INTRODUCTION TO BANKING

THIRD EDITION

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Pearson

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Third Edition

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To my late father, Antonio. To Martin, Lila, Milan, Monika and to Beth. And to my mum and sister (BC)

To Marc, Matteo and Leonardo. To my parents Nieves and Sandro (CG)

To Delyth, Alun, Catrin, Gareth, Gethin, Lois and Rhiannnon (PM)

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Preface

It is well enough that people of the nation do not understand our banking and monetary system, for if they did, I believe there would be a revolution before tomorrow morning.

Henry Ford

The aim of this textbook is to provide a comprehensive introduction to theoretical and applied issues relating to the global banking industry. Despite the fears of Henry Ford, we do not think reading this book will cause a revolution but we do hope it will at least provide you with an enjoyable and interesting insight into the business of banking.

A major motivation for writing this text has been to fill a gap in the market. For a number of years we have all taught banking courses and we have become aware of students' frustration about the lack of a comprehensive yet accessible textbook that deals with a broad spectrum of introductory banking issues. Most introductory texts that cover banking issues tend to be broad-based, focusing on economics and finance, and these (in our view) do not provide sufficient detail or coverage of the theoretical and institutional detail that is essential for an accurate understanding of critical banking issues. While there are textbooks that provide such coverage targeted at advanced undergraduates and the postgraduate market, there is no text that has comprehensive coverage of such issues for those new to the study of banking. In addition, many textbooks that cover banking as part of broadly based money and banking courses tend to provide only limited attention to international experiences. As such, we have written this text to provide (we hope) an essential teaching and learning resource for anyone who has to lecture introductory undergraduates as well as professional banking courses.

The first edition of this book (2006) described a world where the banking industry experienced marked changes and deregulation allowed banking firms to diversify into broader financial services areas. Commercial banks became full-service financial firms, offering a range of non-traditional financial services including insurance, securities business, pensions and the like. Many banks dropped the word 'Bank' from their titles to emphasise their much broader role in the provision of financial services to households and corporations. In addition, various trends such as industry consolidation, securitisation and disintermediation were having a significant effect resulting in a smaller number of major players operating in credit, capital and money markets business that increasingly overlapped. As banking systems opened up, many institutions were pursuing international strategies thereby changing the traditional focus on banking as a mainly domestic business. This rapidly evolving environment posed both threats and opportunities to bank managers and owners. The former had to be increasingly aware of both domestic and international developments in the management process and in particular of the various risk–return trade-offs in all areas of a bank's activities. Capital needed to be managed effectively, so as to adhere to minimum regulatory requirements and also to generate returns in excess of the cost of capital to boost shareholders returns. The market pressure on banks to generate good returns for shareholders was a key element of bank strategy – bankers were forced to cut costs, boost revenues (mainly through fee and commission income sources) and to manage their capital resources much more efficiently.

This golden era of banking came to an abrupt end in the summer of 2007, when the demise of the US sub-prime mortgage lending market led to financial losses, government bailouts of banks (and other financial institutions), a credit crunch and a prolonged economic recession, mainly in developed countries, ensued. Since the onset of the crisis in 2007, there has been a large body of research investigating its causes and consequences. What had started as trouble in a small segment of the US financial markets became a fully-fledged global financial crisis, following the demise of the US investment bank Lehman Brothers in September 2008. The unfolding of the sub-prime crisis and how it became a financial crisis, and its impact on European countries in the form of a sovereign debt crisis, can be described in various phases or waves that include the: (i) US sub-prime crisis (August 2007 to September 2008); (ii) systemic or global crisis (September 2008 to March 2009); (iii) economic crisis (March 2009 to January 2010); and (iv) the sovereign debt crisis (January 2010 to June 2012). In this textbook, we will refer to the sub-prime crisis period as the 2007 crisis; to the global financial crisis period as the 2008–2009 crisis and to the sovereign debt crisis or eurozone crisis as the period 2010–2012. These crises years have had a tremendous impact on the world of banking and have brought about dramatic changes in the global financial architecture. Against this background of global changes, the second edition (2015) was published.

As the dust has begun to settle on the crises period and the new shape of the world's banking markets has started to take form, we have thoroughly revised this textbook to account for more recent changes. In the decade since the global financial crisis, the banking industry has faced renewed challenges. Increased competition from non-bank financial providers has intensified, as the FinTech industry boomed. The digitalisation of banking is transforming the provision of financial services. Big Tech's entry into financial services has also increased, focusing mostly on the customers' experience.

The coronavirus pandemic also poses challenges for banks, but also shows that they still play a key role in helping the real economy deal with the crisis. The industry has shown resilience and it is in a much better health than it was a decade ago. It has also benefited from extraordinary measures taken by governments to support their economies, including monetary, fiscal and regulatory actions. For example, in the Spring of 2020, the European Central Bank (ECB) introduced a €1,850 billion Pandemic Emergency Purchase Programme of public and private sector assets (PEPP), enhanced its long-term refinancing operations, and kept key interest rates at historically low levels. As countries move towards an exit from the global health crisis, national and international regulators and supervisors are working on potential strategies that will not result in increased systemic risk.

Banks are also grappling with other complex issues, from climate change to green finance opportunities. The attention to environmental, social and governance (ESG) concerns is likely to increase as the global economy recovers from the COVID-19 pandemic, and aspects of sustainability are crucial for banks' business models.

The new edition of this textbook introduces and discusses many of these emerging issues, offering a detailed insight into a fast-changing industry.

The text is organised into five main parts:

- Part 1: Introduction to banking
  - Chapter 1 What is special about banks?
  - Chapter 2 Bank activities and services
  - Chapter 3 Types of banking
  - Chapter 4 International banking
  - Chapter 5 Islamic banking

This part of the text provides an introduction to the nature of financial intermediation, covers the main reasons proposed as to why banks exist, focusing on key issues such as adverse selection, moral hazard and delegated monitoring. It also covers the information production, liquidity transformation and consumption smoothing role of banks as well as various other issues relating to the bank intermediation process. We then go on to provide a detailed account of the main activities and services provided by banks, changes in the payment systems and the growing importance of ethical investments and sustainable banking strategies. As the financial sector in many countries comprises a wide range of different types of banking firms, these are then explained covering commercial banks, mutual banks, investment banks, private banks as well as different forms of banking activity such as universal versus specialist banking. Given the increasing role of banks on the global scene, Chapter 4 looks at the main features of international banking highlighting the reasons as to why banks locate overseas or conduct international activity. We also outline the main services provided by international banks covering payments, credit, money and capital markets activity highlighting the role of the Euromarkets – Eurobonds and Eurocurrency activity – and also syndicated lending. Finally, Chapter 5 provides an introduction to Islamic banking, given the growing importance of Islamic banking and finance in many countries. This chapter is new in this edition of the textbook.

The main aim of Part 1 is to familiarise students with the reasons why banks exist, the main services they offer, recent trends impacting on business areas, types of banking firms and the differences between domestic and international banking business. This part provides the reader with the relevant knowledge of global banking business and should also heighten awareness of contemporary banking issues that put the following parts into context.

- Part 2: Central banking and bank regulation
  - Chapter 6 Central banking
  - Chapter 7 Bank regulation and supervision
  - Chapter 8 Bank failures and banking crises

As the banking system is the main conduit of monetary policy, it is important that students of banking are aware of the main roles of a central bank, its monetary policy role and its other functions. The first chapter of Part 2 deals with the theory of central banking outlining the roles and functions of central banks, as well as the rationale for their existence. We also discuss the conduct of monetary policy, distinguishing between instruments, targets and goals, as well as the benefits of central bank independence. We also cover how central banks conduct monetary policy and the role of banks in this process. Chapter 7 focuses on bank regulation and supervision. We discuss the pivotal role played by banks in the economy to understand the rationale for regulation, outline the aims and objectives of regulation and different types of regulation. We next discuss the elements of the financial safety next as well as the limitations of regulation and the possible reasons behind regulatory failure. In this chapter we also review the causes for regulatory reform and discuss key international policy initiatives, such as the Basel Capital Adequacy Accords. The final chapter of Part 2 focuses on bank failures and banking crises. The impact of the global financial and eurozone crises on the world's banking markets made it all the more relevant to include a detailed discussion of the determinants of bank failure. We then discuss the main strategies used to identify problem banks, with a focus on early warning systems (EWS) for bank soundness and the recently introduced stress tests. We also outline the key issues of bank restructuring and the regulatory toolkits to intervene in the banking sector. Finally, we discuss the causes and consequences of banking and financial crises.

By the end of Part 2 students should be aware of the pivotal role played by monetary policy and supervisory regulation and their impact on the banking sector (and economy as a whole). The reader should be familiar with the rationale for central banking, the main tools and instruments of monetary policy and how various major central banks undertake their operations. Students should be able to identify the reasons as to why banks are so heavily regulated and why having adequate solvency and liquidity is critical to maintain a safe and sound banking system. In particular, readers should understand the important role played by capital in the banking sector as well as the relevance of the Basel Capital Accords. Readers should become aware of the determinants of bank failure as well as the toolkits at regulators' disposal to supervise bank risk-taking. Readers should also become familiar with the causes of banking and financial crises as well as effective crisis-management mechanisms.

- Part 3: Issues in bank management
  - Chapter 9 Banks' balance sheet and income structure
  - Chapter 10 Bank financial management
  - Chapter 11 Banking risks
  - Chapter 12 Bank risk management

Part 3 of the text provides a detailed insight into the financial features of banking firms. The first chapter focuses on the balance sheet and income features of both commercial and investment banks, highlighting the main differences between the two types of institutions. Substantial attention to detail is paid to the components of the financial statements of these types of banks. In addition, we outline the role of traditional ratio analysis for evaluating bank performance and asset quality as well as performance indicators relating to shareholder value creation. Chapter 10 provides a detailed introduction to bank financial management issues, covering asset and liability management, capital management, liquidity management and off-balance-sheet management. The important role played by derivative business is introduced, together with a discussion of loan sales and securitisation. We then go on to discuss the various forms of risks faced by banks (including credit, interest rate, foreign exchange, market, operational, sustainability and other risk types). The final chapter in the part introduces a number of key approaches to bank risk management. It also includes a discussion of the growing importance of banks' corporate governance frameworks in setting the standards of good practice and risk culture within banking organisations.

By the end of Part 3 students should be familiar with the main components of banks' balance sheet and income statements, be aware of off-balance-sheet activity and should be able to analyse bank performance and other issues using traditional ratio analysis. In addition, they should have an insight into how banks manage their on- and off-balance-sheet positions and be familiar with the main risks faced in banking operations. After reading this part, students should be familiar with the main risk management approaches undertaken in banking.

- Part 4: Comparative banking markets
  - Chapter 13 Banking in the UK
  - Chapter 14 Banking in Europe
  - Chapter 15 Banking in the US
  - Chapter 16 Banking in Japan
  - Chapter 17 Banking in emerging markets

Part 4 focuses on the features of various banking systems, highlighting the main institutional features of these systems (types of banks, non-bank deposit firms, role of other financial firms) as well as various structural trends (number of banks, branches, M&A activity, market concentration and such like). We have tried to cover systems that (we hope) will be of interest to as wide an audience as possible covering the UK, Europe, US, Japan and various emerging banking markets. We have paid particular attention to regulatory developments in the wake of the global financial and eurozone crises. The emerging regulatory financial architecture is discussed in detail for the UK, the European Union and the United States. It is interesting to note that similar trends are apparent in most of these systems, namely, a decline in the number of banks, consolidation and concentration, the increased role of foreign banks, the broadening of banks' business into other financial services areas, greater disintermediation and the ongoing and omnipresent role of regulatory change. The final chapter provides a discussion of the relationship between finance and growth, illustrating how a sound and efficient financial system can aid economic development. We also provide a detailed insight into various emerging banking systems which we hope will be of interest and also of practical use for anyone wishing to be aware of banking sector features and developments across the globe. These include a discussion of the main forces of change and how these have influenced the structure of the banking industries in emerging and transition economies in terms of deregulation and the liberalisation process, the role of the state, M&As and the entry of foreign banks.

By the end of Part 4 students should be familiar with the institutional features of the banking/financial systems of the UK, US, Europe, Japan and various emerging markets and transition economies. They should be aware of how the institutional features of the different banking systems are changing and the trends that are common to all systems. A full understanding of these characteristics will provide students with the relevant framework to analyse and discuss the structural and performance features of these (and other) banking systems.

- Part 5: Advanced topics in banking
  - Chapter 18 Banks and markets
  - Chapter 19 Mergers and acquisitions
  - Chapter 20 Bank competition and financial stability

Part 5 focuses on some key issues in banking markets. Specifically, in the first chapter of this part we focus on the bank intermediation process, on the increasing integration of banks and markets and discuss the growth of the 'shadow banking' system. The aim of this chapter is to outline the key linkages between banks and markets with a particular focus on the rise and fall of securitisation. We then move on to explain the main processes involved in issuing mortgage-backed securities (MBS) (and other asset-backed securities, ABS). We note the broad impact of securitisation on bank activities and highlight how it has come under increased regulatory scrutiny. The next chapter in this part focuses on mergers and acquisitions (M&As) in banking markets, providing a classification of the different types of bank mergers as well as a summary of the main reasons as to why banks merge. We outline the trends in bank M&A activity as well as the impact of M&As on bank performance. The final chapter focuses on the possible trade-off between banking sector competition and stability. We provide a comparative analysis of the different measures of competition in banking markets. Next we discuss different indicators of bank risk, including accounting indicators and market-based measures of risk. We then explore the link between competition and risk in banking systems and outline the competition-fragility view (which posits that competition induces increased risk-taking and therefore is detrimental for stability) and the competition-stability view, which argues that competition promotes financial stability.

By the end of Part 5 students should be familiar with some of the current issues in banking and with the academic literature that has sought to investigate these issues empirically.

We have written this text to provide an introductory grounding to the theory and practice of banking which we hope will serve as a useful guide for anyone studying banking subjects at an introductory level and for those who are perhaps considering a career in the banking/financial services industry.

We hope you enjoy reading the text and we encourage correspondence regarding any omissions or any recommendations regarding improvement of the content.

Barbara Casu (Bayes Business School, City, University of London)
Claudia Girardone (Essex Business School, University of Essex)
Philip Molyneux (Bangor Business School, Bangor University)

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List of acronyms and abbreviations

$bn	billions of United States dollars
£bn	billions of Great Britain pounds
€bn	billions of euros
$mil	millions of United States dollars
£mil	millions of Great Britain pounds
€mil	millions of euros
2-BCD	EU Second Banking Co-ordination Directive
AAOIFI	Accounting and Auditing Organization for Islamic Financial Institutions
ABCP	asset-backed commercial paper
ABS	asset-backed securities
ACH	automated clearing house
ACP	Autorité de contrôle prudentiel
AES	advanced execution services
AGP	asset guarantee programme
AI	artificial intelligence
AIG	American International Group
AIM	Alternative Investment Market
ALCO	asset and liability committee
ALM	asset–liability management
AMA	advanced measurement approach
AML	anti-money laundering
ANZ	Australia and New Zealand Banking Group Ltd
APACS	Association for Payment Clearing Services
APF	asset purchase facility
API	application programming interface
APRA	Australian Prudential Regulation Authority
ARM	adjustable-rate mortgage
ASEAN	Association of Southeast Asian Nations
ASF	American Securitisation Forum
ATM	automated teller machine
B2B	business-to-business
Bacs	Banks Automated Clearing System
BBA	British Bankers' Association
BBAA	British Business Angels Association
BBVA	Banco Bilbao Vizcaya Argentaria
BCB	Banco Central do Brasil
BCBS	Basel Committee on Banking Supervision
BCCSs	bill and cheque clearing systems
BCRA	Banco Central de la Republica Argentina
BFP	Business Finance Partnership

BHC	bank holding company
BHCA	Bank Holding Company Act
BIP	Bank Insolvency Procedure
BIS	Bank for International Settlements
BNM	Bank Negara Malaysia
BoE	Bank of England
BOJ-NET	Bank of Japan Financial Network System
bps	basis points
BRRD	Bank Recovery and Resolution Directive
BSC	Banking Supervision Committee
BTS	Binding Technical Standards
BU	Banking Union
BU	bottom-up approach
BVCA	British Private Equity & Venture Capital Association
C&CC	cheque and clearing company
C/I	cost-to-income ratio
CAD	EU Capital Adequacy Directive
CAGR	compound annual growth rate
CAMELS	Capital, Asset, Management, Earnings, Liquidity, Sensitivity to Market Risk
CAP	Capital Assistance Programme
CAPM	capital asset pricing model
CBA	Commonwealth Bank of Australia
CBFA	Commission Bancaire, Financière et des Assurances
CBO	collateralised bond obligations
CBPP	covered bond purchase programme
CBR	Central Bank of the Russian Federation
CBRC	China Banking Regulatory Commission
CC	Competition Commission
CCAR	comprehensive capital analysis and review
CCB	China Construction Bank
CCBM	Correspondent Central Banking Model
CCBS	Centre for Central Banking Studies
CCCL	Cheque and Credit Clearing Company Limited
CD	certificate of deposit
CDCI	Community Development Capital Initiative
CDFIs	Community Development Financial Institutions
CDIC	Canada Deposit Insurance Corporation
CDO	collateralised debt obligations
CDS	credit default swaps
CEBS	Committee of European Banking Supervisors
CEE	Central and Eastern Europe
CEIOPS	Committee of European Insurance and Occupational Pensions Supervisors
CEO	chief executive officer
CESR	Committee of European Securities Regulators
CFO	chief financial officer
CFPB	Consumer Financial Protection Bureau
CGFS	Committee on the Global Financial System

CGS	credit guarantee scheme
CHAPS	Clearing House Automated Payments System
CHIPS	Clearing House Interbank Payments System
CI	credit institutions
CIBC	Canadian Imperial Bank of Commerce
CLO	collateralised loan obligations
CLS	Continuous Linked Settlement
CMA	Competition and Markets Authority
CME	Chicago Mercantile Exchange
CMGs	crisis management groups
CML	Council of Mortgage Lenders
CMU	Capital Markets Union
COAGs	cross-border co-operation agreements
CORF	corporate operational risk function
CP	commercial paper
CPP	Capital Purchase Programme
CPSS	Committee on Payment and Settlement Systems
CRA	credit-rating agencies
CRAM	country risk assessment model
CRD	Capital Requirements Directive
CRDs	cash ratio deposits
CRIS	control risks information services
CR-*n*	*n*-firms concentration ratio
CRR	Capital Requirements Regulation
CTF	counter-terrorism financing
CV	conjectural variations
CVF	competing values framework
DD	distance to default
DEFRA	Department for Environment, Food & Rural Affairs
DFAST	Dodd–Frank Act stress tests
DG	duration gap
DGS	deposit guarantee scheme
DIS	deposit insurance scheme
DLT	distributed ledger technology
DMO	debt management office
DNB	De Nederlandsche Bank
DTI	debt-to-income ratio
DTIs	deposit-taking institutions
DWF	discount window facility
EBA	European Banking Authority
EBC	European Banking Committee
ECB	European Central Bank
ECOFIN	Economic and Financial Affairs Council
ECSC	European Coal and Steel Community
ECTR	extended collateral term repo facilities
EDF	expected default frequency
EDI	electronic data interchange

EDP	excessive deficit procedure
EEA	European Economic Area
EEC	European Economic Community
EFDI	European Forum of Deposit Insurers
EFN	European Forecasting Network
EFSF	European Financial Stability Facility
EFTPOS	electronic funds transfer at point of sale
EGD	European Green Deal
EIOPA	European Insurance and Occupational Pensions Authority
EIOPC	European Insurance and Occupational Pensions Committee
EIRIS	Ethical Investing Research Service
EIU	Economist Intelligence Unit
EL	expected loss
ELs	eligible liabilities
ELA	emergency liquidity assistance
EM	equity multiplier
EMI	European Monetary Institute
EMS	European Monetary System
EMU	economic and monetary union
EPS	earnings per share
ERM	Exchange Rate Mechanism
ERM II	Exchange Rate Mechanism II
ES	expected shortfall
ESAs	European Supervisory Authorities
ESC	European Securities Committee
ESCB	European System of Central Banks
ESF	European Securitisation Forum
ESFS	European System of Financial Supervision
ESFS	European System of Financial Supervisors
ESG	environmental, social and governance
ESM	European Stability Mechanism
ESMA	European Securities and Markets Authority
ESRB	European Systemic Risk Board
ESRC	European Systemic Risk Council
ESS	efficient scale hypothesis
ESX	efficient structure hypothesis (x-efficiency)
EU	European Union
euro area	EU member states that have adopted the euro
eurozone	EU member states that have adopted the euro
EVA	economic value added
EVCA	European Private Equity & Venture Capital Association
EVE	economic value of equity
EWS	early warning systems
F gap	financing gap
FAC	Federal Advisory Council
FCA	Financial Conduct Authority
FCC	Financial Conglomerates Committee

FDI	foreign direct investment
FDIC	Federal Deposit Insurance Corporation
Fed	Federal Reserve Bank
FEDNET	Federal Reserve's national communications network
FFIEC	Federal Financial Institutions Examination Council
FHFA	Federal Housing Finance Agency
FHLMC	Federal Home Loan Mortgage Corporation (Freddie Mac)
FICC	Fixed Income, Currencies and Commodities Department
FINMA	Swiss Financial Market Supervisory Authority
FLS	Funding for Lending Scheme
FMSA	Federal Agency for Financial Market Stabilisation
FNMA	Federal National Mortgage Association (Fannie Mae)
FOMC	Federal Open Market Committee
FPC	Financial Policy Committee
FPS	Faster Payments Service
FR	Federal Reserve
FRA	forward rate agreement
FRB	Federal Reserve Board
FRNs	floating rate notes
FROB	Fondo de Reestructuración Ordenada Bancaria
FRS	Federal Reserve System
FSA	Financial Services Agency (Japan)
FSA	Financial Services Authority (UK)
FSAP	Financial Services Action Plan
FSB	Financial Stability Board
FSCS	Financial Services Compensation Scheme
FSF	Financial Stability Forum
FSMA	Financial Services and Markets Act 2000
FSOC	Financial Stability Oversight Council
FSU	Former Soviet Union
FTP	fund transfer pricing
FXYCS	Foreign Exchange Yen Clearing System
G10	Group of Ten
GAFA	Google, Amazon, Facebook, Apple
GAFAA	Google, Amazon, Facebook, Apple, Alibaba
GAO	Government Accountability Office
GCC	Gulf Cooperation Council
GDP	gross domestic product
GNI	gross national income
GNMA	Government National Mortgage Association (Ginnie Mae)
GSE	government-sponsored enterprise
G-SIBs	global systemically important banks
G-SIFIs	global systemically important financial institutions
HHI	Herfindahl–Hirschman index
HICP	Harmonised Index of Consumer Prices
HKMA	Hong Kong Monetary Authority
HNWI	high net worth individual

HQLA	high-quality liquid assets
HTBEL	Help to Buy equity loan scheme
IADI	International Association of Deposit Insurers
IAIS	International Association of Insurance Supervisors
IASB	International Accounting Standards Board
IB	Islamic bank
IBFs	international banking facilities
ICAEW	Institute of Chartered Accountants in England and Wales
ICB	Independent Commission on Banking
ICBC	Industrial and Commercial Bank of China
ICICI	Industrial Credit and Investment Corporation of India
ICRG	International Country Risk Guide
IDB	Islamic Development Bank
IDIC	Indonesia Deposit Insurance Corporation
IFC	International Finance Corporation
IFI	Islamic financial institution
IFRS	International Financial Reporting Standards
IFSB	Islamic Financial Services Board
IIFM	International Islamic Financial Market
ILTROs	indexed long-term repo open market operations
IM	information memo
IMA	Investment Management Association
IMF	International Monetary Fund
IMM	International Money Market
IOSCO	International Accounting Standards Board
IoT	Internet of Things
IPAB	Instituto para la Protección al Ahorro Bancario
IPO	initial public offering
IRB	internal ratings based
IRR	investment risk reserve
IRS	interest rate swap
ISAs	individual savings accounts
ISD	Investment Services Directive
ISP	internet service provider
KA	key attributes
KDIC	Korea Deposit Insurance Corporation
KPIs	key performance indicators
KYC	know your customer
L gap	liquidity gap
LBO	leveraged buyouts
LBS RMS	London Business School Risk Measurement Service
LCBGs	large and complex banking groups
LCDS	loan credit default swaps
LCFIs	large and complex financial institutions
LCR	least-cost resolution
LCR	liquidity coverage ratio
LDA	loss distribution approach

LGD	loss given default
LGE	loss given event
LIBOR	London Interbank Offered Rate
LOC	letter of credit
LOLR	lender of last resort
LPFCs	limited-purpose finance companies
LRAC	long-run average cost
LRMC	long-run marginal cost
LSAPs	large-scale asset purchases
LTRO	longer-term refinancing operation
LTV	loan-to-value ratio
M gap	maturity gap
M&As	mergers and acquisitions
M1	narrow money
M2	intermediate money
M3	broad money
MAC	material adverse change
MAS	Monetary Authority of Singapore
MBBGs	Major British Banking Groups
MBS	mortgage-backed securities
MC	marginal cost
MCOB	mortgage conduct of business
MENA	Middle East and North Africa
MEW	mortgage equity withdrawal
MFIs	monetary financial institutions
MHFG	Mizuho Financial Group
MiFID	Markets in Financial Instruments Directive
MIP	macroeconomic imbalance procedure
ML	machine learning
MLA	mandated lead arranger
MMF	money market fund
MMOLR	market maker of last resort
MNC	multinational company
MPC	Monetary Policy Committee
MPs	Members of Parliament
MROs	main refinancing operations
MTFG	Mitsubishi Tokyo Financial Group
MUFJ	Mitsubishi UFJ Financial Group
MVE	market value of equity
NAB	National Australia Bank
NBB	National Bank of Belgium
NCAs	national competent authorities
NCB	national central bank
NCUA	National Credit Union Administration
NDTI	non-deposit taking institution
NEIO	new empirical industrial organisation
NIF	note issuance facilities

NII	net interest income
NIM	net interest margin
NIM-8	five Central and Eastern European countries and three Baltic States
NMSs	new member states
NOPAT	net operating profit after tax
NPLs	non-performing loans
NPLS	non-profit and loss sharing
NRAM	Northern Rock Asset Management
NSFR	net stable funding ratio
NYSE	New York Stock Exchange
OBA	open bank assistance
OBS	off-balance-sheet
OCC	Office of the Comptroller of the Currency
OECD	Organisation for Economic Co-operation and Development
OFHEO	Office of Federal Housing Enterprise Oversight
OFT	Office of Fair Trading
OIC	Organization of Islamic Cooperation
OIS	overnight index swap
OLA	Orderly Liquidation Authority
OMOs	open market operations
OMT	Outright Monetary Transactions
OSFs	operational standing facilities
OTC	over the counter
OTS	Office of Thrift Supervision
P&A	purchase and assumption
P&L	profit and loss
P2P	peer-to-peer
P/B	price to book value
PBC	People's Bank of China
PC	personal computer
PD	probability of default
PER	profit equalisation reserves
PIN	personal identification number
PISP	payment initiation services provider
PLL	provision for loan losses
PLS	profit and loss sharing
POP	persistence of profits
PPI	payment protection insurance
PPIP	public–private investment programme
PPT	partial property transfers
PRA	Prudential Regulation Authority
PSIA	profit-sharing investment accounts
PSPs	private sector purchasers
PwC	PricewaterhouseCoopers
QE	quantitative easing
QR	quick response
R&D	research and development

RAMSI	Risk Assessment Model of Systemic Institutions
RAP	resolvability assessment process
RAPM	risk-adjusted performance measurement
RAR	risk–asset ratio
RAROC	risk-adjusted return on capital
RBI	Reserve Bank of India
RBS	Royal Bank of Scotland
RBSG	Royal Bank of Scotland Group
REPO	repurchase agreement
RMBS	residential mortgage-backed securities
RMP	relative market power
ROA	return on assets
ROCHs	recognised overseas clearing houses
ROE	return on equity
ROIEs	recognised overseas investment exchanges
RPD	relative profit differences
RSA	rate-sensitive assets
RSL	rate-sensitive liabilities
RTGS	real-time gross settlement
S&LA	Savings and Loan Association
S&Ls	savings and loans
S&P	Standard & Poor's
SAMA	Saudi Arabian Monetary Agency
SBA	scenario-based approach
SCAP	Supervisory Capital Assessment Programme
SCDIS	*Shariah*-compliant deposit insurance schemes
SCP	structure-conduct-performance
SDG	sustainable development goals
SDGS	Single Deposit Guarantee Scheme
SDM	Single Deposit Guarantee Mechanism
SEE	South-Eastern Europe
SEPA	Single Euro Payments Area
SFT	securities financing transaction
SGP	Stability and Growth Pact
SHIBOR	Shanghai Interbank Offered Rate
SIFIs	systemically important financial institutions
SIFMA	Securities Industry and Financial Markets Association
SIVs	structured investment vehicles
SLS	special liquidity scheme
SMEs	small and medium enterprises
SMFG	Sumitomo Mitsui Financial Group
SMP	Securities Markets Programme
SMTB	Sumitomo Mitsui Trust Bank Ltd
SPV	special-purpose vehicle
SRB	Single Resolution Board
SRF	Single Bank Resolution Fund
SRM	Single Resolution Mechanism

SRR	special resolution regime
SRU	Special Resolution Unit
SSM	Single Supervisory Mechanism
SWIFT	Society for Worldwide Interbank Financial Telecommunication
TAF	term auction facility
TARGET	Trans-European Automated Real-time Gross settlement Express Transfer system
TARP	Troubled Asset Relief Program
T-bills	Treasury bills
T-bonds	Treasury bonds
TBTDA	too big to discipline adequately
TBTF	too big to fail
TD	top-down approach
TIP	targeted investment programme
TITF	too important to fail
TITF	too interconnected to fail
TLAC	Total Loss-Absorbing Capacity
TPO	temporary public ownership
TRS	total-return swaps
TSTF	too systemic to fail
UCITS	Directive Undertaking for Collective Investment in Transferable Securities
UKFI	UK Financial Investments Limited
UKPA	UK Payments Administration Ltd
URIA	unrestricted investment account
VaR	value at risk
WBC	Westpac Banking Corporation
WOCCU	World Council of Credit Unions
WSE	Warsaw Stock Exchange
WTO	World Trade Organization
YTD	year to date
YTM	yield to maturity

AT	Austria
BE	Belgium
BG	Bulgaria
CY	Cyprus
CZ	Czech Republic
DE	Germany
DK	Denmark
EE	Estonia
ES	Spain
FI	Finland
FR	France
GB	Great Britain (which consists of England, Wales and Scotland)
GR	Greece
HR	Croatia
HU	Hungary

IE	Ireland
IT	Italy
LT	Lithuania
LV	Latvia
MT	Malta
NL	the Netherlands
PL	Poland
PT	Portugal
RO	Romania
SE	Sweden
SI	Slovenia
SK	Slovakia
UAE	United Arab Emirates
UK	United Kingdom (which consists of Great Britain together with Northern Ireland)
US	United States (of America)

PART 1

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Chapter 1

What is special about banks?

Learning objectives

- To understand the role of financial intermediaries in the economy
- To understand lenders' and borrowers' different requirements and how banks can help to bridge such differences
- To understand how financial intermediaries reduce transaction, information and search costs
- To analyse the theories of financial intermediation

1.1 Introduction

The first question one may ask when reading this book is 'What is special about banks?' This chapter aims to offer some insights into the nature of the banking business and what makes banks 'special'. A bank is a financial intermediary that offers loans and deposits, and payment services. Nowadays banks also offer a wide range of additional services, but it is these functions that constitute banks' distinguishing features. Because banks play such an important role in channelling funds from savers to borrowers, in this chapter we use the concepts of 'bank' and 'financial intermediary' almost as synonyms as we review the role of banks and their main functions: size transformation, maturity transformation and risk transformation. The difference between banks and other financial intermediaries is introduced in Chapter 2. The second part of this chapter gives an overview of some important concepts in information economics as they apply to banking. The final sections present five theories to explain why banking exists and the benefits of financial intermediation.

1.2 The nature of financial intermediation

To understand how banks work, it is necessary to understand the role of financial intermediaries in an economy. This will help us to answer the question about why we need banks. Financial intermediaries' and financial markets' main role is to provide a mechanism by which funds are transferred and allocated to their most productive opportunities. A bank is