## Contents

List of Figures	xvii
List of Tables	xix
List of Boxes	xxiii
Acknowledgements	XXV
List of Abbreviations	xxvii
Prologue	XXXV

## Part I Introduction to Banking in India

1	Abo	About Banks and Banking			
	1.1	Intro	duction	3	
	1.2	Conv	entional Banking and Legal Provisions	4	
		1.2.1	Mobilisation of Savings in the Form of		
			Bank Deposits	6	
		1.2.2	Transfer of Bank Deposits: Enabling Payment		
			and Settlement	8	
		1.2.3	Bank Lending and Investments	11	
		1.2.4	Legal Aspects of Banks and Banking in India	15	
	1.3 Major Banking Activities: Drawing from the Balance Sheet				
		of a B	ank	17	
		1.3.1	Broad Items under the Liabilities Side	19	
			1.3.1.1 Capital	19	
			1.3.1.2 Reserves and Surplus	20	
			1.3.1.3 Deposits	21	
			1.3.1.4 Borrowings	22	
			1.3.1.5 Other Liabilities	23	

# CAMBRIDGE

vi			CONTENTS
	1.3.2	Broad Items under the Assets Side	23
		1.3.2.1 Cash and Balances with the RBI	23
		1.3.2.2 Balances with Banks and Money at	
		Call and Short Notice	24
		1.3.2.3 Loans and Advances	24
		1.3.2.4 Investments	25
		1.3.2.5 Fixed Assets and Other Assets	27
	1.4 Inco	me and Expenditure Statement of a Bank and Key	
	Bank	king Indicators	28
	1.4.1	Major Items under Income and Expenditure	29
	1.4.2	Key Banking Indicators	30
		1.4.2.1 Profitability and Efficiency Indicators	30
		1.4.2.2 Capital Adequacy and Asset Quality	32
	1.5 Othe	er Functions of a Bank	33
	1.5.1	Issuing Guarantees	34
	1.5.2	Opening Letters of Credit	34
	1.5.3	Dealing in Forex: Spot and Forward	
		Transactions	36
	1.5.4	Merchant or Investment Banking	37
	1.5.5	Bancassurance	37
	1.5.6	Other Functions	38
	1.6 Basic	c Operational Activities at Bank Branches	38
		Opening Deposit Accounts	40
	1.6.2	Extending Bank Loans	41
	1.6.3	Managing Currency or Cash	42
		lency towards Greater Centralisation	44
	1.8 Cone	clusion	45
	Revision	Questions and Problems	45
2	The India	an Banking System	47
	2.1 Intro	oduction	47
	2.2 India	an Financial System	48
	2.2.1	Indian Financial Markets	49
		2.2.1.1 Equity Market	49
		2.2.1.2 Corporate Bond Market	53
		2.2.1.3 Government Securities Market	55
		2.2.1.4 Money Market	57
		2.2.1.5 Forex Market	59

CONTENTS		vii
2.2.	2 Indian Financial Institutions	61
	2.2.2.1 Cooperative Banks	61
	2.2.2.1.1 Rural Cooperative Credit Institutions	
	(RCCIs)	62
	2.2.2.1.1.1 Recent Improvement in the	
	Performance of Rural	
	Cooperatives	64
	2.2.2.1.2 Urban Cooperative Banks (UCBs)	65
	2.2.2.2 Regional Rural Banks (RRBs)	66
	2.2.2.3 Non-Banking Financial Companies (NBFCs)	68
	2.2.2.3.1 Insurance Companies, Mutual Funds	
	and Pension Funds	69
	2.2.2.4 Development Finance Institutions (DFIs)	70
2.2.	3 Dominance of Commercial Banks	72
2.3. Evol	ution of Banking in India: A Historical Perspective	74
2.3.	1 Bank Nationalisation and Banking Expansion	75
2.3.	2 Banking Sector Reforms	77
2.3.	3 Metamorphosis of SBI and Other PSBs in India	78
2.4. Ban	king Sector Reforms in India	80
2.4.	1 Phasing Out of Statutory Pre-Emption	81
2.4.	2 Deregulation of Interest Rates	82
2.4.	3 Introduction of Prudential Regulatory and	
	Supervisory Norms	84
	2.4.3.1 Capital Adequacy	84
	2.4.3.2 Income Recognition	85
	2.4.3.3 Asset Classification and Provisioning	
	for NPAs	85
	2.4.3.4 Inspection and Supervision of Banks	86
2.4.	4 Encouraging Entry of Private Banks	86
	5 Computerisation and Mechanisation in Banking	87
	nmercial Banks in India	89
2.5.	1 Public Sector Banks (PSBs)	90
2.5.	2 Indian Private Banks (IPBs)	93
2.5.	3 Foreign Banks	95
	4 Small Finance Banks and Payments Banks	95
	gress of Banking in India	97
	nclusion	100
Revision	Questions and Problems	101

vii	i	COM	NTENTS
Pa	rt II	Banks and the Economy	
3	The	Role of Banks in an Economy	105
	3.1	Introduction	105
	3.2	Theories of Economic Growth and the Role of Banks	109
		3.2.1 Role of Savings in Growth Theories	111
		3.2.2 Role of Banks in Promoting Savings and Economic Growth	113
	3.3	Role of Banks in Resolving Size and Maturity Mismatches	114
	3.4	Role of Banks in Resolving the Problem of Information	
		Asymmetry in the Credit Market	115
	3.5	Risk Moderation in Lending through Diversification	118
	3.6	Banks as the Backbone of the Payment and Settlement System	120
	3.7	Empirical Evidence	125
		3.7.1 Savings and Economic Growth	125
		3.7.2 Role of Banks in Augmenting Savings	126
	3.8	Conclusion	128
	Rev	ision Questions and Problems	128
4	Eco	nomic Fluctuations, Monetary Policy and the Role of Banks	130
	4.1	Introduction	130
	4.2	Short-Run Economic Fluctuations: Theoretical Explanations	135
		4.2.1 Keynesian Demand-Side Explanations	135
		4.2.2 Real Business Cycle (RBC) Model	138
		4.2.3 Price Misperception Model	140
		4.2.4 New Keynesian Model	141
	4.3	Role of Monetary Policy in Managing Economic Fluctuations	146
		4.3.1 Working of Monetary Policy	147
	4.4	Banks and Monetary Transmission Mechanism	148
		4.4.1 Bank Lending Channel	152
		4.4.2 Balance Sheet Channel	154
		Empirical Evidence	156
	4.6	Conclusion	160
	App	pendix 4A	161
	Rev	ision Questions and Problems	166
5	Spr	ead of Banking in India: The Regional Dimension	167
	5.1	Introduction	167
	5.2	Regional Distribution of Banking	169
		5.2.1 Region-Wise Distribution of Bank Credit and Deposits	170

Cambridge University Press & Assessment
978-1-009-55645-3 - Regulating and Managing Banks in India
Amaresh Samantaraya
Table of Contents
More Information

CONTENT	S	ix
	5.2.2 State-Wise Distribution of Bank Credit and Deposits	173
	5.2.3 Bank Credit–NSDP Ratio	174
5.3	Inter-State Economic Disparity	177
5.4	Distribution of Banking Services and Inter-State	
	Economic Disparity	182
5.5	Conclusion	184
App	pendix 5A	185
Rev	ision Questions and Problems	187
Part II	I Banking Risks, Regulations and Risk Management	189
5 Bar	iking Risks and Rationale for Banking Regulations	191
6.1	Introduction	191
6.2	Rationale for Regulation and Supervision of Banks	193
	6.2.1 Rationale for Regulation of Banks	194
	6.2.1.1 Bank Lending and Information Asymmetry	194
	6.2.1.2 High Procyclicality of Bank Loans	196
	6.2.1.3 Banking Involves a Variety of Risks	198
	6.2.1.4 Bank Runs, Contagion and Systemic Crisis	199
	6.2.1.5 Different Stakeholders Managing Banking	
	Business versus Those Bearing Losses	201
	6.2.2 Rationale for Banking Supervision	202
6.3	Major Types of Risks in Banking	203
	6.3.1 What Is Risk?	203
	6.3.2 Types of Risks	205
	6.3.2.1 Credit Risk	205
	6.3.2.2 Liquidity Risk	206
	6.3.2.3 Interest Rate Risk	207
	6.3.2.4 Market Risk	209
	6.3.2.5 Operational Risk	210
	6.3.2.6 Overall Banking Risks in Different Items of	
	Assets and Liabilities	210
6.4	Measurement of Banking Risks	211
	6.4.1 Measurement of Credit Risk	211
	6.4.1.1 Assignment of Credit Rating or Score Using a	
	Credit Rating Model	212
	6.4.1.2 Rating Migration or Transition	214

х				CONTENTS
		6.4.1.3	Expected and Unexpected Loss Due to Credit Rish	k 216
		6.4.1.4	Stress Tests and Scenario Analysis	218
	6.4.2	Measur	rement of Liquidity Risks	218
		6.4.2.1	Construction of Maturity Ladder and Estimation	
			of Gap	219
		6.4.2.2	Scenario Analysis	221
		6.4.2.3	Balance Sheet Indicators	222
		6.4.2.4	Implicit Assessment of Liquidity Risk under	
			LCR and NSFR	223
			6.4.2.4.1 Liquidity Coverage Ratio (LCR)	224
			6.4.2.4.2 Net Stable Funding Ratio (NSFR)	224
	6.4.3	Method	ds to Measure Interest Rate Risk	225
		6.4.3.1	Gap Analysis	225
		6.4.3.2	Duration Analysis	227
			Simulation Approaches	230
	6.4.4	Method	ds to Measure Market Risk	231
			Standard Deviation	231
		6.4.4.2	Sensitivity Analysis	232
			6.4.4.2.1 Present Value of a Basis Point (PV01)	232
			Duration Analysis	232
		6.4.4.4	Downside Potential and Value at Risk (VaR)	233
			6.4.4.1 VaR and Backtesting	234
	6.4.5		rement of Operational Risks	234
			Basic Indicators Approach	236
			Standardised Approach	236
			Advanced Measurement Approach	237
	6.5 Conc			238
	Revision (	Question	s and Problems	239
7	Banking	Regulati	ons and Supervision: A Broad Overview of	
	Different	Forms a	nd Manifestations	240
	7.1 Intro	duction		240
	7.2 Publi	ic Policy	to Contain Banking Risks: Banking Regulation	
	and S	Supervisi	on	243
	7.2.1	Admin	istrative Control	244
	7.2.2	Lender	of Last Resort (LOLR) Facility	246
	7.2.3	Safety I	Net under Deposit Insurance	247
	7.2.4	Statuto	ry Reserves	249

COI	NTENT	S		xi
		7.2.5	Rationale for Capital Adequacy Requirements	250
	7.2.6 Public Ownership Strengthening Depositors' Confidence			
	7.3 Capital Adequacy and Other Prudential Norms			
		7.3.1	Run-Up to the 1988 Basel Accord	253
		7.3.2	Basel Accord of 1988	256
			7.3.2.1 Risk Mitigation under Basel Capital	
			Adequacy Norms	257
			7.3.2.2 Limitations of the Basel Accord, 1988	259
		7.3.3	Adoption of the Basel Capital Adequacy Norms in India	260
		7.3.4	Norms on Asset Classification and Provisioning	261
	7.4	First l	Major Revision in the Basel Norms: Basel II	263
		7.4.1	1 1	263
			7.4.1.1 Assessment of Credit Risk under Basel II:	
			Standardised Approach	264
			7.4.1.2 Assessment of Credit Risk under Basel II:	
			IRB Approach	266
			7.4.1.3 Assessment of Market Risk under Basel II	267
			7.4.1.4 Assessment of Operational Risk under Basel II	267
		=	7.4.1.5 Minimum Regulatory Capital Requirement	268
			Pillar II: Supervisory Review Process	268
			Pillar III: Market Discipline	269
			Adoption of the Basel II Norms in India	269
	7 5		Deficiencies of the Basel II Capital Adequacy Norms	270
	7.5		nd Major Revision in the Basel Norms: Basel III	272
		7.5.1	Modification of Basel II Norms and Strengthening of	273
		752	Related Capital Charges Countercyclical and Non-Risk-Based Capital	275
		7.3.2	Requirements	274
		753	Liquidity Standards	274
			Timeline for Implementation of Basel III and 2017	275
		, 1011	Amendments	275
		7.5.5	Adoption of the Basel III Norms in India	277
	7.6		ing Supervision in India	279
		Concl		282
			Questions and Problems	283
8	Ris	k Man	agement by Banks	284
•			duction	284

xii			CONTENTS
8	8.2	Organisational Structure for Risk Management:	
		An Integrated Framework	287
		8.2.1 Need for an Integrated Approach	287
		8.2.2 Organisational Structure	288
8	8.3	Credit Risk Management: A Multipronged Approach	290
		8.3.1 Assessing Creditworthiness, Pricing of Loans	
		and Monitoring	291
		8.3.2 Mitigation of Credit Risk: Conventional Ways	292
		8.3.3 Mitigation of Credit Risk: Recent Innovations	293
		8.3.3.1 Securitisation	293
		8.3.3.2 Credit Derivatives	295
		8.3.4 Capital Adequacy Requirements	296
8	8.4	ALM System and ALCO	297
		8.4.1 ALCO	298
		8.4.2 ALM and Management of Liquidity Risk	299
		8.4.3 ALM and Management of Interest Rate Risk	301
		8.4.4 LCR and NSFR	302
		8.4.5 ALM Information System	303
8	8.5	Market and Operational Risk Management	304
		8.5.1 Market Risk Management	304
		8.5.2 Operational Risk Management	305
8	8.6	Conclusion	305
1	App	bendix 8A	306
1	Revi	rision Questions and Problems	320

## Part IV Managing the Banking Business

9	Banking Management: Assets Side—Loans and Investments				323
	9.1 Introduction				
	9.2	Mana	igement	of Retail Loans	328
		9.2.1	Types o	f Retail Loans	329
			9.2.1.1	Home Loans	330
			9.2.1.2	Auto Loans	330
			9.2.1.3	General-Purpose Personal Loans	331
			9.2.1.4	Education Loans	331
			9.2.1.5	Consumer Durable Loans	332
			9.2.1.6	Gold Loans	332
			9.2.1.7	Miscellaneous Items	332

CONTE	NTS			xiii
	9.2.2		Appraisal and Designing of Retail Loan Products	333
		9.2.2.1	Role of Credit Information Bureau (India)	
			Limited (CIBIL)	335
			epayment Methods	335
0		•	of Retail Loans	338
9		•	of Corporate Loans	342
	9.3.1	Term L		345
			Purpose of the Loan	345
			Credit Appraisal	345
		9.3.1.3	Duration of Project Loans and Repayment	2.15
		0.2.1.4	Method	347
			Security and Margin Requirements	348
			Pricing of Project or Term Loans	349
	9.3.2		ng Capital Loans	349
			Purpose	349
		9.3.2.2	Credit Appraisal and Setting the Limits for	250
			Working Capital Loans 9.3.2.2.1 Turnover Method	350
				350
			9.3.2.2.2 Assessed Bank Finance (ABF) or Maximum Permissible Bank Finance	
			(MPBF) Method	351
			9.3.2.2.3 Cash Budget Method	352
		0222	Duration of Working Capital Loans and	552
		9.3.2.3	Repayment Method	353
		0324	Security and Margin Requirements	353
			Pricing of Working Capital Loans	353
	033		rium Lending	353 354
Q			r Lending: Agricultural and MSME Loans	355
		•	Branches in Priority Sector Lending	356
	2.1.1		Agricultural Loans	359
			MSME Loans	360
			Loans to Services	361
			MUDRA Loans	361
9	.5 Mana		of Investment Portfolio and Treasury	001
		ations	or my ostillent i or trono und rieddau y	362
	-		osition of Investment Portfolio	363
		-	ement of Investment Portfolio	365
		-	ry Operations	367

xiv	v C	ONTENTS
	9.6 Conclusion	368
	Revision Questions and Problems	369
10	<b>0</b> Banking Management: Liabilities Side—Deposits and Borrowings	370
	10.1 Introduction	370
	10.2 Major Liabilities-Side Items in a Bank's Balance Sheet	371
	10.2.1 Types of Retail Deposits Offered by Banks in India	372
	10.2.1.1 Current Account Deposits	372
	10.2.1.2 Savings Account Deposits	373
	10.2.1.3 Term Deposits	373
	10.2.1.4 Non-Resident Ordinary (NRO) and Non-Resident	
	External (NRE) Deposit Accounts	374
	10.2.1.5 FCNR Deposit Accounts	375
	10.2.2 Borrowings of Banks	375
	10.2.2.1 Borrowings from the RBI	377
	10.2.2.2 Borrowings from Other Banks	379
	10.2.2.3 Borrowings from Other Institutions and	
	Agencies	380
	10.3 Business Strategies for Mobilisation of Bank Deposits	380
	10.3.1 Composition of the Bank Deposits Portfolio	381
	10.3.2 Decisions on Interest Rates on Deposits	383
	10.3.2.1 Asset-Liability Gap Considerations across	
	Different Time Buckets	385
	10.3.2.2 Macroeconomic Conditions and Flow of Bank Cred	it 385
	10.3.2.3 Monetary Policy Stance	386
	10.4 Strategic Decisions on Borrowings	388
	10.5 Off-Balance Sheet (OBS) Items	390
	10.5.1 Conventional OBS Items	391
	10.5.1.1 Bank Guarantees	391
	10.5.2 OBS Items in the Form of Financial Derivatives	395
	10.6 Conclusion	398
	Appendix 10A	399
	Revision Questions and Problems	401

## Part V Performance of Banks in India and Contemporary Issues

11 Profitability, Productivity and Effic	ciency of Banks 405
11.1 Introduction	405

CONTENTS	xv
11.2 Profitability of Banks in India	408
11.2.1 Concept and Measurement of Bank Profitability	408
11.2.2 Performance of Banks in India as per Profitability	410
11.2.2.1 Profitability of Different Bank Groups	410
11.2.2.2 Profitability of Leading Banks in India	413
11.3 Productivity of Banks in India	416
11.3.1 Concept and Measurement of Bank Productivity	416
11.3.2 Performance of Banks in India as per Productivity	418
11.3.2.1 Productivity of Different Bank Groups	418
11.3.2.2 Productivity of Leading Banks in India	419
11.4 Operational Efficiency of Banks in India	421
11.4.1 Concept and Measurement of Bank Efficiency	421
11.4.2 Performance of Banks in India as per Operational	
Efficiency	422
11.4.2.1 Operational Efficiency of Different Bank	
Groups	422
11.4.2.2 Operational Efficiency of Leading Banks	
in India	424
11.4.2.3 Evidence from Econometric Analysis	425
11.5 Allocative Efficiency of Banks in India	427
11.5.1 Regional Distribution of Banking	428
11.5.2 Distribution of Bank Credit	430
11.5.3 Distribution of Bank Deposits	432
11.6 Conclusion	434
Appendix 11A	435
Revision Questions and Problems	438
12 Contemporary Issues and Future Agenda	439
12.1 Introduction	439
12.2 Incidence of High Bank NPAs during the 2010s and	
Lessons Drawn	441
12.2.1 Recent Loan Delinquencies and Their Implications	441
12.2.2 Incidence of High NPAs in the 1990s and Related	
Policy Response	444
12.2.3 Response to High Loan Delinquencies of the 2010s	
and the Road Ahead	445
12.2.3.1 Withdrawal of Liberal Policy on Loan	
Restructuring	447

# CAMBRIDGE

Cambridge University Press & Assessment
978-1-009-55645-3 – Regulating and Managing Banks in India
Amaresh Samantaraya
Table of Contents
More Information

xvi	CONTENTS
12.2.3.2 Recapitalisation of Banks	448
12.2.3.3 Reforms in the Governance of PSBs under the	
Indradhanush Framework	448
12.2.3.4 Insolvency and Bankruptcy Code (IBC), 2016	450
12.2.3.5 Amalgamation of PSBs	451
12.3 Bank Mergers and Consolidation	452
12.3.1 The Context and History	452
12.3.2 Economic Rationale for Bank Mergers	457
12.3.3 Legal Framework for M&As of Banks	459
12.3.4 An Assessment	460
12.4. Debate on Government versus Private Ownership of Banks	461
12.4.1 Rationale for Privatisation of PSBs	461
12.4.2 Benefits of Public Ownership of Banks	462
12.4.3 Future Roadmap	463
12.5 Progress on ITES, Fintech and Implications for Banking	464
12.6 Environmental Concerns and Green Banking	466
12.6.1 Green Deposits in India	467
12.6.2 Climate Change and Its Adverse Consequences for	
the Banking Business	468
12.7 Banking Regulations for the Future	469
12.7.1 Raising Common Equity Capital to a Reasonably	
High Level	470
12.7.2 Upgrading LOLR to a Robust Liquidity Provision Facility	472
12.7.3 Status Quo under Collective Bargaining	474
12.8 Conclusion	476
Revision Questions and Problems	477
leferences	479
ıdex	489