Preface

In last few decades, almost all business areas have undergone major changes because of rapid improvement in Information Technologies. Definitions, business models, processes, workflows, and almost all elements of business areas have been restructured with an Information Technologies base. Therefore, every phenomenon in business needs to be analyzed with a different inter-disciplinary approach. In this book, the financial crisis, which is a sophisticated and multi-dimensional disaster, is analyzed in an inter-disciplinary way. The economic point of view includes relatively classical approaches, technological point of view includes newly developed Information Technologies perspectives, and the analytical point of view presents new statistical, econometrical, financial, and similar methods. Hence, this book combines classical theories and methods, new technologies, and new methods for illumination of the impact of the financial crisis and future effects in all areas.

The main objective of this book is to be a guide to detect, identify, and prevent a future financial crisis on a country level (macro economics), sector level, domain level, and/or firm level (micro economics). (Almost) all of the books about financial crises investigate the financial crisis phenomenon only from the financial, social, economic, etc. point of view. Nowadays, the financial crisis phenomenon and its impacts cannot be clarified enough without Information Technology and Analytical Techniques. This book clarifies the financial crisis phenomenon using IT and analytical techniques in addition to classical approaches. This book will be a primary reference in all areas which had/will have financial crises and are looking to reduce the effects.

This book includes only high quality, original works that have a potential for academical leadership. Furthermore, there is no specialized book in the manner of IT and actual analytical approaches on financial crises. There are some studies (papers, proceedings, etc.) on financial crises mostly based on classical approaches, but there are (almost) no books completely dedicated to the financial crisis from IT and analytical points of view in addition to the classical approaches. Therefore, this book will be the first book that completely covers financial crises from a multi-dimensional perspective. In this manner, this book can be identified as a practical guide to theoretical matters for solving real life problems with feasible potential systems, models, applications, and examples. From that point of view, it can be used in public libraries, research organizations, and academic institutes’ libraries. In addition, individuals such as scientists, practitioners, managers, engineers, and experts from government and non-government institutions involved in financial crises will be interested in this book.

The target audience of this book includes numerous individuals, students, academics, researchers, engineers, professionals from government and non-government institutions working in the field of financial analysis, risk management, IT-based supervision, fraud detection, matters involving financial
crisis in every level in various disciplines, such as information and communication sciences, insurance, banking, and finance, economics, statistics, econometrics, energy, health, social sciences, engineering, etc. Therefore, this book can be identified as a practical guide of theoretical matters for solving real life problems with feasible potential systems, models, and examples. From that point of view, it can be used in public libraries, research organizations, and academic institutes' libraries. In addition, individuals such as scientists, practitioners, managers, and experts from government and non-government institutions involving financial crises will be interested in this book.

This book is divided into three sections. The first section is titled “Multidimensional Overview of the Financial Crisis” and introduces the multi-dimensional structure of the financial crisis from different points of view.

Chapter 1 introduces new paradigms that endogenize ethics, efficiency, rights, and minimize risks in decision systems that can converge in peace and human sustainability. Information distortion in information systems may create high alternative costs such as problems of quantification of socio-economic phenomena and negative impacts on quantitative, and qualitative distortions in decision making structures is evaluated. This chapter emphasized that in the 21st century it has become a necessary condition to transform power driven systems to science, culture, and endogenize ecology and ethics, which aims “human optimal” welfare decision systems at the world level.

Chapter 2 evaluates the developments in last few decades from New World Order point of view and their effects on the global financial system.

Chapter 3 investigates the financial crisis of 2008, which reveals a significant distortion of the information system and a systemic crisis of the internationally agreed upon National Accounts Approach. This chapter reviews the political relevance and reliability of official results and reveals distortions and failures that are due to the framework of National Accounts and its “toxically infected” database. It is assumed that GDP is a false political reference for monitoring and controlling economic stability. The enterprises, their balances, cash flow, liquidity, and equity are neglected. National assets, like natural resources and property, infrastructure, and logistics and geographical issues are inadequately covered by the present system. Data are poor on the impact of public debt and public ownership on the markets. Databases are “toxically infected” due to “false response,” “shadow economy,” and “off-shore-hidden-money.” Therefore, the framework of National Accounts needs revision to improve political relevance and reliability. Investigation is needed to estimate the bias of the database. Audited stocktakings and re-evaluations of accounts and balances are preconditions.

Chapter 4 evaluates the correlation of growth in population, economic welfare, and increases in the energy demand with examples. The biggest concern of mankind is which sources will cover the immense energy demand. It is obvious that fossil fuels are the base energy source for short-term history, and in order to supply developing energy needs, serious investments need to be made in the energy sector. That is why the results of monetary aspects in energy prices and the conditions in leading supplier countries is also evaluated.

Chapter 5 shows the gap between the real economy and the financial markets in the United States, during the pre-crisis period at the end of 2007, as well as during the subsequent crisis period. The current research paper emphasizes the catastrophic effect that financial markets had inside the whole economic system due to this gap. The premise from which this chapter starts can be found in the systems theory and consists in Heinz von Foerster’s theorem. This research has an empirical nature and shows in which way an anomaly within the system, like the one mentioned before, can destabilize the entire system, finally resulting in the installation of the crisis period that we are still facing. In order to illustrate this,
the chapter refers to the evolution of the values of DJIA and real GDP, observed between the mid-1940s and 2010 in the United States.

Chapter 6 introduces crises from a leadership point of view. The aim of this chapter is to examine the impact of crises on leadership virtues and express reflections on the new type of leadership in the new paradigmal period.

Chapter 7 emphasizes the necessity of usage of the new tools and decision support systems by public management in crisis management in light of the developments brought by New Public Management.

Chapter 8 reviews the gender concept and its history and crisis evaluated in terms of both orthodox economy and the heterodox economy. Considering the wide range of the topic, feminist economics arguments are primarily considered.

Chapter 9 investigates the major factors that contribute to the shifting of career of an engineer to management, the challenges faced by them while working in the management field, and how this relates to their job satisfaction after the shift has taken place.

The second section, titled “Economic Views of the Financial Crisis,” introduces the financial crisis and its reflections from an economic point of view.

Chapter 10 aims to assess the role of accounting and auditing in the recent financial crisis. After each crisis, there have been serious discussions concerning the reasons behind those crises. However, no consensus has yet been achieved until now. In this context, the analysis of the relationships among financial crises, accounting, and auditing is of utmost importance in better evaluating the structural reasons behind the crisis. There are several points that this chapter aims to analyze to indicate the contributions of accounting and auditing to the recent global financial crisis. These points are: impacts of disregarding the main principles of accounting, the wide use of fair value accounting over cost-based accounting, incorrect and misleading financial and audit reports, applications of creative accounting, and lack of transparency and weaknesses of the auditing process. The chapter concludes with several suggestions by taking into consideration that accounting and auditing systems should be revised for the better protection of interests of the third parties, such as investors, potential investors, and the state.

Chapter 11 introduces “technical insolvency” in Turkey. In Turkey, “technical insolvency” occurs when one-third of a company’s capital is lost as a result of their losses, increasing bankruptcy pressure on financial management. Moreover, it causes other difficulties such as losing legal grounds for increasing capital or carrying out various structuring plans such as mergers and spinoffs. Accordingly, it is crucial for companies to resolve technical insolvency. There are alternatives for overcoming technical insolvency problems, but each alternative also has disadvantages that need to be carefully taken into consideration.

Chapter 12 introduces the analysis of the Analytical Balance Sheet of the Central Bank of the Republic of Turkey from 2000 - 2009 in terms of crises. First, the sub items of the Analytical Balance Sheet are explained; second, the economic crises of Turkey during 2000-2009 is mentioned; finally, the effects of these crises on the CBRT’s Analytical Balance Sheet, changes in monetary aggregates, which are Currency Issued, Reserve Money, Monetary Base, and Central Bank’s Money, and in this context structure of the monetary policy of the CBRT in this period, are analyzed.

Chapter 13 evaluates financial relations between US and China from a post-2008 crisis point of view. Despite growing global concerns regarding the reliability of the American economy in general and the Dollar as a Negotiated Currency in particular, US-shaped regime of international finance will survive the present difficulties. This is mainly due to the fact that China would be predisposed to maintain its backing of the US Dollar, not to harm it, because it staked a massive economic and political capital in that. Beijing has so far persisted in assisting the global value of the US Dollar (sacrificing considerable
sums of economic return), which is an apt move to beef up the American domestic market with the intention of keeping Chinese factories busy at all times.

Chapter 14 reviews non-occurrence of the banking crises in India unlike those in the mature economies of Germany, Japan, Norway, Spain, UK, and USA, and evaluates whether the banks in India are suitable for the Basel III. The chapter includes (1) the relationship between credit risk premium on loans and risk free rates, (2) credit rating migration during economic slowdown, (3) the fall-out of maturity-mismatch between assets and liabilities on basis risk and yield curve risk, and (4) the level of preparation of Indian banks for Basel III implementation in terms of enhanced requirements of capital.

Chapter 15 discusses the financial soundness of ISE-30 companies in terms of the “capital-liabilities ratios” performance measure.

The third section, titled “Analytical Views of the Financial Crisis,” introduces the financial crisis and its reflections from an analytical point of view.

Chapter 16 introduces a method of price discovery based on established price discovery techniques for credit risk in three financial markets: equity, debt, and credit derivative. This chapter is motivated by the development of credit-related instruments and signals of stock price movements of South-Eastern European countries—Bulgaria, Croatia, Greece, Hungary, Romania, Slovenia, Slovakia, and Turkey—during the recent financial crisis. In this study, the dynamics of fiscal risk or country risk measured by sovereign Credit Default Swap (CDS), liquidity risk measured bond markets, and stock markets for the monthly based September 2008 – February 2011 period are evaluated. The study examines monthly data observing 38 months and 8 countries. A panel vector autoregression model is proposed for changes in Long-Term Interest Rate (LTIR), changes in CDS spreads (CDS), and changes in stock index. In conclusion, CDS markets and stock markets are more significant than bond markets in explaining the post-crisis relationship among developing South-Eastern European countries.

Chapter 17 aims to examine the impact of index-based warrant trading on the volatility of the underlying ISE-30 index during the post-crisis period of 2009-2011. The study employs a Generalized Autoregressive Conditional Heteroskedasticity (GARCH) approach. In order to scrutinize the influence of index warrant trading on the volatility, two GARCH (1,1) models are specified: one includes the volume of index warrants in the conditional mean equation and the other includes a dummy variable in the conditional variance equation.

Chapter 18 analyses assertions, such as the overreaction hypothesis, by measuring the impacts of the crises on the Istanbul Stock Exchange (ISE) over the last decade. The duration of the crises and weekly negative abnormal percentage returns in the period of 01.01.2000-31.12.2011 are analyzed using a regression model. This study offers empirical observations that are useful for technical analysts and stock investors.

Chapter 19 investigates crisis effects on the capital structure determinants for manufacturing companies listed on the Istanbul Stock Exchange Market (ISE) in Turkey for the period 2005-2010. This period was divided into two parts: The period of 2005-2007 was used as pre-crisis period and the period of 2008-2010 was used as a crisis period. The periods were compared to understand crisis effect on the capital structure determinants. The panel data analysis is used for this study.

Chapter 20 evaluates the impact of the global crisis upon the export performance of the Turkish ceramics sector. To this end, this study seeks to measure the export performance of the ceramics factories, ranked among the largest 1,000 industrial firms in 2009, and to offer some recommendations for improvement in the industrial production. Data Envelopment Analysis (DEA) has been used in the identification of the effectiveness in the exports by ceramics companies. The study, which relies on 8
firms as decision units, comprises of 3 inputs (net actives, number of workers, and amount of production) and one output (export).

Chapter 21 reviews the reflections of the recent global crisis on the tourism sector. In the first part of the study, the effects of the global crisis on the tourism sector in the world and Turkey have been examined. The latter parts of the research constitute of the evaluations regarding the effects of the global crisis on the Fairy Chimneys Area in the Cappadocia Tourism Region, and the hotels, motels, and souvenir shops there. Cappadocia was chosen as the research area since it is an important tourism attraction at both national and international levels.

It can be seen that identification, detection, and prevention of financial crises have a very large implementation domain. Furthermore, new generation analytical approaches are a good starting point for the accuracy of identification, detection, and prevention of financial crises. Therefore, this book will trigger new research domains in statistical data analysis, business intelligence, information technologies, finance, banking, economics, energy, governance, etc., and their intersections. It is intended that this book will be a primary reference in all areas, which deal with financial crises.

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