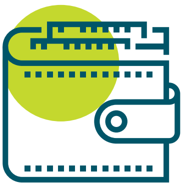
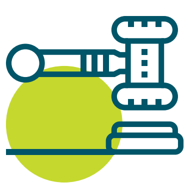
FOURTH EDITION

MANAGEMENT OF BANKING AND FINANCIAL SERVICES





Padmalatha Suresh
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Pearson

MANAGEMENT OF BANKING AND FINANCIAL SERVICES

FOURTH EDITION

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FOREWORD

Mrs. Padmalatha Suresh and Dr Justin Paul have written an extremely useful book on banking. Banking industry has undergone far-reaching changes in the recent period as a result of the banking reforms initiated in 1991–92. Among other things, banking reforms focused on the deregulation of the interest rate structure, introduction of prudential norms and imparting greater competition by allowing new banks and by permitting private participation up to a limit in public sector banks. Even as banks are required to fulfill certain socio-economic goals, they have to remain viable and efficient.

The introduction of the various measures which formed part of the banking sector reforms has had an impact on the way banks perform their functions. Conformity to the new prudential norms requires that banks manage their liabilities and assets in ways different from those practiced earlier. With the deregulation of the interest rate structure, banks have to pay attention to the interest rate risk besides the usual credit risk. The change in the exchange rate regime calls for banks to pay attention to exchange rate risk. These and many other problems have been dealt with lucidly by the authors in this book. The authors are eminently suited to write a book of this type. They have an excellent academic background. They also have the practical experience of dealing with banking issues at various levels. The book fulfills a need and I am sure it will be welcomed by students of banking as well as executives in the banking industry.

(C. Rangarajan)
Chairman
Economic Advisory Council to the
Prime Minister
and
Former Governor
Reserve Bank of India

PREFACE TO THE FOURTH EDITION

"It was a bright cold day in April, and the clocks were striking thirteen."
[The opening sentence in George Orwell, "1984", published 1949]

The winds of change, if anything, have only become stronger over the financial landscape since our third edition. Beginning with the credit crisis in 2007, then the sovereign crisis, and now there is more change in the form of disruptive innovations revolutionizing global banking and financial services. The clocks could soon start striking thirteen!

"Banks, regulators, governments, and the entire global financial system are still finding ways to deal with the aftershocks of the crisis, and to avert new ones in future." This sentence from the second edition was still valid at the time of the third edition. Now in our fourth edition, it seems that the credit and sovereign crisis of yesteryears pale in comparison with the existential problem facing the global financial system.

What's New

The fourth edition in its introductory chapter deals with the future of the banking industry in the context of the global financial and economic crisis that has taken its toll on sovereign powers. It has updated chapters on advanced topics on 'credit risk management' that discusses various models of credit risk measurement and management. 'Risk management', of course, occupies centre-stage, and risks faced by the banking industry from its investment (market risk), solvency (capital), interest rate volatility and adequate liquidity have to be measured and managed. All the chapters have been rigorously updated and revamped to help users of the book understand how these risks can be managed.

How the book has been organized

With risk management in sharp focus, the book is reorganized to enable the modern banker, academician or student to recognize risks in banking and financial services, and take decisions to achieve the most favourable risk-return trade-offs.

The book is divided into 2 major sections – 'Management of Banks' and 'Management of Financial Services'. Chapter 1 is an introduction to the changing dynamics of one of the most regulated industries in the world. Chapters 2 to 12 examine various facets of managerial and risk management aspects of banking in detail. The remaining chapters 13 to 22 deal with management of financial services that banks offer. Relevant description of financial markets, co-banking institutions and legal and regulatory reforms impacting banking and financial services have been elaborated upon.

New features in this edition

- Chapters related to banking, where many reforms have been carried out, have been substantially updated and revised.
- New portions in chapters have been added to address contemporary issues in the industry.
- Almost every chapter contains a case study and live examples. The case studies are followed by questions to explore further.
- The questions at the end of most chapters range from simple 'True' or 'False' questions to numerical problems to enable better understanding of the concepts.
- Additional problems and research questions have been added to many chapters to provide students the opportunity to work with data and circumstances that would help them understand basic concepts better.
- Detailed web references have been provided to enable deeper researching of the topics.
- More topics have been included for possible research by interested students.
- A notable feature of this book is that the topics presented in this book would be found in advanced textbooks on banking and finance. However, the explanations and illustrations are aimed at those with no basic knowledge of both banking and financial concepts. Most concepts are explained in simple terms with the aid of diagrams, figures and simple worked out examples. The technical details/advanced concepts related to each chapter are provided as annexures.

In short, the book, written by practitioners turned consultants/academicians, uniquely focuses on managerial issues in the banking and financial services industry. The book offers something unique for various types of target audiences. For those seeking knowledge of banking and financial services, the book explains basic concepts underlying key banking activities in very simple terms, and demonstrates how banks make financial decisions. For practitioners, the book enables building a sound conceptual foundation that will help them evaluate the overall organizational impact of decisions in their

area of expertise, as well as provides tips to trade off between risk and return. Additionally, the book provides the big picture for managing the entire organization, since each chapter in the book is based on a strategic function of the bank, and addresses the basic concepts and application of these concepts in modern day management of banking and financial services. It is also interesting that the section on 'basic concepts' (presented as Section I) of each chapter has not undergone much change. This only goes to show that basic concepts of financial management and objectives of the banking and financial services industry have not changed. What do change are the applications of the basic concepts and their evolution to suit the environment in which they operate.

Padmalatha Suresh

Justin Paul

OVERVIEW

Banking and financial services have been written about, debated and discussed so much over the years that one would wonder what unique contribution another book would have to make to the subject. A few years ago, even we would have found another book on this subject unnecessary. However, after teaching the subject for over six years at various management schools, we found that we could make a valuable contribution to the existing presentation of the subject by bringing together a distinctive conceptual and managerial flavor to understanding this dynamic industry. Our long years as practitioners in the industry also helped us tremendously in this venture.

Today, the winds of change are sweeping through the landscape of the banking and financial services in the country. The industry is simultaneously consolidating and diversifying in an increasingly deregulated environment. Multiple pressures fuelled by rapid globalization, competition nurtured by customer awareness and expectations of the highest levels of service aided by sophisticated tools and techniques of analysis, threats of security invasion and fraud in an era dominated by technology, demands for transparency and the regulators' overdrive to capital efficiency or asset quality, and the complexity of issues in managing financial institutions have grown exponentially. These issues have been addressed in this book.

This book is divided into six parts. Part I provides an overview of the environment in the banking and financial services sector. Part II describes the banking structure, dealing extensively with analysing banks' financial statements, sources and uses of bank funds, with a comprehensive coverage of the leading function. Part III details risk management in banks—credit risk, market risk, capital adequacy and risk measurement techniques. Part IV introduces international banking, while Part V deals with some contemporary issues in bank management such as high-tech banking, cash management and consolidation of the financial sector through mergers and acquisitions. Part VI and the appendices contain useful pedagogical tools—case studies and multiple-choice questions. This book is also special in that each chapter has sections on basic concepts and the application of these concepts in banking practice. An instructor's tool kit for teaching each chapter is also available on the Web site.

Through this book, we aspire to provide valuable takeaways for all segments of readers: for practitioners, the book will help evaluate the overall impact of their decisions on the organization as a whole, as also the critical trade-offs between risk and return; students will find the book useful to build a conceptual and practice-oriented foundation at one go; academics would find the book a useful reference guide.

We express our heartfelt gratitude to the Pearson Education team, without whom the book would have remained a dream.

Justin Paul

Padmalatha Suresh

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I would like to thank my parents, Mr Balakrishnan and Mrs Meenakshi, for instilling the right values and providing me the opportunities; my Guru, Shri Kamakshi Baba, whose grace has guided this work; my husband, Suresh S. and my children, Anagha and Abhinav, for their unswerving and enthusiastic support; all my teachers—at school, college and IIM Ahmedabad—who opened the gateway to acquiring knowledge; and the versatile veterans under whom I learnt banking in practice. My humble gratitude to Dr C. Rangarajan, whose foreword to the first edition of this book placed me on cloud nine, and Dr A. H. Kalro, whose invitation to teach banking at IIM Kozhikode helped me begin this wonderful journey.

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—Padmalatha Suresh

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V. S. R. Moorthy (Former GM, Union Bank)
S. Harikumar (Oriental Bank of Commerce)
Jeomoan Kuriaon (Wells Fargo Bank)

—Justin Paul

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She is an independent finance consultant and Director, DMS Financial Services Pvt. Ltd, a firm specializing in strategic financial consultancy, outsourcing of financial services, and corporate training in the finance area. She is a visiting/adjunct professor of finance at several Indian Institutes of Management and other reputed B-Schools, where she teaches the courses on Bank management and Project financing. She also teaches at executive and management development programs.

She has edited a professional reference book titled *Project Finance: Concepts and Applications.*

Her several articles on banking and infrastructure financing have been published in popular business dailies, magazines, and refereed journals in India and abroad. Her views/interviews on banking and infrastructure financing issues have been published in leading business magazines. She has been on the Advisory Boards for start-up B Schools and magazines relating to infrastructure management.

Professor **Justin Paul** is known as an author/co-author of eight text books. He is also an author of four Ivey-Harvard case studies, which are used in classrooms worldwide. He is currently the youngest full professor with the graduate school of business University of Puerto Rico, San Juan, PR, USA and a visiting professor with the Deakin University, Melbourne, Australia. He has served as a full time faculty member with the University of Washington and as an Associate Professor with the Nagoya University of Commerce, Japan. Dr Justin is serving as Senior Editor of two international journals, European Journal of International Management and, International Journal of Emerging markets, both published from England. He served as Department Chairperson at Indian Institute of Management (IIM), at age 30 and has been a visiting professor to teach full courses at, Aarhus University, Denmark, Deakin University-Australia, Grenoble Eco le de Management, France, Universite De Versailles, France, Vienna University of Economics & Business, ISM University-Lithuania, SP Jain-Dubai and Warsaw School of Economics-Poland. He has published over 50 research papers in reputed journals during last 5 years. Prior to joining academia, he has served as a bank manager for 2.5 years. His website is www.drjustinpaul.com

CHAPTER ONE

Managing Banking and Financial Services—Current Issues and Future Challenges

CHAPTER STRUCTURE

Section I The Setting
Section II Change is in the air- is the financial system being revolutionised?
Section III The Global Financial system- After the financial crisis
Section IV The Indian Financial System—An Overview
Section V The Indian Banking System—An Overview
Chapter Summary
Test Your Understanding
Topics for Further Discussion
Annexures I, II, III

KEY TAKEAWAYS FROM THE CHAPTER

- Understand the present state of the global financial system and the disruptive changes.
- Understand the basic causes behind the global financial crisis of 2007.
- Learn how macro economic factors can affect financial stability.
- Learn how financial stability can be achieved through better regulation.
- Understand how the Indian financial system is organized.
- Understand the various types and characteristics of financial markets.
- Learn about the evolution of the Indian financial system.
- Understand the impact of the financial sector reforms.
- Take a look at the future challenges in the global and Indian financial systems.

SECTION I

THE SETTING

"It is no exaggeration to say that we are in the midst of a defining moment for innovation in financial services. Some expect that new technology will cause a complete disruption of traditional financial institutions, giving businesses and households access to more convenient and customized services. Entrepreneurs are also finding applications well beyond finance, and these new technologies could transform other fields, such as humanitarian aid."

Remarks by Ms Carolyn Wilkins, Senior Deputy Governor of the Bank of Canada, at Payments Canada, Calgary, Alberta, 17 June 2016.

"Digital currencies, and especially those which have an embedded decentralised payment mechanism based on the use of a distributed ledger, are an innovation that could have a range of impacts on various aspects of financial markets and the wider economy. These impacts could include potential disruption to business models and systems, as well as facilitating new economic interactions and linkages"

Introductory paragraph to the report by Committee on Payments and Market infrastructures, titled "Digital currencies" , published by the Bank for International Settlements in November 2015.

"Financial institutions are increasingly at risk of losing business to fintech innovators, with 67 per cent already feeling the heat, says a PwC study."

News article, The Economic times, dated 7th april 2017.

"Banks should be monitoring innovations from five types of players: business-model disruptors, process innovators, technology start-ups outside the financial sector, digital banks, and platform attackers from other industries, such as e-tailing. Some of these innovations might radically reinvent banking; many can improve how banks currently do business."

Gergely Bacso, Miklos Dietz, and Miklos Radnai, "Decoding financial-technology innovation," Mckinsey Quarterly, June 2015.

"In order to make more informed financial decisions, investors, lenders, and insurance underwriters need to understand how climate-related risks and opportunities are likely to impact an organization's future financial position as reflected in its income statement, cash flow statement, and balance sheet……."

The Financial Stability Board (FSB) Task Force on Climate-related Financial Disclosures, Final report "Recommendations of the Task Force Climate-related Financial Disclosures", delivered at the G20 Hamburg Summit in July 2017.

Welcome to the new future of Banking……

SECTION II

CHANGE IS IN THE AIR….IS THE FINANCIAL SYSTEM BEING REVOLUTIONISED?

Fintech[1]

Fintech is the term used to refer to technological innovations in financial services. It has been creating a lot of excitement – going by searches on Google – that have been reported to have soared more than 30 times in the last half decade!

In many cases, financial innovations are seen to be interesting twists on existing technologies and business models. They promise to lower costs, improve services and broaden access. Peer-to-peer lending is one example (Please refer to Chapter 6 for details). As the world has already seen with the taxi and hotel industries, peer-to-peer services challenge traditional intermediaries.

This new paradigm may change the fundamental relationship existing financial institutions enjoy with their customers. Present regulations may need to tackle issues relating to consumer protection, market integrity, money laundering and terrorism financing, and their implications for financial stability.

Completely new technologies such as the Distributed Ledger Technology (DLT) have the potential to replace entire transaction systems, including core payment systems. New products are being offered in the form of smart contracts – agreements in computer code that do not need human intervention to be executed.
In this new technological environment, regulators could face issues related to governance, legal environments and financial stability as well.

Digital currencies[2]

Money – the traditional understanding

Money denominated in a particular currency (money in a traditional sense) includes money in a physical format (notes and coins, usually with legal tender status) and different types of electronic representations of money, such as central bank money (deposits in the central bank that can be used for payments) or commercial bank money.

E money

Electronic money (e-money) is value stored electronically in a device such as a chip card or a hard drive in a personal computer and is also commonly used around the world. Some countries have developed specific legislation regulating e-money.

Digital currency

Hundreds of digital currency schemes based on distributed ledgers (see above) currently exist, are in development or have been introduced and have subsequently disappeared. These schemes share several key features, which distinguish them from traditional e-money schemes.

Assets – such as Bitcoins (see below – The Bitcoin phenomenon)

They have some monetary characteristics, such as being used as a payment mechanism

- They are not connected to a sovereign currency.
- They are not backed by any authority such as a central bank, and hence are not a liability of any authority (see Chapter 2 for Central Bank operations).
- They derive value from the belief that they can be exchanged for other goods and services or a certain amount of sovereign currency at a later point in time. Hence they have zero intrinsic value.
- The transfer of these currencies is through a built in distributed ledger. The mechanism allows remote peer-to-peer exchanges of electronic value in the absence of trust between the parties and without the need for intermediaries. Typically, a payer stores in a digital wallet his/her cryptographic keys that give him/her access to the value. The payer then uses these keys to initiate a transaction that transfers a specific amount of value to the payee. That transaction then goes through a confirmation process that validates the transaction and adds it to a unified ledger of which many copies are distributed across the peer-to-peer network.
- The institutions that are actively developing and operating these schemes are non banks.

Figure 1.1 illustrates the separation between the two basic aspects of digital currency schemes (the asset side and the decentralised exchange mechanism based on a distributed ledger), and aims to provide a framework to help explain where e-money and digital currencies could be placed in relation to other types of money.

The Bitcoin phenomenon

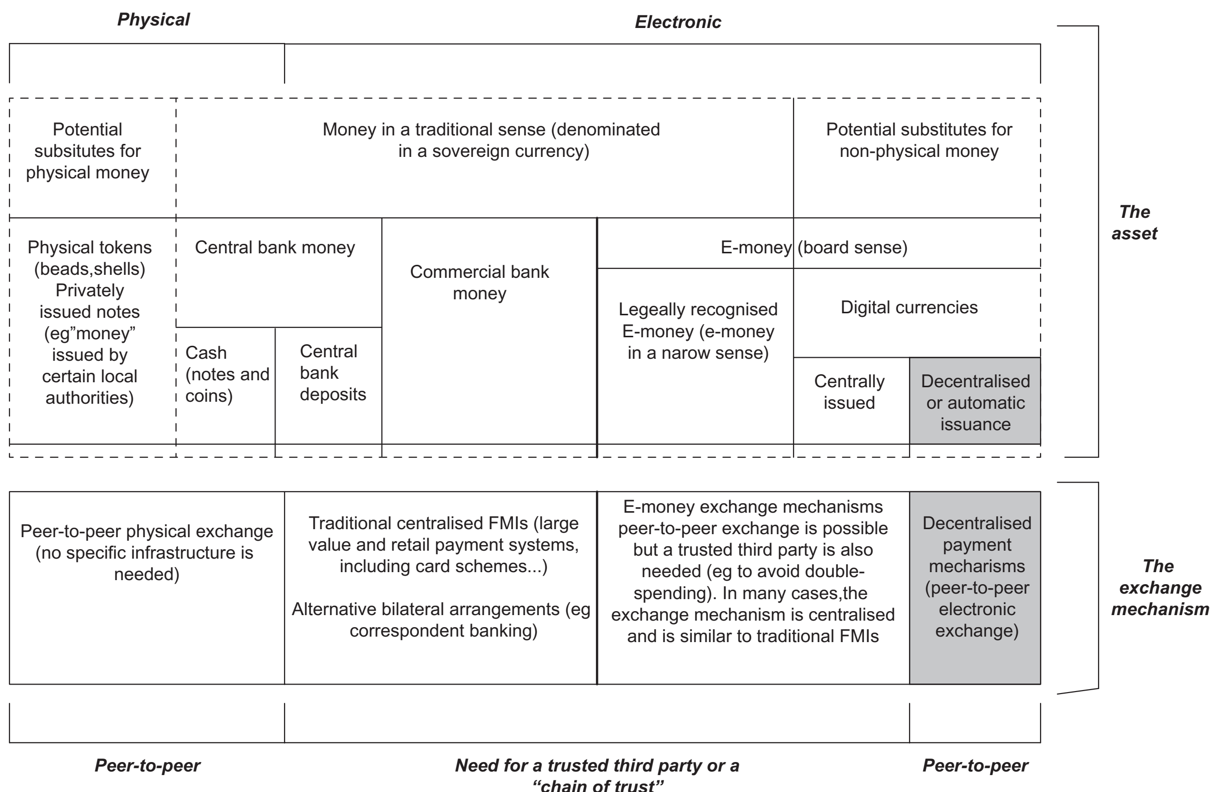
The original concept paper behind Bitcoins, a decentralized electronic cash system using peer-to-peer networking to enable payments between individual parties was presented in 2008 by Satoshi Nakamoto in "Bitcoin: A peer to peer electronic cash system".

Figure 1.2 shows how a typical Bitcoin transaction works.

Climate change and financial system[3]

One of the most significant but most misunderstood, and underrated risks that the world and its organizations face today relates to climate change. To stem the disastrous effects of climate change, nearly 200 countries agreed in December 2015 to accelerate the transition to a low carbon economy. Since such a transition requires considerable and even disruptive changes across economic sectors, financial policy makers have been exploring the implications for the global financial system. The negative implications could include financial dislocations and sudden

FIGURE 1.1 FORMS OF MONEY AND EXCHANGE MECHANISMS



Source: Report by Committee on Payments and Market infrastructures, titled "Digital currencies" , published by the Bank for International Settlements in November 2015, Figure 1, page 6, accessed at www.bis.org

FIGURE 1.2 A BITCOIN TRANSACTION – THE STEPS

How the transaction works

S – the seller of goods – accepts Bitcoins as payment

B- the buyer of goods – has Bitcoins and wants to buy from S

S and B both have Bitcoin "wallets" on their computers

- "Wallets" are files that provide access to multiple Bitcoin addresses
- An "Address"is a string of letters and numbers. Each address has its own balance of Bitcoins. Any number of new addresses can be generated. Every new transaction can have a different address. This ensures total anonymity

S creates a new address for B to make payment

- Creating a new address is done by generating a "cryptographic key pair" - a "public key"(known to anyone) and a "private key"(known only to S).
- The message will be signed by private key and verified using the matching public key
- The new address created for B is stored in a wallet

B inputs address of S into her computer for payment

- B's wallet has a private key for each address. The computer (Bitcoin client) signs the request for the payment transaction with private key
- Anyone on the network can verify the transaction using the public key
- Verification is done to establish legitimacy of the account and transaction

The transaction is verified by by Bitcoin "miners" by creating a "cryptographic hash function"

losses in asset values. Against this background, the G20 Finance Ministers and Central Bank Governors asked the Financial Stability Board to review how the financial sector can take account of climate related issues.

The Task Force set up for this purpose made its final recommendations in July 2017. These recommendations apply to financial sector organizations, including banks (lending activity), insurance companies (underwriting activity), asset managers (asset management such as Mutual funds) and asset owners (such as public and private sector pension plans, endowments and investment foundations).

The Task force has stated that the disclosures by the financial sector could foster an early assessment of climate related risks and opportunities, improve pricing of climate related risks, and lead to more informed capital allocation decisions.

The implementation plan spans a five year horizon reform.

SECTION III

THE GLOBAL FINANCIAL SYSTEM – AFTER THE FINANCIAL CRISIS

It has been about a decade since the Global Financial Crisis (GFC) of 2007-08.

The Bank for International Settlements (BIS), in its 87th Annual Report, 2016-17, has looked back at satisfaction at the past one year, where the global economy has strengthened further. The salient points from the extensive discussions in the Annual Report are summarised in the following paragraphs.

The BIS report points out that growth has approached long-term averages, unemployment rates have fallen towards pre-crisis levels and inflation rates have edged closer to central bank objectives. It also looks to the near term future with optimism. However, the report examines four risks that could threaten the sustainability of the expansion in the medium term: a rise in inflation; financial stress as financial cycles mature; weaker consumption and investment, mainly under the weight of debt; and a rise in protectionism.

However, global response is vital in key areas –ranging from broad principles to common standards. The five key areas identified by BIS are: prudential standards, crisis management mechanisms, trade, taxation and monetary policy.

A first priority is to finalise the financial (prudential) reforms under way. Among the reforms, completing the agreement on minimum capital and liquidity standards – Basel III – is especially important, given the role banks play in the financial system. The task is to achieve agreement without, in the process, diluting the standards. There is ample empirical evidence indicating that stronger institutions can lend more and are better able to support the economy in difficult times. A sound international agreement, supported by additional measures at the national level, combined with the deployment of effective macroprudential frameworks, would also reduce the incentive to roll back financial integration. *The Basel agreements are explained in detail Chapter 11 of this book.*

A second priority is to ensure that adequate crisis management mechanisms are in place. Regardless of the strength of preventive measures, international financial stress cannot be ruled out. A critical element is the ability to provide liquidity to contain the propagation of strains. The intermediation of global currencies, especially the dollar, also creates close linkages between globally active banks. The Global Financial Crisis demonstrated how such interconnectedness propagated funding stress between the world's largest banks and forced them to deleverage internationally. Thus, the regulatory reforms in the aftermath of the GFC have focused on strengthening the resilience of international banks that are the backbone of global financial intermediation. *Liquidity risk management and its relationship with other risks is explained in Chapter 12 of this book*.

Another overarching priority would be to further the room for greater monetary policy cooperation that would help limit the disruptive build-up and unwinding of financial imbalances. *A detailed explanation on Monetary Policy is contained in Chapter 2 of this book.*

The Annual Report also recognizes the increasing role of technology and non bank players in the management of banks globally.

Another paper from BIS [4] categorizes financial crises into banking, currency and sovereign debt crises. Recent research shows that during the period 1970 – 2011, currency crises occurred most frequently (218), followed by banking crises (147) and sovereign debt crises (66).

Since the first quarter of 2010, sovereign debt tensions and their impact on banks and economies have dominated. Sovereign debt crises have been more pronounced in the euro area. How is sovereign risk related to the banking and currency crises? Box 1.1 explains.

BOX 1.1 THE BANKING CRISIS–SOVEREIGN CRISIS NEXUS EXPLAINED

The recent global financial crisis and the consequent deepening of the euro debt crisis clearly indicate the interdependencies between banks and sovereign risk. Several research studies have found a link between the fiscal and financial distress. Discussing the transmission channels during the fiscal and financial turmoil, Reinhart and Rogoff (2011) present a set of four stylized facts. First, private and public debt booms ahead of banking crises. Second, banking crises, both home-grown and imported, usually accompany or lead sovereign debt crises. Third, public borrowing increases sharply ahead of sovereign debt crises; moreover, it turns out that the government has additional 'hidden debts' (domestic public debt and contingent private debt). Fourth, the composition of debt shifts towards the short term before both debt and banking crises. Further, a default may take place if the financial crisis ignites a currency crash that impairs the sovereign's ability to repay foreign currency debt.

The bailout of banks by their respective countries during the recent global financial crisis has led to a shift of credit risk from the financial sector to national governments and led to an increase in sovereign risk (Acharya, *et al*, 2010).

However, historically, the transmission of distress has often moved from sovereign to banks with sovereign defaults triggering bank crises (Caprio and Honahan 2008). The anaemic economic growth combined with high debt-to-GDP ratio has led to frequent downgrades of the sovereign ratings of euro area [Greece, Ireland, Italy, Portugal and Spain (GIIPS)] countries by credit rating agencies. With an increase in sovereign debt risk, banks were also affected as they were the major holders of sovereign bonds.

There are multiple channels through which the increase in sovereign risk feeds into the banks' funding costs: (i) losses on holdings of government debt weaken banks' balance sheets, increasing their riskiness and making funding more costly and difficult to obtain; (ii) higher sovereign risk reduces the value of the collateral which banks can use to raise wholesale funding and central bank liquidity; (iii) sovereign downgrades generally flow through to lower ratings for domestic banks, increasing their wholesale funding costs and potentially impairing their market access; and (iv) a weakening of the sovereign reduces the funding benefits that banks derive from implicit and explicit government guarantees (CGFS-BIS 2011).

The interdependency between the sovereign and their banks can be clearly seen for euro area GIIPS countries, as both sovereign and bank risk (largest bank in the respective country), as measured by CDS spreads, tend to move together during the crisis.

The sovereign and banking stress increased as investors' concerns about the political situation in Greece and the implications of the difficulties experienced by the Spanish banking system were compounded by a perceived lack of cohesion among governments in upgrading the crisis management mechanisms in the euro area.

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Source: Extract from RBI, Report on Trend and Progress of Banking in India 2011–12, Box II.2, pages 18, 19. The charts in this box have not been reproduced here.

A Rewind to the Financial Crisis of 2007–08

No discourse on 'banks', and more so, 'managing banks', can begin without reference to the credit market turmoil of 2007. The global crisis spared no country—developed or developing. With many countries' financial systems having grappled with the after-shocks of what began as a sub-prime lending crisis in the United States, it comes as no surprise that voluminous literature already exists on the causes of and lessons from the crisis, as well as remedial action taken by governments and regulators in various countries.

We will discuss the events that led to the crisis in detail elsewhere in this book. However, what is more important is the way forward. The financial system is the lifeline of any economy. It is therefore only natural that the 'future' of banking is hotly debated topic at not only banking forums but also at every congregation of professionals from various walks of life.

The term 'paradigm shift' is now being applied to banking as well. The question is—what does this 'shift' constitute? Will it mean jettisoning the old model of banking and adopting a completely new one? Or, would it signify fine tuning existing banking practices so that 'crisis management' is strengthened through effective anticipation and preventive action?

The Causes of the Crisis

Several arguments/theories/events have been cited as the causes of the 2007 crisis. But, there seems to be consensus on one possible over arching cause—lack of adequate attention from monetary authorities and regulators to certain factors that were shaping the global financial system when the crisis happened. Three groups of mutually reinforcing factors were then contributing to increased 'systemic' risk. They were as follows:

- Lower interest rates caused by worldwide macroeconomic imbalances over the last decade, inducing heightened risk taking and contributing to extremely high asset prices—the asset price 'bubble'.
- Changing structure of the financial sector and rapid pace of financial innovation over the last two decades, and the failure of 'risk management' to match up to the new demands.
- Failure to adequately regulate highly leveraged financial institutions.

Prevalent models of banking

The aftermath of the global financial crisis ushered in the consequent need for a fresh assessment of the financial and banking sectors, including institutional and regulatory structures. In addition, changes in regulatory requirements and approach envisaged by Basel III, requiring increased analytic and risk assessment capacity in banks, necessitated a fresh look at the desired and optimal contours of a dynamic banking sector.

The broad functions and objectives of the banking structure are more or less similar across countries. However, globally, there are different models of banking structures, different ownership patterns, and different emphasis on size of the banks. Country-level studies show that small, regional and local banks may perform very differently from large banks.

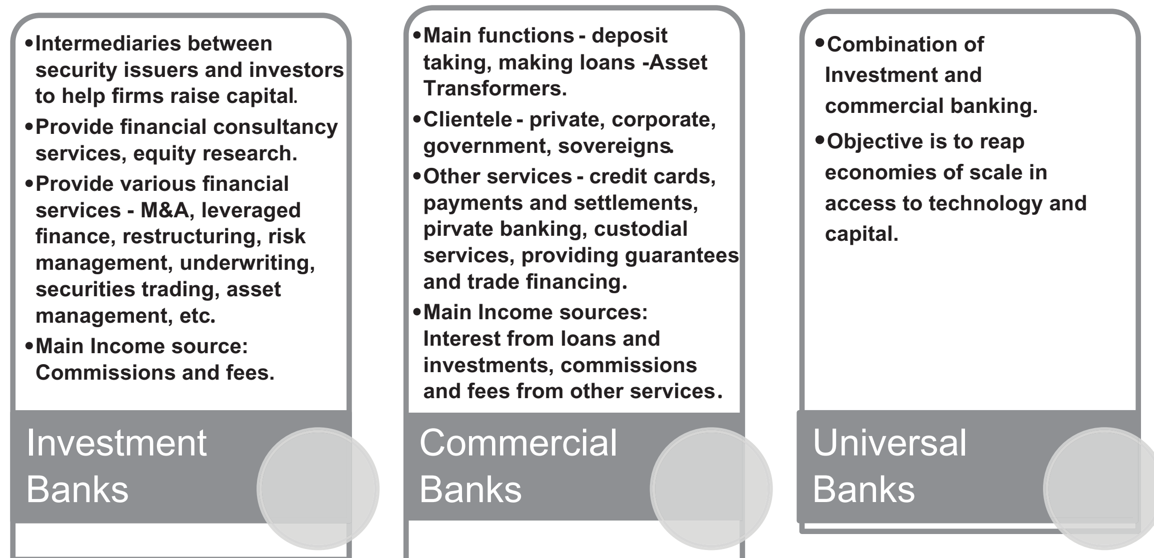
The theoretical debate on how much banks and the financial system should be regulated is voluminous and continuing. However, the necessity of regulating the financial system and banks in particular is universally accepted on financial stability and consumer protection concerns. In fact from the lessons of the current crisis, the regulatory and accounting framework for banks has become more stringent, as we would learn in subsequent chapters.

Investment banks, Commercial banks and Universal banks – What is the difference?

There are basically two pure models of banking: commercial banking and investment banking. Universal banking represents a combination of the two banking models in varying proportions. Thus there are commercial banking oriented Universal banks (Bank of America, Citi Group, HSBC, etc.) and Investment banking oriented Universal banks (Barclays, BNP Paribas, UBS, Deutsche Bank).

Figure 1.3 makes a comparison between Investment Banks, Commercial Banks and Universal Banks.

FIGURE 1.3 INVESTMENT BANKS, COMMERCIAL BANKS AND UNIVERSAL BANKS- A COMPARISON



With the demise of investment banks in the wake of the crisis, the universal banking model remains the dominant model. However the model is not without its risks. The potential systemic risks of the model is being addressed by the Basel III framework through enhanced regulatory framework, pro-active and intensive supervision and efficient resolution framework, enhanced transparency and disclosure and strengthened market infrastructure. In addition, there are proposals for structural reforms – Dodd-Frank Act (under implementation in USA), proposals in Vickers Report (UK) and Liikanen Report (Euro zone) – under consideration for implementation. These regulatory frameworks are discussed in later chapters.

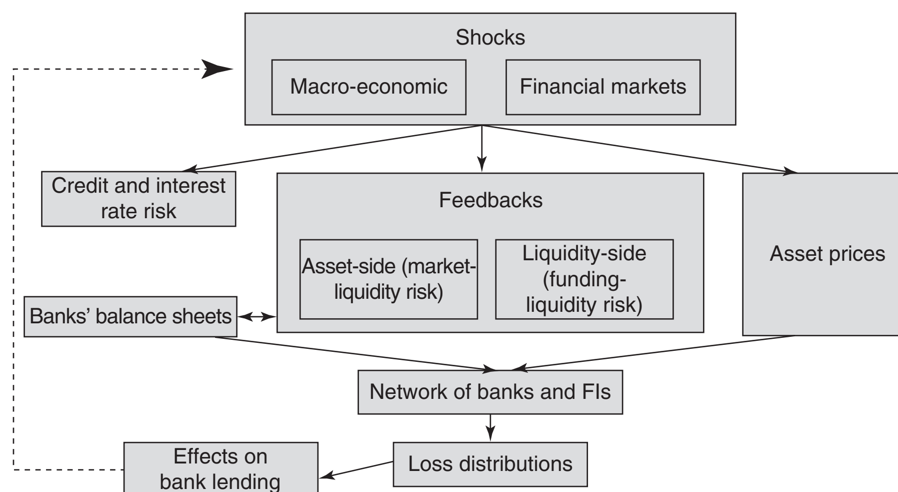
Macroeconomic and Financial Stability—Understanding the Linkages

Studies of economic cycles show that 'booms' and 'busts' are typical of market-driven systems. 'Depressions', 'recessions' and 'market crashes' have all happened and passed into history, leaving behind painful memories, case studies and vital practical lessons to be learnt.

How are a country's macroeconomic developments and financial stability related? Figure 1.4[5] depicts the linkages between shocks in the real sectors of the economy and the financial sector.

Let us understand the figure using the example of the global crisis of 2007. The shock to the US economy began as an asset bubble in the real estate (housing) sector, caused by banks lending to sub-prime (less than credit-worthy) borrowers.[6] The delinquency of such borrowers led to credit and interest rate risk[7] for banks involved in the lending. Since many of these banks, by this time, had 'securitized' the loans[8] and transferred the risks to other banks/entities, and the underlying asset prices had fallen drastically, liquidity in the market dried up. Funding available in the market also dwindled, partly because there was no liquidity and, also due to banks being wary of lending to other borrowers/banks which needed funding.[9] The high degree of interlinkages in the various markets led to a rapid transmission of the crisis from one segment to other segments. Ultimately, many banks 'and other institutions' balance sheets[10] were affected. Taken together, the combined effect of various risks reflected in the aggregate loss distribution, which can be mapped back to the adverse impact on bank lending and the economy. In this case, since several banks and other institutions around the world were involved as 'buyers' or 'insurers' or 'traders' of credit risk, a number of other countries' financial systems were adversely affected. Hence, the United States sub-prime mortgage market triggered a credit market crisis at the global level, the depth of whose adverse effects are being estimated even in 2009–2010.

FIGURE 1.4 INTERRELATIONSHIPS BETWEEN MACROECONOMIC DEVELOPMENTS AND FINANCIAL STABILITY



Source: Haldane, Andrew; Hall, Simon and Pezzini, Silvia (2007). A New Approach to Assessing Risks to Financial Stability; Financial Stability, Paper No. 2; www.bankofengland.co.uk

How do we define 'financial stability'? There is no single definition for financial stability (and the term 'systemic risk' which is used in tandem). Hence, the term takes on contextual meaning, signifying smooth functioning of the financial system, both under normal and stressed conditions.[11]

The recent credit crisis, like others before it, has thrown up several issues and challenges for banks and other financial institutions, as well as central banks and regulators. However, all stakeholders agree on one thing—recovery of the global financial system depends on restoration of 'TRUST'.

The Role of 'Trust' in Financial Stability

The global crisis witnessed the crumbling of the very foundation of a sound financial system—TRUST.

There was a 'massive breakdown of trust across the entire financial system—trust in banks and non banks, trust in central banks and other regulators, trust in credit rating agencies, trust in investment advisors, trust in brokers, dealers and traders, and trust in the financial markets, if not in the market system itself'.[12]

The loss of trust, coupled with failure of banking behemoths and lack of transparency, led to great fear and uncertainty. Which were the banks/institutions that could withstand losses? Can the potential losses be estimated with certainty? Were there lurking risks in the system that could explode in the future? Frightening questions—with no reassuring answers—resulted in unprecedented panic. Banks that had liquidity, hoarded it. Banks that did not have liquidity faced doomsday, since they got no help from the distrusting markets. The financial markets nearly went into a deep freeze. Long-standing financial institutions that had appeared rock solid quietly folded up. Lack of trust had almost brought the entire chain of financial intermediation to a standstill.

The Role of Regulation in Ensuring Financial Stability

The G20 Working Group on 'enhancing sound regulation and strengthening transparency' (Working Group I), in its report[13] dated 25 March 2009, has reiterated the paramount importance of robust financial regulation in each country based on effective global standards for financial stability in future. The report has acknowledged the role of regulation as the first line of defence against financial instability. It sums up the cause of the financial crisis: 'In hindsight, policy makers, regulators and supervisors in advanced countries did not act to stem excessive risk taking or to take into account the inter-connectedness of the activities of regulated and non-regulated institutions and markets'.

Experts have identified some of the areas that were given inadequate attention as the following:

a. *The 'perimeter' of regulation*. In deciding which institutions and practices should be regulated and to what extent, the regulators had overlooked that some institutions outside their purview were taking on excessive risks, and that some of these risks were not 'visible' or 'detectable'.
b. *Procyclical practices*. Booms in the economy lead to higher confidence levels both among borrowers and lenders. As a consequence, lenders become lax about credit standards and borrowers turn overconfident about the potential of projects they invest in. When the economy is on the downturn, banks become wary and tighten lending standards and pull back liquidity.
c. *Information gaps about risk and where they were distributed in the financial system*. This happened in the case of financially engineered products, where credit risk transfer was done in a distributed manner. Though the principle of 'structuring' was to transfer risk to those parties who could best bear them, the rapid increase in demand for such high-yielding products led to lower transparency. As a result, most sellers and the buyers of these products lacked adequate understanding of what they were selling or buying, thus exposing themselves to greater risks.
d. *Lack of cross-border information flow and co-operation among regulators in various countries*. There was no harmonization of national regulatory policies and legal frameworks in various countries, even though risks were being transferred across countries.
e. *Provision of liquidity by regulators* in the event of crisis.

It is, therefore, clear that the regulatory framework needs considerable strengthening. The stark lessons from the crisis will ensure that adequate regulation will be receiving significant attention in future.

The Objectives of Financial Regulation

According to an IMF Working Paper,[14] there are two vital objectives of financial regulation, as depicted in Figure 1.5.

We have already seen how the failure of financial institutions can have a wider impact on financial markets and macroeconomic stability. However, even a weak financial system can have adverse effects on economic growth and stability. Individual banks or financial institutions would not be able to assess the overall economic impact of bank level business decisions. Hence, regulation is used to mitigate such systemic risks.