Wesphalia Treaty is characterized as the starting point of the modern era and of sovereign nation states. The structuring of the nation state was strengthened with the French Revolution in 1789. In the discussions made, the nation state is in fact evaluated as the first emergence of the modern state. The notion of the nation sate is encountered in a strengthened state immediately after the emergence of nations. The idea underlying the strengthening of the nation state is based on nationalism. Organizations before were empires and fragmented state structures belonging to that period were generally referred to as feudalism. In a periodic sense, sovereign power belongs first to kings and then to god. Therefore, the emergence of the nation state and the establishment of its sovereignty developed conditionally to the emergence of the capital owning class (Kazgan 2002: 35). The nation state was a new institution established to govern human societies. While some academicians trace its roots back to no earlier than the French and American Revolutions in late 18th century, others trace its roots back to the 12th and 13th century England. Its wide spread definition indicated that an organic structure based on a common culture, language and traditions had over the course of time evolved into the modern state. However, even if this understanding is correct, when we carry the definition on to an upper point, it becomes also possible to encounter entirely different derivations. The nation state is a fictional means for the generation of a countrywide processing market and the protection of overseas colonies. The brilliance of the nation state lies in its skill in ensuring a common identity for autonomous and free people increasing in numbers every day and who create a world in which private property relations are pursued in self-regulating markets (Rifkin 2010: 178).

Together with globalization, the standing of the nation state has come to be debated. While globalizing approaches argue that the nation state must be dissolved and that economic activities in a country with boundaries no longer will be of use, however, a traditional view on the contrary points out that the presence of the state, as the sole source of legitimacy and order is mandatory and significant as an equal power source against other states. Therefore, is globalization wearing out the nation state or strengthening it? This position states that the supportive role of the state in the development of capitalism continues but however undergoes changes in a national and social sense since the need to assist global capital has emerged (Koray 2005: 36–37). While a retraction in the state's role of welfare distribution and in social policy area, it assumed in the post-World War II era the duty to not only protect and support capital but also international capital came to the fore front. Together with globalization, the notion of the nation state is restructured and the organization of states was reshaped according to the requirements of international capital (Yeldan 2003: 429). However, while it is possible to say that in some areas the notions of the nation state and nation have lost their meanings, it would not be very correct to say this for the economic field.[3] Each state which wishes to gain more from globalization, in fact becomes part of this process by increased interference in its field. The entirety of all functions such as the return of profits of the accessing foreign investor to his country, his avoidance of losses due to exchange differences, his avoidance of incurring tax losses and the decrease of his risk by better understanding tax and budget system renders the increased participation of states in economic life and the institutional infrastructure of economic life inevitable. From another point of view, it is also possible to say that states have suffered a loss of sovereignty in the economic field. In order to ensure that capital easily reaches all the high yield fields in the world, a decrease in Central Banks' interventionism has to occur. Of course, while developed countries realize that such a decrease favors their capital willingly; developing countries are included in the process with the cogency of international entities.

1.2.2.2 Welfare State

In the post-World War II period, Western Europe increased its social functions of European nation states and nation states at the same time became welfare states. The welfare state can be defined as a reshaping system based on high taxation and the establishment of a firm social security network formed by free education, health benefits, insurance, maternity leave, retirement security and long term leaves. Therefore, in the neo-liberal globalization period, the welfare state discussion was shaped preponderantly in line with the rights vested to the labor

[3] The internationalization of capital, to a large extent dependent on the internationalization of the state in order to preserve the continuing reorganization of social relations suitable for world scale capital accumulation. The state must ensure the necessary conditions and institutions for the internationalization of capital (Yeung 1998: 296).

market (Rudra 2002: 414–415). The post-Second World War II period was shown as the term in which the concept of the welfare state gained significance, i.e. practical states increased and were based on solid grounds (Scholte 1997; Moene and Wallerstein 2003). However, social state policies were not an innovation of the post war period. The roots of the idea were traced back to late 19th century's non-socialist or even contradictorily anti-socialist Bismarck Germany and the Scandinavian politics of the turn of the century. Moreover, the notion of the social state was also a controlled market system encompassing of a central planned economy and state-controlled economic government (economic dirigisme) in the interwar period. The common characteristic of these regimes lies in their calling out on social welfare institutions (Berend 2011: 251). Hence, it is possible to identify the notions of the social state or the welfare state in their simplest sense from the past till present with poverty laws. However, post war Western Europe formed and even developed more welfare policies and institutions, thereby building the welfare state, generating a multi-faceted welfare policy with a maturity incomparable to its predecessors with a new view to citizenship rights. Alongside political rights, employment and social security also were taken under the scope of natural citizenship rights. Western Europe's social security system was based on balancing low wage public services alongside social security for the middle class by applying methods for leveling income distribution. With its balancing function in distribution, social security, health services and educational policy, the rich Western welfare state successfully balanced sharp income inequalities, encouraged equality of opportunity; moreover, it added an economic element to democratic institutions, while adding a social element to economic development (Berend 2011: 251).

The most important critique in the welfare state comes from the new right led by constitutional economists. It is possible to list these under six headings. The welfare state is not economic, productive, effective, determinant, but it is despotic and a refusal to liberty (Çaklı 2008: 87). Hence, according to this approach, the welfare state distorts the functions of the market or even social life in many ways. In such case, it is a fact that neoliberal globalization will wear out the welfare state. In the post 1980 period, common neoliberal policies implemented by states were the best proof thereof. The abandonment of the tools used by the state it had applied for ensuring equity in shares gave rise to the expectation that it continues its function in allocating resources. Although it is stated that the proposal of a "small state" was present in this period, no decrease was observed especially in the first years in public spending and taxes. Therefore, the state directed its financial tools towards the improvement of resource allocation instead of social purposes. It is possible to mention four basic theoretical frameworks we encounter with respect to the relationship between the welfare state and globalization. While the first argues that there is a negative correlation between the welfare state and economic globalization, there is a second opinion to the exact contrary. Accordingly, economic globalization is enhancing the welfare state, i.e. positively affecting it. When we look at the third and fourth opinions we encounter apart from those, however, views arguing that there is no direct relation between economic globalization and the welfare state nor a significant exchange between the two (Brady et al. 2005: 922).

What sounds incredible among these approaches is the view arguing that globalization enhances the welfare state. When the empirical findings in the literature were examined, it was seen that the reason behind this view was based on two possible results. The yields gained from international commerce performed by globalization will increase. As a result countries will increase their public spending and the shares they allocate for social expenditures therein. Moreover, another revenue increase to occur as a result of globalization will be in direct investments. An increase in state tax revenues will increase due to direct investments (Brady et al. 2005: 922). There is another view very much similar thereto. Market integration may offer benefits for all sections of society in the long run. This is because a more effective establishment of investments and production will be realized. However, in the short term it is possible that the political effects to be generated by globalization will be very different. While the market scale enhances, two problems causing the support of citizens by the welfare state will emerge. The first of these is increased inequality, while the other is increased economic insecurity. Thereby, states will receive more support by globalization in order to solve these two problems. This is because; the rectification thereof will only be possible with increased efficiency, competiveness, growth and investment. In order to deal with these problems, the country will increase its openness, will increasingly become party to commerce and continue financial globalization (Garrett and Mitchell 2001: 151–152).

The results of these analyses starting with the argument that economic globalization will yield benefits for everyone are far from confirming this. It is possible to say that in the view argued herein, a deterministic error was made. The views of those arguing that globalization enhances the welfare state must be based on an entirely different background. The first developed theory of the expansion of the welfare state was revealed by Harold Wilensky and in this study the main emphasis is made on the view that "strong economies will create strong welfare states". This argument also aids in explaining the reasons for social policy differences between rich and poor nations (Pierson 1996: 148). Therefore, since a country with a strong economy will get a greater share of the cake within the globalization process the welfare state will also expand. However, less developed countries do not gain market share from the international trade in goods and services or direct investments and continue their integration merely as a market and assembly field.

1.3 Evolution of the State in the Globalization Process and Financing Instruments

The economic policies of the welfare state developed in the post World War II era were Keynesian policies, including the accumulation model and the Fordist production model. As a result, developing countries had to continue imports to get intermediary and production goods and have deficits in the budget to increase

domestic consumption expenses. In order to continue imports, foreign assistance was obtained; however, the monetary aids were used more often for consumption instead of efficient infrastructure investments.

The development strategy adopted in newly developing countries was based on an import substituting industrialism strategy. Despite the implementation of the import substituting strategy in developing countries, they were not producers of industrial goods, i.e. they could not realize the difficult phase of the import substituting strategy—production of intermediary and investment goods—have continued to import industrial goods and apply customs taxes and quota practices to prevent the import of goods they produce themselves (Kazgan 2002; Szirmai 2005; Ongun 2009: 41–47). A series of problems starting with the oil crisis emerged in the 1970s. A significant slowdown in the efficiency increases occurred in industrialized capitalistic countries, rapid increases in oil prices prompted stagflation and have led these countries to reach for a new capital accumulation model (Şenses 2004: 3). In 1971, with the devaluation of USD by the United States, the Bretton Woods Monetary System collapsed, and in 1973 and 1979 the first and second oil crises occurred. While Latin American countries which could not realize that the situation was deteriorating, continued to apply Keynesian policies, developed countries started to abandon these policies and cut down on public expenditures. Thereby, in developing countries very high budget deficits were followed by high inflation and while these countries entered an impasse they became incapable of paying their external debts.

In 1979, international entities started to hand out structural adjustment loans to countries and while these loans were extended, taking certain measures in these countries was made as a requirement. These measures were later to be amalgamated in the Washington Consensus.[4] In 1982, the process instigated by Mexico's failure to perform on its external debt service is better known as the World Debt Crisis. Since the 1980s, international financial entities such as IMF and DB have started to implement additional conditions for the funding of new loans. These conditions express the need for observing structural adjustment policies aiming at improving developing countries' balance of payment, decreasing the role of governments, introducing deregulation in the economy and encouraging an export focused strategy. 1980 were marked by debates on structural adjustment policies (Szirmai 2005: 537). In other words, during the globalization era, a change in the understanding of state has been experienced and the tasks and functions of states have undergone change. Neoliberal globalization has caused significant changes in nation states' basic purpose and functions in as much as it has caused

[4] This approach foresees taking inflation under control, decrease of budget deficits, liberalization of trade and capital movements thereby opening up the country economy to the rest of the world and the establishment of macro-economic stability by policies such as the liberalization of domestic goods and factor markets within the framework of structural accommodation policies. The policy package includes the liberalization of imports, competitive foreign currency rates, tax reforms, opening up to direct investments, deregulation, protection of intellectual property rights and the prioritization of education and healthcare expenditures (Szirmai 2005: 538).

changes in their spheres of authority. The notion of industry based growth was abandoned; interventional instruments were dissolved and evolved away as to support globalization in line with the requirements of capital (Şenses 2004: 14). Neoliberal globalization represents several challenges especially against the nation state. Some theoreticians assume that, if globalization only implies liberalization and deregulation, non-commercial public policies such as social development and environmental protection will then be endangered (French 2002: 136–137).

1.3.1 State Budget and Public Expenditures Composition

It is seen that together with the globalization process states have become more regulatory and directing instead of being interventionist. It is said that together with the globalization process budgets are shrinking. The shift from a planned to free market economy was to show a reason thereof. However, according to the country statistics, the situation was different (OECD, 2007) . It can be recognized that states downsized as a consequence of the process of globalization; however, in which fields it downsized must be properly analyzed. In this process, budgets did not shrink during the first years but instead a mere shift was experienced from the composition of public expenditures or its allowances. The productive role of states was entirely smoothened; however, all kinds of regulations and investment activities continued in the hands of the state to ensure the effectiveness of the market. The impact of globalization on the state budget must be analyzed in a multi-dimensional approach. During a period in which international integration is increasing public financing, it can be evaluated in terms of budget dimensions, tax and spend structures and public debts.

Globalization can affect four dimensions of state budgets: the expenditure structure, revenue structure, deficit level and the budget level. The revenue structure's impact is, under the leadership of tax competition, the other intensely taken up dimension. Capital, if stationary, causes globalization, fall of taxes extracted over capital and the insufficient supply of public goods. With the increased effects of globalization, the share of capital in tax revenues diminishes as expected and the share of taxes extracted over stationary factors increases. The determination of the tax composition is performed by looking into the percentage of taxes yielded from institutional revenue within the entire tax revenues and taxes yielded over goods and services within the total revenue. It is expected that globalization shifts tax shares through institutions to stationary tax grounds. The determination of the expenditure structure will be possible by measuring the social security expenditures within public expenditures and net public investments. While public investments are an important representative for private production, social security expenditures are important with respect to labor, a stationary factor or in terms of ensuring benefits therefore. Within this process, the social expenditures of the state will shift towards investment expenditures (Heinemann 2000: 298–299).

The most important benefit of the process of globalization is the increase of international competitive power. Due to this, the roles vested in the state are ample; therefore, generally an increase in public expenditures is seen. One of the notions neoliberal policies explicitly stresses is the production potential. The state has to support companies for the establishment of such production potential in the country. Hence, public investments must be supported by the state. Through public investments, states must be able to encourage companies' activities by generating attractive conditions. According to neoliberalism, there are problems such as efficiency, effectiveness and high costs in public healthcare services, while the solution to these problems lies in the commencement of service production entirely by market logics by the end of a gradual liberalization process. In cases where services are provided by the public, the appropriate solution must be the application of the "those who use the service shall pay" approach by the pricing of the service (Soyer 2003: 302). In the light of all these points explained, it will not be correct to state that the share of budgets within the gross national product. Even if a decrease in welfare expenditures within public expenditures is experienced, a decrease in taxes and subsequent financing by debt will increase the shares of interest payments. There will be an increase in the share of expenditures made to support the private sector. Thereby, budget incomes and expenses will undergo structural changes but there will be no significant changes in its dimensions.

1.3.2 Taxes

The globalization theory suggests that policy makers withdraw taxes on capital and other non-stationary assets. In such case the tax load will shift towards labor, the relatively stationary production factor, consumption, and the other stationary activities. According to the study conducted by Swank and Steinmo (2002: 643–645), the tax rates and tax loads between 1981 and 1995 in industrialized countries were observed. As a result, while company tax diminished in isolation, it has been observed that a moderate increases occurred in taxes collected over personal income.

An increase in taxes yielded over consumption as well as the tax load on labor also occurred. Moreover, as a result of international capital's resort to methods such as transfer pricing to avoid taxes, there was also a decrease in tax revenues. In the study conducted by Geleny and McCoy (2001), however, company taxes in 17 OECD countries were observed from the period between 1981 and 1997 and the thesis that globalization in fact decreases company tax load has been rejected. In this study, the absolute amount of company tax used and its relative value was ignored. Nevertheless, when OECD data was examined and the relative value of the company tax revenue was observed instead of its absolute amount, it was exposed that there was significant decreases after 1980 both in developed and developing countries. Globalization obliges governments to specify a certain tax structure. The tax load shifts from non-stationary factors to stationary factors (Heinemann 2000: 300).

1.3.3 Deregulation Directed Towards Markets

Together with globalization, deregulation emerged in the labor force, finance and real markets. According to Rudra (2002: 419–420), certain processes such as regulation for the labor market and disfranchisement of social security rights or the decrease in welfare spending in direction thereof in a wider perspective are only in developed countries. Since in underdeveloped countries, workers are less capable and are weak in organizing themselves. Since workers, just like underdeveloped countries have very different characteristics from one another they can't act jointly. Therefore, they can't impose pressure upon governments. As a result, they can't respond to reductions in welfare spending directed towards them. Thus, together with globalization the social spending within public expenditures of underdeveloped countries decreases. According to Şenses (2004:16), it has been expressed that as a result of the flexibility of labor markets within the neoliberal globalization process; the emergence of atypical employment types alongside privatization in underdeveloped countries, the decrease of public employment will further weaken organizational powers and a loss in real wages will be incurred.

According to the study made by Rudra (2002) for OECD countries and underdeveloped countries, OECD countries' welfare expenditure share was 12 % of gross national product between the years of 1972–1974. Until mid-1990s, this rate has increased gradually and reached up to 16 % between the years of 1994–1995. In underdeveloped countries however, the result is bleak. The welfare spending which were 3.2 % in years 1972 to 1974 have decreased with 1980s and fell down to 2.5 % in 1994 to 1995.

The World Trade Organization is presently not against the grant of subsidies for three purposes. These purposes are the improvement of research and development, protection of the environment and regional development.[5] Since states down size with globalization and withdraw entirely from production, their access to the market as a purchaser and seller has decreased, if not entirely disappeared. Since the purpose of neoliberal policies is to support the producer, it is impossible to speak of subventions with social purposes for people. At the same time, with subsidiary policies of intervention with agricultural products and input prices are either impossible or limited (Konukman et al. 2005: 108).

1.3.4 2000s

The Asian Crisis in 1997 erupted with the devaluation of the Thai currency Baht. Currencies of Asian countries started falling successively and in the short term capital withdrew rapidly from these countries. With the collapse of currencies, the debt load for companies and banks the external debts of which were in USD and

[5] http://www.econturk.org/dtp12.htm

other international currencies increased. The banking system, fragile due to loans used inefficiently, widespread corruption and insufficient capital in countries such as Indonesia, Thailand and Korea was exposed. The financial crisis rapidly turned into a crisis in the real economy and became severe. Financial instability, spread across the global economy with the financial crises similar to the financial crisis experienced in 1998 in Brasil and Russia, Turkey in 2001, Argentine in 2001 and Brasil in the second half of 2001. Meanwhile, the growth of the world economy fell significantly (Szirmai 2005: 573–574). As a reaction to the Asia Crisis, IMF was seriously criticized for imposing contradictory policies even upon countries where macroeconomic imbalances were not being affected by, thereby aggravating crises.

The criticism of IMF lies in the fact that regardless of what countries' real characteristics are, it imposes standard policies on them. A debate renewed after the Asia Crisis, which focused on the matter of advantages and disadvantages of globalization and liberalization. Stiglitz is sure that international entities bear the responsibility for a great part of the flaws and that overdependence on markets has since the mid-1990s contributed to financial instability, crises and the rise in poverty in many developing countries in Latin America, Asia and former Soviet Union (Szirmai 2005: 575).

Similar to the first system shocks, the Asia Crisis also forced politicians and academicians to rethink the policies suggested for the international system. What is interesting about the rethought process is that the lessons learned from the past are not forgotten. The reversal of ineffective, introverted development strategies applied in previous periods has not been the case. The lesson learned from interventionist policies applied by ineffective and corrupt inducing governments is that this behavior in search for revenues will initiate economic stagnation. Most of the critiques, albeit not all of them, believe that market functions are better; that planning, market reforms will reap benefits, export focused strategies are very important for development, foreign investments will benefit developing countries and forms a strength for improvement. However, there are realities not to be overseen such as the interruption of national and international markets that government policies must be tried to rectify market interruptions and that swift trans-border liberalization harms developing countries' expectations. Policies must be diversified by taking starting points, institutionalizations and government skills into consideration. Public investments in education, health and infrastructure fields are important. The liberalization of exports must be performed very slowly. Tariffs must be complemented with special policy measures to develop strategic exports (Szirmai 2005: 575–577).

Citizenship based on social rights was replaced by market based rights, i.e. notion of social rights granted for the solution of problems created by the market. With the Post Washington Consensus, the terrible outcomes of incorrect and standardized policy recommendation suggested by IMF and WB by then again are appropriated to the countries themselves. Until then, it has been stated that the suggested policies were applied in incorrect sequence and without forming the necessary infrastructure in countries, arguing that incorrect practices were the reason leading to financial

crises. In fact, the invoice is billed to implementing governments. However, despite all these efforts such failure has been recorded into the literature as the failure of international entities. This means that in the process right into the 2000s economic instability has initially been connected to the market, later to governments and then the international entities. In the solution of all these negativities however there is a reconciliatory state improving the operability of the market. An effective state will regulate markets and take measures to avoid the emergence of problems. For this sake; it will both amend its legislation and form regulatory and supervisory boards.[6] The single tool this reconciliatory state holds in its hands to deal with the arising corruption and poverty is called good governance.

Good governance can be expressed as the partition of managerial work. What is meant by management here includes the activities to be performed in the public sphere instead of an administrative activity and being influential on the decisions to be taken. With the idea that the state shall not be the single unit to take the decisions on activities to be performed in the public sphere, civil society entities shall be given rights in this respect (Öztürk 2002: 27–30). On the other hand, this system recommended for state management is already similar to the understanding of government implemented in the private sector enterprises. Alongside the global economic crisis other problems encountered in a global scale shall also not be overseen. Climate changes, great disasters and extraordinary events have come to immediately affect even long distance regions with the rapprochements generated by the notion of globalization. In this framework, it is possible to state that global evolution at the same time assigns the notion of governance meanings of similar grandeur. Therefore, it is possible to use governance skills as a tool for not getting affected by the global crisis (Zorlu 2010: 446).

1.4 Conclusion

In this study, the aim has been to explain the general economic evolution caused by the process of globalization and the changing role of the state in this evolution. With the acceleration of the globalization process, free market economy conditions have become wide spread and the regulatory or interventionist aspect of the state in the economy has relatively been amended. While the effectiveness of state in the economy has reaped positive results with such change, it has caused negative and even social-political results in undeveloped countries. The new paradigm put forth by the relation of globalization and the nation state, has also ensured a certain degree of transformation in the state's governance system and has started to integrate modern governance notions into the economy field. Especially in the

[6] States will continue their relations with the market as apolitisized institutions. Since the rulers of these apparently depolitisized institutions are appointed by politicians, this situation is debatable. (Eğilmez 2009: 40).

1970s, the financial crisis the state went into; the impasse of import substituting policies in underdeveloped countries has caused the gradually increasing implementation of neoliberal policies through entities such as the IMF and the World Bank. As a result of neoliberal policies, state centered development strategies have been eliminated and social state practices have worn out especially in underdeveloped countries. Nation states however have in fact become the most important drive in the intensification and spread of the globalization process. Nation states have also worn out and lost their sovereignty in certain fields. However, they have again generated the conditions and institutions as required by globalization and as needed by multinational companies.

When one looks into the generality of the study, reaching conclusions based eventually on certain parameters and numbers may be misleading. In fact, the empirical studies conducted state that there is a negative relation or even no relation at all between the welfare state and globalization. However, the problem is not that within the said period the share of public expenditures have decreased in the gross national product nor has such proportional relation been continued in terms of tax revenues. What needs to be discussed here is whether there has been a functional evolution. The preservation of the ratios of 1950 numerically in a country must not mean that globalization has not worn the welfare state out. One must assess who bears the load with respect to the content of the expenditures made and the revenues collected. Moreover, the taken up countries being central or peripheral countries will also differentiate the consequences to arise.

In light thereof, globalization has completely changed the state's financial tools structure and thereby generated a differentiation in the understanding of state. The interventionist states of the 1950s have evolved into neutral states. Within this process, states have used all of their financial tools, i.e. public expenditures, public revenues and debts to strengthen the market. Taxes on capital have decreased, serious increases in the share of taxes has been undergone with the increase in tax inducements. The work of financing public expenditures which did not decrease quantitatively within this process was attributed to state debts. The increase in debts has in turn increased public spending once more due to interests and has caused more debts. As a result of these chain effects, states have come to collect taxes only to pay their debts. Alongside other things putting a strain on the state budget, the market has come to be seen as a "solution". Due to the ineffective operation of government business enterprises and their losses their privatization has been the case, withdrawing from state public goods and service production. All these difficulties have left the state facing a low level income public mass void of social rights and as a solution thereof good governance and state understanding aiming at decreasing market based problems have been suggested.

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Chapter 2
Financial Globalization and the Effects of Monetary Policy

Zelha Altinkaya

Abstract The 2008 global financial crises had a deep impact all over the world. The experience of the global financial crises dates back to last century. Firstly, national economies turned to global economies due to rapid development in technology; increase in trade of commodities and capital flows after the industrial revolution. However, failure of the gold standard system was the main reason for the first global crisis in the late eighteenth and early nineteenth century. Initially, the crisis emerged in the financial markets and spread to the commodity markets, and later to international trade. The Great Depression of 1929 would be described by sharp decreases in production, high unemployment, inflation and interest rates. Similarly, the 2008 global crisis emerged on financial markets. The monetary policies followed by developing countries influenced all the markets in not only developed but also developing countries. This paper aims to discuss the impact of globalization and monetary policies on different markets and different parts of the economies. In the first part of the paper, the main instruments of monetary policies will be explained. The question of how global factors will become an important part of domestic nations will be one of the main issues in this part. The role of central banks and their policies on developed countries is another issue. In the second part, the main focus will be on foreign exchange rate volatility. Here, especially 2008 financial crisis will be analyzed in perspective of Euro area countries. The main arguments for recovery of financial crisis another issue discussed.

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2.1 Introduction

The financial crisis, which began in 2007, was considered to be the most severe crisis of global economy since the Great Depression. Unfortunately, it led to a deep and long lasting global economic recession. After the deep contraction in the world economy, all countries were looking for a solution. The institutions and the countries had difficulty finding extraordinary policies to stabilize their economies and the World Economy due to the reason that since Advanced Market Economies did not face such a deep crises since the Great Depression. In this chapter, after reviewing the concept of globalization and its relation to financial institutions in Emerging Markets Economies financial systems are generally underdeveloped. The financial depth at markets are very low; they are very senstitive monetary shocks; credit interest rates are very high in comparison to advanced market economies. The currency would not fully convertible: one would have needed a license to buy foreign exchange and while this would not have prevented all capital flight, it would have prevented rapid flight in a crisis (Krugman, 2000:27). In these countries traditional Keynesian interest rate channel is weak and does not operate effectively (Mukherjee and Bhattacharya, 2011). In general, high inflation, high volatility of exchange, large current account deficits have been discussed in the literature so far. On the other hand, FED and the European Central Bank are two key financial institutions at two Advanced Market Economies. Fed is an independent financial institution; head of FED is the strongest person in the USA. Similarly, the European Central Bank is the important party at Euro Crisis in addition to Global. In this chapter, after reviewing the concept of globalization and its relation to financial institutions in financial markets, the mone1tary policy applied during the crises and its effects will be analysed.

2.2 Globalization, Financial Institutions and Monetary Policies

Globalization is an old phenomenon and would be considered as free flows of commodities, labor and capital in a very simple manner. Although, capital flows were limited to a few countries and a few sectors at the beginning, capital flows have been a central issue for centuries. Similarly, the collapse of the World Economy is not a new phenomenon. The world economy contracted in 1914, just before World War I. It was the end of the gold standard era, free trade and free capital mobility for a period of time. Economic globalization starting after industrial revolution and with the support of Adam Smith and his followers and philosophers since early the 18th century, had raised the prosperity in advanced countries and many other poor countries. The liberal economists argued that markets should be free and governments should not intervene in markets although they considered a role for government restricted only to national defense and

justice. Although, world trade had expanded approximately 1 per cent year during the seventeenth and eighteenth centuries it raised 4 per cent during nineteenth century due to rapid changes and globalization (Rodrik 2011: 24). Three important changes have been defined within this period: the use of stream in transportation and industry and the invention of the telegraph made revolutionary changes on the global economy. Especially, the widespread adoption of the gold standard allowed capital to easily move internationally. It was the realization of Adam Smith and his follower's philosophy and making the world prosper (Rodrik 2011: 22).

The rapid growth in external liabilities of the United States and its implications for a possible reversal in the current strength of the dollar has been a main theme of discussion in economic policy. The discussion on the relation between international payments and real exchange rates has a long and distinguished intellectual history. In the late 1920s, the discussion was on the impact of the German war, in the 1970s, on the implications of oil price shocks, in the early 1980s, the consequences of the debt crisis, and in the mid and late 1980s with the debate on causes and consequences of the large fluctuations in the value of the dollar consequences of the large swings in the value of the dollar. The international system was dominated by Bretton Woods's system of fixed but adjustable exchange rates, limited capital mobility and autonomous monetary policies.

Schmukler (2003) summarized the capital flows and reaction of the markets in three steps: deregulation, privatization and advances in technology made foreign direct investment (FDI) and equity investment in emerging markets. Early 1990s were the boom years for foreign direct investments and portfolio flows to emerging markets in East Asia and the other leading emerging markets. After the Latin American Crisis, the 1997 East Asia Crisis was the second most important crisis in the emerging markets in the last few decades after collapse of Bretton Woods's system in 1973. Friedman, Minsky, Schwarts considered banking panics as a major reason of first contraction on globalization (Mishkin 1992: 2).

However, many economists viewed financial crises as the case where sharp declines in asset prices, failures of large financial and non-financial firms, deflations or disinflations, disruptions in foreign exchange markets or some combinations of all these at the same time. They also strongly suggested much more government intervention when a financial crisis occurs (Mishkin 2012).

After 2003, all governments were following the policies necessary for participating in the globalized world while raising the volume of capital mobility and trade that helped rapid growth in financial markets. Although, globalization made the world wealthier, Stiglitz defined the recent conceptualism of globalization as overselling, just before the 2007 global crises Stiglitz (2005) used globalization *to refer not only to closer integration of the countries and people of the world that has resulted from lowering of transportation and communication costs and man-made barriers but also to the particular policies, like "Washington Consensus".*

On the other hand, Greenspan (Greenspan, 2007:12) the former chairman of the Fed, for a long time argued not only about the technological, and economic developments but also geo-political changes starting with the collapse of the Soviet Socialist States Union, unification of Germany, the end of the Cold War that

reduced real long term interest rates all over the world produced new bubbles in different countries like home price. While many people accused him as being the prime responsible person for the global crises; *however, it was the heavy securitization of the US subprime mortgage market from 2003 to 2006 that spawned the toxic assets that triggered the disruption* (Greenspan 2007: 12). He considers the bankruptcy of Lehman Brothers was the starting point of the infectious global financial crisis. Following the crisis, the economy contracted more than the Great Depression of the 1930s.

> The collapse of private counterpart credit surveillance, fine-tuned over so many decades, along with the failure of the global regulatory system calls for the thorough review by governments and private risk managers now underway (Amartya et al. 2012).

Greenspan's analysis of the crisis was very critical on explaining the causes of the crisis which is a non-monetary issue but the Third World nations, especially China, replicated the successful export-oriented economic model of the Asian Tigers that were fairly well educated with a low cost workforce joined with the developed world's technology and protected by increasingly widespread adherence to the rule of law, unleashed explosive economic growth. The International Monetary Fund estimated that in 2005 a labor force of more than 800 million was engaged in export oriented competitive markets. Additionally, hundreds of millions became subject to domestic competitive forces, especially in the former Soviet Union (Greenspan 2010).

The first signs of crises came in early 2007 when loan originators and financial institutions in the US subprime market incurred heavy losses from derivatives of securitized subprime mortgages. However, these first signs were limited to problems in the subprime mortgage market until late 2007. The Lehman Brothers bankruptcy was the trigger of the financial crisis, and shortly after AIG, American International Group, and the Reserve Primary Fund collapsed on September 16, 2008. When the mortgage institutions and banks and other financial institutions experienced bankruptcy in the UK and other European countries due to the subprime mortgage market, the financial crisis became global.

The World Economy was shrinked more than what had been at the time great depression of 1930s. *The collapse of private counterpart credit surveillance, fine-tuned over so many decades, along with the failure of the global regulatory system calls for the thorough review by governments and private risk managers now underway* (Amartya et al. 2012).

2.3 Effects of Monetary Policies

When the monetary policy has been applied to raise the output level and reduce the inflation rate, the transmission mechanism would support the policy to achieve the targets. First, Keynes discussed the transmission mechanism. The effects of monetary policy would differ depending on the instrument. The short term interest

rate is the key monetary policy instrument under inflation targeting. However, new instruments have been added to the monetary policies. Their effects through transmission mechanism also changed depending on the latest developments of globalization. Traditional interest rate channel, the credit or loan supply channel; the exchange rate channel and the asset price channel.

The issue of exchange rate levels and their relationship with other major economic variables such as growth, income, current account balances, consumption and trade have led to a great deal of discussion since the beginning of the mid 2000s, in particular when global imbalances started to widen. After Bretton Woods systems, volatility of exchange rates increased during 1970's. This strongly affected economies on the World. Misalignment of exchange rates away from levels that reflected inflation or cost differentials would destabilize international trade flows due to incorrect price signals to the markets. In general, this would resource misallocation costs on an economy Aubain and Ruta (2011:5).

During the crisis, all advanced market economies continued to follow expansionary monetary policies and other instruments very effectively. The Federal Reserve has been following the view that monetary policy can be effective in restoring aggregate demand for the last 30 years or more. Not only the US but all advanced market economies continued to follow expansionary monetary policies and other instruments very effectively. The USA took extraordinary actions in response to the financial crisis to help stabilize the US economy and the financial system. Americans started saving more in response to recessionary fears (FED, 2012). A dozen megabanks control 70 percent of the asset in the US banking industry. It was highly concentrated. It was necessary to keep the banks to survive since these were "too big to fail" (Fisher, 2013). These megabanks, 0.2 percent of banks were treated differently from the other 99.0 percent.

Although the Troubled Asset Relief Plan (TARP) was initially intended to purchase subprime mortgage assets to help prop up financial institution's balance sheet, it soon became clear that agreeing on prices for those assets was not viable. Later, the US Treasury used TARP funds to inject capital into financial institutions and supported their balance sheets more directly. In October of 2008, the Federal Deposit Insurance Corporation (FDIC) announced the Temporary Liquidity Guarantee Program guaranteeing newly issued senior unsecured bank debt, such as federal funds and commercial paper as well as noninterest bearing accounts. Its purpose was to "strengthen confidence and encourage liquidity in the banking system (FDIC 2008). Although these programs were initially intended to last less than a year", they were extended several times. During the crisis, all advanced market economies continued to follow expansionary monetary policies and other instruments very effectively. The Federal Reserve has been following the view that monetary policy can be effective in restoring aggregate demand for the last 30 years or more. Not only the US but all advanced market economies continued to follow expansionary monetary policies and other instruments very effectively. Spreading bank failures in Europe in the Fall of 2008 led to similar bailouts of financial institutions: the UK Treasury set up a bailout plan that guaranteed 250 billion pounds of bank liabilities, added 100 billion pounds to the facility that

swaps these assets for government bonds and allowed the UK government to buy up to 50 billion pounds of equity stakes in British banks. $10 trillion worth of bailout packages across 20 countries including both guaranteeing the debt of the banks was direct injection of capital. There was a high degree of international coordination in these policies. Comprehensive bailouts which helped recapitalize the financial sector did help lower interbank risk premiums, but bailouts of individual banks on an ad hoc basis were received by the markets. This increased interbank risk premiums (Ait Shalaia, 2010). When governments support ad hoc bailouts in credit markets, it would suggest that the credit markets may be worse off than they appear. In contrast, following a comprehensive plan to recapitalize the financial system helps to restore confidence and to unfreeze the credit markets. Furthermore, they found out that there were strong spillovers from actions taken in one country to another, suggesting the benefits of a coordinated policy response between countries to cope with a global financial crisis (Mishkin 2010: 19).

Policy responses in the recent crises were initially similar to those in past crises, but over time they have differed. Past crisis responses typically involved three phases, first repression to deal with severe liquidity stress and to stabilize financial market. Credit Easing was preferred to stimulate spending. Different central banks often seem to believe different things about how these processes might work is not encouraging. The European Central Bank sees it "non-standard" policy measures, not as monetary policy at all, but as a means of restoring market functioning so that standard measures can be transmitted to the real economy more effectively. The reduced term might reduce the supply of loans for longer term investments. If creditors have higher marginal propensities to spend than debtors then spending overall might be reduced. A similar conclusion is suggested if consumers would be careful for purchasing an annuity on retirement (White 2012). Secondly, resolution and balance sheet restructuring involved removing some financial institutions from the system and recapitalizing feasible ones, restructuring to restore the financial soundness and profitability of institutions and asset management to rehabilitate non-performing loans. The reduced term might reduce the supply of loans for longer term investments. If creditors have higher marginal propensities to spend than debtors then spending overall might be reduced (White 2012).

The effects of monetary policy in the recent crisis have been analysed since the early 2008. Peersman (2011) examined the macroeconomic effects of traditional interest rate innovations and unconventional monetary policy actions on the Euro area economy. Peersman focused on three different types of disturbances at the supply side of the credit market: innovations to the supply of credit by banks independently a monetary policy action; shocks to the supply of credit due to a shift in the policy rate and the credit supply shocks caused by non-standard monetary policy actions that are orthogonal to the policy rate (Peersman, 2011). Peersman found out more than one instruments of the monetary policy can be used to influence the economy. In particular, a policy action which raises the monetary base or the size of the central bank balance sheet for a given policy rate, has a "hump shaped effect" on economic activity and a permanent impact on consumer prices (Peersman, 2011). Whereas a rise in the balance sheet of the Eurosystem is

passed on the bank lending via a decline in interest rate spreads of banks, the spreads increase significantly after a fall in the policy rate. Furthermore, the so called credit multiplier declines considerably after a balance sheet shock. In contrast, the fluctuation in the volume of credit after an interest rate innovation is mainly created by a rising multiplier. Secondly, on unconventional policy shocks, the parameters did not change dramatically as a consequence of the crisis. One unconventional policy shock may occur in credit supply market. Spread declines in the money market. Peers calls this disturbance as a "signaling" shock by which could for instance to be the consequence of lending at longer maturities by the ECB or a consequence of lending at longer maturities by the ECB or a change in the communication about the future stance of monetary policy. The second non-standard policy is identified as a disturbance to the money supply of credit caused by a shock in the volume of central bank money that is orthogonal to both the policy rate and the money market term spread. There is still a hump shaped impact on economic activity which is more sluggish than the response to an interest rate innovation. A Credit supply shock which is caused by a decline in the money market term spread that is orthogonal to the policy rate tends to be followed by a temporary increase in economic activity and a more permanent effect on the level of consumer prices. The dynamic are strikingly similar as for a traditional interest rate innovation Surprisingly, the monetary base does not react and the policy rate effectively declines after a few months.

2.3.1 Effects of Monetary Policies on Interest Rates

Just before 2007, the Advanced Market Economies were following very strong monetary policies. Expansionary monetary policies during the recent crises were critical in supporting banks and markets. (Stiglitz 2010) argued US monetary policy was largely responsible for Latin America's lost decade, as the unprecented increase in interest rates brought on the debt crisis of the early 1980s. Several central banks committed themselves to maintain low interest rates by taking advantage of their currency reserves. Those moves were contrary to the efforts of central banks in many past crises in which nominal rates were kept high or sometimes even raised to support currencies. In the recent crises, the low policy rates and ample liquidity allowed banks often to preserve their intermediation margins in spite of higher costs of other funding. Moreover, accommodative monetary policy also helped support overall asset values, reduced the risk of an adverse debt-deflation spiral, and limited nonperforming loans, at least initially, thus protecting some of the banks' profit streams and balance sheets despite losses on trade securities (Table 1). Monetary policy was relaxed significantly early on by quickly adjusting short-term interest rates to historical lower levels. Here, are the rates applied in some of the countries between 2003 and 2008.

It was 2.33 % in 2003. However, the rate increased to 4.28 % in 2007. In the European Union, the UK followed high interest rate policy in the period between

Table 1 Short Term Interest Rates

Countries	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Turkey	38.52	23.84	15.87	17.93	18.25	18.84	10.98	7.81	8.74	8	7.25	8.25
U. S.	1.17	1.58	3.53	5.17	5.28	3.2	0.94	0.53	0.42	0.43	0.38	0.46
Euro 15	2.36	2.13	2.2	3.09	4.28	4.63	1.24	0.81	1.39	0.59	0.17	0.13
Germany	2.33	2.11	2.18	3.08	4.28	4.63	1.23	0.81	1.39	0.58	0.17	0.14
Greece	2.33	2.11	2.18	3.08	4.28	4.63	1.23	0.81	1.39	0.59	0.17	0.12
U.K.	3.67	4.57	4.7	4.8	5.96	5.49	1.2	0.69	0.89	0.91	0.67	0.59
Spain	2.33	2.11	2.18	3.08	4.28	4.63	1.23	0.81	1.39	0.59	0.17	0.12
Japan	0.04	0.03	0.03	0.25	0.66	0.74	0.35	0.16	0.12	0.16	0.28	0.24
Switzerland	0.33	0.48	0.81	1.56	2.57	2.48	0.36	0.19	0.12	0.07	0.05	0.05

Source OECD Statistics, 2013 http://stats.oecd.org/Index.aspx?DataSetCode=EO92_INTERNET

2003 and 2007. However, after 2008, the UK also decreased the rate to 1.2 % in 2009 following expansionary monetary policy. All the other countries followed low interest rates policy during the crisis period. Turkish economy was at extraordinary conditions, the interest rate was 38.52 % at 2003 and 17.93 % at 2006. By 2009, the interest rate decreased to 10.98 % in 2009.

As it can be seen from Table 1, the short term interest rates 1.17 % in 2003. It was increased to 5.28 % in 2007. This is very high increase within very short period of time. In Greece, Germany, Spain the rate were the same and above the interest rates in the US.

Although,at 2003, Japan, the Switzerland and the all other advanced economies countries had the lowest interest rates, during the period between 2004 and 2007, the short term interest rates increased substantially It was the highest rate in the US just before 2007. Greece was following almost the same rate with Germany. Turkey had very high interest rates during this period due to the 2001 financial crisis. It would be recognized that the largest decrease on interest rate was on Turkish economy. However, at the beginning of the crisis, the US and Euro 15 countries had very high short term interest rates.

The low rate of interest would have different results in the economy: Even if the ultra- low interest rate and non- standard measures are considered as stimulator for spending, this would push another series of bubbles, the World experienced during the last financial crisis. This would be very helpful for recapitalizing banks. However, very low rates of interest would be considered as penalty for insurance companies, pension funds and other forms of saving. This could contribute to more risk taking and eventually more financial instability. Third, the crisis is already estimated by the OECD have lowered the level of potential in the AME's by an average of three percentage points. *By lowering saving and encouraging the survival of "zombie" companies and "zombie banks" potential could be lowered even further* (White 2012: 13).

By the end of 2012, The Fed was still very sensitive to monetary policy. However, economists criticized the Fed's policy on asset purchasing and accommodative monetary policy, which encouraged capital flows to emerging markets

economies. Bernanke also acknowledged that capital flows were causing undesirable currency appreciation and too much liquidity to asset bubbles and inflation, and/or economic disruptions as capital flows quickly move to the other countries. The interest rate was differentiated from the inflows of emerging markets. Accommodative policies in advanced economies impose net costs on emerging market economies (Bernanke 2012b).

2.3.2 *Effects of Monetary Policies on Inflation*

The 1950s and 1960s were the years, the majority of macroeconomists discussed the role of monetary factors affecting the macroeconomic fluctuations. Keynes emphasized shortfalls in aggregate demand as the source of the Great Depression and the role of fiscal factors as possible remedies. In 1960s, Friedman argued the growth of money supply as a remedy for Depression. Money supply was a key determinant of aggregate economic activity and particularly inflation. Friedman predicted expansionary monetary policy in the 1960s would lead to high inflation. In 1960s and in 1970s, a high inflation environment leads to over investment in financial sector, which expands to help individuals and businesses escape some of the cost of inflation (English, 1996). Inflation leads to uncertainty, either. Inflation rates were similar to each other in European Union counties during 2003–2008 period. In the USA, it was 3.6% in 2008. However, in Japan it was the lowest with 1.5% and in Turkey it was the highest rate of inflation with 19.2% in 2008. Easy monetary policy might cause a sharp increase in inflation. This was a real threat in many emerging market economies in 2011, but it could also be a problem in advanced market economies as well. For those, like the Fed, who focus on the domestic output "gap" as the driver of inflation, such an outcome seems almost impossible. Yet, an "irrational" increase in inflationary expectations cannot be ruled out. One possible trigger might be a sharp decline in the value of the dollar whose inflationary effects would be compounded if the prices of imported goods were rising (White 2012) (Table 2).

Expansionary monetary policy has been expected to a sharp increase in inflation. This was a real threat in many emerging market economies in 2011, but could it also be a problem in advanced market economies as well. For those, like the Fed, who focus on the domestic output "gap" as the driver of inflation, such an outcome seems almost impossible. Yet, an "irrational" increase in inflationary expectations cannot be ruled out. One possible trigger might be a sharp decline in the value of the dollar, whose inflationary effects would be compounded if the prices of imported goods were rising (White 2012). During the crisis the inflation rate declined to 3.6% in the UK, 3.3 % in the US, 3.8 % in the Euro 15 area. By 2012, these rates declined 1.9% in the U.K. and 1.8% in the U.S. However, in Italy and Israel, the rates were still high. Especially, it increased to 22.9% in Greece by 2012.

Table 2 Inflation Rates

Country	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Turkey	46.5	25.2	16.5	17.9	18.3	19.2	11.6	8.4	8.8	8.7	8.5	9.8
U.K.	4.5	4.9	4.4	4.5	5	4.6	3.6	3.6	3.1	1.9	2.1	2.7
U. S.	4	4.3	4.3	4.8	4.6	3.7	3.3	3.2	2.8	1.8	2	2.6
Euro 15	4.2	4.1	3.4	3.8	4.3	4.3	3.8	3.5	4.2	3.8	3.5	3.7
Germany	4.1	4	3.4	3.8	4.2	4	3.2	2.7	2.6	1.5	1.7	2.3
Greece	4.3	4.3	3.6	4.1	4.5	4.8	5.2	9.1	15.7	22.9	16.5	14.3
Israel	8.9	7.6	6.4	6.3	5.6	5.9	5.1	4.7	5	4.4	4.3	4.5
Italy	4.3	4.3	3.6	4	4.5	4.7	4.3	4	5.4	5.5	4.9	4.9
Japan	1	1.5	1.4	1.7	1.7	1.5	1.3	1.1	1.1	0.8	1.1	1.6
Spain	4.1	4.1	3.4	3.8	4.3	4.4	4	4.2	5.4	5.9	5.7	5.5
Switzerland	2.7	2.7	2.1	2.5	2.9	2.9	2.2	1.6	1.5	0.6	0.8	1.3

Source OECD Statistics, 2013 http://stats.oecd.org/Index.aspx?DataSetCode=EO92_INTERNET-Inflation Rates
Source

2.3.3 Effects of Monetary Policies on Growth

After rapid growth at world economy during 2003–2007 period, the growth rate increased to 5.1 % in 2007. The USA had experienced recovery and expansion since 2009, although, this expansion was slow. The effects of deleveraging by households, a weak US housing market, tight credit conditions in some sectors, and spillovers from the situation in Europe, fiscal contraction at all levels of government and concerns about the medium term US fiscal outlook were considered as the main barriers preventing fluent performance of the US economy (Bernanke 2012a, b). Therefore, households and businesses are still very careful about spending. The economic growth has been insufficient to stimulate employment (Table 3). The World economy declined -1.1% at 2009. Euro 15 economies had their worst performance during 2009. Only, China and Indian economies did not suffer from the financial crises. The USA had experienced recovery and expansion since 2009, although, this expansion was slow. The effects of stimulus for consumption by households, still weak US housing market, tight credit conditions in "some sectors, and spillovers from the situation in Europe, fiscal contraction at all levels of government and concerns about the medium term US fiscal outlook were considered as the main barriers preventing fluent performance of the US economy (Bernanke, 2012a October 14). During this period, Turkey followed very stable and rapid growth. However, 2009 was shrinking year for Turkish economy (Table 3).

Table 3 Growth Rates During the Period Between 2003 and 2014

Countries	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
World	3,4	4,6	4,3	5,0	5,1	2,5	-1,1	4,9	3,7	2,9	3,43	4,23
Euro 15	0,7	2,0	1,8	3,4	3,0	0,3	-4,3	1,9	1,5	-0,4	-0,09	1,30
OECD	2,1	3,1	2,7	3,2	2,8	0,2	-3,6	3,0	1,8	1,4	1,4	2,3
China	10,0	10,1	11,3	12,7	14,2	9,6	9,2	10,4	9,3	7,5	8,5	8,8
India	7,0	8,2	9,2	9,3	10,0	6,0	5,2	10,5	7,8	4,5	5,9	7,03
D.A.E	4,7	7,0	5,6	6,1	6,5	2,4	-1,2	9,2	3,9	3,3	4,4	4,7
O.O. P.	7,6	10,1	6,9	7,0	6,2	5,1	0,9	4,6	3,6	4,5	5,8	6,
Turkey	5,3	9,4	8,4	6,9	4,7	0,7	-4,8	9,2	8,5	2,9	4,1	5,1
U.K.	3,8	2,9	2,8	2,6	3,6	-1,0	-4,0	1,8	0,9	-0,1	0,89	1,55
U. S.	2,5	3,5	3,1	2,7	1,9	-0,3	-3,1	2,4	1,8	2,2	2,1	2,8

Source OECD Statistics, 2013 http://stats.oecd.org/Index.aspx?DataSetCode=EO92_INTERNET-Growth Rates

2.3.4 Effects of Monetary Policies on Unemployment

The unemployment rate, one of the important indicators, was so high during the period between 2003 and 2008. Spain had one of the high uenmployment rate of 11.04 % in 2003 (Table 4). In USA it was 5.99 % in 2003. it was lower during 2006–2007 period. At 2003, it was also high in Turkey among the leading economies by 10.82% due to the earthquake in 1999 and 2001 financial crisis. The great number of people were unemployed in this time period. Until 2008, Turkey had this level of unemloyment. However, in Germany, Greece, Italy, Japan, Spain has much lower rate of unemployment 2007 in comparison to 2003.

In the USA, the unemployment rate was still around 7.8 % by the beginning of 2013, quite above what had been expected in the long run. On the other hand, consumer price inflation was below what had been expected. At the beginning of 2013, the FED presented the economic view of the USA as follows:

At 2009, the officially announced unemployment rate increase to 13.75 % at Turkey and 18.01% at Spain. However, in addition to Global Crisis, the crisis in the Euro area, especially at Greece and Spain, caused very high unemployment rates during the period 2009 and 2011. The unemployment rate was still 7.8% at the USA at the beginning of 2013, quite much above what had been expected in the long run. On the other hand, consumer price inflation on was below what has been expected.

The economy is recovering, but progress on maximum employment has been slow and the unemployment rate remains elevated. At the same time, inflation has remained subdued. The Energy prices and other commodities have temporarily been affected by inflation.

The US Federal Open Market Committee expects that a highly accommodative stance of monetary policy will remain appropriate for a considerable time after the economic recovery strengthens to support continued progress toward maximum employment and price stability.

Table 4 Unemployment Rate During the Period Between 2003 and 2008

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Germany	9.13	9.83	10.69	9.69	8.31	7.19	7.43	6.76	5.75	5.29	5.52	5.57
Greece	9.71	10.49	9.85	8.89	8.28	7.65	9.46	12.53	17.65	23.57	26.65	27.24
Italy	8.44	8	7.71	6.78	6.11	6.77	7.8	8.41	8.44	10.56	11.42	11.76
Japan	5.25	4.72	4.42	4.13	3.85	3.98	5.07	5.06	4.59	4.4	4.36	4.29
Spain	11.04	10.55	9.16	8.51	8.26	11.34	18.01	20.06	21.64	25.05	26.89	26.78
Switzerland	4.03	4.32	4.33	3.94	3.58	3.34	4.26	4.45	3.95	3.86	4.11	4
Turkey	10.82	10.59	10.4	10.01	10.06	10.74	13.75	11.66	9.61	9.01	9.32	8.65
U.K.	5.02	4.77	4.85	5.45	5.36	5.71	7.63	7.86	8.08	8.03	8.28	8.04
U.S.	5.99	5.52	5.08	4.62	4.62	5.8	9.28	9.63	8.95	8.09	7.81	7.51
Euro 15	8.69	8.94	8.94	8.23	7.41	7.44	9.37	9.89	9.98	11.12	11.91	12
OECD	6.97	6.86	6.63	6.1	5.66	5.98	8.16	8.32	7.95	7.97	8.15	8

Source Economic Outlook, No.92 December 2012 OECD Annual Projections

The Federal Open Market Committee (December, 2012) indicated that it currently anticipates that a target range for the federal funds rate of 0 to 1/4 per cent will be appropriate as long as the unemployment rate remains above 6-1/2 per cent, inflation between one and two years forward is projected to be no more than half a percentage point above the Committee's 2 per cent longer-run goal, and longer-term inflation expectations continue to be well anchored.

2.3.5 *Effects of Monetary Policies on Current Account Balance*

The Current Account Balance is one of the important indicators for the performance of the economy. As it was designed earlier, Bretton Woods, the USA is the country with current account deficit while the other countries had balanced had the largest current account deficit before 2007, especially, at 2006. However, when it became non manageable by 2007. The current account deficit decreased considerably in 2009 and still it is at manageable level (Table 5).

At the beginning of the global crisis, at Euro 15 area, global crisis, the current account deficit was not so high. However, the Euro crisis, affected all European Union countries more after 2007. At 2012, it was more than ever before. At the beginning of 2013, the Euro area still covers high risk issues in capital flows. European banks were at the center of the euro area crisis. Especially, confidence in Euro Area is still problem. This would remain problem since the low bank capitalization continues in many countries despite an EU requirement that banks reach in 2012 a ratio of a minimum 9% of the best quality "Core Tier-1" capital to risk-weighted assets, in excess of the current international requirements.

Largarde (2013) argues in the Euro Area, ''firewalls operational" need to be made. This includes fiscal adjustment at the country level and supporting demand,

Table 5 Current Account Balance of the Countries During 2003-2008 Period

Country	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Turkey	-7,5	-14,4	-22	-32	-38,4	-41,5	-13,4	-46,6	-76,9	-57,7	-64,6	-73,3
U.K.	-31.7	-46,9	-47	-72	-64,1	-25,9	-27,2	-57,7	-46,5	-81,1	-88,1	-82,0
U.S.	-519	-628,6	-746	-800,6	-710,3	-677,1	-381,9	-441,9	-465,9	-470,3	-481,8	-539,7
Euro15	41,8	111,1	40	37,8	25,8	-96,2	38,2	54,9	65,5	173,3	234,0	268,9
OECD	-311	-315,1	-497	-578,3	-523,9	-667,4	-175,7	-189,2	-316,5	-300,2	-295,7	-300,1
World	-67,1	-1,2	25	194,18	283,2	209,2	213,5	303,1	329,3	278,7	345,5	395,8
N.OECD	4.1	11,7	13,9	13,6	1,5	-28,2	-24,3	-47,2	-52,4	-57.4	-63,8	-71,5
Brazil	43	68,9	132,	231,8	353,2	420,6	243,2	237,7	201,8	237,7	265,0	220,2
China	10.3	1.8	-9,7	-9,6	-7,5	-25,8	-31,3	-51,6	-64,0	-68,6	-62,8	-72,7

Source OECD Statistics, 2013 http://stats.oecd.org/Index.aspx?DataSetCode=EO92_INTERNET- Current Account Deficit Economic Outlook, No.92 December 2012 OECD Annual Projections

especially with further monetary easing. The capacity of European banks to absorb losses need to be raised by increasing their capital relative to assets. There could be large capital needs in the major euro area countries. Moving towards a stronger banking system would help to rebuild confidence and get credit flowing again. Greenspan also asked for emergent adoption of Basel Criteria 3 (Greenspan, 2013) Recent studies show the view that advanced economy monetary policies are not the dominant factor behind emerging market capital flows. Even as monetary policies in advanced economies have continued to ease and longer term interest rates in those economies have continues to decline.

Lagarde (2013) considers the recovery of the global economy for the year of 2013 weak and uncertainty is still high. The IMF forecasts global growth of only 3½ percent this year, which is not much higher than last year. Short-term pressures might have eased, but the longer-term pressures are still present. She argues that the main policy action will be based on putting uncertainty at rest. (Largarde 2013) also argues in the Euro area, resting risk means "making firewalls operational"; pushing ahead with a banking union, continuing with the difficult but necessary fiscal adjustment at the country level; supporting demand, especially with further monetary easing.

Lagarde (2013) believes the United States should pull together in the national interest and avoid further avoidable policy mistakes, such as failing to agree on increasing the debt ceiling and for the United States and Japan, reaching agreement on medium-term debt reduction.

For the emerging and developing economies, they are faring better despite their concerns about continued turmoil and lack of decisive action in the advanced economies, conditions differ greatly. Some are more vulnerable than others, but they need to rebuild the policy space that has been used up in alleviating the crisis in recent times.

After the November 6, 2012 election, America faces "a fiscal cliff" with automatic tax increases and spending cuts at the start of 2013 that will most likely drive the economy into recession unless a bipartisan agreement on an alternative fiscal path is reached.

Largarde (2013) also argues increasing the capacity of European banks to absorb losses, by increasing their capital relative to assets, needs to be addressed in the coming years. If the euro area's largest banks were to move to a 5 % standard, the current capital shortage is estimated at around EUR 400bn (4¼ per cent of euro area GDP). This is not just a problem for banks in the "periphery—there could be large capital needs in the major euro area countries. Future capital needs could be lessened if banks were required to separate commercial banking and market activities, reducing the total assets of the banking business. Moving towards a stronger banking system would help to rebuild confidence and get credit flowing again.

European banks are at the center of the euro area crisis. Especially confidence in the Euro Area is still a problem despite the actions to strengthen banks and build a banking union. This is likely to remain a problem until underlying concerns over low capitalization of some banks are addressed.

Low bank capitalization persists in many countries despite an EU requirement that banks reach in 2012 a ratio of a minimum 9 % of the best quality "Core Tier-1" capital to risk-weighted assets, in excess of the current international requirements.

The developments in the Euro area were covering high risk issues led to corresponding swings in capital flows. Recent studies do not support the view that advanced economic monetary policies are the dominant factor behind emerging market capital flows. Even as monetary policies in advanced economies have continued to ease and longer term interest rates in those economies have continues to decline, the effects of capital inflows, whatever their causes are, on emerging market economies are not pre-determined but instead depend greatly on the choices made by policy makers in those economies. In some emerging markets, policy makers have chosen to systematically resist currency appreciation as a means of promoting exports and domestic growth. However, the perceived benefits of currency management come with costs, including reduced monetary independence and the consequent susceptibility to imported inflation. The perceived advantages of undervaluation and the problem of unwanted capital inflows must be understood as a package you cannot have one without the other.

The Japanese disaster faced in 2011 was affected more than financial crisis. However, the 2012 was the recovery year for the Japanese economy; Japan has been still suffering from weak demand.

Classens et al. (2012) analyzed the timing of interventions by depicting the evolution of liquidity support and the timing of guarantees and recapitalizations by governments around the onset of crises. Also, they compared the frequency of policies used at the end of 2009. As in past crises, liquidity supports and guarantees were deployed in the early stages, although more extensively relative to GDP. However, they argued that policy approaches became less forceful currently than the previous crises. Especially, progress with comprehensive operational and asset restructuring has been slow. However, Iceland, Ireland and Ukraine, the sequence and type of response more closely resembled those of past crises, including due diligence of the viability of financial institutions and quality of assets, public recapitalization, removal of nonperforming assets, operational restructuring and the adoption of IMF programs. The details of policy mixes varied due to the differences in the causes and severity of countries, whether they also involved in a currency or sovereign debt crisis, types of defunct assets involved and political economy considerations. In Iceland and Ukraine, foreign exchange exposures were large wholesale funding runs and withdrawal of foreign capital led to crises and created pressures on currencies, which then reduced the repayment capacity of borrowers. In Ireland, problems were predominantly real estate related and affected largely commercial banks.

In the United States, assuming the "fiscal cliff" is avoided; GDP growth is projected to be at 2 % in 2013 before rising to 2.8 % in 2014. In Japan, GDP is expected to expand by 0.7 % in 2013 and 0.8 % in 2014, respectively. The euro area will remain in a recession until early 2013, leading to a mild contraction in GDP of 0.1 % next year, before growth picks up to 1.3 % in 2014 (OECD 2013) .

The US and the other advanced countries suffered a lot from the effects of the 2008 financial crisis; therefore, they had low investment returns. Emerging market economies including the Turkish economy performed better than advanced countries, so capital inflows entered these countries.

2.3.6 Effects of Monetary Policies on Export

One other important indicator is export. In general, here focus would be on the influences of monetary policy on export via change on volatility of foreign exchange. Real Exchange rates and changes on exchange rate are one of the important factors determining the level export. Real exchange rates are not only determining the relative prices of tradable to non-tradable but also potentially strong impact on the incentive to allocate resources. Real exchange rates are also a measure of real competitiveness, as they capture the relative prices, costs and productivity of one particular country vis- a vis the rest of the world.

An alternative strategy- one consistent with classical principles of international adjustments is to refrain from intervening in foreign exchange markets, thereby allowing the currency to rise and helping insulate the financial system from external pressures. Under a flexible exchange rate regime, a fully independent monetary policy, together with fiscal policy as needed would be available to help contract any adverse effects of currency appreciation on growth. (Bernanke 2012b).

In several models, the effect of volatility of exchange rates on trade depends heavily on the level of risk aversion of traders. Risk neutral traders are unlikely to be affected by exchange rate uncertainty but risk adverse ones will albeit in different degrees. Paradoxically for very risk adverse traders, exporting more could be response to increased volatility in order to compensate for the expected fall in revenue per exported unit. Some models emphasize the effects of exchange rate variability more on the composition than on the gross volume of trade. Kumar (1992) indicated that while the relationship between exchange rate fluctuations and gross levels of trade is ambiguous, fluctuations have a positive impact on intra-industry trade. The logic of the argument is that the exchange rate risk act as a " tax" on the comparative advantage of the exporting sector relative to the domestic sector. If comparative advantage is reduced, economies of trading countries will become less specialized an intra-industry trade will increase at the expense of inter-industry trade. Due to change in monetary policy, export increased in all countries after 2009. In some emerging markets, policy makers have chosen to systematically resist currency appreciation as a means of promoting exports and domestic growth. However, the perceived benefits of currency management come with costs, including reduced monetary independence and the consequent susceptibility to imported inflation.

In the following tables, it would be seen that the USA was the largest exporter country of the world at 2003 (Table 6). However, Germany and China had very good performance following the USA just prior to 2007.

The USA, had the highest export volume at 2008 however, 2009 was the worst performance of USA export. Expansionary monetary policy was so much beneficial to the export of the USA economy. The export increased upt 1.8 billion USA $. However, the good performance of export did not change Lagarde view.

Among all these transmission channels, the early (1970s and 1980s) theoretical analyses and models of the relationship between exchange rates and international trade focused primarily on the commercial risk involved in conduction international transactions and the uncertainty generated by short term or long term volatility (Aubain and Ruta, 2011), (Largarde 2013) considers recovery of global economy for the year of 2013 weak and high uncertainty. IMF forecasts global growth of only 3½ percent this year, not much higher than last year. The short-term pressures might have alleviated, but the longer-term pressures are still with us. She argues main policy action will be based on putting uncertainty rest. (Largarde 2013) also argues in the Euro Area, resting risk means "making firewalls operational"; pushing ahead with banking union, continuing with the difficult but necessary fiscal adjustment at the country level; supporting demand, especially with further monetary easing. The effects of capital inflows, whatever the cause, on emerging market economies are not pre-determined but instead depend greatly on the choices made by policy makers in those economies.

2.4 The Fundamental Challenge in Financial Crisis

The fundamental challenge in the financial crisis 2008 is the difficulty of attaining effective global policy coordination on key matters, particularly in the absence of sufficiently powerful multilateral institutions with a meaningful degree of autonomy from nation states. Without deep coordination on a broad range of interconnected issues, there is little hope not only for resolving the pressing global problems of the day, such as a self-destructive international financial architecture and the unfolding environmental catastrophe, but even for defending some modest democratic and developmental gains of the past two decades (Onis 2010) .

The US and the other advanced countries suffered greatly from the effects of the 2008 financial crisis; therefore, they had low investment returns. Emerging markets, including Turkish economies performed better than advanced countries, so capital inflows increased in these countries. After the Second World War, as it is the case in the political area, the US was one of the main countries influencing international monetary flows. All those accusations of manipulation and currency wars were in effect referring to the demand of solving the trilemma by the USA. They argued that the USA should give up having an independent monetary policy and the FED should give up on trying to stabilize the US economy so that emerging markets are not faced with the uncomfortable trade-off between massive

Table 6 Volume of Export at the Period Between 2003 and 2014

Countries	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Turkey	88	98	106	113	121	124	118	122	130	150	159	170
China	545	678	837	1036	1.242	1.347	1211	1544	1682	1774	1.95	2.161
U. K.	541	567	618	694	676	685	628	668	699	697	714	740
U.S.	1.116	1.223	1.306	1.422	1.555	1.65	1.499	1.666	1.777	1.842	1.918	2.036
Germany	962	1.055	1.139	1.294	1.4	1.431	1.249	1.416	1.5282	1.596	1.648	1.744
Euro- 15	3.395	3.644	3.841	4.193	4.472	4.511	3.953	4.387	4.671	4.802	4.959	5.235
World	10.785	11.92	12.878	14.148	15.237	15.723	14.127	15.951	16.903	17.412	18.232	19.483

Source OECD Statistiics, 2013 http://stats.oecd.org/Index.aspx?DataSetCode=EO92_INTERNET-ExportEconomic Outlook, No.92 December 2012 OECD Annual Projections

appreciation and imported inflation. Krugman (2011) also argued that any kind of misbehavior due to the issue of monetary policy by the US does not exist in emerging markets. He also argued if there are trade-offs in the markets, these would occur at any currency regime and it's not the responsibility of the Fed to save the other decision makers and their choices.

2.5 Conclusion

Although, just at the beginning of 2007, the IMF was stating that the overall US economy is doing well and indicators are very encouraging, and the need for large bank buffers appeared increasingly less important in the Great moderation period. The whole picture started to change at the end of 2007. The credit cycles were not fluid. Financial markets evolved substantially in recent decades. In retrospect, the growth of securitization was so high that even the loans converted into securities and sold to investors in global capital markets. Serious deficiencies with these securitizations, the associated derivative instruments and the structure that evolved to hold securitized debt were at the heart of the financial crisis. The US monetary policy was largely responsible for the bubble whose breaking led to global recession (Stiglitz 2010)..

Recent global crises would be considered as evidence for the case that credit booms have been associated with the financial crises. More credit means increased access to finance and greater support for investment and economic growth, many governments and the central banks which are considered as independent authorities to implement monetary policy independently, followed interest rates and had come largely to disregard monetary aggregates.

There was a long standing view that it was better to deal with the bust than try to prevent the boom. Till, Lehman Brothers in the USA and Northern Rock in the UK, nobody was worried about the international monetary market. The US was following a very careful monetary policy. Although, the interest rates were not so high as it was at emerging markets, the capital flows were looking for safe places and high returns in global markets.

Although the crisis was a global financial crisis, the precautionary measures were also taken in financial markets via monetary policies. Before the financial crisis, the Fed was following very low interest rates, still it supports zero rates. The chairman of the Fed states they won't change their policy till the output level reaches the level required to achieve normal unemployment rates. The Fed policy mainly states the target for the USA economy. However, the USA, the leader of the World Economy since 1944, has been explicitly requested for leadership to the World economy again. While Krugman (2011) did not accept this designed role once more and stated explicitly and reminded Mundellinan "impossible trinity" *which say you cannot simultaneously have free movement of capital, a stable exchange rate and independent monetary policy as an answer to the Putin's statement on* current international monetary system as follows

> We are hooligans, Brazil accuses us of currency war and the Chinese are wellbeing their using charming selves. But, what's going on in international currency scene (Krugman 2011).

Krugman and Dixit are not confirming the old role of the USA. Dixit (2012) firstly stated the uncertainty surrounded by the United States and Europe and argued *dysfunctional politics and continued adverse demographic trends would trap former economic giants into relative mediocrity in the world. Their situation will be eerily reminiscent of many Latin American countries in the bad old* 1970s *and* 1980s. From time to time they may enjoy a little growth but much of the time their economies will stagnate while new dynamic economies of Asia and parts of South America and Africa grow faster. Europe and America will remain burdened by debt and suffer periodic bouts of inflation and currency crises. International Monetary Fund officials from its shining new headquarters in Singapore will send missions to Washington (Dixit 2012: 3).

Stiglitz (2012a) argued the US needs a financial system that serves all of society, rather than operating as if it were an end in itself. Globalization made all countries more interdependent, in turn requiring greater global cooperation. Stiglitz also argued the new task for the USA in a new world order, it should have more of a role on leadership in reforming the global financial system by advocating for stronger international regulation, a global reserve system and better ways to restructure sovereign debt, in addressing global warming in democratizing the international economic institutions and in providing assistance to poorer countries (Stiglitz 2012b).

The collapse of the US subprime mortgage market by mid-2007, provides an interesting story of how determined projects of profitably marginalized the masses into a free market society through the elaborate financial risk, which failed spectacularly. Aggravated by the other factors such as faulty monetary policy decisions, the unraveling of this project with tragic human costs has brought to the surface the fallacy of two fundamental assumptions underlying the liberal market model. The presumed efficiency of self-regulating markets proved to be an illusion (Onis 2010).

The global markets suffer from weak governance due to a lack of global antitrust authority. Although, countries are looking for authorities to manage the world economy, the Advanced Market Economies, especially the USA is not willing to play a role as she did before.

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Chapter 3
The Second Recession and its Impact on the US and Global Economy

Badar Alam Iqbal and Munir Hassan

Abstract The global economy is not yet recovered fully from financial crisis of December 2007 and that a second recession known as dip-recession has affected the world economy. The United Nations (UN) Report in 2011 warned that the world was on the brink of another recession. The recession is already started in the US and the Europe. The European Union is on the verge of disintegration as the week economies may leave it. It is believed by many economists that the second crisis or recession would be worse than the first one. Here too the US and Europe are the major players while the developing economies are feeling the heat. This is the best example of con/demerit of globalization. The present paper examines the major factors responsible for the emerging trends and its impact on US economy in particular and global economy in general. Warren Buffett's recommendation must be followed by the US authorities to overcome a deficit problem which is one of the core issues and sine-quo-non for existing crisis. The EU should also take fiscal and monetary measures to solve the debt crisis. The loans given to Italy and Spain amounting to $1.3 trillion when matured in 2014 could create a global economic 'tsunami'.

3.1 Introduction

Although a specific answer to an emerging second financial crisis is very difficult to give, there is an increasing consensus that the chances of a recession due to a debt crisis in the US and Europe have gone up considerably. This belief is because

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of the current state of the US economy and the debt crisis in Europe that is not only continuing but threatening to engulf nations, which have escaped it so far namely Italy and Spain. In addition to this, Japan, the third largest economy of the world, has been badly affected by the tsunami's after effects have added fuel to fire and hence, aggravating its pre-existing economic woes. Whereas, the term dip-recession is often commonly used worldwide, it is generally accepted as a situation wherein there are two successive quarters of decrease in the economic activity. Some recessions are characterized by a fall followed by a sustained period of recovery. However, sometimes there could be a brief phase of growth followed by another recession. This trend is called a "double dip-recession". In the United States of America, though the government passed a new act under which the US Government may increase the amount of money the nation could borrow (called debt ceiling), poor economic growth numbers and fundamentals have increased the prospects of another recession in the US economy which may have far reaching adverse effects on the global economy. Global investors are nervous and tense, so they are rushing to get out of risky assets like stocks (Times of India 2011a). On the other hand, on the internal horizon, the high rate of inflation and high interest rates are making investors jittery. Pain is on both sides, local and global (Oswal 2012). If the US economy falls back into recession, as many economists are now warning, 'the bloodletting could be a lot more painful than the last time around'. Given the tumult of the Great recession, this may be hard to believe Times Business 2011a). The fact remains that the US economy today is much weaker than it was at the outset of the last recession in December 2007, with most fundamentals of economic health and growth namely-jobs, incomes, output and industrial production are worst today than what they were back in December 2007. At present, growth has been so weak that almost no grounds have been recouped, even though a recovery technically began in June 2009. It would be disastrous if the global economy enters into a recession during time, as the world economy has not recovered from the recession of 2008 (Conrad 2011). The most alarming fact is that last downturn or meltdown hit, the credit bubble made Americans cut a lot of 'fat', but the emerging one would force people of the US in particular and the world in general to cut from the bone, therefore, making the situation worst. Policy makers used most of the economic tools and techniques at their disposal to combat the last recession; hence, they have fewer options available for meeting the emerging challenges coming out the possible second recession. Anxiety and uncertainty have gone up enormously especially after the announcement of a credit downgrade of the US economy by Standard and Poor's agency as well as Europe, which continues its desperate attempt to stem its debt crisis. Europe has been plagued with a debt crisis in 2011. The recent rumors of a down grade of France's credit rating, the Paris market rallied 2.19 % after plunging 5.45 %, whereas London jumped 1.85 % and Frankfurt 2.50 % (Times of India 2011b). This is because of the fact that French banks have a relatively high degree of exposure to Italian and peripheral debt, which appeared to be extreme.

3.2 A Critical Approach to Second Recession and the US Economy

3.2.1 Harsh Facts

In the last 4 years since the recession began, the civilian working age population has increased by nearly 3 %. If the global economy in general and US economy in particular were healthy and economic fundamentals were improved, the number of jobs would have grown by at least the same volume or percentage. Instead, the number of jobs has shrunk. At present the US economy has 5 % of 6.8 million jobs, than it had before the recession of 2007 began. The unemployment rate was 5 % in 2008 and now the figure is of alarming nature stood at 9.1 % (Times Business 2011b). Even those Americans who are working are generally working less; the typical private sector worker has shorter work-week today than 2007. If recession returns, it is not clear how many additional workers businesses could layoff and still manage to function. With fewer jobs and fewer hours logged, there is less income for households to spend, creating a considerable degree of hindrance for a consumer oriented or driven economy.

3.2.2 Few Opinions

According to Baron, Standard and Poor's rating is only one element in the appreciation of the US financial situation. The two other agencies, Moody's and Fitch have confirmed the triple (AAA) rating. It raises questions on taking a decision on the basis of figures which were not consensual (Baron 2011). Mr. Cable has opined that the emerging possibility of a recession is an entirely predictable consequence of the mess that Congress created when they could not agree on lifting the debt ceiling. However, now they have agreed that and the position of US economy is pretty secure (Cable 2011). More than the downgrade the slow pace of recovery in the US will impact the rest of the world. It will have implications for trade and capital flows. Slow growth in the US economy and European nations will have some adverse effects on developing economies' exports especially export of services (Rangarajan 2011). "A US downgrade does not make sense; I did not get it; in Omaha, the US is still triple A; In fact if there were a quadruple-A rating, I would give the US that" (Buffett 2012).

A US downgrade may well raise questions about other members of the dwindling AAA club. Investors should be cautiously positioned as the global economy and market face major uncertainties (El-Erian 2011). In the US, the problem is of fiscal consolidation. In Europe there are several countries that are facing severe debt problems. The Euro as a currency is also being affected. The downgrade itself is a reflection of the lack of credibility in the debt reduction plan that has been approved by Congress and the Senate in the US. They are caught in a dilemma

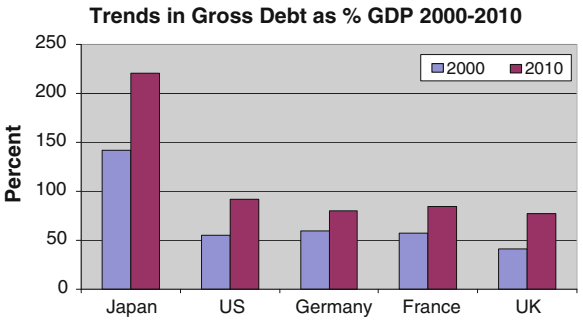

Chart 3.1 *Source* Prepared by the author from Table 3.1

Table 3.1 How they stack up? (Gross debt as % of GDP) of major economies

Country	2000	2010
Japan	142.06	220.28
US	54.84	91.55
Germany	59.74	79.99
France	57.33	84.25
UK	40.97	77.24

Source IMF statistics; Washington; USA 2010

because of the immediate emerging crisis. They need to provide some stimulus to the economy. On the other hand, the expansionary fiscal policy over the last few years has resulted into a huge deficit and raising gross debt-to-GDP ratio (Chart 3.1) from 54.84 to 91.55 % in 2010 (Table 3.1).

3.2.3 Debt Stock

The US debt ceiling is a double edged weapon for China as it has largest share (25.69 %) of holdings in US treasury securities (Table 3.2). The hidden trouble in the global financial market and economic recovery has temporarily been avoided. The second round of quantitative easing adopted by the Federal Reserve ended one month ago, and the newly released U.S. second-quarter economic growth rate fell far short of investors' expectations, standing at only a little more than 1 %. Debates about the risk of a second economic slump in the United States and a third round of quantitative easing monetary policy can be heard without an end.

Global expectations for a deal to raise the U.S. debt ceiling show that the US dollar remains the leading international currency. Creditor countries have no choice but to increase holdings of U.S. debt. Unlike the southern European countries suffering from a debt crisis, the United States does not need tight economic policies or the financial support of international organizations and other countries, and Americans do not need to tighten their belts. As the issuer of a world currency, the United States has easily solved the debt crisis with an unreal 10 years commitment. Therefore, the dollar-centered international monetary

Table 3.2 Debt stock (holdings in US treasury securities as on May 2011

Country	Amount ($ Bn)	% to total
China	1,159.8	25.7
Japan	912.4	20.2
UK	346.5	7.7
Oil exporters	229.8	5.1
Brazil	211.4	4.7
Taiwan	153.4	3.4
India	41.0	0.9
Others	1,460.0	32.3
Total	4,514.0	100.0

Source US Department of Treasury; Washington; 2011

system in the post-crisis era must be reformed, not to mention that the United States was responsible for the global financial crisis.

The U.S. debt problem remains a hidden danger in the world economy. The U.S. debt limit has risen from 6.4 trillion U.S. dollars 9 years ago to 16.7 trillion U.S. dollars at present. In addition, the United States has promised to cut its annual deficit over the next 10 years by more than 3 trillion U.S. dollars. Whether it can fulfill its promise remains to be seen. If the United States cannot tackle the massive debt through economic growth, tax increases and spending cuts, it will suffer from rising inflation, and the U.S. dollar will continue to depreciate.

The United States raising its debt ceiling is a double-edged sword to China. In the short term, the U.S. economy avoids suffering from a "double dip" and introduces the third round of the quantitative easing policy, which will reduce the global financial market risk. This is conducive to China's steady economic growth because the United States is one of China's most important export markets and is also conducive to the security of China's U.S. dollar assets and keeps the exchange rate of the RMB against the US dollar stable (Xiangyang 2011).

The United States is facing a dilemma between default and increasing debt. If one day the United States meets the domestic political obstacles on cutting debt and is facing a choice between default and passing on debt, China's circumstances will be far worse than now. It is undoubted that changing the existing pattern of their holdings is crucial. Dollar assets are necessary. However, it is more important to change the trend of continuing to increase U.S. dollar assets in the future, which requires fundamental adjustments in the economic development model (EKAI 2011).

3.2.4 Sovereign Rating

For investors who plan to invest abroad, a sovereign debt rating is taken as an indicator of the risk involved in investing in securities issued by the Government of a country. Unlike corporations, the Government has powers like the ability to raise taxes and control the money supply. This is why they have to be rated

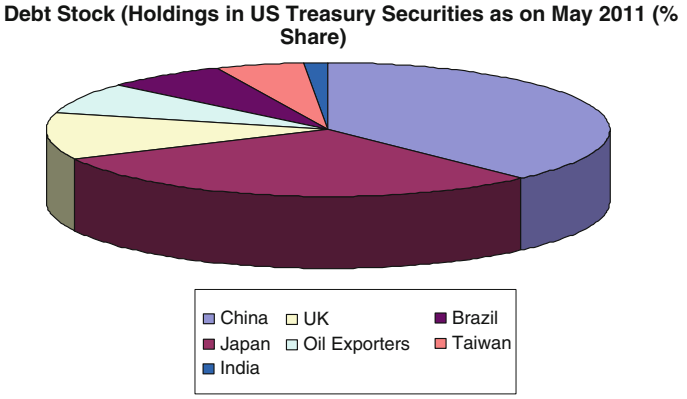

Chart 3.2 *Source* Prepared by the author from Table 3.2

separately and typically, the ratings of a Government of a particular country are higher than other sectors in the same regime. The rating scale which is used presently (in the US case) is devised by credit rating (Chart 3.2).

According to this agency, AAA is the best rating for any country all over the world. On this scale, the ratings decrease to AA+, AA, AA−; A+ and so on till the worst rating which is D, which indicates the Government is in default (Times Globe 2011). Downgrading on the scale means that the risk in investment in that economy's debt is assessed to have increased and because of this, existing investors might withdraw their money while future ones might prefer to invest in safer outlets. This is what has had happened in case of the US. Standard and Poors has downgraded the US rating from AAA to AA+ (Times Business 2011c).

3.2.5 Justification Given by S&P

Standard and Poor took the unprecedented step of downgrading the credit worthiness of the US Government from AAA to AA+, the credit agency offered a full throated defense of its decision, calling the bitter standoff between President of US Barack Obama and congress over raising the debt ceiling a "debacle" and warning that further downgrades may lie ahead (The Hindu 2011a).

The senior officials of S&P insisted the rating's firm had not over stepped its bounds by focusing on the "political paralysis" in Washington as much as fiscal policy determining the new rating. Fiscal policy, like other Government policy is a political process (Chambers 2011). On the other side of it, Government officials criticized S&P's step as based on "faulty budget accounting" that discounted the just enacted deal for increasing the debt limit. The agreement between the Administration and Congress set spending caps in the fiscal year that would begin from October 1, 2011 and calls for 'bipartisan congressional super committee' to propose more deficit reduction up to US $2.5 trillion in combined savings over a decade.

The bipartisan compromise on deficit reduction is an important measure in the right direction (Beers 2011). Yet the path to getting there took too long and is at times too divisive. The 2 trillion difference, in one scenario for 2021. Equals only nearly 2 % of GDP and does not alter the fundamental reality that debt burden would continue to increase in coming years. It is appropriate for the S&P to consider the political situation in its analysis; it is speculative to use predictions of what Congress will likely do in the future as a rationale for a downgrade. One thing is that trying to predict what the political environment is going to be, the credit rating agency is not predicting an overly cooperative environment in Congress and that is a very subjective and debatable call (Neugebauer 2011).

3.3 Global Policymakers and Debt Crisis Turmoil

Global policy makers are trying hard to discuss the issue on a thread bearing basis. The world is facing twin debt crises which are emerging in Europe and US, that are causing market turmoil and stoking fears of the developed world sliding back into a second recession which could prove to be more dangerous or worse than first one began in December 2007. The downgrade announcement put pressure on the market by erasing $2.5 trillion off stock markets, forcing political leaders to reassure investors that Western Governments or European Governments have the will and ability to reduce huge and growing public debt. The European Central Bank is making efforts to take effective steps as investors are anxiously looking at the Central Bank to start buying Italian and Spanish debt. Some of European heads of the Government (President Sarkozy, Cameron) had discussed the Euro area and the US debt down grade. Both heads of the countries have agreed to the importance of working together, monitoring the trends and situation closely and keeping in contact. The US's Asian allies rallied round the bettered superpower, with Japan and South Korea expressing their respective faith in US Treasuries.

3.3.1 Emerging Danger

The danger is that further pressure on Italian and Spanish bonds could undermine an already damaged European Banking System and lock Italy, the world's eighth largest economy, out of the market. Indeed, doubts are growing in the German Government that Italy could be rescued by the European emergency fund, even if the fund is tripled in size. The financial requirements of the country are so huge that it would over whelm resources. Italy's public debt is around 1.8 trillion Euros that comes in at 120 percent of its national output (Der Spiegle 2011).

The lack of trust explains the financial panic in Europe. The solvency of Greece and other weak European nations has long been in doubt, but doubts went up in case of Italy and Spain. In most of the economies, the Government manages both

fiscal and monetary policies, and so could always print enough currency to pay its debt. But in a political pursuit of European unity, 17 European nations have given up their currencies in favor of the Euro, controlled by Central Bank of Europe. It was always a mistake to create a monetary union of such disparate economies (Aiyar 2011). Earlier, Greece could have overcome its lack of competitiveness by devaluation. However, once it has become part of Euro zone, the devaluation option was ceased. Presently, Greece is not competitive and it can not grow; thus, it has become increasingly unable to repay its debts. Portugal and Ireland are facing the same problems and situations. On the other hand, Germany, Netherlands and the Scandinavian states are increasingly showing resentment because they are often being asked to bail out these economies. Today, it is being realized that the Euro zone would not be able to work unless and until a permanent fiscal arrangement is made out wherein a stronger region should subsidize the weaker zone. Accordingly, there are two options to be looked at and examined in the right earnest and perspective. The first option is for Greece and other weaker nations to say good-bye to the euro zone and go back to their old currencies. The second option is that all 17 economies should create a needed partial fiscal union where the rich zone(s) should give guarantees of support to weaker zone(s).

The most unfortunate thing is that politicians in Europe take both the options unbearable and unimaginable. At present, in Europe investors are getting disillusioned with the persisting 'vacillation'. This vacillation is now affecting the bond prices in European markets. This trend and situation pose a threat to big European banks holding vast Government securities. These banks may partially survive a default by weaker economies like Greece, Portugal and Ireland. Although a Spanish default will be crippling and an Italian one could be a fatal and disastrous blow for the global economy in general and European economies in particular.

3.3.2 Another Angle

It is now believed that the present debt crisis is not a mere economic or financial crisis. It is there due to much deeper crisis of State Management. Economic panic and a crash in the stock market that swept across the world which analysts consider a financial crisis. Actually, it is a political crisis. This is because the economic crisis is solvable, but the investors' world no longer trusts politicians to do what is needed. A US downgrade from AAA to AA+ by S&P due to rising the debt ceiling so that country can borrow and make payments is a routine activity of every country's Government. This time the opposition in US, the Republicans who manage the house of Congress, threatened a deadlock on increasing the debt ceiling that was due to be breached on August 2, 2011. Accordingly, the ceiling was raised by $900 billion to meet the country's needs, subject to anew committee devising meaningful debt reduction. This stoked fears that the debt ceiling deadlock would be repeated every few months. Today, 71 % of Americans consider the S&P credit rating fair enough. They are of the view that the downgrade was not

depending only on calculations of future US debt, but it is also because of a flawed political process (Washington Post 2011). Republicans which control the House of Congress has the intention to continue the debt ceiling issue till the next Presidential election in November 2012, constantly threatening a US Government shutdown. Such dirty intentions may lead President Obama to be unelected in the next term because the economic distress could lead to another recession which US economy in particular and global economy in general could not afford. Therefore, investors' worry that such crass political opportunism could lead to gross economic mismanagement which would prove unbearable.

3.3.3 Meaningful and Logical Solution

Investment Guru, Warren Buffet, has suggested more realistic and workable solutions to the US second debt crisis. The US Government should stop coddling the super-rich, and tax their riches if it is serious about the reduction in the suggested federal deficit by $1.5 trillion during the coming 10 years or decade (Buffett 2011). The existing loopholes in the tax structure benefiting the rich must be plugged. The following is the prescription of the investment Guru (Hindustan Times 2011a): (a) Leave the tax rates for 99.7 % of tax payers unchanged. (b) For those making more than $1 million, raise rates on income in excess of $1 million. (c) For people making $10 million or more, increase the tax rate even more.

3.4 The Impact of a Second Recession on Global Economy

The unemployment scene and trends are of disastrous nature as employment growth grounds to a halt as sagging confidence discourages already skittish business from hiring, putting pressure on Federal Reserve to provide more fiscal stimulus to aid and support the economy. Non-farm payrolls were unchanged. The bleak report fueled recession fears, sending prices for US stocks and oil tumbling. Money fled into safe heaven investments and US Government debt prices and gold soared. Bond traders bet the dismal data would compel the Federal authorities to try to lower long-term interest rates to boost the economy. Development economists, however, observed that the data fell short of providing a recession signal, in part because employment was weighed down by 45,000 striking workers at Verizon communication (Times Business 2011d). Hence, the US economy is struggling against stiff headwinds, which appear to have intensified in recent months (Mulraine 2011). It is the weakest reading on jobs in nearly a year and far below the 75,000 gain Wall Street had expected. The unemployment rate however, held at 9.1 % as a Survey of households found both job growth and an expending labor force. With jobless rate struck above 9 % and confidence collapsing, there is a lot of pressure on the Government to come up with ways to spur job creation.

The health of the labor market could determine whether the US economy could record improvement in its performance. The US did not add any non-farm employment, igniting fears the world's biggest economy is headed into second recession. There is no increase in number of jobs and the economy has stalled and that inaction by policy makers carries substantial risk.

The Government report on hiring prompted another round in a relentless reduction of economic expectations. There are indications (White House) that rate of unemployment at 9.1 % may continue that high through at least 2012 (Times Global 2011). The optics of a giant zero in jobs column increases the pressure on US Government to deliver a major address on jobs creation. The Republicans who have a starkly different approach to economic revival and on the Federal Reserve, whose policy makers have been divided over the wisdom of using its limited arsenal of tools to get the economy moving again (Hiring Report 2011).

3.4.1 Global Goods Trade Slows

Another serious and alarming impact of second recession is that the growth of global trade in goods, a critical factor in the health of the world economy, slowed down sharply. But China and Brazil ramped up their respective exports (OECD 2011a). The slowing of growth is major; imports by the top Group of Seven Industrialized countries and the main socalled BRICS emerging economies expanded by 1.1 %, down from 10.3 % in the past. Data also showed that the growth of exports by G-7 and BRICS slowed by 1.9 % from the past figure of 7.7 %. However, the picture is different in case of China where the growth of imports is 0.7 %, down sharply from past figure of 11.1 %. However, exports surged to 10 % from 2.9 %. In the case of US the growth of imports slowed down to 3 % from 11.1 % and exports growth to 2.6 % from 5.6 %. Alongside, China and Brazil also increased their exports of good by 11.2 % (OECD 2011b).

3.4.2 Services Trade Slowdown

Another serious impact of a second recession is that global growth in services came to a virtual standstill as new business opportunities dried up. A Weak Purchasing Managers Indexes (PMIs) indicates that the world factory has slowed and the US service growth has slowed down substantially. According to the President of World Bank, the global economy is stepping into a 'new danger zone' as growth slows; investor confidence weakens (Zoellick 2011). At nearly marginal growth rates, the US and Europe are clearly vulnerable. Recession has started knocking on the doors of the world economy. The US job's numbers also came worse than expected, adding to fears of largest economy, and the stock markets and the Euro battered by its Government debt crisis going into recession. Growth in the Euro

zone's dominant service sector eased out expanding at its weakest pace in 2 years, as new orders in the private sector shrank for the first time since August 2009 (The Hindu 2011b). Worryingly for policy makers, a persistent downturn among smaller members of EU i.e. 17 countries currency-bloc is now spreading to core or major economies namely-Germany that have long supported the region's fragile recovery. The statistics indicated Markit's Euro zone Services Purchasing Managers' Index (PMI) nudged down to 51.5 from 51.6, to its lowest reading since September 2009 but in line with an earlier flash reading. The index has been above the 50 mark that divides growth from contraction for 2 years but Markil warned that unless business condition improves, the Euro zone economy risks contracting (Marcussen 2011). Other available statistics confirmed that German GDP increased marginally by 0.1 % far below than 1.3 % in the first three months of current year. Business operation in the UK 's dominant services sector also witnessed slowed down at the fastest pace in more than a decade, and firms' confidence in future business weakened to a one-year low. China's fledgling services sector, which accounts for 45 % of the GDP, grew at the lowest pace on record, reinforcing signs that the world's second biggest economy is losing steam but there is a little possibility of a hard landing. China's service sector is likely to record moderation, not a meltdown. China's PMI reading of 50.6 still implied annual increase of 8–9 % for services sector (Hongbin 2011). Euro Zone policy makers have been battling to prevent a debt crisis spreading from periphery members to some of the bloc's bigger economies, while the US has been fighting its own demons of sluggish growth and impending tough austerity steps both of which have hit global markets. The PMI for the US service sector, which accounts for around three-quarters of the world's largest economy, likely, fell to 51.1 from 52.7.

3.4.3 Euro Zone Drifts Into Zone of Uncertainty

With fear of a second recession i.e. debt crisis, global markets are highly volatile and policy makers are only marginally closer to a solution of the Euro's troubles than they were 2 years ago; hence, the future for the Euro zone remains uncertain at best. Leading economists and financial analysts claim that there are a series of land mines that are about to burst in the coming weeks. The Global economy in general and European economies in particular, growth is slowing, even in Germany, where exports are down and imports are stagnant. Germany is forcing Athens to live up to its debt-cutting policies as its bills continue to mount. The Italian Government is applying fiscal 'Band-Aids' to its deficit reduction rather than a surgery. The new budgetary pressure on Rome and Madrid considered too big to bail out (Hindustan Times 2011b). The Organization for Economic Cooperation and Development (OECD), released a gloomy assessment of the prospects for a 'new recession and European banking crisis'. The sovereign debt crisis in the Euro zone could intensify again and there is an urgent 'need for the recapitalization of some European Banks and better financial management in 17 nations Euro zone'.

3.4.4 United Nation's Predicting Second Recession

The UN Report captioned "World Economic Situation and Prospects 2012" has observed that the world is on the brink of another recession or Second Recession, estimating that global economic growth would be slowed down further in coming year of 2012 and most alarming thing is that even emerging economies so called powerhouses namely- Brazil, Russia, India, China and South Africa in general and China and India in particular which are responsible for global recovery in 2011 would witness a decline in growth i.e. 5.6 % as compared to 7.5 % registered during 201-11. Accordingly, global growth projected for 2012 would be 2.6 % in 2012 as against 4 % in 2010–2011. The UN is calling the year 2012 as a year of "make-or-break" for the world economy which would face a muddle-through scenario and continue to grow slow (United Nations 2012). During the last 2 years namely 2010 and 2011 of anemic and lopsided recovery from the world financial crisis, the global economy is moving or teetering on the brink of another major downturn that may result into the Second Recession or the chances of risks for a double-dip recession have heightened. The major contributory factor has been the failure of policymakers, particularly, those in United States and the European Union to address the most vital issues of world economy i.e. job creation, prevention of sovereign debt crisis and escalation of financial sector fragility creating the most acute risk of the world economy in 2012–2013.

3.4.5 Slowing Down in Developing Nations

Developing countries are expected to be further affected by the persisting economic ills that are lingering in developed countries through trade and financial channels. Accordingly, economic growth in developing economies especially China and India, which had stoked the engine of the global economy so far, would also register a decline of 1.9 % in 2012 from 7.5 % during 2010. The growth in GDP in case of India and China are being expected at 7.7 and 9.3 % during 2012–2013 respectively. Indian economy is expecting to increase between 7.7 and 7.9 % as compared to 9.0 % in 2010–2011. In respect of China, the growth in GDP is projected at 9.3 % during 2011–2012 as against 10.4 % during 2012–2013. The most noticeable prediction is that that all the major countries would witness a decline in GDP growth.

3.4.6 Developed Countries are on the Decline

A serious, renewed world downturn is looming because in developed economies persisting weaknesses are there due to major issues left unsolved in the aftermath of the recession of 2008–2009. According to the UN Report, the GDP growth in

the US gone down by 0.7 %, Japan declined by 1.5 %, the European Union decreased by 0.8 % and for China the decrease was 0.2 % (Times Business 2011e). The Governments of most of the developed economies have indiscriminately have shifted from fiscal stimulus to premature austerity steps, resulting into further weakening world aggregate demand, which is already nurtured by continued increasing trend in unemployment. Added to these are the economic ills in US and Europe, which have exacerbated volatility in global, financial and commodity markets which in turn have slowed down the growth in developing nations. The above mentioned trends and situation are persisting and reinforcing each other, but further worsening of one of them could set off a vicious cycle resulting in a severe financial crisis and would further renew a global recession for 2012–2013.

3.4.7 Global Economic "Tsunami"

The world has been passing through a very difficult economic mess during the last 4 years. In Europe and in certain other parts of the globe, growth still remained very sluggish. The European Central Bank (ECB) had provided the needed loans to Italy and Spain to alleviate them from the debt crisis amounting to $1.3 trillion and unless and until the ECB sought "Ponzi" game with these loans, the same would be due at the end of 2014, and may cause a global economic 'tsunami' (Basu 2012). This could have far reaching effects, consequences, and impact on the growth of emerging economies namely-India, China, Brazil, etc. The growth of BRICS may also be affected during 2014.

3.5 Conclusion

From the foregoing discussion, it is clear that the debt crisis originated from the US either due to economic mismanagement or political opportunism and could prove fatal for investors all over the world. There has been a serious and considerable slow-down in terms of GDP, employment, global trade in goods and services. Hence, it is high time that policy makers of US and Europe must collaborate and sit together to find out amicable solution (Buffett) to the emerging crisis which the world could not afford. Warren Buffett's solution is in the right direction; hence, it must be carried out by the federal authorities in the USA and EU. Political interests must be kept behind and management of debt and better financial management practices must come to the forefront to overcome the possibility of a second recession which is knocking on the global economy. Investors' interest must be protected at all cost. There is an immediate need of recapitalization of European Banks.

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Chapter 4
The Impact of Globalization on Sub-Saharan Africa

Emeka Nkoro and Aham Kelvin Uko

Abstract This study examined globalization and Sub-Saharan Africa (SSA) with emphasis on its impact on growth and poverty reduction in relation to other regions. The existing literatures on the implication of globalization on economic growth and poverty were reviewed. The study reveals that SSA has been marginalized or has not fared well in spite of the high integration of its member countries. Indeed, SSA has relatively remained poor and with high incidence of poverty. However, in order to maximize the benefits of globalization, Sub-Saharan Africa needs to adopt among others; development of strong production base that is predicated on value-added products, export structures diversification, development of manufactured export capacity and the political-will to implement these policies among others.

4.1 Introduction

There is a commonly held view that globalization would lead to more efficient use and allocation of resources through exposure of the domestic economy to world market disciplines and better access to state-of-the-art technology (Quattara 1997; Obadan 2005). In his view, Ajayi (2001) stated that the appeal of a more open economy is based on simple but powerful premises. Economic integration will offer improved economic performance. In the same vein, Sachs (2005) stated that, globalization offers new opportunities such as expanded markets and the acquisition of new technology and ideas all of which can yield not only increased

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production but also a higher standard of living. Since the beginning of the new wave of globalization in the 1980s, the less developed countries (LDCs) in which Sub-Saharan Africa (see footnote 1) countries are among have been getting integrated into the global economy at a rapidly accelerated rate.[1]

The impetus for the process came from the need to make an adjustment in the imbalance in the external account that most of these countries experienced in the aftermath of the oil shocks of the 1970s and the declining demand for their exports due to the recession in the OECD countries during the 1980s. Many of these countries had to subject themselves to structural adjustment programs at the discretion of the multilateral donor agencies, led by the World Bank and the International Monetary Fund (IMF), which emphasized the urgency of reforming the protectionist trade regimes of these countries (Khan 1997). However, globalization is not only focusing on economic phenomenon which integrates world economies but also culture, governance, religious, environmental and social dimensions. In other words, globalization can be said to be multi-faceted (Daouas 2001; UNDP 2001), but this chapter focuses on the economic and social dimensions of globalization. As emphasized by economic growth theories, the crucial factor in global economic growth is the technological capabilities, which bring about optimum utilization of resources feasible. In turn, the proper utilization of resources is one of the vital processes for achieving technology and generating economic growth. Viewing technology as one of the driving forces of globalization, Obadan (2008) also includes trade, investment and capital flows.

The extent of global economic integration can be gauged by development in trade and financial flows. Indeed different drivers of globalization have evolved over the different phases of globalization (Mason 2001; World Bank 2002; Mussa 2000; Nyong 2005; Obadan 2008). Among these are categories of individuals and societies, macroeconomic factors, such as deregulation and widespread push toward liberalization of trade and capital markets, outward-oriented reform-structural adjustment programs, the ratification of World Trade Organization, international capital market imbalances of the 1980s and the collapse of the Bretton woods system. Therefore, globalization can be seen as a deliberate opening up of nations' gate-ways for interconnections and exchange with other nations of the world for economic, financial, social and technical purposes.

[1] Sub-Sahara Africa is the second largest of the earth's seven continents and with the adjacent islands covers about 21,787,284 sq. km, or about 20 % of the world's total land area. It is also the largest of the 12 regions in the UNEP PTS project, comprising about 47 independent African countries. Algeria, Egypt, Libya and Morocco are excluded as these countries belong to the Mediterranean Region under the project. For the purposes of this project, the region was considered to include the following countries and island states: Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Central African Republic, Chad, Comoros, Congo (Brazzaville), Cote d'Ivoire, Democratic Republic of Congo, Djibouti, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Ghana, Guinea-Bissau, Guinea, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mauritius, Mozambique, Namibia, Niger, Nigeria, Rwanda, Sao Tome and Principe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, Sudan, Swaziland, Tanzania, Togo, Uganda, Zambia and Zimbabwe.

In recent times, the impact of globalization on the development process of emerging economies has occupied a central place in intellectual discourse. There is no doubt that globalization has the propensity to lift an economy out of a downward state to a hill-top state as postulated by scholars. Since the Second World War, Sub-Saharan Africa (SSA) has been strongly integrated in the world economy, with high trade/GDP ratios (Kayizzi-Mugerwa 2001). However, in spite of the integration/liberalization policies embarked upon by SSA countries in order to reap the dividend of globalization, the region relatively remains stagnant, poor and marginalized (afflicted by poverty, deprivation, unemployment, frustration) (World Bank 2000) among the regions of the world.

Given the high degree of openness, SSA countries are characterized by low per capita income, low social indicators, poor infrastructure, low economic diversification, high unemployment, balance of payments deficit, severe and persistent poverty, heavy external debt burden. Against this background, this chapter attempts to examine globalization and Sub Saharan Africa (SSA), focusing particularly on the extent to which it has spurred the growth and reduced poverty in the region. This chapter is organized in five sections: The next section is the literature review, Sect. 4.3 dwells on methodology; while Sect. 4.4 exposes the data presentation and analysis of our findings and discussion. The concluding remarks and recommendations appear in the final section.

4.2 Literature Review

Empirically, there are very few studies on the possible links between globalization (trade), growth and poverty. The reason being the difficulty in measuring certain globalization policies stem from the effect of other policies that are usually implemented simultaneously. However, the study reviewed some existing ones. Rodrick and Rodriguez (1999) in their work, "Trade Policy and Economic Growth", expressed skepticism on the study that has found a positive relationship between trade liberalization and economic growth, on methodological ground.

Khor (2001) in his study also observes that the conventional view that trade liberalization is necessary and has automatic and positive effects on economic growth. But this work was a challenge empirically and analytically. Dollar and Kraay (2001) in their work, the new-globalizes, examined the effect of trade on growth among these countries and found statistical significant effect of trade on growth. That an increase in trade as a share of GDP of 20 % points increase growth by between 0.5 and 1 % point a year. Baliamoune (2002) in his view upheld that increased openness to international trade and foreign capital promote growth and reduce poverty, but maintain that this may require threshold levels of income and human capital.

Nyong (2005) examines globalization, poverty and growth of cross country of less developed countries. The finding is that globalization and poverty are major determinants of economic growth. The finding also shows that the impact of

globalization on growth is not sensitive to alternative measures of economic growth (growth in GDP per capita and growth in real GDP). In the same vein, he observed that the ratio of Foreign Direct Investment (FDI) to GDP has a positive and statistically significant on growth while openness does not enhance growth.

The poverty equation shows that globalization has no effect on poverty reduction. In line with these findings, Nyong (2005) concludes that, to identify the various linkages between trade liberalization and poverty one has to examine several interrelated issues such as macroeconomic growth and productivity, micro–macro linkage, income distribution at the global level, access to market, and commercialization of agriculture, non-firm industries and private sector activities.

These serve to emphasize the complex interrelationship between globalization and poverty and why there is no easy answer to whether globalization improves or aggravate poverty. UNECA (2007), World Bank (2007), Stern (2002) and Gondwe (2001) are of the same view with that of Nyong (2005). These works clearly observed that, openness (trade liberalization/globalization) is not enough for meaningful participation in globalization. Surely, as reviewed by Stern (2002), open trade and investment policies will bring about little or no benefits if other institutions are not properly in place or are bad. However, not much attention has been given to how globalization has impacted on the SSA, particularly, its development exemplified in terms of enhanced growth and poverty reduction. This is what this chapter addresses; but first we highlight our methodology.

4.3 Methodology

Our presentation incorporates the descriptive and regression analyses. In the descriptive analysis which is comparative in nature we drew inference from various tables extracted from the publications of World Bank Development Reports, African Development Bank Reports, journals and internet publications on globalization. Focusing on Regional shares of World Gross Domestic product (percent), Regional share of World Trade (Percent), Regional Growth of Exports and Imports of Goods and Services, Regional Fact Sheet From the World Development Indicators and Proportion of people living on less than US$1 a day.

In the regression analysis, we also drew inferences from the publications of World Bank Development Reports and African Development Bank Reports and attention was on cross-sectional data on poverty headcount ratio for incidence of poverty (POV), measured as the percent of the people living below US$1.00 per day. Growth in real GDP (RGDPG) is the annual average growth rate between 2002 and 2010. The inflation variable is the annual average inflation rate. It is a proxy for macroeconomic environment. The per capita income is in US dollar. This is used in place of real GDP growth to test for the sensitivity of the results to alternative measure of economic growth (GNIPC). Trade as a percentage of GDP is a proxy for degree of openness (TRD). In terms of FDI, the study used the percentage net inflow to GDP (SFDI). TRD and SFDI are two indicators

measuring the extent to which a country or an economy is linked to the rest of the world.

A comparative analysis on major indicators is carried out, vis-a-vis, Sub-Saharan Africa region and other regions of the world. This enables us ascertain where SSA really stand in relation to other regions of the world. After which Vector Autoregressive (VAR) estimation approach is employed to ascertain the factors that drive globalization, and determine economic growth and poverty in SSA. This is because VAR is commonly used for forecasting systems of interrelated time series and for analyzing of random disturbances on the system of variables. And also, emphasizes on the interrelationship between variables. It also enables us compute forecast of the jointly determined variables for a given value of the exogenous/deterministic variable over the forecast period. In its empirical application, the main uses of VAR are the impulse response and variance decomposition. Hence, the analysis focuses on the application of impulse response and variance decomposition. The reason for adopting VAR approach is as a result of the controversy surrounding the possible links between trade/foreign direct investment (globalization), growth and poverty. Different channels provide different impact and which is not more realistic than VAR. However, difficulty in measuring globalization that abound has led to different forms of measurement of globalization. Given this, caution should not be thrown on air in interpreting the result.

4.4 Globalization and Sub-Saharan Africa

Giving that trade, investment and capital flows are the major yardstick of measuring the level or extent of globalization; hence the global economic and financial integration can be gauged by developments in such flows. Increasingly, a quantum share of world output is generated in activities that linked international trade directly or indirectly. The volume of world trade in goods and services rose from 10 % of world GDP in 1950 to 33 % in 2000. In 2005 it rose to 58 % and moved to 61.2 % in 2006. Gross private capital flows across borders increased from 9 % of world GDP in 1950 to 32 % in 2006 (Obadan 2008). Thus, there has been an increase in the degree of global economic and financial integration. If this is the case, what then is the stand of SSA in the share of this global integration and growth?

The stand of Sub-Saharan Africa (SSA) in the global economy can be assessed by examining some macroeconomic variables and the share in the world trade. Particularly, the share of SSA's in global GDP decreased from 2.2 % in 1960s to 1.8 % in 1980s and also fell to 1.2 % in 1990s compared to 77.2 % of the high income countries which are the largest (Table 4.1).

The most direct consequence of low GDP share of SSA is low standard of living and quality of life. Most SSA's are on the far side of the digital divide and are cut off from communications technology and internet (World Bank 2009a, b). African

Table 4.1 Regional shares of world gross domestic product (%)

Region	1960–1969	1970–1979	1980–1989	1990–1999
East Asia and Pacific	5.3	4.9	4.6	5.6
High income OECD countries	74.2	73.8	74.2	77.2
Latin America and Caribbean	5.8	6.3	6.0	6.1
South Asia	3.4	2.3	2.1	1.7
Sub-Saharan Africa	**2.2**	**2.2**	**1.8**	**1.2**
Middle East and North Africa	1.3	2.3	2.9	1.8
World	100.0	100.0	100.0	100.0

Source World bank development report (2009b)

Table 4.2 Regional share of world trade (%)

Region	1990	2005
East Asia and Pacific	4.5	10.6
Low income countries	1.2	2.7
Developing countries	3.7	28.1
High income countries	82.5	71.9
Latin America and Caribbean	17.2	5.1
Sub-Saharan Africa	**1.2**	**1.7**

Source World bank development indicators (2000 and 2007)

nations which are predominantly SSA countries dominate the lower range of HDI (UN 2004). This relatively low growth performance or marginalization of SSA is reflected in her trade, output, manufacturing and investment. SSA's share of trade decreased from 3 % in 1960 (Obadan 2008) to 1.2 % in 1990 and increased to 1.7 % in 2005 compared to 71.9 % of the high income countries which is the largest (Table 4.2). Separately, exports fell from 5 % between 1990 and 2000 to 3.7 % between 2000 and 2005 while imports increased from 5.4 % between 1990 and 2000 to 7.8 % between 2000 and 2005 (Table 4.3). Despite the fact that most SSA countries made significant effort in liberalizing their exchange and trade regime, in the context of World Bank-IMF-supported adjustment programs SSA countries have not kept pace with the rest of the world. SSA performed poorly with its share of the world trade being 2 %. While the share of her output remained constant at 2 % which is the least in the world output (Table 4.4A).

In FDI, SSA's share of the ratio of FDI world GDP increased from 0.09 %in 1980 to 2 % in 2000 and also moved to 3.22 % in 2009 relatively (Table 4.4B). This is impressive. But in terms of the share in world FDI SSA have performed badly. In 1990s its share stood at 1.3 % compared to developing countries, East Asia and Latin America whose shares stood at 31, 12.7 and 11.3 % respectively. Also, the share of SSA in private capital flows indicates a decreasing trend, from 7.7 % in 1980s to 3.5 % in 1990s (Nyong 2005). In respect to share of manufacturing in total exports SSA's share stood at 33 % in 2005, which is the lowest except Middle East and North Africa (20 %), in relation to 78 % of high income countries (Table 4.4C). This could be attributed to political instability, lack of rule of law and dearth of infrastructure.

Table 4.3 Regional growth of exports and imports of goods and services

Region	Exports		Imports	
	1990–2000	2000–2005	1990–2000	2000–2005
World	6.9	5.9	6.9	5.2
Low income countries	8.5	11.5	9.2	13.9
Middle income countries	7.3	10.9	6.6	10.4
Developing countries	7.4	11.0	6.9	10.8
East Asia and Pacific	11.0	16.5	10.4	15.0
Europe and Central Asia	3.6	9.8	2.0	11.5
Latin America and Caribbean	8.5	5.4	10.7	4.0
Middle East and North Africa	4.1	5.2	0.6	8.4
South Asia	9.5	13.8	10.6	15.4
Sub-Saharan Africa	5.0	3.7	5.4	7.8
High income countries	6.8	3.4	7.0	3.9

Source World bank development indicators, 2007/African Development Bank Report (AFDB 2009)

Table 4.4 Regional fact sheet from the world development indicators

Region	1990	2005
A: Regional share of world output (%)		
East Asia and Pacific	60	19
Europe and Central Asia	7	7
South Asia	6	6
High income countries	60	54
Latin America and Caribbean	8	8
Sub-Saharan Africa	**2**	**2**

Region	1980	1990	2000	2009
B: Net inflow of foreign direct investment (% GDP)				
East Asia and Pacific	0.33	0.65	2.02	1.15
High income OECD countries	0.56	1.06	5.59	1.97
Latin America and Caribbean	0.88	0.75	3.91	1.95
South Asia	0.09	0.14	0.72	2.26
Sub-Saharan Africa	**0.09**	**0.43**	**2.00**	**3.22**
World	0.56	1.02	5.04	2.03

Region	1990	2005
C: Share of manufacturing in total exports (%)		
East Asia and Pacific	36	54
High income OECD countries	60	81
Latin America and Caribbean	51	64
South Asia	71	72
Sub-Saharan Africa	**–**	**33**
Middle East and North Africa	–	20
World	73	75

Source World bank development report/indicators 2000 and 2007

Table 4.5 Proportion of people living on less than US$1 a day

Region	1987	1998	2004
East Asia and the Pacific	26.6	15.3	9.0
Excluding China	23.9	11.3	–
Europe and Central Asia	0.2	5.1	0.9
Latin America and the Caribbean	15.3	15.6	8.6
Middle East and North Africa	4.3	1.9	1.5
South Asia	44.9	40.0	32.0
Sub-Saharan Africa	**46.6**	**46.3**	**41.1**
World	28.3	24.0	18.4
Excluding China	28.5	26.2	–

Poverty line is measured at US$1.08 a day at 1993 purchasing power parity
Source World development indicators (2001 and 2007)

The long term growth prospects of SSA is disappointing, with the Gini per capita income of US$1,869 in 2007 which is relatively poor (World Bank 2009a). In contrast, East Asia has been progressing towards the level of industrialized countries. Technology has been the main driver behind the long term increase in income. The proportion of people living on less than US$1 a day in SSA economies is not encouraging. In 1987 SSA's poverty incidence stood at 46.6 % and slightly fell to 41.1 % in 2004 (Table 4.5). Since 1987, the number of extreme poor have risen from 217 to 290 million 1998 (World Bank 2009b). The magnitude and dimension of the problem as well as the grave threats it possess to economic, social and political stability make it one of the biggest challenges facing the region. According to Yakubu (1999), Africa is the only continent in which poverty has increased since the 1970s, and in which most governments use up 70 % of their GNP to service debts. This is also manifested in poor access to improved water source (World Bank 2009a).

The major causes of high poverty incidence are overcrowded settlements in major urban areas and, also remote and isolated rural areas are major concentration of the poor. Compared with other region of the world SSA suffers from more severe and persistent poverty (UNDP 1998; Kankwenda et al. 2000).

4.4.1 Model Specification

This study improves upon Nyong (2005) in relation to empirical methodological issue. His work focused on the impact of globalization on selected low and middle income countries of the world. However, in attempting to examine the link between globalization and its impact on SSA, the study adopts a structural model (VAR model) contrary to that of Nyong (2005), heteroskedastic consistent estimation technique. This is to help us overcome the problem of biasness, inconsistency and forecast error usually associated with such framework, thereby resulting to misleading inferences. This is so because the economic performance of

any economy has implication on foreign inflows and trade (globalization). The reverse is also the case. Hence, to analyze the impact of globalization on growth and poverty using empirically, structural equations are developed. The three variables of focus are trade or foreign direct investment net inflows (globalization), growth and poverty level. The data for this analysis were sourced from World Bank Development Report and African Development Bank (various issues).

$$Sfdi_t = a_o + a_1 Sfdi_{t-1} + a_2 pov_{t-1} + a_3 rgdpg_{t-1} + a_4 inf_{t-1} + u_t \quad (4.1)$$

$$Rgdpg_t = \beta_o + \beta_1 Rgdpg_{t-1} + \beta_2 gnipc_{t-1} + \beta_3 trd_{t-1} + \beta_3 sfdi_{t-1} + V_t \quad (4.2)$$

$$POV_t = \alpha_o + \alpha_1 POV_{t-1} + \alpha_2 rgdpg_{t-1} + \alpha_2 sfdi_{t-1} + b_t \quad (4.3)$$

Equations 4.1 to 4.3 capture the nature of the historical relationship between the variables.

where:

SFDI	*Foreign direct investment net inflow* (*% GDP*)
POV	*Poverty population line* (*% below US$1*)
RGDPG	*Annual real gross domestic product growth* (% 2002–2010)
INF	*Inflation rate*
GNIPC	*Gross national income per capita* (*US$m*)
TRD	*Trade* (*% GDP*) (*Openness*)

Equation 4.1 is the globalization equation; Eq. 4.2 determines the effect of globalization on economic growth while Eq. 4.3 examines the effect of globalization and growth on the poor.

4.4.2 Empirical Results and Discussion

An examination of impact of globalization on SSA macroeconomic indices is further supplemented by VAR-Generalized Impulse Response and Variance decomposition analysis presented in Tables A.1 and A.2 in the appendices respectively. Table A.1 gives the impulse response functions. This analysis is a device to display the dynamics of the variables tracing out the reaction of dependent variables to a shock in the error term at time t.

The impulse response functions allow a sensible economic interpretation. As shown in Table A.1, the response of foreign direct investment (globalization) to poverty, growth and inflation has not been somewhat stable over the time horizon. On the area of the response of poverty to one standard innovation in economic growth and foreign direct investment, poverty has not also been stable, while the response of growth to one standard innovation in per capita income, trade and FDI is also not somewhat stable.

This instability of FDI, growth and poverty could be attributed to infrastructural decay, capital flight, financial liberalization without financial integration and meaningful capital flows. UNCTAD (2000) had it that, the effort to integrate the Africa region into the global financial system and to attract private capital flows through a rapid liberalization of the capital accounts have not resulted to increased inflows but greater volatility, with attendant consequences for exchange rate instability and misalignments. Also, the weak capital flows and financial integration have not been unconnected with the policy environments, underdeveloped financial market and the detrimental effect of high debt burden. On the issue of variance decomposition, the A part of Table A.2 gives the fraction of the forecast error variance for each variable that is attributed to its own innovation and to innovations in another variable.

From the table, shocks of FDI constitute a significant source of variation in FDI forecast errors in the time horizon, ranging from 75 to 89 %. Ten years after an FDI shock, the variation in FDI, economic growth and inflation rate account for 10 and 4 % respectively. In the long-run, economic growth, per capita income and inflation significantly determined the level of FDI in SSA. The salient feature of the variance decomposition results, in this paper, is that the predominant sources of fluctuations in globalization are economic growth, per capita and inflation. This confirms Nyong's (2005) position on inflation (macroeconomic environment).

In the B part of Table A.2, the source of variation in economic growth forecast errors in the short-run, ranging from 77 to 96 % over the ten years horizon. Inflation rate, poverty and the degree of openness account for 9, 6 and 4 % respectively. Hence, in the long-run, economic growth is significantly determined by inflation, poverty and degree of openness (trade). This reveals that globalization (openness) is required for economic growth to contribute to reduction in poverty level. Recall that, in the poverty equation, the globalization variable is insignificant on impacting the poverty level, though not reported. This also throws more weight on Rodrick and Rodriguez (1999), Dollar and Kraay (2001), Khor (2001) and Nyong's (2005) positions. In part C of Table A.2, the shock of poverty ranges from 55 to 97 % over the time horizon.

The persistence of the poverty shock only explains 55 % at the tenth year, while per capita income, inflation rate and economic growth account for 21, 13 and 5 % respectively. The relative importance of past poverty level in determining current poverty declines from 97 to 55 % in period ten. This reveals that in the long-run, the poverty level is significantly determined by per capital income, inflation and economic growth.

This further supports Nyong's (2005) position that, globalization has no effect on poverty reduction. The non-cheerful findings in the SSA can be attributed to a number of factors, such as; low per capita incomes, low social factors, poor infrastructure and weak economic diversification. Furthermore, they are swimming in the murky water of low rates of domestic saving and investment, institutional environment, high unemployment and more dependence on primary commodities for export whose prices are low. In addition, poor governance and corruption undermine the development process (Obadan 2008).

These also reflect in the region's small share of world trade, growth and the high incidence of poverty; hence, making the SSA under-equipped to benefit more from the process of globalization. In view of the policy perspective, policy makers should understand that opening up the economy to international trade will stimulate trade and growth which in turn will have effect on poverty reduction.

4.5 Conclusion

This chapter examines globalization and Sub-Saharan Africa, focusing particular attention on the extent to which it has impacted growth and poverty reductions in the region. As indicated, globalization is not a new phenomenon in global trade but has evolved over the decades and has attracted so much universal attention with immense benefits. The study reveals that SSA has been marginalized or has not fared well in spite of the high integration of its member countries. This confirms World Bank (2002) position that, SSA countries fall into marginalized countries of the world. Theoretically and empirically, the links between globalization, poverty and growth was established. The finding indicates that globalization has not significantly benefited SSA. As such, the SSA has relatively remained poor and with a high incidence of poverty, and lags behind other regions of the world. Consequently, for Sub-Saharan Africa to surmount the factors that have mitigated against the maximization of the benefits of globalization, the following should be adopted;

Development of a strong production base that is predicated on value-added products.

To link the poor with global markets, the SSA would need to direct concerted effort to removing constraints on output supply response, establishing export promotion organizations, improving export servicing facilities, information dissemination and marketing services.

Export structures diversification and development of manufactured export capacity.

Designing and implementing sound economic policies that will sustain financial markets, promote foreign investment and meet the stiff competition in trade, such as promotion of special economic and export processing zones.

Development of adequate human, and strengthening of institutional capacity, physical infrastructure, access to markets, capital and technology necessary for integration into the global economy.

Encouraging and sustaining the operation of strong regional economic groupings such as ECOWAS. This will enhance the promotion of openness, competitiveness and trade.

The principle of good governance, rule of law and anti-graft agencies instituted or strengthened to eliminate corrupt practices.

The SSA cannot turn its back on globalization as autarky is not the best option. Rather, if the foregoing, among others are adopted, it will go a long way to reducing the risks of marginalization and destabilization as well as promote rapid

and sustainable economic growth and poverty reduction in Sub-Saharan Africa region. Also, the advanced economies need to play a complementary role to the efforts of SSA countries in order to significantly benefit from globalization. This they can do by providing greater and more favorable market access to SSA products in their economies.

Appendix A

Tables A.1 and A.2

Table A.1 Impulse response

Period	SFDI	POV	RGDPG	INF	LGNIPC	TRD
A: Response of SFDI						
1	4.722060	0.000000	0.000000	0.000000	0.000000	0.000000
	(0.55650)	(0.00000)	(0.00000)	(0.00000)	(0.00000)	(0.00000)
2	−0.149889	0.206602	−1.180435	−0.420302	0.196185	1.071415
	(0.70496)	(0.64340)	(0.94865)	(0.71690)	(0.69943)	(0.72021)
3	−0.510203	−0.387764	0.890754	0.844080	−0.940370	0.351458
	(0.68075)	(0.63124)	(0.81058)	(0.66125)	(0.62886)	(0.71382)
4	−0.471036	−0.352859	−0.734429	0.413107	−0.254188	0.075921
	(0.49438)	(0.52958)	(0.68865)	(0.56854)	(0.46083)	(0.45284)
5	0.086711	0.271283	−0.383388	0.263610	−0.160964	−0.437179
	(0.41732)	(0.42135)	(0.54755)	(0.46020)	(0.38025)	(0.36170)
6	−0.050511	0.421672	−0.023328	0.122182	0.210674	0.096666
	(0.29384)	(0.38395)	(0.41670)	(0.33984)	(0.31644)	(0.28499)
7	0.168254	0.012687	0.118014	−0.275624	0.078200	−0.100095
	(0.22103)	(0.26517)	(0.32906)	(0.28836)	(0.23879)	(0.20316)
8	−0.050631	−0.215998	−0.003467	−0.160817	0.000892	0.082085
	(0.17753)	(0.23698)	(0.26642)	(0.21584)	(0.18262)	(0.16555)
9	−0.057829	−0.101512	0.123736	0.140110	−0.183293	0.039601
	(0.13931)	(0.19520)	(0.20825)	(0.17070)	(0.15511)	(0.13341)
10	−0.021213	0.050821	−0.106598	0.105021	0.012499	−0.002006
	(0.10657)	(0.16133)	(0.17268)	(0.14442)	(0.11768)	(0.10728)
B: Response of RGDPG						
1	0.035100	−0.130572	1.919392	0.000000	0.000000	0.000000
	(0.32066)	(0.32027)	(0.22620)	(0.00000)	(0.00000)	(0.00000)
2	0.151810	−0.547053	−0.759255	−0.647165	0.261098	−0.299183
	(0.33199)	(0.30349)	(0.40490)	(0.29942)	(0.28156)	(0.29107)
3	0.241973	−0.021346	0.367186	−0.016853	−0.123118	−0.080633
	(0.29697)	(0.25955)	(0.40024)	(0.31098)	(0.28299)	(0.33851)
4	−0.149869	0.167588	0.114899	0.262935	0.040686	0.265363
	(0.23734)	(0.17413)	(0.33670)	(0.25337)	(0.22263)	(0.23297)
5	0.206565	0.002315	−0.080986	−0.200819	0.099564	−0.184237
	(0.16658)	(0.15939)	(0.27268)	(0.18141)	(0.16942)	(0.15123)

(continued)

Table A.1 (continued)

Period	SFDI	POV	RGDPG	INF	LGNIPC	TRD
6	−0.075815	−0.042751	−0.078253	−0.070959	0.050734	0.060698
	(0.12560)	(0.10231)	(0.19792)	(0.14287)	(0.10896)	(0.11176)
7	−0.010491	−0.028602	0.212413	0.087869	−0.108745	0.038793
	(0.09674)	(0.08756)	(0.16765)	(0.11274)	(0.08945)	(0.09004)
8	−0.010832	−0.023741	−0.119115	−0.007121	0.038643	−0.005896
	(0.07478)	(0.06226)	(0.14308)	(0.08850)	(0.06945)	(0.08348)
9	0.024637	0.029842	−0.017227	−0.001054	−0.009082	−0.044973
	(0.06399)	(0.05189)	(0.11115)	(0.06996)	(0.05754)	(0.07146)
10	−0.017127	0.028000	0.030956	0.017656	0.019097	0.036625
	(0.04810)	(0.04031)	(0.08970)	(0.05449)	(0.04584)	(0.05267)
C: Response of POV						
1	2.024189	12.97062	0.000000	0.000000	0.000000	0.000000
	(2.17489)	(1.52860)	(0.00000)	(0.00000)	(0.00000)	(0.00000)
2	1.572640	5.379607	−1.597288	−4.432181	8.746792	1.902378
	(2.63023)	(2.41811)	(3.05287)	(2.48939)	(2.16645)	(1.98393)
3	−0.655898	−3.458727	2.196536	−4.652217	−1.182289	0.713396
	(2.49170)	(2.35958)	(2.88313)	(2.30949)	(2.34711)	(2.44771)
4	−2.396662	−4.495061	2.777403	1.498861	−2.319519	2.505485
	(2.19600)	(2.37841)	(2.42970)	(2.18553)	(1.97150)	(2.01476)
5	−0.942193	−0.325067	−1.956737	3.075382	−2.136430	−0.846507
	(1.80307)	(2.20809)	(2.22731)	(2.12831)	(1.57808)	(1.54991)
6	0.618002	2.722112	−1.831911	1.038330	1.427735	−0.924226
	(1.57428)	(2.10820)	(1.67047)	(1.76962)	(1.40826)	(1.39233)
7	0.586692	1.655770	0.031665	−1.019683	1.208043	−0.385427
	(1.16234)	(1.87012)	(1.38080)	(1.57606)	(1.28450)	(1.09285)
8	0.261176	−0.844323	1.168431	−1.495559	0.391569	0.393676
	(0.98520)	(1.63102)	(1.11373)	(1.36140)	(1.05900)	(0.84499)
9	−0.391564	−1.413310	0.371360	−0.129875	−0.803903	0.327779
	(0.79166)	(1.47214)	(0.93276)	(1.09904)	(0.98408)	(0.68692)
10	−0.258151	−0.211243	−0.090739	0.890284	−0.547178	0.089574
	(0.62573)	(1.21218)	(0.84277)	(1.00975)	(0.81840)	(0.57375)

Table A.2 Variance decomposition

Period	S.E.	SFDI	POV	RGDPG	INF	LGNIPC	TRD
A: Variance decomposition of SFDI							
1	4.722060	100.0000	0.000000	0.000000	0.000000	0.000000	0.000000
2	5.011936	88.85654	0.169925	5.547189	0.703254	0.153222	4.569873
3	5.295649	80.51884	0.688367	7.798022	3.170474	3.290502	4.533790
4	5.400991	78.16918	1.088607	9.345869	3.633034	3.384892	4.378419
5	5.448424	76.83937	1.317651	9.678996	3.804141	3.413492	4.946353
6	5.471278	76.20730	1.900645	9.600123	3.822297	3.533302	4.936332
7	5.483556	75.96057	1.892679	9.603499	4.057844	3.537834	4.947571
8	5.491013	75.76292	2.042279	9.577474	4.132606	3.528235	4.956491
9	5.498634	75.56410	2.070703	9.601582	4.186085	3.629579	4.947947
10	5.500960	75.50170	2.077488	9.631015	4.218994	3.627026	4.943777
B: Variance decomposition of RGDPG							
1	1.924148	0.033276	0.460492	99.50623	0.000000	0.000000	0.000000
2	2.275441	0.468905	6.109281	82.28728	8.089077	1.316664	1.728793
3	2.322371	1.535743	5.873314	81.49501	7.770721	1.545035	1.780177
4	2.366086	1.880724	6.159972	78.74729	8.721151	1.518040	2.972825
5	2.394114	2.581374	6.016681	77.02873	9.221739	1.655653	3.495819
6	2.399328	2.670014	6.022307	76.80069	9.269168	1.693177	3.544641
7	2.413270	2.641142	5.966970	76.69057	9.294950	1.876722	3.529642
8	2.416675	2.635713	5.959815	76.71753	9.269641	1.897005	3.520296
9	2.417482	2.644340	5.971076	76.67141	9.263473	1.897150	3.552555
10	2.418320	2.647522	5.980343	76.63465	9.262384	1.902071	3.573029
C: Variance decomposition of POV							
1	13.12762	2.377554	97.62245	0.000000	0.000000	0.000000	0.000000
2	17.49482	2.146753	64.42253	0.833580	6.418242	24.99647	1.182428
3	18.62354	2.018456	60.29933	2.126680	11.90399	22.46137	1.190180
4	19.85961	3.231388	58.14990	3.826043	11.03790	21.11650	2.638267
5	20.34613	3.293140	55.42767	4.570165	12.80105	21.22127	2.686701
6	20.71433	3.266119	55.20162	5.191246	12.60128	20.94862	2.791111
7	20.85229	3.302206	55.10412	5.123014	12.67422	21.00797	2.788466
8	20.96448	3.282478	54.67814	5.378957	13.04784	20.81862	2.793964
9	21.03732	3.294432	54.75151	5.372936	12.96146	20.82074	2.798927
10	21.06628	3.300395	54.61111	5.360026	13.10444	20.83099	2.793043

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Chapter 5
The Globalization of the 2008–2009 Financial Crisis

Ümit Hacioglu, Hasan Dincer and Onur Parlak

Abstract The 2008–2009 financial crises which began in the USA was one of the greatest economic crises in history. Even though the crisis started in 2007 in advanced economies, its effects still continue and no one can foresee the end of the crisis. In this chapter, it is aimed to illustrate the linkage between the globalization process of the financial system and the roots of the global economic crisis. This chapter evaluates the roots of the global economic crisis. Liquidity redundancy, credit defaults, securitization, the lack of transparency, the shortcomings of rating entities and supervisory entities are some pillars of the global economic recession.

5.1 Introduction

The 2008–2009 global financial crisis has impacted the global economic activity. The growth issues in national economies and the stability in the global financial system have also caused major challenging issues for investors and policy makers. Financial risks in advanced economies transmitted into emerging economies. The major factor behind this transmission is tied to the globalization of economic and financial systems worldwide.

Fluctuating conditions in the global financial system also illustrated the importance of a strategic fit between the economic system and financial institutions. In the last quarter of 2011, the *Sovereign Debt Crisis* in the euro area reached its peak point. The chain reaction of bank failures in advanced economies and sovereign defaults were the major concerns as credit default swap spreads were breaking records high, even as sovereigns with relatively strong public finances were hit by illiquid market conditions in the euro zone. Even though

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equity prices have recovered, there is a need for stabilizing the capital structure of major banks in order to solve performance issues on equity. According to the IMF's *Global Financial Report Analysis*, the pressure on the European banking system have sparked a broader drive for reducing the balance sheet size by shrinking as much as € 2.6 trillion through the end of 2013, which is almost equal to 7 % of total assets.

The major objective of policies attached to the deleveraging process is to prevent future potential consequences of an unhealthy condition which may damage asset prices, credit chain and economic activity in the banking system. The latest advances in the global financial system and the effects of globalization on the financial system should be evaluated from an interdisciplinary perspective. It is also necessary to illustrate the impacts on driving forces and the business landscape, creating and changing strategic opportunities and pressure for economic development, growth, employment, and sustainability.

5.2 The 2008–2009 Global Financial Crisis

The 2008–2009 financial crisis which began in the USA has been one of the greatest economic crisis in history. Even though the crisis started in 2007 in advanced economies, its effects still linger and no one can foresee the end of the crisis. International financial institutions and organizations have argued that the damage caused by the crisis has been more severe than all of the crises which so far have materialized.

The globalization process of this crisis offers some opportunities for economies and investors in the financial system to restructure their financial positions and manage requirements for a rapid change. By the means of present opportunities, (1) international commerce has deepened; economies have connected to one another and become integrated. In this context, in particular, the signing by EU member countries of economic agreements together with political agreements, has integrated continental Europe in an economic sense. The strengthening of regional unions such as the European Union, European Free Trade Association, Free Trade Area of the Americas and the Asian Pacific Economic Cooperation ensured countries entry into a new process called globalization. In fact this unity caused countries (1) to share financial risks albeit being physically located far from one another, (2) to be affected by the "sub-prime" mortgage crisis occurring in America. Although countries have given different reactions according to their financial infrastructures in the undergone crisis, the common point of all this has been the occurrence of control inefficiency. It has been revealed that another shortcoming was related to the reports drawn up by credit rating agencies failing to reflect reality. Economic crises, which may be defined as strong fluctuations in any goods, production factor or currency market beyond tolerable limits of change, can be classified as real sector crises and financial crises (Uzunoğlu 2009: 23).

An economic crisis emerges as a great fall in consumer demand, companies' investments, high rates of unemployment and a significant fall in life standards. Such economic crises generally express ambiguities in financial markets, falls in share prices and the fall in the value of local currency relative to foreign currencies (Eğilmez 2011: 48). An economic crisis may be defined as the sudden and unexpectedly occurring events causing consequences to seriously shake economies and company performance. A rapid contraction in production, price fluctuations in capital markets, bankruptcies, a sudden increase in the unemployment rate, retraction in wages, a collapse in stock prices and a banking crisis are some reflections of the economic crisis.

5.3 The Globalization of 2008–2009 Financial Crisis

Following the demise of the bi-polar economic world order by the end of Cold War, the liberalization process in transitional economies had reflections on international trade and capital flows. It has facilitated enterprises' undertaking in commerce everywhere in the world and this situation has paved the way for the emergence of international enterprises. The rapid change, which facilitated globalization, has significantly affected international organizations. Multinational companies now had to closely monitor all world economies and not only the regions they were active in. The transitional process challenged local companies to create new fresh investment strategies and to monitor opportunities for global rivalry. Although financial globalization is not a new notion, never has its impacts been so intensely felt. Moreover, capital movements, limited to a few countries, in transitional economies had accelerated in the last 2 decades. The main element that started globalization was the collapse of the *Bretton Wood's* system coupled with the decrease in the control over capital and the inclusion of developing countries in this capital movement. According to Bacni (2010: 5), in 1973, as a result of the collapse of the Bretton Woods system, national markets bunched up closely especially after 1980. This situation has paved the way for a crisis, which emerges in world markets by spreading across the world in a short period of time. Nowadays, all world economies have become more open and vulnerable to risks; therefore, formations such as IMF and the World Bank have been established with the purpose of protecting markets and ensuring the stability and the policies and rules that the markets needed. The major reason behind the spread of the financial crisis from advanced to emerging economies relies on the liberalization of capital flows and the globalization of capitalism. On one hand, interdependency is another reason for rapid changing conditions in capital markets and a globalized world economy. Also, Eğilmez (2011) argued that the level of interdependency of economies has been decreasing as a result of rapid transmission of global economic risks.

5.3.1 Mortgage Markets in the USA

Basically, a mortgage is a pledge agreement whereby the lender is entitled to rights over the ownership of the debtor against the loan granted. The mortgage system has been playing a vital role in the USA for many years and grants loans to individuals wishing to become a homeowner with installments of up to 30 years for the amount of the housing price after a downpayment has been received upfront. In this system, if the mortgage cannot be paid, the entity guranteeing the finance can sell the debt in the secondary market without bearing it. Companies in secondary markets, however, form pools where-by investors can sell bonds in the market based on mortgage loan amounts. Thus, the debt arising out of a bilateral contract and the risk it bears is transferred to thousands of investors in the market. Bacni states that (2010: 6):

> In this system, loans obtained by those who wish to become homeowners from credit agencies are paid back with fixed or variable interests. Those wishing to use loans are primarily rated by their credit history. In this system where, A being the best grade, grades are lowered alphabetically, those with a poor credit history (those with a rating lower than A) have to pay higher interest rates compared to those with the best credit history (those whose rating is A). Banks bear a great risk by including these people in the system against high interests.

Er argues that the mortgage banks were aware of the risks in the markets, and FED's low interest policy has caused a boom especially in subprime mortgage loans. The expectation that the suitability in loan conditions will persist in markets has brought about the enhancement of these loans' volume. The policies of President Bush, who was elected to the presidency in 2000, initiated housing acquisition support for especially low income and poor immigrants and had loosened the loan granting conditions of banks (Er 2011: 316). The President's policies coupled with the FED's interest approach created an enormous mortgage market with a volume of $12 billion, which was comprised of several layers. With this structure, the market had the standing as one of the world's greatest markets. The high risk mortgage loans up until 2008 have made a great contribution in the market reaching such a share (Afşar 2011: 148).

As a result of the economic effects of the September 11th attacks, the FED lowered interest rates from 4 to 1 % to keep the economy vibrant. This change caused investors to withdraw their money from the FED's low interest rate bonds and search for new investment opportunities. This capital mainly transferred to mortgage funds. The "hot money" from the FED funds had lowered the interest rates in the mortgage market and provided an opportunity for more people to become homeowners. According to Ergenç (2009: 38–39), this shift caused banks to bear more risks. Banks could now make more investments in high risk customer portfolios; in the even that loans were not repaid, the rational was that housing prices would continue to rise beyond the initial loan granted. This meant an automatic insurance for banks. According to Susam and Bakkal (2008: 74), banks facing difficulties in collecting the payment of mortgage loans started to decrease

the amount of granted loans, which in turn lowered the demand for housing and consequently housing prices. Those using mortgage loans panicked and started to sell their homes. Pursuant to the panic wave, housing prices hit rock bottom; these bonds sold in secondary markets now were much lower than their nominal values on paper. The issue of trust arising in financial markets made it difficult for banks to grant loans to one another and as a result the liquidity crisis occurred.

5.4 The Evaluation of Global Financial Crisis

In mid 2007, markets started to severely deteriorate. Mortgage loans caused credit card expenses to increase. Ordinary Americans who used to spend $200, started to spend $30–$40. Approximately, all banks undertaking transactions in markets had wanted collateral from one another. When news came out that Lehman Brothers, where most transactions accrued, wouldn't be able to meet contract terms, it faced the risk of bankruptcy. As the government and the FED declared that "they will not be able to save the bank," an immense loss was incurred by all banks that were creditors of Lehman Brothers. The crisis wasn't new, but it was then easy to see the picture that the mortgage balloon was punctured.

5.4.1 Liquidity Redundancy and Credit Defaults

The excess liquidity continued in advanced economies from 2000 well until the end of 2006. International financial organizations have generated high profits in this situation but have borne high risk. The preliminary source of such profits generated by banks stems from loans formed by mortgage funds. The grant of loans to even those that did not have steady incomes had caused a virtual increase in housing prices. Due to problems arising in a certain parts of housing loans, the number of seized houses in their portfolio had increased. Since the house was retained by banks and put up for sale, housing prices fell rapidly and under the loan of the said housing.

5.4.2 Securitization

The rise in housing prices was one of the reasons for the global financial crisis, and the fall in housing prices is among the implications of this crisis. Since a part of the housing loans were not returned or repaid, the housing market had went into a vicious cycle as a consequence and a significant fall in housing prices started as of the early part 2007 in the US. Figure 5.1 illustrates the development of housing prices according to the S&P/Case Shiller Index. As illustrated in the Fig. 5.1,

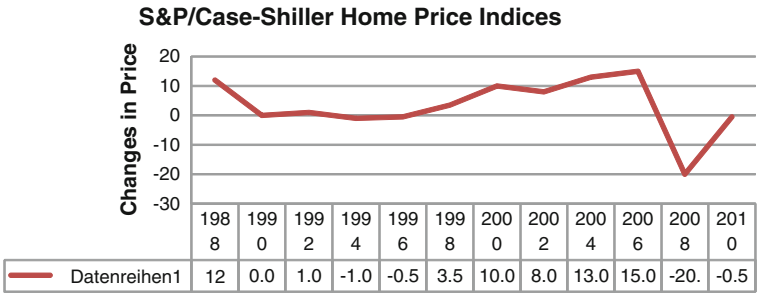

Fig. 5.1 Housing price changes index. *Source* Standard & Poor's and Fiserv 2010 Finance Report

housing prices increased by nearly 90 % in the USA between 2001 and 2007. A fall in these prices started in early 2007.

Prior to the mortgage system, when a housing loan was obtained from a bank, such loan used to be kept on the bank's balance sheet until it ran out. Banks which presently grant housing loans yield profits also by getting shares from the interest revenues to be obtained alongside a fixed wage arising out of the conclusion of a contact by the sale of these loans in secondary markets without withholding them. According to Birdal (2009: 7), as much as the loan risk is transferred to the investors buying the realty, resource for new loans were generated by the revenue yielded; thereby, as a result of this process we get something called securitization. As seen in Table 5.1, by the end of 2006, 68 % of the mortgage loans were securitized worth $3 trillion.

As Birdal argues that the mortgage based realties carry high risks since their terms are not defined. This is significant because of the direct relation between the interest rate and repayment. Although loan terms are long, they may be settled by down payment (2009: 8):

> When interest rates fall, those who have been granted housing loans tend towards refinancing obtain a new loan with lower interest and settle their previous debts before their due term. In such case investors receive the principal back in a shorter term period of time than expected and have to make new investments with a lower interest rate. Therefore the fall of interest rates in the market also causes a decrease in the value of mortgage based realties.

Table 5.1 US mortgage market securitization rates

ABD mortgage market	Mortgage loans (billion USD)	Securitization rate (%)	High risk loans (billion USD)	Rate of high risk credits (%)	Rate of high risk loans' securitization (%)
2001	2,215	60.7	160	7.2	60
2002	2,885	63	200	6.9	61
2003	3,945	67.5	310	7.9	65.5
2004	2,920	62.6	530	18.2	79.8
2005	3,120	67.7	625	20	81.3
2006	2,980	67.6	630	21	80.5

Source Birdal (2009)

Mortgage banks such as Ginny Mae, Fannie Mae, Freddy Mac and Lehman Brothers with a significant mortgage portfolio of which was formed by seized housings faced in-solvency with the fall in housing prices.

5.4.3 The Effect of Transparency

The mortgage market is comprised of primary markets with banks which grant loans and secondary markets where asset backed securities are sold. Institutional and individual investors operate in these markets. According to Akbulut (2010: 53) both borrowers and lenders must research each other's previous performance. There was a transparency problem. The grantors of loans did not inform users of details about future interest rates, additional costs and wages. The system has gone into an impasse since loans were granted to high risk people with low incomes. The loans banks have granted without making necessary research and acting insensitively on matters of risk have fundamentally affected the entire market and caused the loan quality to deteriorate and profit margins to diminish (Akbulut 2010: 53).

5.4.4 Shortcomings of Rating Entities

Due to the complex structure of financial tools, investors pledged their loyalties to the trusted credit rating agencies. However, these institutions could not be impartial in the appreciation of illiquid assets. These agencies at the same time were being financed by companies producing realty caused an interest relationship to form between them. Mortgage banks in advanced economies were especially assumed to be effective in terms of capital adequacy and risk control management. However, the crisis illustrated that these banks could not have been managing risky assets and far away from capital adequacy as it has been reflected by rating notes.

5.4.5 Regulatory Supervisory Entities

Regulatory supervisory entities, especially the FED were late in taking measures against the changing risk environment. Problems starting in the housing market influenced the entire financial system and the real economy. Furthermore, it has spread to other countries and reached a global dimension. Many states in the US, have securitized the high risk seized housing debts, thereby trying to prevent their sales, but the US Treasury has, in line with the requests of some greater banks, opposed this practice on grounds that federal laws were being infringed upon. The US Stock Exchange Commission had stipulated the registry obligation as of February 1, 2006 within the scope of the Investment Consultancy Law and

demanded that managers of high risk funds and assets of whom exceeded 25 million USD or the number of investors of whom exceeded 15. This new rule implemented by the SEC has passed with a risk based approach was brought to trial by a high risk fund manager; The Regional High Court abrogated Stock Exchange Commission's new regulation in June 2006 (Özer 2010).

5.5 Conclusion

The 2008–2009 Global financial crisis has implications on global economic activity. The major economic issues related to development, growth prosperity, employment, stability in financial system have been challenging investors and decision makers. Volatile market conditions transmitted into emerging economies just after the financial turmoil began. The major factor behind this transmission relies on the globalization of economic and financial system worldwide. The latest advances in the global financial system and the effects of globalization on financial system have been evaluated. The major reason behind the transmission of financial crisis from advanced economies to emerging economies relies on the liberalization of capital flows and the globalization of financial institutions. Liquidity redundancy, credit defaults, securitization, the lack of transparency, the shortcomings of rating entities and supervisory entities are some pillars of global economic recession.

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Part II
International Trade and Banking

Chapter 6
Political Instability and Turkish Banking Since the Ottoman Empire: A Historical Overview

Ozlem Olgu

Abstract The Ottoman economic mind was closely related to the basic concepts of state and society in the Middle East in which the ultimate goal of a state was consolidation and extension of the ruler's power. By developing commercial centers and routes, the state performed basic economic functions in the empire. In 1923, Turkey underwent a great transformation in terms of religion, social, and cultural bases of Turkish society as well as its political and economic structure with its announcement as a republic with Ataturk being its first president over 14 years. This chapter discusses the changing structure of the economy, financial system and banking sector since the Ottoman Empire up until today's Modern Turkey. It provides the reader with an overview of political instability, financial crises experienced in the country and what has changed in the banking sector over the past 700 years.

6.1 Introduction

As predecessor of modern Turkey, the Ottoman Empire was at the center of the main trade routes between the Eastern and Western worlds during the period between the years of 1299 and 1922. In spite of being a world economic power for such a long time, the introduction of a banking business to the Ottoman's occured much later than in Europe (Akguc 1987). 1923 is a milestone in the history of Turkish banking when it was formally announced as a republic with Ataturk being its first president. During his 14 years of presidency, Turkey underwent a great transformation, which attempted to change the religious, social, and cultural bases of the Turkish society as well as its political and economic structure. With an aim

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to summarize the historical evolution and structural changes of modern banking in Turkey, the 1299–2013 period can be categorized under seven phases which are discussed in general throughout this chapter.

Phase I, the Ottoman period (1299–1923), refers to the period before declaration of the Republic of Turkey in 1923. The formation of national banks was to support agricultural, commercial and industrial development during the 1923–1932 period constitutes Phase II. Establishment of state banks for special tasks over the 1932–1945 periods refers to Phase III. Phase IV introduces the emergence of private banks between 1945 and 1959 followed by Turkey's monetary decision of shifting to a mixed economy model during 1960–1980 and military interventions to politics which resulted in political instability and frequent changes of government in Phase V. The era of financial liberalization in 1980s initiated Phase VI and changed the structure of banking sector in Turkey. The last phase, Phase VII, covers the period since the 2001 economic and financial crises which has witnessed banking sector restructuring and heavy penetration of foreign banks into the financial system (Altunbas et al. 2009).

6.2 Banking Sector from Ottomans to the Republic of Turkey (1299–1923)

The Ottoman economic mind was closely related to the basic concepts of state and society in the Middle East in which the ultimate goal of a state was consolidation and extension of the ruler's power. The way to reach this was to get rich resources of revenues by making the productive classes prosperous. By developing commercial centers and routes, the state performed basic economic functions in the empire. But in all this, the financial and political interests of the state were prevalent and the Ottoman administrators could not have realized the dynamics and principles of the capitalist economy of the Modern Age (Akguc 1987).

Establishment of the first bank in the Ottoman Empire dates back to 1847, which coincides with the introduction of first banknote (*Kaime*) in 1840. Prior to this period, all banking activities were predominantly carried out by money-changers and the so called "Galatia bankers" who were mostly from the minorities (i.e. Jewish and Armenian) of Istanbul. During this period, the Ottoman Empire was experiencing continuous budget deficits and in an attempt to solve this problem the Ottoman Treasury increased the amount of national currency, which resulted in a sudden devaluation of *Kaime*. With an aim to preserve its value and help financing the trade deficit in international financial markets, the first recorded official bank of the Ottoman Empire, İstanbul Bankasi, was formed by the Galatia bankers, which was closed later on in 1852.

In fact, the first significant bank of the empire, the Ottoman Bank, was established in 1886 as a joint venture between British interests, the Banque de Paris et des Pays-Bas of France, and the Ottoman government. The bank, which had its head office in London, began to serve as the central bank of the empire's financial

system and was also granted the authority to print money in 1963. In addition, it was given authority to supervise the government budget, and the Ottoman treasury not only held all its accounts in the bank, but also issued all bonds concerning its domestic and foreign borrowing through the bank. However, due to the previous sudden devaluation of Kaime, public had no confidence on the currency and the bank could not pursue an effective role defining liquidity and credit volume of the economy (Akguc 1987). Even though progress had been achieved in the financial system during this period, there was a lack of financial institutions able to support local farmers, which constituted the majority of population and also economic activity. In order to fill this gap and extend agricultural loans to farmers through state supervision, a state fund was established in 1863, which was converted into the first state bank, Ziraat Bankasi, in 1888.

Later on, financial needs of the Ottoman Empire changed considerably due to deterioration of financial system after the Crimean War (1953–1956), which led to a dependency of external support.[1] As a consequence, a large number of foreign banks started to operate in Istanbul with the purpose of extending credits to the Ottoman Empire at high interest rates. The main function of these banks was to earn speculative profits from foreign exchange transactions as well as domestic and foreign borrowings of the Ottoman governments. On the other hand, the existing banks were funding mainly the treasury.

As a reaction to foreign banking and to take control of national capital from these banks, a national banking movement started in the Ottoman Empire during early 1910s, and 24 national banks were established in Istanbul and Anatolia over the years 1908 and 1923. These national banks, privately owned by tradesman and farmers, were extending loans for commerce, agriculture, trade and housing.[2] Despite the supportive national economic policy followed by the government, most of these banks could not last long due to powerful competition of foreign banks. Moreover, as a result of the consecutive wars during the period between the years of 1911 and 1922, capitulations granted to foreigners and scarcity of national capital, foreign banks continued to dominate banking activities.

The following years were a milestone for the history of Turkish banking when the Turkish Republic was established in 1923 from the ruins of the Ottoman Empire. Policymakers mainly focused on promoting and establishing industrial manufacturing and support private entrepreneurship by the development of national banking sector over this period. In 1923, the financial system comprised of 35 banks (22 national and 13 foreign) with a total number of 439 branches. Most of these foreign banks only dealt with foreign trade and foreign companies operating in Turkey and their involvement with Turkish firms was limited. On the other hand, national banks were mostly small local banks and were too weak to support the newly emerging industry and commerce (Akguc 1987).

[1] The Crimean war was a conflict between the Russian Empire and alliance of the French Empire, the British Empire, the Ottoman Empire and the Kingdom of Sardinia.

[2] See, Akguc (1987) for details of Turkish banking.

6.3 Political Instability and Turkish Banking Sector (1923–1980)

Turkey was formally announced as a republic in 1923, with Ataturk being its first president and served until his death in 1938. During this period, Turkey experienced a transformation process which attempted to change religious, social and cultural bases of the Turkish society as well as its political and economic structure. The Ottoman Empire was the last strongest Islamic Empire in the world that had strong religious ties. The new republic on the other hand pursued a secular state policy.

The first main bank of this era was Türkiye İş Bankasi established as a joint venture between the state and private initiative in 1924, with the main aim of supporting commerce. Later in 1925, Türkiye Sanayii ve Maadin Bankasi[3] was founded as a development bank. Government also strengthened Ziraat Bankasi by injecting capital and widening its operation outside the agricultural sector. Another major bank, Emlak ve Eytam Bankasi,[4] was established in 1927 to provide housing credits.

Denizer (1997) states that parallel to its broad strategy of industrialization via private sector encouragement, the Government's regulatory approach to banking and finance was quite liberal and aimed at developing a national banking system during 1923–1932. On one hand, the government provided initial capital for 4 public banks and lead development efforts; on the other hand it allowed and actively encouraged the formation of private banks. As a result, 29 new private banks and the Central Bank of Turkey (CBT) were established during this period and there were practically no restrictions for entry to the banking sector.

The important aspect of this period for banking was the creation of new public banks to provide support for the new state enterprises (Denizer 1997). The number of banks reached 60 (45 national and 15 foreign) by 1932 followed by the establishment of Sümerbank in 1933, Belediyeler Bankasi in 1933, Etibank in 1935, Denizbank in 1937 and Halk Bankasi in 1938 by state as special purpose banks in order to support and fund the state led enterprises. During 1944–1960, 27 private and 3 public banks were established. Moreover, some of the largest private banks of today's banking system were founded during this period, such as Yapı ve Kredi Bankasi in 1944, Garanti Bankasi in 1946 and Akbank in 1948.

After World War II (1939–1945), Turkey allied with the West and became a recipient of US assistance under the Truman doctrine.[5] Being very close to Union of Soviet Socialist Republics (USSR) geographically and an ally of US had affected the dynamics of the local politics for more than 40 years until the collapse

[3] This bank subsequently changed its name to Türkiye Sanayii ve Kredi Bankasi.

[4] Later on named as Emlak ve Kredi Bankasi.

[5] US president Harry Truman set forth the Truman doctrine in 1947 which is a policy stating the US economic and military support to Greece and Turkey in order to prevent their falling into the Soviet sphere. See, http://www.Trumanlibrary.org/publicpapers/index.php?pid=2189&st=&st1= for details.

of USSR. As a result, for the first time, Turkey practiced democracy with two parties, Democratic Party and the ruling Republican Peoples Party, competing in the elections in 1950. The Marshall Plan was successful for economic expansion in this period, but was terminated with a serious economic crisis towards the end of 1950s.[6] The outcome of this event was against the government and ended with a military coup in 1960. The military regime executed the Prime Minister Adnan Menderes together with several other party members for violating the constitution.

A significant feature of Turkey since the 1960s has been the instability in politics, which directly led to failures in macroeconomic policy, leading to financial and economic crises. Over the last 53 years, Turkey has seen 4 military coups and 38 different governments. Moreover, most of these governments were formed as a coalition which made it hard to pursue consistent policies. Political stability, where single party governments ruled, was only stored for limited time periods. Turkey followed a state-led inward-oriented growth strategy with import substitution policies and economy-wide planning between 1960 and 1979. Akguc (1987) states "these development plans are aimed to merge small banks and reduce overhead costs with a goal of creating stronger financial sector". Therefore, instead of new commercial banks, the government only permitted establishment of new development and specialized banks during 1962–1975, which were not authorized to collect deposits. These are Tourism Bank in 1960, Industrial Investment and Credit Bank in 1963, Eximbank in 1964, Turkish Development Bank in 1975, State Metal Bank in 1968 and Industrial and Labour Bank in 1976.

Prior to 1980s, financial system in Turkey was characterized with important restrictions such as controls on prices and volume of business conducted by financial institutions as well as allocation of funds among borrowers. According to Edey and Hviding (1995) these regulatory restrictions that repressed Turkey's financial system had evolved to serve a number of social and economic policy objectives of the Turkish governments.

Beginning in the 1980s was a period of liberalization and establishment of the free market economy model in Turkey. Together with the removal of capital account controls, Turkey adopted flexible exchange rates and positive real interest rate policies. These measures reflected well on the banking sector with the removal of interest rate controls. Turkish banks started to establish banks or open branches outside the country and increased their business in foreign trade, leasing, factoring, forfeiting, being an intermediary in the export of securities, and short-term credit operations and increased financing from international markets (Akkurt et al. 1992).

Turkey liberalized its financial sector through deregulation of interest rates and removal of entry restrictions in 1980.[7] As a consequence of development of offshore financial centers, rapid technological and macroeconomic developments, Turkey

[6] It is an American program to provide monetary support to Europe in rebuilding their economies after the World War II. See, http://www.marshallfoundation.org/library/doc_marshall_plan_speech.html for details.

[7] See, Denizer (1997) for more information on the effects of financial liberalization in Turkey.

took the first step towards liberalization of the financial system by increasing the interest rates on personal time deposits in June 1980. The overall program of structural adjustments is known as the "24 January decisions" (Akyuz 1980).

6.4 Structural Changes and Financial Crises: 1980–2000

Besides the liberalization of interest rates and foreign exchange regime in 1984, there were other developments regarding the banking system in Turkey. Firstly a uniform accounting and reporting system was developed and an independent external auditing mechanism was established to increase the soundness of the banking system. Secondly, foreign banks were allowed to open branches with the same rights as Turkish banks which resulted in a significant increase in their number and brought a fierce competition in the banking system (Akkurt et al. 1992).

The dominance of public banks, insufficiency of deposits and loans, high level of duty losses of public banks, increase in open positions, lack of control and political problems related to the government have all played important roles in financial instability. This situation combined with financial distress in real sectors led to the collapse of 6 banks during 1983 and 1984. Due to loosening of entry restrictions with the reforms, there were 31 new entries into the banking system between 1980 and 1990, of which 19 were foreign and 11 were national.

Denizer (1997) points out that almost all of the new banks were specializing in trade finance as well as wholesale corporate banking and they eschewed the retail banking market despite the fact that there were no restrictions on the scope of their operations. One of the most significant occurrences of the early 1990s was the financial crisis of 1994 which had significant adverse effects on the banking system in Turkey. Due to chronic high inflation, the level of dollarization increased in the Turkish financial system prior to the 1994 crises (Altunbas et al. 2009). Alper and Onis (2001) stated that the crisis of 1994 was triggered by two proximate causes, namely, the government's attempt to control the interest rates as well as the level of the exchange rate in a high inflation environment and the lowering of Turkey's credit rating. Accordingly, the end result was a steady decline of the foreign exchange reserves of the Central Bank, ultimately leading to a successful speculative attack on the Turkish Lira, generating a large devaluation. Moreover, public banks have created an uneven playing field in the banking sector due to the fact that both their borrowing and lending operations have been politicized in the aftermath of the 1994 crisis.

Moreover, Turkey could not cope with this financial turbulence and at the same time satisfy the economic criteria of the EU, which resulted in signing the economic recovery program with the IMF in 1999. Following, introduction of the three year stabilization program with the IMF had significant implications for the Turkish banking sector in 1999. Firstly, a new Banking Law went into force introducing the establishment of Banking Regulation and Supervision Agency (BRSA) and the Saving Deposits Insurance Fund (SDIF) became a legal entity administered by the BRSA.

Establishment of BRSA constituted a major source of progress in terms of establishing a well-regulated banking sector, which is a fundamental requirement for full capital account openness. However, operation of the BRSA has been subjected to significant delays and the institution was not in a position to prevent the twin crises (Alper and Onis 2001). Moreover, political disputes over the pace of reforms imposed by the IMF and the EU between the coalition government headed by Bülent Ecevit and president, Ahmet Necdet Sezer, led to a political crises, causing capital outflow and economic crises in 2000.

A year after the start of the program and although an IMF-led emergency package succeeded in normalizing the situation for a while, the Turkish lira came under heavy attack in February 2001, which turned into the most serious financial and economic crisis Turkey has experienced in its post war history. Moreover, not only the short-term portfolio investments, which were easily reversible and made up of most of the inflows, but also the slow pace of reforms under the stabilization program and the political uncertainty are the other contributors that further exposed the fragility of the banking system (Ozkan 2003). In fact, the crisis in 2001 hit the financial system leading to a major downsizing in the banking sector. As a consequence of a series of mergers and liquidations, there were large layoffs generally in the banking sector and the number of employees dropped from 168,000 in 2000 to 132,000 in 2001. Worsening economic conditions have also doubled non-performing loans in banks' books with a record of 17.8 % in privately owned commercial banks. As a result, seriously affected 20 banks were transferred to SDIF, while some of them were sold to the private sector, some others unified under different names (Altunbas et al. 2009).

6.5 Turkish Banking During Post-2000 Period

The early general elections on November 3, 2002 dramatically changed the political climate in Turkey. The established single-party government contacted the IMF to make minor changes in the program. Large IMF loans tied to the implementation of ambitious economic reforms enabled Turkey to stabilize interest rates and the Turkish Lira as well as to meet its debt obligations. In 2002 and 2003, the reforms began to show results in a way that inflation and interest rates had fallen significantly, the currency stabilized and confidence has begun to return. Since 2002, the outstanding performance of the Turkish economy and political stability had positive impacts on banking sector. Furthermore, as credibility increased in international markets, banks borrowing capacity abroad led to growth in banking sector. All of the positive economic and regulatory developments increased foreigners' interest on Turkish banking sector and during 2005–2006 a significant number of foreign banks increased their shareholdings.

Turkey attracted a historical amount of investments from foreigners since 2001 (around USD 16 million in 2011) and a significant amount of this flow went directly into the banking sector, where 12 foreign banks increased their

shareholdings through acquiring majority shares in locally established banks. Most of the deals were between large and medium size Turkish banks and leading banks in the global arena, mainly with European origin.

The earliest entrant to the market was HSBC, which started its financial activities in 1990.[8] HSBC expanded its operations in Turkey through the acquisition of Demirbank, which was the 5th largest private bank in 2001. In 2002, the 50/50 shareholder partnership agreement between Koçbank, the 6th largest private bank at the time of the deal, and UniCredit of Italy, one of the Europe's largest banks, was the first foreign partnership established in the Turkish financial sector.

In 2005, Koçbank/UniCredit joint venture bought a majority share of Yapı ve Kredi Bankasi, one of the largest and well established private banks, as the biggest merger project in the history of Turkish banking. Following, UniCredit, BNP Paribas bought 50 % stake in Türkiye Ekonomi Bankasi (TEB), while Fortis of Benelux acquired 89 % of Dışbank, a privately owned medium sized bank. The largest deals in terms of value were those of Citigroup, National Bank of Greece (NBG), Dexia Bank of Belgium and General Electric Capital Corporation. Both US based financial institutions, Citigroup and GE Capital Corporation, preferred to be minor shareholders and strategic partners in Akbank and Garanti Bankasi. In order to strengthen the banking system, some modifications were introduced to the banking law in 2005. These included changes to approvals and authorization for bank licenses and activities, increase in minimum capital requirements, increasing transparency of financial institutions, introduction of new corporate governance principles for financial sector, limitations on loans to risk groups, strengthening internal and external audit mechanisms, and introduction of minimum liquidity adequacy requirements. Even though, the share of foreign banks (in terms of total assets in the banking sector) has been stable around 3 % during the 1990s and early 2000s, FDI wave observed in the financial sector have increased the level of foreign ownership with a controlling share of 33 % of total assets in 2006.

Overall, outstanding performance of the Turkish economy had positive impacts on the banking sector since 2002. As the credibility increased in international markets, banks borrowing capacity abroad led to growth in the banking sector. Moving onto recent periods, what happened in 2001 is like a vaccine that prepared Turkey for the global financial crisis of 2008. The Banking Sector Restructuring Program, change in the Banking Law, implementation of several new regulations and enhancement of the supervisory framework have presented their award and the impact of the 2007–2009 global crisis on Turkish banks has been limited. Although the real economy has been affected mostly through the international trade channel, the Turkish banking and financial sector has been quite robust where Turkish banks did not require any capital support unlike what happened in many other countries. The average capital adequacy ratio of the banking sector has risen during the crisis period, fluctuating around 20 % well above the target level

[8] Later on named Midland Bank Inc.

of 12 % and the legally required level of 8 %. Moreover, Turkey is one of the few countries whose credit rating has improved during the crisis (Yörükoğlu and Atasoy 2010).

6.6 Conclusion

This chapter pinpointed the key developments and evolution of the Turkish banking sector from the time of Ottoman Empire to today's modern Turkey from a historical perspective. Over the period prior to 1930s, policymakers promoted the development of a national banking sector to provide the necessary financial instruments for investors, whilst state participation was required due to lack of adequate national capital. Following the financial liberalization in 1980, banking activities in the 1990s were affected by chronic high inflation and political instability in the country. Moreover, Turkey witnessed twin crises during 2000–2001 which resulted in failure of many banks and being transferred to the SDIF. Turkey took important steps towards this end and applied regulatory and supervisory policies to the banking sector. All of the economic and regulatory developments as well as political stability achieved in Turkey over the recent years increased confidence in the financial sector, which resulted in augmented foreign capital inflows to the banking sector. Last but not least, the tight regulatory policies worked as a vaccine in the Turkish economy and Turkey has not been heavily affected from the global financial crisis of 2008.

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Chapter 7
Impact of Augmented FDI on Efficiency of Turkish banks: Better or Worse?

Ozlem Olgu

Abstract This study investigates the relationship between foreign investment and bank productivity in Turkey over the 1992–2010 period by examining and decomposing the DEA Malmquist index scores of 17 commercial banks. Four questions are at the center of this study: What are the productivity scores of foreign invested private commercial banks? How was it affected by increased FDI? Did foreign investors target more productive and profitable banks to invest in? What are the most important components of productivity growth: technical progress, efficiency gains, better management or the realization of scale economies? Empirical findings support the hypothesis that productivity scores of foreign invested banks are higher than domestic banks before the time of foreign investment. Overall, decomposed productivity figures indicate that the most significant factor on the total factor productivity change (TFPC) is the technological change (TC) and bank specific factors are important. Interestingly, no significant relationship found between FDI and the Malmquist components.

7.1 Introduction

Turkey is one of the biggest emerging financial markets of the developing world and also a country of transforming economies in the Central and Eastern Europe. Some of the important issues in banking industries over the last two decades have been technological progress and globalization of financial services which exposed banks to increased competitive pressure forcing them to optimize their operations and productivity, often through mergers and acquisitions (Amel et al. 2004; Angelini and Cetorelli 2003). It is well known that countries at all levels of

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development seek to leverage foreign direct investment (FDI) for development (UNCTAD 2006). Ozturk (2007) stated that FDI has the potential to affect economic performance in a country through multiple channels, such as capital and technology transfers as well as skills and knowledge transfers, spill-overs, productivity enhancement and increase in exports. Despite the dramatic decline due to the global financial crisis of 2008, FDI has been the largest sources of external finance for developing countries (UNCTAD 2009).

Advantages of experiencing FDI in an economy are explained by post-Hymer theories such as Buckley and Casson (1976) and Williamson (1986) that focused on the internalization advantages of FDI particularly in reduction of transaction costs. Moreover, resource-based and evolutionary theories, such as Teece (1981) and Kogut and Zander (1993) claimed that multinational firms which engage in FDI operations may be superior to markets in transferring implicit knowledge (Dunning and Pitelis 2008). Since 2005, Turkey has attracted a historical amount of FDI and a significant amount of this flow has been directed to the banking sector (BAT 2006). Numerous leading banks in the global arena particularly with European origin raised their shareholdings in large and medium sized Turkish commercial banks. Main reasons of this increased interest can be stated as; financial progress since the 2000–2001 twin crises, enforcement of internationally accepted banking regulatory and supervisory standards (Basel I and II) and implementation of macroeconomic reforms.

This chapter estimates the relationship between bank productivity and several bank performance measures as well as foreign ownership with an aim to answer the question: *If foreign banks self-select to operate in an economy*, *which bank characteristics seem to affect their decision*? The rest of this chapter is organized as follows. Section 7.2 reviews existing literature. Sections 7.3 and 7.4 describe the data and empirical model. Section 7.5 reports the empirical results and Sect. 7.6 concludes.

7.2 Review of Literature

Results of research focusing on the impact of FDI on domestic banking markets are mixed. In general, views hold that (1) unfettered entry of banks into a country could result in destabilization of the banking system through introduction of excessive risk without commensurate returns (Hellmann et al. 2002, 2000), (2) presence of foreign banks can improve overall competition and provide greater availability of funds at more favorable rates, ultimately providing a more sound banking system (Berger and Humphrey 1997), and (3) more efficient foreign banks provide greater improvements than domestic and government-owned banks for emerging economies (Berger et al. 2005).

Existing empirical literature of foreign banking on transition countries, such as Hasan and Marton (2003) on Hungary; Nikiel and Opiela (2002) as well as Havrylchyk (2006) on Poland; Jemric and Vujcic (2002) on Croatia; Isik and

Hassan (2002, 2003) on Turkey; Grigorian and Manole (2002) on 17 transition countries; Yildirim and Philippatos (2002) on 12 transition countries; and Bonin et al. (2005) on 11 transition countries, does not give explicit answers to questions about why productivity of a foreign-owned bank differs from its domestic counterparts. Moreover, Classens et al. (2001), Demirguc-Kunt and Huizinga (2000); Berger and Humphey (1997), and Berger et al. (2000) examined performance of domestic and foreign-owned banks offering little insight on how foreign existence influences bank productivity.

In Turkey, changing economic and financial environment attracted attention of researchers.[1] The Malmquist Productivity Index (MPI) has been widely used in measuring the productivity of banks. One of the preceding papers measuring total factor productivity (TFP) growth of Turkish banking sector is introduced by Jackson et al. (1998) that analyses the technical efficiency and productivity change over the period 1992–1996 with an application of the Data Envelopment Analysis (DEA) and MPI. They stated that Turkish banking sector experienced productivity growth with the exception of 1993–1994, due to the impacts of the economic crisis. Another finding is that among the three ownership types, private and foreign banks showed greater productivity growth compared to the state owned banks. Another study that illustrated the TFP growth of Turkish banking sector by using MPI is Cingi and Tarım (2000). They concluded that the performance of private banks is higher than that of state owned banks. Another paper in this field is prepared by Isik and Hassan (2003) that investigated the effects of financial deregulation on all banks operating in Turkey during the period of 1981–1990 by using MPI. Their findings suggested that all form of Turkish banks have recorded significant productivity gains driven mostly by efficiency increases rather than technical progress. Moreover, Karacabey and Arslan (2004) applied MPI technique to 43 Turkish commercial banks over the period 1997–2000.

The results indicated that most banks experienced productivity loss due to the negative technological change during the entire period. The results of the productivity change analysis according to banks' ownership structures and scales shows that all the groups experienced similar production changes, which indeed indicates that the banks productivity change is mainly a consequence of the domestic economy's cycles. Moreover, Öncü and Aktas (2007) measure the changes in total factor productivity of Turkish banks over 2001–2005, during the restructuring period of Turkish banking sector. This study finds that Turkish banks experienced productivity gains in the period of 2001–2005, which was mainly attributed to technical progress rather than efficiency increases.

Ceyhan (2007) and Aysan and Ceyhan (2008) are the other remarkable studies applying MPI technique to measure productivity. Ceyhan's paper aims to find the effects of globalization on the performance of Turkish banking sector during 1990–2006, with an emphasis to the period after 2001 crisis. By using MPI and its

[1] There are couple of studies that analyse efficiency of Turkish banks applying DEA such as Altunbas et al. (1994c), Zaim (1995), Denizer et al. (2000), and Isik and Hassan (2002).

mutually exclusive and exhaustive components of efficiency and technological changes and by further decomposing efficiency change component into two as pure technical and scale efficiency changes, the paper finds that the productivity of the banking sector have increased due to the technological improvement. Moreover, with respect to ownership, foreign banks were the most efficient group until 2001 after which state banks captured the first place and with respect to size, before 2000, the most efficient bank group was the medium-scale banks. Similarly, Aysan and Ceyhan (2008) applied MPI to measure the productivity change of 20 commercial banks in Turkey as a result of increasing foreign bank entry during the period of 1990–2006. The study concludes that Turkish economy experienced productivity increase which is predominantly attributed to both technological and efficiency improvement when the benchmark years were 1990 and 2001. After 2000, however, the productivity increase was solely due to technological improvement reflecting the existence of structural changes in the Turkish banking sector. Also, after 2000, pure technical efficiency of the sector increased reflecting the fact that the quality of bank management has been of increasing importance.

7.3 The Data

Data of the empirical analysis comprises population of 17 commercial banks operating in Turkey over the period of 1992–2010, with 340 observations, as available from the Bank Association of Turkey (BAT) see Table 7.1. The sample period is chosen as it covers financial structural changes, recent wave of FDI in Turkey and global financial crisis. Selection of inputs and outputs is guided by the objectives of the Turkish banking system, where commercial banks act as intermediaries. Therefore, the Intermediation Approach proposed by Sealey and Lindley (1977) is followed.[2] Total assets, total deposits and total expenses (including personnel expenses) are considered as inputs used to produce total loans and interest income as outputs.

In order to identify a common frontier, several specific bank and dummy variables which explain the peculiar features of each bank are selected. A dummy variable for FDIFDI[3] is the main explanatory variable to identify the connection between FDI and total factor productivity change (TFPC) at the aggregate level. The rest of the bank-specific control variables are selected following Delis et al. (2008),

[2] Other studies that used Intermediation Approach in banking are; Zaim (1995), Gilbert and Wilson (1998), Kraft and Tirtiroglu (1998), Rezvanian and Mehdian (2002), Isik and Hassan (2002, 2003), and Havrylchyk (2006).

[3] It has been argued that the FDI/GDP ratio might be more preferable to log FDI for testing causal links between FDI and GDP, due to potential "endogeneity" problems with FDI at the aggregate level (see e.g. Herzer et al. 2008). However, this endogeneity problem is not so serious with single country bank level data and we prefer to use a dummy variable for the years that FDI inflows are observed.

Table 7.1 Sample characteristics

Years	Domestic	Foreign invested	Total	Observations
1992–1996	17	0	17	68
1996–2000	17	0	17	68
2000–2004	15	2	17	68
2004–2008	8	9	17	68
2008–2010	8	9	17	68
Total	65	20	85	340

Aysan and Ceyhan (2008), Isik (2007), and Lensink et al. (2008). The first group of control variables includes measures of performance for each bank covering net interest margin (NIM), return on assets (ROA) and return on equity (ROE). Logarithm of total assets (SIZE) is included to capture the effect of bank size. Usually an inverse relationship exists between SIZE and scale efficiency change (SEC) and positive relationship with performance measures. Total amount of expenses is one of the most important input variables for banks. In order to decide if a specific bank is required to take an action on lowering its expenses, cost to income ratio (COST) is included as a measure of effectiveness in expenses management. The second group includes a dummy variable for foreign investment (FDI) to identify the time of FDI into a domestic bank and also time dummies.

7.4 Empirical Model

In the first stage analysis of this chapter, the traditional DEA-Malmquist Index technique introduced by Färe et al. (1997) and the input-oriented DEAP software developed by Coelli (1996) are applied. Changes in total factor productivity (TFPC) are decomposed into the components of technical efficiency change (TEC, catching up) and movements due to changes in technology (TC, technological change). Following, TEC is further decomposed into changes due to pure technical efficiency (PEC, managerial efficiency) and scale efficiency (SEC). In the second stage analysis, TFPC of the DEA-Malmquist index is used as the main dependent variable followed by other six dependent variables such as TEC, TC, PEC, SEC, ROA and net interest margin (NIM). In order to examine whether foreign ownership makes a difference in bank's productivity scores, dependent variables are regressed on two separate ownership variables, for instance, domestic and foreign invested using the following basic equation:

$$TFPC_{it} = \beta_0 + \beta_1 FDI_t + \beta_2 B_{it} + u \tag{7.1}$$

TFPC of commercial bank i that operates in Turkey at time t is written as a function of dummy variables, *FDI*, representing foreign inflow at time t; as well as

Table 7.2 DEA-Malmquist components of all banks, 1992–2010 (1 = 100 %)

Years	TEC	TC	PEC	SEC	TFPC
1992–1993	1.339	0.826	1.027	1.304	1.106
1993–1994	1.062	0.656	0.962	1.105	0.697
1994–1995	0.901	1.109	0.947	0.952	1.000
1995–1996	1.003	1.127	1.001	1.002	1.130
1996–1997	1.030	0.666	1.041	0.989	0.686
1997–1998	1.110	0.656	1.117	0.994	0.728
1998–1999	0.875	0.912	0.946	0.926	0.798
1999–2000	1.092	1.245	1.069	1.022	1.359
2000–2001	1.053	0.541	1.012	1.041	0.569
2001–2002	0.885	1.380	0.863	1.026	1.221
2002–2003	0.965	1.357	1.011	0.954	1.309
2003–2004	0.917	1.305	0.968	0.947	1.196
2004–2005	0.965	1.888	0.984	0.981	1.822
2005–2006	1.053	0.990	1.113	0.947	1.043
2006–2007	1.239	0.814	1.045	1.186	1.008
2007–2008	0.783	1.783	0.882	0.888	1.396
2008–2009	0.801	1.439	0.872	0.919	1.153
2009–2010	0.932	1.054	0.943	0.988	0.982
Mean	1.000	1.097	0.989	1.010	1.067

Notes 1 = 100 %; *TEC* technical efficiency change; *TC* technological change; *PEC* pure efficiency change; *SEC* scale efficiency change; *TFPC* total factor productivity change

a set of time-dependent bank-specific variables, B, and the random error term u, allowing for appropriate interaction and time effects to test the impact FDI on TFPC.[4]

7.5 Empirical Results

7.5.1 First Stage: Productivity Estimation

Table 7.2 presents decomposed components of the Malmquist TFPC estimates as in Casu et al. (2004), Isik and Hassan (2003), Mukerjee et al. (2001), Delis et al. (2008), and Dogan and Fausten (2003). Annual results are geometric means, and indices of change are calculated relative to the previous year using successive reference technologies.

[4] Pearson and Kendall's correlation coefficients among the explanatory variables of the second-stage regressions are available from the author on request. They reveal fairly low to moderate correlations, indicating that they can all be included in the empirical estimation without particular concerns in terms of multicollinearity, except ROE which is highly correlated with ROA, COST, CPE and NIM.

Results suggests that the average bank experienced a productivity growth of 6.7 %, comprising a technological progress of 9.7 %, a slight managerial efficiency regress of 1.1 %, and scale efficiency progress of 1 % over the 1992–2010 period.

TFPC vary across the sample period with a negative change of 40.9 % from 1992–1993 to 1993–1994 attributable to the economic contraction due to the 1994 crisis, which affected the Turkish banking sector badly. In contrast, TEC experienced only a 27.7 % decline over the same period. Following, an immediate recovery of 30.3 % is observed in TFPC during 1994–1995, while the impact of the 1994 crisis affected TEC by a further decline of 16.1 % over the same period. Moreover, frequent fluctuations in the TFPC scores of banks are monitored with the most devastating productivity regress during 1993–1994, 1996–1997 and 2000–2001.

Starting with 1996, banks in the sample experienced a negative TFPC until 1999 followed by a year productivity growth in the period of 1999–2000. We suggest the negative trend over the period of 1996–1999 as a contagion effect of the Russian crisis in 1998 as it is one of the largest trading partners of Turkey. Attributable to the twin crises, TFPC was negative during 2000–2001 which suggests the fact that banks could not cope with the changing economic and technological environment that arose from the twin crises and know-how transferred into the system by foreign investors.

The significant positive TFPC starting in 2001–2002 period may be correlated with the signing of the tough IMF recovery program in 2002, and entry of foreign banks into the system, for instance the sale of Demirbank to HSBC, and acquisition of Koçbank with UniCredito during 2001 and 2002, respectively. In connection with Eller et al. (2005) this may be the result of better management of financial resources to high return projects, technological progress and better risk diversification of foreign-invested banks. For instance, during 2003–2004, the productivity growth (19.6 %) was primarily the result of technological progress (30.5 %), which was partly offset by technical inefficiency (8.3 %). Taken together, these results suggest that unproductive banks tend to catch up with productive banks largely in terms of technological change as banks experienced recessions in their technical efficiency change estimates.

The last months of 2008 witnessed the worst global financial crisis since the Great Depression of 1929–1930 and major world markets as well as a number of US and EU banks declared massive losses which had considerable reflections in Turkey, although to a rather limited extent in comparison with many other countries. The reasons behind the relatively limited negative effects on the Turkish banking sector can be attributable to high capital adequacy ratio, high asset quality, low currency and liquidity risks, successful risk management and effective public supervision of Turkish banks. Moreover, measures taken by the Central Bank of Turkey (CBT) and Bank Regulation and Supervision Agency (BRSA) against the increase in global financial risks helped the banking sector to maintain healthy functioning (Bank Association of Turkey 2009).

Table 7.3 presents the pre and post FDI productivity scores of banks that experienced FDI. It is observed that except from Denizbank, all foreign invested banks have experienced productivity growth during the pre-FDI periods. This

Table 7.3 Pre-FDI and post-FDI TFPC scores of foreign invested banks, 1992–2010

Foreign invested banks	1992–2000	2000–2004	2004–2005	2005–2006	2006–2007	2007–2008	2008–2009	2009–2010
Şekerbank	1.133	1.174	0.826	1.455	**1.113**	**0.919**	**1.281**	**0.916**
TEB	0.956	1.199	1.448	**0.997**	**0.848**	**0.917**	**1.194**	**0.953**
Garanti	1.081	1.133	1.347	**1.191**	**0.940**	**1.047**	**1.002**	**0.840**
YKB	1.028	1.103	1.032	**1.084**	**1.044**	**1.127**	**1.010**	**0.890**
Akbank	1.043	1.265	1.166	1.151	**1.072**	**1.021**	**1.063**	**0.776**
Koçbank	1.060	**1.081**	**1.907**					
Dışbank	1.084	0.983	1.101	**1.055**	**0.954**	**1.255**	**0.991**	**0.968**
Demirbank	1.035	**1.119**	**1.068**	**1.176**	**0.969**	**0.846**	**1.199**	**1.196**
Denizbank	0.866	0.907	1.5514	0.321	**1.062**	**1.045**	**0.872**	**0.807**
Finansbank	1.035	1.188	1.228	**0.797**	**1.012**	**0.947**	**0.953**	**0.744**

Numbers in bold represents the post-FDI periods

supports the argument that efficiency or productivity is a pre-condition to FDI and foreign investors targeting well performing banks to invest in.

7.5.2 Second Stage: Impact of Bank Characteristics on Productivity

In order to complement the results of productivity estimates, this section presents correlation coefficients of various accounting measures with the DEA-Malmquist components. The null hypothesis is that the correlation coefficient between two variables is zero. In all cases, the Pearson (p) coefficient results confirm all the relationships found with the Kendall's (k) in the direction (positive or negative) and significance.

All of the DEA-Malmquist decomposed components, namely, TEC, TC, PEC and SEC, are positively correlated with TFPC ($p_{TFPC-TEC} = 0.4253$, $p_{TFPC-TC} = 0.6962$, $p_{TFPC-PEC} = 0.4362$, $p_{TFPC-SEC} = 0.0561$, respectively). TC is highly positively and statistically significantly associated with TFPC. TEC is more related to PEC and SEC than to TC ($p_{TEC-PEC} = 0.7114$, $p_{TEC-SEC} = 0.5134$, $p_{TEC-TC} = 0.2617$, respectively), confirming the dominant effect of managerial efficiency and scale efficiency in determining the technical efficiency of the Turkish commercial banks. This finding also confirms a similar statement by Isik and Hassan (2002). Over the analysis period, the predominant source of TFPC is observed as TC confirmed by the significantly positive Pearson and Kendall's correlation coefficients. Moreover, high-tech investments brought into the system by foreign-invested banks is suggested to play a crucial role on positive TC, shifting the frontier upwards. The results also indicates a trade-off between managerial efficiency and technical progress over the period of analysis, which could be explained by the fact that technological transfers through FDI takes time to materialize as resources have to be devoted to learning during which banks seek ways of attaining gains in terms of managerial or scale efficiency.

As expected, COST, a proxy measure for cost management, is significantly negatively correlated with TEC, PEC and TFPC as well as proxy measures of accounting performance, which is ROA, ROE and NIM. CPE, a proxy for cost efficiency of employees, is significantly and positively correlated with TC, PEC and TFPC, although negatively correlated with TEC, SEC and accounting performance measures.[5] The number of employees per bank (EMP) indicates higher employee costs per bank as it is higher, thus as expected, it is significantly negatively correlated with TEC, PEC and TFPC. Moreover, logarithm of total assets (SIZE), as a proxy for bank size, is solely significantly negatively correlated with

[5] Isik and Hassan (2002), and Berger and Mester (2003) also report a strong correlation between efficiency scores and commonly used financial ratios.

SEC.[6] INTER, a proxy for intermediation power of a bank, is significantly positively correlated with all decomposed components of the productivity index. In fact, lower loans to total assets and higher deposits to total assets ratios, which represent the intermediation power of a bank means a comparative advantage in collecting primary deposits (Bonin et al. 2005). In addition, various models were estimated to control for alternative bank specific factors with the help of dummy variables (FDI and time dummies). In particular, Model 1 is the base model where the impact of FDI on TFPC is examined, while controlling for bank specific characteristics. In Model 2, we additionally control for market structure by including POSTFDI and private bank without FDI (PNONFDI) variables in the regression equations.

As a result of high correlation (0.8455) between ROA and ROE, we decided to include only ROA as a control variable. However, we are aware that this may be problematic since higher efficiency may lead to higher profits measured by ROA, and therefore may be endogenous. However, it may also be argued that it is important to include ROA in order to control for managerial efficiency. Thus, as a robustness check, ROA is included in the model as independent variables, but also estimated it without ROA. Fortunately, the dependent variable, TFPC, was not affected by the inclusion of ROA. In addition, all equations have been run with and without time dummies for robustness check. The empirical findings suggest significantly negative correlation between TEC and year 2005, whilst rest of the year suggests no effect. In contrast, the year dummies illustrated a significant impact on TFPC, that is, positive for years 1993 and 2007, and negative for 1992, 2001, 2003 and 2004. With regard to the impact of banks specific control variables presented in Table 7.4, larger bank size (SIZE) has a positive impact on TFPC (0.00715), while the effect of ROA (−0.0084) and COST (−0.0185) are significantly negative. Suprisingly, all three FDI dummies, that is, the year of foreign investment (FDI), period representing pre-non FDI (PNONFDI) and period representing post FDI (POSTFDI) are insignificant on TFPC. This finding once again supports the hypothesis that FDI does not affect TFPC scores of banks. Therefore, it can be suggested that enhanced productivity is a pre-condition not a result of foreign investment.[7]

7.6 Concluding Remarks

Employing a two-stage DEA Malmquist model, the impact of foreign ownership and bank specific factors on total factor productivity change (TFPC) scores of 17 Turkish commercial banks over the period 1992–2010 period is examined in this

[6] Log of total deposts is also used as a proxy of bank size by Bonin et al. (2005).

[7] Following Sathye (2001), Isik and Hasan (2002), and Havrylchyk (2006), parametric (ANOVA) and non-parametric (Wilcoxon, Kruskal–Wallis and Kolmogorow-Smirnov) tests are applied to check the null hypothesis that all banks come from the same population.

Table 7.4 Regressions of the DEA-Malmquist measures on bank characteristics

Dependent variable	TFPC	TFPC Without ROA	TEC	TC	PEC	SEC	ROA	NIM
Equation number	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
TEC	0.892***	0.897***		−0.791***	0.897***	0.990***	1.236	2.292
	(−0.137)	(−0.132)		(−0.116)	(−0.034)	(−0.031)	(−1.840)	(−11.630)
TC	1.138***	1.138***	−0.214***		−0.035	0.023	0.798	−10.450*
	(−0.000)	(−0.000)	(−0.031)		(−0.036)	(−0.038)	(−0.956)	(−6.009)
PEC	0.166	0.144	0.836***	−0.122		−1.013***	−1.201	−11.880
	(−0.145)	(−0.139)	(−0.032)	(−0.123)		(−0.019)	(−1.776)	(−11.230)
SEC	−0.047	−0.076	0.829***	0.071	−0.910***		−1.174	−10.740
	(−0.137)	(−0.132)	(−0.026)	−0.116	(−0.018)		(−1.683)	(−10.650)
TFPC			0.892***	0.879***	0.031	−0.020	−0.701	9.189*
			(−0.137)	(−0.005)	(−0.031)	(−0.033)	(−0.840)	(−5.282)
ROA	−0.008***		0.002***	0.004	−0.002	−0.002		−1.680***
	(−0.005)		(−0.024)	(−0.005)	(−0.002)	(−0.003)		(−0.401)
NIM	0.018**	0.016**	0.007	−0.001*	−0.000	−0.000	−0.044***	
	(−0.000)	(−0.000)	(−0.000)	(−0.000)	(−0.000)	(−0.000)	(−0.010)	
SIZE	0.007*	0.002*	−0.000	−0.002	0.000	0.000	0.002	−0.085
	(−0.001)	(−0.002)	(−0.000)	(−0.001)	(−0.000)	(−0.000)	(−0.021)	(−0.131)
INTER	0.015**	0.007**	0.004*	−0.000	−0.000**	−0.006**	0.003	−0.147***
	(−0.000)	(−0.000)	(−0.000)	(−0.000)	(−0.000)	(−0.000)	(−0.007)	(−0.043)
COST	−0.019**	−0.016**	0.003	0.014**	0.000	−0.000	0.061	0.506
	(−0.007)	(−0.007)	(−0.003)	(−0.006)	(−0.003)	(−0.004)	(−0.089)	(−0.562)
CPE	−0.008	−0.002	−0.000	0.001	0.000	0.000	−0.020**	−0.171
	(−0.000)	(−0.000)	(−0.000)	(−0.000)	(−0.000)	(−0.000)	(−0.010)	(−0.066)
NPL	0.002**	0.002**	−0.005**	−0.002**	0.000	0.000	−0.006	−0.042
	(−0.000)	(−0.000)	(−0.004)	(−0.001)	(−0.000)	(−0.000)	(−0.011)	(−0.069)

(continued)

Table 7.4 (continued)

Dependent variable	TFPC	TFPC Without ROA	TEC	TC	PEC	SEC	ROA	NIM
Equation number	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
EMP	−0.002	−0.000	−0.000	−0.000	0.000	0.000	0.018**	0.098*
	(−0.000)	(−0.000)	(−0.000)	(−0.000)	(−0.000)	(−0.000)	(−0.008)	(−0.052)
FDI (dummy)	0.008	0.018	−0.000	−0.017	−0.005	−0.004	0.373**	3.964***
	(−0.017)	(−0.016)	(−0.007)	(−0.014)	(−0.008)	(−0.008)	(−0.169)	(−1.291)
PNONFDI(dummy)	0.006	0.012	−0.005	−0.011	0.000	0.000	0.162	5.151***
	(−0.018)	(−0.018)	(−0.008)	(−0.016)	(−0.009)	(−0.009)	(−0.229)	(−1.410)
POSTFDI(dummy)	0.008	−0.020	−0.000	0.018	0.002	0.005	−0.182	1.683
	(−0.024)	(−0.024)	(−0.011)	(−0.021)	(−0.013)	(−0.012)	(−0.306)	(−1.926)
Y1992	−0.059**	−0.052**	0.014	0.043*	−0.000	0.014	0.616*	1.797
	(−0.028)	(−0.027)	(−0.012)	(−0.024)	(−0.013)	(−0.013)	(−0.339)	(−2.162)
Y1993	0.060**	0.043*	−0.007	−0.039*	−0.006	0.000	−0.306	−1.923
	(−0.024)	(−0.024)	(−0.011)	(−0.021)	(−0.011)	(−0.012)	(0.244)	(−2.569)
Y2001	−0.057**	−0.067**	−0.001	0.036*	0.008	0.011	1.015***	−2.995
	(−0.024)	(−0.021)	(−0.011)	(−0.021)	(−0.011)	(−0.012)	(−0.291)	(−1.908)
Y2003	−0.050**	−0.078**	0.004	0.014	−0.001	−0.003	0.105	−1.795
	(−0.023)	(−0.025)	(−0.011)	(−0.021)	(−0.011)	(−0.012)	(−0.299)	(−1.665)
Y2004	−0.058**	−0.060**	−0.001	0.002		0.003	0.358	−0.862
	(−0.024)	(−0.024)	(−0.012)	(−0.012)		(−0.013)	(−0.304)	(−1.924)
Y2005	0.027	0.019	−0.022*			0.025*		
	(−0.024)	(−0.038)	(−0.012)			(−0.013)		
Y2007	0.052**	0.067**	0.007			−0.015		
	(−0.025)	(−0.033)	(−0.011)			(−0.012)		
No of obs.	251	251	251	251	251	251	251	251

Standard error of coefficients presented in parenthesis. *, ** and *** indicate significance levels of 10, 5 and 1 %, respectively

chapter. In the first-stage analysis, empirical findings suggest that mean productivity estimates of foreign invested banks are higher than those of domestic banks. In general, banks that have received foreign investment were already profitable and productive over the pre-FDI period suggesting that foreign investor targeted banks with good performance scores.

Over the years under study, the Pearson and Kendall's correlation coefficients identified TC as the most powerful and significant component on TFPC scores of Turkish commercial banks. The major investments in high tech bank operations shifted the frontier upward, in particular after entry of foreign banks in the sector. This is due to the fact that foreign involvement created pressure on Turkish banks as a result of increased competition and forced them to diminish their costs. In the second-stage analysis, eight panel regression equations are used to examine impact of FDI as well as bank specific control variables on the DEA Malmquist components. Moreover, the same equations have been run with and without ROA and time dummies for robustness check. Interestingly, empirical findings reveal that FDI dummies are not significant on all decomposed components but are on ROA and NIM. Moreover, except from COST, NPL and EMP, the rest of the bank specific variables have a significant impact on TFPC.

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Chapter 8
Financial Determinants of Bank Profits: A Comparative Analysis of Turkish Banking Sector

Hasan Dincer, Ümit Hacioglu and Senol Emir

Abstract The main purpose of this study is to analyze the role of financial determinants on the bank profits in the Turkish Banking Sector. A comparative analysis has been conducted to predict the bank profits using Support Vector Regression (SVR) and Linear Regression (LR) models. The results illustrate that *Net Interest Income After Specific Provisions/Total Operating Income, Non-Interest Income/Non-Interest Expense, Provision For Loan or Other Receivables Losses/Total Assets* predictors have the most relative importance on SVR while *Non-Interest Income/Non-Interest Expense, Provision For Loan or Other Receivables Losses/Total Assets predictors* have it on LR. On the datasets containing these predictors, performances of SVR and LR models were compared based on Root Mean Square Error (RMSE) and Mean Absolute Error (MAE) metrics. The findings present that SVR predicts the level of bank profits better than classical LR model based on both metrics.

8.1 Introduction

Understanding the nature of profitability in banking sector relies on capital market conditions as well as predicting the complex structure of financial determinants for financial performance. During the last five years, the banking industries in

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advanced economies have experienced severe financial crisis which had negative impacts on financial performance and capital structure. Subsequently the financial crisis in capital markets had its reflections on the global economic activity and was followed by deep economic downturns. Economic activity, which relies on the intermediation role of the banks, requires the stability in the financial markets. In addition to this, the major transformations in banking industry and deregulations in financial markets throughout the World have subsequently affected the structure and financial performance of the banking sector in emerging economies and Turkey.

The most of the studies on the bank profits are concentrated in the efficiency and productivity of the banking sector. Moreover, integrated models used with the international and domestic determinants and the econometric analysis by the unbalanced panel dataset have been conducted to predict bank profits, efficiency and market concentrations prior to this study.

Capacity, the level of competition and size of the banks are the main pillars of the profit efficiency studies. Tax, monitoring and religiosity in the banking sector have been also among the selected topics to identify the profit efficiency of the banking sector. Other interests in bank profits are listed in a wide perspective like religiosity effect, deregulation, and information technology.

The determinants of the bank profits have attracted the interest of investment funds and of academic research.

This chapter argues that predicting the banking profitability based on selection process of the methods, which analyze the financial determinants of the banks, determines the success of investment decisions.

The Hypothesis is conducting a comparative analysis to predict the determinants of the bank profits that effect the success of investment decisions for decision makers using Support Vector Regression (SVR) and Linear Regression (LR) Models.

A comparative analysis has been conducted to predict the determinants of the bank profits using SVR and LR models. In this comparative model, the selected predictors are: Net *Interest Income after Specific Provisions/Total Operating Income, Non-Interest Income/Non-Interest Expense, Provision for Loan or Other Receivables Losses/Total Assets*. On the datasets containing these predictors, performances of SVR and LR models were compared based on Root Mean Square Error (RMSE) and Mean Absolute Error (MAE) metrics.

The study begins by a literature review of financial determinants of bank profit and the Support Vector Machines (SVM). In the second part, a comparative method has been conducted to testify the hypothesis. Finally, the result of this study will be discussed and recommendations will be provided for portfolio managers, investors and scholars.

8.2 Literature Review

8.2.1 Bank Profits

This chapter considers the internal factors of the banks to predict the bank profits. However, there are some different types of research methods on the bank profits.

The most of the studies on the bank profits are concentrated in the efficiency and productivity of the banking sector. Moreover, the main researches of the efficiency are mostly related to the data envelopment analysis. Chu and Lim (1998) evaluated the relative cost and profit efficiencies of 6 Singapore banks using the data envelopment analysis. The results show that changes in the prices of the bank shares result in changes in the profit rather than the cost efficiencies. Dasa and Ghosh (2009) highlighted the impact of financial deregulation on the profit efficiency and costs of Indian banks with the nonparametric data envelopment analysis. The outcomes emphasize that the inefficiency of the revenue of the banks reflects the high levels of cost and low levels of profit efficiency.

Williams (2003), Kosmidou et al. (2007) developed the integrated model using the international and domestic determinants for the banks' profits. Williams (2003) used the pooled regressions to determine the parameters. The findings of the study demonstrate that the competitor market share and bank licence status have a negative effect on the bank profits besides the positive effect of the GDP growth. Kosmidou et al. (2007) considered the econometric analysis by the unbalanced panel dataset and the model results show that the significant factors are listed as liquidity, loan loss provisions or cost efficiency, concentration or market share.

Ownership type and risk profile of the banks are also important factors to examine the profit efficiency in the banking sector. Ariff and Can (2008) examined the cost and profit efficiency of 28 Chinese commercial banks with the ownership type, risk profile, profitability, and key environmental changes using a Tobit regression. The findings demonstrate that the levels of the profit efficiency are under the cost efficiency. Gnezditskaia (2003) offered the profit strategies for the various types of Russian Banks. The study inspects the bank functions under the political and economic constraints and the effects of the constraints on the banking sector. Gander (2013) focused on the micro and macro analysis of the two-equation integrated bank profit and risk-avoidance decisions for 5 European Countries and their banks. Key findings illustrate that the profit rates of the banks are negatively related to the volatility of the capitalization rates of the banks.

Capacity and size of the banks are the main pillars of the profit efficiency. Maudos et al. (2002) analyzed the cost and profit efficiency of European banks to obtain levels of the profit efficiency that are lower than levels of the cost efficiency. The study examines that there are some different sources of the efficiency such as the size, specialization, the characteristics of the other banks and the market. Akhigbe and McNulty (2003) investigated the profit efficiency of small banks in metropolitan and non-metropolitan statistical areas. The factors of structure performance, relationship development, expense-preference are to explain the profit

efficiency of small US commercial banks. DeYoung and Hasan (1998) examined the profit efficiency of the US Banks by Tobit regression analysis for the performance of de novo commercial banks. The results present that excess branch capacity, reliance on large deposits, and affiliation with a multibank holding company are combined with the low profit efficiency in the banks. Cyree and Spurlin (2012) investigated that the effects of big-bank presence on the profit efficiency of small banks in rural markets. The study suggests that the big banks in rural markets which have the priority of the market share with their own higher ROA increased the level of interest and income from loans.

Competition is another prominent issue on the bank profits. Berger et al. (2000) argued the persistency of the bank profits by explaining the roles of banking market competition, informational opacity and macroeconomic shocks. The results uncover that obstacles to competition and informational opacity get the main determinants of the persistence. Goddard et al. (2011) clarified the competition in 65 national banks with the extent of the persistence of bank profit using dynamic panel estimates. Findings show that the persistence of bank profit indicates the intensity of competition. Nevertheless, the persistence is inversely related to the growth rate in GDP per capita.

Tax and monitoring in the banking sector are among the selected topics to identify the profit efficiency of the banking sector. Akhigbe and McNulty (2011) established the literature of the linkage between bank monitoring and profit efficiency. The authors have developed the fixed-effects regression model to demonstrate that the more the banks have resources to monitoring, the more they have the profit efficiency. Chiorazzo and Milani (2011) investigated the impacts of corporate income tax and value added tax on pre-tax profits of European banks. The results display that corporate income tax affects loss provisions by the way of the negative implications on stability of the banking system.

Other interests in bank profits are listed in a wide perspective as religiosity effect, deregulation, and information technology. Farook et al. (2012) emphasized the profit distribution management by Islamic banks. The authors suggest the model that includes positively related factors such as religiosity, financial development, assest quality, availability of the discretionary reserves, while negatively affecting factors are market familiarity, concentration, depositor funding reliance and the age. Tatjé (2011) examined the differences across organizational forms in the profit, productivity and distribution of Spanish commercial and saving banks, financial cooperatives. The findings demonstrate that deregulation and liberalization acted to narrow performance gaps among organizational forms. Ausina et al. (2012) conducted the statistical analysis for the changes in profit and productivity of Spanish commercial banks using linear programming techniques. Outcomes suggest that profit change differentials are not constantly significant. Oliver and Fumás (2008) studied on the contribution of the investments in information technology and advertising to Spanish banks' profit. The findings demonstrate that the growth in the stock of information technology capital defines one third of output growth of banks.

8.2.2 Support Vector Machines

Support Vector Machines (SVM) is a learning algorithm based on Statistical Learning Theory which provides a very effective framework for learning tasks (Vapnik 1995). Contrary to many traditional models, which employ empirical risk minimization, SVM implements structural risk minimization (SRM) principle. Instead of minimizing the deviation of the training data points from correct solution, SRM tries to minimize the upper bound of the generalization error. This strategy makes overfitting to occur less likely with SVM (Kim 2003). Rather than solving non convex, unconstrained optimization problem, SVM models are constructed by solving a quadratic optimization with linear constraints. Solution is global, unique and sparse (Suykens et al. 2002).

The ability of providing nonlinear mappings makes SVM successful in applications where there exists a complex, nonlinear relationship between inputs and outputs. Support Vector Classification (SVC) and Support Vector Regression (SVR) are two main categories for SVM (Basak et al. 2007). Some of the selected financial applications that SVM models were applied in can be listed as: forecasting bankruptcy (Shin et al. 2005; Xiao-si et al. 2006), developing an early warning system for financial crisis (Ahn et al. 2011), credit rating (Chen and Shih 2006), credit data fraud detection (Hejazi and Singh 2012), credit scoring (Huang et al. 2007), stock selection (Huang 2012), stock trend prediction (Ni et al. 2011), financial distress prediction (Sun and Li 2012).

8.3 Methodology

This study examines the capability of Support Vector Regression method for predicting bank profits. The prediction results of SVR are compared with those by LR.

Consider a training set of N points which is shown as $\{x_i, y_i\}_{i=1}^{N}$ with x_i inputs and $y_i \in \mathcal{R}$ outputs. Linear SVR function is in the following form

$$f(x) = w^T x + b$$

where w is weight vector and b is offset term.

To build a SVR model ε—nsensitive loss function which is denoted in (Eq. 8.1) is used (Vapnik 1998).

$$|y - f(x)|_{\varepsilon} = \begin{cases} 0 & \text{if } |y - f(x)| \leq \varepsilon \\ |y - f(x)| - \varepsilon & \text{otherwise} \end{cases} \tag{8.1}$$

As shown in Fig. 8.1, in SVR, a tube with radius ε is fitted to the data (Schölkopf and Smola 2002). Slack variables (ξ) measures deviations of data points lying outside of the tube. ε—insensitive loss function is more robust to outliers because it is not affected by small errors and it is also affected less by large

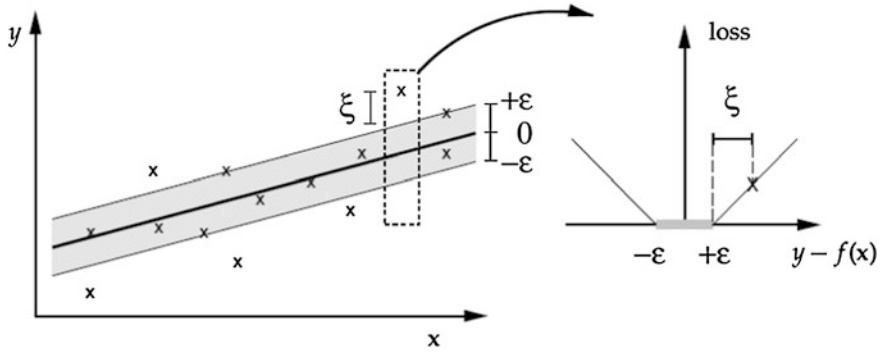

Fig. 8.1 ε—tube and ε—insensitive loss function (Schölkopf and Smola 2002)

errors. Errors up to ε are tolerated, errors beyond ε have a linear effect (Alpaydın 2009).

Based on the ε—insensitive loss function Empirical Risk (R_{emp}) can be expressed as follow.

$$R_{emp} = \frac{1}{N}\sum_{i=1}^{N}|y_i - f(x_i)|_{\varepsilon} \tag{8.2}$$

For minimizing empirical risk, primal optimization formulation can be written as (Eqs. 8.3, 8.4).

$$Objective\ Function \begin{cases} \min\limits_{w,b} & \frac{1}{2}w^T w \end{cases} \tag{8.3}$$

$$Constraints \begin{cases} y_i - w^T x_i - b \le \varepsilon, & i = 1,\ldots,N \\ w^T x_i + b - y_i \le \varepsilon, & i = 1,\ldots,N \end{cases} \tag{8.4}$$

This primal optimization problem has a convex objective function and liner constraints. Using Lagrange multipliers and Karush-Kuhn-Tucker (KKT) optimality conditions primal problem can be solved (Campbell 2011).

To measure the deviations of data points from the ε—insensitive tube (Eqs. 8.3, 8.4) is transformed to the (Eqs. 8.5, 8.6) by using nonnegative slack variables which are represented as ξ and ξ^*.

Primal Objective Function

$$\min_{w,b,\xi,\xi^*} \quad \frac{1}{2}w^T w + C\sum_{i=1}^{N}(\xi_i + \xi_i^*) \tag{8.5}$$

$$Constraints \begin{cases} y_i - w^T x_i - b \le \varepsilon + \xi_i, & i = 1,\ldots,N \\ w^T x_i + b - y_i \le \varepsilon + \xi_i^*, & i = 1,\ldots,N \\ \xi_i, \xi_i^* \ge 0, & i = 1,\ldots,N. \end{cases} \tag{8.6}$$

C term controls the tradeoff between empirical error and complexity of the model (Cortes and Vapnik 1995).

Primal form can be written in dual form (Eqs. 8.7, 8.8) by introducing Lagrange multipliers and KKT optimality conditions.

$$\max_{\alpha,\alpha^*} -\frac{1}{2}\sum_{i,j=1}^{N}\left(\alpha_i-\alpha_i^*\right)\left(\alpha_j-\alpha_j^*\right)x_i^T x_j-\varepsilon\sum_{i=1}^{N}\left(\alpha_i+\alpha_i^*\right)+\sum_{i=1}^{N}y_i\left(\alpha_i-\alpha_i^*\right) \tag{8.7}$$

Such that

$$\begin{aligned}&\sum_{i=1}^{N}\left(\alpha_i-\alpha_i^*\right)=0\\&\alpha_i,\alpha_i^*\in[0,C].\end{aligned} \tag{8.8}$$

Solution of the dual optimization problem (α_i,α_i^*) gives regression function (Eq. 8.9) in dual space as follow

$$f(x)=\sum_{i=1}^{N}\left(\alpha_i-\alpha_i^*\right)x_i^T x+b \tag{8.9}$$

SVR maps the input data (x) into a high dimensional feature space by using a nonlinear mapping and performs a linear regression in this feature space (Cherkassky and Mulier 2007). In this case regression function becomes

$$f(x)=w^T\varphi(x)+b \tag{8.10}$$

where $\varphi(x)$ is the high dimensional feature space which is mapped from input space nonlinearly. Primal optimization problem in feature space is given by Eqs. (8.11, 8.12)

Objective Function

$$\min_{w,b,\xi,\xi^*}\quad \frac{1}{2}w^T w+C\sum_{i=1}^{N}\left(\xi_i+\xi_i^*\right) \tag{8.11}$$

$$\textit{Constraints}\begin{cases}y_i-w^T\varphi(x_i)-b\le\varepsilon+\xi_i, & i=1,\ldots,N\\ w^T\varphi(x_i)+b-y_i\le\varepsilon+\xi_i^*, & i=1,\ldots,N\\ \xi_i,\xi_i^*\ge 0, & i=1,\ldots,N.\end{cases} \tag{8.12}$$

Dual form of the primal objective function can be written as (Eqs. 8.13, 8.14)

$$\max_{\alpha,\alpha^*} -\frac{1}{2}\sum_{i,j=1}^{N}\left(\alpha_i-\alpha_i^*\right)\left(\alpha_j-\alpha_j^*\right)K\left(x_i,x_j\right)-\varepsilon\sum_{i=1}^{N}\left(\alpha_i+\alpha_i^*\right)+\sum_{i=1}^{N}y_i\left(\alpha_i-\alpha_i^*\right) \tag{8.13}$$

Such that

$$\sum_{i=1}^{N}\left(\alpha_i - \alpha_i^*\right) = 0, \alpha_i, \alpha_i^* \in [0, C]. \tag{8.14}$$

Solving this optimization problem gives α_i, α_i^* Lagrange multipliers. By using these values regression function given by Eq. 8.9 now has the following form

$$f(x) = \sum_{i=1}^{N}\left(\alpha_i - \alpha_i^*\right)K(x, x_i) + b \tag{8.15}$$

In (Eq. 8.15) K is defined as kernel function which is the inner product of two vectors x_i and x_j in the feature space $\varphi(x_i)$ and $\varphi(x_j)$ (Hamel 2009). Equation 8.16 shows kernel definition

$$K\left(x_i, x_j\right) = \varphi(x_i)^T \varphi\left(x_j\right) \tag{8.16}$$

Typical kernel functions are in Table 8.1.

Kernel parameters (r, d, γ) have implicit effect on the structure of the high dimensional feature space and control the complexity of the solution. Thus kernel parameters must be chosen carefully (Samsudin et al. 2010).

8.4 Empirical Data and Analysis: An Application on the Turkish Banking Sector

8.4.1 Research Data and Determinants

There are three main types of the deposit bank groups operating in Turkish banking sector. By 2012, foreign banks (F) cover 9 banks, privately-owned banks (P) consist of 12 banks, and state-owned banks (S) include 3 banks in this study.

The determinants of the bank profits are adapted from the existing literature on domestic variables of the banks affecting the profits. The study also implies the comprehensive results by the ownership of the banks (Table 8.2).

Table 8.1 Common kernel functions

Kernel type	Kernel function
Linear	$K\left(x_i, x_j\right) = x_i^T x_j$
Polynomial	$K\left(x_i, x_j\right) = \left(\gamma x_i^T x_j + r\right)^d, \gamma > 0$
Sigmoid	$K\left(x_i, x_j\right) = tanh\left(\gamma x_i^T x_j + r\right)$
Radial basis function (RBF)	$K\left(x_i, x_j\right) = exp\left(-\gamma\left(\left\|x_i - x_j\right\|\right)^2\right), \gamma > 0$

Table 8.2 Firm-based financial determinants of the bank profits

Independent	Definition	Predictor
Capital ratio	Shareholders' equity/total assets	X1
Market share by the assets	Total assets of the bank/total assets of the all banks	X2
Interest efficiency	Net interest income after specific provisions/total operating income	X3
Non-interest productivity	Non-interest income/non-interest expense	X4
Liquidity	Total loans and receivables/total assets	X5
Asset quality	Provision for loan or other receivables losses/total assets	X6
Dependent		*Target*
Return on assets	Net profit (losses)/total assets	Y

Source Adapted from Williams 2003; Kosmidou et al. 2007

8.4.2 Findings and Discussion

The most common kernel used in SVM application is RBF kernel (Chang et al. 2010). For all SVR models RBF kernel was tested.

Prediction accuracy of a SVM model largely depends on the selection of the model parameters. In order to find appropriate parameters, grid search is utilized. Grid search evaluates the each parameter values in a specified range using geometric steps and try to find the global optimum. Table 8.3 shows the search range of the model parameters.

K-fold cross validation is used during the search process to select the optimal parameters and to verify the final model. In analyses 4-fold cross validation was performed.

Table 8.4 shows summary statistics for predictor variables. The independent variables with the smallest standard deviation are X6, X2 while X4 is the variable which has the largest standard deviation.

Table 8.3 Parameters and search ranges for grid search

Parameter	Search range
C	0.1–5000
Gamma	0.001–50

Table 8.4 Summary statistics for predictor variables

Variable	Min	Max	Mean	Std. Dev.
X1	3.264	84.976	16.767	15.053
X2	0.003	18.681	3.846	4.916
X3	−169.353	185.584	57.033	30.737
X4	−134.648	749.536	69.001	80.400
X5	0.000	84.716	44.776	20.097
X6	0.000	37.993	1.264	2.772

Statistics for the target variable (Y) are reported on the Table 8.5. According to the number of observations, P type banks have the largest data set (132 observations) while S type banks have the smallest one (33 observations). Standard deviation values are also valid for the ranking 6.855 and 0.620 respectively.

All the comparisons are based on Root Mean Square Error (RMSE) and Mean Absolute Error (MAE) which are defined as in Eqs. 8.17, 8.18.

$$RMSE = \sqrt{\frac{1}{N}\sum_{i=1}^{N}(y_i - f(x_i))^2} \tag{8.17}$$

$$MAE = \frac{1}{N}\sum_{i=1}^{N}|y_i - f(x_i)| \tag{8.18}$$

Each bank type dataset is separated into training (2002–2011 period) and testing (2012) sets. Table 8.6 summarizes the results obtained from SVR and LR models for the each bank type on the training and testing sets according to RMSE and MAE criteria.

The banks in F category with the best test results are given by LR model both on RMSE and MAE criteria. On the other hand, SVR gives better a result than LR for both P and S types of the banks on RMSE and MAE base. Table 8.6 indicates that for the both performance criteria, the best test results are provided on S type bank dataset by SVR model. Table 8.7 shows the model parameters for each SVR

Table 8.5 Statistics for target variable (Y)

	F	P	S	Overall
N	99	132	33	264
Mean	2.167	0.158	2.179	1.165
Standard deviation	2.684	6.855	0.620	5.222
Minimum	−0.5	−63.2	0.4	−63.239
Maximum	21.5	5.9	3.4	21.523

Table 8.6 Result provided by SVR and LR models

Model	Criteria	F		P		S	
		Training	Testing	Training	Testing	Training	Testing
SVR	RMSE	1.190	2.021	1.556	1.127	0.166	0.444
	MAE	0.612	1.147	0.532	0.634	0.0392	0.390
LR	RMSE	1.029	1.913	2.584	1.166	1.029	1.913
	MAE	0.636	1.131	1.610	0.857	0.636	1.131

Table 8.7 Model parameters for SVR models on each data sets

	F	P	S
C	4048.413	2693.196	0.955
Gamma	0.003	0.811	36.402

models created on F, P and S type bank data sets. S data set which best test results obtained from, has the smallest C and the biggest Gamma value.

Relative importance of each predictor was computed based on sensitivity analysis which measures the effects of the predictors on the quality of the model. The relative importance of the predictor variables for bank categories is shown in Table 8.8.

By considering minimum relative importance as 20 % it can be inferred that for F type banks the predictors that contain the largest amount of information about dependent variable are X4 and X1 (2 predictors). For the P type banks, these predictors are X4, X3, X6, X1 (4 predictors). S type bank dataset has the biggest number of informative predictor as its all predictor variables with a relative importance are bigger than 20 %. This is an indicator why the best test results on this data set were obtained.

Table 8.9 gives the training and testing performances of SVR and LR models on the whole dataset based on two criteria namely RMSE and MAE. While LR gives better test result based on RMSE, SVR outperforms LR based on the MEA criteria.

Table 8.10 presents relative importance values of the predictors on the complete data set for the SVR and LR. X6, X4, X3 contain more information than other variables for SVR model and predictors of which relative importance is bigger than 20 % are X6 and X4 for LR model.

Based on the Table 8.11, a new reduced dataset is formed. Table 8.11 shows the training and testing performances of SVR and LR on these datasets. On dimensionally reduced data set, (instead of using 6 predictors containing 3 predictors namely X3, X4, X6) SVR gives better results for both performance criteria.

Table 8.8 Relative significance of predictors for each bank type

F		P		S	
Variable	Importance	Variable	Importance	Variable	Importance
X4	100.000	X4	100.000	X6	100.000
X1	20.401	X3	73.041	X4	94.180
X2	19.176	X6	70.492	X5	90.349
X5	3.181	X1	21.067	X1	89.676
X3	0.831	X5	11.149	X2	87.231
X6	0.079	X2	9.438	X3	63.524

Table 8.9 Performance results of SVR and LR model on complete dataset

Model	Criteria	Overall banks	
		Training	Testing
SVR	RMSE	1.580	2.373
	MAE	0.806	1.044
LR	RMSE	2.336	1.887
	MAE	1.407	1.152

Table 8.10 Relative variable importance for the SVR and LR on the whole data set

SVR		LR	
Variable	Importance	Variable	Importance
X6	100.000	X6	100.000
X4	79.397	X4	47.821
X3	26.763	X3	6.762
X1	18.435	X5	2.086
X5	7.739	X2	0.607
X2	1.719	X1	0.379

Table 8.11 Performance results of models on reduced data set

Model	Criteria	Overall banks	
		Training	Testing
SVR (x3, x4, x6)	RMSE	2.046	1.857
	MAE	0.894	0.752
LR (x4, x6)	RMSE	2.494	1.902
	MAE	1.506	1.128

On RMSE base, it gives 1.857 (better than 2.373 obtained on complete dataset) and 0.752 MAE (again better than 1.044 obtained on complete dataset).

LR model gives very close results for the reduced and not reduced data set (1.902 and 1.887 respectively) on RMSE base. On the other hand, reduced data set gives slightly better results than complete data set (1.128 and 1.152 respectively) on MAE metric.

Analysis results by the ownership type of the deposit banks demonstrate that all the independent variables including in the study have relative significances with the degree of higher than 20 % to determine the profits for the state-owned banks. However, four predictors that contain of non-interest productivity, interest efficiency, asset quality and capital ratio are meaningful for modeling the profits of privately-owned banks. The profits of foreign deposit banks founded in Turkey are highly explained by the determinants of non-interest productivity and capital ratio.

The relative importance of the determinants of the bank profits by the all dataset is separately illustrated for each method. The results show that the model gives the best predictive solutions with the independent variables of non-interest productivity and asset quality.

As a result, the model that explains the profits of the state-owned banks needs all independent parameters of the study. It means that the profit dynamics of the state-owned deposit banks are highly appreciated with the firm-based financial factors. Thus, not only markets share by the assets but also liquidity which defines the total loans and receivables/total assets, are mostly among the important factors to examine the profits of the state-owned deposit banks. These results also illustrate that state-owned banks have a huge market competition and share in the Turkish banking sector.

Privately-owned and foreign banks have two joint independent variables that are non-interest productivity implies non-interest Income/non-interest expense and capital ratio defines shareholders' equity/total assets to explain the profits. The findings present that the private and foreign banks mostly focus on the non-interest products and incomes with their potential capital to reach the aim of the profitability. That's why new product and service development in the banking sector are the most productive way to share the market in the fierce competition.

8.5 Conclusion

The results of this study illustrate the confirmation of the hypothesis on considerable relationship between firm-based financial determinants of the bank performance and the profitability. The traditional approach to the banking performance evaluation consists of internal and external parameters while it generally omits comparative models. In this study Support Vector Regression method was applied to predict the bank profit. To construct the best model optimal SVR parameters were found by using grid search. Results show that SVR can be a useful tool for predicting bank profits on the overall. The most efficient predictors that determine the bank profit were revealed.

The major contribution of this study is to develop a generic model which correlates the best possible prediction for bank profits and selection process of financial determinants together with internal parameters. With this comparative method, it has been illustrated that the profits of the state-owned deposit banks can be predicted with the all firm-based financial determinants of the study. This is an indicator that the state-owned banks have prominent competitive advantages to get in the profitability with not only interest-based activities but also non-interest productivity. Moreover, privately and foreign owned deposit banks widely utilize the advantages of non-interest income and its productivity with their potential capital to become profitable banks.

The limitation of this study is that the model covers the relative importance of the financial criteria for the Banks located in Turkey. Non-financial parameters have not been considered in this comparative model. Moreover, different types of banking ratios that affect the profit can also be added to data set. Limited numbers of financial determinants for the bank profit assessment process have been selected from Turkey excluding others from advanced and emerging economies. This study could be further widened by considering ensemble methods employed with SVR that can be used to get better prediction performance. In addition, the study can be expanded for comparative analysis between banking industries in advanced and emerging markets. The obtained results have also important consequences in implementing portfolio investment strategies.

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Chapter 9
Computation of the Potential Trade of Turkey in the OIC Market Through Estimator Selection Process

Engin Sorhun

Abstract As the trade volume of Turkey has tripled in the last decade, one observes a complementary shift in the trade orientation of the country from its conventional markets like the European Union to Asian and African markets. Among the alterative markets, the members of the Organization of Islamic Cooperation (OIC) have become particularly important in the market diversification policy of Turkey. In this respect, computing the actualized trade potential can not only account for the dynamic change in trade orientation of the country but also presents a guideline for policy makers and firms. On the other hand, since recent research in literature stated that estimations of potential trade through a single estimator (monotype estimation) lead to overestimations (or underestimations) which misguide policy makers; thus, this paper employs an estimator selection process. For that purpose, this study uses a gravity model estimated by multiple alternative estimators to assure the econometric credibility. This paper aims at (1) choosing the most adequate estimator possible for the case through an estimator selection process, (2) computing the trade potential of Turkey in the OIC market, and (3) revealing to what extent the trade potential has been actualized up to now.

9.1 Introduction

Using a gravity model in studies by analyzing bilateral trade between two entities has a history of 50 years (Timbergen 1962; Linnemann 1966; Aitken 1973). However, the discussion over the gravity model seems to have shifted over the

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course of time from an empirical to theoretical argument and to econometrical argument: The theoretical lack of this model was discussed and widely fulfilled (Anderson 1979; Helpman and Krugman 1985; Bergstrand 1989, 1990). In the 1990s a shift from cross-section to panel occurred due to the use of data-set in the model (Baldwin 1994; Gros and Gonciarz 1996; Matyas 1997; Eagger 2000). Moreover, from the beginning of the 2000s, different estimation methods have been proposed due to the criticism on the monotype econometric technique used in the estimation of the model (Disdier and Head 2003; Brun et al. 2005; Bun and Klaassen 2002; De Nardis and Vicarelli 2003). A long gravity model was used as a technical instrument for policy preference (economic integration, trade blocks, regional trade agreements etc.), especially in predicting future trade or potential trade (Wang and Winters 1992; Hamilton and Winters 1992; Baldwin 1994). However, recent studies indicate that using a single estimation method in forecasting potential trade or gain from economic integration causes overestimations or underestimations of the potential gain and thus misleads policy-makers in their future decisions. This fact requires the use of different estimation techniques and choices of the best among them (estimator selection process).

This study provides a survey of the literature related to the topic and reviews several mostly used estimation methods. The performances of linear, nonlinear, and dynamic estimators are compared using estimator selection process while estimating the potential trade of Turkey in the OIC market. To this end, a standard gravity equation based on theoretical model is used. The main goal of these studies is not only predicting trade by gravity model but also providing technical support to trade policy makers for their decisions. The rest of the study is organized as follows: Sect. 9.2 summarizes the recent developments in the Turkey- OIC trade and the changing pattern in the trade orientation of Turkey; Sect. 9.3 discusses the econometrics of the model; Sect. 9.4 specifies the estimation models; Sect. 9.5 reports the results of the estimated models; Sect. 9.6 deals with the realized magnitude of the potential export of Turkey in the OIC market; and finally Sect. 9.7 presents the conclusion and remarks.

9.2 Recent Developments in Turkey-OIC Trade

Turkey has tripled its total export volume and has quadrupled its total import volume with the rest of the world in the last decade (Table 9.1) due to changes in the trade policy and market diversification. Turkey has diversified its export markets especially with the members of the Organization of Islamic Cooperation (OIC). Most OIC members are neighboring countries of Turkey. Market diversification alleviated the dependence of Turkey on European export market, and made it less fragile vis-à-vis the effect of the global crisis that reduced export demand in Europe. However, the EU is still the main trade market even after the policy change. Exports toward the EU countries and imports from them have

Table 9.1 Trade orientation of Turkey

Periods	Turkey's trade flows		EU share in total trade		OIC share in total trade	
	Exports	Imports	In exports (%)	In imports (%)	In exports (%)	In imports (%)
1996–2003	$30.7 bil.	$49.5 bil.	56	52	15	10
2003–2011	$101.6 bil.	$161.6 bil.	50	40	23	10

increased in volume but not in share. The EU export share in the total export volume of Turkey decreased on average by 6 % since 2003 while the EU import share in the total import volume of Turkey is found 12 % low under the habitual level. Nevertheless the decrease in the import share is not complemented by any imports from neighboring regions but emerging countries like China, Russia, and India. Turkey has also diversified its import markets but not with the OIC countries. Following the years when the foreign market diversification policy was implemented the OIC share in the total exports of Turkey has increased on average 8 % while the OIC share in the total imports remained stable. One of the probable reasons of that situation is the lack of production complementarity[1] (out of energy commodities).

If we look at the composition of traded goods between Turkey and the OIC countries one observes that Turkey exports final goods and imports raw materials and energy commodities from them. Raw materials and energy commodities are the only goods for the OIC countries leading to production complementarity.[2] It makes them advantageous vis-à-vis Turkey in the trade balance.

9.3 Econometrics of the Gravity Based Potential Trade Estimation

The theoretical foundation of the gravity model was tested 17 years after its empirical specification. However, during the 1980s the model's theoretical deficiency was challenged by Anderson (1979) through a good differentiation model; Bergstrand (1989) through a factorial model and Bergstrand (1990) through a

[1] It can be expected that Turkey has a differentiated goods based manufacturing market for exporting toward the OIC counties while they lack production complementarity for exporting toward Turkey.

[2] The lack of production complementarity and the relative similarity of resource endowments (except energy commodities) between Turkey and the OIC members argues against intraregional trade since the comparative advantage among countries in question is mainly in the same products. The lack of diversified products in manufactures has limited the trade opportunities in the course of time. Due to this fact Turkey that historically concentrated its trade flows mainly with the European countries.

monopolistic competition model; Helpman and Krugman (1985) through scale of economies in imperfectly competitive markets; Helpman (1987) through increasing return to scale and good differentiation by firmly providing a theoretical foundation following its empirical success. In fact, each attempt was paving the way of the "new trade theory". Although any theoretical justification of the model was seen to be derived from the conventional trade theory, (Deardorff 1998) it continues being popular in the empirical literature.

During the 1990s, the econometric side rather than theoretical side in the gravity literature was discussed. A shift in data-setting from time series and cross-section (Wang and Winters 1992; Hamilton and Winters 1992; Collins and Rodrik 1991; Brulfart and Kelly 1999; Nilsson 2000) to panel (Baldwin 1994; Gros and Gonciarz 1996; Matyas 1997; Eagger 2000) was observed. A cross-section or time-series had been used for long under heterogeneity assumption. But the likelihood of misspecification rises when one does not deal with business cycles (time-series) and cross-country differences (cross-section) together. Panel data is useful to capture both of them while estimating the model. Due to its advantages[3] compared to time-series and cross-section panel data became more popular especially from the second half of the 1990s.

Furthermore, during the 2000s, the econometric side of the model was intensively questioned. That questioning implied two discussions: The first was about the adequacy and efficiency of the standard parameters of the gravity model (misspecification): To give an example, Disdier and Head (2003), Brun et al. (2005) investigated to what extent the "distance" factor captures transport cost and concluded that opposite to expectations, the negative impact of distance on trade is not shrinking, but increasing over time; however, distance has weaker negative for rich countries than for developing countries.

The second discussion is relevant to econometric methods for estimation (estimator selection). Until the last decade, the OLS was almost the standard estimation technique in the gravity based literature. However, this situation was challenged using different estimators. Among them, the Fixed Effect Model (FEM) and Random Effect Model (REM) (in linear models) and GLS, FGLS, PPML (in non-linear models) came into prominence. From an economic point of view, the FEM's seem to be preferred the REM (Eagger 2002; Baldwin 1994; Matyas 1997; Matyas 1998).

Major factors that stand behind fixed effects may be political (tariff policy, membership of supranational entities etc.) or environmental (path dependency, historical, geographical etc. facts). As these facts are connected to specific characteristics of countries, they cannot be considered as random. Thus, FEM would be the right choice in order to test whether or not tariffs or non-tariff barriers (cultural, historical, geographic, political facts) promote bilateral trade. From an econometric point of view, FEM is preferred to REM if Hausman's test null hypothesis

[3] Matyas (1998) points out two major advantages of panel data: to increase degree of freedom, to correctly account for importing country effect.

is rejected (Baltagi 2001; Green 1997). Besides, FEM-within estimator econometrically provides an advantage while avoiding misspecification due to inclusion of country-specific characteristics in constant term.

An advanced step in the use of panel has recently gained ground in gravity literature: dynamic panel. The logic behind dynamic panel's use is that trade among countries can be linked not only to political, cultural, geographical facts but also to export oriented infrastructure, periodic growth in investment, or radical changes that these countries experienced in the past. In fact, the mentioned argument alludes to a dynamics specification in panel data.

In an important part of the literature a gravity equation is estimated in order to predict trade potentials. The main goal of these studies is to estimate an additional gain from economic integration or trade bloc formation between two (or more than two) countries. They played an important role in providing predictions about potential gain expected by policy makers of countries while joining an integration bloc or ratifying a trade agreement. However, it is possible that monotype estimations of a gravity model, i.e. with standard parameters and through unique estimator, misguided policy makers. In the last decade, econometric questioning suggested that trade potentials could be overestimated in the past (Haris and Matyas 1998; Eagger 2002; De Benedictis and Vicarelli 2004).

Overestimation of trade potential is more evident particularly when only OLS is used without resorting to other (linear or non-linear) estimators. Measurement of trade potential by a gravity model was intensively adopted by many authors in the framework of predicting potential cost and gain from the integration of the ex-socialist Eastern European countries to the European Union (Wang and Winters 1992; Hamilton and Winters 1992; Baldwin 1994; Gros and Gonciarz 1996; Brenton and Di Mauro 1999; Nilson Nilsson 2000). Using a monotype estimator (OLS), most of them focused on the parameters and observed that different specifications gave different results. However, as recent studies indicated that OLS can lead to overestimations (or underestimations) of the gravity model, the OLS-based estimations of the trade potential in the past become disputable[4] "The choice of the estimator is very important if we want to draw some political guidelines from a gravity equation. The same 'standard' gravity equation might illustrate different results […]". De Benedictis and Vicarelli (2004).

Consequently, it is adequate to estimate or re-estimate trade potentials by a gravity equation using different estimators and techniques. Recently, the studies which allow us to compare different techniques and choose the best one among them (estimator selection) instead of doing with monotype estimation foreground in the gravity literature. Estimating a gravity equation without estimator selection can lead to underestimations or overestimations. For this reason it seems that the more various techniques are used in estimating it the higher the credibility of a

[4] De Benedictis and Vicarelli (2004) estimates 143 cases using several estimators: OLS based estimation give %46 of untapped trade potential but using FEM-within and GMM estimators this reduced 24 and 3 %, respectively. Additionally, there is a great difference between static and dynamic estimators. Dynamic estimator gives a better result.

study is. Besides, there is never a *best-for-all* but *the best among bad* technique due to estimator selection. However, every technique can be good for a specific case not for every case.

9.4 Specification of the Gravity Equation

The basic gravity equation that is used in the estimation of potential trade of Turkey in the OIC market is written in nonlinear form as follows:

$$X_{ijt} = \alpha_0 Y_{it}^{\beta_1} Y_{jt}^{\beta_2} Pop_{it}^{\beta_3} Pop_{jt}^{\beta_4} FCR_{jt}^{\beta_5} PG_{ijt}^{\beta_6} Dist_{ijt}^{\beta_7} \tag{9.1}$$

The model predicts that the trade between two countries depends on their size, each country's income, and distance between them. Where X_{ijt} is the value of exports between country i and j at time t; Y_{it} and Y_{jt} are the levels of their GDP at time t; Pop_{it} and Pop_{jt} are the population of Turkey and the population of the partner country at time t; FCR_{jt} is the foreign currency reserve of the partner country at time t; PG_{ijt} is the price gap captured by differentiation of CPI of the partner country from that of Turkey at time t; and $Dist_{ijt}$ the income weighted geographical distance[5] between the two countries at time t. It is fundamentally expected that trade is positively affected by economic size $(\beta_1, \beta_2 \geq 0)$ and negatively related to distance $(\beta_7 \leq 0)$.

The model is re-written so as to be adaptable into cross-sectional time-series data settings to capture stationary process.[6] With these specifications the gravity model takes the following linear form including an error term ε_{ijt}:

$$\begin{aligned} lnX_{ijt} = {} & \alpha_0 + \beta_1 lnY_{it} + \beta_2 lnY_{jt} + \beta_3 lnPop_{it} + \beta_4 lnPop_{jt} + \beta_5 lnFCR_{jt} \\ & + \beta_6 lnPG_{ijt} + \beta_7 lnDist_{ijt} + \varepsilon_{ijt} \end{aligned} \tag{9.2}$$

To capture partner country specific fixed effect (γ_j) and business cycle (time) effect (λ_t) some specifications are added:

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[5] $DIST_{ijt} = Distance * \left|\frac{GDP_{it} - GDP_{jt}}{GDP_{it} + GDP_{jt}}\right|$. The distance variable is measured in kilometers between capitals and computed as GDP weighted for every time period.

[6] In Gravity type models time-fixed regressors like geographical or cultural distance, language and institutional (dummy) variables are widely used to analyse the impact of trade costs on bilateral trade. Panel data settings help avoid the inconsistency problem due to a correlation of the time-fixed regressors with the combined error term in the model. It is the major reason for using gravity models based on panel data in the literature on trade. Nevertheless, since estimated gravity models based on panel data are often static they only allow for contemporaneous effects of the regressors on trade while ignoring dynamics effects (De Grauwe and Skudelny 2000). In multi-country case cross-sectional time series data set, in bi-country case time-series data set allows to explain dynamic effects while estimating gravity model.

$$lnX_{ijt} = \alpha_0 + \beta_1 lnY_{it} + \beta_2 lnY_{jt} + \beta_3 lnPop_{it} + \beta_4 lnPop_{jt} + \beta_5 lnFCR_{jt} + \beta_6 lnPG_{ijt} + \beta_7 lnDist_{ijt} + \gamma_j + \lambda_t + \varepsilon_{ijt} \quad (9.3)$$

Finally, the estimation model is transformed by introducing a lagged dependent variable (i.e. lagged export flows) for dynamic panel estimation in nonlinear form:

$$lnX_{ijt} = \alpha_0 + \beta_1 Y_{it} + \beta_2 Y_{jt} + \beta_3 Pop_{it} + \beta_4 Pop_{jt} + \beta_5 FCR_{jt} + \beta_6 PG_{ijt} + \beta_7 Dist_{ijt} + \beta_8 X_{ijt-1} + \varepsilon_{ijt} \quad (9.4)$$

9.5 Estimation Results

Table 9.2 reports the estimated outcomes resulting from the different methods used for estimator selection. As/For the estimation method, FGLS is used as nonlinear estimators (Eq. 9.1); OLS, FEM and REM as linear estimators (Eqs. 9.2 and 9.3 respectively; and GMM as dynamic estimator. The models are estimated for Turkey and 43 OIC members (Appendix A) for 16 year long period (except for the model estimation by GMM estimator which covers 15 years due to lagged variable). All data is given yearly from 1996 to 2011. Export data is taken from the Trade Statistics of the Turkish Statistical Institute (2012), and population and income data are obtained from the United Nations Database (2012). All monetary variables is calculated using 1996 data in US dollars. In calculating the distance variable "Surface Distance between Two Points of Latitude and Longitude" program of Bayers (1997) is employed.

Before dealing with the specification tests, which look at the overall significance of the models: Fisher's test is run to test the null hypothesis that the independent variables do not reliably predict the dependent variable. The p value associated with the computed F value gives a high overall significance for the estimated models rejecting the null hypothesis above 99.99 %. Since Fisher's test does not address the ability of any of the individual independent variables to predict the dependent variable, the t-values of the estimated coefficients are listed in the parenthesis. The estimated coefficient in the five types of estimation, except for some parameters in the FGLS estimation, are significant at 0.05 or 0.10 levels. R^2 indicates the power of explication of the dependent variables for the independent variable. However, this value varies according to the selected estimation techniques: the dependent variables in OLS, FEM, REM and GMM models predict to a large extent the independent variables (exports) while they predict only 29 % of the dependent variable in FGLS model.

Conventionally, the gravity model has been estimated using the OLS assuming that the variance error is homoscedastic (i.e. the error is constant across countries). However, the presence of heteroskedasticity may make estimation by OLS inconsistent. As Santos Silva and Tenreyro (2006) emphasized, the log-linearization

Table 9.2 Estimation results

	Non-linear	Linear			Dynamic
Variables	FGLS (1)	OLS (2)	FEM (3)	REM (2)	GMM (4)
No. of Obs.	688	688	688	688	645
R^2	0.29	0.84	0.82	0.71	0.75
CONS	3.650021*	4.650021*	2.265987*	3.258741*	3.252710*
	(6.262510)	(6.108745)	(5.896413)	(4.592222)	(2.364921)
GDP_{it}	1.421516**	1.332510*	–	1.162614*	1.241236*
	(1.782614)	(3.375691)		(3.265947)	(2.131649)
GDP_{jt}	1.241114**	1.0125340*	–	0.910161*	0.811216*
	(1.890014)	(2.225173)		(3.012220)	(2.131649)
POP_{it}	0.751687	0.6097150*	–	0.519985*	0.661211*
	(0.569421)	(2.110285)		(3.895461)	(2.651418)
POP_{jt}	0.442614	0.3478911*	–	0.3112591*	0.260169*
	(1.112616)	(2.762260)		(3.132647)	(3.326161)
FCR_{jt}	0.221614	0.1228940*	0.032616*	0.150061**	0.111216*
	(1.015470)	(1.999857)	(2.221601)	(1.872614)	(1.996594)
PG_{ijt}	−0.1418981	−0.1135200*	−0.042601*	−0.090809*	−0.071216*
	(−0.986471)	(−2.694468)	(−3.760041)	(−2.162548)	(−4.121366)
$Dist_{ijt}$	−0.561316**	−0.5502987*	−0.362619*	−0.310200*	−0.262619*
	(−1.862364)	(−4.450001)	(−4.256410)	(−3.264879)	(−2.561214)
γ_j	–	–	11.265892*	–	–
			(5.001594)		
λ_t	–	–	0.063501*	–	–
			(5.289410)		
X_{ijt-1}	–	–	–	–	0.151649*
					(3.111611)
Fisher	Prob>	Prob>	Prob>	Prob>	Prob>
	F = 0.001	F = 0.001	F = 0.000	F = 0.000	F = 0.000
Wooldridge	Prob>	Prob>	Prob>	Prob>	Prob>
Autocorr	F = 0.007	F = 0.016	F = 0.045	F = 0.002	F = 0.033
Greene Test	Prob>	Prob>	Prob>	Prob>	Prob>
Heteroked	chi2 = 0.022	chi2 = 0.001	chi2 = 0.000	chi2 = 0.000	chi2 = 0.000
Hausman				Prob>	
				chi2 = 0.063	

**significant at 0.05 level; at 0.1 level*

of the gravity model alters the nature of the error term and thus leading to inefficient estimations if the data are heteroskedastic.[7] Thus, they suggest the use of a nonlinear estimator as a solution. Using alternative estimators Martinez-Zarzoso et al. (2007) propose FGLS since it weights the observations according to the root of their

[7] "However, the expected value of the error term is a function of the regressors if the data are heteroscedastic- as usually happens with trade data […] Heteroskedasticity does not affect the parameter estimates; the coefficients should still be unbiased, but it biases the variance of the estimated parameters and, consequently, the t-values cannot be trusted" (Herrera 2012).

variances and is robust to any form of heteroskedasticity. Running Greene's test the presence of heteroskedasticity is detected in OLS, FEM, REM, GMM estimations as well as in the FGLS estimation. Though the p-value of the null hypothesis for Greene's test in FGLS is higher than the p-values in other models, FGLS does not perform as predicted by Martinez-Zaroso et al. (2007). These findings support the consideration that there is no single *remedial* technique that is used well for performing in every case.[8] On the other hand, Anderson and van Wincoop (2003) point out that there are some aspects differing from one country to another but are not captured by the regressors (country specific effects). To control for this unobserved heterogeneity they introduce "multilateral resistance terms" into the gravity equation. Alternatively, Feenestra (2002) proposes the inclusion of a country fixed effect to obtain unbiased estimates that may matter for heteroskedasticity's consideration. FEM assumes the presence of an unobserved heterogeneous component that is constant over time and which affects each country in a different way. However, fixed effects are relevant to cross-sectional units (export and import effects) or to time periods as fixed effects are due to omitted variables (Hsiao 1986). Contrarily, REM assumes that the unobserved heterogeneous components are strictly exogenous.

To decide between FEM and REM, a Hausman's test where the null hypothesis is that the preferred model is random effects vs. the fixed effect is run. It tests whether the unique errors are correlated with the regressors (i.e. the null hypothesis is that they are not). Since the null hypothesis is rejected over REM, then FEM is preferred to REM in this study. Thus, country-pair specific fixed effects and time varying fixed effects correct the unobserved heterogeneity; drop the economic and population sizes of the countries. Both fixed effects are significant and have positive impacts on the exports of Turkey in the OIC market.

Finally, by ignoring the endogeneity problem, which leads to biased estimation, the GMM estimator involves numerical minimization of potentially highly nonlinear functions with respect to the full parameter vector is used for dynamic gravity panel estimation. The estimated coefficients of the lagged endogenous variables can capture the relevance of the trade pattern through dynamic panel[9]

[8] Another problem observed in panel data is autocorrelation. To detect the presence of autocorrelation Wooldridge test is conducted. The null hypothesis that there is no autocorrelation is rejected for the whole models. The autocorrelation problem is solved through AR(1) method while the heteroskedasticity problem is solved through White's cross section coefficient covariance method.

[9] However, in spite of fitted estimations the statistical significance of the dynamic panels is arguable: "If trade is a static process, the within estimator is consistent for a finite time dimension T and an infinite number of country-pairs N. But if trade is a dynamic process, the estimate of a dynamic panel […] with the inclusion of a lagged dependent variable is more complex. If country specific effects are unobserved, they are included in the error term; the introduction of the lagged dependent variable on the right hand side of the equation leads to correlation between the lagged dependent variable and the error term that (for a finite T and an infinite N) renders least square estimator biased and inconsistent. If time dimension T is fixed, the transformation needed to wipe out the country-pair fixed effects could not resolve the problem" (Baltagi 2001).

(Eagger 2001; De Grauwe and Skudelny 2000; Bun and Klaassen 2002; De Nardis and Vicarelli 2003).

The inclusion of previous export values as a lagged dependent variable into the estimation by GMM reveals that for every unit increase in X_{ijt-1} there is 0.15 unit increase in the predicted exports of Turkey toward the OIC members. As expected, the lagged exports have no minor but positive and significant effect on the current export flows.

This type of the estimators seems to affect the magnitudes but not the signs of the parameters for most gravity variables. As predicted in the gravity literature, regardless of the employed estimator, the fundamental parameters of the gravity equation (i.e. the economic and population sizes of the countries) give positive signs and increase exports while the distance gives negative sign and reduces exports. As for other variables, foreign currency reserves have positive but a price gap, which has a negative impact on the exports of Turkey toward the OIC countries. Note that when a specific country and time specific dummies are included in the FEM estimation, the coefficient of foreign currency reserves of the target country and the coefficient of the price-gap between Turkey and the target country decreases.

9.6 Realization of the Potential Export

In this section, to compare the potential trade volume (predicted through the estimated gravity coefficients) with the actual trade volume is computed by using: $A/P\ Exports\ Index = \left(\frac{Actual\ Exports_{ijt}}{Potential\ Export_{ijt}}\right) * 100.$

This index measures to what extent Turkey realizes its trade potential in the OIC market over the period. If the A/P Export Index exceeds 100, then the conclusion indicates that Turkey is over-exporting; if it falls behind 100, then the conclusion is that Turkey is under-exporting to the OIC Market and thus it has export potential in the OIC market. The results are presented in graph 1. A/P Export Indexes calculated on the basis of FEM, REM, GMM estimators have similar paths while A/P the Export Index calculated on the basis of OLS seemingly dissociates from the general trend. This indicates the possibility of an overestimation of potential exports by OLS. If the OLS estimator overestimates the potential trade, it leads to a lower A/P Index due to the lower computation in the realization of potential trade. However, A/P by FGSL gives a volatile path since the estimator performs on a highly biased structure. Regardless of the selected estimators, the graph shows that during the period, Turkey has realized more of its potential trade in the OIC market, especially since 2004. As the averages of the calculated A/P Export Indexes before and after 2004 are considered, Turkey's average actual to potential exports has varied between 59 % (minimum by OLS) and 77 % (maximum by FEM) since 2004 while it was between 52 % (minimum by OLS) and 73 % (maximum by FEM). Whichever estimator is used, it more or

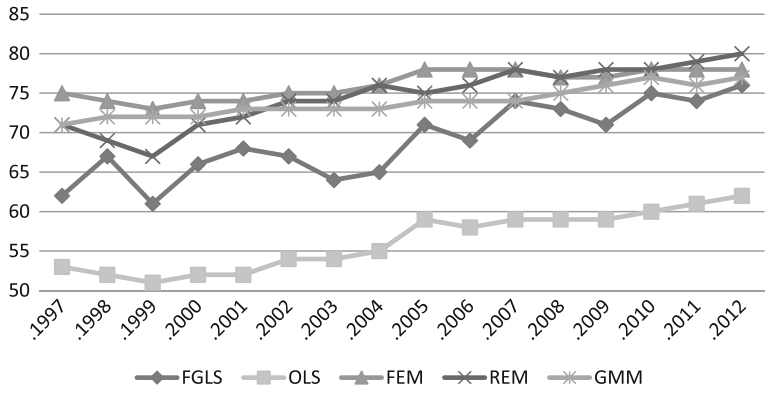

Fig. 9.1 A/P export index according to the selected estimators

less points out an increase of 4–5 % in the realization of potential exports by Turkey in OIC market. It seems that the market diversification policy has recently contributed to the Turkey's performance in its export market within the OIC market (Fig. 9.1).

9.7 Conclusion

The advantage of an estimator selection process comes from the fact that there is not a standard estimation technique appropriate to every case. Every case has its own private nature and data structure. As the use of monotype estimation technique leads to the possibility of overestimation or underestimation and misguides policymakers in their critical decisions, an estimation selection is advantageous to minimize errors. Using the same model with various techniques and comparing the results, each other estimator selection process provides a degree of freedom to get the most robust result possible. However, it requires using, testing and comparing multiple methods. While forecasting the potential export realization of Turkey in the OIC market, this study employed linear, nonlinear and dynamic models. Since the OLS and FGLS estimations in this study are inconsistent due to the presence of unobserved heterogeneity and individual effects are not distributed randomly, the FEM estimation becomes more consistent. Besides, dealing with the endogeneity problem by using a dynamic model becomes important. In this study the GMM estimation gives highly robust estimation results. Although FEM and GMM are relatively highlighted in this study, different or similar results may be obtained using different methods. On the other hand, using the estimators as deterministic functions, the estimated coefficients are employed to compute the potential export value of Turkey in the OIC market. Moreover, the actual export value is proportioned to the computed values to develop an index. Five different estimators

used in this study commonly indicate that Turkey seems to be under-exporting to the OIC countries during the period mentioned. It was calculated that exports are well below its potential level. However, this trend appears to be broken, especially after 2004 when there was a change in the trade policy (market diversification). Additionally, the path of the OLS based calculation differs from those of the FGLS, FEM, REM, and GMM based calculations which have similar orientations during the period. It may result from the possibility of overestimation by OLS as indicated in recent literature.

Appendix A

Azerbaijan, Jordan, Afghanistan*, Albania, The United arab emirates, Indonesia, Uzbekistan, Uganda*, Iran, Pakistan, Bahrain, Brunei-Darussalam, Bangladesh, Benin, Burkina-Faso, Tajikistan, Turkey**, Turkmenistan, Chad, Togo, Tunisia, Algeria, Djibouti, Saudi Arabia, Senegal, Sudan, Syria, Suriname*, Sierra Leone*, Somalia, Iraq, Oman, Gabon, Gambia, Guyana*, Guinea, Guinea-Bissau*, Palestine, The Comoros, Kyrgyzstan, Cote D'ivoire*, Kuwait, Lebanon, Libya, Maldives, Mali, Malaysia, Egypt, Morocco, Mauritania*, Mozambique*, Niger, Nigeria, Yemen

*Marked countries are excluded due to missing data; **the source country

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Chapter 10
The Evolution of the European Union as a Trade Bloc

Ebru Nergiz

Abstract The European Union is an enormous power in world trade. The huge size of its market, its experience in negotiating international trade agreements, the creation of the Single Market and the creation of the single currency-Euro have turned the European Union into one of the most important trade blocs in the world. This section examines the historical development and evolution of the European Union as a trade bloc. Firstly, the concept of a trade bloc and regional economic integration are examined. In this study, the establishment of the Single Market and European Monetary Union has been evaluated. Finally the impacts of the Euro on the Single Market, the current and future strategies for the Single Market have been discussed.

10.1 Introduction

The European Union was established as one of the most important trade blocs in the World. The European Union (EU) is an economic and political partnership that represents a unique form of cooperation among its 27 member states. The Union is the latest stage of a process of integration. A trade bloc can be defined as a 'preferential trade agreement' (PTA) between a subset of countries, designed to significantly reduce or remove trade barriers within member countries. When a trade bloc comprises of neighboring or geographically close countries, it is referred to as a 'regional trade (or integration) agreement'. It is sometimes also referred to as a 'natural' trade bloc to underline that the preferential trade is between countries that have presumably low transport costs or trade intensively with one another. The two principal characteristics of a trade bloc are that: (1) it

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implies a reduction or elimination of barriers to trade, and (2) this trade liberalization is discriminatory, in the sense that it applies only to the member countries of the trade bloc, outside countries being discriminated against in their trade relations with trade bloc members. Trade blocs can also entail deeper forms of integration, such as international competition, investment, labor and capital markets (including movements of factors of production), monetary policy, etc.

The integration of countries into trade blocs is commonly referred to as 'regionalism', irrespective of whether the trade bloc has a geographical basis or not (Bhagwati and Panagariya 1996). The world economy after World War II has become much more integrated. Eight successive rounds of negotiations under the General Agreement on Tariffs and Trade (GATT) have resulted in significant global trade liberalization and there has been an accelerating trend toward regional integration in every part of the world (Evans et al. 2004). According to Daniels, regional economic integration is the political and economic agreements among countries that give preference to member countries to the agreement (Daniels et al. 2004).

There are four levels of regional economic integration: *Free Trade Agreement* in which countries remove trading barriers among its members; *Customs Union, which* includes common tariffs toward non-members in addition to the conditions of Free Trade Agreement; A *Common Market* that allows for mobility of resources and production; *Economic Integration* which establishes common economic policies and has some political integration without countries relinquishing their sovereignty. In recent years, regional economic integration has grown. There are at least twelve regional integrated areas in the world with the European Union being the oldest and the most integrated (Mariotz and Malhotra 2004). The most dramatic policy-driven exercise in regional integration has been the establishment of the European Common Market in 1958 and its evolution into the European Union (EU) (Evans et al. 2004).

The European Union was created in the aftermath of the Second World War. The first steps were to foster economic cooperation: the idea being that countries which trade with one another become economically interdependent and so more likely to avoid conflict (http://europa.eu/about-eu/basic-information/index_en.htm). The EU has pursued regionalism aggressively as a means of encouraging investment and competition, and to reinforce a multipolarity in the international system.

10.2 The Single Market of the European Union

In 1949, the Council of Europe was established "to achieve a greater unity between its members for the purpose of safeguarding and realizing the ideals and principles which are their common heritage and facilitating their economic and social progress", stated in the Statute of the Council of Europe. In 1957, the European Economic Community (EEC) emerged establishing "a large single

market that would ensure the free movement of goods, people, capital and services with a wide measure of common economic policies". The result was the European Economic Community (EEC), created in 1958, and initially increasing economic cooperation between six countries: Belgium, Germany, France, Italy, Luxembourg and the Netherlands. The EEC than came to be known as the European Community which then changed to what it is called today, the European Union.

It all started with the 1957 Treaty establishing the European Economic Community (EEC) to abolish customs barriers within the Community and establish a common customs tariff to be applied to goods from non-EEC countries. This objective was achieved on 1 July 1968. The Single Market of the European Union is the common area between the 27 EU countries where goods, services, capital and persons can circulate freely. The Single Market also ensures that European citizens are free to live, work, study and do business where they want in the EU. In the mid 1980s, the president of the European Commission, which is a branch of the Union, pursued rigorously, the establishment of a single market.

In February 1986 the Single European Act was signed moving the EC toward a total integrated body, the European Union (http://europa.eu.int/abc/12lessons: *Economic and Monetary Union and the Euro*). By amending the original 1957 Treaty, the EEC gained the enabling instrument for the Single Market. The revised Treaty—the Single European Act—revised the Treaty of Rome in order to add new momentum to European integration and to complete the internal market.

The Single European Act, signed in Luxembourg on 17 February 1986 by nine member States on 28 February 1986 by Denmark, Italy and Greece, is the first major amendment of the Treaty establishing the European Economic Community (EEC). It entered into force on 1 July 1987. Its purpose was the completion of the Single European Market, an area within which there were to be no restrictions on the movement of persons, capital, goods and services.

The chief objective of the Single European Market was to add new momentum to the process of the European construction so as to complete the internal market. The Single Market is defined as 'an area without internal frontiers in which the free movement of goods, persons, services and capital is ensured in accordance with the provisions of this Treaty'. It created the single biggest market and trading unit in the World. Many internal passport and customs controls were eased or lifted, banks and companies could do business throughout the Community, there was little to prevent European Community residents living, working, opening bank accounts and drawing their pensions anywhere in the Community, protectionism became illegal and monopolies on everything from electricity to telecommunications were broken down. The passage of the Single European Act was widely acclaimed as the most important and successful step in the process of European Integration since the Treaty of Rome.

The Single European Act provided for the transformation of the Common Market into a Single Market on 1 January 1993. By creating new Community competencies and reforming the institutions the Single European Act opened the way to political integration and economic and monetary union to be enshrined in the Treaty of Maastricht on the European Union.

10.3 Treaty of Maastricht (The Treaty on the European Union) and Establishment of the European Monetary Union

In the 1970s, the EEC recognized a need to coordinate monetary policy. Thus the European Monetary System (EMS) was established in 1979. It "helped stabilize exchange rates and encouraged the Community member states to implement strict policies that allowed them to maintain their mutual solidarity and to discipline their economies" (http://europa.eu.int/abc/12lessons: *Historic Steps*). The Treaty of the European Union represents a new stage in European integration since it opens the way to political integration. The Treaty on European Union, signed in Maastricht on 7 February 1992, entered into force on 1 November 1993. The Maastricht Treaty creates the European Union, which consists of three pillars: the European Communities and the Economic and Monetary Union (EMU), common foreign and security policy and police and judicial cooperation in criminal matters. The European Economic and Monetary Union make finishing touches to the single market. Generally, economic and monetary union (EMU) is part of the process of economic integration.

10.3.1 Steps of Economic Integration

Independent states can integrate their economies to varying degrees in order to achieve the benefits of size, such as greater internal efficiency and more robustness to external events. The degrees of economic integration can be divided into six steps as (European Commission, One Currency For One Europe The Road to Euro 2007): (1) a preferential trading area (with reduced customs tariffs between certain countries), (2) a free trade area (with no internal tariffs on some or all goods between the participating countries), (3) a customs union (with the same external customs tariffs for third countries and a common trade policy), (4) a common market (with common product regulations and free movement of goods, capital, labor and services), (5) economic and monetary union (a single market with a single currency and monetary policy), (6) complete economic integration (all the above plus harmonized fiscal and other economic policies).

The degree of economic integration in the European Union (EU) varies. All Member States in the EU are part of what we call EMU and form a common market, known as the single market. They all coordinate their economic policy-making to support the aims of EMU. Adopting the euro is an obligation laid down in the Treaty establishing the European Community (the Treaty or EC Treaty).

Several Member States are more integrated and have adopted a single currency—the euro. These countries form the euro area and, as well as the single currency, have a single monetary policy conducted by the European Central Bank. Those Member States which are not part of the euro area retain their own currencies and conduct their own monetary policies. So, the degree of economic integration

within EMU is a hybrid of steps 4 and 5 in the list above. To reach complete economic integration would require all Member States to join the euro area and harmonies their fiscal policies, including taxation, and other economic policies.

In the European Union, the Member States must ensure coordination of their economic policies, provide for multilateral surveillance of this coordination and are subject to financial and budgetary discipline. The objective of monetary policy is to create a single currency and to ensure this currency's stability thanks to price stability and respect for the market economy. In the Maastricht Treaty, it stated that "the national currencies will be replaced by a single European currency—provided the countries concerned meet a number of economic conditions" (http://europa.eu.int/abc/12lessons: *Economic and Monetary Union and the Euro*). Criteria included "that the country's budget deficit cannot exceed 3 % of its gross domestic product (GDP) for more than a short period. Public borrowing must not exceed 60 % of GDP. Prices and interest rates must also remain stable over a long period, as must exchange rates between the currencies concerned".

The Treaty provided for the establishment of a single currency in three successive stages:

1. The first stage, which liberalizes the movement of capital, began on 1 January 1990
2. The second stage began on 1 January 1994 and provides for convergence of the Member States' economic policies
3. The third stage that begins with the creation of a single currency and the establishment of a European Central Bank.

In 1998, the European Central Bank was established for "setting monetary policy and managing the exchange-rate system for all of Europe since January 1, 1999" (Daniels et al. 2004). On 31 December 1998, the conversion rates between the euro and the currencies of the participating Member States were irrevocably fixed. On 1 January 1999, the Euro was introduced and the Eurosystem, composed of the ECB and the national central banks (NCBs) of the euro area Member States, took over responsibility for monetary policy in the new euro area. This was the beginning of a transitional period that was to last three years and end with the introduction of euro banknotes and coins and the withdrawal of national banknotes and coins. While the euro replaced national currencies immediately, with the national currency units becoming sub-units of the euro, it initially existed only as scriptural or "book" money.

National currency banknotes and coins remained the means of everyday cash transactions. During the transitional period it was the world of business and finance that began to use the euro in their everyday cashless operations. For the financial markets this transition happened immediately—the ground was well prepared and trading in financial markets was exclusively in euro. For administrations and business there was a longer transition period as they gradually switched their systems for accounting, pricing and payments over to the euro. For citizens the most visible part of the transition was the appearance of dual pricing on labels in

shops and petrol stations, etc. (European Commission, One Currency For One Europe The Road to Euro 2007).

10.4 The Impacts of the Euro on the Single Market

Besides social effects, a common currency can be argued to play a key role in completing the single market; and as such can be expected to boost trade among monetary union member states. Currency unions go beyond reducing the variability of bilateral exchange rates by eliminating altogether the risk of future changes in the exchange rate, as well as the transaction costs incurred by converting one currency into another. Therefore, decisions based on prices can be taken in a more transparent way than before.

The intuition behind a hypothetical common currency boosting on trade is that agents operating within monetary unions benefit from lower costs of economic exchange disruptions related to fluctuations in real bilateral exchange rates, higher price transparency and other micro-efficiency advantages, and hence a larger number of transactions take place as a result (Costa-i-Font 2010). A study by Andrew Rose found monetary unions to boost trade by almost 300 % (Rose 2000). Similarly, a study by HM Treasury (2003) reported that the entry into the Eurozone would bring the UK a total increase in trade of 50 %. More recently, some critics (Artis 2006) have insisted in that the EMU itself is endogenous to the process of integration, especially among the core economies of Europe. Nonetheless, more recent work by Frankel (2009) has found limited empirical evidence to support the endogeneity claim. The euro has rapidly become one of the world's two major currencies, alongside the dollar. Economic and Monetary Union (EMU) has delivered economic stability within the euro area. Since the start of EMU, inflation has been around 2 % a year, significantly lower than the average 3.3 % in the 1990s and far below the levels witnessed in the 1970s and 1980s when average inflation over the decade stood at 9.3 and 7.5 % respectively. Interest rates have also been low and currency crises are a thing of the past. The euro acts as a shield against turbulence in the global economy, protecting its members from exchange rate volatility (http://ec.europa.eu/achievements_en.pdf).

The Euro had also positive effects on employment. More than 16 million jobs have been created in the euro area since 1999 and the unemployment rate has gone down from 9 % in 1999 to an estimated 7 % in 2008. EMU has helped euro-area governments to get their public finances in shape, which is important for economic stability and sustainability, especially in view of Europe's ageing population as progressively fewer workers have to support an ever greater number of pensioners. With a deficit of 0.6 % of GDP in 2007, the Euro area achieved one of the best results in decades. As late as the 1980s and 1990s the overall fiscal deficit in the euro area was on average around 4 %. Trade among euro-area countries has increased, financial markets are more integrated and business cycles have converged. Capital is moving where it is most productive, which in turn has made investment more

efficient. Within the euro area, trade flows are estimated to have increased by between 5 and 15 % and intra-euro-area foreign direct investment by as much as 15–35 %, thus showing the euro area has become an attractive business location.

10.5 Current and Future Strategies for the Single Market

The first Single Market Act adopted in April 2011 (IP/11/469) came as a response to the crisis and the need to foster growth. (http://ec.europa.eu/internal_market/smact/index_en.htm). The Single Market Act adopted in 2011 aims to meet the challenges of globalization and technological change by enhancing Europe's competitiveness and putting businesses and citizens at the heart of the single market. Twelve new initiatives are designed to promote growth, create jobs, and restore confidence—in tandem with the EU's 2020 strategy for growth. It will be easier for citizens to have their professional qualifications recognized and work in another Member State. Goods will circulate even more easily.

Service providers operating across borders will benefit from new rules that remove restrictions on the provision of services. New approaches to dispute settlement will better enable consumers to take advantage of the opportunities offered by the digital single market, and boost e-commerce by up to €2.5 billion. The joint involvement of the European Parliament, the Council, the European Economic and Social Committee, the Committee of the Regions and many stakeholders in the first Single Market Act led to a widely shared political vision for the further development of the Single Market. It focused political attention, creating a sense of urgency and fast-tracking key actions.

The Communication on the Single Market Act II proposes twelve levers and corresponding key actions, concentrated on four main drivers for growth, employment and confidence: (1) integrated networks; (2) cross border mobility of citizens and businesses; (3) the digital economy; and (4) social entrepreneurship, cohesion and consumer confidence. They constitute the next steps towards the objective of a highly competitive social market economy.

If implemented swiftly, the Single Market Act II, together with the delivery of the Single Market Act I, will open new paths towards growth, employment and social cohesion for over 500 million Europeans. The Commission is committed to delivering all key legislative proposals by spring 2013 and proposals for all key non-legislative actions by the end of 2013. The Commission calls on the European Parliament and the Council to fast-track all key legislative actions and adopts them as a priority by spring 2014.

10.6 Europe in 2020 and the Single Market

The EU's growth strategy for the current decade strives to deliver high levels of employment, productivity, and social cohesion by reaching five objectives by 2020: (1) 75 % of the population aged 20–64 should be employed, (2) 3 % of the

EU's GDP should be invested in R&D, (3) the "20/20/20" targets in terms of reduction of greenhouse gas emissions, renewable energy production, and energy efficiency should be met, (4) the share of school dropouts should be under 10 %, and at least 40 % of the population between the ages of 30 and 34 should have a university degree or diploma, (5) 20 million fewer people should be living below poverty line. (http://www.eurunion.org/eu/images/stories/singlemarket.pdf)

In October 2012 the Commission proposed a second set of actions (Single Market Act II) to further develop the Single Market and exploit its untapped potential as an engine for growth. (http://ec.europa.eu/internal_market/smact/index_en.htm) Deepening the single market and undertaking urgent structural reforms are the keys to achieving these 2020 targets. Growth and job creation depend on healthy, well-connected markets, where competition and consumer access stimulate business and innovation. (http://www.eurunion.org/eu/images/stories/singlemarket.pdf)

10.7 Conclusion

The European Union (EU) is an economic and political partnership that represents a unique form of cooperation among its 27 member states. The Union is the latest stage of a process of integration. In 1957, the European Economic Community (EEC) emerged establishing "a large single market that would ensure the free movement of goods, people, capital and services with a wide measure of common economic policies''.

The huge size of its market, its experience in negotiating international trade agreements, the creation of the Single Market and the creation of the single currency-Euro have turned the European Union into one of the most important trade blocs in the world. Since 1993, the Single Market has brought various benefits and created new opportunities. But free movement of goods, services, capital and people does not always happen smoothly. There is no truly integrated European market in some fields. Pieces of legislation are still missing. Administrative obstacles and lacking enforcement leave the full potential of the Single Market unexploited. Today, it is obvious that the effects of the global financial crisis are still hitting Europe hard: growth needs to be revived, unemployment is persistently high, in particular among young people, and a part of the European population is living in poverty. The Single Market can do more to bring about new growth and jobs, to strengthen citizens' and businesses' confidence and to deliver concrete day-to-day benefits to them. Modernizing and deepening the Single Market is a continuous exercise. The Single Market must respond to a constantly changing world where social and demographic challenges, new technology and imperatives, such as climate change, must be incorporated in policy thinking.

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Part III
Financial Innovations and Regulations

Chapter 11
Application of Lean Six Sigma Methodology in Design and Improvement of Financial Services

Ulas Akkucuk

Abstract Since the day of its inception at Motorola Inc., Six Sigma methodology has been widely used in process improvement by companies all over the world including financial institutions. Users of Six Sigma strive to achieve competitiveness through improving processes. In recent years, "Lean" principles have been merged with the Six Sigma approach in what is known widely as Lean Six Sigma. Six Sigma is not only applicable to manufacturing but also to the service sector. With growing competition in the financial services sector, Six Sigma principles can be used to cut costs, increase efficiency and thereby help companies to stay afloat in the global economy. This paper will try to outline how Lean Six Sigma principles can be used to continuously improve service operations with special emphasis on financial institutions such as banks, insurance companies, individual pension systems, brokerage firms and others. A demonstrative case is also provided on how the principles can be applied in the context of a pension company.

11.1 Introduction

In today's era of globalization, many financial institutions, especially banks, are facing a growing wave of competition from all over the world. Turkey is no exception to this global trend. According to the Turkish Union of Banks (TBB 2013a) there are 45 banks in Turkey as members of the union. Among these only 3 are public banks, 12 are private banks (including the major players such as Yapı Kredi, İş Bankası, Garanti Bankası and Akbank), 10 are foreign operated banks (such as Citibank, Denizbank), 6 are foreign banks with just branch operations (such as JP Morgan, Bank Mellat), 1 consolidated bank belonging to savings deposit insurance authority of the Turkish government (TMSF), and the remaining

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13 are development and investment banks of which also 4 are foreign. With increasing involvement from global players it becomes important for the members of the banking sector to remain competitive. Table 11.1 provides the most recent figures on the number of branches operated by the most prominent banks in Turkey (TBB 2013b). These banks constitute 90 % of the total number of branches in Turkey.

There have been many useful innovations in the financial services sector since the 1960s. It used to be at some point that checks and cash deposits were the main operations of a bank. Credit cards changed the face of banking with the ability to pay with a plastic card. Even then, the card needed to be physically swiped and checked against a book of blacklisted card numbers. IT technologies further changed the face of banking with the ability to communicate online with the main servers. In a study drawing on detailed case studies of IT-based innovations, the five most important innovations have been identified as Interbranch Online service, Automated Teller Machine service, Credit Card service, Remote Banking service, and Electronic Funds Transfer service (Uchupalanan 2000). Today credit cards can even make use of chips with additional security and the ability to make offline touch free payments. Internet and smart phone applications also help the consumers conduct their transactions with ease.

Some innovations in the financial services sector can be in the form of completely radical products yet others can be in the form of improving existing services or processes. An improvement project may involve reducing the time it takes for the loan application and approval process. Another improvement project may involve designing a completely new loan application system such as one involving the use of SMS technology. In order to have a system for continuously improving existing services or processes companies can make use of quality management frameworks such as Six Sigma. The tools can differ in service or manufacturing contexts.

Table 11.1 Branches held by Public, private and Foreign banks in Turkey

Name of bank	Type	Number of branches
Ziraat Bankası	Public	1,492
Halkbank	Public	827
Vakıfbank	Public	741
Akbank	Private	974
Garanti Bankası	Private	926
İş Bankası	Private	1,237
Yapı Kredi	Private	927
Denizbank	Foreign	609
Finansbank	Foreign	582
HSBC	Foreign	334
ING Bank	Foreign	318

11.1.1 Service versus Manufacturing Operations

While many of the principles of quality management and operations management were originally developed in the context of manufacturing operations, nowadays service operations are equally important in terms of the application of efficiency improving techniques. In manufacturing operations a physical transformation generally takes place, whereas in service operations information flows may be more important. Starting with the early applications of Scientific Management techniques exemplified by Taylor's work, the focus was on finding more efficient ways to perform various physical tasks (Taylor 1911). The case studies presented by Taylor included, for example, a shoveling experiment in which the shovel size that permitted the largest amount of coal to be physically shoveled per unit time was determined. The same principles may be applied in service settings, yet it is important to see how service and manufacturing operations are different in a number of different contexts:

1. Products are generally tangible with the ability to keep inventories or return merchandise. A yearly auto insurance plan is not physical in nature (even the policy may be e-mailed); it cannot be returned, and will be valid until the end of the year, only then the customer may choose to switch to another provider.
2. Product flows in a manufacturing process are more apparent, in a service delivery process document flows and information flows may be more important. A credit approval in a bank may require various physical documents such as pay stubs, photocopy of ID card; also it may require a credit history check over an online connection.
3. Services are heterogeneous while products are more homogeneous. An individual pension plan may contain many different combinations of funds, monthly payments may change and even the age of the beneficiary plays a role in the event of termination.
4. Services are simultaneously produced and consumed. A pension plan details may be determined as the sales process is going on. During the sales presentation it is inevitable that the service be customized according to the consumer's needs (Esin 2004).

11.1.2 Improving Processes and New Process Design

The history of quality management has benefited vastly from the works of quality "gurus". Especially one of the most prominent of these gurus, W. Edwards Deming, has stated 14 principles that guide the managers of leading companies. Among Deming's 14 points, one of the most important point is "Point 5" where it is stated that companies should "improve constantly and forever the system of production and service to improve quality and productivity, and thus constantly decrease costs" (Deming 1982).

The Deming cycle, also known as the plan-do-study-act (PDSA) (or PDCA) cycle can aid managers in improving a process (Gitlow et al. 2005). All other frameworks used in different quality management programs are actually extensions of the PDSA cycle (such as DMAIC-Define, Measure, Analyze, Improve and Control—in Six Sigma terminology). The four stages in the Deming cycle start with "plan" stage where the analysts develop a plan to further improve a best-practice method developed before (maybe in the last cycle of improvement) and documented. This process could be a loan application system for a bank. The analyst would start with the flowchart of the existing process and try to come up with an improved flow chart. The "do" step involves conducting experiments on the alternative methods. The "study" stage analyzes the data collected in the previous stage. In the final "act" stage the managers chose an alternative and document the process to be used until the next process improvement cycle begins.

Frequently the design of products or services might restrict the dimensions in which they could be improved. As a solution the continuous improvement could start from the design of a product or service. Design for Six Sigma (DFSS for short) is a systematic methodology for designing new products (services), redesigning existing products (services) to exceed customer requirements. The DMAIC approach in Six Sigma is replaced by the DMADV method in DFSS (Brue & Howes 2006):

Define: Determine the goals and requirements of the customers (both internal and external)
Measure: Assess customer needs and specifications
Analyze: Examine the process options to meet the expectations of the customers
Design: Develop the process to meet the requirements
Verify: Check the design to make sure it meets the customer requirements

There are also some other acronyms used in conjunction with DFSS:

IDOV-Identify, Design, Optimize and Verify
DMADOV-Design, Measure, Analyze, Design, Optimize and Verify
DMCDOV-Define, Measure, Characterize, Design, Optimize and Verify
DCOV-Define Characterize, Optimize and Verify
DCCDI-Define, Customer, Concept, Design and Implement
DMEDI-Define, Measure, Explore, Develop and Implement
DMADIC-Define, Measure, Analyze, Design, Implement and Control
RCI-Define and Develop Requirements, Define and Develop Concepts, Define and Develop Improvements

This paper will continue and explain the fundamental frameworks of Lean Thinking, Six Sigma and the marriage of these frameworks in the form of Lean Six Sigma. We will also present a demonstrative application on an individual pension system to illustrate the application of Lean Six Sigma in an innovative design of a process related to acquisition of customers. The case is purely hypothetical.

11.2 Principles of Lean Thinking

Lean manufacturing, lean production, lean principles, lean enterprise or simply "lean" thinking derive their names from a focus on reducing waste and minimizing costs thereby improving efficiency in producing goods or services. The term actually started originally with Toyota Production System (TPS); however, the term "lean" came into popular use with the publication of a book called "The Machine That Changed the World" (Womack 1990; Holweg 2007).

Lean actually encompasses a set of tools and techniques that could be used to reduce waste. The seven types of waste (referred to as "Muda" in Japanese) are (Womack and Jones 2003):

1. Transport
2. Inventory
3. Motion
4. Waiting
5. Overproduction
6. Over processing
7. Defects

After the application of lean tools, a number of cost reducing elements are realized. Lead times are shortened and thus revenue can grow dramatically. There is less handling and thus there will be less demand for people and equipment. There will be reduced space requirements and hence less rental costs. Due to the reduction in defects there will be less customer complaints (George 2002).

Many of the lean tools were provided in a book written by Shigeo Shingo about the Toyota Production System (Shingo 1989). In summary these tools can be categorized under the following headings:

Line Balancing: Balancing the flow of materials will eliminate the need to store the E-Type inventory which is mainly due to unbalanced flow between processes.
Single Minute Exchange of Dies (SMED): The setup times on machines will be unproductive downtime. SMED seeks to minimize this downtime resulting in speedy changeovers. This also reduces C-Type inventory accumulations or cushion stocks.
5S: In Japanese the words Seiri, Seiton, Seiso, Seiketsu, Shitsuke which are translated as Sorting, Setting in order, Systematic cleaning, Standardizing, and Sustaining. These "S" words prompt an organization to keep the workplace clean and orderly so that the inefficiencies are reduced. A worker delayed because he is unable to find a tool or a forklift not being able to navigate through the shop floor due to an obstacle are such examples of inefficiencies.
Pull systems: Production in the current workstation is prompted by the next workstation, hence there is no over production.
Reduced lot size: Batch sizes increase the level of inventories so an ideal lot size of one should be used.

Critical Path Analysis: Analyzing the flows, interdependent steps and operation times to coordinate the operations and reduce throughput time.

It might be thought that most of the items listed above including the seven Muda and some of the Lean tools are mostly manufacturing related. However the equivalents of the Lean concepts in terms of service applications also exist (Bicheno and Holweg 2009):

Delay: Customers waiting for services, examples may be for delivery such as packages, in queues as in a bank, for response as in a call center. The delays may result in lost customers or legal penalties.
Duplication: having to re-enter data, repeat details on forms, and answer queries from several sources within the same organization. An example may be callers repeating his/her account number and having to answer a secret question (such as mother's maiden name) in multiple stages in calling a bank's call center.
Unnecessary Movement: queuing several times, lack of one-stop, poor ergonomics in the service encounter. An automotive inspection facility may require documentation about tax and insurance status of the cars which require going to offices located in different buildings.
Unclear communication: waste of time spent in seeking clarification, confusion over product or service use, wasting time finding a location. Banks may use the help of navigation tools on cell phones to guide their customers to the branches or ATM locations.
Incorrect inventory: being out-of-stock, unable to get exactly what was required, substitute products or services. An example may be an automotive service shop not being able to fix a car because inventories of light bulbs for the headlights do not exist in the inventory.
Unfriendly Service Staff: an opportunity lost to retain or win customers, a failure to establish rapport, ignoring customers, unfriendliness, and rudeness. An unfriendly call center employee may cause the customer to switch to another company.
Defects: errors in the service transaction, product defects in the product-service bundle, lost or damaged goods. An example may be a stock broker giving the order for an incorrect stock purchase or incorrect amount.

11.3 Six Sigma and Lean Thinking

A popular application of the waste reduction principles and short term focus of "Lean" techniques with the continuous improvement and methodologically advanced foundations of "Six Sigma" culminated in the formation of a set of principles often termed as "Lean Six Sigma". Lean Six Sigma can be described as an approach focused on improving quality, reducing variation and eliminating waste in an organization (Furterer 2009). The marriage of Lean and Six Sigma could be explained in a number of broad headings (de Koning et al. 2008):

Organization: Six sigma approach provides the organization with a solid framework of roles and responsibilities under names such as Green Belts (GBs), Black Belts (BBs), Master Black Belts, project Champions and etc. The organization structure in Lean Six Sigma is directly derived from Six Sigma.
Methodology: The DMAIC approach from Six Sigma is used as given in Table 11.2. In the case of design of new products the DMADV approach can be used replacing the Improve and Control phases with Design and Verify phases.
Tools and techniques: Some tools from Lean are used in stages of DMAIC. For example value stream mapping (a technique that involves analyzing the flow of goods and information in a service or manufacturing environment) can be used in Analyze 1 stage.
Concepts and classifications: Both approaches supply their own jargon. Six Sigma CTQ (Critical to Quality Characteristic) can be used from Lean concepts such as tact time (cycle time), critical path and waste can be used.

Overall "Lean Six Sigma" can be defined as a methodology that strives to maximize shareholder value by achieving a fast rate of improvement in speed, customer satisfaction and quality while also minimizing cost and invested capital. The reason why the two approaches were fused into one was mainly due to the fact that Lean approaches alone do not take advantage of statistical tools and techniques present in Six Sigma and that Six Sigma alone does not pay enough attention to increasing process speed and reduce capital investments (George 2002). It is also true that when employees make intellectual contributions to the improvements through using the DMAIC improvement cycle, there will be a more positive work environment and decreased levels of stress (Gitlow 2009).

11.4 A Demonstrative Application on a Pension Company

Voluntary contribution based retirement systems have been in existence in many parts of the developed world and constitute an important percentage of the funds in the global financial system. The 401 K system in the US is one such example. Turkey for a long time relied solely on the State Pension system. On October 07,

Table 11.2 DMAIC approach of lean six sigma (de Koning et al. 2008)

Step	Definition
Define	Develop project charter
Measure 1	Define the CTQs
Measure 2	Validate the measurement and procedures
Analyze 1	Diagnose the current process
Analyze 2	Identify the potential influence factors
Improve 1	Identify the effects of influence factors
Improve 2	Design actions for improvement
Control 1	Improve process control
Control 2	Close the project

2001 the law number, 4,632 on Individual Pension Savings and Investment System came into force. It was passed by the parliament of Turkey on March 28 and published in the official gazette on April 7. This law was meant to provide a system which would be complementary to the already existing state social security system. In the beginning, the contributions to the new system would be tax deductible; currently there is a new incentive that would provide a certain percentage of state contributions in addition to the individual's contributions. The new system would work on the basis of voluntary participation by depositing a predefined quantity monthly to the pension company account maintained for the beneficiary individual. The main motivation of the law was to direct individual pension savings to investment and to improve the welfare level of the individual by providing a supplementary income during retirement period. The additional savings would also contribute to the economic development of Turkey by creating long term resources for the economy. After the law and some other legislation were passed, Turkish Individual Pension System practically started operations on October 27, 2003 with the founding of six pension companies. Currently there exist 17 pension companies in the Turkish system (EGM 2013).

In any individual pension company there are a number of different operations, among these are:

- Making initial contact with customers: Potential customers may be approached by sales agents who have the necessary certificates. In some cases affiliated banks may be used to create contacts either in the branches or by online banking tools.
- Maintaining databases of current and potential customers: Potential customers can be taken from affiliated banks' databases or personnel records of companies. Current and terminated customers' lists should also be kept for CRM purposes.
- Assessment of risk profile of the customer: Various questionnaires can be used to assess what kind of funds the customer is most likely to invest in. This step can be skipped by some companies.
- Opening an account: The account opening requires a formal application with national ID present. The initial entrance fee needs to be charged and the customer needs to select a pension plan and the monthly payment quantity.
- Changing between pension plans: Customers may wish to switch between plans, such as switching from a plan investing in treasury bonds to one investing in stocks.
- Switching funds to another company: Transfer of funds to any company is possible within certain limitations. This would involve written application from the beneficiary, where the beneficiary states which company the funds are to be transferred to.
- Taking over funds from another company: Similar to the previous action, except this time the company is receiving a new customer from another company.
- Consolidating different accounts opened within the company: In some cases the same person may have more than one account in the same company and may wish to consolidate those.

- Sending routine statements to the customers: This transaction may be online depending on the wishes of the customer or in some cases paper statements may need to be sent every month showing the contributions, deductions, and the current state of the funds.
- Sending routine statements to the pension monitoring board: Since the pension monitoring board oversees the state contributions it needs to have a consolidated picture of all the accounts owned by one individual. Also pension company activities need to be monitored.
- Financial operations: Allocating group funds to different sources such as government securities, stocks, foreign currency and etc.
- Termination and exit from the system: Calculation of total amount to be paid to the beneficiary, informing the pension board and transfer of funds to the consumer.
- Seizure of funds: Some customers' funds may be seized due to bankruptcy or debt.

It is evident that the processes listed above are prone in many ways to different kinds of waste and can be the subject of improvement projects. The processes involve many different flows of physical documents and information. The organization of the flows of information and physical documents might result in different ways of getting the services performed with maximal customer satisfaction and minimum costs. Most of the above stated processes are repeated on a regular basis, most of the time monthly while some will take place once in the life of the customer (such as exit from the system). Having even minor improvements in efficiency of a process repeated monthly could dramatically reduce the costs and thereby increase profits of the pension company. In a highly regulated industry such as the pension system Lean Six Sigma may come as a useful tool for managers. In the remainder of this section we will go through the DMAIC steps and show how Lean Six Sigma could be applied in the context of streamlining the application, risk profile building and new account opening operations of an individual pension company. The tools are kept as general as possible so the readers can get a clear view of the application of the steps in a wide variety of financial services contexts.

11.4.1 Overview of the Pension Sales Transaction

Pension companies can perform sales through a multitude of channels. The sales agents, regardless of which channel they take part in, must have a certification in individual pension sales. One of the most important channels is the use of an affiliated bank. Many pension companies have an affiliated bank as another member of the larger corporation they are part of. Both banks and pension companies find this arrangement very useful as the banks earn commission income and the pension companies could use the infrastructure, information database of the

banks and client circulation of bank branches in generating sales. There are a number of different commission structures in pension sales.

There could be a one-time commission given to the agent (which is the case with many independent agents) or otherwise the commission could be spread out to the lifecycle of the pension. The former system may not be advantageous since the pension beneficiary is free to transfer to other companies with certain restrictions. Generally, in the affiliated bank sales channel the commissions are spread out to the lifecycle and the bank and pension company sign an agreement that will ensure the proper distribution of the commissions between the bank and the pension company. Overall using the bank as a sales channel provides many advantages. In a popular application, the bank branches can be visited by the licensed financial advisors working for the pension company with a certain frequency. During the one or two week long stay of the advisor, the branch visitors would be approached with the intention to generate pension contracts. The transaction could optionally include a risk profile assessment and would end with entering the personal data into the pension company system and signing the necessary paperwork. There are a number of areas that could be prone to improvement in such a transaction.

11.4.2 Define Phase

The main aim of this first phase is to depict the specific business problem at hand and outline the scope of the project and the process to be improved. In general the following five steps need to be completed in this phase:

1. Development of the project charter
2. Identification of customers and stakeholders: SIPOC analysis (Pyzdek 2003) is a useful tool in the Define Phase and it aims at identifying the interrelationships between the Suppliers, Inputs, Processes, Outputs and Customers.
3. Definition of critical to satisfaction (CTS) and voice of customer criteria: Defects, delivery times, processing costs can all be elements of CTS.
4. Formation of the project team and determination of responsibilities
5. Creation of the project plan

The aim of the project for the pension company is to improve the efficiency of the operations involved with creating new plans at the bank branches. The stakeholders are the customers, bank branch employees, Pension Company, government agencies and the affiliated bank. The CTS could include the time it takes to convince and sign customers (this may include data entry requirements, examining documentation etc.). Another CTS would be the retention rate of the customer within the next year (if the customer leaves before the first year no commission would be gained).

11.4.3 Measure Phase

The main aim of this second phase is to understand and document the existing state of the process to be improved. In general the following five steps need to be completed in this phase:

1. Definition of the current process: Flowcharts about the current system.
2. Definition of the VOC (voice of customer): Satisfaction of the customer from the transaction, time it takes to complete the transaction.
3. Definition of the VOP (voice of process) and current status of the performance measures: Data entry, documentation, back office operation times.
4. Validation of the measurement system: Setting operational definitions for how the VOC and VOP will be measured. As an example the customer satisfaction from the transaction can be measured by a survey placed on the online banking system to be administered next time the customer logs on.
5. Definition of COPQ (cost of poor quality): All training costs, customers lost to other pension companies, IT costs, labor hours spent for communication, document handling, mistaken data entry etc.

11.4.4 Analyze Phase

In this step the data collected in the measure phase are analyzed through the plethora of quality management and control tools. Developing cause and effect relationships, statistical tools and process capability analyses could be performed. As a contribution of "Lean" thinking to the "Six Sigma" approach waste analysis is conducted at this stage. Non-value adding activities like printing multiple copies of the documents, scanning or photocopying some documents, calling the pension company center for approvals, manually entering data and many other sources of waste can be analyzed. Lean tools here supplement statistical tools such as correlation analysis, histograms, Pareto analyses and regression analysis.

A "Cause and effect matrix" can be constructed, showing the relative magnitude of the effects of the various causes on the CTS criteria. This results in a relative weighting with decreasing order of importance for the causes on the CTS criteria. 5S analysis, another Lean tool, helps to organize the workplace. The elements of 5S are sorting, setting in order, systematically cleaning, standardizing, and sustaining (simplifying, straightening, scrubbing, stabilizing and sustaining is another version of the translation of the 5S).

11.4.5 Improve Phase

The main aim of this penultimate phase is to identify the recommendations, run pilot projects and document the improvements. In general the following six steps need to be completed in this phase, with examples from the pension company:

1. Identification of the improvement recommendations: Data entry phase could be improved by IT integration with the bank database, risk profile assessment could be completed with the ATM machines or through the online services of the bank, signature and document processing could be moved to the back office personnel of the bank.
2. Cost benefit analyses: IT integration costs, extra load to the back office personnel.
3. Designing the proposed state: Flow charts and necessary amendments to the ATM and online banking tools.
4. Establishment of performance targets: Percentage increase in the efficiency of the financial advisors, retention rates of the customers in the first year, and customer satisfaction rates.
5. Gaining approval to implement: Approval of both the bank and pension company management.
6. Training and execution: Training the financial advisors of the pension company and the back office personnel of the bank branches for the proposed state.

11.4.6 Control Phase

During the control phase, the results from pilot projects are evaluated and the replication opportunities in other parts of the organization are examined. This stage generally includes the following five steps:

1. Measurement of the results from pilot implementation projects
2. Reporting the results: Reductions in time required to complete the financial transactions, one financial advisor would be able to sign on 50 % more customers during a typical stay in a branch. Customer retention during the first year may be improved.
3. Replication opportunities: Can the same methods be applied elsewhere in the pension company. This may reduce costs further.
4. Future plans: Lessons learned and the next possibility for improvement.

11.5 Conclusion

Operations managers and service operations managers have been trying to achieve efficiency and productivity increases since the initial days of industrialization. Currently, the focus is more on service operations more than ever with the intense competition in the services sector. Financial services are also the spotlight in terms of improvements in efficiency and productivity.

A very important branch of financial services in the developing and developed economies is the Individual Pension System. This highly regulated industry is

crucial for the economic stability of a country and the well-being of its citizens. Close to its 10th year of operations, the system in Turkey is getting close to a total of 3.5 million customers and total assets in excess of 20 billion TL. Turkey has come a long way in a short period of time in terms of the percentage of GDP invested in pension funds and percentage of population covered by private pension plans, yet there is still more to accomplish in terms of reaching the corresponding levels of the developed countries.

Just like all financial services providers, managers of individual pension companies need to manage multiple distribution channels, innovate products, streamline daily operations, and invest in marketing strategies aimed at acquiring new customers and keeping existing ones. Lean Six Sigma tools can help individual pension companies further cut operational costs and increase efficiency thereby ultimately helping the consumers improve their savings habit even more. Lean Six Sigma tools can also be applied in insurance companies to reduce claims processing times, in finance departments of companies or government offices to reduce monthly reporting cycle times, and in banks to reduce credit application cycle times.

In this article we have tried to outline the use of Lean Six Sigma principles which can help managers in financial institutions in terms of remaining competitive against their global rivals. In the ever changing global economic circumstances, distribution channels and financial instruments must be continuously innovated and improved in order to stay competitive. Lean Six Sigma can promise to deliver these incremental improvements.

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Chapter 12
Pros and Cons of Financial Innovation

Serkan Çankaya

Abstract This chapter gives an overview of how financial innovation has been one of the most influential factors in shaping today's financial system and the world economy. It starts with a brief review of the financial innovation literature and addresses the determinants of financial innovation. The next section examines the current debate regarding financial innovation and concludes with a discussion for the future of these new financial products and processes.

12.1 Introduction

Financial innovation is one of the most influential factors in today's financial system and the world economy. A brief review of financial innovation literature shows that the creation of new financial products and processes is not a new concept; rather, it has been part of the economic environment for centuries (Tufano 2003). Certainly, the central role of finance–especially after the 1970s–enhanced the importance of financial innovation. Yet there is an ongoing debate regarding the positive and negative sides of financial innovation and its role in shaping the future of financial markets. Some argue that financial innovation boosts the performance of the financial system by increasing market efficiency and risk allocation, calling it the "engine of economic growth" (Miller 1986). Others argue that financial innovation increases the frequency of financial crises like, the 2008 global financial crisis, which caused a more cautious approach. Both sides of the debate have reasonable arguments.

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The main objective of this chapter is to provide a short overview of the subject and examine the debate between the positive and negative sides of financial innovation. First, it is essential to clarify the definition of financial innovation. Tufano (2003) describes financial innovation as the act of creating and then popularizing new financial instruments, technologies, institutions, and markets. Schneider (1997) classifies three types of financial innovations: (1) Financial system innovations can affect the financial sector as a whole and relate to changes in business structures, to the establishment of new types of financial intermediaries, or to changes in the legal and supervisory framework. (2) Process innovations cover the introduction of new business processes leading to increased efficiency and market expansion. (3) Product innovations include the introduction of new credit, deposit, insurance leasing, hire-purchase, and other financial instruments to improve the efficiency of the financial system. While there are many different definitions and classifications for financial innovation, there are several common features (Levich et al. 1988): innovation, securitization, liberalization of domestic financial market practices through deregulation, globalization, and increased completion among financial institutions.

The rest of this chapter is organized as follows. Section 12.2 addresses the determinants of financial innovation. Section 12.3 examines the current debate regarding financial innovation. Section 12.4 provides a discussion about the future of this debate.

12.2 Determinants of Financial Innovation

There have been numerous attempts to specify the underlying causal factors affecting the nature and degree of financial innovation. An analysis of the literature shows that technological, market, and regulatory factors are the major determinants of financial innovation, although there is no standard classification of the terminology. Figure 12.1 presents the main determinants of financial innovation.

There are interactive relationships among different determinants and financial innovation. Llewellyn (1992) emphasizes that "financial innovation should be viewed as a reflection and partly a cause of structural changes evident in many financial systems."

12.2.1 Macroeconomic Conditions

Changes in the general economic and political environment, such as the high levels of inflation during the 1970s and the increasing volatility of interest and foreign exchange rates, decrease economic growth. Increased volatility forces market participants to create new instruments to help them handle the changes in the market (BIS 1986).

Fig. 12.1 Determinants of financial innovation

12.2.2 Customer Needs

This factor is also related with two other determinants: technological developments and globalization. The increase in the wealth and sophistication of market participants in most world economies has led to increased diversity of new financial instruments (Llewellyn 1992). This has forced financial institutions to be more sensitive to their customers' needs. In other words, financial institutions now realize the significance of marketing. Moreover, the receptivity of investors in complicated new financial instruments has increased considerably.

12.2.3 Increased Competition

Before the 1980s, the banks and other financial institutions were protected by their national governments from competition. Regulatory authorities banned international rivals from entering national markets. Many financial innovations occurred in the post-1980 period of financial liberalization when most developing countries implemented deregulatory policies. Actually, most of these deregulations resulted from pressure from domestic financial institutions. The need for remaining competitive in globally integrated markets is also recognized by government regulatory authorities. This illustrates the interrelation of increased competition with globalization and developments in information technology. Since 2001, the Global Competitiveness Index has been used to measure the competitive landscape around the world. This index is grouped into 12 pillars: institutions, infrastructure, macroeconomic environment, health and primary education, higher education and

training, goods market efficiency, labor market efficiency, financial market development, technological readiness, market size, business sophistication, and Innovation. The 2012–2013 Global Competitiveness Report shows that for the fourth consecutive year, Switzerland tops the overall rankings, followed by Singapore, Finland, Sweden, The Netherlands, Germany, the US, the UK, Hong Kong, and Japan.

12.2.4 Globalization

The concept of globalization can be looked at from two different viewpoints: the globalization of financial institutions and the globalization of customers. With the increased level of globalization, both banks and their customers have the opportunity to diversify their risk more efficiently, which improves macroeconomic stability (Lane 2012). On the other hand, they are also exposed to new risks such as the political and exchange rate risks of other nations (Tufano 2003).

Buckley (2009) notes that we are living in a more globalized world which offers cheaper credit and much more financial innovation in capital and credit markets; this makes it much more costly for a nation to turn its back to globalized capital. Lane (2012) describes the effects of globalization on the recent 2008 financial crises. First, the participation of foreign banks increased the growth of asset-backed securities (ABS), which played a major role in the 2007–2008 subprime mortgage crises of the US. Second, it became very difficult for national regulatory authorities to oversee the risk profiles of globally active banks. Regarding financial innovation, Lane (2012) states that cross-border financial trade is promoted by new investment classes (such as ABS), new investment vehicles (such as special purpose vehicles) and the rise of lightly-regulated types of asset managers (hedge funds).

12.2.5 Policy and Regulations

The relationship between regulation and financial innovation is quite complicated. Regulation can both obstruct and promote financial innovation. As Dufey and Giddy (1981) argue, most financial innovations are aimed at circumventing regulations. Miller (1986) states that "the major impulses to successful innovations over the past twenty years have come I am saddened to say, from regulations and taxes."

Financial innovations such as securitization of loans and overconfidence about asset values and riskiness of these financial products are often described as the major motives for the subprime financial crises (Bianchi et al. 2012). There is no doubt that financial innovations are used as a major tool for excessive risk taking,

but it would be unfair to solely blame financially engineered products for the catastrophic result of the latest global financial crises.

Excessive risk taking behavior by financial managers can be understood as a result of huge profit pressures from the shareholders of giant financial institutions. However, numerous government policies encouraged excessive risk taking by financial market participants. According to Calomiris (2009), many different government policies and political pressure from Congress on government-sponsored enterprises (GSEs) to encourage affordable housing influenced excessive risk taking by financial institutions.

Looking at the US government policy changes over the past century, we can see that changes in the regulatory environment had a strong effect on the financial system and financial innovations. The Great Recession of 2008 is frequently compared with the Great Depression of 1929. Banks and other financial institutions were accused of being greedy and taking on too much risk.

The Glass-Steagall Act of 1933 was a reaction of the regulators to the Great Depression. The financial system of the US functioned largely as expected until the collapse of the Bretton Woods system in the early 1970s, which unfolded the weaknesses of the existing financial system (Neal and White 2012). At that time, banking industry was losing market share to securities firms and was unable to compete with their global rivals, which could provide universal banking services to their customers. This lobby resulted in the repeal of the Glass-Steagall Act in 1999, which was replaced with the Gramm-Leach-Bliley Act. All of these policies contributed to the take-off of the subprime risk, which resulted in the subprime mortgage crisis of 2007. The effect of deregulation as a cause for the financial crisis is still an ongoing debate (Engel and McCoy 2011; Stiglitz 2010). Governments are responding with increasing regulations. The Dodd-Frank Act is one example from US regulators. Regulators should act as a stabilizer between market development and investor protection. The history of financial crises demonstrates that lack of government interference results in fewer financial crises (Calomiris 2007).

12.2.6 Technology

Advances in technology, especially in telecommunication and the Internet, have promoted a series of innovations. The costs of gathering, storing, analyzing, and globally transmitting information have decreased substantially (Levich et al. 1988). However, the decrease in the cost of information technology diminishes the demand for financial intermediation, which raises competitive pressure on financial institutions. An investor can buy stock from NYSE with one click at his home or even through his iPad on the way to work. Technology has made it very easy for multinational corporations to operate, and technological developments have helped financial innovations develop more quickly. For example, the development of information technology innovations provided the necessary grounds for innovations such as new risk management systems, developments in new numerical

analysis and simulations, hardware that enables faster processing, and certainly the Internet (Tufano 2003).

There are also unique risks for information technologies such as unauthorized access to sensitive data, loss of critical business data, unintentional user errors, natural disasters, cyber-attacks, etc. The concept of technology and financial innovation is closely related to regulation. However, this does not mean more regulation; rather it should mean better and more effective regulation. Regulatory authorities should try to keep up with technological innovations.

12.3 Pros and Cons of Financial Innovation

12.3.1 Pros of Financial Innovation

The existence of an inseparable link among economic growth and financial and technological innovations was first proposed by Smith (1776). Throughout history, financial innovation has been shown to improve financial services and thus accelerate economic growth. Together with the twin engines of financial liberalization and technological advancements, financial innovation has served to economic and social needs. Even strong opponents, such as Volcker, agree to some of these innovations such as ATMs. Benefits of financial innovations extend well beyond the financial products such as debit or credit cards. Tufano (2003) summarizes the possible benefits of financial innovation: innovation exists to complete inherently incomplete markets; innovation reduces agency costs and information asymmetries; innovation exists to minimize search, transactions, or marketing costs; innovation is a response to taxes and regulation; increasing globalization and risk motive innovation; and technological shocks stimulate innovation.

Dynan et al. (2006) highlight financial innovation as one of the contributors to the economic stabilization of the mid-1980s. Allen (2011) notes the positive effects of financial innovations as venture capital and leveraged buyout funds to finance businesses and the improvement of environmental and global health. The list of financial innovative benefits can be extended for pages.[1] However, focusing on the costs of financial innovations is critical to avoid them in the future.

12.3.2 Cons of Financial Innovation

The 2007 global financial crisis cast doubt on the view of financial innovation as the "engine of economic growth." The crisis revealed that financial innovation is

[1] See World Economic Forum (2012), "Rethinking Financial Innovation: Reducing Negative Outcomes While Retaining The Benefits".

not without its risks and can bring considerable costs. Krugman (2007) expresses his criticism as follows:

> (T)he innovations of recent years—the alphabet soup of C.D.O.'s and S.I.V.'s, R.M.B.S. and A.B.C.P.—were sold on false pretenses. They were promoted as ways to spread risk, making investment safer. What they did instead—aside from making their creators a lot of money, which they didn't have to repay when it all went bust—was to spread confusion, luring investors into taking on more risk than they realized.

Former Fed chairman Volcker (2009) was more direct. Volcker said to a room full of bankers, "I wish someone would give me one shred of evidence linking financial innovation with a benefit to the economy."

Financial innovations in the mortgage markets such as subprime and Alt-A mortgages as well as the rapid growth in securitization were seen as the major causes of the crisis. The crisis had a massive adverse impact on global banking systems. The International Monetary Fund's Global Financial Stability Report (2009) reports $2.7 trillion for write-downs of US-originated assets by banks and other financial sector institutions between 2007 and 2010.

It is undeniable that financial innovation has improved the mechanical efficiency of markets, but it is also obvious that each innovation in financial instruments and markets has increased the level of complexity (Bookstaber 2007). Human beings have limited information processing capability for risk perception. Financially engineered instruments with highly sophisticated mathematical models assume perfect rationality. However, behavioral finance research shows us that people might not be fully rational in their financial decisions or about their choice of financial instruments. Their cognitive biases can cause them to assign incorrect probability weights to events. Gabaix and Laibson (2006) find that consumers ignore some attributes of the products they buy. Gennaioli et al. (2012) shows that investors sometimes neglect certain risks.

Modern financial derivatives provide tremendous opportunities for hedging risks and enhancing the resilience of the financial system, but they are more often used to facilitate speculation and induce volatility. The intense use of derivative products by largely unregulated hedge funds has drawn considerable attention from regulators. After Alfred Winslow established the first hedge fund was in 1949, hedge funds are the center of attraction for risk-seeking investors. Certainly, the Madoff scandal damaged the reputation of the sector. Even though hedge funds were blamed for aggressive short selling of stock and for pushing banks toward bankruptcy, the latest figures are quite impressive, showing an all-time record of 2.25 trillion USD at of the end of 2012 (HFR 2013). It is rather anomalous that such operators have not been regulated more like traditional investment firms. Although there are some improvements in terms of regulations both in the US and the EU, investors do not seem to be impressed. According to the 2012 Ernst and Young's Global Hedge Fund and Investor Survey, only 10 % of investors believe that the new regulations will be effective in their protection, and only 2 % believe that these regulations will prevent another financial crisis.

12.4 Conclusion

The dominant view prior to the 2008 financial crisis was that financial innovation is beneficial to the financial system. Certainly, the world economy benefits from financial innovations through increased levels of savings and increased levels of economic growth, but these innovations are not without their risks. The enormous amount of benefits does not eliminate the costs of financial innovation. As national barriers erode and financial markets became more integrated with the help of globalization and technological improvements, the 2008 crisis revealed the importance and need for coordinated regulatory response to financial crises. Regulation should focus on increasing transparency and accountability as well as decreasing regulatory uncertainty. Proper regulation is of vital importance to avoid future financial crises.

On one hand, financial innovations reduce transaction costs and the cost of financial intermediation; improve risk allocation, market efficiency, and economic growth; minimize the impact of taxes and regulations; and decrease agency costs and volatility of economic activity. On the other hand, financial innovations are considered as the root cause of financial crises. New and complex financial products are blamed for the reduction of transparency. Some of the major market participants propose the following ways to reduce risks brought about by financial innovation (WSJ 2009): (1) Overhaul Rating Agencies: Restore investor confidence in rating agencies by eliminating conflicts of interest between agencies and issuers, returning to an "investor-pays" model, distinguishing between ratings of corporate debt and structured financial products, and promoting new entrants to the credit-rating business; (2) New-Product Transparency: Improve structural and price transparency of new products, using modeling and stress testing to ensure that downside scenarios are as visible as upside scenarios; (3) Resist Over-regulation: Because financial innovation is central to growth and critical to a speedy recovery; (4) Promote Risk Management: Boards should be required to demonstrate a full understanding of risks inherent in new products. (5) Strengthen Infrastructure: Ensure financial infrastructure is commensurate with the innovation that it supports, both at the firm and the market level.

Palmer (2012) asks whether innovations are born bad or if something makes them sour over time. The answer to this question is an easy one: greed. Behavioral finance shows that complex financial products are sometimes beyond our cognitive capabilities. As human beings, we do not have unlimited cerebral RAM and occasionally deviate from rationality. As Meir Statman argues, we are not rational; we are just normal.

This work contributes to the discussion of the role of financial innovation. Among all financial market participants, financial industry leaders and regulatory authorities need to find common ground in order to sustain healthy global economic growth.

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Chapter 13
The Impacts of Information Technologies on Financial Institutions

Hilal Celik

Abstract Tools facilitating the exchange of goods and services between economic units and information technology systems comprising of the institutional and organizational roof, operative processes and communication network are important for the effective functioning of the financial system and the economy. This chapter aims to analyse the role of information technologies and impact on financial institutions. As a conclusion, it has been revealed that the primary target of financial institutions is to ensure the most appropriate data flow, interdepartmental information exchange and coordination, swift and cheap access to information, following up on innovations and ensuring communications with services sectors. Moreover, in this research, it has been observed that the conflict levels among personnel, directors and branches have decreased. Also, the effect of information technologies on organizational performance is observed that it increases service efficiency, financial institutions' competitive aspect, number of customers, profitability and organizational performance in general.

13.1 Introduction

The integration of communication technology with telecommunications has caused a revolutionary change both in intra-organizational and inter-organizational communications in today's increasing global competitive environment. The strategic use of information technologies have been explained in many case studies. The use of information technologies changes both the way organizations do business and the way these businesses are coordinated with people. After the invention of computer, rapid development of the internet accelerated development

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of information technologies. Organizations that adapted to world changes started to use information technology in their organization because of international trade.

Most of financial organizations changed their organization structure and management style thanks to the ease of information technologies. They began to reorganize their structure, so job flow operated faster and easier. They created a democratic and open management style which harmonized with the job flow chart. Because of this, the impact of information technology on financial institutions must be analyzed.

The most significant among these economic impacts have been the level at which economic and social data such as company efficiency, profitability, customer surplus revenue, product quality and output levels have been affected by information technologies. All research has, in general, discovered that investments made in information technologies have increased efficiency in financial institutions and other companies and positively affected profitability and customer revenue structures. There is a fast improvement in the global financial market, which has forced banks to change. However, the products based on technology used in the banking sector started to spread and use information technologies. The use of information and communication systems in financial institutions has caused managers' behaviors and decisions to become definitive, systematization of the management, use of modern management techniques and the centralization of information used in decision making. Moreover, it has been observed that information and communication systems contribute to the enhancement of auditing spheres in banks and the control of personnel in organizational design. In this part, the concept of information technology, importance of information technology within organizations, functions of information technology in financial enterprises and also the impacts of information technology systems on financial enterprises will primarily be mentioned.

13.2 Information Technology and Organization

Information Technology as a concept related to computer aided systems ensuring managers to process data or information is comprised of feedback elements, which gather information from different sources, process and store such information, resend the yielded output to individuals in charge in the organization and ensure that inputs are assessed and corrected (Laudon and Laudon 2004: 10). When information technologies are considered in context of organizations, information technology emerging as a result of changing conditions can provide information for the realization of targets such as institutional competitiveness, provision of quality services when required and with desired quality (Ogüt 2001: p. 143). While it facilitates all kinds of intra-organizational information flow, it also increases effectiveness and efficiency with the advantages it provides in time and location (Erkan 1998: p. 81). The integration of communication technology with telecommunications has caused a revolutionary change both in intra-organizational

and inter-organizational communications in today's increasing global competition environment. Nowadays, several organizations utilize networks created by the connection of individual computers in various ways instead of individual computers. It is foreseen that in a very short period of time, organizations which do not use these types of networks will become a minority.

13.3 The Functions of Information Technology in Financial Enterprises

Access to information is facilitated with the use of information technologies and thanks to such access all ranks can reach information more conveniently (Kronke 2007: p. 105). Since the necessary information sharing is ensured with the use of information technologies in financial enterprises, intra-enterprise communication and communication with consumers and suppliers is facilitated and this situation reflects on efficiency, thereby increasing the profitability of the organization (Kraemer and Dedrick 1997: p. 100). Nevertheless, since the functions of information gathering and the transfer thereof to senior levels in enterprises is assumed by information technology systems, mid-level managers are eliminated. (Keri and Saunders 2006: p. 102). Information technologies have three basic functions in financial enterprises: supporting business processes and operations, supporting employees' and managers' decision making and supporting strategies developed for the generation of a competitive advantage (O'brien and Marakas2007: p. 9). The basic roles of information technologies in financial enterprises are shown. Alongside these basic roles, information systems have many important traits. Some of these are listed below (Rainer et al. 2007: p. 8):

Making fast and large amounts of numerical calculations,
Ensuring fast and right communication and cooperation between and within organizations,
Collection of great amounts of information in a small storage space easy for daily access,
Allowing swift and cheap access to immense amounts of information worldwide,
Facilitating the assessment of immense amounts of data,
Increasing the effectiveness and efficiency of people working at a certain place and in groups,
It automatizes both semi-automatic operating processes and manually performed duties.

In principle, information technologies provide service by performing the functions of information collection, storage, processing, electronic distribution and transfer. Information technologies have three sub elements, those being hardware, software and databases. Information technologies provide very significant strategic advantages in organizations. However, one must understand these advantages, know and understand the roles information systems play in organizations

Table 13.1 Development of Information Systems

1950–1960	Record processing systems
1960–1970	Managerial information technology and management reporting systems
1970–1980	Decision support systems, office automation systems and group decision support systems
1980–1990	Senior level management information technologies systems and expert systems
Since 1990	Strategic information technology systems

(Bensghir 1996: p. 39). Therefore, information technologies have changed the scope of business and organizational life; geographical and time limits have assumed new meanings (Rainer et al. 2007: p. 18). Also, information technologies are used in all units of enterprises.

The development of information systems in financial institutes has occurred as stated in Table 13.1.

With the establishment of fast and effective communication between employees from all ranks in organizations, strong access opportunities to data bases and interactive exchange of information with competitors outside the organizations, subsidiary industries and customers have brought about many organizational and sectorial changes (Laudon and Laudon 2004: p. 5). Information technology and its comparative superiority have been closely linked and it has been argued that organizations in developed countries must use information technology against their competitors in developing countries. Seen from a different angle however, it has been stated that small and medium enterprises have had to use information technologies, information sources and communications to survive in this globalized era (Bonk 1996: p. 71). It is seen that in the first years of the use of information technologies in financial enterprises, the measurement of the contribution yielded by information technology has intensely focused on inner competency, efficiency and procedures.

Analyses done in these periods are based on simple cost—benefit economy (Tapscott and Caston 1993: p. 122). In these analyses, emphasis is made on lowering costs and saving on labor. In current conditions, it is difficult to determine the real cost and benefits of information technologies. This is because the impact of this technology is dispersed through many departments and their budgets (Malaga 2005: p. 38). Information technology, however, in general is applied in a way as to comprise the entirety of the enterprise. The inner information sources of an organization are the regular reports submitted on department activities. Such reporting can be more easily, reliably and swiftly provided by information technology systems developed in conformity with the functions within departments' own structures (Kumar and Mittal 2004: p. 76).

13.4 Information Technologies and Their Impacts on Financial Institutions

The strategic use of information technologies have been explained in many case studies. The use of information technologies changes both the way organizations do business and the way these businesses are coordinated with people (Luthans 1995: pp. 27–30). Developments experienced in the field of information technologies have rendered employees with high level skills necessary. Such tendency will, together with the business making processes to be seen in enterprises, continue in the years to come to change the quality of business and the talent types required for business.

Internet and wireless communication technologies have a deep impact in financial services. New suppliers in line with a certain purpose take place in the system with a very low cost by using internet technologies, credit calculations and other yield techniques. With the analysis of data collected and accumulated in the internet, customer base is better arranged and customers are given the opportunity to create their preference profiles online. This development does not only allow the personalization of information and services, it also allows for financial services to be much more personalized and credit risks to be determined much more effectively. At the same time internet also allows the access of new financial services providers to the system for much more effective competition for consumers. These are distinguished from amongst financial services providing services by intangible and traditional methods (Yörük2003: p. 303). The theory establishing a relation between the competitive theory and information technology is seen often in literature. Accordingly, information technology provides the opportunity of vital strategic options making it possible for a company to gain a competitive edge over its rivals and continue such advantage. In order to provide good service to its customers, decrease costs or for market choice, a financial enterprise may use information technologies.

The various economic impacts of information technologies within the nearly twenty years have been researched. The most significant among these economic impacts have been the level at which economic and social data such as company efficiency, company profitability, customer surplus revenue, product quality and output levels have been affected by information technologies. All research has in general discovered that investments made in information technologies have increased efficiency in financial institutions and other companies and positively affected profitability and customer revenue structures (Thatcher and Pingry 2004: p. 81).

Managers in banks now feel the need to follow up daily on all kinds of activities and manage organizations based on such information. With Management Information Technology Systems managers have reached the opportunity to follow up on all kinds of information at desired levels and see such information on computer screens (Keri et al. 2006: p. 163). Technological developments continue to bring fundamental changes to the financial services sector. ATMs (Automated Teller

Machines) ensure wide geographical access without being dependent on branch working hours; thereby, providing the opportunity to take advantage of cash and deposits services.

The important progress in banking for the future has been in the management of information and sales system which assist in the banking official to know his customer and estimate his individual requirements. Home banking and enhanced electronic funds transfer systems offer both individual and corporate customers more suitable services and products. Online credit approvals and documentation systems eliminate the delays the customer faces while already obtaining credits. The imaging technology used for processing cheques and other banknote based services has enhanced customer services and decreased costs. When seen with a competitive perspective, success or failure depends largely on the use of appropriate technology in retail banking, sufficient investment in risk management and customer information systems.

The arrival of information technologies to the organization can be considered to be a novelty. All organizations are, in one view, comprised by five sections, those being technical, structural, and psychological, targets/values and management. The change in any of these will cause others to change. With increasing global competition, managers consider information technologies to be an effective tool for increasing business values and the redesign of works. By ensuring novelties in business processes, it is possible for customers to use the most important step of information technology, which are means such as internet banking and gsm banking and undertake financial transactions in swiftest and most efficient way.

When information technologies are used in a financial institution they cause structural changes. These changes in the organizational structure are generally seen in the control structure of the organization, number of rankings and departments, control and authority mechanism. The change of organizational structures, information management's coming into prominence, challenges in cogency and also the development of deliberative democracy now cause charismatic leadership to be replaced by information society. Now, to ensure organizations' efficiency, leaders have to manage information, information technologies must be encouraged in proportion with their employees and transform their organizations into learning organizations (Gül 2003: p. 771). When the impacts of information technology on organization performance are examined; it is observed that it increases service efficiency, the competitive aspect of financial institutions, customer numbers, profitability, and organization performance in general. New technology ensures the enhancement of cost effective operations, thereby assists in accessing new markets with intense competition and ensures that new products and services come out (Ekren 2004: p. 10). Efficiency has come on to the agenda with the technology making costs measurable. Developments gone through recently exert that banks work in a highly risky environment and a great part of risks in fact materialize (TBB 2002: p. 11).

Banks, which rank foremost among financial institutions, are economical decision units with many inputs and outputs; they are intermediary institutions targeting the maximization of capital revenues and offering financial services.

However, determining the output vector in banking is not a simple task. A variable considered to be an output in one of the banking performance measurement studies can be taken up as an input in another. In the measurement of efficiency or performance, however, there are two basic approaches: production and the mediation approach. Methods and scales used in the measurement of efficiency are important with respect to the assessment of the yielded result.

In banking industry, the concept of efficiency implies the following concepts: *product variety, scale and scope economies, property and market structure, integrations, transfers, the access of foreign banks into the market, privatization, circumferential economic conditions, competitive power, technological development, centralization of operations, restructuring of business processes, quality of actives, capital adequacy, auditing efficiency, transparency, alternative distribution channels, and the balance of income and expenses* (Yolalan 2001: p. 2). Cost elements have been brought out as a result of efficiency. In periods when the technological environment is not enough; the most effective method used by commercial banks to reach their customers has been branching.

The increase in the number of branches of banks which especially aim at offering services across the country has necessitated the endurance of high costs. The newly opened branches have, with the employment of personnel to carry out all kinds of routine and administrative procedures, brought about a second cost element. The performance of all kinds of transactions between and within branches by classical means based on banknotes has become another element increasing non-interest expenses in banking (Akpınar 1995: p. 3). Nowadays, although banks refrain from branching, the number of branches cannot be decreased since internet use is not widespread in our country. Even phone banking is not enough for customers, who prefer undertaking their transactions verbal. The demand of the information society is one of the reasons leading to electronic banking.

13.4.1 The Impact of Information Technologies on Managers and Employees' Managerial Activities in Financial Institutions

While the use of information technology by personnel in financial institutions is openly adopted, the change generated by these technologies is recognized by the personnel of financial institutions. Moreover, with the use of such technologies, written and verbal communications become widespread within the organization, while an increase in interdepartmental communication has been observed. The use of information and communication systems in banks has caused managers' behavior and decisions to become definitive, systematization of management, use of modern management techniques and the centralization of information used in decision making. Moreover, it has been observed that information and communication systems contribute to the enhancement of auditing sphere in banks and the control of personnel in organizational design.

Table 13.2 The effects of information technologies

Effects of information technologies on managers and managerial activities
With a central data bank, swift calculation skills and available programs, a manager's information requests can be met more swiftly
With Information Technologies an increase in managers' forecasts and the consistency and accuracy of their decisions materializes
With Information Technologies managers can obtain the information they know as they wish and whenever they want
Information Technologies, by providing the opportunity to more easily control personnel efficiency and their tracking, ensures a decrease in personnel costs
Information Technologies provide enterprises the advantage of market efficiency
Information Technologies offer managers the opportunity to increase cooperation and coordination between departments, thereby ensuring a more orderly management understanding
Information Technologies offer managers the opportunity to follow up on their competitors more easily, thereby ensuring competitive advantage
Information Technologies by ensuring enterprises advantages with continuous data collection and analysis by the use of statistical methods, thus, ensuring managers the opportunity to create systematic solutions
Information Technologies offer managers the opportunity to use information quickly and effectively
Information Technologies offer managers the opportunity to save time and managers thereby can allocate more time to other activities
Information Technologies offers managers the opportunity to conduct continuous market analyses
Information Technologies offers managers the opportunity to try out new approaches

Source Mahmut Tekin et al., *Technology Management in the Changing World,* Damla Ofset, *Konya,* 2000

The effects of information technologies on managers and managerial activities in financial institutions are shown in the Table 13.2.

13.5 Conclusion

The strategic importance and value of information technology in organizations is continuously increasing. In most enterprises information technology has helped to be a supportive function in organizations and has come to hold a strategic and structural role. This development towards the use of information technologies in organizations has ensured contributions to management, production factors and performance and has been regarded as an indispensable element to increase efficiency in organizations. Instead of being seen as an organizational overhead, information technology is now seen as a strategic resource changing competition and sectorial structure. The functioning of the process with the support of top management is of vital importance for ensuring harmony among different units, eliminating resistance to change and the timely and effective distribution of required resources. It has been revealed that the primary target of banks using

information technology at various levels is to maximize efficiency as information technologies assist top managers to develop strong long term plans.

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Chapter 14
Development of the Regulatory Framework of Securities Market Supervision Post-GFC

Phuong Duong, Jinghui Liu and Ian Eddie

Abstract The objective of this paper is to analyze changes in securities market supervision and regulation by investigating the impacts of the 2008 global financial crisis (GFC) on the conceptual framework of securities market supervision (SMS). Post-GFC, the trend of SMS is characterized by a move away from the market-based approach and an increasing reliance on the risk-based approach. Further, the macro-prudential supervision approach relying on the involvement of the securities regulator has become common practice. First, this paper identifies the theoretical framework of the SMS prior to the GFC. Next, this paper observes some key developments of SMS post-GFC. Finally, this paper concludes that the philosophy of the SMS has experienced substantial evolution post-GFC. Neoliberal ideologies and the efficient markets hypothesis (EMH) is no longer considered as the conventional wisdom of securities market regulators. Accordingly, a new conceptual framework of market supervision is recommended. The twin-peak model is identified as the preferred model due to a wider view of systemic risk mitigation.

14.1 Introduction

The 2008 Global Financial Crisis (GFC) occurred just 10 years after the Asian Financial Crisis, at the time when most of the financial regulators believed that more developed markets were immune from the 'Asian-flu-type crisis' (Hale 2011). However, far from the expectations of academics and practitioners, the GFC shocked the world and significantly reshaped every field of the global economy. As economic barometers, securities markets around the world were

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shaken by the GFC. An inadequate supervision system was blamed as one of the contributing factors that enabled the crisis to grow from the US mortgage and securities markets to a global economic crisis. The IOSCO commented: 'The crisis affords regulators an opportunity to revisit the design, structure and approach to regulating and developing their financial systems. One positive result of the crisis is a general willingness to examine existing policies and practices, and consider a wide range of alternatives' (IOSCO 2009e).

Many academics and practitioners considered the crisis as a regulatory failure and believed that the current regulatory architecture—a product of subsequent responses to earlier crises and evolution of financial institutions—needed repair (Viral et al. 2009). Soon after the first shock of the GFC, securities regulators had their early responses to the GFC, including: banning of short selling; applying more stringent regulation on credit rating agencies; revisiting of regulation on securitization; implementation of high level principles on regulation of credit default swaps; and identifying areas for regulatory improvement of hedge funds (D'Aloisio 2009). Academic research, government papers and institutional reports suggested that the 2008 GFC led to dynamic regulatory changes in the securities markets. Following the GFC, international and national securities regulatory bodies (D'Aloisio 2009; IOSCO 2009e) released a series of rules and regulations demonstrating that the SMS was experiencing significant changes. For a deeper understanding of the impacts of the GFC on the securities market supervision and regulation, this paper provides a systematic examination to address aspects of the supervision conceptual framework.

The contributions of this paper are threefold. First, it investigates the impact of the GFC on the SMS. Second, it reviews the pre-GFC SMS framework and identifies some issues regarding the SMS in the financial markets. Third, it constructs a new SMS framework that is responsive to the issues of the SMS arising from the GFC. This paper is structured as follows: following the introduction, in Sect. 14.2, based on previous studies and investigation of market supervision, this paper reviews how the theoretical framework has evolved due to the impacts of the 2008 GFC. Section 14.3 identifies problems of the pre-GFC SMS framework. Section 14.4 explores the evolution of the SMS conceptual framework in the post-GFC era. Section 14.5 reviews the implementation of the post-GFC SMS framework reforms in securities markets. Section 14.6 reports conclusions and implications for the SMS in the post-GFC era.

14.2 The SMS Theoretical Framework Prior to the 2008 GFC

Before the 2008 GFC, neo-liberal ideologies, typically the *efficient market hypothesis* (EMH) served as a theoretical framework for the SMS. The EMH was not only the economic or philosophical fundamental underpinning securities and investments regulation but also formed the basis for the philosophy of regulation

of financial markets in developed countries such as Australia, U.S., U.K. and European countries (D'Aloisio 2009). The concept of 'efficient markets' has a long history and can be traced to 1889 in the book of George Gibson entitled 'The Stock Markets of London, Paris and New York: a Comparison'.

Gibson 1889 writes 'shares become publicly known in an open market, the value which they acquire may be regarded as the judgment of the best intelligence concerning them.' Many other economists and scholars subsequently contributed to this idea. Sewell (2004) lists studies of twenty nine scholars and economists, that advocated the idea of efficient markets theory, including random walk of markets prices and capital asset pricing model for a period of 65 years before the 1960s. Fama (1970) defined an efficient market as 'a market in which prices always 'fully reflect' available information'. Fama's EMH is based on the supposition that: 'an ideal capital market is the market in which prices provide accurate signals for resource allocation: that is, a market in which firms can make production—investment decisions, and investors can choose among the securities that represent ownership of firms' activities under the assumption that securities at any time fully reflects all available information'. Applying the EMH, then if stock markets are efficient, prices will always reflect all publically available information. The EMH has been considered as one of the most influential ideas in the past 30 years by the *Journal of Portfolio Management* (Lo 2004).

Based on the EMH, 'the conventional wisdom' of securities regulation (Erskine 2010b), a conceptual framework of the SMS was developed and operated by the IOSCO as the key philosophy underpinning policies on securities regulation. It was well reflected in the policy documents of the IOSCO before the 2008 GFC by providing guidelines regarding objectives and some principles of securities regulation (IOSCO 1990, 1998, 2000b, 2003a). Full disclosure and best practices of corporate governance were the major tools for investor protection (IOSCO 1992, 1999, 2000a, 2001, 2002, 2007). Derivatives and financial structured products were believed to be instruments diversifying risks(IOSCO 1995). Besides, market gatekeepers such as credit rating agencies, auditors and stock exchanges were perceived as active agents in the supervisory regime rather than regulated entities (IOSCO 2003a, b). The IOSCO documentation promoted a culture of deregulation and a reliance on self-regulation in the SMS that can be observed in the IOSCO recommendations to its members by making appropriate use of self-regulatory organizations as regulators of securities markets (IOSCO 2003a). Researchers further concluded the conceptual framework and operational assumption of securities regulation in the pre-GFC period (Erskine 2010b) comprised four aspects: (1) a pro-market deregulatory mindset, where information asymmetry and conflict of interests would be adequately resolved by disclosures and fairness regulation, and risk appropriately assessed and allocated; (2) corporate governance and market gatekeepers could be relied on to minimize risks and maintain quality of disclosure; (3) innovation in products and markets was to be welcomed for the purpose of completing the risk spectrum and

facilitating risk transfer; and (4) a bigger finance sector and bigger financial intermediaries were thought beneficial for economic growth and welfare.

14.3 Problems of SMS Framework Prior to the 2008 GFC

The problems of SMS framework prior to the 2008 GFC are identified as the flaws of market supervision philosophy, over-reliance on self-regulation and de-regulation. After the 2008 GFC, a crisis of financial market philosophy was described by Alan Greenspan (former Chairman of US Federal Reserve from 1987 to 2006) as a 'shocked disbelief' because 'the whole intellectual edifice' had 'collapsed' (Krugman 2009). In an interview with the *Washington Times* in October 2008, Greenspan admitted that he has found a flaw in the ideology—a conceptual framework which made him believes that 'free, competitive markets are by far the unrivalled way to organize economies'. Many academics and practitioners argued that the concept of the EMH has contributed to the 2008 GFC. Grenville (2009) argued that at the micro level, the EMH has taken a direct hit and 'its credentials as an intellectual rationale for self-interested minimal regulation are gone'. It was also proclaimed by Rudd (2009) that 'the great neo-liberal experiment of the past 30 years has failed,….the emperor has no clothes'. Erskine (2010a, b) claimed that the 'views that formed pro-market deregulatory mindset' were exaggerated. Efforts trying to regulate markets did not work (Ward 2008). Krugman (2009) concluded that economists need to abandon the assumption that investors are rational and markets work perfectly. Therefore, it is necessary for economists to call for a return to Keynesian economics as it remains the best framework to respond to recessions and depressions. The GFC has proved that disclosures and fairness regulation are insufficient to discipline risk taking and to prevent conflicts of interest and other conflicts. As a result, risks are not adequately recognized or diversified. Therefore, a critical question encountered by regulators and supervisors is: what their appropriate 'field of vision' should be (Bernanke 2008). IOSCO (2009c) declares that the globalization and the growing complexities of financial and capital markets have necessitated that regulators undergo a paradigm shift in securities' philosophy and regimes. Over-reliance on self-regulation is a typical feature of the SMS before the 2008 GFC. Self-regulating organizations (SROs) are defined as private sector organizations that share the same objectives of market integrity, market efficiency and investor protection with governmental regulators. However, SROs have limited statutory authority and disciplinary power to regulate the market participants and individuals under their jurisdiction. Therefore, SROs must maintain the relevant framework and standards in order to eliminate the conflicts of interests that may arise from their commercial and regulatory activities.

In pre-GFC time, SROs were recognized as a component of the securities co-regulation regime promulgated by the IOSCO. The IOSCO claimed that the

securities regulatory regime should make 'appropriate use of SROs that exercise some direct oversight responsibilities for their respective areas of competence, to the extent appropriate to the size and complexity of the markets' (IOSCO 2003a, p. 1). This recommendation believed that SROs should undertake regulatory responsibilities by which they have incentives to perform most efficiently (IOSCO 2003b, p. 12). It is also observed that SROs can maintain 'ethical standards that go beyond government regulation' (IOSCO 2003a, p. 13). With the mindset of reliance on self-regulation, securities regulators in many markets transfer certain supervisory responsibilities to SROs, especially stock exchanges. This can be evidenced by the fact that stock exchanges (e.g. the Australian Stock Exchange, ASX) were wholly in charge of or shared the same duty of market surveillance with securities commissions (e.g. the Australian Securities and Investment Commission, ASIC). The securities dealers associations are actively involved in supervision of their corporate members.

Financial deregulation can be a catastrophe as it can increase financial complexity and market volatility in U.S. (Lister 2011). Kniest (2008) stated that de-regulation in the financial markets resulted in a situation, where in order to increase commissions, banks and other financial institutions made loans to people who clearly did not have the capacity to repay. According to Erskine (2010b), pro-market deregulatory views were found to be inadequate as disclosures failed to inform investors adequately about the identity of transactions or enable them to appropriately diversify risk. In addition, fairness regulation proved insufficient to discipline risk taking actions and to prevent conflicts of interests and other agency conflicts being exploited by market participants. Furthermore, it was believed that the deregulation of the US stock markets increased riskier lending without enforceable credit controls that gave rise to high risk derivative products including the sub-prime mortgage and collateralized debt obligations (CDO) (Carty 2011). Therefore, it was argued that financial markets were not self-repairing (Haldane 2009). The 'faith that markets will solve all problems' does not hold any longer (Krugman 2009).

14.4 The SMS Conceptual Framework After the 2008 GFC

After the GFC, some academics and practitioners proposed a new conceptual framework of SMS. It was argued that securities regulators should move toward a conceptual framework that reassesses the market efficiency hypothesis and ensures that reforms achieve the right balance between efficiency and investor protection (D'Aloisio 2009). D'Aloisio (2010) also suggested that this conceptual framework should be applied to post-GFC securities regulation. Researchers and practitioners proposed a new conceptual framework for securities regulation and the SMS that comprised more stringent regulatory requirements for risky instruments, risk

diversion and financial stability, and financial institutes (Erskine 2010b). The new conceptual framework included: (1) avoidance of market overreliance and a wider view to address systemic risks for financial stability; (2) more stringent regulatory requirements for risky instruments but noting that this might drive them into less regulated jurisdictions; (3) non-depositary and other financial entities should be subject to the same regulations as banks; (4) insights of behavioral finance and agency theory should be used to deal with conflicts of interest and agency costs as they represent human behavioral problems; (5) exchange traded markets should be promoted as they are less sophisticated and more transparent; (6) OTC trading should be facilitated by organized clearing venues; and (7) regulation of systemic risks is called for to eliminate the danger of risk concentration in integrated financial markets and financial conglomerates.

Recommended changes to the regulatory philosophy were incorporated into the principles and guidelines of the securities regulatory community, represented by the IOSCO. They are: review of securities regulatory coverage and reassessment of the roles of SROs (BCBS et al. 2010; IOSCO 2010b); the roles of securities regulators in mitigation of systemic risks (IOSCO 2011b); conflicts of interest and problems of financial conglomerates (BIS 2009; IOSCO 2009c, 2010a, 2011c); regulation of derivatives and structured finance products (IOSCO 2009a, d, h, i, 2010d, 2011a, b, c, d, f, IOSCO BIS 2012); and supervision over market intermediaries and market gatekeepers (IOSCO 2009b, f, g, 2010a, 2010c, 2012a, 2012e). A departure from deregulation and delegation of supervisory responsibilities to market actors could be found in the IOSCO's 2010 version of 'Objectives and Principles of Securities Regulation'. IOSCO (2010b) highlighted the significance of oversight of SROs by the securities market regulators.

The evolution of the SMS conceptual framework is also reflected in the securities regulators perception as to the supervisory architecture that mitigates systemic risks and responds well to a financial crisis. After the 2008 GFC, there was an urgent demand of regulatory reform towards a more consolidated supervisory structure to ensure efficient systemic risk management and a better response to financial turbulence. The twin-peaks model, an Australian model with a prudential and a business conduct regulator, is argued to be the optimal means ensuring discharge of transparency, market integrity, and consumer protection with sufficient priority (Group of Thirty 2008). The twin-peaks model is recommended to be set up in the EU (The de Larosière Group 2009), in Germany (John 2009), in Spain (CNMV 2008), in UK (Weatherhead 2010), and in US (Paulson et al. 2008). On 2 April 2012, the British Financial Services Authority (FSA) introduced its twin-peaks model, separating prudential regulation from the conduct of business regulation. The FSA was re-organized into two new agencies, namely the Prudential Regulation Authority (PRA) and the Financial Conduct Authority (FCA), expected to commence in March 2013. In July 2012, The Financial Services Board in South Africa (FSB) also introduced the twin-peaks regulatory model, where the central bank is responsible for prudential regulation and the FSB is responsible for market conduct regulation.

14.5 The Implementation of the SMS Framework After the 2008 GFC

In order to implement the new SMS conceptual framework, there were changes regarding the roles of SROs, market-based versus risk-based supervision and the recognition of securities regulators' role in macro-prudential supervision. First, the 2008 GFC created an opportunity for securities market regulators to re-think the roles of SROs. The GFC illustrated that the models of 'co-regulation' or 'enforced self-regulation' could slide into bare self-regulation in the absence of meaningful regulatory oversight and engagement (Ford 2010). Many academics and practitioners shared the point of view that the pre-GFC assumptions were wrong (Rudd 2009; Erskine 2010b) as the financial markets cannot regulate themselves and SROs were not trustworthy as market gatekeepers. Therefore, the key roles of SROs perceived by Carson (2009) after the 2008 GFC were: (1) reducing reliance on SROs; (2) cutting back of the SRO roles of stock exchanges due to conflict of interests; (3) moving away from member control and towards more independent governance; and (4) placing tougher oversight and direction from securities regulators.

The diminishing roles of SROs have been found in the documents of IOSCO as they advocate no longer relying on self-regulation in dealing with risk management, conflicts of interest and misalignment of incentives. Instead, IOSCO shifted the above roles to the securities regulators by increasing the number of principles applied for securities regulators, strengthening the roles in systemic risks management, regularly reviewing the regulatory perimeter and eliminating the conflicts of interest (IOSCO 2010b). It also addressed more oversight over SROs as shown in the 'Principles For Self-regulation' (IOSCO 2010b). IOSCO's recommendation on compulsory use of self-regulation has been replaced by its warning for more stringent supervision over SROs. This change is a sharp contrast to that of a few years ago before the 2008 GFC when IOSCO relied heavily on SROs as an essential component of securities regulation and supervision. In 2010, the fact that ASIC took over the ASX's responsibility of market surveillance was recognized as 'a fundamental shift away from the co-regulation model'.

Second, the 2008 GFC has ended the age of the pro-market mindset in securities regulation. The departure from the market-based philosophy has led to the trends of moving away from the market-based approach to the risk-based approach of SMS. The new SMS approach meant that the supervisory activities are undertaken depending on the SMS philosophy of the securities regulators.

Deregulation, disclosure-reliance, self-regulation and market self-correction are the major means of the market-based approach. Before the 2008 GFC, the market-based conceptual framework had dominated the regulatory world for several decades, forming the basis of the IOSCO 'Objectives and Principles of Securities Regulation' (IOSCO 2003a; Erskine 2010a). However, in the 2008 GFC, it came to an end as the market-based financial system became the object of intense scrutiny for clues as to what went wrong (Morris and Shin 2008). A move away

from the market-based approach is a direct impact of the GFC on the SMS philosophy. Accordingly, the market-based approach is no longer used to supervise securities intermediaries as an 'invisible-hand' to align the incentives of market participants with the objectives of the regulators (Bernanke 2007).

The latest version of IOSCO's 'Objectives and Principles of Securities Regulation' (IOSCO 2010b) has abandoned the market-based model with amendments and supplements to the 2003 version, which was claimed to form the principles of market-based conceptual framework (Erskine 2010a). After the GFC, more reliance on the risk-based approach became a natural response of securities regulators to the GFC that reflected the risk-based approach has obtained an unarguable significance. The IOSCO (2009b) identified a trend of increasing number of IOSCO members moving away from a rigid rules-based system of regulation to a system, which relies more on the discretion and professional judgment of securities supervisors through the adoption of a risk-based supervisory structure. According to IOSCO (2009b), the main objectives of the risk-based supervision approach include: (1) identification of risk exposure of market intermediaries and their possible impacts on the market; (2) allocation of relevant supervisory scope and intensity based on the level of risk exposed; (3) combination of supervisory regimes by efficient use and effective allocation of scarce resources; (4) a more pro-active approach; and (5) promotion of confidence in the system as a whole. Following the recommendations of IOSCO, the risk-based supervision approach was proposed to be employed in many securities markets.

In U.S., it was proposed by the International Securities Exchange (ISE) (ISE 2009) that the risk-based approach should be adopted for securities regulation. In Canada, the risk-based approach is believed to be one of global best practices and should be adopted (Pan 2009; Expert Panel 2010). In U.K., Black and Baldwin (2010) proposed a 'really responsive risk-based regulation' approach. In Australia, Medcraft (2011), the Chairman of the ASIC elected in 2011, confirmed that the ASIC was taking systemic and other risks very seriously, and would do risk-based surveillances and focus on the highest impact risks. In Netherlands, the risk-based approach is taken by the Authority for Financial Markets (AFMs) as a robust supervisory framework, which exhibits high levels of implementation of IOSCO Principles (IMF 2011). Though the risk-based approach is not an absolute answer for the SMS after the 2008 GFC, the approach has obtained an emerging significance as risks, especially systemic risks, are now at the center of the regulatory and supervisory reforms.

Third, another notable change in the conceptual framework of securities market supervision after the 2008 GFC is the recognition of securities regulators' role in macro-prudential supervision. Macro-prudential supervision 'concerns itself with the stability of the financial system as a whole' (The World Bank Group 2009) and aims to limit systemic risks. While the problems of currency, assets and liabilities mismatch were most blamed for the 1997 Asian Financial Crisis, inadequate systemic risk management was seen as one of the crucial weakness that triggered the 2008 GFC (Hale 2011). Before the GFC, macro-prudential supervision was traditionally perceived as the responsibility of central banks. However, after the

2008 GFC, the securities regulators were expected to take a more active role in macro-prudential supervision.

The representation of the IOSCO in the Financial Stability Board (FSB), which was established to develop and implement strong regulatory, supervisory and other policies in the interests of financial stability after the GFC, is an inherent evidence of recognizing the importance of securities regulators in macro-prudential supervision. In July 2010, the IOSCO adopted new principles of securities regulation, including the need to monitor, mitigate and manage systemic risk and to review the extent of regulatory coverage. The 'Objectives and Principles of Securities Regulation' of IOSCO (2010b) specified that reducing systemic risk is one of the three objectives of securities regulation. Securities regulators were recommended to maintain or contribute to a process to monitor, mitigate and manage systemic risk (IOSCO 2010b). IOSCO observed that pre-GFC practices of securities regulation lacked a 'financial stability perspective'. IOSCO (2011b) recognized mitigating systemic risk was one of the most important roles of securities regulators. In order to promote better macro-prudential supervision, IOSCO created the Working Group on Systemic Risk (Working Group) to examine the role of securities regulators with respect to systemic risk (IOSCO 2011b).

In Australia, the fundamental thinking about post-GFC securities regulation has discussed the macro-prudential regulation with detailed considerations to explore methods for managing systemic risk (Erskine 2010a). In Canada, the mandate of securities regulation was recommended to include mitigating systemic risks (Anand 2010). In U.K., securities regulators and financial stability authorities were recommended to meet half way to make progress with network characteristics of the financial system (Tucker 2011). Undeniably, the 2008 GFC has changed the perception of securities regulators on the role of macro-prudential supervision, which used to be considered as a function of banking regulators.

14.6 Conclusion

This paper argues that the 2008 GFC has brought significant impacts on the theoretical framework of securities market regulation and supervision. First, the neo-liberal ideologies, encompassing the EMH theory have been replaced as the philosophy for the SMS. A new conceptual framework of securities supervision and regulation are recommended by academics, practitioners and regulatory bodies. The recommendations have been implemented in policies of the securities regulatory community. Second, with a wider view of systemic risk mitigation, securities regulators tend to prefer the twin-peak model as a structure that responds to systemic risks efficiently, as well as to financial turbulence. Third, securities regulators now hold a different perception about the roles of SROs that are no longer considered to maintain ethical standards that go beyond government regulation. Fourth, securities regulators are moving away from the market-based approach. The risk-based approach, as an effective tool to avoid crisis, is more

preferable. Fifth, the roles of securities regulators in macro-prudential supervision are recognized to be more important.

In the post-GFC period, it is urgent for the securities regulators to construct a supervisory framework of the SMS, which is resilient to financial crises. The proposed framework in this paper has implications for the practices and regulation of the SMS. First, the securities regulators should adopt the rule of thumb for effective regulation. That is, to focus on the specific sources of the market failures and address these failures by relevant regulatory interventions. From the perspective of public policies, the market failures revealed by the 2008 GFC included: (1) information asymmetries: a lack of adequate transparency requirements and an assumption that investors are sophisticated enough for trading with OTC derivatives; (2) principal-agent problems: where SROs and market gate-keepers, such as credit rating agencies, are supposed to act for the benefit of investors, they indeed work best to protect their self-interests. The conflicts of interests in the financial institutions are not adequately addressed by corporate governance principles, leading to excessive risk taking; (3) Negative externalities: failures of individual firms caused by a system collapse. It is unaddressed because the prudential regulation focuses on the micro-level of individual firm rather than on systemic risks; and (4) de-merit goods: market failure of control over the manufacture and sale of goods, such as highly leveraged securitized products and hedge funds, which have less merit than investors perceive. The above failures can be remedied by: (1) more transparency requirements, that enable a precise pricing mechanism and adequate access by investors; (2) more regulation over SROs and market gate keepers to prevent conflict of interests; (3) harmonized supervision focused on both macro-prudential and micro-prudential level, risk-based supervision to be employed; and (4) more stringent regulation of fund managers and securitizers.

Second, given the context that financial markets are transferring to an integrated model of financial supervision post-GFC, it is recommended that the regulators maintain financial markets with functional or institutional supervisory structure in the short term. It is crucial that the securities regulators have clear lines of authority and have a regime of freely and continuously sharing information and effective coordination of regulatory actions with other regulators in the financial markets.

Third, given that the financial markets show irregularities in post-GFC, the securities regulators should take self-regulatory organizations seriously and apply the recommendations of the IOSCO in setting up relevant supervisory arrangements with the implementation of SROs to reduce the conflict of interests faced by the agents. The role of market surveillance traditionally taken by the stock exchanges should be transferred wholly to the regulatory bodies, that are securities commissions (e.g. ASIC).

Fourth, the securities commissions should take part in macro-prudential supervision to address the systemic risks arising in the securities markets. The risk-based approach should be used for micro-prudential supervision of market intermediaries, such as investment funds and brokerage firms, in a way to ensure their

financial soundness and harmonization of macro-prudential and micro-prudential supervisory activities.

Finally, a responsive framework of SMS should be constructed by the securities regulators to avoid potential future crises. The 'responsive regulation' (Black and Baldwin 2010), a new regulatory framework, responds to the firms' attitudinal settings and recognizes the institutional environment, as well as being aware of the differential logistics of regulatory tools and strategies, and is performed sensitively and responsively to changes in the regulatory environment.

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Chapter 15
The Impact of Globalization on Bank Guarantees: Changing Role of Letter of Guarantee in Banking

Kemale Aslanova

Abstract It is proved that traditional guarantees such as mortgaging or accessory guarantor could not reduce the risk in international trade and might put the business life in danger. In order to overcome such obstacles and secure the international transactions, bank guarantees have been designed and widely used. As a form of non-cash credit bank, a letter of guarantee ensures that the bank undertakes to meet losses arising—at the request of one of the parties—if the other party does not fulfill its requirement, debt in accordance with the contract or fails to perform as it should be. In the international level there have been several attempts to unify the rules on bank guarantees. The "United Nations (UN) Convention on Independent Guarantees and Standby Letters of Credit" was adopted and entered into force in 2000. Moreover, The International Chamber of Commerce accepted "Uniform Rules regarding the Guarantees at Request (URGR) Publish no.758/2010" which can be applied in the international trade as well. Four views have been developed on the legal nature of bank guarantees by the doctrine and court cases: "bail", "guarantee", "sui generis contract" and "mixed quality".

15.1 Introduction

In banking, credit activities are classified under two headings: Cash loans are given as money in exchange of interest and commission. Non-cash loans types of credit provides bank to be guarantor in exchange of commission. It does not matter whether they are considered as a guarantee contract or a surety agreement; letters of guarantee by the banks are considered as the non-cash credit, which turn to cash on the first request or when the certain conditions are met (Taşdelen 2002). During the

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establishment of a business relationship, the parties doubt either other party fulfills the requirement committed or not fulfill the requirement as it required. Especially when the parties do not know each other and there are distances between the parties, it might be difficult to trade. For this reason, the parties may demand guarantees from each other. As a rule, the creditor does not have to provide any collateral to the debtor. A debtor cannot force the debtor to provide collateral unless there is an obligation arising from a law or an agreement. In these cases, a debtor either can find a reputable warrant or mortgage or a third person can be a guarantor and promise to pay the debt under certain circumstances (Kuntalp 1995).

The term of collateral, their types and liability arising from them (Reha Poroy'a Armağan. Istanbul. pp. 266–267). Bank guarantees or letters of guarantee have emerged to secure the business relationships. Although every real or legal person can issue guarantee letters but in practice it has experienced that only banks are issuing such letters (Sungurtekin 1990). With a bank letter of guarantee, the bank undertakes to meet losses arising—at the request of one of the parties—if the other party does not fulfill its requirement, debt in accordance with the contract or fails to perform as it should be. A letter of guarantee is neither a guarantee of a loan nor a type of collateral received by the bank. On the contrary, it is a kind of a guarantee given by the bank. In other words, while the bank is the collateral creditor in all other types of collateral, the bank is the collateral debtor in bank guarantee letters.

Letters of guarantee are used in the local or national business life. Due to providing guarantees and the use of other collateral requirement types in international trade, letters of credit are used in international practice. Exchange of goods and services between countries are constantly expanding and it has resulted in financial globalization, which is defined as the integration of a country's financial markets to the international financial markets (Arestis et al. 2005).

15.2 Globalization and Its Impact on Bank Guarantees

Globalization emerged in 1980s and it has intended international economic integration by providing free movement of the goods, services, information, capitals in the World (IMF staff 2008). Given that global economy is growing significantly, the need to facilitate payments and reduce the risk has been increased in the international trade. The development of global markets has been facilitated by design of more reliable financial instruments such as bank guarantees. Bank guarantees became one of the most notable and widespread financial instruments in international exchanges. While the use of bank guarantees emerged in the mid-1960s in United States, it appeared at the beginning of 1970s in the international trade, when increasing wealth in the oil producing countries of the Middle East enables them to enter major contract with Western firms for large scale projects (Roeland 2004). Considering that companies enter large scale projects and more complex contracts as a result of financial globalization, they invest more money

and the risk becomes bigger. Traditional methods such as accessory guarantee or surety ship are considered not sufficient and cumbersome to address the needs of the international trade (Roeland 2004). For example, the accessory guarantor's obligation is not more than the obligation of the principal debtor and the accessory guarantor can raise every defense which the principal debtor could invoke (Gold 1986). In order to overcome these obstacles, independent bank guarantees were designed. Taking into consideration that bank guarantees are unconditional and payable upon first demand, it ensures that beneficiary receive payment easily. Furthermore, it is worth to note that the use of bank guarantees has grown owing to the fact that they can be used to support all kind of transactions, both non-financial and financial transactions, and in addition, bank guarantees can ensure security to both parties (Roeland 2004). Unconditional nature of the bank guarantees is very important due to the fact that it prevents uncertainty in the international trade. Therefore, the bank guarantees are preferred to traditional instruments since they are independent, unconditional and more reliable guarantees and easily capitalized (Nemes 2012).

Several attempts have been taken at the international level in order to unify the law on bank guarantee. In 1978, the International Chamber of Commerce developed "Uniform Rules for Contract Guarantees of the (URCG 325)" so as to establish international rules for guarantee contracts and "encourage more equitable practice in the area of guarantees, especially by reducing the opportunities for abuse" (ICC Publication No. 32). Since the rules of the URCG were not widely recognized by the banks and beneficiaries, the ICC designed "the Uniform Rules for Demand Guarantees" (ICC Publication No. 458 2013). URCG 458 was revised and the new version, called URCG 758 entered into force in 2010. Moreover, "Standard rules for standby letters of credit" known as ISP98 were accepted by the American Institute of International Banking Law and Practice and published as ICC publication No: 590. All these documents are optional and it is up to the parties to apply these rules. There was a need to unify the rules and adopt internationally binding instruments for guarantees. In 1995, the General Assembly of the UN adopted the "United Nations Convention on Independent Guarantees and Standby letters of credit" and it entered into force in 2000 (UN Convention, A/RES/50/48 2013).

The UN Convention is considered as an outstanding step towards the international harmonization of the law of international bank guarantees. It is stated that adoption of a convention would contribute to remove the current uncertainties and disparities in international trade. The legal basis of the application of letters of guarantee in Turkey is based on the texts of letters of guarantee accepted by the Council of Ministers and used in the State tenders in 1928. In these letters, the first written demand by the bank interlocutor about the immediate payment commitments "without the need to protest against the cutting; and not to take the borrower's consent and issuance of a court order" have taken place in all letters of guarantee so far, and these phrases identified the quality of letters of guarantee (Reisoglu 2002).

15.3 Definition and Legal Status

The letter of guarantee is a contract that contains the commitment to satisfy to pay the amount of the letter in favor of the addressed organization in case of the failure of the delivery of the goods of natural and legal persons in the country and abroad, business deals or the payment of a debt or in a business deal with similar issues. By this contract, the bank guarantees to comply with the damages and the debt himself arising from the guarantee if the other party fails to perform the commitments. In the UN Convention, a bank guarantee is defined as "an independent commitment given by a bank or other institution or person ("guarantor/issuer") to pay to the beneficiary a certain or a determinable amount upon simple demand or upon demand accompanied by other documents, in conformity with the terms and any documentary conditions of the understanding, indicating, or from which it to be inferred, that payment is due because of a default in the performance of an obligation, or because of another contingency, or for money borrowed or advanced, or on account of any mature indebtedness undertaken by the principal/applicant or another person (Article 2 of the UN Convention 2013). Unlike the Turkish Law, Romanian Law describes bank guarantees in the Civil Code as the letter of guarantee is the irrevocable and unconditional commitment by which a person, called issuer, undertakes, at the request of a person called authorizing officer, in consideration of a preexisting report involving obligations, but independently, to pay a sum of money to a third party called beneficiary, under the terms of the undertaken commitment" (Nemes 2012).

On the other hand, in American practice, banks gives guarantees under "the letter of credit" and the banks become liable to pay the sum when the documents, which stipulated in the letter of credit, submitted. There are some distinction between the letter of credits and bank guarantee: With the letter of credit, the bank undertakes to make a payment to the beneficiary once the criteria, which is stipulated in the agreement is met. Unlike a letter of credit, the bank guarantee ensures that the sum is only paid if the other party fails to fulfill its obligations stipulated in the contract (Trade Finance Guide 2007). In Australia both bank guarantees and letters of credit are used. The Court indicated that, for example in the case of Esal Commodities Ltd. V Oriental Credit Ltd, letters of credit and bank guarantees are similar and identical in law (Mugasha 2003). The legal nature of the contract will have to be determined to specify a more comfortable relationship between the parties and their obligations to each other. Letters of guarantee have not been subject to positive regulations in Turkish law, and at that, they have been discussed in the doctrine and court decisions intensively. On the legal nature of letters of guarantee; four views ("bail", "guarantee", "sui generis contract" and "mixed quality") have been advocated in comparative law (Dogan 2005).

15.3.1 Opinion About the Surety Agreement

Letters of guarantee, previously, have been accepted as a contract of surety in comparative law and Turkish law and court decisions. Accordingly, the bank does not guarantee that the addressee will not undergo any damage; on the contrary, it commits to meet losses incurred up to amount identified in the contract if the beneficiary acts contrary to the contractual provisions of the addressee. In addition, the phrases stating that the bank would be responsible as "joint and several debtor together with the joint guarantor and joint debtor" have been written in the bank letters of guarantee in the Turkish banking sector the applications previously (Dogan 2005). The presence of the bank's payment was kept on the condition that the risk materializes. For these reasons, the legal nature of letters of guarantee had been considered to be surety agreements (Barlas 1996).

15.3.2 Opinion About the Guarantee Contract

The bank letters of guarantee have the quality of being the third party's commitment, forming of guarantee, warranty contract and not to be concluded as bail by the two decisions of joint chambers acted in 1967 (Case from www.yargitay.gov.tr—İBK. 13.12.1967T. and E.1966/16 K.1967/7.) and 1969 (Case from www.yargitay.gov.tr- İBK. 11.6.1969 T.E.1969-4, K. 1969-6). Such a commitment is assumed to contain a liability in excess of bail, not to bear depending on the actual debt and to be independent (Stammler 1966).

15.3.3 Opinion About the Joint Qualification

According to proponents of this view, it will not be accurate to see all of the letters of guarantee being a contract of bank guarantee or a surety. In each concrete event… should be a classification. The bank, which guarantees the fulfillment of the availability and performance of third party's debt, should be examined whether it made a commitment that of possible admission, application exists or not; if the bank's commitment is not connected to the third-party's availability and feasibility of the debt, it will be assumed as a commitment admission, otherwise it would be appropriate to characterize the transaction as a bail (Reisoglu 2002).

15.3.4 Opinion About the Sui Generis Contract

Letters of guarantee are not included in comparative and Turkish law as positive regulations. However, letter of guarantee is a sui generis contract included in the nature of the actions of justice fields committing a contract of surety, guarantee, promising the Part 3's actions (Dogan 2005). Because the contract does not comply with any bank letters of guarantee issued by law, in my opinion, letters of guarantee are a guarantee agreement; because they are already in a separate bank debt or the original actual debt and this debt is independent of the actual debt.

15.4 Parties in Letters of Guarantee

15.4.1 In International Relations

15.4.1.1 Guarantor (Bank)

There are usually three sides in letters of guarantee: guarantor, acceptor and beneficiary. In international trade relations, more are added to the sides such as the second bank and the bank in the country of the party. Letters of guarantee, as mentioned earlier, is a letter, given to the beneficiary, which guarantees an act to be fulfilled by the borrower against the addressee according to the rules prescribed before. According to the agreement of guarantee, the parties are guarantor and acceptor. This is accepted indirectly by the expression stated in Banks Law, Article 11, Article "cash loans and a bank letter of guarantee given by the bank…" (Akyazan 1972).

15.4.1.2 Acceptor (Addressee)

The other side of the letter, however, is a party taking the guarantees that commitments shall be performed as needed. This party is called the acceptor. Instructed by the beneficiary, the bank is loaded a one side debt against the addressee which is the fundamental acceptor in the relationship. In a warranty contract, the addressee does not have any obligations against the issuing bank (Reisoglu 1997).

15.4.1.3 Beneficiary

A beneficiary is the fundamental borrower that gave birth to the guaranteed relationship and of in favor the person that the bank (which guarantees) guarantee that it will perform its own commitment obtaining assurance (Dogan 2005). In

general, these are borrowers at banks and non-cash credit is given to these guarantees in exchange for a commission. Banks already take counter-guarantees corresponding to the letter of guarantee given.

15.4.2 In International Trade Relations

In a foreign country, the guarantor bank, undertakes the beneficiary bank's obligation guaranteed for the first contract against the addressee. In other words, the second bank in the foreign country gives the letter to the addressee. So, if the other party (the beneficiary) in the contract does not meet the act dealing with foreign countries, he will refer to the second bank in their own country.

15.5 Facility of Agreements of Letter of Guarantee

A bank letter of guarantee is a contract to be implemented between the beneficiary, the bank and its customer- third party- or the beneficiary and to him that he has relationship with. Thus, it is an agreement that the bank guarantees to a third party in favor of the beneficiary customer. There are ideas to be contract work or a power of attorney on the legal nature of the relationship between the beneficiary and the bank; but both are contractual and consensual contracts so a party is considered to be sufficient if the will of the match is guaranteed (Dogan 2005). On top of that, the wills of the parties will be sufficient for the contract to be established. In international trade relations, a bank prepares preliminary instructions on the demand of the beneficiary and delivers it to the addressee. In national trade relations, this giving of preliminary conditions is scarce. This foreknowledge to the addressee given by the banks may be considered as a clear sign proposal that the bank may give a bank letter of guarantee to the addressee. Therefore, on the instructions of the beneficiary, the bank could provide the beneficiary pursuant to the contract between them and the letter of guarantee made to ensure as a requirement. If the Requirement of the Bank is accepted by the addressee explicitly or implicitly, the letter of guarantee is assumed to be specified in preliminary stated conditions. Normally, the bank delivers the letter of guarantee to the beneficiary and the beneficiary will deliver it to the addressee. A contract has not been established yet with the issue of the letter of guarantee to the beneficiary because the requirement is not issued to the addressee yet and it itself is not yet accepted; thus, the parties did not express the will of mutual and consistent with each other.

15.6 The Form of the Letter of Guarantee

When referring to the legal nature of the letter of guarantee, we outlined that letter of guarantee is a guarantee agreement. The letter of guarantee does not depend on any shape such as warranty agreements. Declarations of intention of the parties are considered sufficient. Since the figures contained in the letters of guarantee or warranty is too high, they are in written form. Another important reason for conducting in written form is to cut off the proof the problems. When we look at the applications, letters of guarantee are organized as a standard contract text. The most important reason for this is to provide unity in practice. In regard to which language to be used when editing a letter of guarantee applies in articles of the Law on the Obligation of Use of Turkish in Economic Establishments dated 1926 and numbered 805. In the first article of the mentioned law it is stated that if both parties are Turkish organizations, the letter of guarantee can easily be organized in Turkish. In letters of guarantee held by foreign banks operating in Turkey, the second article of the same law states that if the other party is Turkish, Turkish must be held. However, an exception is brought in the next matter; even if the letter of guarantee is written in a foreign language, the actual text is the text written in Turkish and the signatures must be taken on to it. Even if the signatures take place on the foreign text, the text in a foreign language will not be taken into account. Taking into account of the text in a foreign language would be to just if the provisions are addressee; pursuant to 4th article of the same Law, the letter of guarantee written in a foreign language or containing various provisions in a foreign language should not make the letter of guarantee invalid, the invalidity of the provision must be decided in good faith only upon the request of the acceptor only for the provisions in a foreign language (Dogan 2005). In doing so, if the provision in a foreign language had not been convicted and if the if the relationship of letter of guarantee had not been installed, it shall be accurate to declare the contract would be invalid (Dogan 2005).

15.7 Obligations of Parties

When examining the obligations of the parties, we will only discuss the obligations of the bank and the beneficiary since there is no liability for the addressee.

15.7.1 Obligations of the Bank

15.7.1.1 Obligations to Comply with the Instructions

In editing a letter of guarantee, the beneficiary gives instructions to the bank in accordance with the demand of the addressee. The bank is responsible for organizing the letter of guarantee within the framework of the instruction given by the beneficiary (Reisoglu 1997). In practice, the banks are met by the parties, or rather, the terms of the addressee. Sometimes, in the original contract there takes place so heavy conditions that the creditor can receive—whatever the conditions are—the money from the bank by cashing the letter of guarantee. Such records which constitute a violation of the law will not be effectual even if they were placed in the text of the letter of guarantee.

15.7.1.2 Obligation of Making a Guarantee Agreement with the Respondent

The Bank has to prepare the warranty agreement as soon as the necessary instructions addressed to it from the beneficiary. If the received instruction is incomplete and inadequate, the bank should refrain from executing the letter of guarantee, and immediately notify the beneficiary. The beneficiary must correct the instruction or gives another instruction to the bank.

15.7.1.3 Investigation of the Risk Occurred or not

If the bank faces a demand payment containing 'first request' record in letter of guarantee given by the addressee, the bank will review the nature of the request for payment and pay regardless of risk taking place. The bank must examine the previous registration documents presented if the letters of guarantee do not contain the mentioned record. As principle, the proof of hazard has happened arising from the promise warranty claims is on the addressee taking the guarantee (Dogan 2005).

15.7.1.4 The Rejection about the Obligation of Bank's Payment Request

The bank has to pay if all the conditions are met in the agreement of guarantee, but shall avoid from paying if it finds that these conditions are not fulfilled or not performed. The warranty issuing bank has the opportunity to refrain from payment by claiming the reasons based on the relationship with addressee as a set-off defense (Kahyaoglu 1996).

15.7.1.5 The Notification of Customer about the Payment Demand

This obligation does not make any sense in the letters of guarantee containing the "first demand" requirement because the bank must make immediate payment, and the real reason of this obligation lies in the ability to make one be recourse to him if you have any reservation. The bank is obliged to pay immediately after examination of the documents in letters of guarantee depending to submit documents, but we think that there is enough time to withstand the beneficiary. Though, since set-off defense asserted by the beneficiary to the addressee arise from a separate and independent legal relationship, they do not allow the bank to avoid paying.

15.7.2 The Obligation of the Beneficiary

15.7.2.1 The Payment Obligation of Commission and Other Payments

Banks present letters of guarantees in exchange for a commission in return for which they give and receive counter-guarantees, i.e., they provide a kind of non-cash loans. A beneficiary has to pay commission or other charges for the execution of the contract to the bank (Kahyaoglu 1996).

15.7.2.2 Recourse Relationship

If the risk materializes, the counter-guarantor must meet the payment made to the addressee on the request of the bank's payment made properly (Dogan 2005). Thus, what will happen in the absence of counter-guarantees? Is there a right of recourse for the bank? In principle on this subject, it is mentioned that the beneficiary must be recognized the possibility of reclaiming due to the payment to the addressee for the letter of guarantee (Kahyaoglu 1996). The legal bases for this are available in three different views: recourse appears to be based on the relationship because doing business without gesture, unjust enrichment and incomplete relationship. In practice, banks usually require the cost of the letter of guarantee as deposit from the beneficiary. However, it has been the subject of debates to take the risk before it materializes. According to the Supreme Court, the bank cannot ask to deposit the debt from the beneficiary. Kostakoğlu suggests that it may only apply to the guarantor, i.e., to request a letter of guarantee fee before the risk materializes in bank loan agreements will be legally true. However, this provision cannot be admitted to guarantors. The cost of the letter of guarantee to be unrealized for risk of storage cannot be required to vouch for (Dogan 2005). However, in application, the banks approve a loan secured by bond on behalf of the

beneficiary to cover the debt and transfer from the realization to the addressee after risk materializes, thus, the letter of guarantee and recourse relationship ends and a credit relationship starts.

15.8 Termination of the Agreement

The Letter of guarantee is a type of contract that loans debt on one side, i.e. on the bank. Therefore, if the bank carries out the letter of guarantee, the letter of guarantee contract will expire. The realization the other reasons terminating the debt will also terminate the letter of guarantee agreement. These cases are the forms of the execution of the debt arising from thereof the letter of guarantee, debt renewal, combination of attributes of the creditor and the debtor, releasing and clearing. The bank debt will expire if the risk guaranteed by the letter of guarantee will not be realized objectively. The risk will not be realized objectively in either two cases: the beneficiary fulfills obligations to the addressee according to the contract, and the termination of the bank's responsibility after fulfillment of the requirement that was guaranteed. As a rule, with the end of the maturity term, a letter of guarantee will expire as well.

The bank's responsibility ends when the risk guaranteed by letters of guarantee occurs due to gross negligence on the addressee having warranty (Case from www.yargitay.gov.tr—19.HD.28.6.1994T.93/6811E.94/6930.K.). The addressee shall provide to the bank, a discharge or return of the letter of guarantee if the bank carries out or bonds the debt, the risk guaranteed by the letter of guarantee does not materialize, the maturity or expiry terminate in term deposit transactions. The addressee's failure to transfer the letter to the bank does not abate the bank's responsibility because the letter of guarantee does have the nature of negotiable instruments; thus, the text of the letter of guarantee will not make sense on its own. In this case, the bank may cancel the letter of guarantee but will not be able to request commission from the beneficiary doing just that, and so it will be freed the counter-guarantee, that such a thing would not be appropriate for the bank's interest. If the addressee does not return the letter of guarantee, the bank or the beneficiary must determine that the debt ended the court (Dogan 2005). Since this declaratory judgment shall be considered as conclusive evidence, it will give the bank an opportunity to avoid paying. The return of the letter of guarantee by the addressee does not alone end the bank's responsibility. Receiving a certificate of receipt, the bank will cut off all issues in the future. Being in not written form like a bond guarantee agreement and the offer and acceptance of the parties' statements are found to be sufficient for the establishment of the contract. However, in practice, the letter of guarantee is prepared in written form. The parties of the letter of guarantee include the bank, addressee and the beneficiary. If the addressee applies to the bank, the bank must pay. If the letter of guarantee contains the edited record of payable upon first request, the risk is on the beneficiary although the bank has the right, on request, to pay. We should mention that almost all of the

letters of guarantee in Turkey bear "pay on first demand." When the bond debt ends, the letter of guarantee terminates. The addressee must return the letter of guarantee; otherwise, the beneficiary may act to the court and request the return of the letter of guarantee.

15.9 Conclusion

In this article, we have tried to examine the letter of guarantee which is a type of personal guarantee and show our view in the light of the debate the doctrine. Letters of credit are different from all the other guarantees since the bank does not take collateral for the loan given by the bank; just a non-cash credit loan has been allocated for the liability instead. With a bank letter of guarantee, the bank guarantees that the customer will pay his debt; otherwise, this debt will be committed by the bank itself. The letter of guarantee was first used in government procurements in Turkey in 1928. Although the use of bank letters is very common, a lot of view on the legal nature of the letter of guarantee has been proposed. In our opinion, the bank's relationship to the original debt or the original debt—apart from being saddled with a debt—makes such debt completely independent of the actual debt. Therefore, the guarantee agreement should be mentioned at this point. Being not in written form like a bond guarantee agreement and the offer and acceptance of the parties' statements are found to be sufficient for the establishment of the contract. However, in practice, the letter of guarantee is prepared in written form.

The parties of the letter of guarantee include the bank, addressee and the beneficiary. If the addressee applies to the bank, the bank must pay. If the letter of guarantee contains the edited record of payable upon first request, the risk is of the beneficiary although the bank has the right, on request, to pay. We should mention that almost all of the letters of guarantee in Turkey bear "pay on first demand" record. When the bond debt ends, the letter of guarantee terminates. The addressee must return the letter of guarantee; otherwise, the beneficiary may act to the court and request the return of the letter of guarantee.

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Part IV
Behavioral Finance and Risk Assessment

Chapter 16
Behavioral Approach to Financial Distress and Health

Zeynep Copur, Michael S. Gutter and Sibel Erkal

Abstract The purpose of this study is to explore the relationship between financial distress and health and financial behaviors among families in Ankara, controlling for socioeconomic characteristics, financial discussion with parents, negative financial events, and risk tolerance. Data was collected through a systematic sample in the neighborhood of Dr. Halil Ulgen Health Center (Mamak-Ankara, N = 600) in summer 2009. Bivariate results showed significant differences in financial distress levels by socioeconomic factors and financial behaviors. In addition, regression analysis showed that saving and self-reported health status was significantly related to financial distress when controlling for other factors.

16.1 Introduction

Financial distress has been described as judgments about and responses to one's financial condition (Prawitz et al. 2006). Financial distress is a subjective phenomenon. Two individuals with the same levels of income and economic resources may have different levels of perceived financial distress. Financial distress can last a short time, or it can become a persistent state for families at all income levels (O'Neill et al. 2006). It is perceived to be one of the most important sources of psycho-social stress because so many of the basic activities of daily life are associated with personal financial resources and their management (Bailey et al. 1998). Kim and Garman (2003) characterized financial stress as the subjective

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assessment of one's financial condition, including one's perceived ability to meet expenses, satisfaction with one's financial condition, one's level of savings and investment, and worry about debt. A person's economic condition, financial knowledge, and financial behaviors can be assumed to be related to financial stress levels. Specifically, those who have acceptable financial ratios, more knowledge, and better behaviors tend to be less stressed with their financial situation. Financial behaviors can also be affected by demographic characteristics, financial stressors, financial knowledge, and risk tolerance (Joo and Grable 2004). Financial distress is different from negative financial events, sometimes referred to as negative stressor events. Occurrence of negative financial events can contribute to financial distress. Financially distressed consumers often report no or low savings and high household debt (O'Neill et al. 2006).

Financial distress can result in or result from poor health, or both. Distress and worry about the family's financial situation may also contribute to negative health outcomes and losses beyond the boundaries of the family system. For example, limited finances have been known to negatively affect health (e.g., overdue medical debt resulting in delayed or inadequate treatment and anxiety), but one's health may have negatively affected one's financial state (Prawitz et al. 2006). Stress can cause numerous deleterious changes in health. Stress appears to accelerate the aging process by shortening the lifespan of cells, thereby opening the door to disease (O'Neill et al. 2006).

The effects of stress caused by financial events can be detrimental to individuals' mental and physical health (O'Neill et al. 2005a, b, c). Personal finances can negatively affect health because overdue medical debt can result in delayed or inadequate treatment and resulting in anxiety. Personal finances can also be negatively affected by health as when increased medical expenses result in lower life expectancy and asset accumulation, and a poor credit history from unpaid medical bills. There are a number of health effects of poor financial behaviors such as overspending and unpaid debts (Drenteo and Lavrakas 2000; O'Neill et al. 2005b). Health and personal finance issues, individually and in combination with each other, affect millions of households (O'Neill et al. 2005b; Pearlin et al. 1981). Researchers examining health in relationship to one's level of financial distress and worry about financial matters have found connections (Kim et al. 2003a; O'Neill et al. 2005a, b). Poor health is likely to affect an individual's capacity to earn income and/or accumulate assets due to a limited ability to work and/or rising medical expenditures. The end result may be even greater financial strain and/or more serious health problems. Thus, the widening disparity in health is likely contributing to household financial problems, and in turn, to the growing gap in income and wealth inequality (Lyons and Yilmazer 2004). Previous research (Drentea and Lavrakas 2000; O'Neill et al. 2005b) generally supported relationships between personal finances and health, especially among samples of financially distressed populations. The purpose of the current study was to explore the relationships between financial distress and health and financial behavior of families after controlling for socioeconomic characteristics and other factors.

16.1.1 Literature Review

Researchers have established that a relationship exists between health and levels of stress. Researchers also indicate that positive financial behaviors should improve financial well-being (Drentea and Lavrakas 2000; Kim and Garman 2003; Kim et al. 2003a; O'Neill et al. 2005a, b, c; Shim et al. 2009; Xiao et al. 2006, 2009). For example, Drentea and Lavrakas (2000) provided evidence of a link between financial stress, specifically credit card debt and stress reporting debt, and mental, as well as physical health. They found that individuals reporting higher levels of financial stress had higher levels of illness and physical impairment than others with lower financial stress. Bagwell and Kim (2003) stated that poorer health led to increased financial stress.

Kim et al. (2003a) indicated that financial well-being was associated with health. Additionally, financial well-being was a partial function of financial behavior and financial stressor events. They found that those who had high levels of financial well-being and experienced fewer financial stressor events had better health than others. They also defined negative stressor events as incidents that had the capability of causing change, specifically to the level of financial stress experienced by an individual. Such events might include negative occurrences such as paying bills late or receiving unwanted contacts from creditors. Joo and Grable (2004) determined that financial well-being is related, both directly and indirectly, with diverse factors including financial behaviors and financial stress levels.

Lyons and Yılmazer (2004) used data from the 1995, 1998, and 2001 survey of consumer finances to examine the effect of financial strain on health status controlling for the fact that financial distress can be both a cause and consequence of poor health. Results from models for three different measures of financial strain indicated that poor health significantly increased the probability of financial strain, but found little evidence that financial strain contributed to poor health.

O'Neill et al. (2005a) studied the negative health effects of financial distress. They found that health was affected by financial problems; almost half of the survey respondents reported that their personal finances affected their health. O'Neill et al. (2005b) found positive associations between self-reported health status and health status improvements, on the one hand, and indicators of financial well-being and positive financial behaviors on the other. There was a positive association between perceived health status and level of financial stress. O'Neill et al. (2005c) found positive associations between aspects of health and finances. Previous research also indicates that individual characteristics such as gender, education, and marital status are correlated with financial distress (Joo and Grable 2004). For example, Porter and Garman (1993) concluded that personal characteristics such as marital status were significant predictors of financial distress or well-being.

16.1.2 Research Questions and Hypotheses

The preceding discussion has pointed out that financial behavior is related to financial distress. Increased financial distress may result from the limited use of certain financial management behaviors believed to be important by experts (Porter and Garman 1993). This study will explore this relationship further, allowing for the relationship of financial behaviors (budgeting and saving) and health status on financial distress to vary with socioeconomic characteristics, whether finances were discussed with parents, negative financial events and risk tolerance. Individual's financial distress can be either objective or subjective (Joo 2008). In the present study, to measure financial distress we used subjective distress.

16.1.2.1 Hypotheses

Previous research, generally based on highly industrialized countries (Bagwell and Kim 2003; Drentea and Lavrakas 2000; Kim et al. 2003a, b; O'Neill et al. 2005a), has supported relationships between personal finances and health, especially among samples of financially distressed populations. However, there has been less attention to developing countries. This study extended previous research by examining the health of families in conjunction with both financial distress and changes in financial practices. Based on previous research, the following hypotheses were formulated:

1. Families' financial distress scores would differ by their socioeconomic characteristics such as gender, age, marital and work status, education level, and income.
2. There would be a difference between financial distress scores of families who were budgeting and saving, and those who were not budgeting and saving.
3. Families' financial distress scores would differ by their self-reported health status.
4. There will be a relationship between financial behaviors and financial distress when controlling for socioeconomic characteristics, whether finance was discussed with parents, negative financial events, and risk tolerance.
5. Self-reported health status will be positively associated with higher scores on the IFDFW scale (indicating lower financial distress and higher financial well-being) when controlling for socioeconomic characteristics, discussed finance with parents, negative financial events, risk tolerance, and financial behaviors.

16.2 Method

16.2.1 Data and Sample

The present research was designed in order to explore relationship between financial distress and health of families in Ankara. The research sample was comprised of 600 people living in the neighborhood of Dr. Halil Ulgen Health Center (Mamak-Ankara). Participants were selected via a systematic sampling method by utilizing the health center household evaluation form. The vast majority (95.7 %) of the sample was married, widowed, or separated, 75.0 % were female. The ages of the participants ranged from 18 to 84 with 47.8 % aged 35–54 years old. About two-thirds were not working (65.3 %). Incomes varied between less than 750 and 1,501 or more Turkish lira (TL) per month; with 46.8 % earning 751–1,500 TL/month (see Appendix A).

16.2.2 Procedure

Participants were contacted in person and surveys were given individually. Upon arrival at their living sites, and following the researcher's self-introduction, the purpose of the study was explained. Participants were also informed that participation in the study was voluntary. After obtaining their consent, the survey packets, which subjects read and completed on their own, were distributed, and then researchers collected all surveys once they were completed. None of the contacted individuals refused to participate. Data was collected between June 8 and July 8, 2009.

16.2.3 Measurement of Variables

16.2.3.1 Independent Variables

Socio-economic and Demographic Variables: The study collected data on participants' socioeconomic and demographic variables, including gender, age, education, work and marital status, and income.

Willingness to Take Financial Risks: Willingness to take risks was measured with the question, "Which of the statements on this page comes closest to the amount of financial risk that you are willing to take when you save or make investments?" Responses included: "Take substantial financial risks expecting to earn substantial returns," "Take above average financial risks expecting to earn above average returns," "Take average financial risks expecting to earn average returns," and "Not willing to take any financial risks." For the analyses, the "take

substantial financial risks" and "take above average financial risks" categories were combined as "take above average financial risks."

Discussed Finance: Whether finance discussed was measured with the question, "When growing up in your parents' or guardians' home; did your parents or guardians include you in discussions or speak with you about any of the items below?" Responses included: "The importance of saving," "The family spending plan," "Your own spending," "Using credit," and "Did not include me in discussions."

Negative Financial Events: Negative financial events were measured with three questions. Reported frequency of the occurrence of eight specific negative financial events in the last two years, such as "needed emergency repairs (for car, home etc.)" and "been late on bills and/or credit card payments," measured this variable. Respondents were instructed to indicate the occurrence for each event as "yes" (coded as 1) or "no" (coded as 0). The frequency of occurrence of such events, then, provided an indication of a respondent's financial condition. Participants were asked how their current economic situation impacted their savings behaviors and attitudes. Responses included: "No impact at all," "Some impact," and "Significant impact." Participants were also asked over the past year, whether their family's spending exceeded, was about the same as, or was less than their income.

Financial Behaviors: Financial behaviors can be defined as any human behavior that is relevant to money management. Common financial behaviors include use of cash, use of credit, and saving (Xiao 2008; Xiao et al. 2006). For the purpose of this study, budgeting and saving behaviors were considered as financial behaviors. Behavior can be measured as a binary variable, whether or not the behavior was performed (Xiao 2008). In the present study, budgeting was measured with the question, "Do you currently use a plan to manage expenses?" Saving was measured with the question, "Are you currently depositing or investing money on a regular basis into some sort of account?" Responses included yes and no.

Perceived health status: Responses to the question, "Would you say your health is…." measured self-reported health status variable. Response choices were 1 (very good), 2 (good), 3 (fair), and 4 (poor).

16.2.3.2 Dependent Variable

Financial Distress: *The InCharge Financial Distress/Financial Well-Being* (*IFDFW*) scale (Prawitz et al. 2006) was used as a measure of financial distress. This measure is designed to be a latent construct representing feelings about one's financial situation on a continuum from overwhelming financial distress to no financial distress. The IFDFW scale is an 8-question self-reported subjective measure of financial distress. Internal consistency/reliability of the scale is reported as 0.96 (Prawitz et al. 2006). Questions in the IFDFW scale include: "What do you feel is the level of your financial stress today?" For each item, responses ranged from negative (1) to positive (10). Individual scores can range from 8 (1 point on each question) to 80 (10 points on each question). Scores on the IFDFW were computed by adding the numerical responses from the eight items, then dividing the total by eight. Resulting scores could range from 1

(overwhelming financial distress) to 10 (no financial distress). This indicated that lower level of financial distress would result in higher scores on the scale.

Validity and reliability tests for the IFDFW scale have also been carried out for Turkish families in this study. Principal Component Factor Analysis was used for this analysis. The factor loading of each item ranged between 0.47 and 0.81. All 8 items had positive loadings on the factor. Almost 48.7 % of the total variance was explained by the one factor extracted. The maximum likelihood confirmatory factor analysis was also performed for IFDFW scale using the LISREL 8.80 program. Goodness- of-fit indices $\chi^2 = 101.86$, $df = 21$, GFI = 0.96, CFI = 0.97, AGFI = 0.93, RMSEA = 0.080) suggest that the 1-factor model has an excellent fit for Turkish families. These results support the validity of the items, and thus, of the scale. In order to test the reliability of the measure, Cronbach's Alpha was selected. The correlations among the items varied between 0.20 and 0.69. All correlations were significant ($p < 0.01$), and Cronbach's Alpha internal consistency reliability was calculated to be 0.82. These results suggest that the inner consistency of the inventory is high. Turkish families' scores ranged from 1 (overwhelming financial distress) to 8.75 (no financial distress). The average financial distress score for Turkish families was 4.40 ($SD = 1.47$), with a median of 4.50, which indicated that average financial distress.

16.2.4 Analyses

Preliminary analysis included calculating frequencies of the sample on all independent variables. We conducted bivariate analyses to compare financial distress by socio-economic characteristics and financial behaviors. We used *t*-tests and one-way analysis of variance to identify statistically significant differences among families' socio-economic characteristics and financial behaviors. One-way analysis of variance was computed to compare mean IFDFW scores by age and income. When the *F*-test indicated significant (0.05) mean differences on a given variable, the Scheffe multiple comparison test was used to isolate the specific between-category means that were significantly different. Independent sample *t*-tests were then used to compare mean values on the IFDFW and gender, education level, work and marital status, budgeting, and saving. Finally, Ordinary Least Squares (OLS) Regression Analysis was computed to determine the interrelationships between IFDFW and the financial behaviors when controlling for socioeconomic characteristics, whether finance was discussed with parents, negative financial events, and risk tolerance.

16.3 Results

More than half of the participants (53.2 %) had not discussed finances with their parents when they were growing up. Nearly two-thirds (61.5 %) of the families have experienced an increase in their cost of housing, and about half of the

families (46.5 %) have experienced being late on bills and/or credit card payments in the last two years, which affected their ability to save or invest. The majority (60.2 %) of families reported that over the past year their family's spending exceeded their income, and the current economic situation significantly impacted more than half (58.0 %) of the families' saving behavior and attitudes. The vast majority of families (64.8 %) were not willing to take any financial risk. The majorities (70.3 %) of the families were budgeting; however, 63.3 % of the families were not saving.

16.3.1 Comparing Families' Financial Distress by Socio-economic Characteristics and Financial Behaviors

Table 16.1 summarizes the comparison of families' financial distress by socio-economic characteristics and financial behaviors. Results of the bivariate analysis tests showed that families' financial distress scores differed by their socio-economic characteristics and financial behaviors. As can be seen in Table 16.1, males, working individuals and families with higher education levels had significantly lower financial distress scores than females, those who were non-working, and families with lower education levels. Table 16.1 also shows that the results of one-way ANOVA for income was significant ($F = 18.88$, $p < 0.001$). For this variable showing significant differences, the Scheffe Multiple Comparison Test was used to determine which pairs of categories of each variable were significantly different. There were significant differences among all income groups ($p < 0.001$). Age and marital status were not significantly related to financial distress.

Table 16.1 also summarizes the comparison of families' financial distress by financial behaviors. Persons who were saving reported significantly lower financial distress scores compared to those who did not save. However, there was no significant difference between budgeting and financial distress. Partial evidence was found to support hypotheses 1 and 2. Although families who reported very good health status had higher scores on the IFDWF scale (i.e., lower financial distress) than those who reported poor, fair, or good health, this difference was not significant. Statistical evidence was not found to support hypothesis 3.

16.3.2 Relationship between Financial Behaviors, Self-Reported Health Status and Financial Distress

OLS regression analysis was used to examine the relationship between level of families' financial distress and financial behaviors, when controlling for socio-economic characteristics, whether finance was discussed with parents, negative financial events, and risk tolerance. Correlations were both negative and positive.

Table 16.1 Bivariate analysis results of financial distress scale averages score according to socio-economic characteristics, financial behaviors, and health status

Variables	*Mean (SD)*	Test statistics	Variables	Mean (SD)	Test statistics
Socioeconomic variables			*Monthly income (TL)*		$F = 18.88$***
Gender		$t = -3.995$***	750 TL or less	4.03 (1.45)	
Female	4.27 (1.47)		751–1500 TL	4.45 (1.37)	
Male	4.81 (1.39)		1501 or more TL	5.09 (1.52)	
Age		$F = 1.311$	*Financial behaviors*		
<34 years	4.25 (1.45)		*Budgeting*		$t = 1.706$
35–54 years	4.40 (1.53)		Yes	4.47 (1.43)	
55> years	4.52 (1.38)		No	4.24 (1.54)	
Education		$t = -2.298$*	*Saving*		$t = 6.157$***
High school or less	4.36 (1.46)		Yes	4.87 (1.43)	
More than high school	4.83 (1.52)		No	4.13 (1.42)	
Work status		$t = 3.092$**	*Perceived health status*		$F = 1.71$
Not working	4.27 (1.49)		Poor	4.10 (1.50)	
Working-retired	4.65 (1.39		Fair	4.46 (1.37)	
Marital status		$t = 0.350$	Good	4.42 (1.54)	
Single	4.30 (1.85)		Very good	4.65 (1.38)	
Married-widowed-separated	4.41 (1.45)				

*$p < 0.05$, ** $p < 0.01$, ***$p < 0.001$

Most correlations had significance levels of between 0.01 and 0.05. Table 16.2 summarizes the results of OLS regressions predicting financial distress. As seen in Table 16.2, families' financial distress was significantly related to their socio-economic characteristics. Families with higher income reported significantly lower levels of financial distress than those with lower incomes. However, females reported significantly higher levels of financial distress than males (Step 1).

When the variables for whether finance was discussed with parents or guardians was added to the equation, the step was still significant ($F = 6.23$; $p < 0.001$) and accounted for 11 % of the variance in levels of family financial distress. The F change was also significant and with the addition of this variable, an increased percentage of the variance was explained by the step. Age had increased significance in step 2. Older people had significantly lower levels of financial distress than younger people. Measures of whether finance was discussed with parents or guardians were significantly related to financial distress: families who discussed using credit with their parents or guardians had significantly lower levels of financial distress than those who had not discussed use of credit (Step 2). Step 3 was run adding negative financial events. This step was also significant ($F = 4.213$; $p < 0.001$) and accounted for 25 % of the variance in the outcome variable. Negative financial events were significantly related to financial distress. Families who had experienced needed emergency repairs (for car, home etc.) had significantly lower levels of financial distress than those who had not experienced such a disaster. However, families who had experienced being late on bills and/or credit card payments had significantly higher levels of financial distress than those who had not experienced such hardships. As expected, families who had indicated that over the past year their spending was less than their income had significantly lower levels of financial distress than those who had indicated that their spending had equaled their income. However, the effect of economic situation was not significantly related to financial distress.

Step 4 was run with the addition of willingness to financial risk. This step was also significant ($F = 4.478$; $p < 0.001$) and accounted for 26 % of the variance in the outcome variable. Although the F change was also significant, the addition of willingness to take financial risks did not substantially increase the percentage of variance explained. Increased costs of housing had increased significance in step 4. Families who had experienced an increased cost of housing had significantly lower levels of financial distress than those who had not experienced such a disaster. Families who were not willing to take any financial risks had significantly higher levels of financial distress than those who were willing to take average financial risk (Step 4).

There is partial support for the fourth hypothesis. As seen in Table 16.2, there is a relationship between families' financial distress and financial behaviors. This step was also significant ($F = 8.10$; $p < 0.001$) and accounted for 28 % of variance in degree of families in financial distress. The F change was also significant and with the addition of the financial behavior variables, the step explained a higher portion of variance in the outcome variable. An exception was budgeting; negative financial behaviors contributed to financial distress through such

Table 16.2 OLS regression result for financial distress (IFDFW)

	1	2	3	4	5	6
Socio-economic variables						
Female	−0.572 (0.182)**	−0.520 (0.181)**	−0.546 (0.170)***	−0.524 (0.171)**	−0.518 (0.169)**	−0.520 (0.168)**
35–54 age	0.133 (0.157)	0.286 (0.165)	0.157 (0.156)	0.171 (0.157)	0.157 (0.155)	0.217 (0.158)
55+ age	0.291 (0.174)	0.511 (0.192)**	0.264 (0.186)	0.300 (0.188)	0.284 (0.186)	0.416 (0.196)*
High school or less	0.077 (0.229)	0.136(0.228)	0.289 (0.218)	0.350 (0.219)	0.398 (0.217)	0.455 (0.218)*
Working-retired	−0.203 (0.176)	−0.187 (0.175)	−0.140 (0.163)	−0.192 (0.164)	−0.137 (0.162)	−0.145 (0.162)
Married-widowed-separated	0.132 (0.300)	0.015 (0.299)	−0.036 (0.286)	−0.064 (0.285)	−0.085 (0.282)	0.064 (0.288)
751–1500 TL income	0.463 (0.132)***	0.439 (0.131)***	0.426 (0.126)***	0.385 (0.127)**	0.382 (0.125)**	0.369 (0.126)**
1501 or more income	1.139 (0.194)***	1.091 (0.196)***	1.147 (0.193)***	1.053 (0.199)***	1.035 (0.196)***	1.024 (0.198)***
Discussed finance						
Discussed importance of saving		0.159(0.147)	0.155 (0.139)	0.135 (0.140)	0.094 (0.138)	0.096 (0.138)
Discussed family spending plan		0.222 (0.161)	0.238 (0.151)	0.239 (0.150)	0.199 (0.149)	0.188 (0.148)
Discussed their own spending		0.165 (0.153)	0.236 (.146)	0.219 (0.145)	0.155 (0.144)	0.131 (0.145)
Discussed using credit		1.386 (0.473)**	1.130 (0.441)*	1.090 (0.440)*	1.095 (0.433)*	1.165 (0.433)**
Negative financial events						
Needed emergency repairs			0.454 (0.118)***	0.456 (0.118)***	0.394 (0.117)***	0.379 (0.117)***
Been late on bills and/or credit card payments			−0.817 (0.112)***	−0.819 (0.112)***	−0.781 (0.110)***	−0.801 (0.111)***
Had costly out-of-pocket medical expenses			0.090 (0.140)	0.101 (0.140)	0.037 (0.139)	0.029 (0.138)
Unemployment			−0.233 (0.143)	−0.223 (0.143)	−0.167 (0.142)	−0.152 (0.141)
Natural disaster			−0.079 (0.292)	−0.066 (0.291)	−0.193 (0.288)	−0.173 (0.288)
Vandalism or terrorism			−0.141 (0.173)	−0.125 (0.172)	−0.201 (0.171)	−0.254 (0.172)
Major life changes			−0.135 (0.116)	−0.163 (0.116)	−0.195 (0.115)	−0.197 (0.115)
Increase in cost of housing			0.249 (0.130)	0.279 (0.130)*	0.289 (0.130)*	0.271 (0.130)*

(continued)

Table 16.2 (continued)

	1	2	3	4	5	6
Spending-Income balance						
Spending exceeded income			−0.174 (0.134)	−0.184 (0.133)	−0.093 (0.133)	−0.092 (0.133)
Spending was less than income			0.901(.260)***	0.907 (0.260)***	0.850 (0.258)***	0.861 (0.257)***
Impact of economic situation						
No impact at all			0.426 (0.236)	0.392 (0.237)	0.349 (0.233)	0.370 (0.233)
Significant impact			−0.233 (0.145)	−0.244 (0.145)	−0.300 (0.143)*	−0.282 (0.143)*
Willingness to take financial risks						
No financial risk				−0.364 (0.155)*	−0.324 (0.153)*	−0.323 (0.153)*
Above average financial risk				−0.178 (0.186)	−0.162 (0.184)	−0.225 (0.186)
Financial behaviors						
Budgeting					0.072 (0.128)	0.044 (0.129)
Saving					0.512 (0.123)***	0.514 (0.123)***
Perceived health status						
Poor						−0.774 (.287)**
Fair						−0.503 (0.256)*
Good						−0.479 (0.235)*
Constant	4.150(.401)***	3.885 (0.408)***	4.213 (0.412)***	4.478 (0.430)***	4.233 (0.431)***	4.534 (0.444)***
F	7.02***	6.23***	8.05***	7.69***	8.10***	7.61***
R^2	0.087	0.113	0.252	0.259	0.284	0.293

Unstandardized coefficients are reported, with standard errors in parentheses
Note $*p < 0.05$, $**p < 0.01$, $***p < 0.001$

variables as socio-economic characteristics, whether finance was discussed with parents, negative financial events, and risk tolerance. Families who saved reported significantly lower levels of financial distress. However, budgeting was not significantly related to financial distress (Step 5).

There is strong support for the fifth hypothesis. As seen in Table 16.2, there is a relationship between families' financial distress and self-reported health status. This step was also significant ($F = 7.61$; $p < 0.001$) and accounted for 29 % of variance in degree of families in financial distress. The F change was also significant with the addition of self-reported health status variable. Age and educational level had increased significance in step 6. Older people and people with lower educational levels had significantly lower levels of financial distress than younger people and those with higher educational levels. As expected, self-reported health status was related to financial distress. Families who reported their health status as poor, fair or good had significantly higher levels of financial distress than those who reported their health status as very good (Step 6).

16.4 Conclusion

The families in Ankara could be characterized as experiencing average financial distress about their personal finances. According to national norming data for the IFDFW scale for the United States (Prawitz et al. 2006), the median score (indicating average financial distress) for the general population was 5.7 on the 10-point scale. This was slightly above the scale's midpoint of 5.5. For Turkish families in the current study, the median score was 4.4, slightly below the scale's midpoint of 4.5. These figures indicate that the families were experiencing average financial distress and they were experiencing high financial distress when compared with the original version of the scale for American population.

Overall, this study found a relationship between financial distress, health, and financial behaviors. A partial relationship was found between financial distress and financial behaviors of families after controlling for socioeconomic characteristics, whether finance was discussed with parents, negative financial events, and risk tolerance. Generally, saving behavior was negatively related to financial distress of families, with the exception of budgeting. Our results suggest that to become financially healthy, families need to exhibit desirable behaviors with regard to cash and credit management, saving, etc. Financial distress can be said to be "low" when families have positive financial attitudes and exhibit healthy financial behavior. Those reporting better health reported lower financial distress than did families reporting poor, fair, or good health.

Bivariate relationships between socioeconomic characteristics, financial behaviors, and financial distress were proposed and explored using mean-comparison techniques. Consistent with our expectations, socioeconomic characteristics and financial behaviors were significantly related to financial distress, except for age, marital status, and budgeting. Partially consistent with earlier studies

(Shim et al. 2009; Xiao et al. 2006, 2009), we also found that positive financial behaviors were related to lower financial distress. This indicates that families who had saving significantly decreased their financial distress.

OLS regression was used to identify the relationship of financial behaviors, health status, and financial distress. In the current study, families' saving behavior and health status predicted financial distress after controlling for selected socio-economic characteristics, whether finance was discussed with parents, negative financial events, and risk tolerance. Furthermore, in the full step, families' financial distress tended to be related to gender, age, education, income, discussed using credit, negative financial events, willing to take financial risk, saving behavior and health status. In contrast to previous research, our study found that budgeting was not related to financial distress when controlling for other variables. These results partially confirmed findings of previous studies cited in the literature. For example, Xiao et al. (2007) indicated that good financial practices in cash management, credit management, and saving were positively related to overall well-being. O'Neill et al. (2005a, b, 2006) found evidence of associations between individuals' self-reported health status and their financial stress. Similar to previous research, the current study also found a positive association between self-reported health status and level of financial distress.

The results of this study help to further document the financial distress of selected families. This study had several limitations that affected the generalizability of its findings. First, the sample consisted of families in a lower socio-economic level district who were likely to be experiencing more financial distress when compared to the general population of Turkish families. Therefore, associations between financial behaviors, health and financial distress cannot be generalized to the general population. Second, the respondents' perceptions of both their health status and financial well-being may differ from that of an objective third party assessment. Future researchers examining relationships among these and other variables may want to employ more specific measures of health rather than self-reported health status.

This study has some implications. Public policy regarding improving families' health and personal finance practices often is formulated on some tracks. With increasing documentation of relationships between health and personal finances, policymakers need to consider families' lives holistically when proposing regulatory changes and/or making recommendations for behavior change. Also, financial educators and counselors should help financially distressed families make a smooth transition from negative financial behaviors to positive financial behaviors and being debtors to being savers.

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A.1 16.5 Appendix A: Description of the Sample (N = 600)

Socio-economic Characteristics	%		%
Gender		Natural disaster	
Female	75.0	Yes	3.7
Male	25.0	No	96.3
Age		Vandalism or terrorism	
<34 years	22.0	Yes	11.3
35–54 years	47.8	No	88.7
55> years	30.2	Major life changes	
Education		Yes	39.0
High school or less	90.8	No	61.0
More than high school	9.2	Increase in cost of housing	
Work status		Yes	61.5
Not working	65.3	No	38.5
Working-retired	34.7	*Impact of economic situation*	
Marital status		No impact at all	6.3
Single	4.3	Some impact	35.7
Married-widowed-separated	95.7	Significant impact	58.0
Monthly income (TL)		*Spending-income balance*	
750 TL or less	36.8	Spending exceeded income	60.2
751–1,500 TL	46.8	Spending equaled income	34.3
1,501 or more TL	16.3	Spending was less than income	5.5
Discussed finance		*Willingness to take financial risks*	
Discussed importance of saving	29.5	Above average risks	16.3
Discussed family spending plan	21.0	Average risks	18.8
Discussed their own spending	27.0	No financial risks	64.8
Discussed using credit	1.5	*Financial behavior*	
Did not include in discussions	53.2	*Budgeting*	
Negative financial events		Yes	70.3
Needed emergency repairs		No	29.7
Yes	42.5	*Saving*	
No	57.5	Yes	36.7
Been late on bills and/or credit card payments		No	63.3
Yes	46.5	*Perceived health status*	
No	53.5	Very good	6.7
Had costly out-of-pocket medical expenses		Good	45.5
Yes	21.2	Satisfactory	33.0
No	78.8	Poor	14.8
Unemployment			
Yes	78.8		
No	21.2		

Note Since participants can discussed more than one financial management topic with their parents it does not add to 100 %

A.2 16.6 Appendix B: Variable Coding

Variables	
Socio-economic variables	
Female	1 if participants is female, 0 otherwise
<34 years age	omitted
High school or less	1 if participants education level is high school or less, 0 otherwise
Working-retired	1 if participants is working or retired, 0 otherwise
Married-widowed-separated	1 if participants is Married-Widowed-Separated, 0 otherwise
751 TL or less	omitted
Negative financial events	
Needed emergency repairs	1 if participants had needed emergency repairs, 0 otherwise
Been late on bills and/or credit card payments	1 if participants had been late on bills and/or credit card payments, 0 otherwise
Had costly out-of-pocket medical expenses	1 if participants had costly out-of-pocket medical expenses, 0 otherwise
Unemployment	1 if participants had unemployment, 0 otherwise
Natural disaster	1 if participants had natural disaster, 0 otherwise
Vandalism or terrorism	1 if participants had vandalism or terrorism, 0 otherwise
Major life changes	1 if participants had major life changes, 0 otherwise
Increase in cost of housing	1 if participants had increase in cost of housing, 0 otherwise
Some economic impact	omitted
Spending equaled income	omitted
Willingness to take financial risks	
Average financial risks	omitted
Perceived health status	
Very good	omitted

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Chapter 17
Psychological Factors Affecting Stock Prices and Related Theories

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Abstract Globalization and pervasiveness of Internet usage enabled investors to move their funds from market to market. This reality leads to a more diverse universe for investors and in order to better understand their varying rationales, it is essential to take factors influencing their decision making process into account. Behavioral finance explains some of these factors and this paper examines and discusses some of the most important factors and theories affecting investor behavior in the literature.

17.1 Introduction

Internet usage as an innovation has surely changed the lives of people dramatically but this reality has also facilitated financial trades, leading foreign investors to easily invest on-line in markets, as they have access to information they need via web sites they choose to access. The presence of foreign investors has increased the factors affecting the decision making process as the investor base is varied and expanded as well as their risk aversion, tax preferences, cultural differences and psychological differences. It is important to incorporate these factors into any model that aims to explain market movement and hopefully, this study will shed light to some of these factors. As mentioned above, numerous factors may affect stock prices and it seems like, it is a futile effort to model the price changes in the stock markets with accuracy because factors and their significance vary from market to market and time to time and some factors may gain importance or lose importance by time depending on the prevailing conditions in a particular market but still some of them are addressed in this study with the relevant theories in the

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literature, so that a clearer picture of factors impacting stock prices may be presented, which may help understanding how investors think when they invest. In the first section, capital structure and its effects have been presented with the related theories. In the second section, dividends and their impact are presented and in the third part, some of the effective psychological factors in decision making are given. There are other factors effecting decision making of investors such as, liquidity, the state of the economy etc. In this study, some of the important factors affecting stock within the scope mentioned above prices are presented.

17.2 Capital Structure

All the firms that issue stocks surely have varying assets but the way they finance the purchase of these assets are claimed to be influential on security prices. Some of the firms may finance it internally, without any bank loans, which results in lower default risk; some of the firms may elect to use external financing to benefit from the leverage effect and to better exploit the growth opportunities at the expense of higher default risk due to interest cost they are bearing. Theories regarding external funding and value of firms are presented here below.

17.2.1 Capital Structure Theory

In 1958, Professors Franco Modigliani and Merton Miller, introducing the capital structure theory, showing evidence that a capital structure of a company doesn't affect the value of a firm with a very restrictive set of assumptions. They assume there are no taxes, brokerage costs, bankruptcy costs, investors and corporations borrowing at the same rate; EBIT is not affected by the use of debt, and investors and managers have the same information about the future investment opportunities of the firm. In a no tax world, the value of a firm depends on the firm's asset base and it won't change no matter how the firm finances it. This means that the firm's WACC is constant as there are no taxes and the capital structure doesn't affect the stock price of the firm.

17.2.1.1 Tax Effect

Modigliani and Miller (1963) have studied the effects of taxes in another work of theirs. As interest payments are tax deductible, dividends are not. Modigliani and Miller demonstrate that the optimal capital structure in a tax world will be 100 % debt if their other assumptions hold. Brennan and Schwartz (1978) also state that in the absence of transaction costs, it might be optimal to issue bonds as firms might avoid bankruptcy and benefit from tax savings.

17.2.1.2 Bankruptcy Costs Effect

Modigliani and Miller assume a constant borrowing cost which is controversial in the sense that as debt ratio increases lenders demand more interest for the increasing bankruptcy risk. So, in a Modigliani and Miller market with taxes and bankruptcy costs, the WACC will decrease in the beginning as debt ratio increases by small amounts, then it will bottom out and finally when interest rates start to increase, WACC will start to increase as well. As a result, WACC is minimized and Stock price is maximized by having an optimal capital structure in a world with taxes and bankruptcy costs.

17.2.1.3 Trade off Theory

The trade-off theory of leverage states that the optimal capital structure is where the advantages of tax shelter of debts are equal to the costs, which is bankruptcy risk. This theory suggests a value maximizing debt level where the marginal costs of bankruptcy is equal to the marginal benefits of a tax shelter. The end result from this theory is that capital structure can affect prices.

17.2.1.4 Signaling Theory

Symmetric information is among the assumptions of Modigliani and Miller. In real life, a manager may have better information than investors, indicating asymmetric information. Signaling theory states that if a company willingly issues new shares, it should indicate that the firm's prospects are not exceptional. If they were exceptional, the management would know that their stock prices would increase due to their exceptional situation and they would avoid issuing new stocks when the prices are yet low. They would prefer debt alternatives to raise funds and management might than issue stocks when prices have increased.

17.3 Dividends

Dividends may or may not affect the stock price of a firm. Debate about the influence of dividends on stock prices has not reached to a conclusion. Black (1976) argues that fund managers prefer dividend paying stocks as it would be more prudent for them. A stock that promises both dividends and capital gains may be a more conservative investment than a stock that offers only capital gains. To have a better understanding, investor preferences for dividends are described in three theories which are mentioned briefly here below:

17.3.1 The Dividend Irrelevance Theory

Modigliani and Miller state that dividend policy has no effect on the company's stock price or its cost of capital. It is argued that an investor may elect to tailor the dividend policy according to her needs. If the dividends are too much, stocks are purchased; if they are too little, stocks may be sold and cash, which can be seen as dividends, may be generated. This theory holds when there are no taxes, brokerage costs, and infinitely divisible shares.

17.3.2 The Bird-in-the-Hand-Theory

Gordon (1959, pp. 102–105) and Lintner (1956, pp. 111–112) state that investors evaluate expected dividends more highly than expected capital gains because growth component in the total expected return equation is more risky than the dividend yield component.

Expected return equation:

$$k_s = D_1/P_0 + g.$$

where;

K_s expected return
D_1 next period's dividend
P_0 current price of the stock
g growth rate

17.3.3 The Tax Preference Theory

This theory mentions three reasons why investors might prefer the stocks that pay lower dividends:

1. Capital gains are taxed at a lower rate than dividend income in almost all of the markets.
2. Capital gains taxes are not paid until they are realized.
3. No capital gains taxes are due upon the death of an investor holding stocks.

For a statistical test to be valid; things other than a dividend policy must be held constant and each firm's cost of equity must be measured with a high degree of accuracy. Therefore, it is hardly possible to set a clear relationship between the dividend policy and stock prices.

17.3.4 Clientele Effect

Another issue regarding with dividend policy is the clientele effect referring to the different groups of investors, such as corporations, small investors and institutions that buy stock. The dividend clientele effect states that low tax bracket investors, like the foreign investors in Turkey and corporations, prefer high dividend payouts; high tax bracket individuals may prefer low dividend payouts in this regard. It is worth to mention that some markets are not valid for the dividend irrelevance theory where capital gains are not taxed and tax preference theory doesn't mean much. The Clientele effect is also negligible in countries where there is no tax; The Bird in the Hand theory may help in explaining the investors' decisions in such markets. In contrast, theories mentioned above may all be effective in markets especially when the tax burden is heavier.

17.4 Psychological Factors

Modern Portfolio Theory (MPT) assumes that investors make rational buy and sell decisions. Rational investors are risk averse in the sense that they require higher returns in order to compensate the higher risk taken. MPT also assumes that investors are assumed to assess risk and return of the assets within a portfolio context. Investors are assumed to form portfolios that maximize expected return within risk class and minimize risk within expected return class. A portfolio is assumed to be efficient when it fulfills the above mentioned conditions and the theoretical set of all available efficient portfolios is called the efficient frontier. When we combine the portfolios on the efficient frontier with a risk free asset, we derive Capital Market Line (CML) where we notice that investors hold some combination of risk free security and the market portfolio. Investors are assumed rational to invest wisely to these portfolios and they are assumed to make no unsystematic errors.

However, it is assumed that markets don't make unsystematic errors the investors do (Ritter 2003). The limitation of these assumptions is that, in reality, people do mistakes, and behave irrationally. Investor's mood may lead them to be risk seeking rather than being risk averse. Behavioral tendencies may influence the investors to make decisions on case by case basis rather than a portfolio context. Hirshleifer (2002) calls the cognitive constraints of investors forcing them to decide with heuristics as heuristic simplification and thus, behavioral tendencies may affect the buy and sell decisions and they may affect the prices of securities.

Shefrin and Statman (1994) define investors with insufficient information and cognitive errors as noise traders, whereas, information traders have no such flaws. They provide behavioral mean–variance efficiency theory to analyze the influence of noise traders on volatility, prices, return anomalies, volume, and noise trader survival. The possible psychological errors that can be done by these noise traders are briefly defined, listed, and their effects on prices and reversals are discussed here below (Nofsinger 2005):

Overestimating the precision and importance of information Prior to any investment, investors need information to select the right security; however, the information may be incomplete and may not be accurate. Information arrives randomly and with noise. These investors who strongly believe in the accuracy of the information they have gathered may purchase a stock and may persist to the accuracy of their decision and when the prices rise, they will resist selling and when prices decrease, they may realize additional purchases. Overall, overestimating may provide an upward bias in prices and may help reversals as prices deviate from their fundamentals.

Over confidence Over confident investors think that their information and reasoning is better than average, they are better than the average investor in reading the market. This behavioral bias makes the investor think he is smarter than he is. Overconfidence also may cause investors to trade more frequently, as they believe, they can time the peaks and bottoms of the price of the securities. Overconfident investor's portfolio may be overly risky and may be poorly diversified. Overconfidence increases liquidity level and over confident investors' effect on prices and reversals may be neutral.

Fear of regret and seeking of pride investors feel pain after making a bad decision and they feel joy from making a good decision however, these behavioral tendencies cause investors to act in ways that inconsistent with Modern Portfolio Theory and affect the price of the securities. The fear of regret causes an investor to hold on to a stock that has dropped in price for a long time, hoping for the reversal to occur and he may than sell the stock without feeling any regret. This tendency helps reversals as investors hold on to their stocks rather than selling them. On the other hand, investors feel proud when they sell their security for a profit but this time they may sell the security sooner than they should have. This tendency has an adverse effect on prices as it thickens the free float.

Reference points Investors often evaluate alternatives in terms of gains and losses defined relative to a reference point rather than in terms of final results; referring to the stock price against which the current stock price is compared. Investors may have a tendency to compute profits as the difference between the current stock price and the reference point. The effects of this tendency on prices and liquidity level depend on the reference point and it is somewhat arbitrary therefore it may be assumed as neutral.

The disposition effect Investors may feel pride and regret due to their investment decisions as it is mentioned earlier. These feeling are strong when a company specific news is released relating directly to stock held in the portfolio of the investor. However, when there is an economy-wise or global news release, these investors consider it as if it is beyond its control and act differently than expected; pride predicts that a stock will be sold after a good news release but not after a good global news release. Regret predicts that a stock will be held too long after the company releases bad news but may not be held after bad economy-wide news is announced. The effects of this tendency are ambiguous and may be in the interest of further studies.

House money Refers to gains of a gambler meaning that when gamblers play with the money that they have gained, they treat the money as it is not theirs but house money and they take very big risks as they think so. As the gains from investment are seen as a free opportunity to take further risk, investors may be opt for taking excessive risks in the stock market. For instance, if this tendency over rules investment decisions in Istanbul Stock Exchange, than the house money of these investors may increase the overall liquidity and the prices of illiquid, small cap companies' stocks as well.

Snake bite Refers to resistance to take risk after losing in the market. This tendency predicts that investors will prefer riskier stocks after experiencing losses in the market. This tendency clearly favors liquid securities to the illiquid ones and it may adversely affect the price of the illiquid assets. These investors tend to sell at low end of the stock's price range, acting adversely against reversals.

Trying to break even This effect is just the opposite of a snake bite effect. Investors, who lose in the market, try to recoup the losses by taking more risk. This tendency predicts that investors may take larger risks; therefore, as illiquid stocks are more risky, illiquid stocks' prices may be affected positively.

The endowment effect Similar to fear of regret, this effect predicts that investors may hold on to their original portfolios rather than assessing alternatives. This effect is a do nothing effect and act adversely on reversals as investors who are exposed to this effect, may refrain from selling their relatively over valued portfolios, replacing them with undervalued portfolios.

Cognitive dissonance Happens when a person' actions and beliefs contradict. Investors want to be consistent and try to avoid cognitive dissonance either by altering beliefs or altering behavior (Festinger 1957). Investors may underestimate the extent of past mistakes or overestimate the glory days. Similarly, investors who are uneasy with their losses are inclined to take long shots (Kahneman and Tversky 1979)

Mental accounting Refers to investor's tendency to classify activities into different accounts (Thaler 1985). Some amount of money may be allocated in mind for education of a son or car/flat purchase; however, they should be treated from a portfolio point of view. This effect may be ambiguous and may be assumed neutral as it is almost impossible to determine its existence.

Representativeness Refers to the tendency of attributing future success or failure to particular incidences or events. A company with bad profitability can be seen as representative of a bad company by investors. As a result, investors may be inclined to hold "good stocks" in their portfolio which may adversely affect illiquid stocks' prices as demand for them will decline.

Familiarity Refers to the tendency of investors to purchase stocks of companies with which they are familiar with. They use their familiarity as a short cut to investing. Behavioral investors may pick stocks of companies where are located closer to their homes and even though they have no idea about the company's financials or future prospects, they feel comfortable about investing in such familiar companies. Their portfolios will be made up of large, well-known companies and local companies, leading them to poor diversification. (Nofsinger 2005)

17.5 Conclusion

Investor psychology is a hot topic in behavioral finance in the modern literature and investors are vulnerable to the above mentioned biases unless they are strictly confined with trade algorithms. Presumably the effect of psychology is significant on prices but these factors are mostly held as constant as they are hard to quantify. Despite this difficulty, it is vital to take these realities into consideration when investor behavior is being examined. Dividends may play a role in determining prices especially in markets where alternative investment's returns are low but its effect is dubious as there is no actual financial gain. Capital structure may also influence decision making of investors depending on their risk aversion.

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Chapter 18
Board Involvement in Risk Management Practices: Evidence from Saudi Arabia Banks

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Abstract This study bridges the gap between theory and practice of risk management in banks incorporated in Saudi Arabia. The main objective of this study is to investigate the risk management process to assess the level of involvement of boards in risk management practices (RMPs). This study surveys representatives from banks to elicit their opinion regarding the characteristics of an efficient risk management process, the four aspects of risk management practices; understanding risk management (URM), risk identification (RI), risk assessment and analysis (RAA) and risk monitoring and control (RMC), as well as the role played by boards in risk management (RM). The results suggest that banks in Saudi Arabia have an efficient risk management process and an adequate understanding of risk management and a system for risk identification. Additionally, there is a high level of board's involvement in assessing, analyzing, monitoring and controlling risk efficiently, where they are somewhat reasonably efficient in managing risk, hence, URM, RM and RMC are the most influencing factors in RMPs. This study may have practical implications for boards in banks incorporated in Saudi Arabia by explaining the adoption of certain risk management strategies, and helping them understand how risk management behavior can maximize operating performance. In addition, it would help regulators and policy makers to develop a coherent and acceptable set of risk management tools and techniques.

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18.1 Introduction

The banking industry has witnessed significant growth, as many branches have opened in increasing markets around the world. As a result of the ongoing financial crisis, in which banks are considered to have had a major role, markets have been searching for more prudent and transparent banking procedures that overcome the critical flaws of the current systems. The study of risk management models is attracting attention, as it emphasizes transparency and value creation in its dealings. Business growth, however, does not only mean a larger market share. It also implies more interaction with the global market, a wider range of products to meet global market demands and, last but not least, committed to international regulations and financial stability. Financial stability is critically linked to managing risk in banks, and so it follows that banks need to have a strong focus on their risk management practices and disclosures. Risk-taking is an inherent element of banking. Profits are, in part, the reward for successful risk-taking. On the other hand, excessive and poorly managed risk can lead to losses and thus endanger the safety of a bank's depositors. Accordingly, regulators place significant emphasis on the adequacy of an institution's management of risk. Risk management in Saudi banks is not a new activity. The regulations issued by the Saudi Arabian Monetary Agency (SAMA) state that more emphasis should be given to managing major risks such as market, credit and operational risks. Effective risk management is critical to sustaining business growth and continued profitability of the banks. Due to some emerging economies, such as Egypt, Pakistan and Malaysia, the Saudi banking systems incorporate two types of operating systems: conventional and Islamic. In principle, Islamic banks are different from conventional ones due to the prohibition of "Riba" and the need to comply with the Shari'ah. The challenge facing Islamic banks is not only to offer products that cover the same scope as those of conventional banks, but also to ensure that their products are different from those of their Islamic peers. In this regard, having a well-honed product development capability is paramount. In practice, it can be noticed that Islamic banks offer products that are quite similar to the conventional banks and emulate their practices. The Saudi Monetary Agency states that all banks working in the Saudi economy must employ adequate tools of risk management, including compliance risk. Hence, questions that might be raised include:

RQ1. Do banks have efficient risk management practices?
RQ2. Do banks have adequate understanding of risk management?
RQ3. Do banks have in place a system for risk identification?
RQ4. Do banks have in place a system for assessing and analyzing risk?
RQ5. Do banks monitor and control risks efficiently?
RQ6. What is the level of involvement of boards in RM practices?

Our study differs from prior research on risk management in banks in emerging economies in a number of ways. For example, Abu-Hassain and Al-Ajimi (2012) investigated empirically the degree to which the conventional and Islamic banks in

Bahrain use effective RMPs and techniques in dealing with different types of risk. Hassan (2009) reported that, like the conventional banks, Islamic banks are also subject to a variety of risks due to the unique range of products offered. He also shows that there was a remarkable understanding of risk and risk management among the staff working in the Islamic banks of Brunei Darussalam, which proved their ability to manage risk successfully. It is noticed that such studies on emerging economies do not examine the characteristics of the risk management process as well as involvement of the boards, if any, in RMPs. We complement and extend these studies by investigating the characteristics of the risk management process, looking at the board involvement, if any, in risk management practices, as well as its determinants in Saudi context. However, the exploration of bank risk management practices in theory and practice remains unexplored in the Saudi Arabia context. This paper aims at bridging this gap in the literature on Saudi Arabia settings. It is hoped that this study will help to enrich the literature in the area of risk management in emerging markets and provide more insights on the board's related involvement. This in turn would help the Saudi Arabian Monetary Agency to develop regulations that mitigate risks in banks. The remainder of this paper is structured as follows. Section 18.2 discusses the study background of risk management and the Saudi banking system. Section 18.3 provides a review of literature and hypotheses developments. The research method follows in Sect. 18.4, data analysis and discussion of findings are explained in Sects. 18.5 and 18.6 includes conclusion.

18.2 Study Background

18.2.1 Background in Risk Management

Because of the vast diversity in risk faced by banking institutions, there is no single prescribed risk management system that works for all. Each banking institution should tailor its risk management program to its needs and circumstances. Regardless of the risk management program's design, each program should cover risk identification, risk measurement, risk monitoring and risk control. There are many and varied views and descriptions of what risk management involves, how it should be conducted, and what its purpose is. Several publications—including the Institute of Internal Auditors (2003, 2004) "An approach to implementing Risk Based Internal Audit", the Committee of Sponsoring Organizations of the Tread way Commission (COSO) 2004, "Enterprise Risk Management—Integrated Framework", the 'Orange Book' of the U.K Treasury, "Management of Risk-Principles and Concepts"—all provide valuable guidance on the subject. In addition, professional risk management institutes have been established to train professionals and provide a platform for guidance and standardization. The Institute of Risk Management (IRM) (2002a, b), with the

collaboration of the Association of Insurance and Risk Managers (AIRMIC), the Public Risk Management Association (ALARM) of the UK, published in 2002 a 'Risk Management Standard' which outlines the best practices in risk management, its terminology, objectives, organization structure and processes by which risk management can be carried out.

However, there are many risk management frameworks that have been designed to manage risk in organizations. National standards of risk management have appeared in many countries and regions, including Australia and New Zealand in 1995, Canada in 1997, Japan in 2001, and others. The Joint Australia Standards/New Zealand Standards Committee published AS/NZS 4360:1995 on November 5, 1995. Its objective was the creation of a "generic framework" for the risk management discipline to support better decision-making. The standard was updated and re-issued in March 1999 as AS/NZS 4360:1999 and was re-issued again in a 28-page booklet in 2004. Although this standard is generic and can be applied to all forms of organizations, imagination and modification are required to fit it to different organizations, as this standard does not indicate how but only why it should be applied. Following Australia and New Zealand, the Canadian standards association published a new guideline on risk management (CAN/CSA-Q850-97) in October 1997. This guideline is addressed to be a risk management guideline for decision-makers. This standard can be considered more of a public policy risk document than a financial or operational risk management guide. In addition, this guideline has formally introduced some ideas, like the importance of the shareholders' interest and risk evaluation; also, it has designed the risk management process and ensured documentation of the process through what is termed the 'risk library.' On the other hand, Canada is still moving forward in the area of generating risk management standards, as, in 2001, the Treasury Board of Canada Secretariat issued an integrated risk management framework to be used in public sector companies and governmental institutions. The Japanese Industrial Risk Management Standard (JSI Q2001: 2001) introduced a guideline to develop and implement the risk management system in an organization, as it aims to make risk management an imbedded and integral part of organizational structure; also, it ensures that it is reflected in each stage of the organization's activities.

The Basel Committee on Banking Supervision (2001) defines risk management as a sequence of four processes: the identification of events into one or more broad categories of risk; the assessment of risks using data and a risk model; the monitoring and reporting of the risk assessments on a timely basis; and the control of these risks by senior management. As can be seen from the definition, the generic risk management framework includes four major risk management components: risk identification, risk measurement, risk mitigation, and risk monitoring and reporting. In a holistic view, banking risks are categorized into three types, namely pure risk (hazard risks), financial risks and non-financial risks. Some of the major financial risks are market risk, credit risk, liquidity risk, interest rate risk, foreign exchange risks, solvency and capital adequacy risk. As for non-financial risks-the major one is operational risk. Apart from these common types, Islamic banks are also exposed to risks caused by the various modes of financing available to Islamic

banks and their unique nature. Some of these risks are benchmark risk (rate of return risk), withdrawal risk, fiduciary risk, reputation risk, displaced conventional risk, Shari'ah compliance risk and asset price risk.

A bank that applies a risk management framework will be in need to have a risk-based audit to provide assurance that the risk management process is adequate and reliable. There is a need to understand how banks in Saudi Arabia are practicing the bank's existing risk management methodologies and tools. Prior studies that are directly related to risk management of banks have been conducted by Khan and Ahmad (2001) and Mohd Ariffin (2005) on risk reporting and disclosure and Dasuki (2002) on risk exposure. However, investigating the issue of risk management practice and board's involvement in risk management in banks incorporated in Saudi Arabia setting is lacking. Therefore, this study aims at filling this gap and provides insights that would help management and policy maker to mitigate risk management in banks.

18.2.2 Saudi Banking System

The banking system in Saudi Arabia is governed by the Saudi Arabian Monetary Agency (SAMA). SAMA's broad supervisory powers are derived from its 1957 charter and the 1966 Banking Control Law. Unlike many banks around the world, Saudi Arabia banks remain in a healthy financial condition, with strong economic fundamentals, robust growth in most areas and a high likelihood that their recent impressive performance will continue into 2012 (Timewell 2012). The SAMA showed incredible growth in all banking indicators with the aggregate net income of the banking system up 18.5 % to SR32bn ($8.5bn) in 2011, compared to just 8 % net income growth in 2010. The results in 2011 showed that the Saudi banks had not only overcome the problems of the 2008 global financial crisis but also the massive defaults relating to the family dispute between Ahmad Hamad Algosaibi and Brothers and the Saad Group, with banks expanding their businesses in many new areas (Timewell 2012). However, there are twenty three banks incorporated in Saudi Arabia with 1,646 branch across the country (SAMA report 2012).

18.3 Brief Review of Literature and Hypotheses Development

Al-Tamimi and Al-Mazrooei (2007) provided a comparative study of risk management in locally incorporated and foreign banks in the United Arab Emirates (UAE). They reported that inspections by the bank risk manager, audits or physical inspections, financial statement analyses and risk surveys were the main methods used to assess risk. These findings indicated that banks were becoming more

sophisticated in managing their risks. The report showed that the locally incorporated banks were fairly efficient in managing risk. However, the variables such as risk identification, assessment and analysis proved to be more influential in the risk management process. Finally, the results indicated that there was a significant difference between the UAE national and foreign banks in understanding risk and risk management, in practicing risk assessment and analysis, and in risk monitoring and controlling, but not in risk identification, credit risk analysis and risk management practices. Hassan (2009) showed that there was a remarkable understanding of risk and risk management among the staff working in the Islamic banks of Brunei Darussalam, which enabled their ability to manage risk successfully. The major risks that were faced by these banks were foreign exchange risk, credit risk and operating risk. Furthermore, the results suggested that risk identification, assessment and analysis were the most influential variables.

The Islamic banks in Brunei needed to give more attention to those variables to make their risk management practices more effective. Understanding the true application of the Basel III Accord could improve the efficiency of banks' risk management systems. However, Van Greuning and Iqbal (2008) and Iqbal and Mirakhor (2011) argued that a comprehensive framework of risk management is equally applicable to a conventional or Islamic bank. Abu-Hassain and Al-Ajimi (2012) investigated risk management practices of banks operating in Bahrain. The results revealed that banks in Bahrain were found to have a clear understanding of risk and risk management, and had efficient risk identification, risk assessment analysis, risk monitoring, credit risk analysis and risk management practices. Furthermore, the risk management practices were determined by the extent to which managers understood risk and risk management, efficient risk identification, risk assessment analysis, risk monitoring and credit risk analysis. Islamic banks were found to be significantly different from their conventional counterparts in understanding risk and risk management. The levels of risk faced by Islamic banks were found to be significantly higher than those faced by conventional banks. Rosman (2009) proposed a research framework for risk management practices and the aspects of risk management processes. This framework observes the relationship between RMPs and the four aspects of the risk management process:

1. Understanding risk and risk management (URM).
2. Risk identification (RI).
3. Risk analysis and assessment (RAA).
4. Risk monitoring and control (RMC).

The remarkable development of risk management in the Saudi banks showed their management's ability to pave the way towards successful risk management. Thus, the obvious suggestion is to implement vibrant risk management techniques in Saudi banks. The author is not aware of any other study that specifically attempts to assess the RMPs of Saudi banks. Taking into account the previous review, the questions raised and the objectives of the study, the following hypotheses phrased in a null form will be tested:

$H0_1$. Banks have inefficient risk management processes.
$H0_2$. Banks are inefficient in risk management practices.
$H0_3$. Boards are not involved in risk management practices.
$H0_4$. Board involvement in RMPs is not determined by URM, RI, RAA, and RM.

18.4 Method

18.4.1 Study Variables and Model

A multiple ordinary least squares (OLS) model is estimated to examine the variables that could be important in determining the dependent variable: the board involvement in risk management (BORRM). The tested independent variables are the four aspects of risk management practices; understanding risk management (URM), risk identification (RI), risk assessment and analysis (RAA) and risk monitoring and control (RMC). The following regression model is used to test the determinants of board involvement in risk management:

$$BORRM = \beta 0 + \beta 1 URM + \beta 2\, RI + \beta 3\, RAA + \beta 4\, RMC + \varepsilon \qquad (1)$$

where:

$\beta 0$	constant
($\beta 1$–$\beta 4$)	coefficients of partial regression of each independent variable
ε	an error estimate

18.4.2 Sample Selection and Instrument

The target group of this study comprises all 23 banks that are incorporated in Saudi Arabia, consisting of 12 national and 11 foreign banks. A sample of the senior staff in the head offices of the selected banks was approached. The study was based on primary data that was collected through the use of a standardized questionnaire. As shown in Table 18.1, a total number of 115 questionnaires were distributed, out of which 73 filled out questionnaires were received. The screening process resulted in

Table 18.1 The study sample

	N	%
Initial questionnaires	115	100
Returned questionnaires	73	63.4
Less: questionnaires with missing data	7	6
Usable questionnaires	64	55.6

excluding 7 responses from the sample because of missing data answers, resulting in 64 valid questionnaires.

The questionnaire comprised a number of statements related to risk management processes, risk management practices and board involvement in risk management. The questionnaire included fifty questions with four sections. The first section was about participant's demographic information, and the second section included eleven questions related to characteristics of an efficient risk management process. The third section was related to risk management practices and contained nine questions about understanding of risk management, six questions about risk identification, eight questions about risk assessment and analysis, and six questions about risk monitoring and control. The fourth section dealt with the level of board involvement in risk management practices. Apart from demographic questions, the majority of the questions were statements that were measured on a five point Likert scale of "strongly disagree", "disagree", "undecided", "agree" and "strongly agree". The questionnaire was pre-tested and modified according to feedback from senior officer representatives from the banks incorporated in Saudi Arabia.

18.5 Data Analysis and Discussion of Findings

18.5.1 Reliability Test

Reliability of the measures used in the questionnaires was assessed by using Cronbach's α; which measure the reliability of different variables. In the estimation, a coefficient greater than or equal to 0.7 is considered acceptable and a good indication of reliability. As shown in Table 18.2, Cronbach's α for risk management process, understanding risk management, risk identification, risk assessment and analysis, risk control and monitoring, and board's involvement in risk management are greater than 0.7, indicating that all six variables are reliable (Sakran 2000).

Table 18.2 Reliability of the measures

No.	Variables	Cronbach's α
1	Risk management process	0.903
2	Understanding risk management	0.789
3	Risk identification	0.744
4	Risk assessment and analysis	0.798
5	Risk control and monitoring	0.789
6	Board's involvement in risk management	0.882
	Overall reliability of variables	0.862

18.5.2 Demographic Statistics

Table 18.3 shows the breakdown of the survey participants by demographic information as type of bank activities, experience, academic qualification, study background and country of study. The results show that the respondents in this study are comprised of 56 representatives from Islamic banks and 8 who are working in conventional banks with Islamic banking subsidiary/windows.

A total of 10 respondents (15.6 %) have less than five years of work experience, 42 (65.6 %) with experience between five to ten years, while 12 (18.8 %) have above ten years of work experience. The majority of respondents (78 %) has a bachelor's degree. Respondents are with different academic backgrounds as finance (21.8 %), accounting (34.5 %), economics (12.5 %), and business administration (31.25 %). A total of 84.4 % of the respondents earned their study degree from Saudi Arabia and the remainders (15.6 %) were graduated from such countries as the USA, UK, and Egypt. All the respondents are working in local Saudi banks and committed to a risk management practice.

Table 18.3 Demographic information of surveyed Saudi banks' representatives

	Participants (n = 64)
Type of bank activities	
Islamic	56
Conventional	0
Conventional with Islamic banking windows	8
Experience (years)	
<5	10
5 < 10	42
>10	12
Academic qualification	
Bachelor	50
Master	10
Ph.D	4
Study background	
Finance	14
Accounting	22
Economics	8
Business Administration	20
Country of study	
Saudi Arabia	54
USA	2
UK	4
Others	4

18.5.3 Respondents' Perception of Risk Management Process

An analysis of participants' responses on their perception of the characteristics of an effective risk management process in banks was carried out. The participants were asked to express their opinion on some characteristics of the risk management process. They were asked to rate their opinion based on Likert-Scale ranged from "strongly disagree" to "strongly agree". Table 18.4 shows that each of the characteristics of risk management have means score higher than 3, which indicates a considerable degree of consideration of the characteristics of the risk management process in banks.

Each of the eleven characteristics has a mean score of at least 3.84. This study defines any factors with the mean values up to 2.0, at least "disagree" or "strongly disagree" upon; in the range of 2.1 to 3.0, are "undecided" and 3.1 or above indicating that the respondents either "agree" or "strongly agree" that the bank maintain such characteristics of the risk management process.

The results suggest that all characteristics of an effective risk management process exist. In conclusion, the respondents think that the tested characteristics of

Table 18.4 Characteristics of risk management process of surveyed Saudi banks

	Characteristics of Risk Management Process	Mean	STD	Skeweness	Kurtisos
1	Executive management regularly reviews the bank's performance in managing its business risk	4.31	0.965	−1.839	3.854
2	The bank is highly effective in continuous review/ feedback on risk management strategies and performance	4.28	0.888	−1.784	4.736
3	The risk management procedures and processes are documented and provide guidance to staff about managing risks	4.19	0.998	−1.439	2.237
4	The bank's policy encourages training programs in the risk management and Islamic ethics areas	3.91	1.146	−1.178	0.942
5	The bank emphasizes the recruitment of highly qualified people having knowledge in risk management	3.44	1.243	−0.386	−0.564
6	One of the objectives of the bank is 'effective risk management'	3.94	0.840	−0.226	−0.757
7	Investing funds in one specific sector of the economy is too risky	3.94	0.801	−1.613	−0.412
8	The bank is successfully implementing the Saudi Arabian Monetary Agency (SAMA) guidelines on risk management	4.25	0.916	−0.518	3.707
9	Application of Basel III Accord will improve the efficiency and RMPs	4.06	0.801	−0.915	−0.126
10	The level of RMPs of the bank to be excellent	3.84	1.051	−1.376	0.500
11	The bank ensures compliance with risk management regulations	4.13	0.976	−0.934	2.298

an effective risk management process are maintained in the Saudi Arabia banks which points out the respondent's consensus on the characteristics tested. The above discussion leads to the rejection of the first hypothesis, where "banks have an efficient risk management process. Our results are consistent with those of Al-Tamimi and Al-Mazrooei (2007) and Abu-Hassain and Al-Ajimi (2012).

18.5.4 Respondents' Perception of Risk Management Practices

Participants were requested to indicate an opinion concerning the efficiency of the four aspects of risk management practices in their banks; i.e., understanding risk management, risk identification, risk assessment and analysis and risk control and monitoring. The results would help in pinpointing areas that need much attention of the management.

Table 18.5 shows the opinions expressed by the respondents, where they suggest that banks in Saudi Arabia are efficient in risk management practices. The highest mean value among the four aspects is 4.14; which relates to the understanding of risk management and its importance to the performance and success of the bank. Furthermore, the respondents express that they are committed to implementing Shari'ah compliance risk management practices, and also indicate that they have training programs to enhance staff knowledge in risk management practices.

Table 18.5 also shows that the respondents' responses to the questions on other aspects of risk management practices. The mean average of risk identification practices is 3.85, while it is 4.10 for risk assessment and analysis, and 4.09 for risk control and monitoring. The results indicate that the banks in Saudi Arabia are efficient in risk management practices; hence the second hypothesis is rejected.

18.5.5 Respondents' Perception of Board's Involvement in Risk Management

In relation to the board involvement in risk management practices, participants were requested to express their opinions on the level of involvement in the four

Table 18.5 Risk management practices of surveyed Saudi banks

No.	Risk management practices	Mean	STD
1	Understanding risk management	4.14	0.530
2	Risk identification	3.85	0.630
3	Risk assessment and analysis	4.10	0.490
4	Risk control and monitoring	4.09	0.607

aspects of risk management practices, i.e.; understanding risk management, risk identification, risk assessment and analysis, and risk control and monitoring. They were asked to rate their opinion based on Likert-Scale ranged from "never" to "always". The results in Table 18.6 suggest that the participants believe that the boards have a high level of involvement in Risk management practices; with a mean score of 3.91 for understanding risk management, a mean score of 4.06 for risk identification, a mean score of 4.00 for risk assessment and analysis, and a mean score of 4.16 for risk control and monitoring. It can be noted that such results were supported by Hassan (2009) and Abu-Hassain and Al-Ajimi (2012). The results suggest that the third hypothesis to be rejected.

18.5.6 Multivariate Analysis of Determinants of Board Involvement in Risk Management

A multivariate regression analysis is conducted to take into consideration the relationship between board's involvement in risk management and the level of risk management practices. As shown in Table 18.7, R is 0.615, which indicates that 61 % of the variation in independent variable; board involvement in risk management, are explained by dependent variables.

Table 18.6 Board involvement in risk management practices

No.	Risk management practices	Mean	STD
1	Understanding risk management	3.91	0.8560
2	Risk identification	4.06	1.014
3	Risk assessment and analysis	4.00	0.8800
4	Risk control and monitoring	4.16	0.9200

Table 18.7 Multiple regression analysis of the determinants of board involvement in risk management

Panel A: Model summary					
Model 1	R	R2	Adjusted R2	F	Sig.
	0.615	0.379	0.287	4.112	0.010*
Panel B: Coefficients					
Standardized coefficients					
Independent variables	t	Beta	VIF	Sig.	
(Constant)		0.232	1.222		
Understanding risk management	0.553	0.022*	2.432	1.962	
Risk identification	0.059	0.821	0.228	1.830	
Risk assessment and analysis	0.125	0.720	0.363	4.252	
Risk control and monitoring	0.165	0.048*	2.603	2.808	

Note: Dependent variable: Board' involvement in RMPs
* Significant at 0.05 level

The results suggest that the two independent variables URM and RMC have a positive and significant impact on the dependent variable RMPs. URM and RMC are significant at 5 % as their p-values are 0.022 and 0.048, respectively. There is a positive relationship between URM and RMPs and positive relationship between RMC and RMPs. Table 18.7 shows that the values of variance inflation factors (VIF) of URM, RI, and RMC range from 1.830 to 2.808, suggesting the absence of multicollinearity among these variables. RAA has a VIF of 4.252, suggesting multicollinearity with other variables as URM, RAA and RMC.

On the basis of the above mentioned results it can be concluded that the fourth hypothesis of this study is not valid, where there is a positive relationship between URM and RMPs, RI and RMPs, RAA and RMPs, and finally between RMC and RMPs. However, this result is consistent with the findings of Khalid and Amjad (2012).

18.5.7 Testing the Influence of Participants' Demographic Information

Analysis of variance (ANOVA) was conducted to determine whether respondents' perception on questions related to risk management process, risk management practices and board involvement in risk management practices were influenced by demographic characteristics. As shown in Table 18.8, it was found that work experience, academic qualification, study background, and the country of study have no impact on respondents' perception, where all respondents expressed the same views on the influence of the risk management practice on board involvement in risk management (all statements have $p > 0.05$). Therefore, the fifth hypothesis is accepted.

Table 18.8 Impact of demographic on risk management process, risk management practices and board involvement in risk management

Aspects of risk management	Descriptive statistics		ANOVA test			
			Significant level			
	Mean	STD	Experience	Academic qualification	Study background	Country of study
Risk management process	4.02	0.695	0.6560	0.4950	0.1640	0.646
Understanding risk management	4.14	0.530	0.7380	0.8560	0.6500	0.7100
Risk identification	3.85	0.630	0.9140	0.3760	0.2750	0.6880
Risk assessment and analysis	4.10	0.490	0.6620	0.8950	0.8380	0.690
Risk control and monitoring	4.09	0.607	0.8090	0.6500	0.080	0.9830
Board's involvement in risk management	4.15	0.663	0.197	0.9450	0.9110	0.8930

**Significant at the 0.05 level*

18.6 Conclusion

The main objective of this study is to investigate the risk management process to assess the level of involvement in risk management practices (RMPs) in banks incorporated in Saudi Arabia. Risk management practices have been divided into four aspects: understanding risk management, risk identification, risk analysis and assessment, and risk control and monitoring. Results of empirical study indicate that the risk management process is effective in banks incorporated in Saudi Arabia. This provides support for the efforts of the Saudi Arabian Monetary Agency to assure compliance with the related regulations and guidelines.

To examine the aspects of risk management practices, statistical analysis was accomplished in three stages. First, the survey elicits opinions of a representative sample of senior staff who are working in the head offices of banks to assess the level of practices of the four aspects of risk management. The results reveal that understanding risk management, risk identification, risk assessment and analysis, and risk control and monitoring are well defined and effectively presented in banks. Second, a multiple regression analysis was carried out between the level of board involvement and each of the four aspects of risk management practices. The results indicate that bank boards are reasonably efficient in managing risk where understanding risk management, risk identification, and risk monitoring and control are the most influential variables in RMPs. Third, analysis of variance (ANOVA) was conducted to determine whether respondents' perception of questions related to risk management processes, risk management practices, and board involvement in risk management practices were influenced by demographic characteristics. The results suggest that work experience, academic qualification, study background, and the country of study have no impact on respondents' perceptions; all respondents expressed the same views on the influence of the risk management practice on boards' involvement in risk management.

In an environment where a secretive culture still prevails, as in Saudi Arabia, the presence of a regulatory body such as the Saudi Arabian Monetary Agency forces banks to comply with all the guidelines that manage risk and acts to pressure banks to enhance board involvement in risk management practices.

This study has a number of limitations that might warrant further research. The study can be considered exploratory in nature, and further work is needed in specific areas. First, the dimension of risk management could be expanded to define tools and strategies of risk management used in banks incorporated in Saudi Arabia to control different types of risk. Moreover, the sample used in this paper refers only to Saudi banks. Empirical evidence could take advantage of the hypothesis testing for banks but in different contexts, such as in Gulf Co-operation Council (GCC) countries. Second, we have tested the board involvement in risk management without analysis of a broad range of board of director characteristics. However, board involvement in risk management can be influenced by many characteristics, such as board composition, board structure, board size, the duality of chief executive officer (CEO) and director characteristics, and board disclosure

policies. Hence, further research can be carried out to consider such characteristics and their impact on risk management practices. Third, the efficient involvement of boards in risk management practices is a complex matter that includes many aspects of the bank (e.g. value drivers, strategy, processes) and it cannot be studied referring only to the items considered in this study. We are aware, however, that even as we considered these aspects, further research is needed in this area, particularly to correctly identify the measure that can actually be used to assess the efficiency of such involvement and its impact on the bank performance.

Considering these limitations, however, this study shows interesting results that can be useful for managers and regulators. In our opinion, the study's main result is that it confirms that banks incorporated in Saudi Arabia are complying with the risk management regulations recommended by the Saudi Arabian Monetary Agency. A second result that appears to emerge from this study is that board involvement in risk management practices enhances the risk management process and improves the bank's performance.

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Chapter 19
Leadership and Innovation Strategies in Banking

Ümit Hacioglu, Hasan Dincer and Aylin Ipekci

Abstract In the period of the 2008–2009 financial crisis, fluctuating conditions addressed the importance of leadership and developing competitive innovation strategies in the banking sector. From a behavioral approach to a scientific route, it has been accepted that the leadership and innovative solutions to issues in financial system are prior to examination. The most important matter for institutions in the financial system is to sustain a competitive advantage will be developed, continued in a wavy, turbulent, complex and most complex environment and how they can change themselves in this process. In this chapter, leadership and innovative strategies in banking are closely attached to the success and sustainability in a competitive environment.

19.1 Introduction

The global economic crisis and *sovereign crisis* in Europe have been teaching us how to manage our financial assets and define our positions in balance to the changing political and economic conditions. Financial stress from advanced to emerging economies diverted our attention to the banking sector, capital markets, exchange markets and sovereign instruments. As an indicator or emergency signal of a global recession, financial stress should be evaluated closely within an innovative and behavioral approach. On one hand, volatility in financial systems affects stock prices and the value of corporations directly. On the other hand, generating income becomes a challenging issue for a profit organization as the effects of volatility in financial system have reflections on economic activity, employment, growth and development.

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The most important matter all institutions, especially enterprises, encounter is how sustainable a competitive advantage will be developed, continued in a wavy, turbulent, complex and most complex environment and how they can change themselves in this process. The leadership and innovative strategies in banking are closely attached to the success and sustainability in a competitive environment. In this chapter, the first section illustrates the importance of leadership and defines the concept of leadership. The Second section demonstrates effective competitive and innovative strategies in Banking.

19.2 Leadership Concept in Banking Sector

None of the words in literature on leadership has been used in such a variety of meanings. Leadership has sometimes been used as the quality of authority, as a type of behavior and as a personality trait towards others. According to one definition, leadership is the cumulative of knowledge and skills in gathering a group of people around certain goals and in mobilizing them to realize these goals. A leader is a person who can put forth common thoughts and wishes, which are being felt by group members but which have not come out yet, in form of an adoptable goal and who activates group members' potential powers around this goal (Eren 1993: 337).

A leader is a person who specifies a group's purposes, affects group members in line with these purposes and guides them into action. Leadership, however, is a process related to what a leader does (Davis 1972: 101; Sabuncuoğlu and Tüz 2001: 216). Leadership ranks first among the subjects which are discussed and researched most in management. Several authors have made a definition of leaders and leadership. Some of these definitions are as follows (Güney 2001: 285; Hellriegel and Slocum 1992: 467; George and Jones 1995: 404; Certo 1997: 350). Hellriegel and Slocum define the concept of leadership which is the talent in influencing, motivating and guiding other members of the organization in order to reach targeted goals. According to George and Jones, a leader is a person who influences members of groups and organizations in order to ensure that groups and organizations reach their targets. Certo underlines the concept of leadership defining the process by which human behavior is guided in line with the goals to be reached and accomplished. According to Drucker (1998: 131); a leader says that the final task of leadership is to generate dynamism in people and to enhance their visual horizon. When several definitions put forth of leadership is examined and a synthesis is tried to be formed, it is possible to state this notion as the cumulative of the talents and knowledge in gathering a group of people around certain purposes and in mobilizing them for the realization of these purposes (Eren 2010: 435).

Studies in the literature illustrate several leadership theories which are encountered with different perspectives and in different classes. Leadership theories are classified as below in their historical process (Daft 1997: 500; Gray and

Starke 1977: 65; Koçel 2005: 587). These are (1) *Theory of Traits,* (2) *Behavioral Leadership Theories,* (3) *Situative Leadership Theori*es. In the traits approach, the traits which the leader holds rank first among the factors which determine the effectiveness of the leadership process (Daft 1997: 498; Güney 2001: 288). In other words, the reason why a person stands out in a group and guides by leadership is the traits a person has (Fig. 19.1).

In theory, having different traits within the group enables the person to be accepted as a leader. Therefore, the gravity point of this theory is in finding the traits of a successful leader and an unsuccessful leader among group members. As a result of the studies, we gather traits in four groups (Organ and Hamner 1982: 395; Donnelly et al. 1990: 213–214; Sabuncuoğlu and Tüz 2001: 220) (Table 19.1).

The behavioral approach, which is an important approach in the theory of leadership, has directed scholars towards analyzing the actual behavior of a leader, since the theory of traits had fallen short of explaining the leadership notion (Şimşek 2010: 199). The main basis of this approach is the behavior a leader displays during the performance of leadership instead of the traits of the leader. Therefore, the inclinations underlying leader behavior have been strived to be specified in the studies conducted. Behavior such as the leaders in group communication, whether he transfers authority, planning and controlling style, target setting pattern and the like rank first among the factors affecting the effectiveness of the leader (Tengilimoğlu et al. 2009: 123).

The first seeds of this approach were sown in Bales and Strodtbeck (1968) work and social-emotional leadership notions. These theorists have found that two types of leaders emerge in discussion groups formed in equal circumstances, while the first thereof proceeds in line with the goal of the group, the leader of the other group ensures keeping the group together (Hortaçsu 2008: 159). The assumption researchers who adopt behaviorist approaches predicate on against the belief that "one is born a leader; he is a leader in any case" is that "leadership behavior is learned and can be learned" (Yilmaz 2008: 61).

In the process of voicing behavioral leadership theory practical, research and theoretical studies have been made. As a result of these studies Mouton, Likert and Blake have developed a model in leadership. In the studies of the Ohio University

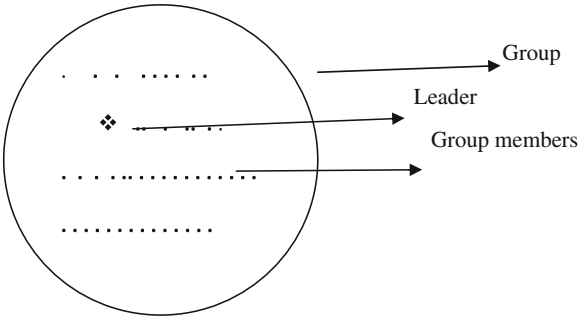

Fig. 19.1 Leadership.
Source Koçel (1999), s. 426

Table 19.1 Leadership features

Physical traits	Intellectual traits	Emotional traits	Social traits
Strength	Intelligence	Perception	Good communicative skills
Age	Attention	Self-control	Close friendship
Height	Initiative	Sense of security	Friendship skill
Gender	Decisiveness	Love and being loved	Extroverted personality structure
Handsomeness	Fore sight	Sense of high achievement	Making oneself accepted
Race	Responsibility	Ambition	
Exerting influence	Realism		
Activity	Knowledge		
Eloquence	Skill Persuasion		

Source Organ and Hamner, 1982:395; Donnelly et al 1990: 213–214; Sabuncuoğlu and Tüz, 2001: 220

however theories on the appropriateness of leadership behavior have been voiced. Moreover Michigan University's leadership study, Bale's Harvard University study, Gary Yukl's leadership behavior models have also been voiced. Ohio State has initiated its leadership studies in end 1940s and early 1950s. Researchers have developed a sample question and applied it in the assessment of a leaders' behavior and the thoughts of their employees' thoughts (Donnelly et al. 1990: 392; Keçecioğlu 1998: 123). Researchers have determined two dimensions in this study. These are activating the structure, Understanding, Leaders activating the structure are directed towards business goals, completing duties, forming and mobilizing those, while understanding expresses the leader's arousal of respect and trust in his employees and his development of friendship and close friendship with employees (Daft 1997: 501; Certo 1997: 359). Activating a structure and understanding are complementary and independent behavior. Their complementarity may be included in both of these behaviors. Its independence however does not

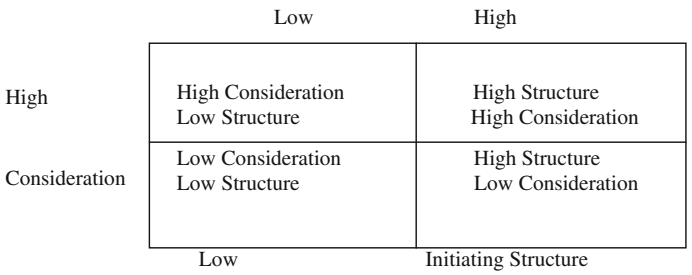

Fig. 19.2 Effects of initiating structure and consideration on employee reactions. *Source*: Chung, 1987:369; Can, 1992: 189

mean the presence of one leads to the presence of the other. It is possible that the leader displays both behaviors (Fig. 19.2).

The conclusions of the Ohio State studies are as follows; (1) The strength of understanding behavior increases job satisfaction, decreases absence and labor force turnover rate. (2) The more the leader's behavior of mobilizing the structure increases the more the group members' performance increases. (3) If the employees' relations with the leader are weak the management will be of an authoritarian leadership type (Chung 1987: 369; Daft 1997: 501; Güney 2001: 290).

19.3 Innovation Strategies as Competitive Solutions to Current Issues in Banking

The most important matter all institutions, especially enterprises encounter is how sustainable competitive advantages will be developed, continued in a wavy, turbulent, complex and most complex environment and how they can change themselves in this process (Keçecioğlu 1998: 1). Several definitions in innovativeness are encountered. Those who make these definitions underline the elements they attach importance to according to their own paradigms.

According to Cumming (1998) innovation is the successful implementation of products or processes. According to Higgins (1996), however, innovation is the creation of a significant influence on society or the industry by people, groups and organizations, the generation of processes, development or generation of products and services. However, Kırım (2006: 9) defines innovativeness as a money earning novelty. This means that as an individual or a company you shall discover such novelty which has not been tried out by anyone else before and for which people pay more money or come to shop more of it. Innovativeness in its broadest sense is defined as the transformation of knowledge into economic and social advantage. Therefore, it is an entirety of technical, economic and social processes. It is the product of a culture identified with the wish for change, being open to innovation and an entrepreneurial spirit (Elçi 2006: 2). In light of these explanations we may derive such conclusion; if an enterprise wishes and plans to survive in the sector for many years it must be ready for change and must realize due innovation. It is however mandatory that they develop innovation strategies for enterprises to proceed in a globalizing world.

In its general meaning strategy expresses the path taken in pursuit of a predetermined goal. In enterprises however strategy is their determination of their strong and weak points in order to realize their targeted goals for growth and change in the product and market, their means of competition; in short to cream off the market (İraz 2010: 97). Enterprises which wish to increase their strength in the global market and get an edge over competitors always need to be the best. At this point we encounter four different innovation strategies (Freeman 1982; Maidique and Patch 1988: 236–248). Innovative enterprises may apply a few of these

strategies together or implement a common innovative strategy derived thereof (Trott 2002: 106).

Aggressor Strategy: This innovation strategy targets gaining an upper hand in the market by outmaneuvering competitors in the market with the initial development of product or process innovations. In enterprises using the aggressive strategy the pace of communication and effectiveness must be high. At this stage the enterprise has to attach importance to this pace in order to respond to customers' possible future requests and needs with the information on the innovation project to me initiated by competitors and the innovative strengths which may be generated by them (Freeman and Soete 1997: 268; Durna 2002: 129). This strategy has been developed by taking Porter's leader and follower strategies as a starting point. These are preponderantly strategies applied by competitors holding leader position in highly competitive markets. It is seen that the new products brought to the market by these enterprises are responded to by their competitors (Trott 2002: 107).

Defensive Strategy: This strategy is valid for enterprises taking advantage of opportunities generated by the faults made by enterprises which are newcomers in the market. An enterprise pursuing an aggressive strategy which however has been eliminated by a more aggressive competitor may unwillingly have to apply a defensive strategy (Freeman and Soete 1997: 273). It cannot be determined whether an enterprise holds a leader of follower position in innovativeness. Therefore, enterprises may play their roles differently from time to time (Tidd et al. 2005: 121).

Imitative Strategy: is the development of an advanced and differently patented product with technique and designs, taking advantage of the opportunities provided by the market generated by the enterprise having a leader standing and the mistakes it has made. In such cases the entrepreneur wishes to be the protective innovator in swiftly developing economies with his imitating trait (Freeman and Soete 1997: 276). Enterprises adapting such strategy style have a high chance of being successful in mature and placid markets where innovative responses and threats by aggressive enterprises are low (Rickard 1985: 80).

Traditional and Opportunity Pursuing Strategies: In the traditional innovation strategy, enterprises make certain design changes in terms of fashion instead of changes concerning technical and research and development. Opportunity pursuing strategy however is similar to the military strategy of discovering the weak points of the opponent of moments of unawareness to attack him (Freeman and Soete 1997: 283)

19.4 Conclusion

The most important matter all institutions, especially enterprises, encounter is how sustainable competitive advantage will be developed, continued in a wavy, turbulent, complex and most complex environment and how they can change

themselves in this process. The leadership and innovative strategies in banking are closely attached to the success and sustainability in competitive environment. The behavioral approach, which is an important approach in the matter of leadership, has directed theorists towards analyzing the actual behavior of a leader, since the theory of traits had fallen short of explaining the leadership notion. Strategy expresses the path taken in pursuit of a predetermined goal. In enterprises however strategy is their determination of their strong and weak points in order to realize their targeted goals for growth and change in the product and market, their means of competition; in short to cream off the market. Enterprises which wish to increase their strength in the global market and get an edge over competitors always need to be the best. The development of leadership skills attached to competitive innovation strategies in banking facilitates organizational success in long term and addresses the effective strategies of global crisis.

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