

India Banking and Finance Report 2022

Edited by

Partha Ray

Arindam Bandyopadhyay

Sanjay Basu

NATIONAL INSTITUTE OF
BANK MANAGEMENT
(NIBM), PUNE



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Edited by Partha Ray, Arindam Bandyopadhyay and Sanjay Basu

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List of Abbreviations

AAs	Account Aggregators	BCR	Bid Cover Ratio
ACRE	Agriculture and Climate Risk Enterprise Ltd.	BF	Business Facilitators
AD	Authorized Dealers	BG	Bank Guarantees
AePs	Aadhaar Enabled Payments System	BIA	Basic Indicator Approach
AI	Artificial Intelligence	BIS	Bank for International Settlements
AMA	Advanced Measurement Approach	BO	Banking Outlet
AML	Anti-Money Laundering	BoE	Bank of England
ANN	Artificial Neural Networks	Bps	Basis Points
ANT	Actor Network Theory	CB	Corporate Bond
APBS	Aadhaar Payments Bridge System	CBDC	Central Bank Digital Currency
API	Application Programming Interface	CBDC-R	Central Bank Digital Currency – Retail
APP	Asset Purchase Programme	CBDC-W	Central Bank Digital Currency – Wholesale
APRA	Australian Prudential Regulatory Authority	CCA	Controller of Certifying Authorities
APTs	Advanced Persistent Threats	CCCB	Countercyclical Capital Buffer
AQR	Asset Quality Review	CCIL	Clearing Corporation of India Limited
ASA	Alternative Standardised Approach	CD	Certificate of Deposits
ASP	Application Service Provider	CDP	Carbon Disclosure Project
ASVI	Adjusted Search Volume Index	CEE	Central and Eastern Europe
ATM	Automated Teller Machine	CERT	Computer Emergency Response Team
AUROC	Area Under the ROC Curve	CES	Component Expected Shortfall
BB	Bank Borrowing	CET1	Common Equity Tier 1
BBN Limited	Bharat Broadband Network Limited	CGapR	Cumulative Gap Ratio
BBPS	Bharat Bill Payment System	CGM	Chief General Manager
BC	Business Correspondent	CIBIL	Credit Information Bureau India Limited
BCA	Business Correspondent Agent	CIC	Community Inclusion Currency
BCBS	Basel Committee on Banking Supervision	CMIE	Centre for Monitoring Indian Economy
BCNM	Business Correspondent Network Managers	CNN	Convolutional Neural Network
BCP	Business Continuity Plan	CNY	Chinese Yuan Renminbi
		COP	Conference of the Parties
		CORF	Corporate Operational Risk Function

CORM	Corporate Operational Risk Management	FDI	Foreign Direct Investment
COSO	The Committee of Sponsoring Organisations	FDR	Gross Fiscal Deficit-GDP Ratio
CoVaR	Conditional Value at Risk	FEARS	Financial and Economic Attitude Revealed by Search
CP	Commercial Paper	FEAT	Fairness, Ethics, Accountability & Transparency
CPI	Consumer Price Index	Fed	Federal Reserve
CPTPP	Comprehensive and Progressive Agreement for Trans-Pacific Partnership	FEMA	Foreign Exchange Management Act
CRAR	Capital to Risk-Weighted Assets Ratio	FG	Forward Guidance
CRI	Climate Risk Index	FI	Financial Institutions
CRM	Customer Relationship Management	FI	Financial Inclusion
CRR	Cash Reserve Ratio	FIMMDA	Fixed Income Money Market and Derivatives Association
CSBS	Conference of State Bank Supervisors	FIPs	Financial Inclusion Plans
CSP	Customer Service Points	FMA	Financial Market Authority
CTI	Cyber Threat Intelligence	FPI	Foreign Portfolio Investment
DBT	Direct Benefit Transfer	FRBM	Fiscal Responsibility and Budget Management
DDoS	Distributed Denial of Service	FSA	Financial Services Agency
DEPA	Data Empowerment and Protection Architecture	G2P	Government-to-Person
DFI	Digital Financial Inclusion	GARP	Global Association of Risk Professionals.
DHFL	Dewan Housing Finance Ltd.	GBP	British Pound Sterling
DID	Digital Identity	GDP	Gross Domestic Product
DISHA	Digital Saksharta Abhiyaan	GE	Grassroots Economics
DLT	Distributed Ledger Technology	GFCF	Gross Fixed Capital Formation
DMS:	Document Management Systems	GFD	Gross Fiscal Deficit
DMT	Domestic Money Transfer	GFSR	Global Financial Stability Report
DNS	Domain Name System	GHG	Greenhouse Gas
DRC	Democratic Republic of Congo	GM	General Manager
DRI	Differential Rate of Interest	GMM	Generalized Method of Moments
D-SIB	Domestic Systemically Important Bank	GNPA	Gross Non Performing Assets
DTB	Day Treasury Bill	GOI	Government of India
e₹-R	e-rupi - Retail	GSAP	Govt. Securities Acquisition Programmes
EAD	Exposure at Default	G-Secs	Government Securities
EASE	Enhanced Access and Service Excellence	G-SIB	Global Systemically Important Bank
EBT	Electronic Benefit Transfer	GST	Goods and Services Tax
ECB	European Central Bank	GTR	Gross Tax Revenue
ECL	Expected Credit Loss	GVA	Gross Value Added
EFT	Electronic Funds Transfer	HDFC	Housing Development Finance Corporation Ltd.
ES	Expected Shortfall	HFC	Housing Finance Company
ESG:	Environmental, Social and Governance	HFC	Hydrofluorocarbons
FAS	Financial Access Survey	HHI	Herfindahl-Hirschman Index
FATF	Financial Action Task Force	HTM	Held Till Maturity
FBIL	Financial Benchmarks India Pvt. Ltd		
FCA	Financial Conduct Authority		
FCNR	Foreign Currency Non-Resident Account		

IBA	Indian Banks' Association	MIS	Management Information Systems
IBBIC	Indian Bank's Blockchain Infrastructure Co Pvt Ltd	ML	Machine Learning
IBEF	Indian Brand Equity Foundation	MOT	Moment of Truth
ICAAP	Internal Capital Adequacy Assessment Process	MPC	Monetary Policy Committee
ICT	Information and Communication Technology	MRM	Model Risk Management
IDS	Intrusion Detection Systems	MRTS	Mass Rapid Transit System
IFRS	International Financial Reporting Standards	MSF	Marginal Standing Facility
IIN	Interbank Information Network	MSME	Micro, Small and Medium Enterprises
IIP	Index of Industrial Production	MTM	Mark to Market
ILFS	Infrastructure Leasing and Financial Services	MUDRA	Micro Units Development and Refinance Agency
IMF	International Monetary Fund	NACH	National Automated Clearing House
IMPS	Immediate Payment Service	NAPCC	National Action Plan on Climate Change
INR	Indian Rupee	NBFC	Non-Banking Financial Company
IPEF	Indo-Pacific Economic Framework	NDC	Nationally Determined Contributions
IRB	Internal Ratings Based	NDS-OM	Negotiated Dealing System-Order Matching
IRDP	Integrated Rural Development Program	NDTL	Net Demand and Time Liabilities
IRM	Institute of Risk Management	NEER	Nominal Effective Exchange Rate
ISBP	International Standard Banking Practices	NETC	National Electronic Toll Collection
IT	Information Technology	NFC	Near Field Communication
JAM	Jan Dhan-Aadhar-Mobile	NFS	National Financial Switch
JPY	Japanese Yen	NGOs	Non-Governmental Organisations
KGFS	Kshetriya Gramin Financial Services	NIFTY_FSEB	NIFTY Financial Services Ex-Bank
KRIs	Key Risk Indicators	NII	Net Interest Income
K-S	Kolmogorov-Smirnov	NIM	Net Interest Margin
KYC	Know Your Customer	NLP	Natural Language Processing
L&T	Larsen and Toubro	NNPA	Net Non-Performing Asset
LAF	Liquidity Adjustment Facility	NOFN	National Optical Fiber Network
LC	Letter of Credit	NPA	Non-Performing Asset
LGD	Loss Given Default	NPCI	National Payments Corporation of India
LIC	Life Insurance Corporation of India.	NRNR	Non-Resident (Non Repatriable) Rupee
LoD	Line of Defence	NSE	National Stock Exchange of India Ltd.
LR	Leverage Ratio	NSFI	National Strategy for Financial Inclusion"
LRMES	Long Run Marginal Expected Shortfall	NSO	National Statistical Office
LTBR	Long-Term Borrowing Ratio	OCEN	Open Credit Enablement Network
LTRO	Long Term Repo Operations	OeNB	Oesterreichische Nationalbank
MeitY	Ministry of Electronics and Information Technology	OFAC	Office of Foreign Assets Control
MES	Marginal Expected Shortfall	OIS	Overnight Index Swap
MFI	Micro Finance Institutions	OMO	Open Market Operations
MIBOR	Mumbai Interbank Offered Rate	ONDC	Open Network for Digital Commerce
		OpRWA	Operational Risk Weighted Assets
		ORCC	Operational Risk Capital Charges
		ORMC	Operational Risk Management Committee

ORMD	Operational Risk Management Department	RFIA	Risk Focused Internal Audit
ORMF	Operational Risk Management Framework	RFID	Radio Frequency Identification
OT	Operations Twist	RMC	Risk Management Committee
OTC	Over-the Counter	RNN	Recurrent Neural Networks
P2M	Person to Merchant	ROA	Return on Assets
P2P	Person to Person	ROC	Receiver Operating Characteristic
PBDIT	Profit Before Depreciation, Interest and Taxes	ROE	Return on Equity
PCR	Provisioning Coverage Ratio	RORWA	Return on Risk Weighted Assets
PD	Primary Dealers	SA	Scenario Analysis
PD	Probability of Default	SAS	Statistical Analysis Software
PFCE	Private Final Consumption Expenditure	SBI	State Bank of India
PIT	Point-in-Time	SBR	Scale-Based Regulation
PMJDY	Pradhan Mantri Jan Dhan Yojana	SCB	Scheduled Commercial Banks
PNB	Punjab National Bank	SDF	Standing Deposit Facility
PO	Participant Observation	SDL	State Development Loans
POS	Point of Sale	SEE	Shanghai Environment and Energy Exchange
PPAC	Product and Process Approval Committee	SES	Systemic Expected Shortfall
PSB	Public Sector Bank	SFG	Sustainable Finance Group
PSI	Population Stability Index	SGL	Subsidiary General Ledger
PSMOR	Principles of Sound Management of Operational Risk	SHG	Self-Help Group
PSP	Payment Service Provider	SIFI	Systemically Important Financial Institution
PSU	Public Sector Undertakings	SLAs	Service Level Agreements
PwC	PricewaterhouseCoopers	SLBC	State Level Bankers Committee
QR	Quick Response	SLR	Statutory Liquidity Ratio
RATS	Risk Appetite and Tolerance statement	SOAR	Security Orchestration, Automation and Response
RBI	Reserve Bank of India	SOC	Security Operation Centre
RBSI	Retail Banking Sentiment Index	SRMES	Short Run Marginal Expected Shortfall
RBSI_E	Retail Banking Sentiment Index (Education)	SVI	Search Volume Index
RBSI_H	Retail Banking Sentiment Index (Home)	SVM	Support Vector Machines
RBSI_M	Retail Banking Sentiment Index (Modified)	SWIFT	Society for Worldwide Interbank Financial Telecom
RBSI_P	Retail Banking Sentiment Index (Personal Credit)	TAT	Turnaround Time
RBSI_R	Retail Banking Sentiment Index (Raw)	TB	Treasury Bill
RBSI_V	Retail Banking Sentiment Index (Vehicle)	TBTF	Too Big To Fail
RCAP	Regulatory Consistency Assessment Programme	TCFD	Task Force on Climate-related Financial Disclosures
RCB	Central Bank of Russia	TDS	Tax Deduction at Source
RCR	Risk and Control Register	TENET	Tail Event Driven Network
RCSA	Risk and Control Self-Assessment	TLAC	Total Loss Absorption Capacity
		TLTRO	Targeted Long-Term Repo Operations
		TREP	Tri-Party Repo
		TRIM	Targeted Review of Internal Models
		TRWA	Total Risk Weighted Assets

TSA	The Standardised Approach	URDG 758	Uniform Rules for Demand Guarantees
TTC	Through-the-Cycle	US	United States
UCP 600	Uniform Customs & Practice for Documentary Credits	USD	United States Dollar
UEBA	User Entity Behaviour Analysis	USSD	Unstructured Supplementary Service Data
UIDAI	Unique Identification Authority of India	VaR	Value at Risk
UK	United Kingdom	WACR	Weighted Average Call Money Rate
UL	Unexpected Loss	WEO	World Economic Outlook
UNFCCC	United Nations Framework Convention on Climate Change	WPI	Wholesale Price Index
UPI	Unified Payments Interface	ZAR	South African Rand
		ZLD	Zero Liquid Discharge

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Preface

Three Cs – climate, conflict and contagion – dominated global headlines in 2022. As climate risk appeared to escalate to an unprecedented level, concerted mitigation attempts accelerated across the world. The Russia-Ukraine war disrupted supply chains and aggravated inflation everywhere. Political tensions in East Asia added to the uncertainty. The co-ordinated policy rate hikes by major central banks, to mitigate inflation spikes, hit financial markets worldwide and raised the spectre of a global recession. The recent spate of bank failure, in US and Europe, shows how fast financial instability can be transmitted from one country to another. The slowdown in global growth, the return of high inflation and financial sector meltdown remind us of the difficult 1970s. However, Indian authorities have managed to strike a fine balance between maintenance of growth and price stability, with a strict vigil over financial sector resilience and promotion of sustainable finance.

Against this backdrop, NIBM brings out the second edition of the India Banking and Finance Report - IBFR 2022. Written by our faculty members, this report is a compendium of articles on Financial Markets, Risk Management, Information Technology HR and Strategy. The coverage is diverse and exhaustive – from Friend Shoring to CBDC, Loan Melas to Green Finance and People Risk Management to Systemic Risk Assessment. Recent challenges to banks and NBFCs, which emanate from domestic and global developments, have been examined. The approach is lucid, yet analytical

and rigorous. As before, IBFR 2022 remains a comprehensive and definitive source of information and discussion on the BFSI sector for banks, regulators, policymakers and academicians.

Macroeconomy and Markets

In the first chapter, *Macro-Financial Perspectives on the Indian Economy*, the authors G. Nagaraju and Jiji Matthew observe that India has been a bright spot in the global economy in terms of output growth, inflation control, tax buoyancy, banking and financial sector performance. Deficits are closer to budget estimates and public debt appears to be sustainable. Much of the repo rate spike was passed on to fresh deposit and loan rates. The ratio of Gross NPAs continued to decline, while credit growth exceeded deposit growth. Net Interest Margin, Return on Equity and Capital Adequacy Ratio improved for the banking sector. Despite sustained capital outflows, the INR stabilized against the USD, from October 2022 onwards.

The second chapter is *Impact of Monetary Policy Signals on Fixed Income Markets in India* by Kedar nath Mukherjee. It argues that the effect of policy rate hikes on bond and OIS yields was transitory, with a sharper impact on shorter tenors. From June 2022 onwards, the effect was minimal since markets may already have factored in the possibility of future rate hikes. By September 2022, the repo rate hikes were followed by a decline in G-sec and OIS yields, which indicates the chance of future reduction

in policy rates. The increase in trading volumes in the above 7-year segment, from September 2022 onwards, also hints at a potential decline in policy rates. Long-term bonds are preferred when market rates are low.

In the third chapter, *Retail Banking Sentiment Index*, Elizabeth James and Smita Roy Trivedi develop an index based on google search terms related to retail banking products, viz. housing loans, educational loans, vehicle loans and other personal loans. The raw index is erratic between the pre-Covid and recovery phases. However, the modified index, linked to stock market returns, depicts more consistent growth. The difference may be due to the fact that the stock market is forward looking. The steady growth, in the modified index, portrays optimistic consumer expectations about the future, though the current scenario may be bleak.

The fourth chapter, by Gargi Sanati, is on *INR Settlements in the Era of Friend Shoring*. The author observes that settlements in domestic currency depend on the bargaining power of a nation. This requires the following promotional measures for India: (1) invoicing more of its imports in INR (2) reducing reliance on imports and becoming a major supplier in the global chain, and (3) promotion of exports by providing financial incentives in the production cycle, especially to SMEs.

Risk Management in Financial Sector

The fifth chapter, on *Mergers and Systemic Risks of Large Banks in India*, is written by Anjan Roy. It is the first one on Risk Management issues. The results indicate that the systemic risk of banks have increased after the mergers. However, it has been more for the non-merged banks and particularly the DSIBs, owing to their higher growth. While the private banks have sufficient capital to meet their business and systemic risks, the recently merged public sector banks have been strengthened by capital infusion as well as their steady growth in earnings during the transition phase.

In the sixth chapter, *Operational Risk Management: Principles, Practice and Preparedness among*

Indian Banks, Richa Verma Bajaj makes an attempt to assess the readiness of banks in India with respect to the Basel Principles of Sound Management of Operational Risk. The study shows that operational risk capital charges are higher for big banks. It finds that operational risk-weighted assets to total risk-weighted assets are in the range of 7 to 13 percent for public sector banks and 9 to 16 percent for private sector banks.

The seventh chapter, by Tasneem Chherawala, explores the important subject of *Model Risk Management in Credit Risk Models*. Major concerns may arise from large-scale Credit Risk model usage. Because of a defective model, its opacity or misuse, an organization suffers operational losses, is subject to regulatory penalties or faces adverse reputational impact. Thus, model validation, governance and transparency have become key oversight areas. This chapter provides a summary of best practices and regulatory expectations for model risk management. It describes the appropriate qualitative methods and statistical techniques for validation of credit risk models and identifies the remedial measures that may need to be adopted for improving model performance.

The eighth chapter, on *Determinants of Systemic Risk of NBFCs*, is written by Sanjay Basu. It tries to analyse the systemic risk contribution of large NBFCs in India and examine the factors which govern such risks. The conclusion is that, the Covid-19 crisis was the most severe and prolonged source of systemic risk to the NBFC sector. Before the crisis, the systemic threat of NBFCs depends on their balance sheet and financial ratios. During the pandemic, NBFC systemic risk is driven by the severity of Covid outbreak and the ratio of fiscal deficit to GDP. The chapter has serious implications for capital charges on systemically important NBFCs, macroprudential regulation for NBFCs and conduct of stress tests by banks and FIs.

In the ninth chapter, *Green Finance Market in India: Trends, Status and Potential for Bank Lending*, Arindam Bandyopadhyay, Anjan Roy and M. Manickaraj discuss the preparedness of Indian banks for climate change. The study reviews climate finance initiatives, and evaluates

sectoral positions in terms of environmental risk and schemes for financing green and renewable energy. It critically examines the scope for green finance in India, the linkage with economic growth and the sustainability of banking business. The chapter highlights important relationships between Environmental, Social and Governance (ESG) scores and credit risk rating and recommends key policies for enhancing green finance by banks.

Digital Technology in Financial Sector

The tenth chapter is on *Central Bank Digital Currencies: Can it have a Role in Enhancing Financial Inclusion?* It is the first contribution, of IBFR 2022, on the application of Digital Technology in Banking. Deepankar Roy and Partha Ray begin with a glimpse of financial inclusion problems in developing economies and the beneficial role of technology. Thereafter, the chapter delves into the risks to the banking sector from CBDCs and the key design choices. It highlights the opportunities and challenges of CBDC, in India, for financial inclusion. One of the key observations is that the ecosystem needs to develop an appropriate CBDC design backed by adequate financial literacy to achieve high impact of financial inclusion.

In the eleventh chapter, *Emerging Technologies and Cybersecurity*, Alka Vaidya discusses the potential of Artificial Intelligence, Machine Learning and Blockchain in the domain of Cybersecurity. The chapter also focuses on the possible loopholes in these technologies which may make them susceptible to cyberattacks and financial frauds. It is essential for banks to pay adequate attention to such threats and their likely impact on overall cyber security and customer data protection.

In chapter twelve, *Advancing Digital Financial Inclusion by Leveraging Business Correspondent Model: Policies and Strategies*, Naveen Kumar, M. Manickaraj and Sunil Kulkarni argue that access to affordable and quality financial services is essential for inclusive growth and development. The Business Correspondent (BC) framework is a unique and popular digital banking model, across the globe. The study analyses the

various policy measures undertaken for the development of the BC model, their progress and strategies to be adopted for deepening digital financial inclusion in India.

HR and Strategy

Chapter thirteen, *Towards a Socio-Behavioural Model of People Risk Management in Banks*, is authored by B. Ashok and Shomi Srivastava. It attempts to explore the ways of developing an organisational culture based on the principles of risk management in banks by positioning people risk in focus. The study tries to understand the terms 'people risk' and 'conduct risk', draws from the scholarship on socio-behavioural approach to misconduct risk, critical examination of some popular models like the 'fraud-triangle', social and interpersonal dynamics of unethical behaviour and the role of organisations.

In chapter fourteen, *Impact of Business Strategy on Bank Profitability*, Kaushik Mukerjee and Arindam Bandyopadhyay focus on the type of strategies adopted by banks, with higher profitability, in order to create a strategy-profitability framework. This study also investigates how revenue diversification affects risk-adjusted profitability of select scheduled commercial banks in India, in a panel data framework. An examination of how the dynamics of ownership impact profitability has been conducted as well.

The last chapter, *Revisiting 'Loan Melas': Qualitative Study and Analysis of Practice in Credit Marketing*, looks at the practice of 'loan melas' as a phenomenon through certain qualitative frameworks revealing their antecedents, the current practice and their consequence for credit growth and quality. Sarita Bhatnagar and Anjan Roy attempt to discern the theoretical rationale of the practice and recognize its valuable contribution in the credit marketing process. The study finds that 'loan melas' provide external influence on the flow of bank credit, and a complement to branch-based models for responsible lending and borrowing.

We are grateful to the esteemed reviewers of all the chapters of IBFR 2022, for their kind comments and suggestions. They are: Shri Atah Omar Basheer, Shri. G. Bharankumar, Shri. Indranil Bhattacharyya, Shri Krishnan Chari,

Dr. Saibal Ghosh, Shri Ganesh Kumar, Dr. Bapaditya Mukhopadhyay, Dr. Parthapratim Pal, Dr. Pradiptarathi Panda, Dr. K. Srinivasa Rao, Dr. Ashish Saha, Shri Bazil Shaikh, Ms. R. Shashikala, Dr. Ashish Srivastava and Shri Omkar Shivraj Swami. Their detailed observations have gone a long way towards a substantial improvement in the quality of the report.

We are also indebted to all the participants of the Round Table Discussion, on the draft chapters of IBFR 2022, held at NIBM Campus on April 6, 2023. In particular, the external experts viz., Dr. Subrata Sarkar, Shri Bazil Shaikh, Shri Neelam Damodharan and Shri Sunil Bakshi offered valuable advice on the chapters they

discussed. The entire event was interactive, insightful and enjoyable.

Needless to say, the responsibility for any errors, which remain in the chapters, lies solely with the authors. The views expressed in the Report also reflect the opinions of the authors and are not to be ascribed to National Institute of Bank Management or its Governing Board.

The first edition of this report – IBFR 2021 – received wide acclaim from readers. We hope that IBFR 2022 will also get a similar response from the audience. It contains lucid and rigorous analysis on a variety of subjects, which are relevant to the banking and financial sector in India and abroad. Happy Reading!

JULY 2023

PARTHA RAY
ARINDAM BANDYOPADHYAY
SANJAY BASU



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THE *India Banking and Finance Report (IBFR) 2022* is a comprehensive anthology of articles on the domestic and global financial sector. The report covers a wide vista of important subjects, from recent macro-financial developments to green finance, model risk to people risk and CBDCs to loan melas. Each issue is addressed with cogent and incisive theoretical and data analysis. While the observations and recommendations are factual, the style is crisp, clear and simple. The report highlights the challenges and opportunities in the banking and financial sector in an integrated and turbulent world, necessary reforms and prudential measures to ensure sustainable growth and financial stability, as well as lessons for the future. Hopefully, IBFR 2022 will motivate informed discussions on the BFSI sector among practitioners, regulators and policymakers.

UNLIKE institutional reports, the *India Banking and Finance Report 2022* blends unbiased and data-founded analysis that helps understand certain special features of India's financial markets and provides insights into future course of actions required to address current or potential concerns. This is a very useful work for academics, practitioners and policymakers alike and, of course, the students of banking and finance.

Shri N.S. Vishwanathan *Former Deputy Governor, Reserve Bank of India, and Senior Fellow, IIM Bangalore*

THE articles cover a gamut of subjects from monetary policy, credit risk and human resource strategy to new-age opportunities like digital transformation. I am particularly happy that the report addresses emerging and critical topics like climate finance. I strongly recommend bankers to deliberate these well-researched papers and operationalise the same in their strategies.

Shri B. Sambamurthy *Formerly: Chairman, Corporation Bank, Director, IDBBI, and Chairman, NPCI*

THE papers bear the stamp of erudition and efforts put in by the respective authors. The findings and rich references would be of immense benefit to those who are engaged in policymaking and regulation as also to the practising bankers and academicians.

Shri B.V. Chaubal *Chairman, CDSL, and Former Deputy Managing Director, State Bank of India*

THE report provides a 360-degree view of the evolution of the banking system in India, the prudential policies of Indian banks, the challenges faced by them in an increasingly integrated world, and their efforts to be future-ready. Written in a lucid way, the IBFR is a must-read for everyone in academics and policy circles and anyone interested in the role of the banking system in the growth and development of a nation.

Prof. Subrata Sarkar *Professor and Dean of Faculties, IGIDR, Mumbai*

THE report is a useful compendium of thought-provoking articles on the state of India's financial sector. In addition to the usual areas of markets and financial risk management, it focuses on two emerging issues - digital disruption and strategies for the financial sector in view of increasing competition and uncertainty. The report also includes discussions on new areas like green finance and retail banking sentiment index.

Prof. Ashok Banerjee *Director, Indian Institute of Management Udaipur*

THIS volume is rich in insights about a wide range of current issues as well as emerging areas such as green finance and CBDCs, all backed by rigorous research. It deserves to be read by practitioners, policymakers and researchers.

Dr. Niranjan Rajadhyaksha *Executive Director, Artha India Research Advisors*



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