INCLUSIVE FINANCE INDIA REPORT 2023

EDITED BY
Ramesh Srivatsava Arunachalam

An ACCESS Publication

Inclusive Finance India Report 2023

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First published in 2023 by

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ACCESS Development Services
22, Ground Floor, Hauz Khas Village
New Delhi 110016

ISBN 978-81-955245-9-4

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Contents

List of Tables, Figures, Boxes, Appendices and Abbreviations iv

Foreword xiii

Preface and Overview xvii

1. Micro Finance Marching On 1

2. The Banking Channel of Financial Inclusion: Credit Where Credit's Due 13

3. SHGs and SHG Federations: Moving Towards Sustainability? 31

4. Financial Inclusion and Rural Co-operative Banks 49

5. MSMEs: The Pillars of India's Economic Strength 61

6. Digital Financial Services in India 79

7. Artificial Intelligence and Financial Inclusion in India: A New Dawn 95

8. Recoding Women's Financial Inclusion 107

9. The Measurement of Financial Inclusion: The RBI Experience in India 119

10. Inclusive Insurance and Pensions: State of Progress in India 135

About the Authors 151

List of Tables, Figures, Boxes, Appendices and Abbreviations

Tables

1.1:	Comparison of Microfinance Markets	1
1.2:	The Broad Microfinance Sector	2
1.3:	Select Indicators of MFIs	3
1.4:	Select Indicators of Financial Performance	4
1.5:	Top five MFIs	4
1.6:	Top Five States by Microfinance Portfolio	4
1.7:	High Penetration States – Client and Credit (March 2023)	5
1.8:	Portfolio at Risk Comparison between Sector and MFIs	6
1.9:	Bucket-wise PAR Comparison across Institutional Types	6
1.10:	Five States with highest PAR	6
1.11:	Largest Lenders to MFIs	7
2.1:	Gender and Geography-wise Distribution of Credit to Small Borrower Accounts of Scheduled Commercial Banks (March 2023)	22
2.2:	Share of Bank Credit for MSE	23
3.1:	Details of Thrift and Credit Cooperatives Promoted by Sahavikasa	34
3.2:	Savings Linked and Credit Linked SHGs	35
3.3:	Savings and Loan Data of the Best-performing States	36
3.4:	Status of Stree Nidhi in Andhra Pradesh and Telangana as on 31 March 2023	43
3.5:	Stree Nidhi and Bank Linkage Scenario in Andhra Pradesh and Telangana	43
4.1:	Performance of PACS in India	50
4.2:	Financial Inclusion by Co-operative Banks (in ₹ Billion)	52
4.3:	Profile of Rural Co-operatives – As of March 2021 (Amount ₹ Billion)	53
4.4:	Select Indicators of PACS' Performance	54
4.5:	Deposits of DCCBs (₹ Billion)	54
4.6:	KCC Performance	55
4.7:	Deposits with DCCBs as of March each year (₹ Billion)	56
4.8:	Profile of Short-term Rural Co-operatives as of March 2021 (₹ Million)	56
5.1:	Factsheet of MSME (Udyam) Registration as on 9 October 2023 (in millions)	62
5.2:	Credit Flow to the MSME Sector by SCBs (number of accounts in millions, the amount outstanding in ₹ billion)	64
5.3:	Bank Credit to MSMEs (number in million, amount in ₹ billion)	66
5.4:	MSME Asset Quality Profile of SCBs (Percentages)	67

5.5: PMMY, 2018–19, 2019–20, 2020–21, and 2021–22 Agency-wise Performance - Sanction Amounts (in ₹ billion) 70
5.6: Core Operations of SIDBI (in ₹ billion) 71
5.7: Progress in MSME Financing Through TReDS 73
6.1: Percentage of CIC to GDP 81
6.2: Estimated Savings from DBT 82
7.1: Comparative Analysis of Traditional Versus Alternative AI-Based Credit Scoring 98
8.1: Financial Inclusion Measurement Framework 113
9.1: Strengths and Weaknesses of the RBI FI-Index 122
9.2: RBI FI-Index, from March 2017-2023 123
9.3: RBI FI-Index Sub-Indices from March 2017-March 2021 125
9.4: RBI FI-Index Sub-Indices Absolute and Percentage Growth Analysis 126
10.1: Overview of Government Schemes 136

Figures

1.1: MFIs Gain Market from Banks 2
1.2: MFI Performance over the Years 3
1.3: Outstanding Borrowings of MFIs by Source (share %) 7
1.4: Comparison of Finance Costs and Interest Rates 7
2.1: Share of Banks- ATM and Micro-ATM Ownership 17
2.2: Gaps in Account Ownership with a Financial Institution (%, age 15+) 18
2.3: PMJDY accounts 18
2.4: Banking Outlets in Rural and Urban Locations 19
2.5: Gender Composition of Borrowers in the Banking System 19
2.6: Nominal and Real Credit by the Banking System 21
2.7: Performance of BSBDA Accounts 21
2.8: Credit Outstanding Per Account, As of End March 22
2.9: Share of Small Borrowers in Overall Bank Credit 23
2.10: Per Account Credit Outstanding for Small Borrowers 23
2.11: Share of Credit at Interest Rates 13% and Above Per Annum 24
2.12 Transaction Failure Rate of All AePS-enabled Transactions 25
2.13 Reason for not Using Their Inactive Account (% with an Inactive Account, Age 15+) 26
3.1: Key Phases in SHG Movement 32
3.2: Status of SHG-Bank Linkage 32
3.3: Region-wise Number of SHGs over the Past 15 Years 33
3.4: Average Savings per SHG over the Past 15 Years 33
3.5: Average Loan Disbursed per SHG over the Past 15 Years 35
3.6: Region-wise SHGs credit linked as on 31-03-2023 (in million) 35
3.7: Non-performing Asset (NPA) as Percentage to Loan Outstanding over the Past 15 Years 37
3.8: Region-wise Trend Analysis Status of Federations 38
4.1: Number of PACS in Indian States (in ’000s) 53
5.1: Strategic Context of MSME Financing – Stakeholder Diagram 62
5.2: Credit Flow to the MSME Sector by SCBs-Number of Accounts (in millions) 64
5.3: Credit Flow to the MSME Sector by SCBs-Amount Outstanding (₹ in billion) 64
5.4: SCB Lending to MSMEs in India across Years - No. of Accounts (all figures are year-wise percentages) 65

5.5:	SCB lending to MSMEs in India across Years - Amount Outstanding (all figures are year-wise percentages)	66
5.6:	Bank Credit to MSME Segments for Number of Accounts(in millions)	66
5.7:	Bank Credit to MSME Segments for Amount Outstanding (₹ in billion)	67
5.8:	MSME Asset Quality Profile March 2021 to March 2023 (percentages)	68
5.9:	Loans and Advances to MSMEs (all figures are % of total SFB advance) and Total Loans and Advances and Advance to MSMEs by SFBs (in ₹ billion)	69
5.10:	PMMY Agency-wise Performance, 2018–19, 2019–20, 2020–21, and 2021–22 (year-wise percentages of sanction amounts)	70
5.11:	CGTMSE Financial Year-Wise Total Number of Cases and Claims Settled (Numbers)	72
5.12:	CGTMSE Financial Year Wise Credit Guarantee Extended Amount and Claims Settled (in ₹ billion)	72
5.13:	Claims to Guarantees Percentages for Number of Cases and Amounts (in percentages)	73
6.1:	Cumulative Number of PMJDY Accounts	79
6.2:	Percentage of 15+ Individuals with a Bank Account	79
6.3:	Number of Villages Not Having a Banking Access Point within 5 km	80
6.4:	Falling Cost of Data and Smartphone Ownership	81
6.5:	Growth of UPI Payments	82
6.6:	LinkedIn Opinion Poll Result: Effect of DFS on Cost of Financial Services	87
6.7:	LinkedIn opinion Poll Result: Effect of DFS in reaching new customer segments	88
6.8:	LinkedIn Opinion Poll Result: Effect of DFS on Productivity, Efficiency and Profitability	88
6.9:	LinkedIn Opinion Poll Result: Fraud Risks in accessing DFS	88
6.10:	LinkedIn Opinion Poll Result: Adequacy of safeguards against risks in DFS	89
7.1:	Applications of AI in Financial Inclusion (Exhaustive)	96
7.2:	AI-Led Alternative Credit Scoring to Enhance Inclusion	98
7.3:	AI-Based Chatbots and Voice Robos to Enhance Process and Digital Literacy	100
7.4:	AI-Led Fraud Detection to Facilitate Wider Reach and Enable Greater Inclusion	101
7.5:	AI-Led Innovative Underwriting in Agricultural Finance to Facilitate Inclusion	103
9.1:	The Strategic Context of the RBI Financial Inclusion Index	120
9.2:	RBI Financial Inclusion Index Sub-Indices Description and Weights	121
9.3:	RBI FI-Index, from March 2017–March 2023	124
9.4:	RBI FI-Index Sub-Indices, March 2017–March 2021	125
9.5:	RBI Governor's Remarks on the Financial Inclusion Index and Policy Directions from It	128
9.6:	Antardrishti, the RBI Financial Inclusion Dashboard Inaugurated by RBI Governor on 5 June 2023 for RBI's Internal Use	129
9.7:	Real-Time Measurement of the Financial Inclusion Index from Antardrishti Using a NextGen AI Super Model	132
10.1:	Ecosystem for Inclusive Insurance and Pension in India – Stakeholder Diagram	135
10.2:	Key PMJJBY Trends	138
10.3:	Key PMSBY Trends	138
10.4:	Total Ayushman Cards Issued and Total Hospital Admissions (month-wise)	139
10.5:	APY-Number of Subscribers and AUM Growth	139
10.6:	Performance of Micro-insurance Business in the Life Insurance Sector – Individual New Business (Policies)	141
10.7:	Performance of Micro-insurance Business in the Life Insurance Sector – Individual New Business (Premiums)	141

10.8: Performance of Micro-insurance Business in Life Insurance Sector – Group New Business (Lives Covered) 141
10.9: Performance of Micro-insurance Business in Life Insurance Sector – Group New Business (Premiums) 142
10.10: Meta-Analysis Process Focussed on Inclusive Insurance in India 144
10.11: Key Enablers 145

Boxes

2.1: What does it Mean to be Poor (and Excluded) in Urban India? 16
2.2: How does a Migrant Send Money Home? 20
2.3: Hardships in Accessing Payments in Odisha— Survey of Last Mile Challenges in MGNREGA Wage Payments in Select Blocks (May 2021) 25
3.1: The Sustainable Impact of Savings-Based Models by Sahavikasa and Self Employed Women's Association (Sewa) Bank 34
3.2: National Conference on SHG Federations Conducted by APMAS 40
3.3: Promotion of 'Shg Bank' on the Model of 'Stree Nidhi Cooperative Federation' 43
3.4: Revolutionising Agriculture Through Msp Operations: A Serp Initiative In Telangana 44
3.5: Transforming Lives Through Hygienic Food Delivery – Didi Ki Rasoi 45
4.1: Importance of Co-operatives 51
4.2: Normal SB Account and Financial Inclusion - An Argument 52
5.1: SIDBI's Technological Empowerment For MSMES 71
5.2: SIDBI's Championing and Nurturing Entrepreneurship 72
5.3: Harnessing the Power of AI: Lendingkart's Innovative Approach to MSME Lending 74
5.4: Kinara Capital: Pioneering Inclusive Lending with AI 75
6.1: ONDC: A ₹ 15,000 Billion Opportunity 83
6.2: OCEN 4.0 84
6.3: Surging Market for Digital Lending 84
6.4: The Agri-Tech Torch-Bearers 85
6.5: The Digital Personal Data Protection Act 2023 (DPDPA) 89
7.1: Integration of CIBIL Credit Report and SatSure Farm Report 104
8.1: Gender Disaggregated Data should Help Answer the Following Questions 112
9.1: The Uniqueness of the RBI FI-Index Methodology 122
10.1: Micro-Insurance Coverages 140
10.2: Bundled Policies, PPB Tata AIG Group Accident Guard Policy @ ₹399 140
10.3: The Spectacular Journey of VimoSEWA 143

Appendices

A.1.1: Client Penetration and Credit Penetration Ratio 9
A.1.2: Unique Clients to Population Ratio 10
A.2.1: Share of Credit at Interest Rates 13% and Above Per Annum 28
A.2.2: Reasons for not Having an Account (% without an Account, age 15+) 28

List of Abbreviations

AAY	Antyodaya Anna Yojana
AePS	Aadhaar-enabled Payments System
AI	Artificial Intelligence
AML	Anti-Money Laundering
AMICE	Association of Mutual Insurer and Insurance Co-operative in Europe
AMSY	Adivasi Mahila Sashakt Yojana
ANBC	Adjusted net Bank Credit
AP	Andhra Prades
APCNF	Andhra Pradesh Community-Managed Natural Farming
API	Application Programming Interface
APU	Azeem Premji University
APY	Atal Pension Yojana
BC	Business Correspondent
BF	Business Facilitator
BHIM	Bharat Interface for Money
BMR	Benchmark Regulations
BNPL	Buy Now Pay Later
BOP	Base of Pyramid
BPL	Below Poverty Line
BSBD	Basic Savings and Bank Deposit
BSBDA	Basic Savings Bank Deposit Account
B2B	Business to Business
CAGR	Compound Annual Growth Rate
CA Grameen	CreditAccess Grameen
CASA	Current Account Saving Account
CBDC	Central Bank Digital Currency
CBRM	Community Based Recovery Mechanism
CBS	Core Banking System
CCL	Cash Credit Limit
CCFR	CIBIL Credit and Farm Report
CD	Credit-Deposit
CFT	Combating the Financing of Terrorism
CGSSD	Credit Guarantee Scheme for Subordinate Debt
CGTMSE	Credit Guarantee Fund Trust for Micro and Small Enterprises
CIBIL	Credit Information Bureau India Limited
CIC	Cash in Circulation
CICO	Cash-In-Cash-Out
CIF	Community Investment Fund
CLFs	Cluster Level Federations
CPI	Consumer Price Index
CPMS	Central Process Monitoring System
CRAR	Capital to Risk Assets Ratio
CRIF-High Mark	Centre for Research in International Finance High Mark
CRR	Cash Reserve Ratio
CSC	Common Service Center

CSO	Civil Society Organisations
CSP	Customer Service Point
CTS	Cheque Truncation System
DAY-NRLM	Deendayal Antayodya Yojana-National Rural Livelihoods Mission
DBT	Direct Benefit Transfer
DCCB	District Credit Cooperative Bank
DFID UK	Department of International Development, United Kingdom
DFS	Digital Financial Services
DKR	Didi Ki Rasoi
DMT	Domestic Money Transfer
DPDPA	Digital Personal Data Protection Act
DPI	Digital Public Infrastructure
DSCB	Domestic Scheduled Commercial Bank
DWCRA	Development of Women and Children in Rural Areas
EC	Executive Committee
ECLGS	Emergency Credit Line Guarantee Scheme
e-KYC	Electronic KYC
EVA	Electronic Virtual Assistant
FATCA	Foreign Account Tax Compliance Act
FB	Foreign Bank
FES	Foundation for Ecological Security
FII	Financial Inclusion Index
FPC	Farmer Producer Companies
FPCs	Farmer Producer Companies
FPO	Farmer Producer Organisation
FSP	Financial Service Provider
FY	Financial Year
G2P	Government to Person
GCC	General Credit Card
GDP	Gross Domestic Product
GIZ	Gesellschaft für Inter-nationale Zusammenarbeit
GLP	Gross Loan Portfolio
GMV	Gross Merchandise Value
GNPA	Gross Non Performing Asset
GoI	Government of India
G-SEC	Government Securities
GSTN	Goods and Services Tax Network
HDI	Human Development Index
IAY	Indira Awaas Yojana
ICMIF	International Cooperative and Mutual Insurance Federation
ICT	Information and Communication Technology
IIFL	India Infoline Limited
III	Insurance Institute of India
IFAD	International Fund for Agriculture Development
IMBP	Individual Maximum Borrowing Limit
IMPS	Immediate Payments System
IPPB	India Post Payments Bank

IRACP	Income Recognition, Asset Classification and Provisioning
IRDA	Insurance Regulatory and Development Authority
IT	Information Technology
ITDA	Integrated Tribal Development Agency
IOT	Internet of Things
JAM	Jan-Dhan, Aadhaar and Mobile
JLG	Joint Liability Group
KCC	Kisan Credit Card
KYC	Know Your Customer
LAMPS	Large Area/Adivasi Multipurpose Societies
LIC	Life Insurance Company
LPG	Liquefied Petroleum Gas
MCCO	Mutuals, Co-operative and Community Based Organisations
MDP	Multi Dimensional Poor
MEPMA	Mission for Elimination of Poverty in Municipal Areas
MF	Marginal Farmers
MFI	Microfinance Institutions
MFIN	Microfinance Institutions Network
MGNREGA	Mahatma Gandhi National Rural Employment Guarantee Act
MI	Micro-Insurance
ML	Machine Learning
MoC	Ministry of Cooperation
MoU	Memorandum of Understanding
MPCS	Multi Purpose Credit Societies
MSCSA	Multi State Cooperative Act
MSE	Micro and Small Enterprise
MSME	Micro, Small and Medium Enterprise
MSP	Minimum Support Price
MUDRA	Micro Units Development and Refinance Agency
MYRADA	Mysore Resettlement and Development Agency
NABARD	National Bank for Agriculture and Rural Development
NABARD-GIZ	National Bank for Agriculture and Rural Development and Gesellschaft für Inter- nationale Zusammenarbeit
NACH	National Automated Clearing House
NAFSCOB	National Federation of State Cooperative Bank
NBFC	Non-Banking Financial Company
NCD	Non-Convertible Debentures
NEEMSIS	Networks, Employment, Debt, Mobility and Skills in India Survey
NFC	Near Field Communication
NFHS	National Family Health Survey
NFIS	National Financial Inclusion Strategy
NFSA	The National Food Security Act, 2013
NGO	Non-Governmental Organisation
NHB	National Housing Bank
NLP	Natural Language Processing
NODC	Non Overdue Cover
NPA	Non-Performing Asset

NPCI	National Payments Corporation of India
NPL	Natural Language Processing
NPS	National Pension System
NREGA	National Rural Employment Guarantee Act
NRLM	National Rural Livelihoods Mission
NSAP	National Social Assistance Programme
NSS	National Sample Survey
NSTFDC	National Schedule Tribes and Finance Development Corporation
NULM	National Urban Livelihoods Mission
OBC	Other Backward Classes
OCEN	Open Credit Enablement Network
ONDC	Open Network for Digital Commerce
OSS	Operational Self Sufficiency
P2M	Person to Merchant
P2P	Person to Person
PACS	Primary Agriculture Credit Society
PAHAL	Pratyaksh Hanstantrit Labh
PAIS	Personal Accident Insurance Scheme
PAN	Permanent Account Number
PAR	Portfolio at Risk
PB	Payment Bank
PCARDB	Primary Co-operative Agriculture Rural Development Bank
PDS	Public Distribution System
PFRDA	Pension Fund Regulatory and Development Authority
PMFBY	Pradhan Mantri Fasal Bima Yojana
PM-JAY	Pradhan Mantri Jan Arogya Yojana
PMJDY	Pradhan Mantri Jan Dhan Yojana
PMJJBY	Pradhan Mantri Jeevan Jyoti Bima Yojana
PMMY	Pradhan Mantri MUDRA Yojana
PMSBY	Pradhan Mantri Suraksha Bima Yojana
POS	Point of Sale
PRADAN	Professional Assistance for Development Action
PSB	Public Sector Bank
PSL	Priority Sector Lending
PSU	Public Sector Undertaking
PVB	Private Bank
PWCS	Primary Weavers Credit Society
PWD	Persons with Disabilities
QMR	Quarterly Monitoring Report
RBI	Reserve Bank of India
RCB	Rural Co-Operative Banks
RCT	Randomised Controlled Trial
ROA	Return on Assets
RPCD	Rapid Planning Credit Department
RRB	Regional Rural Bank
RXIL	Receivable Exchange of India Limited
SAO	Seasonal Agricultural Operations

SBI	State Bank of India
SC	Scheduled Caste
SCARDB	State Co-Operative Agriculture and Rural Development Bank
SCBs	Scheduled Commercial Banks
SCB	State Cooperative Banks
SDG	Sustainable Development Goals
SDK	Software Development Kit
SEBI	Securities and Exchange Board of India
SERP	Society for Elimination of Rural Poverty
SEWA	Self Employed Women's Association
SF	Small Farmers
SFB	Small Finance Bank
SGSY	Swarnjayanti Gram Swarozgar Yojana
SHG	Self-Help Group
SHPIs	Self-Help Promoting Institutions
SIDBI	Small Industries Development Bank of India
SKDRDP	Shri Kshethra Dharmasthala Rural Development Project
SLR	Statutory Liquidity Ratio
SMA	Special Mention Account
SMBs	Small and Medium-Sized Businesses
SOPs	Standard Operating Procedures
SRLM	State Rural Livelihoods Mission
ST	Scheduled Tribes
TNCWWB	Tamil Nadu Construction Workers Welfare Board
TPDS	Targeted Public Distribution System
TReDS	Trade Receivables Discounting System
UAM	Udyog Aadhaar Memorandum
UCB	Urban Cooperative Bank
UID	Unified Identification Number
UIDAI	Unique Identification Authority of India
UNDP	United Nation Development Program
UPI	Unified Payments Interface
USSD	Unstructured Supplementary Service Data
UT	Union Territory
VC	Venture Capital
VOs	Village Organisations
WASH	Water, Sanitation, and Health
WRF	Warehouse Receipt Financing
YoY	Year over Year

Foreword

The successful and much-celebrated G20 Presidency of India this year has been a significant milestone in bolstering the country's leadership in the global sphere. With G20 being the 'premier forum for international economic co-operation', the adoption of the New Delhi Leader's Declaration with full consensus among G20 members helps to put India at the forefront of the discourse on the global development agenda.

The Financial Inclusion Plan 2023 document of the G20 Global Partnership for Financial Inclusion (GPFI), while acknowledging 'the significant role of digital public infrastructure (DPI) in helping to advance financial inclusion', applauded India for 'achieving over 80 per cent bank account penetration by leveraging DPIs, a journey that would otherwise have taken 47 years through traditional means.' It is evident that India's financial inclusion story, riding on the success of DPI, is a shining example for the world to learn from.

The GPFI Financial Inclusion Plan 2023 identified the two key priorities for the next three years – (i) Digital financial inclusion - promoting the deployment of secure and responsible digitally-enabled financial services and products to provide financially excluded and underserved populations, with a focus on effective access, at a cost affordable to customers and sustainable for providers, and (ii) Micro Small and Medium Enterprise (MSME) finance - improving MSMEs' access to finance through innovative methods (including digital infrastructure) for enhancing growth, resilience and exiting informality. Both of these clearly resonate with the priorities for India for building on the existing body of work and moving towards responsible and outcome oriented financial inclusion, and are brought out in this year's Inclusive Finance India Report as well.

This seems to be a year of milestones. This is the 10th year of the ambitious Pradhan Mantri Jan Dhan Yojana (PMJDY) – 510 million bank accounts opened as of November 2023 with over ₹ 2,102 billion in deposits, which has been a resounding success. The ground-breaking progress on leveraging DPI has enabled 'account inclusion' to evolve into 'payment inclusion' by helping to overcome the barrier of physical access and reducing transaction costs. The role of technology platforms and fintech to support this mission through tech-led tools is already evident from the multiple models being developed and tested. Now is the time for financial institutions to optimise and leverage this base to design and deliver relevant financial products and services through partnerships and move the needle from inclusion towards financial resilience and well-being of customers.

The world's largest programme for promoting women's access to finance – the Self-Help Group (SHG) movement in India – has completed 30 years. With 13.4 million SHGs covering 160 million households across the country, both the National Bank for Agriculture and Rural Development (NABARD) and the National Rural Livelihoods Mission (NRLM) need to be commended for this spectacular achievement. The future direction of the SHGs and the SHG federations should be to push harder with the bank linkages to promote the livelihoods of women and enhance incomes.

With Sa-Dhan celebrating its 25 years, this year also marks a milestone for the Joint Liability Group (JLG) model of microfinance delivery. With a base of 137 million unique clients and ₹ 3,500 billion loan portfolio outstanding, the sector is going strong and has shown resilience, having overcome the shocks of the COVID-19 pandemic and adapted to the new regulatory regime. Going by the performance of FY

2023, it is evident that the impact of the pandemic is behind us, with the apparent revival of growth and profitability along with improving portfolio quality and collection rates, supported by renewed interest from investors and lenders.

The issue of graduation of clients from group-based microcredit to larger (individual) enterprise/ business loans continues to be a question for both the SHG and JLG channels; products and models are being tested towards this which need to be scaled soon for real outcomes of access to finance on incomes. The role of commercial banks, Small Finance Banks (SFBs), Non-Banking Finance Companies (NBFCs), and fintechs is critical in serving the business loan requirements of micro and small enterprises. The Prayaas Scheme of the Small Industries Development Bank of India (SIDBI) is a significant initiative in this direction, being operational in 400+ districts of the country and having over 85 per cent of clients as women.

This year is also the 50th Anniversary of SEWA Bank, possibly India's oldest inclusive finance institution. Late Elaben Bhatt's vision lives on through this women-owned and run bank, a model which has inspired several women's self-employment and financial inclusion programmes.

India's current female labour force participation rate (LFPR) has shown improvement from 32.8% (2022) to 37% (2023) as per the Periodic Labour Force Survey Report released by the Ministry of Statistics and Programme Implementation in October 2023. The renewed focus of the Government of India on *Nari Shakti* – shifting gears from 'women development' to 'women-led development' is a significant welcome endeavour. This agenda, however, needs specialized strategies given the unique barriers that women face in actively participating in the economy. The Global Findex is quite encouraging in reporting that the gender gap in bank account ownership in India has been closed as evidenced from Findex data - the percentage of men having an account with a formal financial institution was 17% more than the percentage of women in 2011, a gap that has been eliminated by 2021. The gap in access to credit however persists with the percentage of women borrowers at 34% in March 2023, although an improvement from 21% in 2014.

For real progress towards the agenda of *Nari Shakti,* access to financial services for women is an important input which needs, to begin with, development of 'suitable' products and processes for 'low income' and 'unorganised sector' women requiring financial institutions to graduate to gender intentional design. Second, monitoring and measurement of progress through the collection and reporting of gender-disaggregated data at multiple levels will be critical.

The GPFI Financial Inclusion Plan also underscores the significance of updating and expanding the monitoring of financial inclusion, highlighting the need for 'improvements to identify which indicators can best capture not only whether the financial services are available and accessible to individuals and MSMEs, but also if they really serve clients' needs and allow them to achieve the benefits promised by financial inclusion.' While the Global Findex survey provides a periodic measurement of the progress on financial inclusion, the home-grown Reserve Bank of India's Financial Inclusion Index (FI-Index) comprehensively covers the dimensions of access, usage and quality through 97 indicators. Over time, this will help build useful trends to learn and redesign strategies, and could potentially be developed further to include indicators on outcomes.

The Inclusive Finance India Report continues to provide a comprehensive review of the progress of financial inclusion in the country, tracking performance, highlighting achievements, and flagging gaps and issues that need to be addressed at the levels of both policy and practice. It is a much-awaited annual reference document for policymakers, investors, practitioners, academia, and students, for data trends and insights on various thematic cuts pertaining to financial inclusion. The Report is sponsored by the Bill and Melinda Gates Foundation, Mastercard, SIDBI, and Rabobank Foundation as the long-term steadfast supporters. The Report this year has additionally been supported by IDFC FIRST Bank, SBI and HSBC. I would like to express my deep gratitude to all sponsors for their unstinted and continued association with this effort, without which it would not have been possible for ACCESS to bring out the Report year after year.

As always, ACCESS has been fortunate to have seasoned sector experts to help write the Report. I would like to thank Ramesh Arunachalam for agreeing to edit the Report along with authoring four of the ten chapters. He has supported all the other Chapter authors with patience, offering suggestions

on chapter structure, making editorial comments, and helping to bring the Report together as a cogent cohesive document. I also take this opportunity to thank all the chapter authors, for their diligent efforts and for providing great insights through their analysis and writing of their respective thematic chapters. I would like to thank N Srinivasan (Micro Finance Marching On); Gaurav Gupta (The Banking Channel of Financial Inclusion: Credit Where Credit's Due); C S Reddy and his team (SHGs and SHG Federations: Moving Towards Sustainability?); R Bhaskaran (Financial Inclusion and Rural Co-operative Banks); Prabhat Labh (Digital Financial Services in India); and Indradeep Ghosh and Misha Sharma (Recoding Women's Financial Inclusion) for their contributions.

Finally, I would like to thank my small team at the Inclusive Finance Secretariat for providing support in terms of data consolidation and analysis, copy editing, and coordination with the authors and printers, among others. The team, led by Sudipto, and supported by Akash, Satyan and Shilpa, has tirelessly worked to bring out a high-quality Report. My sincere gratitude and appreciation to the ACCESS CEO Vipin Sharma for his visionary leadership and his persistence in pushing the team for high standards of quality, and for his technical inputs and thinking through with the editor on this year's Report.

The 18th edition of the Inclusive Finance India Report will be launched at the 20th (milestone) Inclusive Finance Summit being organised by ACCESS with the Department of Financial Services, Ministry of Finance, Government of India as the Co-host.

I hope the Report will serve the purpose of providing an insightful view of the 'state of the sector' in a ready reckoner form for use by a diversity of stakeholders and help in contributing to the agenda of universal financial inclusion in the country, as also serve as a knowledge document for other markets.

Radhika Agashe
Executive Director
(November 2023)

Preface and Overview

India's Financial Inclusion Journey: The Road Travelled and the Path Ahead

A TRANSFORMATIVE HAPPENING IN INCLUSIVE FINANCE

Financial inclusion is fundamentally about expanding timely access to a wide range of formal financial services needed by vulnerable, low-income, and excluded groups at an affordable cost. As India embarks on its mission to become a $5 trillion economy, bridging gaps in access to finance is pivotal for enabling the equitable growth and shared prosperity required to achieve this goal. Accordingly, this year's Inclusive Finance India Report provides a comprehensive analysis of India's multi-dimensional financial inclusion landscape, delving into the progress made, persistent gaps, innovative approaches, key enablers, and policy perspectives across a diverse range of thematic areas. As the Editor of this volume, it is my privilege to present an overview synthesising the report's salient aspects and reflecting on the road ahead to advance India's financial inclusion agenda.

Let me begin this overview with the subtle yet profound transformation in inclusive finance that has quietly swept across the streets of India's towns, cities, and villages. It is a change most visible even among tea stall owners, vegetable vendors, and *samosa* sellers who occupy numerous street corners. Where once handling money and change posed hassles for these microentrepreneurs, today, digital payment QR codes are proudly displayed. Financial inclusion has, thus, reached the grassroots level as these folks seamlessly interface with the central banking payment system. Customers from all walks of life can patronise these small businesses cash-free, and owners have embraced the efficiencies that technology facilitates.

How has this been possible? The key to this remarkable transformation has been India's bold move towards revolutionising its payment infrastructure, a journey marked by the introduction of the Unified Payments Interface (UPI). This groundbreaking initiative, expertly led by the National Payments Corporation of India (NPCI) and carefully fostered by the Reserve Bank of India (RBI), started as a visionary project and has since evolved into a digital powerhouse. It has profoundly influenced the financial habits of millions, becoming a pivotal moment in the global narrative of financial inclusion. In October 2023, UPI surpassed a staggering 11.4 billion transactions, setting a new benchmark with transaction values exceeding ₹17,600 billion. This is financial inclusion at its absolute best.

What insights and lessons can be drawn from UPI's remarkable journey for financial inclusion globally? UPI stands as a beacon in the world of inclusive finance, showcasing how a user-centric design can revolutionise digital payments. At its core, UPI's philosophy prioritises the end-user, making it a model of intuitive and inclusive financial technology. UPI's success hinges on its simplicity, using a Virtual Payment Address (VPA) to simplify transactions, thereby lowering the entry barrier and making it accessible to those with minimal financial literacy. This simplicity is a cornerstone in promoting financial inclusion, allowing a wider demographic to participate in the digital economy.

Consistency across platforms is another hallmark of UPI, offering a uniform experience, whether through a bank or third-party app. This consistency broadens its accessibility, crucial for financial inclusion, as it allows users to transition between platforms effortlessly. Real-time transaction notifications in UPI build trust and control, essential for inclusive participation in the financial system. The versatility of UPI, handling everything from peer-to-peer transfers to merchant transactions, caters to diverse financial needs, furthering financial inclusion.

The minimal transaction costs associated with UPI have democratised digital payments, extending its reach to grassroots businesses and Micro, Small and Medium Enterprises (MSMEs). Balancing security with simplicity through two-factor authentication, UPI ensures safe and user-friendly transactions, encouraging greater digital engagement. UPI's design reduces cognitive load by presenting complex banking processes in clear, intuitive interfaces, removing barriers to digital banking and enhancing financial inclusion. Its integration with various financial platforms has facilitated rapid adoption, making it a ubiquitous payment option and furthering financial inclusion.

Adaptable and scalable, UPI evolves with user needs and emerging technologies, ensuring long-term relevance and utility for a diverse user base. Its robust infrastructure and capacity to handle billions of transactions underscores its role as a key player in advancing global financial inclusion. UPI has already been adopted in many countries globally and is fast spreading to other nations.

OVERVIEW OF THE TEN CHAPTERS: SALIENT ISSUES AND HIGHLIGHTS

While UPI's role in advancing financial inclusion is central to the India story, let us now focus on the ten chapters in this report that intertwine to form the multifarious yet complex narrative of India's journey toward achieving comprehensive financial inclusion.

Chapter 1, "Micro Finance Marching On", authored by *N Srinivasan,* brilliantly narrates the significant reach of microfinance in India and its role in financial inclusion. The chapter reveals that India holds the position of having the second-largest global outreach in microfinance, only surpassed by China, boasting a client base exceeding 140 million. Srinivasan discusses the impressive resilience demonstrated by India's microfinance sector, particularly in its ability to adapt to new regulatory frameworks and its cautious expansion since the 2010 crisis in Andhra Pradesh.

Srinivasan observes that the sector has navigated the challenges of the pandemic effectively, as evidenced by a 10% increase in active loan accounts and a 20% growth in unique clients during the fiscal year 2023. Despite these achievements, he points out that the sector faced higher credit losses, impacting balance sheets and leading to the need for further equity infusions. However, the outlook remains optimistic, with investors showing renewed interest due to the sector's reasonable returns and relatively low delinquency rates. He also notes the diversification of Microfinance Institutions (MFIs) into areas such as affordable housing, solar loans, and MSME finance.

A key point Srinivasan makes is the evolution of MFI customers into the “missing middle” segment—those who are now seeking larger loans. He argues for the importance of regulatory support to facilitate a smooth transition of these customers to Small Finance Banks (SFBs), thus, maintaining continuity in financial relationships. Finally, Srinivasan aptly emphasises the need for the microfinance sector to sustain prudent growth, enhance the affordability of microloans, and prevent over-indebtedness through coordinated policy efforts.

In **Chapter 2, "The Banking Channel of Financial Inclusion: Credit Where Credit’s Due",** author *Gaurav Gupta* comprehensively delves into the roles of India’s public and private sector banks, along with specialised institutions like SFBs and payments banks, in fostering financial inclusion. Gupta points out the significant strides made in this area, particularly highlighting the impact of the Pradhan Mantri Jan Dhan Yojana (PMJDY). This audacious initiative has led to a remarkable increase in basic ‘no-frills’ account ownership, with over 500 million accounts opened as of 9 August 2023. According to the author, PMJDY has successfully eliminated the gender gap in account ownership. He notes the expansion of bank branches and Business Correspondent (BC) networks, which have greatly enhanced last-mile reach and reduced access barriers

Gupta also mentions the reduction in the cost of domestic remittances from 10% to 1-2% due to the intervention of BCs, effectively saving migrants from a 'remittance tax'. Additionally, he observes a significant increase in the share of women borrowers, from 21% to 34% between 2014 and 2023, and an increase in basic account ownership from 35% to 77% between 2011 and 2021.

However, Gupta addresses lingering concerns, such as the availability of credit, sub-optimal usage of accounts, high costs for small borrowers, and persisting gender and social gaps. He points out the need for a greater focus on urban financial inclusion, especially considering large-scale migration. He underscores the importance of promoting active usage through financial literacy, positive customer experiences, and designing products based on customer needs. In summary, Gupta emphasises the importance of

consolidating the gains in basic access while also addressing the more complex challenges of usage, quality, and overall well-being in the financial (inclusion) sector.

In **Chapter 3, "SHGs and SHG Federations: Moving Towards Sustainability?"** *C S Reddy, S Ramalakshmi and Padmasri Nivedita Aduri,* thoroughly explores the significant role of self-help groups (SHGs) and SHG Federations in advancing financial inclusion for rural women over the last 30 years. He points out that there are 13.4 million SHGs, with a remarkable 84.25% comprising women, impacting 160 million households. Reddy highlights that while 6.9 million of these SHGs have successfully linked with banks, there remains potential for further expansion in credit linkages.

Reddy observes how under the National Rural Livelihood Mission (NRLM), the State Rural Livelihood Missions (SRLMs) have effectively scaled up SHGs, making them one of the largest poverty alleviation interventions globally. As of March 2023, these SHGs hold savings accounts with a total deposit of ₹588.93 billion. However, Reddy also addresses challenges like dormant accounts, data discrepancies, and informal collateral arrangements.

Discussing SHG Federations, Reddy states that over 500,000 federations are now offering a range of financial, social, and livelihood services in rural areas, supported by NRLM funding. While these federations are instrumental in providing last-mile financial and development services, Reddy argues that they require more autonomy to be effective. Reddy also acknowledges the positive impact of SHGs on women's leadership but emphasises the need for greater collaboration with farmer-producer organisations to foster sustainable incomes. He suggests that the future direction for SHGs should be towards nurturing women collectives that balance financial inclusion, livelihood security, and human development.

Chapter 4, "Financial Inclusion and Rural Co-operative Banks", authored by *Dr R Bhaskaran,* makes a compelling case for the significant role of India's financial cooperatives in the realm of financial inclusion. Bhaskaran points out that rural cooperatives have been instrumental in providing credit access to small farmers and the rural poor through community-based organisations long before the concept of "financial inclusion" became a staple in policy discussions in the 2000s.

The author highlights the role of Primary Agricultural Credit Societies (PACS) in promoting thrift and savings, predating the introduction of no-frills accounts. He notes that today, 97,961 PACS are operating across the country. These PACS collectively hold deposits of approximately ₹1,700 billion and boast a membership base of around 130 million farmers.

Bhaskaran acknowledges the challenges faced by these cooperatives, such as constrained financing and insufficient member control over governance, which have limited their ability to offer comprehensive financial services, including credit, savings, insurance, and payments. However, he emphasises the unique advantage of cooperatives in their localised community linkages, which can effectively address last-mile access barriers. The author argues that with structural reforms focused on decentralisation, professionalisation, and technology adoption, rural cooperatives continue to hold significant potential in facilitating inclusive rural transformation. Bhaskaran's analysis in this chapter underscores the enduring relevance of rural cooperatives in India's financial landscape, especially in the context of advancing financial inclusion.

In **Chapter 5, "MSMEs: The Pillars of India's Economic Strength",** which I have written, the focus is on the evolving inclusive financing ecosystem for India's MSMEs. The chapter presents an analysis of lending patterns by public and private sector banks, revealing a divergence. Public sector banks have shown reasonable annual growth of around 5% in MSME loan amounts. In contrast, private banks, despite a robust average 22% growth in loan amounts, have reduced the number of accounts post-2020, indicating a shift towards fewer, larger mid-sized borrowers. This trend underscores the need for prudent risk management. SFBs and Non-Banking Financial Companies (NBFCs) are making their mark with niche interventions, suggesting that decentralised approaches tailored to specialised strengths can bring balance to the ecosystem.

Data from Pradhan Mantri Mudra Yojana (PMMY) provides insights into emerging credit patterns. Public sector banks have slightly underperformed recently, but private banks have surpassed sanction targets due to their agility and attractive offerings. SFBs and MFIs have shown commendable performance, capitalising on their regional presence. The data also highlights the significant role of women entrepreneurs in smaller-ticket loans and the need for focused initiatives to increase their participation in higher loan amounts. The chapter also discusses how Small Industries Development Bank of India (SIDBI) has significantly expanded its refinancing activities and boosted credit access to Micro and Small Enterprises (MSEs), with its portfolio expanding by 79% to ₹2.98 trillion in March 2023. SIDBI's approach goes beyond credit delivery, encompassing a range of initiatives across the business lifecycle, including incubation and

skilling. The TReDS e-platform for trade receivables financing/discounting demonstrates the potential of digital finance in addressing working capital challenges for MSMEs. Furthermore, fintech players are at the forefront, developing alternative credit assessment models using digital data analytics to provide tailored credit products.

In its concluding remarks, the chapter underscores the importance of policy approaches that capitalise on the innovative efforts of institutions like SIDBI, fintech firms, and digital platforms such as TReDS to establish a harmonised, digitally cohesive, and inclusive financial framework that can accommodate the wide-ranging needs within the MSME sector.

Chapter 6, "Digital Financial Services in India", authored by *Prabhat Labh,* comprehensively details the transformative role of India's digital public infrastructure in enhancing financial inclusion. Labh discusses the pivotal contributions of the JAM (Jan Dhan-Aadhaar-Mobile) framework and the UPI, a homegrown innovation. He notes that UPI, by 2022, had processed 52% of the 88 billion digital transactions, positioning India as a global leader in real-time payments.

Furthermore, Labh underscores the impact of the PMJDY, which significantly increased account ownership, adding 500 million new accounts and accumulating deposits of ₹2,000 billion. The Direct Benefit Transfers (DBT) system, another key initiative, disbursed ₹32,291.62 billion across 313 schemes to a billion beneficiaries, effectively reducing leakages. The expansion of banking services through 3 million BC agents is also noted. In his analysis, Labh acknowledges the significant advancements brought by digitalisation in the financial sector, noting its role in enhancing transparency, efficiency, and inclusion. However, he points out that challenges such as pricing control and data access limitations persist. He highlights the innovative role of fintechs, emphasising the need for their balanced collaboration with regulators and investors.

He also brings attention to the risks associated with digital finance, such as behavioural biases, the high costs of digital credit, cybersecurity threats, and gaps in consumer protection. Labh underscores the necessity of addressing these challenges and enhancing the capacity of banking correspondents to ensure the continued growth and effectiveness of India's digital finance ecosystem. He advocates for the adoption of interoperable open banking systems like Open Network for Digital Commerce (ONDC) and Open Credit Enablement Network (OCEN), viewing these as critical for advancing digital financial inclusion. According to Labh, the next phase of this inclusion should focus on responsible digital finance that integrates innovation with social protection.

Chapter 7, "Artificial Intelligence and Financial Inclusion in India: A New Dawn", which I have written, delves into the role of artificial intelligence (AI) in enhancing financial inclusion in India. The chapter explores how AI and machine learning are revolutionising credit scoring by utilising non-traditional data sources such as bill payments, mobile usage patterns, and psychometric evaluations. This AI-driven approach to credit scoring aims to enable the disbursement of loans to individuals who were previously excluded from traditional credit systems while also reducing default rates.

The chapter also discusses the impact of Natural Language Processing (NLP) chatbots in improving customer service and resolving issues more efficiently. In the agricultural sector, AI is making significant strides by employing satellite imagery, weather data, and agronomic IoT sensors for more accurate credit risk assessments and tailored product development. Additionally, AI-based fraud management tools, which combine supervised and unsupervised learning techniques, are providing enhanced security measures against increasingly sophisticated threats.

However, the chapter also addresses the challenges associated with AI in financial services, particularly the lack of transparency in AI models and the potential for data biases, which could lead to exclusion errors. It emphasises the importance of using high-quality datasets, designing responsible AI systems, and regularly updating models in accordance with ethical standards to mitigate these risks. In conclusion, the chapter asserts that while AI offers a transformative potential for financial inclusion, its successful deployment depends on ensuring trust and transparency. The prudent application of AI technologies is crucial for realising their full potential in the realm of financial inclusion.

Chapter 8, "Recoding Women's Financial Inclusion", authored by *Indradeep Ghosh and Misha Sharma,* offers an innovative and insightful analysis of the complexities involved in advancing women's financial inclusion beyond simply aiming to "close gender gaps." The authors argue for a shift in focus from asking "Does finance empower women?" to considering "What does women's empowerment demand from finance?" They challenge the common assumption that married women lack control over household finances, noting that financial decisions are often made jointly.

Ghosh and Sharma highlight the inherent inequities in current financial product designs. They point out that savings accounts do not adequately cater to women's diverse financial goals, and credit products often overlook the unique constraints faced by women. The chapter emphasises the need for "gender intentional" product design that aligns with women's real-life situations and responsibilities rather than attempting to alter established gender roles. This is a very interesting and fresh perspective.

The authors advocate for more in-depth research into whether women truly have equal opportunities for financial access and how their experiences with different products may vary. They also call for improved collection of gender-disaggregated data on financial inclusion. To ensure that financial services genuinely contribute to women's well-being and household resilience, Ghosh and Sharma stress the importance of developing solutions based on the perspectives of poor women themselves. They argue that reframing the approach to start with women's needs, rather than pushing conventional financial products, is essential for achieving meaningful financial inclusion.

In **Chapter 9, "The Measurement of Financial Inclusion: The RBI Experience in India",** which I have authored, the critical importance of measuring financial inclusion for equitable growth and development is discussed. The chapter details the RBI's initiatives in this area, including the introduction of the Financial Inclusion Index (FI-Index) in 2017 and the launching of the Antardrishti Dashboard in June 2023.

The FI-Index, a comprehensive tool, evaluates financial inclusion across three dimensions—access, usage, and quality—using 97 indicators. The index has shown a steady increase from 43.4 in March 2017 to 60.1 in March 2023, indicating significant progress in India's financial inclusion efforts, especially post-demonetisation. Although there was a slowdown during the pandemic, the rebound in 2022-2023 suggests that the index accurately reflects on-the-ground realities. The analysis within the chapter reveals that while access and usage have consistently expanded, there was a drop in quality in 2021, likely due to the pandemic's impact and other factors outlined in the chapter. The RBI has utilised data from the FI-Index to implement various initiatives aimed at enhancing financial literacy, reactivating dormant accounts, synergising the efforts of different financial providers, improving the quality of BCs, expanding priority sector lending, driving digital financial inclusion, and strengthening consumer protection.

Antardrishti, on the other hand, offers a more granular and layered approach to understanding the nuances of financial inclusion. This dynamic database overcomes the limitations of the static FI-Index by providing real-time, detailed insights into the dynamics of financial inclusion. The chapter argues that this approach aligns with the need for real-time, high-quality data and has the potential to significantly impact India's financial inclusion narrative if integrated with an AI supermodel.

In **Chapter 10, "Inclusive Insurance and Pensions: State of Progress in India",** that I have written, the focus is on the significant progress made in expanding insurance and pension coverage in India, especially for economically disadvantaged groups. The chapter outlines the substantial growth of government initiatives like Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY), Pradhan Mantri Suraksha Bima Yojana (PMSBY), Pradhan Mantri Jan Arogya Yojana (PM-JAY), and Atal Pension Yojana (APY). These schemes have dramatically increased coverage, with PMJJBY now encompassing 144 million people. PMSBY has extended its reach to 321 million individuals, and PM-JAY health insurance now protects 550 million citizens, offering significant coverage per family. Additionally, the APY pension scheme has seen a year-on-year growth of over 25% in subscribers during the period 2021-2023, with a notable increase in youth participation.

The chapter also examines the expanding microinsurance sector, highlighting its role in providing inclusive insurance to low-income groups with affordable premiums. Despite facing market share challenges, Life Insurance Corporation of India remains a dominant player in the individual life segment, while private insurers have concentrated on group policies. The COVID-19 pandemic has notably spurred a surge in microinsurance demand. Furthermore, mutual insurers are depicted as vital community-based risk management entities, offering products tailored to local needs, such as health, credit life, and livestock insurance. These member-governed non-profits boast high claims settlement rates with low rejection rates.

The chapter also discusses the role of technology companies in enhancing financial inclusion through digital insurance solutions, even for the underserved. The burgeoning InsureTech sector demonstrates the potential of technology in broadening the reach of inclusive insurance in India. Overall, the chapter underscores the collaborative efforts of the government, commercial sector, mutuals, and technology companies in advancing India's insurance ecosystem to foster financial inclusion.

DISCUSSION

Thus, over the past decade, as the report highlights, India has witnessed a remarkable journey in financial inclusion, achieving significant milestones and setting a global benchmark. This period of dynamic progress has laid a robust foundation for future advancements. And amidst this encouraging progress, there is a vital opportunity to sustain and build upon the momentum of inclusion with a long-term strategic roadmap. The focus on financial inclusion has to mature beyond just quantitative metrics like account ownership, evolving to prioritise the quality of financial services and their meaningful impact on people's welfare, especially the most vulnerable. Likewise, gender-intentional approaches that address deep-seated societal inequities for achieving meaningful financial inclusion are necessary. Further, customisation of approaches is required for easing the constraints of smaller borrowers and MSMEs in accordance with their unique needs. Rural inclusion remains a policy priority, considering the significant dependence on agriculture and rural non-farm livelihoods. In this context, leveraging existing institutions with extensive rural networks, like the PACS, appears to be a pragmatic approach. And India's digital public goods offer a unique opportunity to catalyse these inclusive innovations, which must, of course, be balanced with robust data and consumer protection measures. Equally important is fostering meaningful usage of financial services advancing human development alongside financial access to ensure genuine inclusion. All of this requires coordinated efforts across various stakeholders including government, regulators, financial service providers, fintechs, civil society, and communities, to effectively bridge the inclusion gaps.

In summary, there is no doubt that India's financial inclusion mission has made incredible strides in multiple directions, and the report offers extensive insights into what has happened so far. My hope as Editor is that the discourse herein provides a constructive foundation to inform evidence-based policies, responsible innovation, and multi-stakeholder collaboration. Such efforts are vital to fostering an inclusive financial ecosystem that leaves no one behind in India's journey to becoming a developed nation. Progress will require perseverance and patience. But India's financial inclusion stakeholders, leaders, and visionaries can feel energised and be proud and optimistic, as their diverse efforts are contributing immensely to crafting a balanced, equitable, and inclusive economy.

ACKNOWLEDGEMENTS

As we draw this overview to a close, I find myself filled with a deep sense of appreciation and gratitude. First and foremost, my heartfelt thanks go to Vipin and Radhika for giving me the opportunity to edit this hugely prestigious report. Second, their unwavering support and belief in the vision of this year's report have been nothing short of inspirational. Their guidance has been a beacon of light throughout this journey. I also extend my sincere gratitude to Sudipto, Akash, Satyan, Shilpa, and every member of the ACCESS team. Their dedication, expertise, and collaborative spirit have been outstanding. Each one of them has contributed immensely, and for that, I am eternally grateful.

A special acknowledgment is due to each of the authors who collaborated on this report. Working alongside such talented and brilliant individuals has been an absolute pleasure. The insights and knowledge I have gained from each one of them have been invaluable. And most importantly, this report would not have been possible without their contributions.

Furthermore, on behalf of ACCESS and all the authors, I would also like to express our collective gratitude to all the organisations and stakeholders who participated in the discussions leading to this report. Your willingness to share valuable data and insights has been crucial. Without your cooperation and openness, this report would not have been possible.

Finally, to our readers, I hope you find this report as enlightening and enjoyable to read as we found it to be while creating it. Your engagement and feedback drive us to strive for excellence continually. Thank you for joining us on this remarkable journey.

Warmest Wishes

Ramesh Srivatsava Arunachalam

Micro Finance Marching On

N. Srinivasan

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Last year's report[1] concluded with the following.

> The sector has put the COVID-19 disruptions firmly behind and is going ahead with positive intent. The future outlook seems much better, as indicated by industry leaders. The changes to the operating environment and regulatory framework require MFIs to learn new skills faster and realign themselves to emerging possibilities.

The performance of the microfinance sector, in the year under review 2022–23, has fully validated the foregoing assessment with institutions acquiring new skills, adapting to the new regulatory environment, and expanding sensibly. Mr Rajeshwar Rao, Deputy Governor, Reserve Bank of India (RBI) in a speech observed,[2] 'There are sufficient avenues in the microfinance sector to grow the business as availability of credit to last mile still remains an unfinished agenda. The industry should work towards increasing the size of the pie while balancing the interests of the vulnerable borrowers.' Indeed, the industry has been working on expanding the pie, utilising all the opportunities offered by the different avenues.

Globally, the Indian microfinance sector is perhaps the second largest (Table 1.1) after China.[3] The number of borrowing customers in India is about three times the next biggest market—Indonesia. The Indian microfinance coverage (self-help groups or SHGs and joint liability group or JLG-based microfinance institutions or MFIs) is more than 50% of households and 10% of the Indian population.

Table 1.1. Comparison of Microfinance Markets

Country	Savers (millions or mn) and Savings (Local Cy)	Borrowers (millions or mn)	Outstanding loans (Local Cy and USD)	Providers
Bangladesh (June 2022)	66.4 mn BDT 800 bn	44.6	BDT 1594 bn $ 17.4 bn	Non-profit MFIs, government agencies /programs, banks
Cambodia (December 2022)	2.7 mn KHR 19.4 tn	2.1	KHR 39.9 tn $ 9.70 bn	Deposit taking and non-deposit MFIs
Philippines (December 2020)	-	17.0	Peso 365 bn $ 7.6 bn	Banks, microfinance NGOs, co-operatives
Indonesia (December 2019)	-	56.8	Rupia 28.9 tn $ 2.1 bn	Non-banks, MFIs, co-operatives
Pakistan (March 2023)	98.1 mn PKR 487 bn	9.25	PKR 509 bn $1.8 bn	Deposit taking and non-deposit taking MFIs, MFBs
India (March 2023)	SHGs 161 mn ₹ 0.59 Tn	SHGs 83 MFIs 73	₹ 1.88 Tn $23.5 bn ₹ 3.52 Tn $ 44 bn	Banks, MFIs, non-bank finance companies (NBFCs), co-operatives, and non-profits

Source: Data from different sources such as industry associations, central bank websites, and academic publications

Table 1.2. The Broad Microfinance Sector

Indicators	2017–18	2018–19	2019–20	2020–21	2021–22	2022–23	Growth % FY 23
Outreach—loan a/cs (mn)	76	96	110	112	124	137	10.5
Outreach—unique clients (mn)	46	56	63	60	61	73	19.7
Loan Outstanding in ₹ bn	1373	1885	2342	2538	2898	3523	21.6
Amount disbursed in ₹ bn	1416	2075	2411	1733	2586	3311	28
PAR 30+ days %	7.7	5.6	6.6	9.7	5.3	2.2	--
Unique clients to loan accounts ratio	1.65	1.71	1.75	1.87	2.03	1.88	--

Source: Data from Sa-Dhan reports several years, from 2008 and the latest report is that of 2023.

Microfinance sector (comprising all players, both profit and non-profit) had 137 million active loan accounts, an increase of more than 10% over the previous year (Table 1.2). During the financial year (FY) 2023, MFIs acquired 13 million new clients, which was well above the previous year's level of about 12 million. The addition of new clients' points to the continuing inclusion efforts of the sector and offers hope for the remoter and underserved geographies. The number of unique clients grew by almost 20% over the previous year, reversing the trend of declining unique clients to active loans ratio. Number of unique clients enrolled during FY 2023 was 12 million as compared with 1 million in the previous year. The number of loans per unique clients has been increasing from 1.65 in FY 2018 to 2.03 in FY 2022, indicating multiple loans at individual borrower level. In FY 2023, the ratio declined to 1.88, perhaps in response to the revised microfinance sector guidelines of the Reserve Bank of India (RBI). Loan portfolio outstanding registered 21% growth reflecting both the confidence and the robust demand from the field. Disbursements increased by 28%. Microfinance loans as a proportion of non-food bank credit formed about 2.57% in March 2023 (2.21% in March 2022), which is a significant step up from less than 0.25% of bank credit about 10 years back.

COVID-19 impacted impaired loans came to the surface during the last year and by the end of the year (March 2022), delinquencies came under a measure of control to 5.27% (Portfolio at Risk/PAR 30 days). This registered a steep decline to 2.16% by March 2023. A detailed analysis of delinquencies is made in a later section.

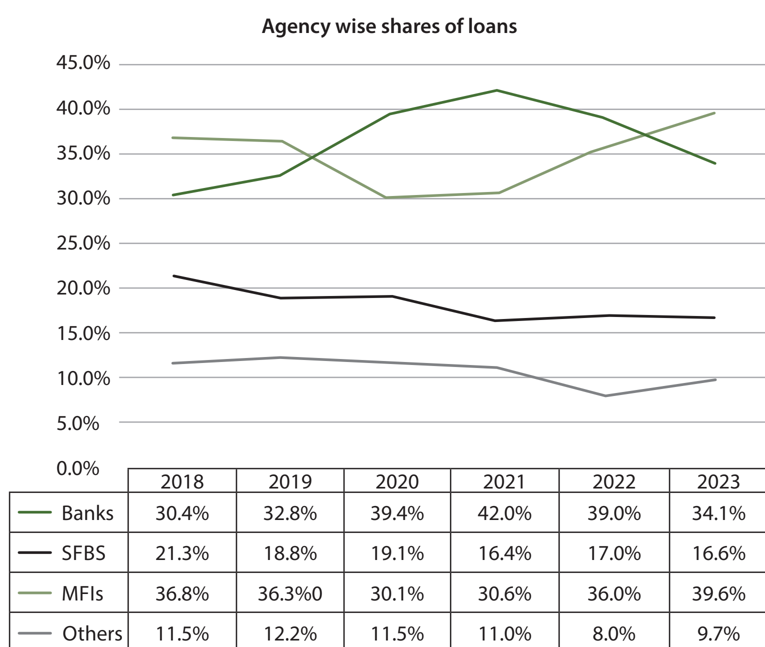

Figure 1.1. MFIs Gain Market from Banks

Source: Bharat Microfinance Report (BMR) 2023, Sa-Dhan

The microfinance sector has been undergoing a structural change again post-COVID. Between 2018 and 2021, banks had increased their share of microfinance loans. MFIs, after a decline in market share in 2019–20, were stagnating at around 30.00% share (Figure 1.1). In the last two years, MFIs have fully reversed the trend. By end-March 2023, MFIs had 39.60% share of the loans. Small finance banks (SFBs) seem to be conceding market space with their share declining continuously over the last six years. The share of all banks (including SFBs) decreased to 50.7% in FY 2023 from that of 56% in the previous year.

The microfinance sector grew at a faster pace post the AP crisis[4] in 2010–11 (Figure 1.2). As observed in last year's report, the sector was severely affected by demonetisation disruptions in 2016–17 and the COVID-19 pandemic lasting almost two years (2019–21). These disruptions left a deeply negative impact on the vulnerable livelihoods of typical microfinance clients. In terms of impact on client and credit outreach, the pandemic did not have a very serious impact. The data shows that customer

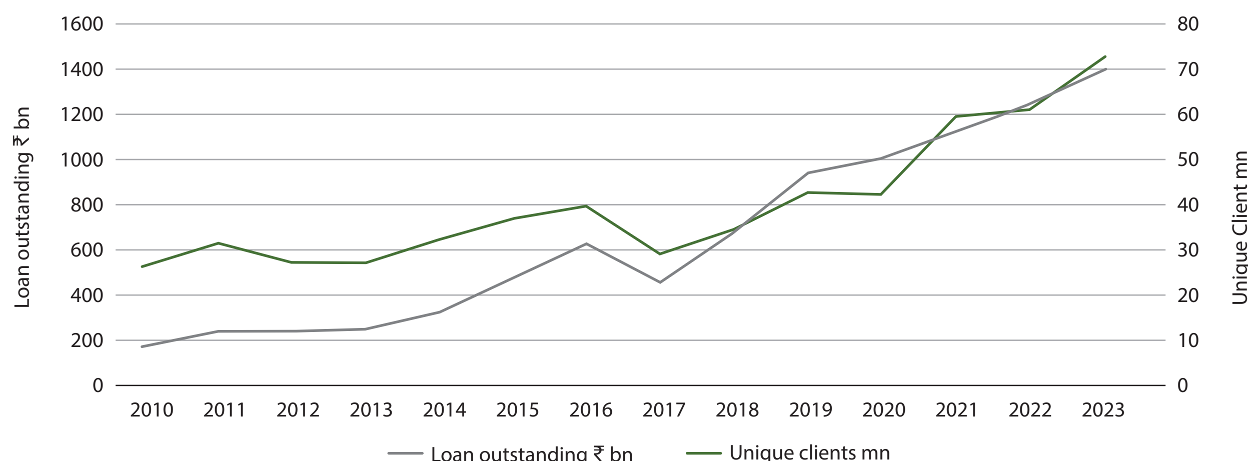

Figure 1.2. MFI Performance over the Years

Source: Data from Sa-Dhan reports several years, from 2008 and the latest report is that of 2023

acquisition stagnated for a year before resuming the growth path. Outstanding credit continued to increase, helping both the moratorium on loans that kept current loans outstanding and the top-up loans provided to ensure continued livelihood activity. The impact on the microfinance sector was the higher credit losses, which was felt fully in FY 2021 and FY 2022 and to a limited extent in FY 2023. Despite the pandemic ceasing to be a major factor in the health and economic activity of vulnerable people in the second half of FY 2022, the microfinance sector was dealing with COVID-19 impacted loans. During FY 2023, the sector signalled that the problems from COVID-19 have been left behind and growth and profitability returned to normalcy with improving credit quality and collection rates.

1.1. PERFORMANCE OF MFIS

The geographical coverage of MFIs extended to 730 districts by March 2023, across all the states. The number of branches of Non-Banking Financial Company (NBFC)-MFIs increased by about 16% (compared to 11% in FY 2022).[5] There was a net increase in staff employed by all MFIs by 13%, taking the number of staff to 174,000.[6]

The total loans managed by MFIs comprising own account loans and managed portfolio increased by 12%, while the own portfolio (excluding the managed portfolio[7] on behalf of others) increased by 11%. About 67.5% of the portfolio outstanding was 'own' portfolio of MFIs, indicating a marginal fall of about 1.5% from the previous year. The average loan size increased by about 25%.

1.2. FINANCIAL PERFORMANCE

Operating costs increased during the year on account of the changed processes in loan origination and appraisal to comply with the regulatory requirements imposed during the year. As the COVID-19 funding shelters were retracted, the cost of funds started to creep upwards in a tightening liquidity environment with increasing interest rates.

The performance and profitability ratios during FY 2023 provide a picture of good health and improving prospects of the industry as a whole. The industry managed to pare operating costs while retaining finance costs at more or less the same level as that of previous year. There was a significant hike in yield (more than 4%), with a resultant increase in margins by 1.26%. Return on Assets (ROA) at 2.49%

Table 1.3. Select Indicators of MFIs

Indicator	2023	2022	2021	Growth rate FY 2023
No of loan accounts (million)	53.6	44.8	42.2	20%
Gross loan portfolio (₹ billion)	1,396	1,246	1,134	12%
Of which own portfolio (₹ billion)	944	852	781	11%
Average loan ticket size (₹)	43,200	38,850	18,894	25%

Source: The data used in this section is drawn from Bharat Microfinance Report 2023 and Quarterly Monitoring Repost Q4-March 2023, Sa-Dhan and from Micrometer Synopsis Q4 FY 2023, MFIN, 2023.

Table 1.4. Select Indicators of Financial Performance

Indicator	FY 2021 (%)	FY 2022 (%)	FY 2023 (%)
Operating cost	6.40	6.96	6.58
Financial cost	10.92	10.65	10.70
Yield	16.80	16.50	20.65
Margin	8.40	9.04	10.30
Return on assets (ROA)	0.64	1.11	2.49
Operational Self Sufficiency (OSS)	105	114	116

Source: Cited from Bharat Microfinance Report 2023, Sa-Dhan.

is a comfortable level for most MFIs regardless of form (Table 1.4). Bharat Microfinance Report (BMR) 2023[8] points out that the ROA was highest for MFIs in the medium category (loan portfolio of ₹ 5 bn-2.0 bn); Small MFIs (₹ 1 bn to 5 bn loans) had the lowest ROA at 1%. BMR 2023 also reported that 11 MFIs were unable to cover their full costs with revenues (with OSS of less than 100).

1.3. LEADING MFIS

The leaderboard of MFIs has seen some small changes in FY 2023. Credit Access Grameen (CA Grameen henceforth) became the largest in terms of gross loan portfolio (GLP), taking over from Shri Kshethra Dharmasthala Rural Development Project (SKDRDP). IIFL Samasta entered the top five list, edging out Muthoot Microfinance. BMR 2023[9] observed that 'Top 10 MFIs contribute 781,759 of loan portfolio, which is 62% of sector's total and rest of other 203 MFIs hold only 38%." The top five MFIs (Table 1.5) accounted for almost 20% of the total loans of the sector (including all forms of lenders). The top five MFIs had recorded significant improvement in their portfolio over the last year, indicating that the underlying conditions both at macro and customer levels had improved significantly. CA Grameen, the leader had almost 6% of the total GLP of the sector. SKDRDP's portfolio was entirely as a BC (Banking Correspondent) and did not have any own account loans.

Table 1.5. Top five MFIs

Name of MFI	GLP (₹ bn) 2023	Name of MFI	GLP (₹ bn) 2022
CA Grameen	210.31	SKDRDP	167.12
SKDRDP	190.27	CA Grameen	137.32
IIFL Samasta	105.52	Asirvad	70.02
Asirvad	100.41	Fusion	66.54
Fusion	92.96	Muthoot	65.67

Source: Bharat Microfinance Report 2023, Sa-Dhan

1.4. GEOGRAPHICAL SPREAD

Seventy four percent of Microfinance loans were in rural areas; this was marginally less than the previous year's level of 75%. While southern and eastern regions were well placed, northern, western, and north-eastern regions had shares of 9%, 9%, and 3%, respectively of the client base. These shares were well below their share of the national population. The top five states accounted for 55% of total microfinance outstanding loans in the country. The western states, despite their size, are absent from the top five list (Table 1.6). Bihar has taken the lead and it has done so within a short period of time (about three years), considering the fact that the southern states had occupied the leader board for about two decades. Madhya Pradesh, which was in the top five list last year dropped out and Karnataka made a re-entry.

Table 1.6. Top Five States by Microfinance Portfolio

State	Loan Outstanding (₹ bn) March 2023	Share of State 2023
Bihar	494.32	14.0%
Tamil Nadu	469.21	13.3%
Uttar Pradesh	338.98	9.6%
West Bengal	324.96	9.2%
Karnataka	322.71	9.2%
India	3,523.39	

Source: Bharat Microfinance Report 2023, Sa-Dhan

Client and credit penetration ratios were calculated across the different states (Table 1.7). The client penetration ratios are arrived at by comparing the proportion of the national population in a state with the proportion of microfinance clients in the state. The credit penetration ratios are computed by comparing the proportion of national population in a state with proportion of microfinance loans outstanding in the state. A ratio of more than one means that the state has a greater concentration of clients or credit compared to the rest of the country. Very high numbers might indicate vulnerabilities on account of excessive coverage of people and high levels of debt. Low numbers in ratio may indicate: (i) a large market space is available in the state both for client acquisition and credit expansion; (ii) the environment in the state is not attractive to MFIs in comparison with other states; and (iii) the state has credit discipline issues and/or high cost of operations, making MFIs hesitant to enter.

Table 1.7. High Penetration States – Client and Credit (March 2023)

State/UT	Client Penetration Ratio			Credit Penetration Ratio		
	FY 2021	FY 2022	FY 2023	FY 2021	FY 2022	FY 2023
Tamil Nadu	2.30	2.05	1.85	2.17	2.11	2.11
Tripura	2.56	1.97	1.73	4.13	2.72	1.92
Karnataka	1.74	1.53	1.45	1.69	1.68	1.75
Puducherry	1.94	1.59	1.60	1.74	1.50	1.66
Odisha	1.61	1.56	1.54	1.74	1.69	1.65
Kerala	1.48	1.32	1.24	1.57	1.52	1.48
Bihar	1.41	1.39	1.55	1.29	1.36	1.45
West Bengal	1.43	1.10	1.03	2.12	1.44	1.21
Jharkhand	0.98	1.03	1.14	0.91	0.97	1.00
Madhya Pradesh	1.10	1.05	1.02	1.01	0.95	0.95

Source: Author's calculations - See Appendix A.1.1. to this chapter

Both client and credit penetration in Tamil Nadu have been at high levels; the state has been among the top three states in both ratios over the last three years. In FY 2023, it occupied the top position in both client and credit penetration ratios. While the client penetration ratio is declining in Tamil Nadu, the credit penetration ratio remains at the same level as that of last year. Tripura, which had high penetration ratios last year, has seen some moderation in FY 2023. Bihar and Jharkhand witnessed increasing penetration during FY 2023, reflecting the faster pace of expansion of microfinance in these states. Large states such as Uttar Pradesh and Maharashtra have much lower penetration ratios indicating that there is space in these markets (See Appendix A.1. 1 at the end of this chapter for state-wise details). During FY 2023, these two are the large states in which the ratio saw an increase from the previous year's level. Telangana and Andhra Pradesh, with client penetration ratios of 0.32 and 0.18 respectively, continue to exhibit (even after 13 years) the after-effects of the AP microfinance law[10] and the difficult business environment created for the microfinance sector. It is worth noting that these two states are at the forefront of the SHG Bank linkage movement with coverage of a high proportion of rural adult women.

State-wise analysis of the number of unique clients covered as a percentage of the population (See Appendix A1.2 at the end of the chapter) reveals that Tamil Nadu had the highest coverage of 10.5% followed by Odisha, Bihar, Karnataka, and Kerala. At the country level, the unique client-to- population ratio was 5.5%. Ten states had a higher coverage of population compared to the national average. The ratio reflected the bias in favour of southern states in the geographical spread of microfinance, despite the earnest efforts to explore new markets.

In terms of districts, Bharat Microfinance Report 2023 observes:

> The top ten districts accounted for 8% of the total portfolio, indicating that there is a huge potential outside these states to grow the microfinance sector in the country. Similarly, the top 25 districts accounted for 17% of the share in the total sectoral portfolio.

The top ten districts (1.4% of all districts covered by microfinance) accounted for 8% of the loans outstanding. The top 25 districts (3.4% of total districts covered by microfinance) accounted for 17% of loans across the country. Of the top ten districts, five were in Bihar, two each in Tamil Nadu and West Bengal, and one in Karnataka. Looking at the different ratios, the potential for credit concentration risk in Bihar, Tamil Nadu, Karnataka, Odisha, and West Bengal needs close monitoring. The skew in the flow of microfinance loans persists, but it should be noted that the skew is moderating with each passing year with more expansion in the underserved districts.

1.5. QUALITY OF LOAN PORTFOLIO

During FY 2023, good progress in enhancing portfolio quality has been achieved. The sector in general and MFIs in particular have been able to rein in defaults, improve recoveries, and deal with more chronic cases through settlements and write-offs.

Table 1.8. Portfolio at Risk Comparison between Sector and MFIs

Indicator	2019	2020	2021	2022	2023
PAR30+ days (Sector)	0.92	1.78	9.01	5.27	2.16
PAR30+ days (MFIs only)	1.05	1.77	7.12	8.35	1.6
PAR90+ days (Sector)	0.41	0.88	4.1	2.48	1.06
PAR90+ days (MFIs only)	0.66	0.75	2.03	3.08	0.93

Source: Bharat Microfinance Reports 2021, 2022, and 2023, Sa-Dhan

The PAR 30+ ratios for both MFIs and the sector in general (Table 1.8) are moving towards pre-COVID levels, but are still short of the lowest delinquency ratios achieved in FY 2019.

The industry monitors loans past due for more than 30 days as the bellwether indicator of portfolio quality as it shows the initial symptoms of a tendency towards default rates. A deeper analysis is made of PAR buckets of more than 60 days past due and more than 90 days past due. When the loan remains unpaid beyond 180 days from the due date, it is normally treated as non-performing assets (NPA) and fully provided for. While PAR30+ includes the subsequent buckets of PAR60+ and PAR90+, it does not include the PAR180+ bucket, which is monitored separately as assets under the bucket have been provided for and have no provision implications for the profit and loss account. In FY 2023, all institutional segments in microfinance made considerable progress (Table 1.9) in reducing default rates measured by PAR30+. Loans in the PAR180+ bucket did not show a significant fall across the sector (except in the case of non-profits).

The CRIF-Highmark analysis[11] shows that during FY 2023 the MFIs have been able to reduce forward flows of impaired loans from one bucket to the next in the case of 30, 60, and 90 days PAR. However, the forward flows in the 91 to 180-day buckets increased for MFIs and banks. This bucket in PAR usually results in credit losses and hence is fully provided or written off.

Given the changes in regulation that examine excessive debt from repayment capacity rather than the multiplicity of loans, most credit bureaus do not carry out multiple-loans analysis anymore. In last year's report, it was observed,

> With the proposal by RBI to harmonise the guidance on avoidance of excessive debt across all microfinance providers, including banks, this problem is likely to come under a measure of control. The move to determine the eligibility of the borrower for microfinance loans and the size of loans through analysis of debt service capacity will also reduce risks.

The improved credit quality and declining impairment levels in the credit portfolio during FY 2023 validate this.

Geographically, the eastern region seemed to exhibit vulnerability, with two large states, West Bengal and Odisha, figuring in the top five states having high PAR30+ levels. West Bengal is among the top five states in terms of loan portfolio, accounting for 9.2% of country-level loans outstanding. West Bengal also has a high PAR 180+ level, indicating credit losses are likely to be high in the state.

Table 1.10. Five States with highest PAR

State	PAR 30+ %	State	PAR 180+ %
West Bengal	4.1	Maharashtra	16.0
Rajasthan	2.9	West Bengal	14.7
Madhya Pradesh	2.8	Madhya Pradesh	10.7
Odisha	2.6	Odisha	10.4
Kerala	2.4	Kerala	10.1

Source: Microlend, Quarterly Publication on Microfinance Lending, Volume XXIII, March 2023, CRIF High Mark.

Table 1.9. Bucket-wise PAR Comparison across Institutional Types

Type of Institution	PAR FY 2021 (%)				PAR FY 2022 (%)				PAR FY 2023 (%)			
	30+	60+	90+	180+	30+	60+	90+	180+	30+	60+	90+	180+
NBFC-MFIs	3.45	2.53	1.65	7.77	3.75	2.65	1.89	7.35	1.60	1.30	0.93	7.61
Banks	7.10	5.22	2.25	12.75	6.43	4.31	2.92	11.82	3.03	2.35	1.47	12.53
SFBs	5.36	3.33	2.02	10.88	6.89	4.53	3.05	10.05	2.46	1.75	0.92	10.34
NBFCs	2.51	1.67	1.02	3.61	3.20	1.89	1.18	4.25	0.98	0.70	0.44	2.75
Non-profits	3.29	1.91	1.30	11.13	2.41	1.26	0.80	8.82	1.56	1.25	1.02	1.59

Source: Quarterly Monitoring Report, Multiple Issues (BMR, 2023), Sa-Dhan

1.6. SOURCES OF FINANCE FOR MFIS

Of the total resources deployed by MFIs, about 21% were in the form of owned funds. Equity constituted 9.2% of total funds at ₹131.8 billion. During FY 2023, 70 MFIs raised ₹16 billion in fresh equity, with most of it raised by the top ten MFIs in the industry. There was an increased flow of funds to MFIs reflecting the overall improvement in the credit environment and the increased attractiveness of MFIs as an asset class. The outstanding borrowed funds of MFIs increased to ₹1,133 billion in March 2023 (Figure 1.3).

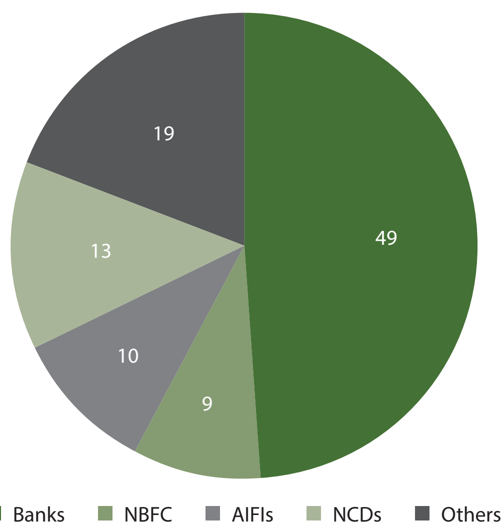

Figure 1.3. Outstanding Borrowings of MFIs by Source (Share %)

Source: Bharat Microfinance Report 2023, Sa-Dhan

Banks were the dominant funding source for MFIs.[12] ICICI Bank was the top lender to the MFIs (Table 1.11). Of the top five lenders, two were public sector banks and of the three private sector banks, two were new generation banks. But many banks were taking microfinance loans directly on their books through the BC route or securitisation/assignment structures. The amount of securitisation transactions were of the order of ₹262 billion.

Table 1.11. Largest Lenders to MFIs

Bank	₹ (Bn)
ICICI Bank	67.86
SBI	54.17
IDFC First Bank	49.83
Bank of Maharashtra	42.70
Bandhan Bank	34.26

Source: Bharat Microfinance Report 2023, Sa-Dhan

1.7. CHALLENGES

MFIs continued to face problems of high staff attrition rates. During FY 2023, of the average staff strength of 191,000 in MFI in different forms, about 98,000 left, necessitating fresh recruitments. The attrition rate was, thus, about 49%. The attrition was the highest (64%) in MFIs with a loan portfolio between ₹ 5–20 billion. These high attrition rates reflect both the competition for staff and the arduous nature of work at the field staff level. The industry

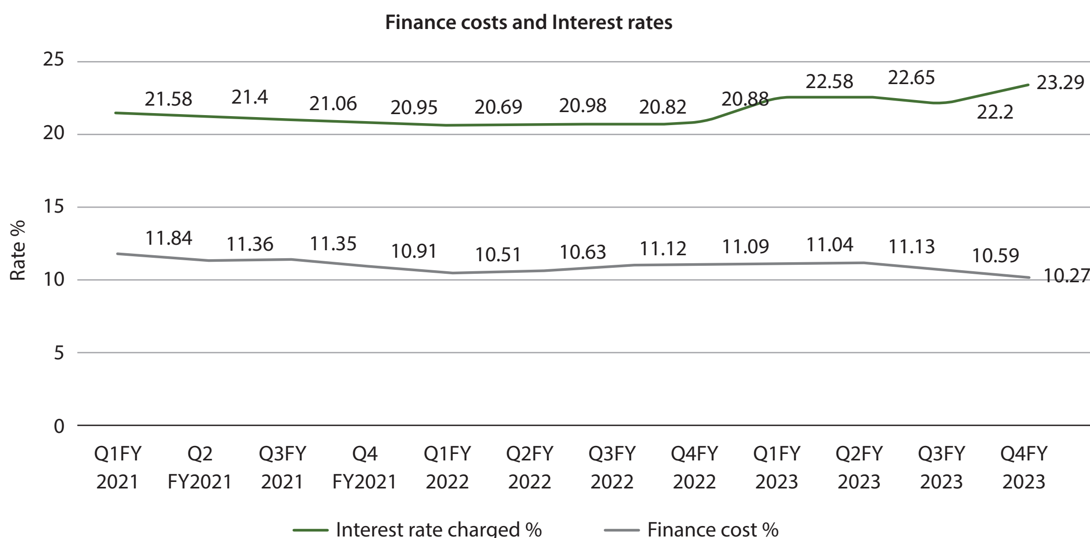

Figure 1.4. Comparison of Finance Costs and Interest Rates

Source: QMR different issues of Sa-Dhan, BMR 2023, Sa-Dhan

has been managing these high levels of attrition and the associated high operating costs for a long period of time. An industry level effort to understand the cost implications of the high attrition rates and measures to reduce attrition levels is needed.

At the customer level, there was good demand for loans from MFIs. The MFIs seemed to have increased the interest rates to price the risk costs incurred during COVID-19. While finance costs generally declined after the third quarter of FY 2022, interest rates increased and decreased alternatively, before ending at 23.29% at the end of FY 2023. The difference between finance costs and interest rates was 9.7% in Q3 of FY 2022 and increased gradually over six quarters to 13.02 in the fourth quarter of FY 2023. Normally, MFIs were passing on any finance cost savings to customers. During FY 2023 it seems that the higher operating costs arising from the reset of regulations and the need to recover past losses had an influence on interest rates. The sector should be circumspect about the negative image it might create among the people of being high-cost institutions.

1.8. CONCLUSION

The sector has matured after the disruptions of the last few years. Equity investors are back in the market with more MFIs issuing new equity and listing the same in the stock exchanges (Fusion). MFIs are also able to raise debt funds through the public issue of bonds and non-convertible debentures or NCDs (CreditAccess Grameen). RBI's level of comfort with the sector has rubbed off onto others, such as equity investors and lenders. MFIs are also engaged in several socially relevant impactful activities, going well beyond finance. The current business models seem to have achieved a steady state. The pathways for MFIs to transition into banks are well laid out. There are also several acquisitions of MFIs by banks and other non-banking finance companies (NBFCs), which show a clear path forward for MFI evolution. The future of growing MFIs through expansion, or merger into larger entities or transitioning to banks is well and truly signaled.

The MFI customers do not have such much clarity on their way forward when they grow out of MF loans. They have to disrupt their existing relationship with MFIs and look for a bank loan. The size of loans for a graduating MFI customer is not in favour with the banking sector. These loans fall in the infamous 'missing middle' category. The previous reports made a plea to allow MFIs to continue to finance graduating customers with larger loans, by allowing up to 50% of the portfolio being utilised for such purposes. This would enable the MFI's transition into quality financial institutions, with a better product mix. The customers will be able to seamlessly pursue their aspirations with a familiar financier. In case the MFI looks at the option of becoming a small finance bank (SFB), it will have most competencies within the assets side of the balance sheet, necessary for diversified business. RBI should examine the feasibility of reducing the qualifying asset's threshold with the caveat that the extent of reduction should be fully reflected in enterprise loans given to graduating customers.

Some MFIs provide housing loans and water sanitation and hygiene (WASH) loans, but these are priced between 20% to 26%. At such interest rates, it is difficult to envisage the affordability of activities that do not produce revenue. However, the demand for such loans from the customers is legitimate and needs to be met. RBI and development finance institutions or DFIs (Small Industries Development Bank of India or SIDBI, National Bank for Agriculture and Rural Development or NABARD, and National Housing Bank or NHB) should put their heads together to offer a refinance facility that can bring down the interest rates to the customer to a level that is fitting for the purpose. If required, the MFIs can be asked to operate on a lower margin on such loans, as these promote quality of life.

The digitisation effort is expanding exponentially. Metrics such as percentage of 'repayments made digitally' occupy the mind space during discussions. There is a need to ensure that the customer is digitally literate and can operate digitally without extra costs. With cash continuing to be 'king' in several rural hinterlands, digitising customer-originated transactions can impose real physical and cost burdens on customers. The potential problems must be anticipated and addressed with suitable remedies.

The sector has shown resilience and has absorbed the costs of high risks at its level and to a large extent at customers' levels too. The sector has also been successful in establishing a good base to lobby for appropriate policy change and benevolent regulatory oversight. The sector should now deliberate on how to take the gains to the next level and ensure that microfinance becomes the most reliable sector for vulnerable and underserved people.

APPENDIX A.1.1.

Client Penetration and Credit Penetration Ratio

State/UT	Client Penetration Ratio			Credit Penetration Ratio		
	FY 2021	FY 2022	FY 2023	FY 2021	FY 2022	FY 2023
Tamil Nadu	2.3	2.05	1.85	2.17	2.11	2.11
Tripura	2.56	1.97	1.73	4.13	2.72	1.92
Karnataka	1.74	1.53	1.45	1.69	1.68	1.75
Puducherry	1.94	1.59	1.60	1.74	1.5	1.66
Orissa	1.61	1.56	1.54	1.74	1.69	1.65
Kerala	1.48	1.32	1.24	1.57	1.52	1.48
Bihar	1.41	1.39	1.55	1.29	1.36	1.45
West Bengal	1.43	1.1	1.03	2.12	1.44	1.21
Jharkhand	0.98	1.03	1.14	0.91	0.97	1.00
Madhya Pradesh	1.1	1.05	1.02	1.01	0.95	0.95
Maharashtra	0.82	0.81	0.83	0.79	0.79	0.86
Haryana	0.97	0.96	0.89	0.86	0.87	0.78
Rajasthan	0.85	0.86	0.86	0.8	0.77	0.76
Punjab	0.98	0.94	0.85	0.82	0.77	0.74
Chhattisgarh	0.92	0.89	0.84	0.83	0.77	0.73
Assam	1.33	0.77	0.52	1.67	0.9	0.67
Uttarakhand	0.6	0.59	0.62	0.65	0.59	0.56
Sikkim	1.02	0.79	0.67	1.3	0.76	0.56
Gujarat	0.67	0.64	0.64	0.55	0.54	0.56
Uttar Pradesh	0.53	0.55	0.65	0.45	0.5	0.55
Goa	0.52	0.43	0.43	0.56	0.38	0.40
Mizoram	0.46	0.3	0.40	0.33	0.25	0.28
Dadra & Nagar Haveli	0.26	0.24	0.28	0.32	0.22	0.27
Telangana	0.3	0.31	0.32	0.1	0.16	0.17
Chandigarh	0.19	0.17	0.17	0.12	0.14	0.16
Manipur	0.35	0.26	0.23	0.25	0.18	0.13
Delhi	0.2	0.15	0.14	0.18	0.14	0.13
Andhra Pradesh	0.15	0.15	0.18	0.08	0.08	0.11
Andaman & Nicobar	0.12	0.16	0.18	0	0.15	0.10
Meghalaya	0.24	0.17	0.13	0.23	0.12	0.10
Arunachal Pradesh	0.1	0.11	0.13	0.08	0.08	0.09
Nagaland	0.2	0.15	0.09	0.21	0.16	0.09
Himachal Pradesh	0.09	0.1	0.11	0.06	0.08	0.08
Jammu & Kashmir	0.03	0.03	0.03	0.07	0.07	0.02

Source: Data on population from Registrar General – Census statistics, Client and Loan data from Bharat Microfinance Reports of Sa-Dhan 2021, 2022, 2023.

APPENDIX A.1.2.

Unique Clients to Population Ratio

State/UT	Unique Client to Population Ratio
Andaman & Nicobar Islands	1.0%
Andhra Pradesh	1.0%
Arunachal Pradesh	0.7%
Assam	2.8%
Bihar	8.5%
Chandigarh	0.9%
Chhattisgarh	4.6%
Dadra and Nagar Haveli	1.5%
Daman and Diu	0.0%
Delhi	0.8%
Goa	2.4%
Gujarat	3.5%
Haryana	4.9%
Himachal Pradesh	0.6%
Jammu and Kashmir	0.1%
Jharkhand	6.3%
Karnataka	8.0%
Kerala	6.8%
Lakshadweep	0.0%
Madhya Pradesh	5.6%
Maharashtra	4.5%
Manipur	1.3%
Meghalaya	0.7%
Mizoram	2.2%
Nagaland	0.5%
Orissa	8.5%
Puducherry	8.7%
Punjab	4.7%
Rajasthan	4.7%
Sikkim	3.6%
Tamil Nadu	10.2%
Telangana	1.8%
Tripura	9.5%
Uttar Pradesh	3.5%
Uttarakhand	3.4%
West Bengal	5.7%
India	5.5%

Source: Data source: Unique clients – Sa-Dhan BMR 2023; Population data from Registrar General – Census statistics. Calculations are that of the author.

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The Banking Channel of Financial Inclusion: Credit Where Credit's Due

Gaurav Gupta

'An inclusive financial system is essential infrastructure in every country.'

–United Nations Secretary-General's Special Advocate for Inclusive Finance for Development[1]

2

2.1. INTRODUCTION

Financial inclusion is not a new policy measure that the government has suddenly embraced in recent years. Rather it has been a key component of the inclusive growth objectives of the Indian State for decades. Given that the poor suffer from multiple and varying levels of deprivation, a single channel to include the excluded in the formal financial system does not work in a country as vast and diverse as India. Three main channels or models are in operation in the country, led by the banks, microfinance institutions (MFI), and self-help groups (SHG). The focus of this chapter is on financial inclusion via the banking channel while the other two channels will be covered in detail in other chapters.

When it comes to financial inclusion in India, the State and the banks are joined at the hip. Banks with the largest physical network and the highest market share of deposits and credit are owned by the Government of India. Given their size and vast network, the nationalised banks (henceforth referred to as banks) have been subjected to State-directed lending for decades. They have also played a large role in government-to-citizen transfers. Banks via their investments in Statutory Liquidity Ratio (SLR) eligible bonds have also provided much-needed funding for the budgetary deficits.

Over the years, the policy mix with respect to financial inclusion in India has included a wide range of initiatives. It began with the active promotion of cooperative banking in the early years after independence (Roy 2011). This was followed by the nationalisation of several life insurance companies, the formation of the Life Insurance Company of India in 1956 followed by the nationalisation of several commercial banks in 1969 and again in 1980. Several general insurance companies were nationalised in 1972 leading to the formation of four state-owned general insurers.

Gradually, in the late 1960s and early 1970s, priority sector lending norms were introduced and have since remained a key component of financial inclusion through banks. To promote inclusion of the rural poor, Regional Rural Banks (RRB) were set up in 1975 followed by the setting up of the National Bank for Agriculture and Rural Development (NABARD) in 1982. Kisan Credit Cards (KCC) for agriculture credit and zero balance no-frills savings accounts were introduced in 1998 and the early 2000s, respectively. Following the recommendations of the Nachiket Mor Committee (2013–14) on Comprehensive Financial Services for Small Businesses and Low-Income Households, differentiated financial institutions such as payments banks and small finance banks (SFB) were granted licenses.

These measures taken over several decades have had varying degrees of success. The reality is that a large part of the adult population (35%) was financially excluded even in the most basic terms of having a bank account till 2011 as per the Global Findex Database of the World Bank, 2021 (henceforth referred to as Findex) (Demirgüç-Kunt et al. 2022). By 2021, 77% of Indians aged 15 and above had a bank account. Clearly, significant changes occurred during the last decade. Perhaps, a renaissance of financial inclusion. As the analysis in the chapter shows, this renaissance was not only restricted to providing access to bank accounts but also saw a substantial reduction in the cost of making small amounts of domestic money transfers. Some other important aspects of deepening financial inclusion are yet to see similar traction.

Despite the slow growth in agriculture, it continues to be the primary occupation of a large part of the population in rural areas, rural India has always lagged behind urban areas in addressing multi-dimensional poverty. This coupled with a limited network of physical branches, most financial inclusion schemes and branch expansion programs have also had a rural focus in India with later adaptations of such schemes put to work in urban locations. Today, branches in rural and semi-urban areas combined make up slightly less than two-thirds of all bank branches in the country. The Kisan Credit Card (KCC) and the General Credit Card (GCC) have provided millions of small-holder farmers and others in non-farm activities access to credit.

Despite a dense network of branches in urban areas, a large part of the population is not meaningfully financially included. As per the All-India Debt and Investment Survey 2019, the incidence of indebtedness was found to be lower in urban households at 22% vs 35% in rural households.[2] The difference compared to the rural households was starker in the lower deciles of the population based on levels of asset ownership. Households in the first, second, and third deciles in rural India had an incidence of indebtedness of 21.6%, 24.7%, and 28.4%, respectively. For urban India, the first, second, and third deciles had an incidence of indebtedness of 9%, 13.2%, and 18.5%, respectively.[3] This indicates that the poorer households in rural India had greater access to credit than similarly placed households in urban India.

The last census in India was conducted in 2011. The social and economic dataset that policymakers need is more than a decade old. This makes a lot of policymaking and its critical analysis by independent observers similar to driving on a highway with a foggy rear-view mirror. Nevertheless, there are transitions happening in the economy that do not necessarily show up in official statistics. One of these is migration for work, most of which is distress driven. Migration occurs rural to urban as well as rural to rural, both within and inter-state. Migrant workers lead precarious lives with low wages, insecure work arrangements, and poor living conditions (Peter and Johnson 2021). They also face exclusions from the social security schemes of the State due to the lack of proper documentation in their new and often changing work locations.

As per estimates for 2017–18, urban India was home to more than 111 million occupationally-vulnerable migrants (Srivastava 2020) and they have been hit hard by the impact of COVID-19 on their livelihoods. Large numbers are employed as daily wage workers including construction workers, head loaders, domestic workers, drivers, retail workers, etc. These workers tend to migrate from rural areas to escape the lack of livelihood opportunities and end up living in conditions that are just as harsh but with no kinship or community network to lean on for support.

The plight of migrant labourers is one of the strongest arguments for strengthening financial inclusion in urban areas. Indeed, this deserves as much attention as rural and agriculture-focused financial inclusion has recieved in the past. While the analysis in this chapter is based on data for both rural and urban areas, wherever available, issues concerning financial inclusion in urban India have been emphasised.

The following analysis shows that a lot has been achieved by the combined efforts of the trinity— the State (including the government and the Reserve Bank of India or RBI), the banking sector led by state-owned banks, and the National Payments Corporation of India (NPCI) which can be seen as the ecosystem enabler. However, a comparative analysis of data from both the pre-COVID years and the so-called COVID years of 2020–22, and 2023 reveals that a lot of progress has been undone by disruptions in the economy. If new measures are not taken to make formal financial services more convenient, accessible, and relevant to the needs of the poor, those recently included in the formal financial system run the risk of slipping out of the net.

This chapter is organised as follows: section 2.2 puts forward a basic definition of financial inclusion while section 2.3 briefly discusses the importance of banks as a delivery channel in financial inclusion and provides a brief overview of the different kinds of banks in India. Section 2.4 discusses areas where substantial progress has been made while section 2.5 analyses some uncomfortable observations. Section 2.6 concludes with recommendations for the way forward.

2.2. THE SOCIAL CONTEXT OF FINANCIAL INCLUSION

Despite the success achieved so far, the numbers of the poor and indebted in the country highlight the need for speed while working towards financial inclusion. First, it is estimated that 5%–15% of India's population is extremely poor if one considers the globally used poverty benchmark of US $1.9 per day (adjusted by the World Bank to US $2.15 since September 2022).[4,5] However, if one were to consider a benchmark of US $3.2 or higher, derived

from the recommended National Minimum Wage, a much higher percentage of the population would be classified as poor.[6]

Second, a large proportion of the population depends on government transfers. The National Food Security Act, 2013 (NFSA) provides for coverage of up to 75% of the rural and up to 50% of the urban population for receiving highly subsidised food grains under the Targeted Public Distribution System (TPDS), which according to the 2011 Census totals about 813.5 million.[7] With the onslaught of COVID-19 and given the increase in population since 2011, this number has likely gone up and many poor are yet to be issued Below Poverty Line (BPL) ration cards.[8] This makes them vulnerable to short-term borrowing in order to feed themselves and their families.

Third, the poor are deprived on many fronts. They lack not just financial capital but also physical, human, and social capital. They do not have access to credit at reasonable interest rates. Fourth, distress-driven migration has been increasing over the years creating an occupationally-vulnerable workforce. Of the estimated 111 million migrant workers in urban India as of 2017–18, 44 million were short-term seasonal and 67 million were long-term/semi-permanent workers. A little less than half of these 111 million workers i.e., 52 million were inter-state migrant workers.

Fifth, for most informal sector workers, the starting point of their work contract (mostly undocumented) is debt i.e., an advance taken from their employer or the recruiting contractor. This is especially true for those working in sectors such as construction and brick kilns. This extension of advance loan traps these workers into low-paying employment in poor conditions which they are unable to escape at will. This is how debt and informal sector employment are closely related.[9]

Finally, there is a positive relationship between access to formal financial sector and economic growth and development. The importance that financial inclusion commands as a tool for development strategy is reflected in its position as an enabler for 7 out of the 17 United Nation's Sustainable Development Goals (SDG)—no poverty (SDG 1), zero hunger (SDG 2), good health and well-being (SDG 3), gender equality (SDG 5), decent work and economic growth (SDG 8), industry, innovation and infrastructure (SDG 9), and reduced inequalities (SDG 10). Therefore, it is important that one lays down at the very beginning key features of financial inclusion—the why, who, what, and how of financial inclusion.

The Why: Financial inclusion is not just about more credit; it lets the poor work towards improving their future and transact efficiently. What does exclusion from the financial system lead to? At a very basic level, it forces individuals and households to save under the mattress and risk losing their hard-earned savings, consume strictly within their budget, and use high-cost informal infrastructure to send money to their loved ones in the form of remittances. RBI's definition of financial inclusion over the years has been rather narrow and mostly focuses on the credit provision role of the banking sector. However, others have defined financial inclusion more broadly to include a range of low-cost financial services that are required by all citizens, more importantly, the poor ones, at various life stages.

The Who: The financially excluded are typically those at the bottom of the income and wealth pyramid. However, for a careful evaluation of the progress in financial inclusion, one must look at the 'bottom' of this so-called bottom of the pyramid. This is a part of the population which is extremely poor. Extremely poor are defined as those with unstable, irregular, and very low incomes, no or limited asset ownership, poor indicators of physical health and nutritional status, etc. The segment of the population that is actively sought after by the billions of dollars in equity investments flowing into the so-called impact firms is the working poor and not these extremely poor.

The What: Financial inclusion is defined by the access to, usage of, variety of, and quality of financial products at different life stages. Access refers to a range of products/bank accounts, savings products, remittances, insurance of different kinds, credit, pensions, financial literacy, and consumer protection. Usage refers to the frequency of account usage, change in behaviour, and take up of other products. The aspect of variety is concerned with whether there are just one-size-fits-all products or some level of need-based availability of financial products and services. Quality is concerned with whether financial inclusion delivers what it is supposed to deliver, i.e., an improvement in the lives of the poor.

The How: This aspect of financial inclusion is concerned with whether the delivery channels are user-friendly and designed keeping in mind those at the 'bottom of the pyramid'. This includes more bank branches, ATMs, mobile and internet banking, and business correspondent (BC)/cash-in-cash-out (CICO) network.

In India, financial exclusion is intricately linked to social exclusion. Discussions around financial

inclusion are generally linked to poverty, unstable and low incomes, and lack of assets to offer as security by the poor. What is not adequately discussed is the role of gender, caste, religious minorities, low levels of education, poor health and living conditions, employment in the informal economy, low and unstable incomes, and migration. Another emerging source of exclusion is technology. The increasingly tech-enabled digital financial inclusion agenda runs the risk of exacerbating the divide between the haves and the have-nots.

For context, findings from a survey conducted by researchers at Azim Premji University (APU) are shared in Box 2.1 (Basole and Gupta 2023). The findings highlight the extent of deprivation and exclusion of urban poor communities. This survey was conducted among 3000+ low-income households in 92 slum settlements in Bengaluru in November 2021. The sampling frame included 100,000+ households in 179 settlements. The study focused only on poor and vulnerable households. The survey sample included a higher proportion of the vulnerable sections of society with Muslim and Scheduled Castes (SC) households representing 21% and 37% of the total surveyed households respectively. The livelihoods of these households depended on a wide range of low-paying occupations with insecure work arrangements such as drivers, daily wage workers, domestic workers, factory workers, tradespersons, *agarbatti* and *beedi* workers, workers in retail, street vendors, and those running small shops/ small businesses. The precarity of the lives of these households is reflected not just in their work, but also in abysmal living conditions, and inadequate access to sanitation, education, finance, and social protection as summarised in BOX 2.1.

2.3. CHANGING ROLE OF BANKS AS DRIVERS OF FINANCIAL INCLUSION

India has a bank-dominated financial system as far as credit allocation is concerned. However, most innovations and progress that move the needle for the poor and the (previously) excluded is now happening outside the banking system. This has been made possible by the combined efforts of the government, the NPCI, and the RBI.

The government under the umbrella of the JAM trinity (with JAM standing for Jan Dhan, Aadhaar, and Mobile) has ensured the right policy impetus, and availability of the necessary digital public goods infrastructure to leverage the increasing penetration of mobile phones in the country. The JAM trinity rests on three components: (i) a no-frills/zero-

BOX 2.1. WHAT DOES IT MEAN TO BE POOR (AND EXCLUDED) IN URBAN INDIA?

Findings from the Bengaluru COVID-19 Impact Survey (2023) by APU

All numbers pertain to a typical month in the period immediately preceding the start of COVID-19 in March 2020 in India, unless explicitly stated.

1. Average earnings per worker was ₹ 9,410.
2. Sixty-six percent of households lived below the poverty line (based on the recommended National Minimum Wage of ₹ 430 for a household with 3.6 members as of July 2018).
3. Drivers, daily wage workers including those in construction work, factory workers, and domestic workers made up 57% of the workforce.
4. Thirty-four percent of households did not own a mobile phone.
5. Sixty-one percent of households lived in a house with at most 1 room (other than kitchen, bathroom, and toilet).
6. Seventy-eight percent of households did not have a woman-owned Jan Dhan account.
7. Seventeen percent of households had an outstanding loan pre-COVID averaging ~₹ 75,000; 66% and 41% reported borrowing from formal and informal sources respectively.
8. Twelve percent of households borrowed during COVID-19; more than 50% and ~40% reported borrowing from informal and formal sources respectively.
9. A significant minority of households (12%), wanted to borrow but could not in all three reference periods in the survey before and during COVID-19.

balance bank account in the form of Jan Dhan Yojana accounts; (ii) a unique biometric identifier for all citizens in the form of an Aadhaar card since 2009; (iii) and increasing level of mobile or smartphone penetration in the country. While there are still gaps in access for the marginalised sections of society, slightly more than 1.3 billion Aadhaar cards have been issued as of July 2023 indicating near-universal coverage.[10] There are no official estimates as such, but various estimates indicate that mobile (both smartphone and feature phone) and smartphone penetration in India was 1.2 billion and 600 million respectively in 2022.[11]

It goes without saying that each of the channels i.e., banks, MFI, and SHG benefits from the vision, active participation, and enablement of the RBI. With respect to the banking channel, the NPCI and a vast ecosystem of so-called financial technology firms (fintech) have been critical enablers. Without the work done by NPCI as an ecosystem enabler over the last few years, it is hard to imagine if banks could have provided the leadership and the mind space required for innovation in providing basic financial services to the unbanked (excluded).

What's special about financial inclusion via banks? Inclusion typically begins with providing a no or low-cost avenue for savings and facilitating remittances. All bank deposits up to ₹500,000 are fully insured by the Deposit Insurance and Credit Guarantee Corporation. Therefore, among the previously-mentioned three channels, banks are best placed to provide a safe avenue to save for those who have little to save and were hitherto saving under the proverbial mattress. However, this delivery channel is a relatively high-cost one which is why the other two channels, i.e., MFI and SHG emerged in the first place. Banks also promote financial inclusion with their power to allocate credit using the deposits placed by their customers and provide the necessary infrastructure for delivering social protection through their massive network of physical branches and other touchpoints across the country.

2.3.1. Types of Banks in India and Their Different Roles

The banking landscape in India comprises public sector banks (PSB), regional rural banks (RRB), private sector banks (PVB), small finance banks (SFB), payments banks (PB), cooperative banks, and foreign banks (FB). Cooperative banks, an important institution in the last-mile delivery infrastructure, are the subject of a full-fledged chapter in this report and not discussed here.

To provide a simplified summary, PSBs have the largest market share in rural and urban India with respect to the physical branch/ATM network, deposits, and credit. RRBs are a set of banks focusing exclusively on rural India and are, therefore, an important institution for the financial inclusion of the rural poor. Of the 12 SFBs operating in the country, 10 were erstwhile MFI and continue to have more than 50% of their assets portfolio in the form of small-ticket MFI loans.

Payments banks, as with SFBs, are relatively new institutions granted licenses under RBI's differentiated bank approach. Envisaged to be tech-driven, new-age banks, payments banks already have the largest share of alternate/low-cost delivery channels across the country. Given their small customer base, they still have a low share in new tech-enabled forms of payments (such as Aadhaar-enabled payment system or AePS discussed later) but are driving the rapid increase in micro-ATMs with more than market 50% share of such devices (Figure 2.1).

With respect to priority sector lending (PSL) obligations, commercial banks have a target of 40% of their advances (Adjusted Net Bank Credit or ANBC) to PSL whereas SFBs and RRBs both carry a target of 75%. What further differentiates RRBs from other banks is that their actual achievement of PSL targets is way higher than the minimum requirement. Achievement for Financial Year (FY) 2023 stood at 97.5%, 41%, and 85.6% for overall PSL, direct advances to agriculture, and weaker sections respectively.[12] No other institution comes close to this achievement of RRBs. RRBs also punch above their weight when it comes to overall lending in rural areas as well as in aspirational districts (Gupta 2022).

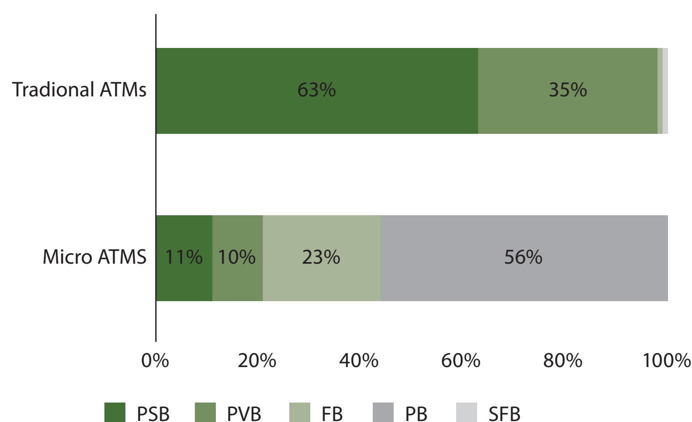


Figure 2.1. Share of Banks- ATM and Micro-ATM Ownership

Source: RBI – Bank wise ATM/POS/Card Statistics

2.4. CREDIT WHERE CREDIT'S DUE

2.4.1. Improving Access to Savings via Bank Accounts: Policy Implementation at a Massive Scale

The Findex database captures vital details of tangible improvements in financial inclusion efforts over the years in India. Up till 2011, certain segments of Indian society were better included in the formal financial system than others. The percentage of men having an account with a formal financial institution was 17% more than the percentage of women in 2011. This gap has been eliminated by 2021, as in Figure 2.2. Similarly, the access gap has been drastically reduced or eliminated for those out of the labour force, not educated beyond the primary level, and the poorest 40%.

Figure 2.2. Gaps in Account Ownership with a Financial Institution (%, age 15+)

Source: Findex, various editions

The Pradhan Mantri Jan Dhan Yojana (PMJDY) has achieved, in a very short time, what no other variant of financial inclusion policy measures hitherto implemented in India were able to achieve (Figure 2.3). Not only did it aim to provide access to the formal financial system via no-frills bank accounts, but it also provided automatic insurance protection as well as contingent access to overdraft facilities on these bank accounts. The Basic Savings Bank Deposit Account (BSBDA) allows unlimited credits into the account, four withdrawals a month, and has no minimum balance maintenance requirement which had hitherto deterred the poor from opening bank accounts.

Only to account holders who are issued RuPay debit cards, accident insurance cover of ₹200,000 is provided (₹100,000 for accounts opened before August 2018). Penetration of RuPay cards is not universal yet with less than 70% of all PMJDY account holders being issued one as of August 2023. This means approximately 160 million PMJDY account holders are still excluded from the accident insurance cover that comes along with the bank accounts. For PSB, PVB, and RRB, 75%, 80%, and 37% of account holders respectively have been issued RuPay cards. Two-thirds of these accounts have been opened in rural and semi-urban branches of banks.

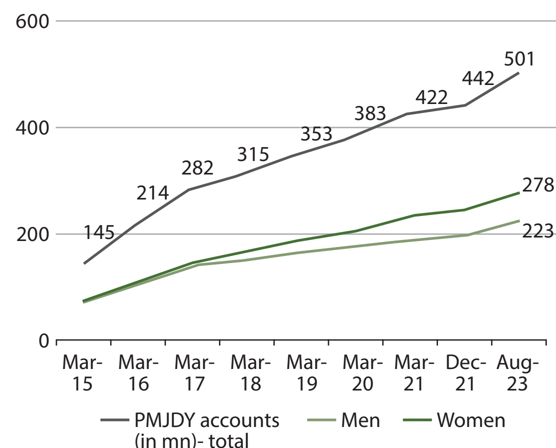


Figure 2.3. PMJDY accounts

Source: Department of Financial Services, Annual Report (various editions)

2.4.2. Branches and the BC Model: Taking the Bank to the Unbanked

There are more than 150,000 bank branches in the country today. While the banks now appear to be in a branch rationalisation mode and very few new branches have been added since 2020, the branch network grew at an annualised rate of 6% between 1969 and 2020.[13]

Garg and Gupta, 2023 in their work using location data of various bank branches in India from 1951 to 2019 demonstrate a substantial reduction in the mean (and median) distance of an unbanked village to a banked village. Considering almost 600,000 villages in India, this distance, which was 43.5 kilometers (median of 34.8 kilometers) in 1951, was found to have reduced to 4.3 kilometers (median of 3.5 kilometers) by the end of 2019. Major reductions happened during the time periods from 1951 to 1969 and from 1969 to 1990. However, it is also important to note that even in 2019 there were approximately 25,000 unbanked villages (albeit down from approximately 100,000 in 2005) which were 10 or more kilometers away from a banked village.

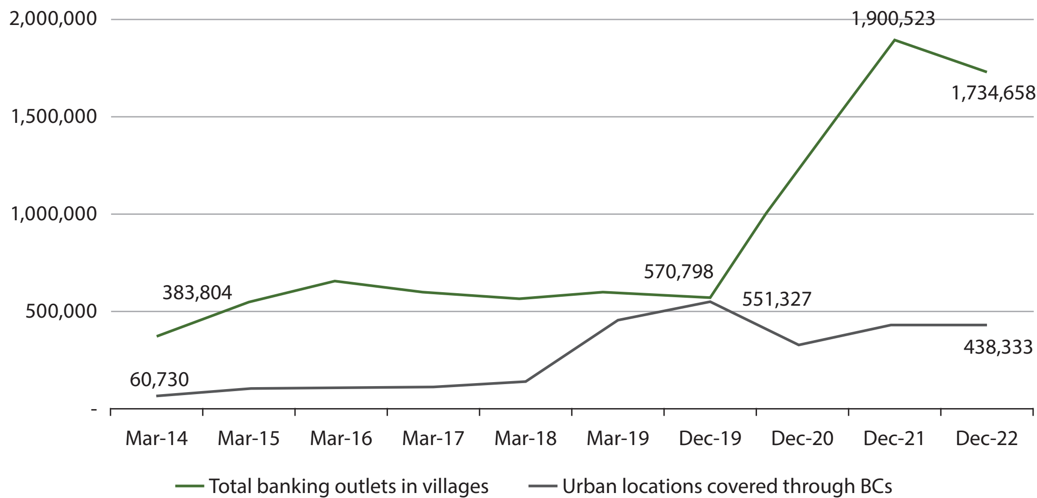


Figure 2.4. Banking Outlets in Rural and Urban Locations

Source: RBI Annual Report, Financial Inclusion Plan (various editions)

Opening branches was never a low-cost option for banks and, with the advent of technology-enabled solutions, is no longer one of the only two channels, along with ATMs, for reaching out to the masses. The increase in banking outlets is now coming via an increase in the BC network. Handheld micro-ATMs, also discussed earlier in this chapter, are used by BCs to provide basic banking services at a hyper-local level. Figure 2.4 shows how rapidly the overall banking outlets have increased in both rural and urban locations. Year-on-year data on these outlets is noisy. However, over a long period from March 2014 to December 2022, banking outlets in villages and urban areas have grown at annualised rates of 19% and 25%, respectively.

2.4.3. Reduction in Gender Gap with Respect to Access to Credit

When viewed from the point of view of the gender of borrowing individuals, the gender gap in access to credit from the financial system has narrowed over the years. Of all the individual borrowers in the banking system in 2014, only 21% were women. As of March 2023, the percentage of women borrowers stood at 34% though it has stagnated around these levels from the onset of COVID-19 in March 2020 (Figure 2.5).

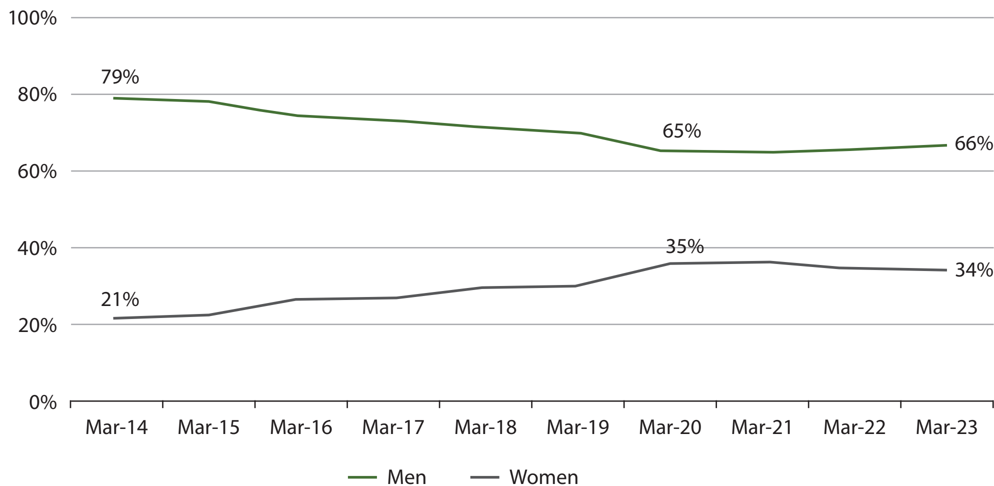


Figure 2.5. Gender Composition of Borrowers in the Banking System

Source: RBI Database of Indian Economy, Quarterly BSR-1 (Old edition, Table No. 1.6 – Outstanding Credit of Scheduled Commercial Banks According to Organisation)

2.4.4. Drastic Reduction in Domestic Remittance 'Tax'

'वो भी एक टाइम था जब 1000 पे 100 रूपये एजेंट को इधर देते थे और 100 गांव में कटते थे।'

— गुमनाम प्रवासी श्रमिक

As mentioned in the introduction section, there are an estimated 111 million migrant workers in India mostly employed in low-paying occupations in the informal sector. Most of this migration is distress driven and remittances from the workers to family members back home are an important source of sustenance in villages. Several studies have shown that, till a few years ago, these domestic money transfers (DMT) used to cost anywhere between 5–10%. This was nothing less than a draconian tax on the meager earnings of poor citizens. The cost of DMT has drastically come down in the last few years. In regular times, it now costs 1–2% to remit and withdraw funds. In comparison, it must be noted that post-office money orders still cost 5% but have now become a less important source.

Many more have bank accounts today which can be accessed via the BC network more conveniently. Where customers had to travel long distances to withdraw cash from banks earlier, the BC network of banks has brought the bank much closer home. This indeed was a tax on the poor, informal sector workers with very low earnings, and its elimination can be considered a very big achievement. During COVID-19, however, there is enough anecdotal evidence as well as from rapid surveys by various civil society organisations (CSO) that people had to pay as much as 10% to remit funds.

Box 2.2 compares results from surveys conducted by grassroots organisations in the pre-and-post-renaissance eras to show how the reduction in the cost of domestic money transfers shows up in the preferred channels to send money back home by migrant workers--a clear move away from carrying cash to the available money transfer channels. One of these studies was conducted in 2011 (Thorat and Jones 2011) and the other in 2020 (Welfare Services, Ernakulam and Centre for Migration and Inclusive Development 2020).

2.5. A LONG ROAD TO NIRVANA

2.5.1. Credit Growth Lags the Growth in the Real Economy

Despite all the attention that the financial system and more importantly the banking system receives, what seems to have escaped attention is the dismal real growth rate of bank credit in the last decade since 2014. While bank credit has expanded at a compounded annual growth rate (CAGR) of ~9%

BOX 2.2. HOW DOES A MIGRANT SEND MONEY HOME?

A comparison of findings from two surveys 9 years apart.

2011

National Bank for Agriculture and Rural Development (NABARD) and Gesellschaft für Inter- nationale Zusammenarbeit (GIZ) conducted studies of four different migration corridors in India and analysed the payments system with respect to small remittances of migrant workers. The migration corridors studied were: Uttar Pradesh-Mumbai, Rajasthan-Gujarat, Odisha-Andhra Pradesh, and within Maharashtra. As part of the survey, 200 remittance receivers and 212 migrants were interviewed. With respect to the commonly used method of remitting money, 17%, 91%, 27%, and 90% of workers in these respective corridors either carried cash themselves or used others such as fellow villagers, family members, etc. to carry cash home.

2020

Between December 2019 and January 2020, Welfare Services and the Centre for Migration and Inclusive Development with support from Caritas India conducted a survey of 426 migrant workers in Kerala on the state of inclusion of migrant workers in Ernakulam district, Kerala (Caritas India 2020). These migrants were from Assam, West Bengal, and Tamil Nadu.

When it came to modes of sending remittance home, the main channels reported by workers were as follows (% of workers): money transfer agent (47.7%), bank or post office account (33.6%), cash deposit machine (31.6%), and UPI/payment apps (16.2%). Only 7.6%, 5.8%, and 1.8% reported sending cash through villagers/friends, transferring to the accounts of other workers, and personally taking cash respectively.

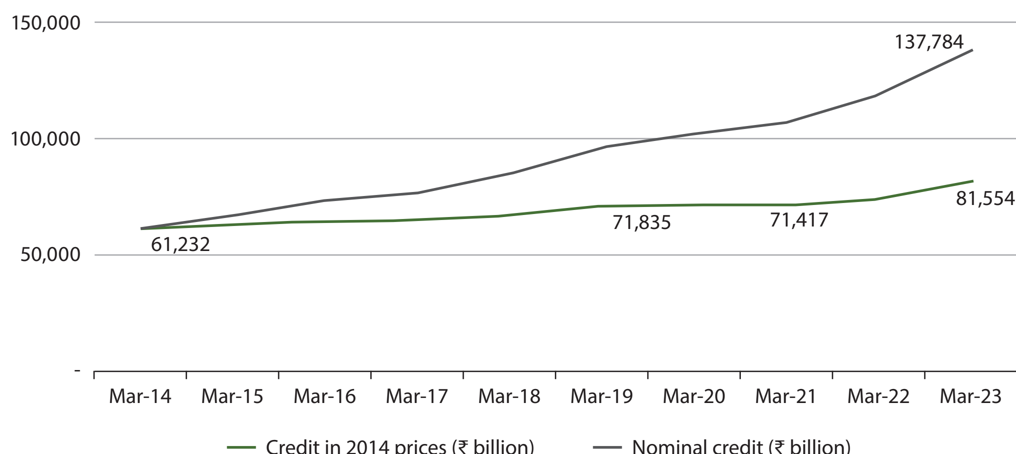


Figure 2.6. Nominal and Real Credit by the Banking System

Source: RBI Database of Indian Economy, Quarterly BSR-1 (Old edition, Table No. 1.6 – Outstanding Credit of Scheduled Commercial Banks According to Organisation)

during this period, the real growth rate that excludes the impact of inflation or rising prices was only 3% per annum.[14] In other words, while nominal bank credit grew from ₹61.2 trillion as of March 2014 to ₹137.8 trillion by March 2023, bank credit in March 2023 measured at 2014 prices stood at only ₹81.5 trillion (Figure 2.6). This slow growth rate lags the 6–7% real annual growth rate in the Indian economy over this period.

2.5.2. BSBDA/PMJDY's Weak Performance in Providing Access to Credit

In a previous avatar, the now famous PMJDY accounts were known as BSBDA accounts. The poor, for whom the PMJDY accounts were introduced, have built up steady balances in these accounts. The total balance as of the end of August 2023 was above ₹2 trillion (not shown in Figure 2.7).[15] It must be noted that these are new balances coming into the banking system for the first time, given these account holders were previously unbanked. This is a huge source of low-cost funds for the banking sector. In effect, if one assumes a net interest margin of 5%–7% for the banks in the business of financial intermediation, these balances result in annual earnings to the tune of ₹100 billion to ₹140 billion.

As of the end of December 2022, there were 679 million BSBDA accounts with total savings and overdraft balances of ₹2.4 trillion and ₹5.5 billion respectively. In return for the above-mentioned annual 'subsidy' flowing from the poor to the banking sector, only 1.3% of the BSBDA holders (Figure 2.7) have been granted overdraft facilities. If one assumes a hypothetical scenario where BSBDA savings balances could be given out as credit (overdraft) only to BSBDA account holders, the relevant metric i.e., Credit-Deposit (CD) ratio would be an abysmally low 0.2% in December 2022. This CD ratio of BSBDA accounts was 5.1% in March 2014. The average savings account balance and overdraft balance per BSBDA account in December 2022 were ₹3,543 and ₹613 respectively. This implies a per-account annual growth rate of 12% in savings balances and 16% annual de-growth in overdraft balances between March 2014 and December 2022.

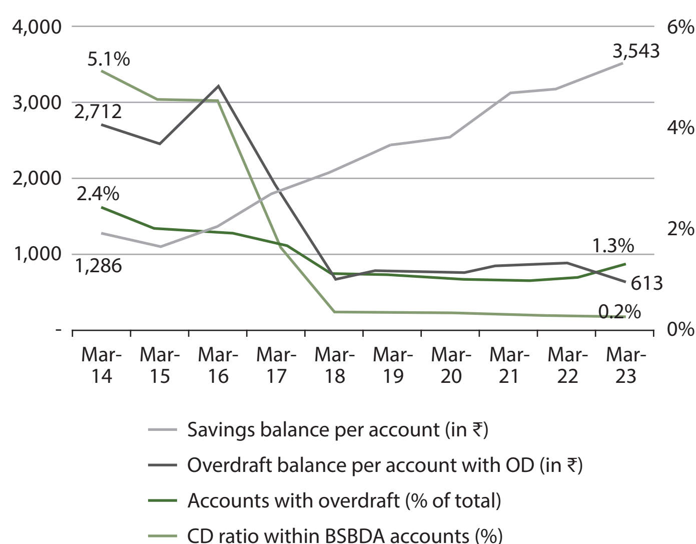


Figure 2.7. Performance of BSBDA Accounts

Source: Department of Financial Services, Annual Report (various editions)

2.5.3. Gender Gap in Per Capita Availability of Credit Remains

Having established that the growth rate in bank credit was indeed slower than the growth rate of economic activity in real terms and the percentage of women among all borrowers was increasing over the 10-year period from 2014 to 2023, we turn our attention to how men and women fared differently in access to bank credit on a per capita basis. As in Figure 2.8, per capita credit from the banking sector to women borrowers de-grew at -1.67% per annum from ₹160,488 in March 2014 to ₹137,948 in March 2023. During the same period, per capita bank credit for men grew 3.14% per annum from ₹178,571 to ₹235,820.

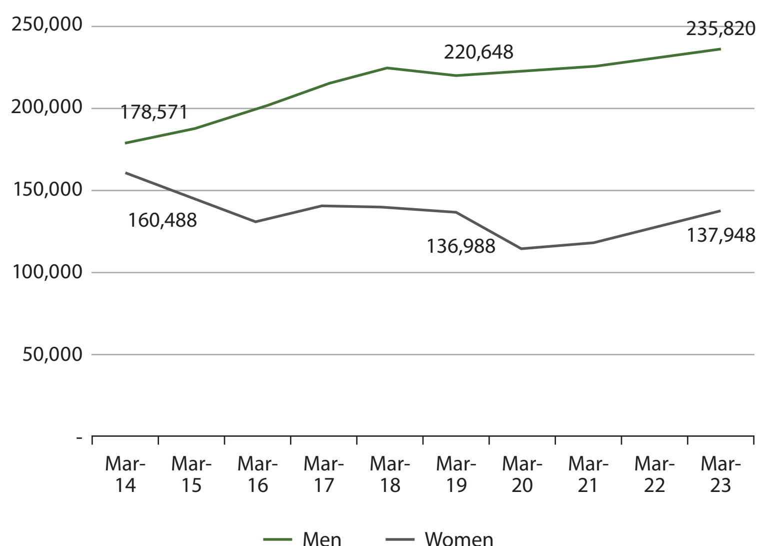


Figure 2.8. Credit Outstanding Per Account, As of End March

Source: RBI Database of Indian Economy, Quarterly BSR-1 (Old edition, Table No. 1.6 – Outstanding Credit of Scheduled Commercial Banks According to Organisation)

2.5.4. Gender Gap is More Severe in Metropolitan Cities

In metropolitan areas, the share of women in small borrower accounts i.e., with credit limits of ₹200,000 or lesser, was the lowest among all geographical categories (Table 2.1). As of March 2023, women had 19.8% and 27.1% share in the number of accounts and amount outstanding respectively in metros. This was much higher at 49.6% and 37.5% respectively in rural areas.

2.5.5. Overall Share and Per Capita Availability for Small Borrowers Declining

While there can be multiple ways of defining a small borrower, RBI defines it as any borrower with credit limits of ₹200,000 or lesser. From the RBI data, it is evident that while more individuals have been added to the financial system (borrowers as well as non-borrowers), the share of those with credit limits of ₹25,000 or lesser has fallen from 0.43% in March 2014 to 0.28% in March 2023 (Figure 2.9). During this period, the share of the small borrowers, i.e., those with credit limits of ₹200,000 or lesser grew marginally from 7.1% to 7.4%. In both categories, COVID-19 clearly had a negative impact.

Credit per borrowing account for small borrowers declined 14% between March 2014 (₹48,425) and March 2023 (₹41,451). The decline for borrowers with credit limits up to ₹25,000 was even steeper at -38% from ₹10,234 in March 2014 to ₹6,382 in 2023 (Figure 2.10). Despite the schemes put in place by the central government and the RBI's intent to limit the impact of COVID-19 on the small borrowers, they have been impacted at a time when more support was required.

Table 2.1. Gender and Geography-wise Distribution of Credit to Small Borrower Accounts of Scheduled Commercial Banks (March 2023) (in %)

Attributes	INDIVIDUAL				OTHERS	
	MALE		FEMALE			
	No. of Accounts	Amount Outstanding	No. of Accounts	Amount Outstanding	No. of Accounts	Amount Outstanding
Rural	44.3	57.9	49.6	37.5	6.1	4.6
Semi-urban	48.0	56.3	38.5	37.0	13.5	6.6
Urban	51.0	55.8	35.9	36.4	13.1	7.8
Metropolitan	76.4	67.5	19.8	27.1	3.9	5.4
All-India	57.1	58.7	34.8	35.5	8.0	5.9

Source: RBI Database of Indian Economy, Basic Statistical Returns of Scheduled Commercial Banks in India, March 2023 (Old edition, Table No. 1.12 – Percentage Distribution of Outstanding Credit of Small Borrowal Accounts of SCBs According to Broad Category of Borrowers)

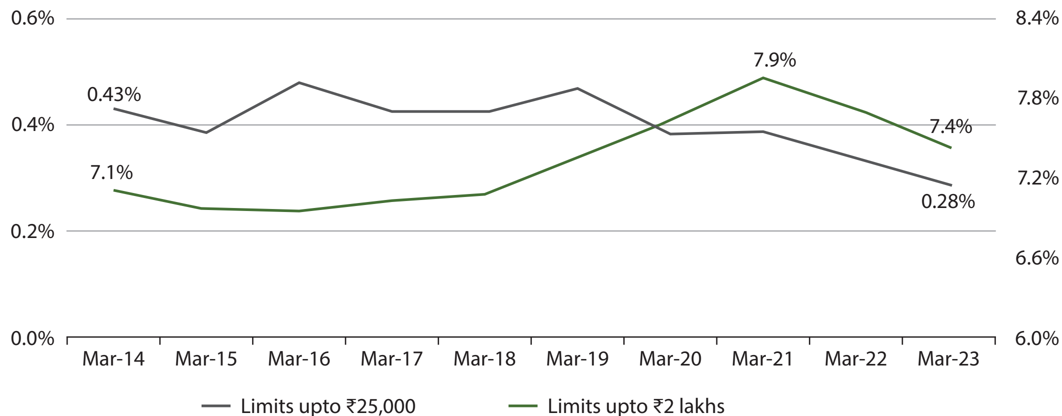


Figure 2.9. Share of Small Borrowers in Overall Bank Credit

Source: RBI Database of Indian Economy, Quarterly BSR-1 (Old edition, Table No 1.7 Outstanding Credit of Scheduled Commercial Banks According to Size of Credit Limit)

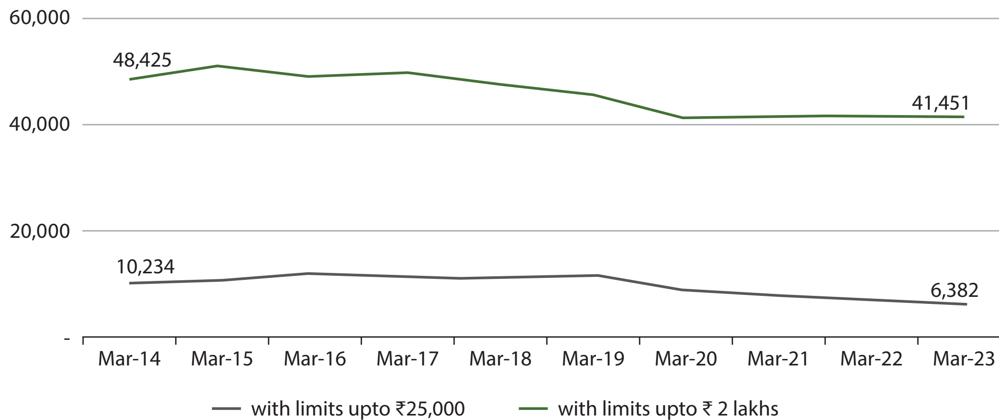


Figure 2.10. Per Account Credit Outstanding for Small Borrowers

Source: RBI Database of Indian Economy, Quarterly BSR-1 (Old edition, Table No 1.7 Outstanding Credit of Scheduled Commercial Banks According to Size of Credit Limit)

2.5.6. Declining Number of Borrowers and Share of Bank Credit for Micro and Small Enterprises (MSE)

Micro and small enterprises (MSE) are a more fragile sub-component of the Micro, Small, and Medium Enterprises (MSME) category of firms. They have often been acknowledged to be credit-starved despite their vital contribution to India's gross domestic product (GDP), employment, and exports. When it comes to credit from the banking sector, despite their presence as a sub-category in PSL lending norms, credit to MSE firms as a share of overall bank credit has declined from 13.9% as of March 2014 to 12.9% as of December 2022 (Table 2.2). Surprisingly, the number of MSE borrowers in the banking system from figures put together from various editions of RBI's Annual Report shows an almost 50% decline between March 2021

Table 2.2. Share of Bank Credit for MSE

	MSE borrowing accounts (in ₹ million)	Credit per MSE borrowing account (₹)	MSE share of bank credit (%)
Mar-14	12.6	675,468	13.9%
Mar-15	13.8	696,522	14.4%
Mar-16	20.4	488,446	13.6%
Mar-17	23.2	461,263	13.9%
Mar-18	25.9	443,764	13.5%
Mar-19	27.9	465,589	13.5%
Mar-20	35.3	481,051	13.1%
Mar-21	41.6	420,761	13.8%
Mar-22	26.1	613,845	13.5%
Dec-22	21.0	813,964	12.9%

Source: RBI Annual Report (various editions)

and December 2022. If one excludes the abnormal jump with respect to December 2022, the average credit per MSE borrowing account was very low at ₹420,761 and ₹613,845 as of March 2021 and March 2022 respectively, reflecting de-growth when compared with ₹675,468 as of March 2014 even in nominal terms.

2.5.7. Contrary to Perceptions, the Poor and Small Borrowers Are Not Surviving on Subsidised Credit

Figure 2.11 shows the share of the credit (both by the percentage of borrowers and the amount outstanding) at annual interest rates of 13% and above. The data is presented by two different sub-categories of small borrowers—those with credit limits of ₹25,000 or lesser and those with credit limits between ₹25,000 and ₹200,000. Almost 2/3rd of very small borrowers (₹25,000 or lesser), by number of borrowing accounts and by amount outstanding, had borrowed at an interest rate of 13% or above. In comparison, only 1.5% of the amount outstanding from borrowers with credit limits above ₹100 crore (₹1 billion) was at a 13% or higher interest rate. Refer to appendix Figure A2.1 for other categories of borrowers. The small borrowers pay substantially more than the larger borrowers.

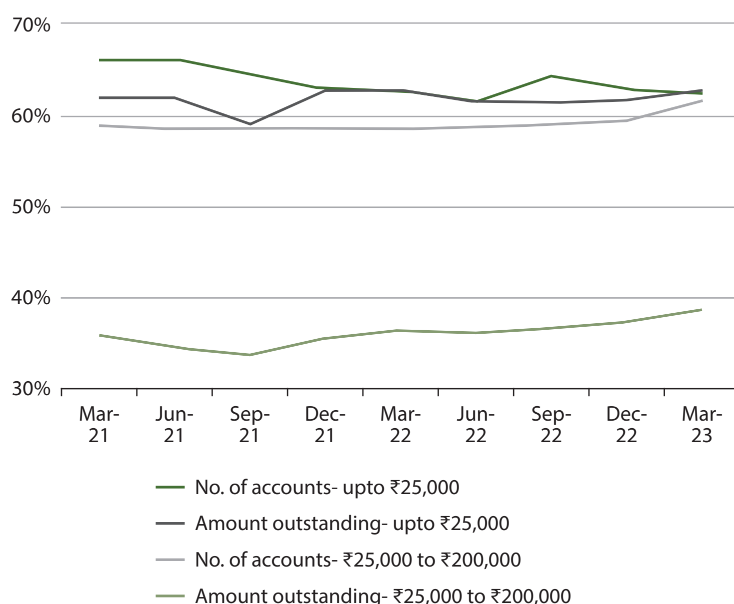


Figure 2.11. Share of Credit at Interest Rates 13% and Above Per Annum

Source: RBI Database of Indian Economy, Quarterly BSR-1 (Old edition, Table No 2.5 Size of Credit Limit and Interest Rate Range-wise Classification of Outstanding Loans and Advances of Scheduled Commercial Banks)

2.5.8. High Transaction Failure Rate in AePS Mechanisms

The digital revolution is far from inclusive and so is the case with the digital financial inclusion revolution riding on it. Not everyone has access to an internet-enabled smartphone. Given the low literacy levels of the adult population, watching YouTube videos is one thing but doing banking transactions is a completely different and scary proposition for many.

Certain pockets of the population, as shown in Box 2.1 for 92 slums in Bengaluru, still have low ownership rates for even basic mobile phones let alone smartphones. The onset of COVID-19 intensified the ongoing digital revolution in the country. However, those in rural India continue to fall behind. Here's how things have played out: rural smartphone penetration is low at 28%, the physical touchpoints of banks have not increased in the last 2–3 years and the usage of technologies to access the banking system via feature phones has not taken off.[16] One such technology is Unstructured Supplementary Service Data (USSD) which facilitates Unified Payments Interface (UPI) payments via feature phones. One potential reason for the less-than-desired uptake is that out of 1.15 billion wireless subscribers as of March 2023 in India, Jio had 430 million subscribers (37.6% share) but Jio is not on the USSD platform. Of these 430 million subscribers, 188.7 million are in rural areas.[17]

AePS transactions which are meant to address the requirements of hard-to-access areas with poor literacy have a transaction failure rate in excess of 20% (for both business and technical reasons). PSB and RRB both have a combined market share of more than 90% (Figure 2.12). However, a failure rate this high risks discouraging users from continued usage.

A joint team of researchers at the Foundation for Ecological Security (FES) and LibTech India (LibTech) conducted a rapid survey of 1,066 Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) workers in five blocks of Odisha from districts of Koraput, Dhenkanal, Keonjhar, and Angul (Saboo et al. 2021). Findings from this survey with respect to challenges faced by workers while trying to access their wages from payment disbursement agencies including banks, ATMs, Customer Service Points (CSPs), and BCs are presented in Box 2.3.

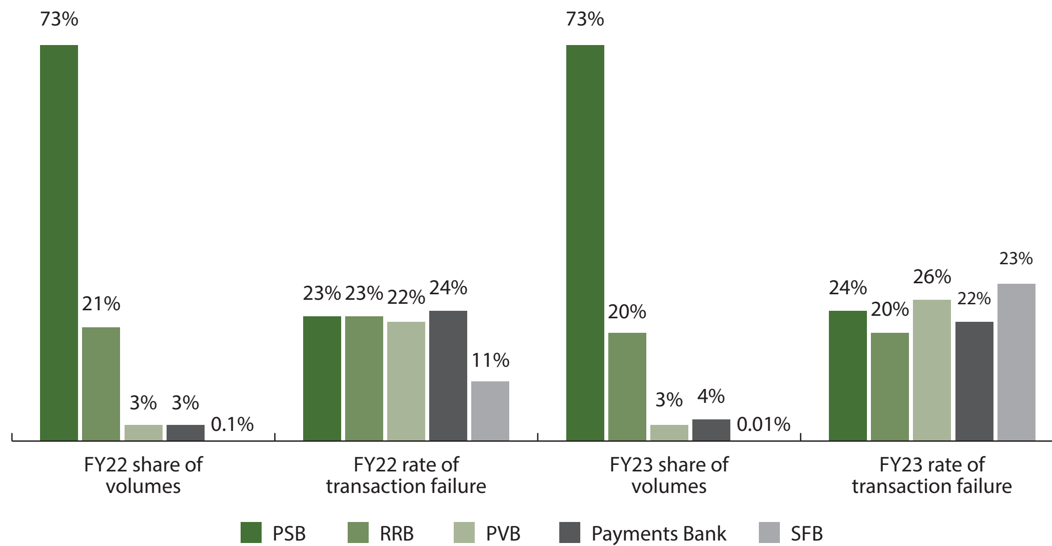


Figure 2.12. Transaction Failure Rate of All AePS-enabled Transactions

Source: Authors calculations based on bank-wise NPCI data on volumes and transaction failure

BOX 2.3. HARDSHIPS IN ACCESSING PAYMENTS IN ODISHA— SURVEY OF LAST MILE CHALLENGES IN MGNREGA WAGE PAYMENTS IN SELECT BLOCKS (MAY 2021)

i. A large majority (74%) of the workers use bank branches as the primary disbursement agency, and 21% primarily use CSPs/BCs.

ii. Half the workers spent more than ₹200 (equivalent to MGNREGA's daily wage of ₹215) on each visit to the disbursement agency.

iii. Half the workers using bank branches to access their wages had to travel more than 10 km. CSPs and BCs were more accessible. Only one-fourth of the workers using them had to travel more than 10 kms to access their wages.

iv. One-third bank users and one-fifth CSP/BC users took more than 6 hours to withdraw their wages. Given the distance and time involved in accessing their wages, some workers had to spend a significant amount on food. Given age and gender, many workers need others to accompany them.

v. Overall, 73% of the workers missed at least one day of work when they went to the disbursement agency.

vi. Sixty-three percent workers reported making multiple visits due to wages not being credited into the account or due to infrastructural issues such as overcrowding (40%), network issues (26%), and lack of electricity (12%).

vii. Transactions tracking mechanisms such as passbook updation, receipts, and SMS notifications were largely missing. While most had a passbook, 35% CSP/BC users reported that their passbooks were never updated. Amongst the workers whose passbooks were updated, 20% said that the balance was written by hand on the last page instead of electronically updating the passbook. As a result, they could not keep a track of their credits and debits, but only the amount of money in their account. Given that more than half the workers did not have a mobile phone, receiving SMS is not even an option for them.

2.5.9. Many Accounts but Limited Usage

As per the Findex survey for 2021, only around 35% of all account holders had a debit card and less than half were using them. More than one-third of the bank accounts was inactive, and females had a higher share of inactive accounts. For those with inactive bank accounts, key reasons listed for inactivity were lack of trust in banks, physical distance, no need for a bank account, and lack of resources to maintain an account (Figure 2.13). Interestingly, 29% of inactive account holders reported being uncomfortable using an account on their own. Clearly, more work is required on the part of banks to make banking services more accessible, convenient, and closer to their customers. Similar reasons are listed by the 20% of those aged 15 and above who did not have a bank account in 2021 (Figure A.2.2).

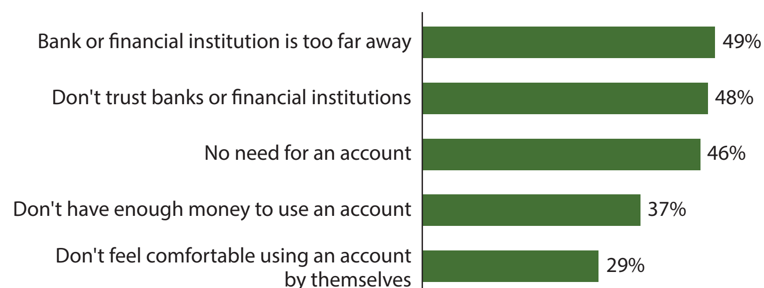


Figure 2.13. Reason for not Using Their Inactive Account (% with an Inactive Account, Age 15+)

Source: Findex, various editions

2.5.10. Inadequate Inclusion for Risk Protection and Old Age

As has been shown above, the bank account penetration rates are high. There is steady albeit slow growth in credit delivery to the marginalised and visible improvements have been made in transaction banking. However, when it comes to protection against various risks such as death, disability, and the risk of inadequate savings to maintain a minimum lifestyle after retirement from the workforce, a lot is left to be desired. The three major contributory schemes run by the government for such requirements are Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY), Pradhan Mantri Suraksha Bima Yojana (PMSBY), and Atal Pension Yojana (APY). The distribution and outreach of these schemes is led by banks.

PMJJBY is a life insurance product available to those in the age group 18 to 50 years having a bank/post office account. The coverage is for ₹200,000 with an annual premium of ₹436. This was revised up from ₹330 paid by subscribers in 2022. The policy term is from June to May. While it is claimed that the scheme has 144.3 million cumulative subscribers as of November 2022, the actual subscriber base was much lesser at around 49.6 million as of the end of 2021. This was made available via a public interest litigation filed by a media platform (Newsclick).[18] This implies that roughly less than 10% of PMJDY account holders have insurance on their lives.

PMSBY is an accident insurance available to those in the age group 18 to 70 years having a bank account. Coverage is ₹200,000 for accidental death and full disability and ₹100,000 for partial disability with an annual premium of ₹20. The annual coverage term extends from June to May. As is the case with PMJJBY, it is claimed that the scheme had 313 million cumulative subscribers as of November 2022. However, no information about the actual subscriber base is available. A cumulative subscriber base does not make any sense given it is an accident insurance plan that needs renewal every year.

APY is a contributory monthly pension scheme with benefits in the range of ₹1,000 to ₹5,000 available for those in the age group 18–40 years having bank accounts. Contributions are to be made till age 60 post which the pension starts. There were 48 million (RBI Annual Report 2023) and 49.4 million (Pension Fund Regulatory and Development Authority or PFRDA quarterly newsletter) APY subscribers respectively as of November 2022 and as of March 2023. The market share of banks in enrolling subscribers is as follows: PSB 70%, RRB 19%, PVB 7%, PB 3%, Department of Posts- 0.8%, SFB 0.3%, and cooperative banks 0.2%. A significant majority of the subscriptions are at the lower end of ₹1,000 per month having greater than 80% of new subscribers in FY23. Again, as with PMJJBY, APY has a penetration equivalent of around 10% of PMJDY account holders. Not all or many of the subscribers might be poor and previously financially excluded, so this too might be an overestimation.

2.6. POLICY RECOMMENDATIONS

India's progress on the financial inclusion front, albeit a work in progress, is certainly inspiring and offers valuable lessons for other countries. Leveraging the innovation and technology ecosystem in the country and having the NPCI, instead of the established banks, drive key infrastructural developments helped in achieving transformational change. Importantly, this change was delivered on a massive scale.

The JAM trinity, another example of innovation outside the core banking system, has enabled a lot of what would have previously been thought of as unachievable in India's financial inclusion efforts. The

progress made so far needs to be sustained and made more inclusive as the same enabling technology also has the potential of deepening the divide between the haves and the have nots. The poorest of the poor have certainly benefited from Aadhaar-enabled public goods by having to pay a much smaller fraction of their hard-earned income towards remittance costs than was the case a decade ago.

This paper makes a case for redoubling efforts with respect to measures of financial inclusion other than a basic bank account. Women, small borrowers, MSEs, and other marginalised sections have a lot of catching-up to do when it comes to the availability of credit. Penetration of risk protection products and pensions for old-age savings despite being driven with a policy focus have a lot of ground to cover.

The analysis based on the available data as well as on the work done elsewhere makes a case for a policy focus on the urban poor. It does not, however, mean that eyes be taken off financial inclusion-related issues concerning rural India. The changing demographics of urban India with inward migration from rural India to escape poverty and lack of livelihood opportunities necessitates a focus on financial inclusion in urban parts of the country.

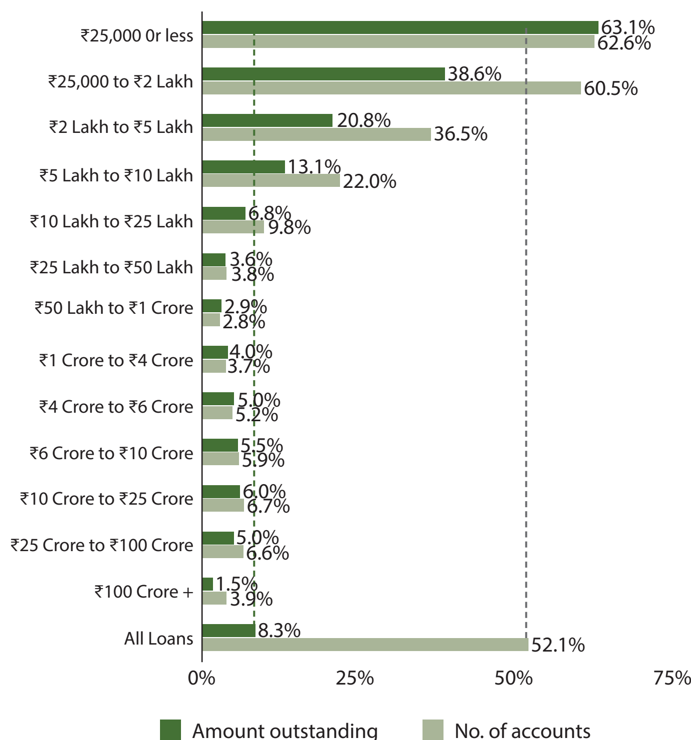
Banks are fearful of lending to the poor which is visible from the very low CD ratio based on savings and overdraft balances in BSBDA/ PMJDY accounts. Given their vast physical network, enrolling large numbers in risk protection and pension schemes already rolled out will do the poor a lot of good. Financial literacy, though not discussed in this chapter, plays a key role and must receive continued focus.

For rural areas, a continued focus on strengthening the RRBs, appropriate product design, consumer protection, and financial literacy is required. New product development leveraging technology should address the technology divide that impacts the low-income and less-educated. For urban areas, the inclusion of informal sector workers, financing of street vendors, consumer protection, and financial literacy should be emphasised.

Overall, the policy prescriptions for the decision makers call for factoring in the changing demographics in rural and urban areas in the design of financial inclusion policy. Financial literacy efforts should be directed towards ensuring that the technology divide is arrested, and technology is used for the benefit of the marginalised. There is clearly a latent demand for financial services as is evidenced by the proliferation of informal savings schemes such as chit funds and other deposit schemes that so often end up in the poor losing their hard-earned savings and the so-called unfree work having its origins in debt given by the recruitment agents to poor workers often in rural areas. The ecosystem must make a sincere effort in bringing down the non-pecuniary costs of dealing with the banking system. Account opening was the first step. It is time now for the banking system to enable and improve the livelihoods of the poor and the vulnerable and make a meaningful contribution to building up their financial resilience.

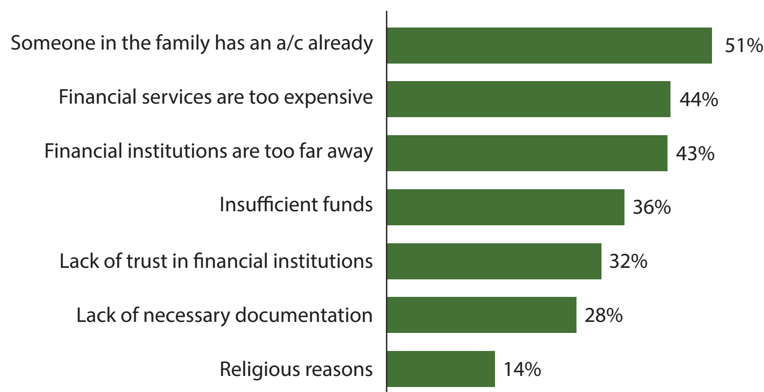
The question is not whether the troika of the State (the government and the RBI), banks, and the ecosystem enabler NPCI, have done enough to promote financial inclusion in the country. A start has been made which has clearly demonstrated that policies can be delivered at scale. Rather the question we must now ask is whether a lot more needs to be done going forward given the complex challenge that financial inclusion of the poor is. The answer is a definite yes.

APPENDICES



APPENDIX Figure A.2.1. Share of Credit at Interest Rates 13% and Above Per Annum

Source: RBI Database of Indian Economy, Quarterly BSR-1 (Old edition, Table No 2.5 Size of Credit Limit and Interest Rate Range-wise Classification of Outstanding Loans and Advances of Scheduled Commercial Banks)



APPENDIX Figure A.2.2. Reasons for not Having an Account (% without an Account, age 15+)

Source: Findex, various editions

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END NOTES

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3. For example, assume that there are hundred households that are made to stand in a line starting with the household with the lowest asset ownership and ending with the household with the highest asset ownership. They are then grouped into 'deciles' starting with the first ten households clubbed into the first decile, followed by the next ten in the second decile and so on.
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14. Year-on-year credit figures are not calculated based on actual inflation for each year. Inflation is consistently assumed to be 6% annually during the period considered.
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SHGs and SHG Federations: Moving Towards Sustainability?

C S Reddy, S Ramalakshmi and Padmasri Nivedita Aduri

3

3.1. INTRODUCTION

The self-help groups (SHGs) and their federations have emerged as powerful agents of change in the development context of India. Originating as a quiet revolution at the grassroots level, the SHG movement has grown significantly over the past three decades. As these institutions evolved, so did the question whether the SHGs and SHG federations are indeed moving towards sustainability?

The chapter begins with the historical genesis and spread of the SHG movement, then provides details on the present status of SHG savings SHG-bank linkage, followed by an exploration of the evolving journey of SHG Federations. The next section is on the pivotal question: Can SHGs and SHG federations emerge as autonomous and independent entities? This is followed by the transformative impact of the SHG movement on financial inclusion, women's empowerment, human development, poverty alleviation, and the pursuit of sustainable development goals (SDGs). The chapter ends with a conclusion that raises some important questions for the future.

3.2. HISTORY AND SPREAD OF THE SHG MOVEMENT IN INDIA

The SHG movement in India has not only evolved over decades but has also become a crucial platform for poverty eradication and women's empowerment in India. The journey of this transformative movement can be traced back to 1985 when Mysore Resettlement and Development Agency (MYRADA)[1] and a few other non-governmental organisations (NGOs) pioneered the concept of promoting SHGs.

The real turning point came in 1992 when National Bank for Agriculture and Rural Development (NABARD), in collaboration with MYRADA, initiated the SHG-Bank Linkage programme on a pilot basis. This programme started with 255 credit-linked groups availing a cumulative loan of ₹2.9 million in 1992–93. This marked the actual take-off of the SHG movement in India (Reddy and Reddy 2012).

Subsequently, in 1993, the Reserve Bank of India (RBI) issued policy guidelines allowing informal SHGs to open savings accounts in banks and obtain collateral-free group loans for on-lending to their members. The momentum gained further strength, resulting in scaling-up with the issuance of SHG financing guidelines by RBI and NABARD in 1996. In the late 1990s, the state governments, particularly in South India, realised the tremendous potential of SHG Banking for poverty reduction and women's empowerment. They launched large-scale SHG promotion programmes through projects funded by international development agencies like United Nations Development Programme (UNDP), International Fund for Agricultural Development (IFAD), Department for International Development, United Kingdom (DFID UK), and the World Bank to facilitate massive scaling-up of SHG-bank linkages through policy support. The number of SHGs linked to banks surged from 500 in the early 1990s to over 1.6 million in 2006, surpassing the target of NABARD to reach one million bank-linked SHGs by 2008! (Parthasarathy 2015).

As the SHG movement became an integral part of the government's policies for poverty reduction and women's empowerment, major institutions like NABARD, RBI, leading NGOs, and multilateral agencies worked together to scale-up the SHG movement with state governments in Kerala, Andhra Pradesh, and Tamil Nadu setting up state-level institutions like Kudumbashree, Society for

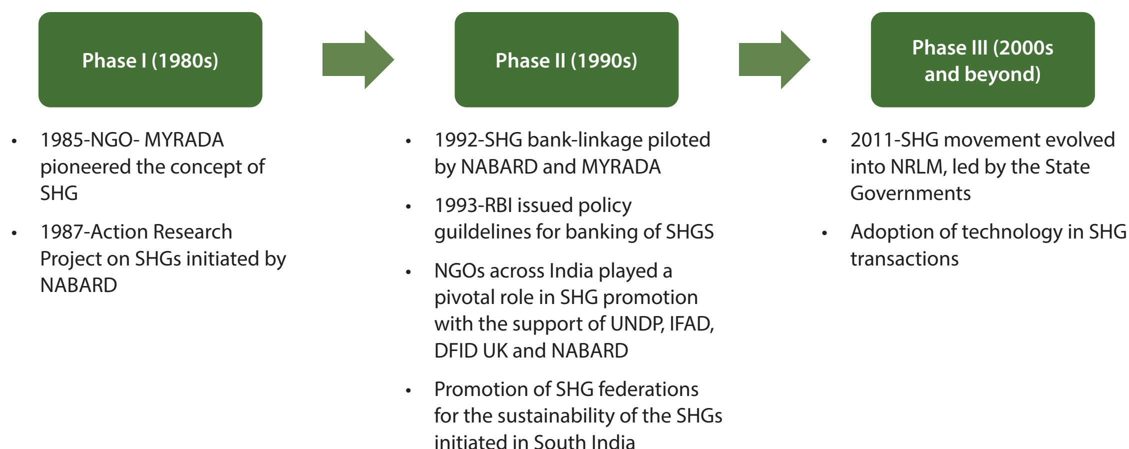


Figure 3.1. Key Phases in SHG Movement

Source: Fernandez, 2006.

Elimination of Rural Poverty (SERP), and Tamil Nadu Construction Workers Welfare Board (TNCWWB), respectively to perform the role of a sensitive support system. In 2011, the programme reached a milestone, evolving into the National Rural Livelihoods Mission (NRLM) of the Government of India to support the State Rural Livelihood Missions (SRLMs). SRLMs set up as autonomous implementing agencies by the state governments, are operational in 29 states and 5 Union Territories.

This ambitious initiative named the Deendayal Antyodaya Yojna-National Rural Livelihoods Mission (DAY-NRLM) since 2011 stands as one of the largest poverty alleviation programmes globally.

During the 2000s and beyond, the SHG movement experienced significant growth and transformation with a surge in the recognition of microfinance's pivotal role in poverty alleviation. SHGs became integral to such initiatives by providing financial services to marginalised communities and ensuring financial inclusion of hitherto excluded women. They took a prominent role in empowering women, often targeting them as members to enhance family and community well-being. SHGs diversified their activities beyond financial services incorporating skill development and livelihood programmes and further expanded their engagement in various social development initiatives related to Nutrition, Health, Water and Sanitation. They also played a pivotal role during the COVID-19 pandemic by undertaking awareness creation, relief, and rehabilitation of COVID-affected families. Governments lent their support through policies and funding, while the adoption of technology facilitated financial transactions in remote areas. Some SHGs even evolved into social enterprises, embracing sustainability, and social responsibility. SHG Federations played a strong role in agriculture value-chain development.

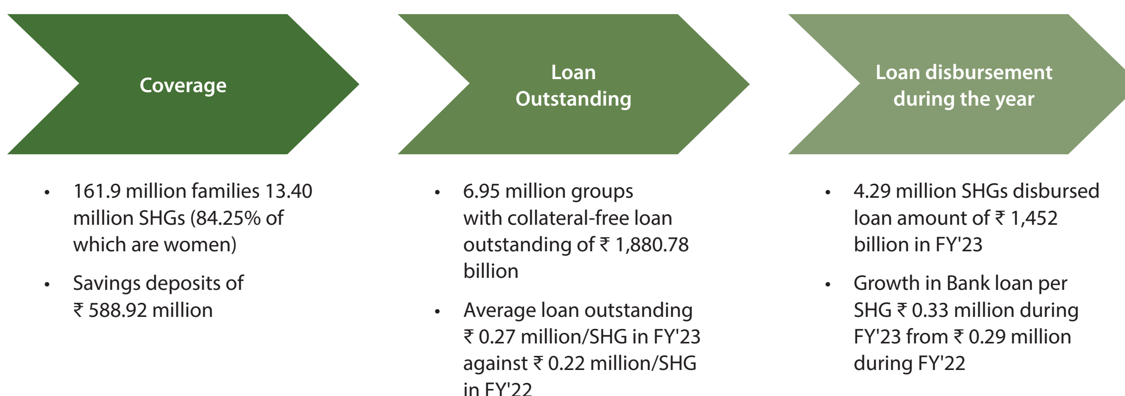


Figure 3.2. Status of SHG-Bank Linkage

Source: Status of Microfinance in India, NABARD, 2023.

3.3. STATUS OF SHG-BANK LINKAGE

According to NABARD's statistics, the programme covers more than 160 Million households, with 13.4 million SHGs having accumulated savings of ₹ 588.93 million in their bank accounts as of 31 March 2023. This registered 13% increase in the number of SHGs and 25% increase in the savings amount over the previous year.

Of the total SHGs, 11.29 million were all women SHGs with savings of ₹ 524.55 billion, accounting for 84% and 89% of total SHGs and savings, respectively. There is no data regarding approximately 2.1 million savings-linked SHGs, which are not all-women. Are they dormant or functional?

3.3.1. Growth of SHG-Bank Linkage over Three Decades: Savings in Bank Accounts

Over the past 15 years, there has been continuous growth in the number of SHGs and their savings in the bank accounts. The southern region, where the movement originated, has the highest number of SHGs. The trend has been continuing for the last 15 years, though plateauing (Figure 3.3). The growth rate in the number of SHGs is significantly high in the eastern region.

During FY 2022–23, the southern region had the highest number of SHGs (4.1 million), followed by the eastern region (3.9 million), while the northern region (0.78 million) and north eastern regions (0.79 million) have the least number of SHGs. Overall, the southern region and the eastern region account for about 60% of the SHGs in the country. Within the southern region, Andhra Pradesh has the highest number of SHGs, followed by Tamil Nadu and in the eastern region, West Bengal has the highest number, followed by Odisha.

The average savings increased from ₹ 9,000 to ₹ 43,000 per SHG from 2008 to 2023 (Figure 3.4). During FY 2022–23, total savings of the SHGs (13.4 million) was ₹ 588.93 billion; savings of SHGs under National Rural Livelihood Mission or NRLM (8.2 Million) and National Urban Livelihoods Mission or NULM (0.73 million) was ₹ 374.25 billion and ₹ 35.47 billion, respectively.

The savings data of the SHGs from the banking system collected and published by NABARD is only a third of the story of SHG savings! However, there is no reliable database on the accumulated corpus (savings, interest earned over the years, grants received, and other incomes) of the SHGs in India. Neither the Government of India nor NABARD has such data! A few years ago, based on field studies, NABARD estimated the savings of the SHGs in the bank accounts to be approximately one-third of their total funds as the remaining is always in loans to the members. Andhra Pradesh Mahila Abhivruddhi Society (APMAS), through its research studies, came to a similar conclusion. If one were to take that estimation into consideration, the total accumulated SHGs owned funds/savings (corpus) would be a massive ₹ 1,766.79 billion approximately (thrice the SHG savings in banks as on 31 March 2023)! During FY 2022-23, loans worth ₹ 1,452 billion were disbursed to 4.29 million SHGs. Approximately 7 million SHGs have bank loans outstanding—to the extent of ₹ 1,880.87 billion. The total fund managed by the SHG movement would be over ₹ 3,500 billion (SHGs owned funds + bank loans).

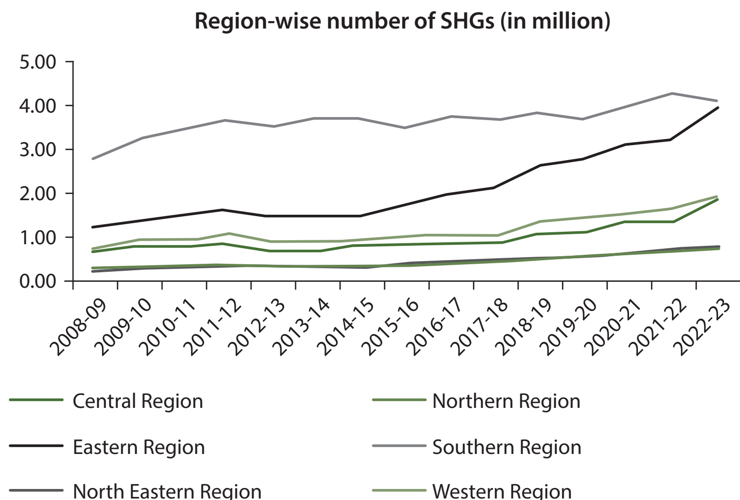


Figure 3.3. Region-wise Number of SHGs over the Past 15 Years

Source: Status of Microfinance in India, NABARD, 2023.

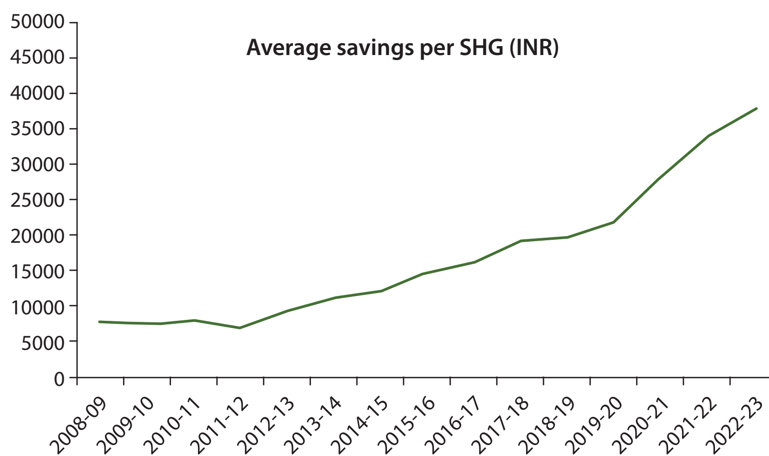


Figure 3.4. Average Savings per SHG over the Past 15 Years

Source: Status of Microfinance in India, NABARD, 2023.

The large agencies engaged in supporting the women SHG movement in India (NRLM and NULM) don't seem to have reliable data on the savings and retained earnings of the SHGs. Even the SRLMs / SULMs don't have a database to track SHG savings in real-time. More importantly, these agencies seem to pay little attention to savings mobilisation and utilisation by SHGs.

Though SHGs are savings first organisations, there has always been too much emphasis on bank loans to SHGs at the cost of neglecting optimum use of members' savings, which builds ownership and accountability of women. As a result, sometimes the SHGs don't fully utilise their own savings for lending to members while waiting for bank loans. Subsequently, the amount of SHGs' own funds lying in the banks would be considered as "idle funds" which are not working for the SHG members. Of course, we came across cases of banks holding the SHG savings in their bank accounts as informal "collateral" for the bank loans, though such practices are officially discouraged strongly!!! In states like Andhra Pradesh and Telangana Bank Loans to SHGs are interest-free as the interest paid by the SHGs to the banks is reimbursed by the state governments periodically. As a result, banks 'encourage' SHGs to borrow up to ₹2 million/SHG and not withdraw their savings. SHGs not optimally using their own savings reduce

BOX 3.1. THE SUSTAINABLE IMPACT OF SAVINGS-BASED MODELS BY SAHAVIKASA AND SELF EMPLOYED WOMEN'S ASSOCIATION (SEWA) BANK

Examining the sustainability of SHGs through savings discloses a resilient model. By relying on internal resources, SHGs reduce dependence on external funding, ensuring long-term viability. This sustainability is rooted in the principles of thrift and credit cooperatives, a model exemplified by organisations like Sahavikasa and SEWA Bank.

This Savings-based model emphasises the dual function of savings as a form of social capital and financial resource. Members not only save for individual goals but also collectively contribute to a shared pool. This communal approach not only fortifies the financial base but also builds a sense of community responsibility.

Sahavikasa has promoted 561 Thrift and Credit Cooperatives and 50 Associations of Thrift and Credit Cooperatives with about 2.61 million members in erstwhile Warangal and Karimnagar districts of Telangana state. As on December 2022, these cooperatives mobilised ₹4.55 billion of savings and corpus and disbursed loan amount of ₹2.87 billion while loans outstanding were ₹4.14 billion. The average loan per member is around ₹19,117. None of these cooperatives access external loans or funding support. Cooperatives and Associations are self-reliant, self-regulating, and sustainable institutions.

Table 3.1. Details of Thrift and Credit Cooperatives Promoted by Sahavikasa

Particulars	Financial Year	Savings & Corpus	Loan disbursed	Loan outstanding (in million)	Average Loan per members
Women's Thrift & Credit Co-ops	2021	2,210	1,570	2,040	16.15
	2022	2,370	1,710	2,190	16.44
Men's Thrift & Credit Co-ops	2021	1,990	1,040	1,790	21.40
	2022	2,180	1,160	1,950	21.79
Total	**4.10**	**4,550**	**2,870**	**4,140**	**38.23**

Note: Financial year of the cooperatives is January-December

Source: Sahavikasa, 2021, 2022.

SEWA Bank, in particular, has been instrumental in pioneering a model that intertwines financial inclusion with social welfare. By providing financial services tailored to the needs of women, SEWA Bank has showcased the transformative potential of savings-based models. As on 31 March 2023, SEWA Bank has a paid-up share capital of ₹195.5 million, savings of ₹3,449.7 million, and a profit of ₹21.9 million (SEWA Bank).

members ownership and self-regulation creating vulnerability. The SHG movement in India can learn a great deal from SEWA Bank and Sahavikasa.

3.3.2. Credit Linkage

The overall trend in average loan disbursed per SHG has been increasing over the past 15 years. The average loan disbursed per SHG increased from ₹0.2 million in 2008-09 to 0.33 million in 2022–23 (Figure 3.5).

During FY 2022–23, the total loan disbursed to 4.29 million SHGs was ₹1,452 billion. Most of the SHGs have loans from commercial banks. While the average loan disbursed per SHG was ₹0.33 million, the average loan outstanding per SHG was ₹0.27 million.

The highest number of SHGs credit linked in absolute terms is in the southern region (3.2 million), followed by the eastern region (2.38 million), while the least number of SHGs credit linked (0.17 million) is in the northern region (Figure 3.6).

While 13.40 million SHGs have savings bank accounts, only 6.95 million SHGs had credit outstanding of ₹1,880.78 billion with banks as on 31 March 2023. It has always been a puzzle to have such a wide gap of nearly 50%. *Only five states in the country have more than 50% of the SHGs credit linked* (NABARD 2023).

Important reasons for this could be: (i) some of the newly formed SHGs that have a savings bank account are yet to receive a bank loan; (ii) many SHGs formed over the past 30 years opened their bank account but became defunct and have not been removed from the database; (iii) some of the SHGs repaid their bank loan but are yet to receive a new bank loan as there is a delay in obtaining the loan or inability to get loan because they defaulted on the previous loan; (iv) during the migration of the SHGs from Development of Women and Children in Rural Areas (DWCRA) to Swarnjayanti Gram Swarozgar Yojana[2] (SGSY) to NRLM, several were reorganised and the same SHG opened a new bank account probably with a new name without closing the old account.

Because of these reasons, there might be several SHG savings and loan accounts that might be dormant for several years. NRLM/NULM should focus on deduping of the SHG savings accounts while promoting digitisation of SHGs. NABARD could ask banks to provide ageing analyses of dormant SHG savings and loan accounts over 1-3+ years. Maximum efforts should be made to decrease the gap between savings-linked and credit-linked SHGs in India. A real-time portal to monitor SHG savings and credit data is crucial, as this database would provide reliable information on SHGs.

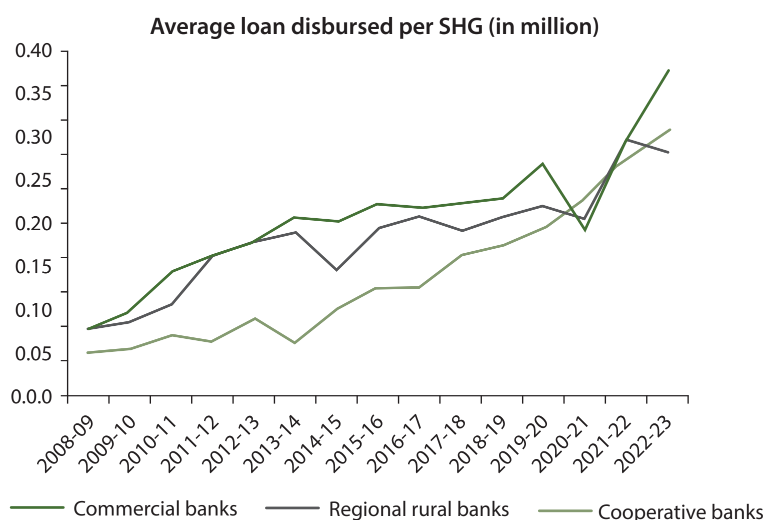


Figure 3.5. Average Loan Disbursed per SHG over the Past 15 Years

Source: Status of Microfinance in India, NABARD, 2023.

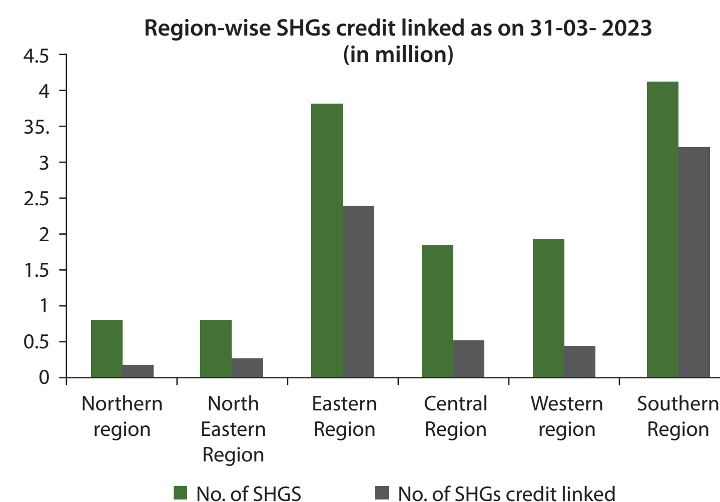


Figure 3.6. Region-wise SHGs credit linked as on 31-03-2023 (in million)

Source: Status of Microfinance in India, NABARD, 2023.

Table 3.2. Savings Linked and Credit Linked SHGs

Financial Year	No of SHGs Savings Linked with Banks	No of SHGs Received Loans during the Year	Coverage of SHGs
2020–21	11.2 million	2.9 million	26%
2021–22	11.9 million	3.4 million	29%
2022–23	13.4 million	4.3 million	32%

Source: Status of Microfinance in India, NABARD, 2023.

The proposed integration of digital technology in SHG operations can revolutionise the way these groups function. By adopting digital payment systems,

SHGs can facilitate quicker and more transparent financial transactions. Online record-keeping can significantly reduce paperwork, minimise errors, and improve the efficiency of tracking savings and loans. To achieve this digital transformation, there needs to be a focus on providing digitalisation training to SHG members, ensuring that even those with limited education can confidently use these technologies. The public digital infrastructure would also need strengthening to enable seamless adoption.

More broadly, digitalisation of SHGs is an opportunity to financially empower rural women and communities. With the right training and infrastructure, it can significantly improve access to savings, credit, and insurance services for the underserved. It can open new opportunities for income generation and entrepreneurship at the grassroots. To realise this larger vision, strategic partnerships between government, banks, civil society, and other stakeholders will be crucial. But the ultimate goal should be SHG members themselves drive this digital transformation.

'Best-performing' states in terms of bank linkages:

The SHG-bank linkage data for top nine states (Andhra Pradesh, Telangana, Karnataka, Tamil Nadu, Kerala, Odisha, Bihar, West Bengal, and Maharashtra) where the SHG movement started early reveals some interesting trends. At the national level, 85% of the savings deposits belong to these nine states. Similarly, 91% of the loans disbursed and 92% of the loans outstanding during the year 2022-23 belong to these nine states. This requires great attention of NRLM/NULM, NABARD and other key stakeholders to these states to ensure low disparity among the states.

When the data of Andhra Pradesh is compared to the national data, it brings out some interesting observations and also raises questions for further analysis and understanding. Out of the total ₹588.93billion savings balance in the bank accounts at the national level as of 31 March 2023, almost 32% belong to SHGs of Andhra Pradesh, whereas a total of ₹ 186.060 billion savings is in banks in Andhra Pradesh. If the amount of savings in the bank is compared to the banks' lending during the year it is a little more than double the amount—₹402.31 billion. This amount is about a third of the total credit linkage during the year at the national level. Moreover, the Table also shows that in states such as Odisha and Maharashtra the loan outstanding amounts are almost equivalent to the savings amount in the banks. In contrast, in states like West Bengal, Andhra Pradesh, Bihar, and Telangana the loan outstanding is 2-4 times the savings balance of SHGs in the banks.

In Andhra Pradesh, during 2022-23, 32% of SHGs got loans and the average size of the bank loan was ₹0.76 million, which is more than double the national average loan disbursed i.e. ₹0.33 million. Additionally, 91% of SHG corpus money in Andhra

Table 3.3. Savings and Loan Data of the Best-performing States

Sl. No.	Name of the State	No of SHGs (in million)	Savings Amount (in ₹ billion)	Proportion of SHG Savings in Banks to National Level Total (%)	Avg Loan/ SHG (in million)	Loan Outstanding (31 March 2023)		Proportion of SHGs Savings Balance Banks to O/s (%)
						No of SHGs (in million)	Amount (in ₹ billion)	
1	Andhra Pradesh	1.08	186.06	32	0.76	0.96	587.57	32
2	Telangana	0.6	51.57	9	0.61	0.58	260.48	20
3	Karnataka	0.87	16.66	3	0.28	0.93	211.51	8
4	Tamilnadu	1.07	22.74	4	0.53	0.45	151.15	15
5	Kerala	0.48	12.32	2	0.56	0.25	22.86	14
6	Odisha	0.97	63.16	11	0.27	0.35	64.86	97
7	Bihar	1.11	30.74	5	0.17	0.84	126.26	24
8	West Bengal	1.44	72.35	12	0.22	1.01	184.25	39
9	Maharastra	1.51	47.42	8	0.25	0.37	62.42	76
Total			**503.02**				**1737.36**	
Total at National level		**13.4**	**588.93**			**6.96**	**1880.79**	

Source: Status of Microfinance in India, NABARD, 2023.

Pradesh is in a savings bank account as balances of the total savings and corpus mobilised by SHGs (₹ 204.06 billion as per SERP and MEPMA data).

The strong positive correlation between SHG savings amounts and loan amounts outstanding suggests that savings are (perhaps) being used as collateral or a factor in loan eligibility. That said, given that the savings-to-loan ratio varies widely across states, there is an inconsistent national relationship between savings and credit access. This suggests that savings may not be a formal part of collateral norms nationally, but state-level differences could result in the use of savings as collateral. This complex linkage requires detailed investigation to understand if and how SHG savings are being used as collateral for loans. While using savings may appear to demonstrate credit worthiness, it risks excluding newer SHGs with lower savings.

Furthermore, two major implications require systematic study. First, savings are the cheapest source of non-subsidised capital for SHGs. Using them solely as collateral rather than allowing rotation for on-lending contradicts the purpose of savings in the SHG model. Second, lending from own savings creates greater accountability for repayments compared to external bank loans. Members feel a higher responsibility to repay on time when lending their own money.

This context in which the SHG movement is operating right now raises serious concerns about the original intent for initiating the movement and the path in which it is headed right now. There are also thought-provoking questions raised by senior government officials and development practitioners who have been associated with SHGs for a long time regarding the current SHG–Bank linkage practices such as limited internal lending within SHGs and banks withholding the SHG savings. There is also a need for NRLM and NABARD to find more reliable ways of estimating the SHG savings, which are in rotation as loans to SHG members. As a part of reimagining the design of the women's collectives, as noted above, there is a need for a strong IT-based system to monitor the savings mobilisation and utilisation by SHGs. SHG Federations at village and cluster levels must play a proactive role in fully utilising the SHGs' own funds (savings, interest earned, grants received, and other incomes) by de-emphasising the preoccupation of the entire system for SHGs to look for bank loans for lending to SHG members to meet their emergency and emerging needs. In Andhra Pradesh and Telangana, a portion of the corpus funds of the SHGs and Federations are deposited with Stree Nidhi earning good interest rates as income for the SHG Federations.

3.3.3. Non-performing Assets in SHG Bank Linkage

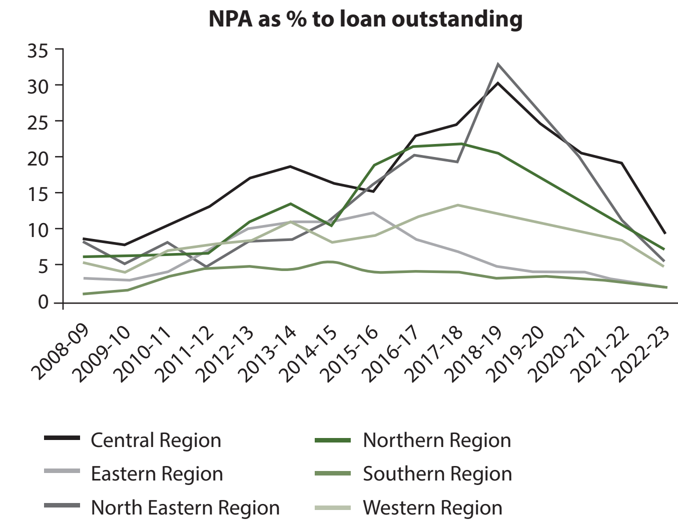


Figure 3.7. Non-performing Asset (NPA) as Percentage to Loan Outstanding over the Past 15 Years

Source: Status of microfinance in India, NABARD, 2023.

The overall trend of non-performing asset (NPA) over the past 15 years reveals that they have been increasing till FY 2018-19. A study done by BIRD in 2019 (Muduli and Sharma 2022) suggests that some of the main reasons for increase in NPA are economic conditions, poor monitoring, lack of credit data, negative peer pressure and loan waiver by political leaders. In the past four years, the NPA has been coming down gradually. The region-wise data also suggests that the southern region has the least NPA, which is also linked to higher credit linkage and disbursement in this region. In the eastern region, which has the second-highest number of SHGs credit linked in the country, the NPAs have been coming down significantly for the past seven years. Its performance is now on par with the southern region. The reason for maintaining low NPA and high percentage of recovery of loans is that SHG Federations are acting as intermediaries between SHGs and banks. SHG federations at the village and cluster levels under NRLM/SRLMs introduced the system of community-based recovery mechanism (CBRM). CBRM committees facilitated development of Bank Sakhi (Bank Mitra) to support bank linkages. These have facilitated significant increase in the number of SHGs-bank linked and the amount of

credit. Similarly, NRLM has been implementing subvention scheme on prompt repayment of bank loans by SHGs.

During 10–11 October 2023, APMAS organised a National Conference on SHG Federations in Hyderabad city of Telangana. The deliberations of the conference brought out the issues related to SHG bank linkages and the Special Chief Secretary, Rural Development, Government of Andhra Pradesh raised the issue of declining internal lending in SHGs in the last two years. Additionally, bank managers insist that banks are giving ₹1-2 million loans per SHG, therefore, SHGs have to maintain sufficient savings in the savings bank account.[3]

Looking at above issues and the growth of SHG credit linkages in the last few years raises many questions:

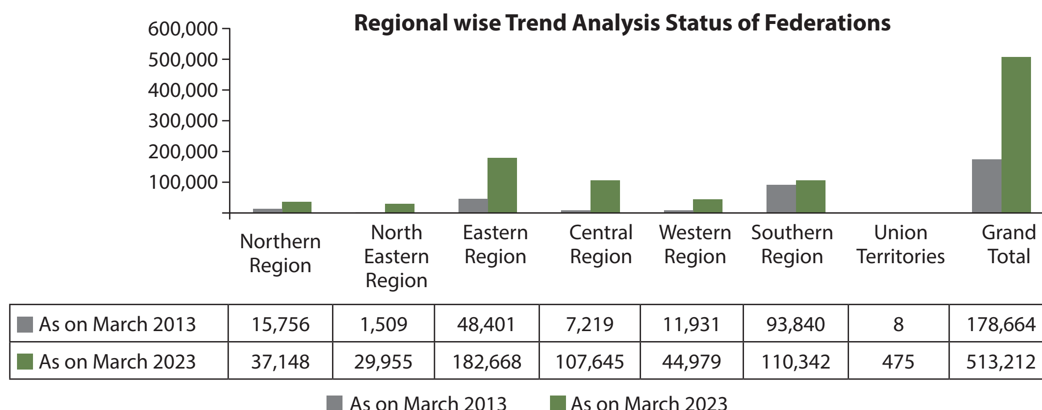
- Is achieving 100% repayment to banks truly indicative of success for the SHG movement, or does it primarily benefit the banks?
- Are bank loans to SHGs really collateral-free in practice, or do savings act as informal collateral?
- What is the impact of the interest rates charged on bank loans and paid on savings for SHGs? Who benefits more from this spread – the banks or the SHGs?
- What is the effect of interest subvention on SHGs? Are banks or SHGs benefiting more from these subsidies?
- Who is benefiting most from the investments made by SHGs, Federations, and NRLM towards maintaining 100% repayment to banks?
- Even after 30 years, are we still measuring SHG performance mainly through repayment rates rather than broader impact indicators? Should the metrics of success focus more on outputs and outcomes for women's empowerment?

As most of the states are moving towards reaching the highest bank linkage without focusing on these issues, it calls for immediate attention by NABARD, Banks, and NRLM to reflect upon for policy changes.

3.4. THE JOURNEY OF SHG FEDERATIONS

The evolution of SHGs has been dynamic, marked not only by individual achievements but also by the collective strength harnessed through SHG Federations. From their inception, SHG Federations—pioneered by leading agencies such as Professional Assistance For Development Action (PRADAN), Cooperative for Assistance and Relief Everywhere (CARE), Dhan Foundation, and MYRADA—played a foundational role in shaping the narrative of the SHG movement. Examining the performance of SHGs, thus, becomes an integral part of understanding the broader landscape where these Federations have thrived, creating a holistic and impactful approach to community development. The massive outreach of the informal SHG movement has generated great interest in the model's sustainability, which has led to the promotion of SHG Federations at village, cluster, and district levels as formal member-owned, member-managed and member-controlled, self-reliant organisations.

Majority of the SHG Federations have been promoted by state governments under NRLM and NULM. There are 5.13 million SHG Federations in rural areas across the country.[4] These Federations offer a wide range of services – financial, technical, livelihoods, social, and development. SHG Federations also act as implementing agencies for various government schemes. Some of them are engaged in financial intermediation acting as Business Correspondents (BCs) of banks, accessing



	Northern Region	North Eastern Region	Eastern Region	Central Region	Western Region	Southern Region	Union Territories	Grand Total
As on March 2013	15,756	1,509	48,401	7,219	11,931	93,840	8	178,664
As on March 2023	37,148	29,955	182,668	107,645	44,979	110,342	475	513,212

Figure 3.8. Region-wise Trend Analysis Status of Federations

Source: National Rural Livelihoods Mission

bulk loans from banks for on-lending and managing funds given by the state governments and donors. SHG Federations have evolved as an institutional base providing sustainability to the SHG sector, with significant scale and widespread acceptance.

After the southern region, majority of the federations in the country are present in the Eastern region. Even though there is an overall increase in the number of SHG Federations in this region, there is little growth as compared to 2013 as the states have reached saturation. In this region, the government is promoting SHG Federations through Society for Elimination of Rural Poverty (SERP), Mission for Elimination of Poverty in Municipal Areas (MEPMA), Kudumbasree, and State Rural Livelihoods Mission or SRLM (Vazhndhu Kaatuvam and Mahalir Thittam). In addition to NRLM and NULM, a few prominent NGOs like MYRADA, PRADAN, Dhan Foundation etc. are promoting SHG Federations. However, a rapid expansion of SHG Federations, supported and monitored by NRLM at the national level and by SRLMs at the state level, are gradually replacing the functions of NGOs and other Self Help Promoting Institutions (SHPIs), previously involved in the establishment and nurturing of SHG federations. Even though the SHG Federation model was initiated by the NGOs, their role is not recognised and given due importance. At the same time, the data related to NGOs and number of SHG Federations promoted is unavailable.

NGOs should continue to play a significant role in the strengthening of SHGs and SHG Federations, especially in building models, piloting innovations and promoting livelihoods through SHG Federations to ensure the sustainability of these institutions.

3.5. CAN SHGS AND SHG FEDERATIONS BE AUTONOMOUS AND INDEPENDENT ENTITIES?

Although SHG federations in many places are still in nascent stages of development, they have already proved to offer many benefits to SHGs and their members. This includes economies of scale, extending value chains, broadening and deepening of SHGs' service packages, enabling capacity building among primary members, managers, professionals, etc. Though the gains are many and significant, there are several emerging needs of SHG Federations that require urgent attention. The following challenges emerge for achieving autonomy and independence:

- Majority of SHG federations are promoted by NRLM/NULM. While they have gained strength in terms of finance, capacity building, and human resources among others, they are vulnerable to elite capture.
- As greater numbers of federations are being promoted through a target-oriented and top-down approach, there is a fear among the stakeholders that the system may lose its autonomy and independence and be captured by vested interests.
- SHGs and federations are increasingly dependent on promoters for financial resources (working capital and management cost) and staff. Similarly, limited understanding of statutory provisions and legal compliances by Executive Committee (EC) or Board members is also increasing the dependency. This is leading to SHG Federations tending to be member-owned and promoter-controlled.
- Similarly, there is increasing tendency among the state and central governments to consider the Federations as channels for delivering government schemes rather than as membership- based democratic institutions. Implementation of government programmes requires large number of staff in SHG Federations resulting in reduced member control and increased operational cost with sustainability becoming a causality.
- Majority of the SHG federations (formal/ informal) have three-tier structures i.e. the SHG, the village and the cluster level federations. In some states there are block / district level SHG Federations promoted by the SRLMs. As the Federation grows in size and complexity, maintaining member participation becomes one of its biggest challenges.
- At the SHG and federation levels, focus is shifted from internal resource mobilisation (mandatory savings, resource fee collection through fee for services, profit) to subsidised bank borrowing and grants. This situation is leading to members remaining passive and the federations' power and resources captured by a few.
- Role of the promoters will change over time according to the progress made by SHGs and their Federations. Leadership and management responsibilities will be taken over by the community and the promoters should evolve to facilitators. However, in practice we have seen continued and increasing role of promoters.

To overcome the above challenges and ensure that the Federations remain autonomous and independent, an *appropriate strategy must be evolved by the promoting institutions. It must be ensured that members' stake remains high and they remain the*

owners, users, and managers of the federation and the federation's power and resources do not get captured by a few.

Promoters should develop mechanisms that ensure the members monitor their leaders and ensure their interests are represented competently and correctly at the federation level. This should be done by individual members at SHG level and member organisations at federation level. At the SHG and federation level, promoters should develop a democratic system for members electing their leaders through a secret ballot system. The operational and business rules of federations must be changed as they grow. Leaders and staff should be trained on evolving and changing policies based on the context and relevance.

Given the autonomy and independence of the institutions, promoters should not standardise the federation model. Another important element in decentralising SHGs and federations is having a suitable legal framework. Based on the objectives and services offered to its members, Federations can register as a formal organisation under various acts such as the Societies Act, Trust Act, and Self-Reliant Cooperative Act like Mutually Aided Cooperative Societies Act in AP, Telangana, and a few other states. The formation of the Ministry of Cooperation (MoC) and the Supreme Court judgment on the 97th Constitutional Amendment is central to the future of cooperatives. In this context, an act through regional consultations should evolve to make necessary changes in the existing law or evolve new law for SHG Federations that could inform and engage the new MoC, NRLM, NABARD, etc.

To create a feeling of ownership and accountability among SHGs and their federations, a commonly accepted and understandable vision and strategy should be facilitated by the promoters. Representatives of SHGs and federations should be included in developing commonly accepted functions and standards, process of implementation, mobilisation and usage of resources, performance planning, and supervision systems.

APMAS, with support of NABARD, DGRV Germany, and State Bank of India (SBI) organised three Annual National Conferences on SHG federations and presented National Awards for the best SHG federations during 2021 to 2023. These conferences had around 200 participants from 15-20 states with representation from SHG federations, state and national livelihood missions, banks, academic institutions, etc.

Based on the aspirations expressed by the women leaders from the SHG Federations and inputs from the sector experts, SHG Federations' 'Vision 2030' was crafted. The collective vision for the SHG movement, articulated by SHG Federation leaders is given below.

Creation of wealth in an equitable gender-just society that enhances quality of life of women: *SHGs and their federations to evolve into autonomous, independent, self-reliant, sustainable, resilient institutions owned, managed, and utilised by women strongly supported by an enabling ecosystem for the SHG movement to realise its full potential of social and economic empowerment of women.*

BOX 3.2. NATIONAL CONFERENCE ON SHG FEDERATIONS CONDUCTED BY APMAS

In the Third National Conference on SHG federations, organised by APMAS (in collaboration with key stakeholders in SHG promotion), high quality candid discussions on innovation-based experiences were facilitated. The broad outcomes of the Conference are as follows:

- Advocate for the independence and autonomy of SHG federations, allowing them to make decisions that align with their objectives. Encourage a three-pronged income approach for SHG sustainability and diversified revenue streams for long-term viability
- Given the current practices by banks, NRLM and NABARD should focus on reasons behind high SHG repayment rates to banks in the ever-greening of loans. Are SHG members bor-rowing from one source to repay another source? Are there still some vulnerable SHG fami-lies in perpetual debt-traps? Are there real cash flows for SHG members from their enterpris-es? Are banks benefiting from interest subversions of state/central governments?
- Promote initiatives such as small savings, insurance, housing, and skill development to en-hance the financial well-being of SHG members. Collaborate with Banking Correspondents and co-lending models to improve access to financial services for SHGs.

- Recognise SHGs as effective platforms for focusing on nutrition and health and leverage their reach and influence. Strengthen the linkage between SHG Federations and political par-ticipation for women, emphasising the role of women in decision-making processes.
- Success of SHGs and their federations has to be measured in terms of impact/outcomes in poverty reduction/improved quality of life (increased incomes, reduced vulnerability and re-duced gender gap), and asset creation for the poorest of the poor!!
- NRLM and SRLMs must design and monitor outcomes of poverty reduction based on efforts for over 20 years by capturing increased household incomes in real terms, increased asset creation in the name of women, increased education and health of SHG families and im-proved living standards of women!
- Create awareness about contemporary risks and dangers, including climate change and how families could cope and adapt by adopting natural farming!

Over the last three decades, there is a rising expectation among SHGs and SHG Federations to increase women's participation in economically-viable activities. This includes agriculture and the non-farm sector through farmer producer organisations (FPOs), enterprise development, skills training and access to larger loans, all of which are in line with vision 2030 of the SHG Federations.

Thus, NRLM, NULM, and NABARD should play a crucial leadership role in achieving Vision 2030 of SHG federations through the following strategies in the next few years:

3.5.1. Federations must become Credible Institutions

The SHG-Bank linkage programme is reaching 30 years. However, banks are limited to SHG-bank linkages with Federations playing the role of business correspondents (BCs) in nascent stage. To advocate the agenda with NABARD, NRLM should create a national level forum for enabling eco-system for policy makers.

3.5.2. Developing Model CLFs

To create a proof of concept through sharing and learning, NRLM is focusing on developing model cluster level federations (CLFs). Other CLFs will adopt and replicate the practices learned from model CLFs. However, there is a need for further exploration on the role and functions of SHG Federations i.e. impact of financial and non-financial functions on each other, member control vs. professional management, method of undertaking and prioritising the development agenda, role played by SHG Federations in value chain development, and processes and mechanisms used by Federations to sustain themselves.

There have been considerable discussions on 'reimagining the design of collectives'. For the CLFs to be serving their members in an effective manner, there needs to be a bottom-up approach and the SHG Federations must be accountable to their member-SHGs and the women. The service offered by the CLFs must have a strong business model and must be able to mobilise resources to meet the operational costs to for serve their members effectively. CLFs are formal agencies, mostly registered under the cooperative laws. They must have democratic functioning and strong ownership of the members demonstrated by the role played by the Board of Directors of the CLFs in developing their annual plans and budgets and implementing those by raising adequate resources from the member SHGs. For the CLFs to be sustainable business organisations, the focus must be on the optimum use of savings of women in their SHGs, with strong systems in place to track the services provided.

3.5.3. Self-Regulation of SHGs and SHG Federations

Over the past 15 years, APMAS has been advocating self-regulation of SHGs and SHG federations. During the process, it was realised that the SHG members and SHG federation board members should be equipped with the necessary understanding and orientation so that they can play their role effectively and lead their institutions to become vibrant entities benefiting their members. In the interest of their members, these institutions need to have effective and efficient internal control systems and maintain sufficient accountability and transparency to reach their goals.

SHGs and SHG federations should adopt self-regulation practices to promote sustainability and self-reliance. Critical aspects of self-regulation like timely audits, legal compliances, leadership changes through elections, financial viability, savings and loan growth should become norms for

SHGs, VOs, and CLFs. SRLMs should make annual audits, timely elections, and grading of all NRLM-promoted community institutions mandatory. Based on experience and stakeholder feedback during national conferences conducted by APMAS, introducing these self-regulation practices across SHGs is not only desirable but also essential to ensure their sustainability in the long run. Mainstreaming self-regulation will help SHGs become self-reliant over time.

3.5.4. Intensify Livelihoods Outreach

NRLM facilitated community institutions to access credit linkage, technical assistance and support value chain and linkages through VOs and CLFs, with the objective of increasing household income in rural areas. However, NRLM should focus on integrated agro-ecological value chain projects in aggregation, collection, processing, distribution by bringing technical expertise, appropriate technology, timely investment, incubation support, market linkages etc. In this context, there is a need for clarity on the role played by Federations, NGOs, and NRLM in intensifying livelihood outreach and mutual benefits of SHG Federations and FPOs. There is also a need for NRLM to develop an institutional framework for SHG Federations supporting this matter.

SHG movement emerged as a strong force in promoting financial inclusion in India. Its impact reaches beyond economic empowerment, encompassing social and gender empowerment as well. However, addressing the challenges they face and leveraging technology and policy support will be crucial in ensuring their continued success in advancing financial inclusion and reducing poverty in India.

3.6. IMPACT OF SHGS AND SHG FEDERATIONS

Over a period of 30 years, the impact of SHG movement varies based on factors such as the promoter's philosophy and capacity in terms of resource availability, organisational framework and layers, range of services, and the effectiveness of training and handholding support provided, and the broader socio-economic context. The promoters followed multiple strategies in achieving the scale and sustainability, including: (i) facilitating intensive institutional building; (ii) enhancing the capacities of leaders and developing community cadre; (iii) facilitating institutions to access government schemes and programmes through linkages and convergence; (iv) facilitating financial linkages to access resources to enhance the livelihoods of the SHG members.

These strategies, clubbed with community participation had a significant impact on individuals and communities, particularly in the context of socio-economic development and empowerment of women and other vulnerable groups.

3.6.1. Financial Inclusion

SHGs and their federations play a crucial role in promoting financial inclusion. SHGs provide a platform for members to pool their savings and access credit, enabling them to meet their financial needs, open bank accounts, and access loans for investing in income-generating activities. Opening a bank account is often the first step towards financial inclusion. SHG federations are acting as intermediaries between SHGs and banks. SHG Federations at the village and cluster levels under NRLM/SRLMs introduced the system of community cadre – Bank Sakhi (Bank Mitra). They significantly increased the number of SHG-bank linked accounts and the amount of credit. As of March 2023, NRLM had developed around 35,000 community cadres under financial inclusion.

SHGs, with the support of SHG federations provide a safety net for members in times of emergencies or financial crises. Stree Nidhi, a pioneering organisation, has launched a joint initiative by the community and the Andhra Pradesh State Government, for transforming the landscape of livelihood finance for SHG women. Stree Nidhi introduced a comprehensive solution that combined a customer-centric approach with technological innovations to empower SHG women and enhance their economic prospects. Members can borrow from the group to cope with unexpected expenses, reducing their vulnerability and becoming more resilient to economic shocks, thereby reducing the risk of falling into poverty. Federations also enable SHG members to access other financial services like insurance and savings products.

The growth of bank linkages has a significant effect on declining share of informal credit and reduction in high-cost debt, and increase in the productive assets at the household level, which leads to increasing the income (Kochar et al. 2020). However, there is still a need for facilitation of SHG Federation-bank linkage using technology-based solutions for offering financial services. Moreover, encouraging them to play the role of BCs also offers a range of financial services to SHG members.

BOX 3.3. PROMOTION OF 'SHG BANK' ON THE MODEL OF 'STREE NIDHI COOPERATIVE FEDERATION'

There is a distinct possibility of the SHG federations promoting their own microfinance institutions or 'SHG banks' to serve the supplementary financial needs of their SHG members. In Andhra Pradesh and Telangana, 'Stree Nidhi Cooperative Federations' have already proved and emerged as specialised Microfinance Institutions for SHGs at the state level with a portfolio size of around ₹ 16,4.30 billion. In each state, the SHG Federations can promote their own 'Stree Nidhi' as a women's bank. To meet the ever-growing financial needs of the SHG members, several innovations are needed including, SHG federations as BCs/BFs and adoption of technology.

Stree Nidhi Status as on 31 March 2023

Table 3.4. Status of Stree Nidhi in Andhra Pradesh and Telangana as on 31 March 2023

Particulars	Telangana	AP
No. of members financed (in million)	18	9.8
Share capital mobilised from community (in ₹ billion)	3.88	1.4
Savings mobilised (in ₹ billion)	8.07	7.2
Loans disbursed (cumulative in ₹ billion)	170.7	152.85
Loans disbursed (during the year in ₹ billion)	23.14	31.67
Loans outstanding as on 31st March (in ₹ billion)	52.32	35.87
Loan recovery rate (%)	93	98.23
NPA %	0.31	1.14
Profit sharing/patronage to members (last year)	69.59	9.84

Source: Stree Nidhi and Bank linkage scenario with the SHGs in AP and Telangana

Table 3.5. Stree Nidhi and Bank Linkage Scenario in Andhra Pradesh and Telangana

Particulars	Bank Loan		Stree Nidhi		Total
	2021-22	2022-23	2021-22	2022-23	2022-23
Andhra Pradesh					
Total loan disbursed during the year	284.98	402.31	28.14	31.68	43.40
Outstanding	468.17	587.57	33.87	35.87	62.34
Telangana					
Total loan disbursed during the year	118.84	145.89	30.74	23.15	16.90
Outstanding	206.08	260.48	53.55	52.33	31.28

(In ₹ Billion)

Source: Stree Nidhi, 2023

3.6.2. Poverty Elimination

SHGs and Federations are often engaged in community development activities beyond financial services. They are addressing issues in the areas of water, sanitation, and hygiene (WASH), education, health and nutrition amongst various others and contributing to the overall development of the SHG members and their households (Singh 2017). SHGs and their federations are involved in identification of vulnerable communities such as persons with disabilities (PWD) and single women and linking them to various schemes of the government. Similarly, VOs promoted by NRLM are able to access special funds like Vulnerability Reduction Funds (free interest loans to vulnerable SHGs members), Revolving Fund, CIF Fund etc.

to support them in emergencies and address their critical needs.

As per NRLM data, as on March 2023, a total of ₹57.76 billion was disbursed to SHGs and around ₹287.80billion fund was disbursed to VOs and CLFs. This capital injection enables SHG members to initiate small businesses or improve existing income generation activities leading to their financial independence. SHG Federations also facilitate distribution of benefits and ensure support for intended beneficiaries. For example, majority of the SHG members are accessing Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), Antyodaya Anna Yojana (AAY), and Indira Awaas Yojana (IAY) schemes (Singh 2017).

However, the involvement of the SHGs and SHG Federations in activities beyond savings and credit is still limited. To ensure that the potential of SHGs in poverty elimination is completely tapped, there is a need to revive the movement with more enthusiasm by involving all the key stakeholders to ensure that the SHGs and their Federations become the platforms for social development of the communities.

3.6.3. Livelihoods

SHGs have formal financial support from banks and a significant part of the members are engaged in enterprises. To support its members, some of the SHG federations are further engaged in higher order value chain activities. FPOs, another form of collectives, are also involved in providing backward and forward linkage services to farmers. The FPOs are projected to have potential in providing income security to the producers by strengthening their position in the agriculture value chain. But the FPO ecosystem, being in a nascent stage, has been challenged with availability of capital and capability. As the targeted beneficiaries are the same and institution building is involved in both the collectives, it has been strongly proposed to find an interface between the SHGs and FPOs.

A greater collaboration between SHG Federations and FPOs could also benefit both collectives. An exploration into integrating these groups and developing mutually beneficial approaches is needed. Discussions could centre on creating an institutional framework that enables the SHG and FPO federations to work together and leverage each other's strengths. The key questions are how these two groups can cooperate, and how they might derive mutual benefits from partnerships. The innovations and benefits from such careful integrations can be widely disseminated further, fostering sustainable and inclusive economic growth across the SHG ecosystem. Bringing these collectives together through open dialogue and strategic partnerships will create a social impact and prosperity greater than their individual contributions. The stakeholders must come together to envision how synergies between Federations and FPOs may unlock their full potential.

BOX 3.4. REVOLUTIONISING AGRICULTURE THROUGH MSP OPERATIONS: A SERP INITIATIVE IN TELANGANA

The Society for Elimination of Rural Poverty (SERP), Telangana focuses on grassroots institutions like SHGs and their Federations promoting collective community marketing activities.

Initiating Minimum Support Price (MSP) operations in May 2021, SERP, through VOs, addresses the challenges faced by rural farmers. With over 2,300 Procurement Centres operational across the state, VOs play a pivotal role in minimising malpractices, reducing input costs, and providing marketing facilities at farmers' doorsteps.

The MSP operations involve meticulous planning from pre-procurement stages, including action plans and MOUs with Civil Supplies Corporation, to procurement stages with awareness campaigns and direct fund transfers to farmers. Post-procurement, daily reporting, transparent financial auditing, and grievance resolution ensure a seamless process.

Financial benefits to farmers include savings on transportation costs and guaranteed support prices, while VOs earn commissions, enhancing their financial reserves and lending capacity. However, challenges such as inadequate infrastructure, limited storage, and coordination issues persist, requiring continual efforts for sustained success.

BOX 3.5. TRANSFORMING LIVES THROUGH HYGIENIC FOOD DELIVERY – DIDI KI RASOI

JEEViKA's Didi Ki Rasoi (DKR) initiative emerged to address the challenge of providing hygienic food to patients in district hospitals and residential school children at scale. The complex supply chain and ever-changing suppliers posed persistent problems for the government. DKR sought to establish professionally managed canteens with standardised processes, trained staff, and digitised payment options, empowering rural women entrepreneurs associated with JEEViKA's SHGs.

The first DKR began in Vaishali district of Bihar in 2019 and has since expanded to 103 canteens across hospitals, schools, and public offices in 38 districts of the state. These DKRs cater to thousands daily and operate under state and central government schemes. Efficient service delivery and real-time monitoring is achieved through the centralised Central Process Monitoring System (CPMS). JEEViKA has formalised Standard Operating Procedures (SOPs) and policy guidelines for DKRs, facilitating replication.

The DKR programme has empowered over 1,500 rural women entrepreneurs, boosting their annual income and enhancing their skills. These entrepreneurs procure high-quality, local produce, benefitting all-women Farmer Producer Companies (FPCs). Even during the COVID-19 pandemic, DKRs provided essential services with efficiency.

JEEViKA's DKR initiative has not only transformed the food delivery mechanism but also provided a strong platform for rural women entrepreneurs in Bihar. It has elevated their income, skills, and confidence, while delivering hygienic food to those in need and reducing government expenses through increased community involvement and transparency.

3.6.4. Women's Empowerment

Beyond financial services, SHGs foster social empowerment. Women, in particular, gained confidence, leadership skills, and a sense of solidarity through participation in SHGs, SHG Federations, interactions with banks, and other government departments (Singh 2017). This social capital often translates into better access to healthcare, education, and other essential services. The SHG federations are taking up gender-related issues through family counselling centres, providing legal services, focussing on non-availability of public facilities, organising health camps, and conducting gender awareness programmes amongst other social initiatives. In addition to serving the members, Federations at village and cluster levels are also focusing on creating assets in the name of women and offering trainings and skill development programmes, enabling members to learn various skills to start small businesses. This is enhancing the entrepreneurial abilities of the women. SHG Federations also undertake gender audits and make necessary changes in the interventions.

The efforts of NGOs, NABARD and NRLM, on SHGs, and SHG federations has resulted in women's empowerment through the improved access to resources, increased bargaining power, enhanced skills and livelihood opportunities, and improved access to rights and entitlement. They are able to tackle gender-related issues, bring about behavioural change and better socio-economic conditions. However, the impact of SHGs and their Federations on women's decision making at the household level needs further focus.

3.6.5. Human Resource Development

Initially, the promoting institutions trained SHG and Federation leaders on basic concepts, management, linkages, and convergence. Over a period of 30 years, slowly the promoters transferred the role of training SHG members and cadres to Federations. The training included financial literacy and entrepreneurship skills, which enhanced the confidence of members, enabling them to take on leadership roles in their institutions (Singh, 2017).

Promoters supported in creating and nurturing community cadres to support SHGs and SHG Federations in internal audits, training, and bookkeeping. This cadre in turn nurtured SHGs, VOs and CLFs to take up higher responsibilities and also provide need-based services. As per NRLM data, as on March 2023, out of 0.57 million community cadres trained, around 0.26million are SHG women.

However, effective governance at SHGs and Federation level is critical for their success. Capacity building should be institutionalised to ensure required training to leaders and staff. SHG Federation leaders especially require greater understanding of bookkeeping,

financial management, business planning, legal compliances, and review mechanisms for cadres. This helps them in maintaining transparency and accountability within the institutions.

3.6.6. Sustainable Development Goals

SHG Federations are enterprises that endeavour to meet the economic progress of members while satisfying their socio-economic interests. In this connection, the work of SHGs and SHG Federations directly contributes towards achieving SDGs and specifically the goals of: ending poverty, ensuring gender equality and economic growth, reducing inequality, and making communities sustainable. However, there is a need for further study on how SHGs and SHG federations are contributing to the triple bottom line objectives (economic, social, and environmental) of sustainable development and the governance agenda.

3.6.7. Agriculture and Environment

Andhra Pradesh Community-Managed Natural Farming (APCNF) stands as a tangible example of SHGs' tremendous potential to bring change. It showcases how grassroots involvement can bring about positive change in sustainable agriculture and ecological practices. The initiative uses the SHG platform and community resource persons to embrace climate-smart farming methods, such as agroforestry, natural pest control, drop diversification etc. APCNF has touched the lives of 0.5 million farmers in 2,000 villages, fostering sustainable practices across 0.5 Million hectares of agricultural land. This significant outreach underscores the transformative potential that SHGs possess in steering environmental initiatives at a community level. There is tremendous scope for SHGs across India to take up national farming based on the experience and learning from APCNF.

Two specific priorities in this context are

Inclusion of vulnerable groups: The SHG programme can play a pivotal role in empowering the most marginalised sections of society. This includes actively reaching out to tribal populations, who often lack access to formal banking services, and tailoring programmes to their unique cultural and economic contexts (Integrated Tribal Development Agency or ITDA areas or equivalent). In urban areas, lower-income groups can benefit significantly from SHG membership, providing them with a platform for savings, credit, and entrepreneurial support. Additionally, integrating differently-abled individuals into SHGs can promote inclusivity and provide them with opportunities for financial independence. This requires sensitisation and training of SHG facilitators to understand and cater to the specific needs of these groups. Partnerships with organisations working in these areas can also be beneficial in identifying and addressing the challenges faced by these vulnerable populations.

Environmental focus: Integrating environmental sustainability into SHG activities can have a dual benefit of promoting eco-friendly practices and creating new opportunities for income generation. SHGs can be encouraged to undertake activities that positively impact the environment and climate change such as the adoption of agroecological practices, organic farming, waste recycling, and the production of eco-friendly products. This not only helps in conserving the environment but also opens up new market opportunities for SHGs as there is a growing consumer base for sustainable products. Similarly, SHGs can be made an integral part of agroecological value chains. Training and awareness programmes can be conducted to educate SHG members about climate action (including mitigation and adaptation), other environmental issues and sustainable practices, and they can be used as agents for facilitating climate change at the grassroots. Additionally, SHGs can be linked with government and non-governmental programmes that focus on agro-ecology, climate action and environmental conservation, providing them with the necessary resources and knowledge to implement sustainable practices. This approach not only contributes to environmental protection but also enhances the social and economic resilience of SHG members.

3.7. CONCLUSION AND KEY QUESTIONS FOR CONSIDERATION

The SHG movement in India has transformed the lives of millions over the past three decades. The SHG-bank linkage programme has enabled financial inclusion of rural households through savings and credit facilities. However, as the report highlights, there are critical issues to address like the underutilisation of SHGs' own savings and the gap between savings and credit linkage. This underscores the need for optimal resource utilisation through a tailored approach.

The emergence of SHG federations demonstrates their immense potential for positive impact on community development. Although instrumental in many aspects, Federations face challenges in maintaining member participation and autonomy, as they are promoted by government agencies.

The report emphasises the need for SHGs and federations to transition into independent entities

and move beyond a narrow focus on recovery rates towards improved quality of life of the SHG families. It advocates for promoters to evolve from facilitators into supporters of democratic processes within SHG Federations at all levels as nested institutions.

Strategies outlined for the future include establishing credible SHG Federations, developing model Cluster Level Federations, enabling self-regulation, expanding livelihood programs, adopting natural farming, and renewing the focus on social development beyond finance.

In summary, the SHG movement has made vital contributions to development in India. Continued collaboration among stakeholders is needed to address challenges around autonomy, optimal savings utilisation, self-management, and building SHGs as platforms for self-help – enabling women to fulfil their aspirations and maximise social, economic and environmental impact.

The key is keeping the focus on empowering women through self-reliant collectives for livelihoods, financial inclusion, and social development.

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END NOTES

1. MYRADA, founded in 1968, is an Indian NGO headquartered in Bangalore, Karnataka, dedicated to rural development and empowering marginalised communities through initiatives in livelihoods, education, health, and community organising. See https://myrada.org/.
2. SGSY is holistic scheme covering all aspects of self-employment such as organisation of the poor into SHGs, training, credit, technology, infrastructure, and marketing.
3. PPT made by SERP, AP to bankers on SHG bank linkage issues and also letter to Chairpersons of RRBs, SLBC from Special Chief Secretary, Govt. of Andhra Pradesh.
4. This is the data of SHG federations in rural areas which was taken from NRLM. The data of urban areas (NULM) is not available.

Financial Inclusion and Rural Co-operative Banks

R. Bhaskaran

4

4.1. PREAMBLE

This chapter is on the role and performance of rural co-operative banks in financial inclusion. State co-operative banks and district co-operative banks have been advised to implement financial inclusion, more specifically to open Basic Savings Bank Deposit (BSBD) accounts[1] and submit quarterly data to Rural Planning and Credit Department (RPCD). Department of Financial Services, Ministry of Finance (DFS) has advised that co-operative banks can, 'if they are on Core Banking Solution (CBS) and issue RuPay cards', participate in Pradhan Mantri Jan Dhan Yojana (PMJDY).

Yet, the review of financial inclusion in the Reports on Trends and Progress of Banking in India (T&P Report) and Annual Report 2023[2] of Reserve Bank of India (RBI) does not cover the performance of co-operative banks, except in agricultural credit. The information on banking outlets does not include 2,089 branches of state co-operative banks (SCBs), 13,670 branches of District Co-operative Central Banks (DCCBs) (March 2021[3]), 97,961 Primary Agriculture Credit Societies (PACS)[4] and branches of Urban Co-operative Banks (UCBs). Obviously, the regulatory focus of financial inclusion is on commercial banks.

PACS, being part of the Rural Co-operative Credit System, can open savings accounts and extend agriculture credit to their members. RBI has observed that PACS mandate "is raising deposits and providing crop loans to member farmers" (T&P Report, 2018).

4.2. REAL BEGINNING OF FINANCIAL INCLUSION

All definitions on 'financial inclusion' indicate that giving the poor and rural population facility to save money, make transactions, ensure access and insurance are among the main objectives.

Typically, a financial institution would choose its customers keeping in mind the perceived risks in associating with a product, area or person. Generally, people from the low-income group, weaker sections and marginal farmers, do not automatically qualify for banking services. Therefore, financial inclusion efforts, across the world, are driven/mandated by the financial sector regulators. Experience has shown that facilitating groups and extending credit to people leads to economic growth.

PACS are the earliest examples of group-based financial inclusion in India. PACS are based on the Raiffeisen model and were initiated by governments in the early 1900s. Enactment of the *Co-Operative Societies Act, 1904* (amended in 1912), led to the establishment of co-operative credit societies to encourage *thrift, self-help, credit,* and *cooperation* among agriculturists, artisans, etc. PACS are formed by groups of farmers, and registered as co-operative societies with the main objective of extending credit to the farmers.

RBI started financing the co-operatives from the year 1939. The All-India Rural Credit Survey (1951-54) had recommended 'positive and deliberate' measures, rather than 'small administrative, functional or other changes' to ensure the success of co-operative credit institutions and make them self-supporting. It recommended an integrated system of cooperation and rural credit wherein RBI occupied a 'strategic position'.

Right from inception, the thrust of these credit societies/banks has been on savings and credit. PACS function on a 'one vote, one member' norm, irrespective of the amount of capital contributed by each member. All farmers, agricultural labourers, and artisans can become members of PACS by

subscribing to share capital. They can open a savings account with the society and avail credit for their economic activity. Initially, the members' liability was unlimited; later, it became limited. Societies distributed credit through member's savings accounts. This enabled farmers to make payments for expenses on crop cultivation. PACS also supplied/sold fertilisers and pesticides.

PACS were organised to meet the credit needs of agriculturists. It is noteworthy that right from inception it was evident that PACS would need fund support to meet the credit demand as savings by members would never be sufficient for the purpose. As such, the government and the regulator had an important role to promote PACS and extend support.

Today, co-operatives have lost their importance in the banking system. Their share in agriculture credit has declined substantially. Possibly, on account of this, by the time the need for financial inclusion came to be recognised and vigorously pursued by the regulator, there was a noticeable shift in emphasis towards mainstream banks.

4.3. A BRIEF ON CO-OPERATIVES

Since inception, PACS have been offering savings facility and loans to their members. Loan amounts were credited to the savings account, which could be withdrawn in cash to meet cultivation expenses. Credit linkage to shares is a basic stipulation. For example, in Tamil Nadu,[5] PACS collect shares up to 5% (of the loan amount) from small farmers and 10% from large farmers.

Over the years, the nationalisation of some commercial banks, the establishment of Regional Rural Banks (RRBs), the introduction of priority sector lending (PSL) norms, and the doubling of credit through commercial banks have brought in a paradigm shift in the mix and flow of institutional credit. Today, commercial banks have the largest share of agriculture credit; unlike Europe and other countries where co-ops' share in banking continues to be substantial.

The basic fibre of credit co-operatives continues to be rural and agricultural. The performance of PACS over the years is given in Table 4.1.

Data on averages shows that PACS are small-sized institutions that are supported by DCCBs. They support micro and marginal farmers with very small loans. They provide (i) savings account (not BSBD Accounts), (ii) credit (Kisan Credit Card or KCC and other loans), and (iii) transactions in cash. If financial inclusion is "the process of ensuring access to financial services and timely and adequate credit needed by vulnerable groups (weaker sections and low-income groups) at an affordable cost" (Rangarajan Committee 2008), then PACS and DCCBs are indeed fully involved in it.

Table 4.1. Performance of PACS in India

Details	1993-94	2000-01	2010-11	2020-21
Number of societies	91,592	98,247	93,413	102,559
Members ('000s)	88,989	102,141	121,225	137,168
Deposits (₹ Billion)	21.02	148.45	372.38	1,709.22
Borrowings (₹ Billion)	91.16	294.75	540.00	1,430.44
Loans issued (₹ Billion)	75.10	307.70	913.04	2,294.43
Loans outstanding (₹ Billion)	105.35	407.79	877.68	2,168.62
Average per PACS				
Members	972	1,040	1,298	1,337
Amount of capital (₹ Million)	0.29	0.69	1.54	4.12
Shareholding per member ₹	182.23	380.41	571.98	1,327.95
Deposit (₹ Million)	23	151.1	398.6	1,666.6
Deposit per member (₹)	236.25	1,453.45	3,071.82	12,460.79[6]
Loan outstanding (₹ Million)	115	415.1	939.6	2,114.5
Loan outstanding per member (₹)	1,183.81	3,992.46	7,240.09	15,809.93
Borrowers to members ratio	56.78	54.38	43.22	39.11

Source: National Federation of State Co-operative Banks Ltd. (NAFSCOB)

But if the approach to inclusion is "leveraging existing financial players (banks, Microfinance Institutions or MFIs, insurers, etc.) and nonfinancial players (mobile network operators, retail outlets, etc.), connecting them to each other and scaling up outreach bigger and faster",[7] PACS and DCCBs could be excluded.

BOX 4.1. IMPORTANCE OF CO-OPERATIVES

A country and its banking system should not depend only on a company form of organisation. Co-operatives are also needed.

Co-operatives are engaged in economic/industrial activities such as credit, banking, production, processing, and a plethora of economic activities. In 2017, there were more than 0.85 million co-operatives in India with 290.6 million members. Of these credit cooperatives, less than 20% had 206 million members (two-thirds of total members). This shows the affinity of people towards credit cooperatives and showcases them as ideal organisations for financial inclusion. People approach co-operatives primarily for credit.

The success of co-operative milk societies and federations is a pointer to the need for networked co-operatives, which nurture freedom of operation at the primary level and better governance and organisation in the higher tiers. Cooperative banking should also be similarly networked. Within the rural credit co-operatives, loan for agriculture is issued by PACS, while deposit mobilisation is done by PACS, DCCBs, and SCBs. These, organisations have achieved considerable outreach. Yet, their performance relative to commercial banks is declining.

There is an overwhelming demand for credit from farmers, as commercial banks often fail to meet their credit needs. It is noteworthy that as of March 2021, 53.6 million (50% of farmers) availed credit from co-operatives. This demand, especially for small loans from marginal farmers, sustains these co-operatives.

One noticeable aspect is that the deposit growth with co-operatives has not kept pace with commercial banks. Recognising this, RBI has, till early nineties played an important role in extending credit support to the co-op banks. Currently, refinance support from National Bank for Agriculture and Rural Development (NABARD) to co-operatives is around a third of their ground-level credit. The refinance support is inadequate for co-operatives to meet in full the demand for credit from their members. As such their share in agriculture credit by banks has become very low though they have involved more than 50% of their resources in it.

Generally, PACS and other primary credit societies can accept deposits only from members. These deposits are covered by deposit insurance schemes of the state government. PACS are not regulated by RBI.

4.4. CO-OPERATIVE CREDIT STRUCTURE

The co-operative credit structure includes employee's thrift and credit societies and other primary societies. DCCBs and SCBs are federations of credit societies, while UCBs are standalone co-operative banks. All co-operative banks are regulated by RBI. Co-operatives are registered under either state-specific Cooperative Acts or the *Multi-State Cooperative Societies Act, 2002* (MSCSA). Rural co-operative banks are registered under State Acts while some of the UCBs are registered under MSCSA.

The co-operative banking system in India is organised into two broad segments; namely, rural co-operative banks and urban co-operative banks.

4.4.1. Rural Co-operatives

Rural credit co-operatives are grassroots institutions with a deep understanding of rural life and economics. They perform a critical role countrywide in the last-mile delivery of credit and financial services.

Rural Cooperatives are networked institutions and consist of (i) short-term structures mainly focused on credit for working capital needs of farmers, weavers, artisans, and SMEs and (ii) long-term structures exclusively focused on investment needs of farmers.

Short-term structures may be considered as three-tiered with SCB as the apex tier, DCCB the intermediate tier for one or more districts, and PACS the lowest tier (not a bank and not regulated by the RBI) for a set of villages. In some states, there is a two-tiered setup with only SCBs and PACS.

The long-term structure consists of the State Co-operative Agriculture and Rural Development Bank (SCARDB) operating at the state-level and the Primary Co-operative Agriculture Rural

Development Bank (PCARDB) operating at the district/block-level. These are not banks.[8] They cannot accept public deposits and are not regulated by RBI.

4.4.2. Urban Co-operative Banks

Urban Cooperative Banks (UCBs) are standalone primary co-operative banks in urban and semi-urban areas—formed by communities, workplace groups, etc.—extending banking and financial services for personal and business requirements to their members. Many UCBs are single-office banks while some are large with a number of branches. There were 1,514 UCBs (as of March 2022), of which 52 were scheduled. Generally, they offer Micro Small and Medium Enterprise (MSME) loans, housing loans, vehicle loans, personal loans etc. Currently, these banks are not networked or federated, though steps are afoot to create a national-level federation. UCBs are recognised for financial inclusion and offer BSBD Accounts. The priority sector lending norm for them is 75%.

4.5. RURAL CO-OPERATIVES: OVERVIEW OF PERFORMANCE

When rural co-operatives started in the early 1900s, they were hailed as a great innovation and talked about as "mutualist credit and the mysteries of a system based on self-help by the farmers themselves". Though earliest in terms of group methodology and pioneers in rural credit till the 1970s, they have since lost their shine. This is because of (i) lack of drive to succeed being government-initiated and not self-manifested, (ii) frequent interventions by governments[9] either through use and abuse of revenue recovery act or through waivers and incentives, (iii) ill-affording ability to issue the mandated crop loans at low rate of interest, which they can ill afford, and (iv) lack of necessary funds due to slow growth of deposits.

4.5.1. Long-Term Co-operatives

Long-term co-operatives provide credit for land development, farm mechanisation, minor

BOX 4.2. NORMAL SB ACCOUNT AND FINANCIAL INCLUSION - AN ARGUMENT

PACS open only normal SB accounts, while DCCBs/UCBs open both BSBDA and normal SB accounts. Progress in financial inclusion is evaluated in terms of the number of BSBD accounts opened, BCs established, and transactions put through. As such, if a first-time to bank rural person opens a normal SB account, it will not be reported under financial inclusion. Reportedly, the number of SB accounts were 734.8 million and 1,826.6 million as of December 2010 and 2022, respectively. That means since the launch of the mission for financial inclusion, more than 1,091.8 million accounts have been opened, including 663.2 million BSBDA (Dec 2021). This means about 428.6 million normal SB accounts were opened during this period indicating contribution to financial inclusion.

Definitely, a number of these accounts would be 'new to bank' accounts. This is because normal SB accounts are more appropriate for MFI borrowers, delivery partners in online businesses, on-call taxi drivers, etc., as they have to do more debit transactions whereas BSBDA limits withdrawals to four in a month.

The number of SB accounts with UCB and DCCBs (Table 4.2) is not included in financial inclusion data. The growth in deposits with these institutions is however a measure of their achieving financial inclusion.

Table 4.2. Financial Inclusion by Co-operative Banks (in ₹ Billion)

	2001		2011		2021	
Particulars	**UCB**	**DCCBs**	**UCB**	**DCCBs**	**UCB**	**DCCBs**
Deposits	331.64	541.95	2,120.31	1,651.00	5,260.21	3,818.25
Loans & advances	215.10	445.28	1,363.41	1,308.00	3,147.41	3,049.90

DCCB's loans include loans to societies for lending to farmers, rural artisans, weavers (handlooms), etc., and individuals. UCBs issue loans to individual members for micro-enterprises and other purposes, including small loans for housing, etc.

Table 4.3. Profile of Rural Co-operatives – As of March 2021 (Amount ₹ Billion)

Particulars	Short-term			Long-term	
	SCBs	DCCBs	PACS	SCARDB	PCARDBs
Number	34	351	102,559	13	603
Owned funds	244.25	467.73	423.11	61.42	42.27
Deposits	2,230.57	3,818.25	1,709.22	25.46	15.51
Borrowings	1,072.07	1,080.77	1,430.44	132.93	161.44
Loans and advances	2,117.94	3,049.90	2,294.43	209.18	153.25
Total assets	3,773.38	5,889.14	3,347.18	272.75	316.77
Number in profit	32	308	47,297	10	311
Number in loss	2	43	37,419	3	292
NPA* amount	14,113	34,761	72,550	6,942	6,818
NPA % to loans outstanding	6.7	11.4	33.5	33.2	44.5
NPA % of owned funds	61.5	81.6	160.41	140.69	185.54
% of overdue	9.5	25.1	29.9	53.5	59.2

* Non-Performing Asset

irrigation, etc. Recently, some of them have forayed into financing rural industries and housing. They account for a bulk of NPAs of rural co-operatives and have huge carry-forward of losses. Their share in rural credit is negligible. Their losses have completely eroded their funds and they are involved only in credit inclusion.

4.5.2. Short-Term Rural Co-Operatives

Short-term rural co-operatives are basically meant for crop loans and networked institutions. Currently, 18 states have a three-tier structure with State Co-operative Banks, 351 DCCBs, and nearly 86,000 PACS. In the two-tier structure, there are 15 SCBs and about 9,000 PACS catering to 171 districts. Kerala and Jharkhand have recently merged their DCCBs into SCBs. In Andhra Pradesh (AP) and Telangana, the short-term and long-term structures have been merged.

A quick analysis of the performance of PACS and DCCBs in financial inclusion is as follows:

4.5.3. Primary Agriculture Credit Societies (PACS)

The distribution of the number of PACS across states is uneven and the number of viable and functioning PACS is possibly lower (Figure 4.1).

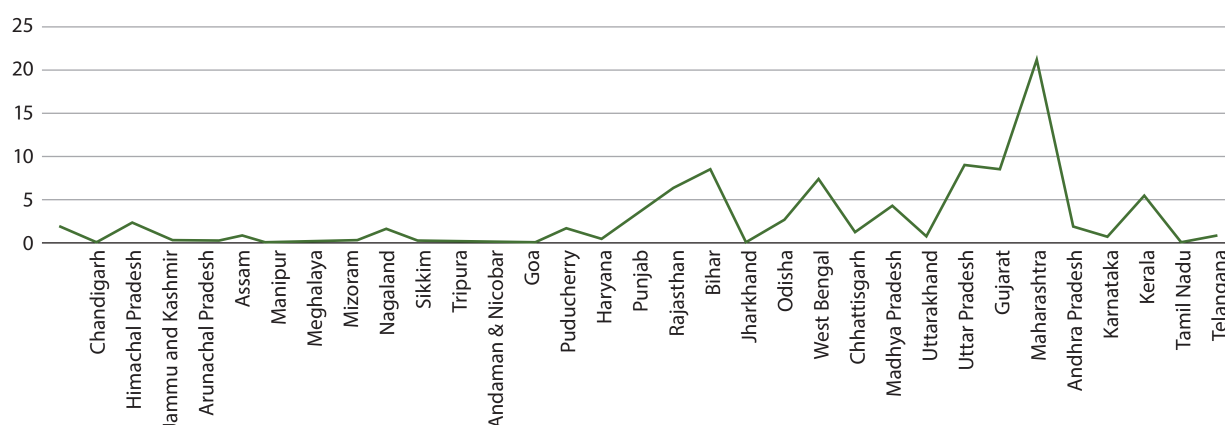

Figure 4.1. Number of PACS in Indian States (in '000s)

Source: RBI Database of Indian Economy, Quarterly BSR-1 (Old edition, Table No. 1.6 – Outstanding Credit of Scheduled Commercial Banks According to Organisation)

PACS cover about 0.63 million villages and have nearly 138 million members. A majority of their members are farmers and a small quotient is rural artisans.[10] The members take membership of a society to get loans; PACS are however not able to fulfil the financing needs of all members. The borrower-to-member ratio[11], a metric to gauge credit penetration of PACS has been hovering around 40% over the last few years.

Despite the fact that PACS do not have adequate funds to finance all the needs of their existing members, there is a continuous addition of new members. As on March 2021, the deposits with all PACS were ₹7,000 billion and loans outstanding were of the order of ₹22,900 billion. PACS need more funds/support from DCCBs/ NABARD.

PACS are indeed very small in size as compared to DCCBs and MFIs and are managed by secretaries. DCCBs extend credit and supervise the credit portfolio of PACS. Due to paucity of funds, the available funds with PACS is rationed using a norm of "individual maximum borrowing limit (IMBP)"[12]. PACS have recorded continuous, albeit low, growth rate in deposits and advances with low average credit size and focus on small farmers (SF) and marginal farmers (MF) (Table 4.4).

Presence - availability of PACS and their performance - is uneven across states and regions. For example, 26% of the total PACS are in the western region. Also, the southern, northern and western regions account for a substantial share of loans and advances. Nearly 70% of deposits of PACS are in Kerala.

As landholdings get subdivided over the years, there is a noticeable increase in the number of marginal farmers. In case of PACS, the percentage of borrowers to member (ratio) is high for marginal farmers.

4.5.4. District Central Co-operative Banks (DCCBs)

DCCBs fund PACS and get financed by NABARD through SCBs. Three-tier SCBs are not directly involved in financing PACS. SCBs and DCCBs offer SB accounts and retail loans to individuals. The deposit position of DCCBs is given in Table 4.5.

Table 4.5. Deposits of DCCBs (₹ Billion)

Deposits From	2000-01	2010-11	2020-21
Co-op societies	260.94	490.69	977.08
Individuals	368.80	969.18	2,185.87
Local bodies	28.89	105.31	140.22
Others	9.32	41.89	294.26
Total	667.97	1,613.08	3,597.44
Savings deposit	158.78	553.71	1276.56
% of savings deposits	23.77	34.33	35.48

The total number of deposit accounts with DCCBs was about 128 million as of March 2022.[13] DCCBs, which are on core banking system, being a member of the National Payments Corporation of India (NPCI), can issue RuPay cards and participate in PMJDY.

Agriculture statistics at a glance (Ministry of Agriculture, Government of India) show that as of 2015 there were 146.1 million land holdings; of which, PACS financed 28.7 million, commercial banks financed 18.3 million, and RRB financed 12 million holdings. More than 50% of holdings did not have any institutional finance. RBI data shows that there were about 73.4 million KCCs as against nearly 130 million farmers. Some farmers may have more than one KCC. As such, there is still a huge unmet demand for agricultural and rural credit in the country. Given this, if co-ops were to cover twice the

Table 4.4. Select Indicators of PACS' Performance

Particulars	2004-05	2009-10	2014-15	2019-20
% of SF members to total members	38.91	31.29	14.79	25.77
% of MF members	22.02	35.56	15.39	53.73
% of artisan members	5.72	4.20	5.49	2.17
% of borrowers to total members	35.48	47.30	41.17	38.04
% of SF in borrowing members	28.17	28.71	35.91	23.69
% of MF in borrowing members	43.37	49.81	37.39	62.27
% of artisans in borrowing members	4.69	4.38	7.12	1.45

number of borrowers or increase their per borrower outstanding to ₹0.1 million from the present level of ₹48,800 (2021) or so, they will need an additional funding of ₹ 13,000-15,000 billion. Co-op banks have the reach for making a huge contribution to credit inclusion but, have not been able to live up to their potential due to their limited resources.

DCCBs support PACS, handloom societies, artisan societies (micro-enterprises), other societies, and individuals. Some of the highlights of the performance (March 2022) of DCCBs are:

- Their share in the overall banking business of the country is about 4%. They account for more than 60% of the total assets of all co-operative banks (including UCBs) and about 96% of business of rural co-operative banks.
- The average size (total assets) of DCCBs is around ₹16 billion. Out of 351 DCCBs, 61 had less than ₹5 billion total assets while 112 had less than ₹10 billion. About 17 DCCBs had total assets in excess of ₹50 billion.
- Only three DCCBs had deposits in excess of ₹100 billion. About 19% of DCCBs were in loss.
- Agriculture credit formed three quarters of total loans of DCCB and two-fifths of their total assets. Loans and advances accounted for about 50% of their total assets. About 10% of their credit was for retail segment like housing, vehicles, etc.
- In recent years, possibly on account of high NPA in loans these banks have reduced their credit exposure and increased investments in Government Securities (G-Secs) as 36.31% of their total assets and 51.18% of the deposits.
- The percentage of NPA to owned funds is high. NPAs have been provisioned in line with extant guidelines.
- Share of co-operatives in overall number of KCCs by all banks is about 45%. But their share in loan was only 20%. The average loan outstanding per KCC was very low and less than a third of that of commercial banks.

By design, and since inception, rural cooperatives depend heavily on refinance support from NABARD, which however is insufficient. Despite good growth in lending to agriculture and half their balance sheet exposed to rural finance (as against a mere 7% by commercial banks), the share of agricultural credit by rural co-operatives is reducing year after year. From a high of 64% in 1992-93, it has fallen to 13% in 2021.[17]

Given that co-operatives rely heavily on refinance for extending rural credit, availability of sufficient refinance will be critical for the proposed 0.2 million PACS under *Amrit Kaal* that will issue 50% of agricultural credit.

4.6. RURAL CO-OPERATIVES AND FINANCIAL INCLUSION

RBI focuses on strengthening the credit delivery mechanisms, ensuring adequate credit to agriculture and MSMEs and the availability of banking services to all sections of the society. It also (T&P, 2020) observes that co-operative banks "are conduits of financial inclusion at the grassroots level as majority of their borrowers as well as members are marginal farmers".

The term 'financial inclusion' was formalised in 2005-06, nearly a hundred years after the co-operative movement took place in India in 1904. Governments facilitated groups of farmers, weavers and artisans who were extended savings account credit - now termed financial/credit inclusion. Co-ops/Co-op banks are specialist financial inclusion institutions totally focused on the primary sector.

DCCBs and SCBs offer both normal savings bank accounts and BSBDA. But there is no verifiable data about BSBDA. DCCB and SCB provide credit facilities to their members.

As regards insurance, crop insurance and Personal Accident Insurance Scheme (PAIS) are included in KCC through the Pradhan Mantri

Table 4.6. KCC Performance

	Mar 2021				Mar 2022			
	DCCB	**RRB**	**CBs**	**Total**	**DCCB**	**RRB**	**CBs**	**Total**
Number Million	30.1	12.9	30.7	73.7	31.1	13.3	26.9	71.3
Loan O/S ₹ Billion	1,469.81	1,494.16	4,587.36	7,551.33	**1,637.71**[14]	1,620.59	4,567.36	7,825.66
Average loan O/S ₹	48,831	115,826	149,425	102,460	52,659[15]	121,849	169,790	109,756
Share % in total number	40.84	17.50	41.66		43.62	18.65	37.73	
Share % in amount o/s	19.46	19.79	60.75		20.97	17.28	58.36	

Source: KCC: State-Wise Progress T & P Report RBI

Table 4.7. Deposits with DCCBs as of March each year (₹ Billion)

Year	Deposits From				Total Deposits	Type-Wise Deposits			
	Co-Ops	Individuals	Local Bodies	Others		Current	Savings	Fixed	Others
2005	282.64	462.84	38.62	20.66	804.94	67.73	226.04	459.83	51.34
2010	491.18	843.96	85.04	42.85	1463.03	123.36	473.26	788.30	78.12
2015	783.86	1491.42	103.36	132.52	2511.16	179.86	730.53	1497.17	103.59
2020	875.44	2051.35	145.79	186.38	3258.95	187.61	1145.00	1776.65	149.70
% to total deposits									
2005	35.1	57.5	8.3	2.6	100	8.4	28.1	57.1	6.4
2010	33.6	57.7	10.1	2.9	100	8.4	32.3	53.9	5.4
2015	31.2	59.4	6.9	5.3	100	7.2	29.1	59.6	4.1
2020	26.9	62.9	7.1	5.7	100	5.8	35.1	54.5	4.6

Source: NAFSCOB

Fasal Bima Yojana (PMFBY).[18] Also, most of the co-operative banks have tie up with insurance companies to offer insurance products to their members.

Both DCCBs and SCBs accept public deposits. Together, they have nearly 20,000 branches. Between 2005 and 2021 total deposits with DCCBs have grown four times, while savings bank deposits have grown nearly five times (Table 4.7).

It is noteworthy that 63% of DCCB deposits are from individuals with 35% deposits in savings accounts. Current Account Savings Accounts (CASA) is about 41% (2020). It is estimated that the number of SB accounts could be more than 170 million. Yet it is in credit inclusion that their role is more recognised.

A major portion of DCCB loans is through societies. The number of loan accounts with DCCB cannot be taken as a full measure of credit inclusion. Yet, the low average amount per loan account and the funding of PACS, Primary Weavers Credit Society (PWCS), Multipurpose Credit Societies (MPCS) and Large Areas/Adivasi Multipurpose Societies (LAMPS[19]), affordable housing, etc., is indicative of the fact that DCCBs play a critical role in credit inclusion of marginalised persons. DCCBs have a high exposure to agriculture credit. Due to the recent regulatory push, these banks have been diversifying into (i) non-farm sector, (ii) term lending to allied sectors, (iii) housing loans and (iv) consumption loans.

Two-tier SCBs have a very low exposure to agriculture, particularly in the north east. These banks are involved in financing MSME, housing and education, all of which fall under priority sector advances. These banks have a high exposure to consumer loans.

It seems, in the absence of any way to raise capital and being forced to lend at low rates, DCC banks have chosen to invest more of their funds in G-Secs, which are less risky. This has also resulted in reduction of sources available for agriculture loans. It may be recalled that a regulatory decision was taken that DCCBs must invest in G-Sec for Statutory Liquidity Ratio (SLR) as against keeping it in the form of deposits with SCBs.

Essentially, rural co-operatives are small-sized non-scheduled banks working within a few districts as their area of operation, focused on a given target of people and given set of loan products i.e., working capital loans for agricultural activities, term loans for investment in agriculture and allied activities and rural artisans.

Table 4.8. Profile of Short-term Rural Co-operatives as of March 2021 (₹ Million)

Particulars	SCBs	DCCBs	PACS[20]
Average own funds	7,183.8	1,332.6	4.1
Average deposits	65,605	10,878	17
Average borrowings	31,531	3,079	14
Average loans and advances	62,292	8,689	22
Borrowings to loan ratio	50.6	35.4	62.3
NPA to loans ratio	6.7	11.4	31.6
NPA to own funds ratio	57.78	74.32	171.47

The data above indicates that these are very small local banks with close contact with the local people ideal for delivering last mile financial inclusion.

4.6.1. Reasons for Decline in Growth and Share of Credit

The reasons for the decline in growth rate and share of credit in the banking system are discussed below.

Collection (Recovery)

Initially, PACS worked on a joint liability basis and share linking to credit, both of which were done away with in the 1990s to facilitate flow of credit. Moreover, though loans issued by PACS were collateral free, revenue recovery provisions existed in various State Coop Acts that helped in collection. These revenue recovery provisions are not in use these days. Banks are advised to lend more to farmers and collateral-free limits are also on the increase. At the same time banks have been advised not to collect aggressively. Also, there is no message from the governments asking borrowers to repay. Collecting overdues and defaults in small loans through legal processes takes a long time. Recovery through co-operative courts is not encouraged and more time-consuming than Money Suits. RBI does allow use of agents for collection of agricultural loans.

As per extant guidelines, defaults have to be provisioned in the account books. If a loan is defaulted due to difficulties mentioned above the two options available to the PACS/DCCB are: (a) wait for a waiver or (b) write-off. Co-operatives do not have the financial strength to write off as they are starved of capital funds. The accumulated NPA/bad loans at PACS level are very high. It is apprehended that this could be understated as the overdue norms at PACS level are less stringent than that at DCCBs. Losses cannot be written off unless the write-off is funded.

Debt Waivers

Debt waivers definitely impact the credit quality of co-op bank loans. Loan waivers lead to strategic default making borrowers wait for more waivers, which impacts credit flow, possibly more so in the case of cooperatives. A study by the National Institute of Bank Management (2011 November) *"Report on the impact of the agricultural debt waiver and relief scheme—Evaluation"* points out that "in respect of loans closed due to waiver, percentage of borrowers who could receive fresh loans were only 18% for co-operatives, 71% for RRBs, and 81% for commercial banks". Possibly future waivers, if any, could be in Direct Benefit Transfer (DBT) format such that the bank's finances and credit quality remain unaffected.

Norms for Refinance Limit for Seasonal Agricultural Operations (SAO) Loans

Till the early 1990s, the SAO (crop loan) limit were based on seasonality discipline or the recovery (*Kharif* and *Rabi* loan collection) performance of PACS. If PACS/banks were to achieve a given percentage of recovery—notwithstanding defaults by individual members—in a season, then credit limits were sanctioned based on realistic lending programme and availability of non-overdue cover. This ensured continuous credit flow to PACS and DCCBs and encouraged repayment as it assured credit flow to the non-defaulting farmers. This procedure has now changed with limits linked to NPA norms.

Provisions exist for converting crop loan dues in case of natural calamities to medium-term loans and extending fresh crop loans. Apart from natural calamities, farmers also face event-related risks such as COVID-19 induced lockdowns. RBI observed that though co-op banks weathered the pandemic well, event risks such as COVID-19 impacts these banks as well. Yet, whereas MSME loans were given relaxations in NPA norms on account of COVID-19, no such relaxations were extended for agricultural loans.

Currently, banks are sanctioned limit subject to compliance of some threshold Capital to Risk Assets Ratio (CRAR) and NPA norms, coupled with Non-Overdue Cover (NODC). As these norms are strict, though prima facie there is growth in the amount of short-term credit sanctioned by NABARD, the growth in ground-level credit flow by co-ops ends up being very low. Commercial bank credit to agriculture has - since 2000 - grown at 16% Compound Annual Growth Rate (CAGR) whereas credit of co-ops has grown at 9% (CAGR). KCC is a five-year limit whereas NABARD refinance is annual limit. Theoretically, this could result in denial of credit to some non-defaulting farmers if the annual limit of NABARD to banks is denied or low.

Interest Rate

Co-operatives have been mandated to issue KCC (crop and term loan) at 9%. They get an interest subvention of 2-3%. In some states, the entire interest charged is given as subvention by the states. The subvention is arrived on the basis of interest cost to total assets. Provisions and reasonable profit are not included in the cost. As such, the subvention

is insufficient; reasonable margins, over and above costs, are required in order to build reserves and be sustainable.

Rural co-operatives, despite their small size and dependence on borrowings, are mandated to lend at low rates by the government and the regulator, in contrast to higher interest rates of MFIs which also adopt group lending systems and finance low-income people including farmers.

Change in NPA Norms

NPA norms on agriculture loans are common across all banks, big and small, companies and co-operatives, irrespective of the size of the loan. Such norms, though appropriate from a regulatory perspective, affect the small and marginal farmers who are vulnerable from cash flow inadequacies. Vagaries of weather and climate cycles have been recognised as possible causes of distress and default. If fresh funding is not available, it could drive some of the farmers, if not all, back to informal credit.

Differential Income Recognition

The above issues strongly suggest the need for differential Income Recognition, Asset Classification and Provisioning (IRACP) norms for DCCBs. DCCBs and PACS should be (a) allowed to charge viable rate of interest and (b) supported with appropriate fund/capital infusion.

4.7. ARE CO-OPERATIVES IDEAL FOR FINANCIAL INCLUSION?

The current approach to financial inclusion does not, barring credit inclusion, envisage an important role for co-op banks. Therefore, it will be interesting to see if these banks are appropriate for financial inclusion.

In the current atmosphere of well-entrenched digital banking and BCs being information and communications technology (ICT) enabled, PACS are not ideal for financial inclusion. Most of them are cash-oriented. Obviously, the first step will be to ensure that PACS and co-operative banks are ICT-enabled and offer electronic/digital transactions. Ministry of Co-operation, Government of India has initiated a project to introduce appropriate technological solutions and systems for 66,000 PACS.

Literature survey reveals that financial exclusion happens due to many reasons. It will be interesting to see if co-ops are constrained by these reasons.

Lack of awareness about bank products and processes: In the case of PACS and DCCBs, members are aware of the terms of savings/term deposits and loan products due to long years of relationship. Transactions at PACS level are on cash basis. Barring KCC, there has been no change over the last five decades on how the amount of credit for crop loan is arrived at. Members have a good idea of credit seasons, credit terms, and repayment terms. Till the governments intervened in the form of interest and/or debt waivers, the system had moderately good collections, which was around 60% of the demand. The constraint that the banks face is mainly inadequacy of funds.

Inability of clients to comply with terms and conditions of credit: Depending on the size of loan, loan seekers are expected to comply with banking norms like collaterals, margins, payment of fees etc., which are difficult to comply. However, credit products of cooperatives banks are designed to suit the members of PACS, who are farmers with limited income and assets.

Social exclusion leads to financial exclusion: This is not the case with PACS, as members come together to form a society on the basis of economic activity and avail credit. There is no bar on becoming a member on a social basis. The Co-operative Act ensures that membership is based on occupation, not on caste or other such parameters.

Distance from branch: On an average, 6-7 villages are served by one PACS. The distance to the PACS or DCCB branch is not an inhibiting factor for banking operations. Ensuring that all PACS have POS or mini-ATM and are linked to the CBS of DCCB will go a long way in increasing the ease of access.

Complicated processes and barriers of interaction with bank staff: Credit rules and eligibility criteria are uniform for all banks for KYC, credit utilisation, crop insurance etc, and there are various guidelines which banks have to comply with. Credit assessment at PACS level is based on the individual farmer's landholding and cropping pattern with simple standard operating procedures (SOPs). Also transacting with community in local language is an advantage for PACS as they have local staff.

Thus, co-operatives are not constrained by the factors that lead to financial exclusion but are in fact ideal for financial inclusion of poor and rural people. Local vernacular is a great advantage for them. It is in this connection that this paper argues that financial inclusion can happen outside BSBDA as well. Rural and urban co-operative banks have been playing an important role in credit inclusion and offering banking at the village level to farmers

and rural poor. Financing to weavers, artisans and other business-related finance falls under MSME, indeed credit inclusion. This needs encouragement.

4.8. CONCLUSIONS

The Gorwala Committee's (1951) observation that "Co-operatives have failed, but cooperation must succeed" is valid today as well. This coupled with the fact that co-operative banks play a critical role in most countries will give a clear message that "credit co-operatives are very much needed".

Improve general perception about co-operatives: The general perception about the co-op banks is negative. In fact, both commercial banks and co-op banks have had their share of frauds. In the case of commercial banks, frauds and other issues are treated as bank-specific, whereas in the case of co-ops, the entire system is castigated. Dual control is there for both – the public sector commercial banks and co-op banks – but is highlighted only for the latter.

Ensure regulatory norms that facilitate flow of funds. With the onset of economic liberalisation and institutional reforms, co-operative banks have fallen out of favour. Even then, co-operatives in several other areas, like dairy and housing, have performed very well as they are (a) better organised, (b) better networked with members interacting regularly with the management and (c) better managed with management separate from leadership. There exists almost the same level of government control over these societies as in the case of PACS/DCCBs.

However, there are two noticeable differences. One is that other societies do not face the competition from new specialised institutions like SHGs, JLGs, MFIs, and Farmer Producer Organisations (FPOs), which have been promoted for increasing credit flow to rural areas and weaker sections. Secondly, unlike other co-operatives, PACS and DCCBs are subject to tight financial regulation and control by multiple authorities. RBI has repeatedly acknowledged the role of rural co-operatives in financing marginal farmers. Yet, it has been tightening regulatory norms that impede fund/credit flow. It is felt that appropriate regulation coupled with more refinance and improved SOP will improve credit flow.

Rerouting of credit: India is changing, and today it is the fifth-wealthiest nation in the world. Some of the rural areas have become urban areas. Some of the district headquarters have become state headquarters or big cities. There is no demand for agriculture credit in these areas. Instead of asking banks working in these areas to route their funds to farmers through other DCCBs, there have been frustrated suggestions that such banks should be treated as urban co-op banks and that PACS should become BCs of the DCCBs. These suggestions may reduce the supervisory burden, but will they increase credit flow?

Some of the PACS undertake other businesses such as running a petrol pump, hospital etc. Possibly encouraged by their performance, recently, NABARD has announced certain targets to convert PACS into Multi-Purpose Cooperative Societies (MPCS). The focus of MPCS—as the name implies—will be on many activities and not exclusively on agricultural credit. This raises a few questions. In what way it will be able to improve the borrower-member ratio? Will it be a voluntary movement or, as in the past, government-facilitated with full department control? Will there be relaxed norms of refinance for them? Who will fund the non-financial business of MPCS?

Improve supervisory and administrative efforts: There are internal issues in co-operatives. Political interference is high. Some of the leaders have caused a large number of inappropriate credit decisions across the country. A number of associate members have been inducted with an eye on the board posts. That waivers happen periodically and impact the co-op banks is well known. Co-ops are managed by the co-op dept and hence follow-up for recovery and fraud control is delayed. They lack professional management. Possibly 25% of the banks may not get good regulatory rating. About 40% of the societies are defunct. Given this supervisory and administrative efforts have been highly prescriptive and pushing co-operatives to function like companies.

Utilise existing infrastructure: The infrastructure of nearly 0.1 million societies and 20,000 bank branches should be used more aggressively for credit. This will help expedite credit inclusion, which is lagging far behind the number of BSBD accounts. It is important to realise this potential and work towards making the concept work. Making co-ops work like commercial or company form of organisation will not be successful.

The announcement by the Ministry of Co-operation that nearly 300,000 PACS will be promoted in the coming years is a positive statement. However, for the co-operatives to have 50% share in agriculture credit and 20% share in deposits by the end of *Amrit kaal* co-operatives, will call for huge support to this sector. Certain suggestions have been made about credit flow, regulation, NPA norms, use of technology, product change and empowering self-management by members.

END NOTES

1. RBI Circular 06/233 dated 13/12/2005, 13/172 dated 22/08/12 and 14/264 dated 17/09/23
2. Chapter IV Credit Delivery and Financial Inclusion, RBI Annual Report 2023
3. Data Source NABARD
4. Ministry of Co-operation Aug 23 pib.gov.in
5. Ascertained locally
6. There is a sudden jump. The data is provisional.
7. A Brief History of Financial Inclusion - India CSR
8. By ordinance 12 of 2020, these institutions are prohibited from using the word 'bank' in their name.
9. In co-operatives, people should be at the core and politics at the periphery; in reality though, the situation is reversed. Heavy political influence and interference in co-operative banks is a distinct reality. What can co-operative banks do when they are asked to (i) (*by the government, not politicians*) waive loans, (ii) give loans selectively, (iii) finance a large number of members albeit inadequately rather than adequately finance a few.
10. Source NAFSCOB.
11. PACS extend credit only to their members. Therefore, a useful indicator for both access to and demand for credit from PACS is the borrower-to-member ratio. This ratio has generally remained below 50%, showing a steady decline (Report on T&P of Banking, 2017).
12. A method of distributing available funds to a large number of borrowers by limiting the credit per borrower. In this way, more members can be covered.
13. Key Statistics of Co-operative Banks as of March 2022. NABARD.
14. Data (March 22) shows the Karnataka outstanding at ₹ 1,445 billion as against ₹ 171.7 billion in the previous year. For this report, data has been reworked.
15. Estimated based on reduced outstanding
16. RBI T& P report 20-21. Box V.2 Developments in Cooperative Banking.
17. All KCC holders up to the age of 70 years are covered under PAIS with a risk coverage of ₹50,000
18. LAMPS: a flagship scheme of National Scheduled Tribes Finance and Development Corporation (NSTFDC) and Adivasi Mahila Sashakt Yojana (AMSY)

MSMEs: The Pillars of India's Economic Strength

Ramesh Srivatsava Arunachalam

5

5.1. INTRODUCTION

This chapter focuses on the financing of the Indian micro, small and medium enterprise (MSME) sector, which plays a pivotal role in the country's economic growth and development. The chapter is organised into several key sections. Section 5.2 provides an in-depth analysis of the strategic context surrounding MSME financing. Section 5.3 examines the landscape of MSMEs within the Indian economy. Section 5.4 explores credit flow to the MSME sector by scheduled commercial banks (SCBs). Section 5.5 offers insights into asset quality in MSME financing. Section 5.6 presents an analysis of MSME financing trends among small finance banks (SFBs). Section 5.7 discusses the growing role of NBFC financing for MSMEs. Sections 5.8 and 5.9 examine the roles of the Pradhan Mantri MUDRA Yojana (PMMY) scheme/MUDRA Bank and the Small Industries Development Bank of India (SIDBI), respectively. Section 5.10 analyses the relevant credit guarantee fund trust for micro and small enterprises (CGTMSE) data, while Section 5.11 dissects trade receivables electronic discounting system (TReDS) dataset insights. Section 5.12 explores the revolution in digital lending for MSMEs in India. Finally, section 5.13 synthesises the key aspects and discussions into a summary of the MSME financing landscape. In totality, the sections work together to provide a comprehensive overview of MSME financing in India.

5.2. STRATEGIC CONTEXT

India's economy is anchored by MSMEs, which significantly influence its gross domestic product (GDP), employment, and exports. However, these vital entities face financing challenges that impede their growth. The importance of MSMEs in India's economic structure is evident in the data. But before exploring the data, it would be prudent to look at two significant policy shifts in India that occurred in recent years.

In a rapidly evolving business world, classifications for MSMEs must adapt to reflect the multifaceted nature of modern enterprises. Recognising this, the Indian government, superseding its 2006 notification, introduced new criteria for classifying MSMEs based on both investment in plant and machinery/equipment and annual turnover: (i) *Micro enterprises:* Up to ₹ 10 million investment in plant and machinery/equipment and a maximum annual turnover of ₹ 50 million; (ii) *Small enterprises:* Investment in plant and machinery/equipment not exceeding ₹ 100 million and annual turnover limited to ₹ 500 million; and (iii) Medium enterprises: Investment in plant and machinery/equipment capped at ₹ 500 million, with an annual turnover not surpassing ₹ 2500 million. This classification is applicable to both manufacturing and service-rendering enterprises.[1]

This pivotal change merged two essential criteria—investment and turnover. Instead of solely focusing on investment, the updated classification now provides a comprehensive view by considering both investment and turnover. This dual approach ensures diverse MSMEs are accurately represented, promotes inclusivity, facilitates better access to capital, and fosters fair competition.

The government's modern approach to MSMEs is further exemplified by the introduction of the Udyam registration in July 2021. Replacing the previous Udyog Aadhaar Memorandum (UAM), this digital-first initiative revolutionises MSME administration. Key benefits of Udyam registration include streamlined administrative processes,

Table 5.1. Factsheet of MSME (Udyam) Registration as on 9 October 2023 (in millions)

Total Registration	19.84
Total Classified	19.78
Micro	19.15
Small	0.57
Medium	0.05
Total Employment	134.38

Source: Data from https://udyamregistration.gov.in/Government-India/Ministry-MSME-registration.htm

enhanced transparency, affirmation of the 'Digital India' vision, and inclusive outreach to MSMEs across all regions. The platform's success is evident, with 19.84 million units registering so far (Table 5.1.). Additionally, the digital shift aligns with global sustainability goals, emphasising ecofriendly governance. Together, the revamped classification and Udyam registration symbolise India's commitment to modernising its MSME sector, ensuring it remains a robust pillar of the economy in the contemporary business landscape.

The strategic context of MSME financing is provided in Figure 5.1.

5.3. MSMEs IN THE INDIAN ECONOMY

India is home to a significant foundation of over 19.8 million registered MSMEs, emphasising the sector's vastness and influence. Their formidable role is exemplified by their contribution to about 33% of India's GDP. Delving into the specifics, the Ministry of Statistics and Programme Implementation has highlighted that the MSME gross value added (GVA) shares in the nation's GDP were recorded as 30.5% in 2019–20, 27.2% in 2020–21, and 29.2% in 2021–22. Furthermore, their impact on the manufacturing sector is evident, with the MSME manufacturing output shares being 36.6%, 36.9%, and 36.2% for the respective years. In the realm of international trade, MSMEs have been a driving force behind the country's exports. In the fiscal year 2022–23, they accounted for 43.6% of the nation's exports. While this is significant, it's also pertinent to note the fluctuations in their contribution over the years—49.7% in 2019–20,[2] 49.4% in 2020–21 and 45.0% in 2021–22.[3]

As of 9 October 2023, according to the MSME (Udyam) registration portal, the total number of registrations stood at an impressive 19.84 million, reflecting the vast number of enterprises in this

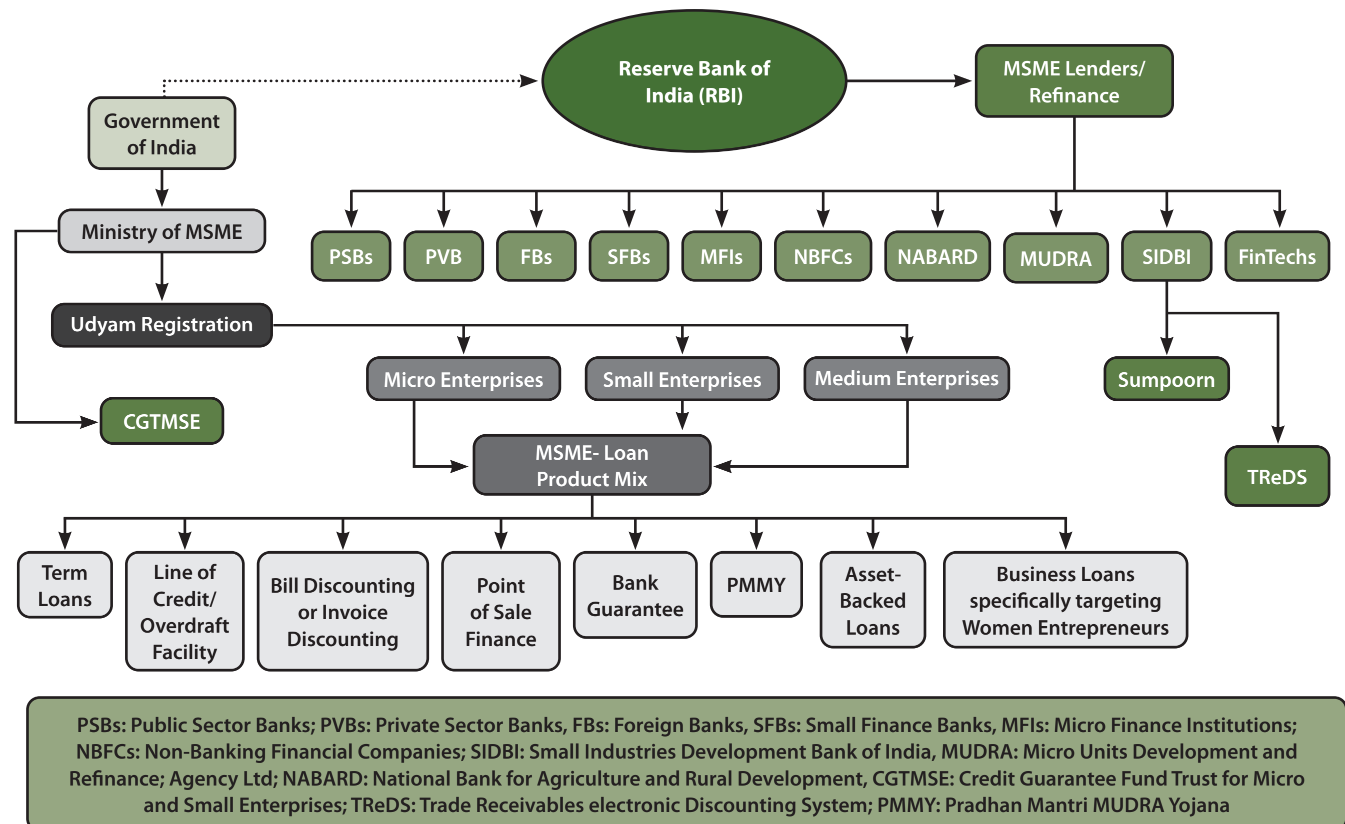

Figure 5.1. Strategic Context of MSME Financing – Stakeholder Diagram

sector. Diving deeper into the classification, out of the total registrations, a whopping 19.78 million have been classified into one of the three primary categories of MSMEs. This suggests a tiny fraction of the enterprises (64,308) await classification. A closer look at the distribution reveals that the lion's share of these classified MSMEs is 'micro' enterprises, totalling 19.15 million. This indicates that the majority of MSMEs in India operate on a smaller scale.

In contrast, 'small' enterprises, while fewer in number at 5,74,606 (0.57 million), still form a significant part of the MSME ecosystem. 'Medium' enterprises, the least numerous among the trio, count 53,758 registrations (0.05 million), showcasing that fewer businesses operate at this larger scale within the MSME bracket. Beyond the sheer numbers, the employment aspect paints an equally compelling picture. The registered MSMEs collectively provide jobs for an astounding 134.38 million individuals across a spectrum of industries and regions. This figure not only underscores the immense employment potential of this sector but also its pivotal role in driving India's economy and workforce.[4] In essence, the numbers and data accentuate the pivotal role of MSMEs in the narrative of India's economic growth. Addressing the persistent challenges they face, especially in financing, is crucial to harnessing their full potential and fostering India's economic growth.

5.3.1. Credit Gap in India's MSME Sector

A report from Blinc Invest highlights this discrepancy, revealing that despite the sector's twofold growth in recent times, there exists a vast chasm between the credit required and what is made available. The credit gap stands stark at ₹ 25 trillion, even as the overall debt demand by these enterprises has touched ₹ 69.3 trillion, growing steadily at an 11.5% compound annual growth rate (CAGR).[5] Micro and small enterprises primarily bear the brunt of this credit disparity. According to this report, Micro and small enterprises contribute to around 95% of the overall credit gap as most of these businesses lack adequate documents for credit underwriting or immovable collateral that can be provided as security. Medium enterprises are most well-served among MSMEs by financial institutions because of their formalised operations, stable cash flows, and qualified management, leading to higher creditworthiness.

Despite the growth in MSME disbursements over recent years, the underlying issue remains the same: the credit distribution is not uniform. The micro-segment, despite its vast number, hasn't seen growth in loan ticket size. The current growth in disbursements is driven more by penetration into tier 3 and 4 cities than by improvements in the underwriting mechanism. For a more holistic solution to the credit gap, there's a clear need to refine the underwriting processes, potentially by leveraging alternative data sources, and this is discussed subsequently. In summary, the MSME sector's credit gap is a pressing issue that needs immediate attention. Addressing this gap not only supports the growth of these enterprises but also harnesses their potential to contribute significantly to India's economic growth. It needs to be noted that other sources reinforce the above credit gap.[6] Furthermore, as per a study by the U K Sinha Committee[7] established by the Reserve Bank of India (RBI), the MSME sector faces a credit shortfall estimated between ₹ 20,000–₹ 25,000 billion. This deficit stifles MSMEs from scaling, capitalising on growth ventures, or recruiting new talent. Traditional financiers often perceive MSMEs as risky ventures, limiting their funding access.

5.3.2. The Burden of Interest Rates

The financing challenge isn't limited to just accessing credit. The sources of these credits and the associated interest rates further compound the issue. As per interviews conducted by the author, MSMEs that do manage to borrow from fully formal institutions typically, often grapple with interest rates averaging between 11–13%, with some MSMEs borrowing at rates as high as 18–21% (based on their risk profile). On the other hand, those resorting to informal credit sources can find themselves burdened with exorbitant rates, sometimes as high as 40–60%.

5.4. CREDIT FLOW TO THE MSME SECTOR BY SCHEDULED COMMERCIAL BANKS (SCBs)

Public sector banks maintained a steady number of accounts over time, while private sector banks saw growth in accounts until 2019–20 and then a decline. However, outstanding amounts rose consistently for both sets of banks. FBs had only a small and decreasing number of accounts, with a slight increase in outstanding amounts. This indicates a shift in lending patterns. PSBs continue strong lending activity, while PVBs seem to be concentrating on larger loans rather than expanding their customer base. The data suggests that credit availability from PVBs may be tightening for smaller MSMEs as they focus more on larger, established businesses. This could make it harder for new or small firms to access credit, especially from private banks.

Table 5.2. Credit Flow to the MSME Sector by SCBs (number of accounts in millions, the amount outstanding in ₹ billion)

Bank Groups	Items	2018-19	2019-20	2020-21	2021-22*
Public Sector Banks (PSBs)	No. of Accounts	11.30 (1.76)	11.08 (-1.90)	15.08 (36.05)	14.97 (-0.71)
	Amount Outstanding	8800.33 (1.79)	8933.15 (1.51)	9086.59 (1.72)	9558.60 (5.19)
Private Sector Banks (PVBs)	No. of Accounts	20.53 (38.42)	27.06 (31.81)	26.68 (-1.41)	11.28 (-57.70)
	Amount Outstanding	5636.78 (37.23)	6469.88 (14.78)	7920.42 (22.42)	9698.44 (22.45)
Foreign Banks (FBs)	No. of Accounts	0.24 (9.14)	0.27 (14.17)	0.26 (-5.11)	0.21 (-18.84)
	Amount Outstanding	669.39 (36.94)	732.79 (9.47)	832.24 (13.57)	853.52 (2.56)
All Scheduled Commercial Banks (SCBs)	No. of Accounts	32.07 (22.61)	38.42 (19.80)	42.02 (9.37)	26.47 (-37.01)
	Amount Outstanding	15106.51 (14.08)	16135.82 (6.81)	17839.25 (10.56)	20110.57 (12.73)

Notes: 1: * The reduction in the number of accounts partly reflects the mandatory registration requirement on the Udyam portal under the new MSME definition implemented by the Government of India (GoI).
2. Figures in the parentheses indicate Y-o-Y growth rates.
Source: RBI, 'Report on Trend and Progress of Banking in India 2021–22'.

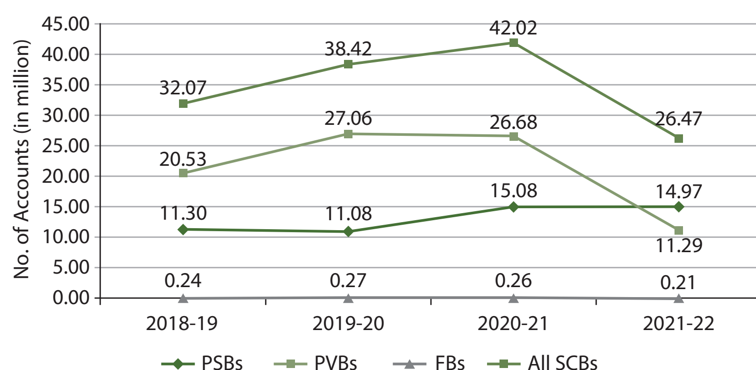

Figure 5.2. Credit Flow to the MSME Sector by SCBs-Number of Accounts (in millions)

Source: RBI, 'Report on Trend and Progress of Banking in India 2021-–22'.

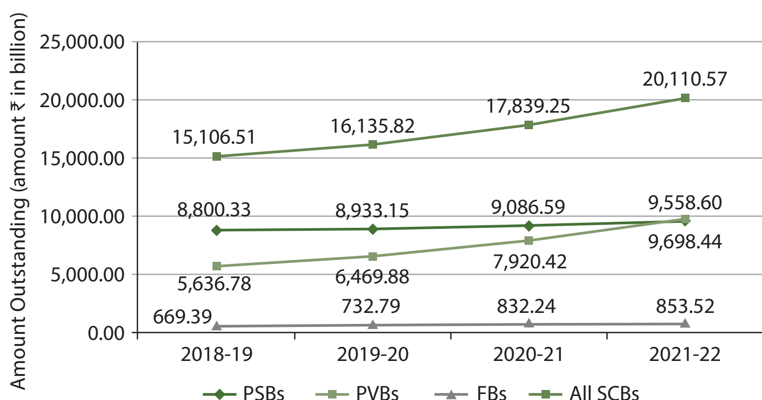

Figure 5.3. Credit Flow to the MSME Sector by SCBs-Amount Outstanding (₹ in billion)

Source: RBI, 'Report on Trend and Progress of Banking in India 2021-–22'.

Number of accounts by bank group: The following plot displays the number of accounts for each bank group across the years 2018–19 to 2021–22 (Figure 5.2).

Amount outstanding by bank group: The following plot displays the amount outstanding for each bank group across the years 2018–19 to 2021–22 (Figure 5.3).

In the financial year (FY) 2021–22, the lending behaviours of PSBs and PVBs showcased distinct patterns. PVBs, even with a reduction in the number of accounts, registered a surge in outstanding loans. This shift could be a clear indication of their strategic inclination towards medium-sized MSMEs or intent to extend more significant loans to their existing customer base. By harnessing advanced technology and sophisticated risk-assessment tools, PVBs are perhaps carving a unique space for themselves, possibly pinpointing niche segments within the broader MSME landscape. This approach, which emphasises operational efficiency and cultivates deeper, more meaningful customer relationships, may grant them the flexibility to set customised interest rates and other loan terms. However, it is worth noting that their model, characterised by larger loans across fewer accounts, demands an unwavering commitment to stringent risk management.

On the other hand, PSBs presented a different narrative. Despite a marginal decline in the number of accounts, they recorded a pronounced increase in outstanding amounts. This resilience is emblematic

of the trust and reliability PSBs have cultivated over the years. With the backing of potential government initiatives and a storied reputation, they remain an unwavering credit backbone for the MSME sector. The expansion in loan volumes suggests that PSBs' longstanding clients are capitalising on diverse factors—from favourable interest rates to economic stimuli—to augment their borrowings.

FBs, when juxtaposed with their PSB and PVB counterparts, carve out a more muted footprint in the MSME credit landscape. Their steady, albeit gradual, growth trajectory in outstanding amounts lends insights into their strategic positioning within this domain.

Unlike the broad-based approach that might characterise other banking entities, FBs appear to have adopted a more curated strategy. Their relatively limited presence, yet consistent growth, suggests a deliberate focus on specific segments within the MSME sector. It would be interesting to examine whether their targeted service is to businesses that have transcended domestic boundaries by venturing into international operations. Such businesses, with their global aspirations, often grapple with a unique set of challenges and opportunities that demand specialised financial expertise and solutions, something that foreign banks traditionally possess.

Overall, the MSME lending landscape is undergoing a transformative phase, marked by insightful strategies and promising directions taken by different banking entities. PSBs continue to play a foundational role, leveraging their legacy, trust, and vast reach to support a large segment of MSMEs. Meanwhile, PVBs, despite a potential dip in the number of accounts, perhaps also influenced by the Udyam registration, are showcasing adaptability and innovation as they navigate through the waters of concentrated credit portfolios.

Several insights emerge from these dynamics. First is the role of the MSME sector as an economic bellwether. Traditionally viewed as a reflection of a nation's economic pulse, the MSME's sustained and robust credit demand is a testament to its resilience. This is especially noteworthy given the evolving regulatory landscapes, such as the Udyam portal mandate. However, there is a subtle undercurrent that needs attention. The trend of credit concentration, particularly within PVBs, is a gentle reminder of the need for prudence. While this does not ring alarm bells at present, it emphasises the importance of balanced portfolio management to preempt potential vulnerabilities. This credit concentration also has implications for financial stability from a regulatory perspective.

Second, innovation, particularly driven by digital transformation, looms large on the horizon. As the lending dynamics evolve, banks might be propelled to harness cutting-edge technologies, refine their credit assessment processes, and sculpt bespoke solutions tailored to diverse MSME needs. The future for MSMEs is poised to be deeply intertwined with digitisation, offering both challenges and opportunities.

Collaboration emerges as another pivotal theme. In an ecosystem brimming with diverse stakeholders, from banks and MSMEs to regulatory entities, harmonious collaboration can transform potential challenges into growth avenues. Regular dialogues and feedback loops can sculpt a vibrant and responsive MSME lending environment.

A further analysis of the data suggests the following:

Overall, the data (Figures 5.4 and 5.5) shows that PSBs have seen their share of decrease in MSME account numbers, though they still maintain a large share of outstanding loan amounts. PVBs have experienced a reduction in their share of MSME accounts but an increase in their share of outstanding loan amounts. FBs continue to have only a marginal share of both MSME and outstanding amounts.

This reflects a declining dominance of PSBs in terms of MSME lending volumes, even as PVBs are growing their MSME lending volumes. It points to a shifting landscape in MSME financing in India, with PVBs playing an increasingly significant role, possibly gaining market share at the expense of smaller MSMEs that have traditionally relied on PSBs.

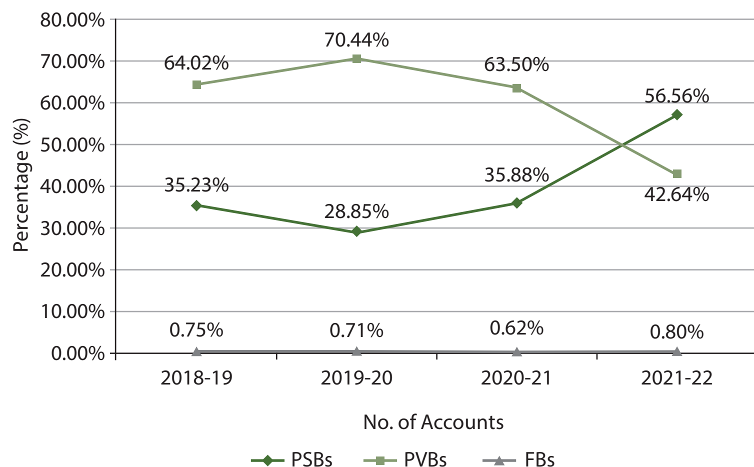

Figure 5.4. SCB Lending to MSMEs in India across Years - No. of Accounts (all figures are year-wise percentages)

Source: RBI, 'Report on Trend and Progress of Banking in India 2021–-22'.

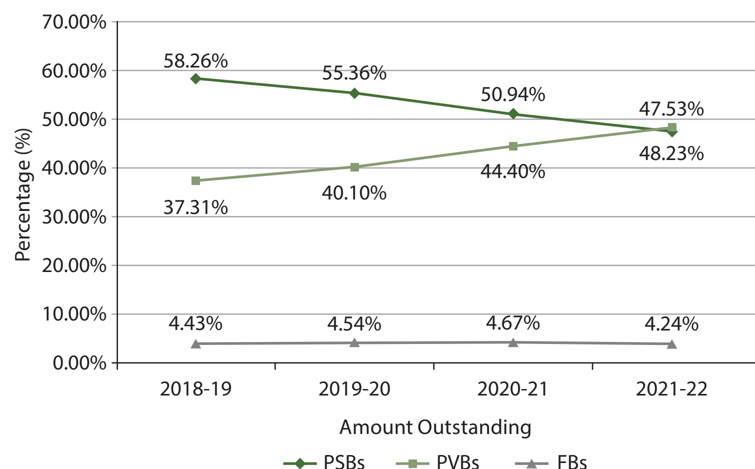

Figure 5.5. SCB lending to MSMEs in India across Years - Amount Outstanding (all figures are year-wise percentages)

Source: RBI, 'Report on Trend and Progress of Banking in India 2021--22'.

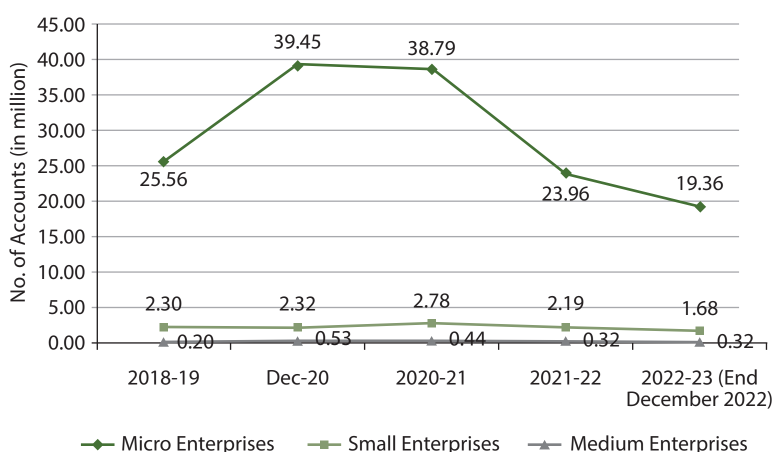

Figure 5.6. Bank Credit to MSME Segments for Number of Accounts (in millions)

Source: RBI, 'Annual Reports 2019-20, 2020-21, 2021-22, and 2022-23'

These trends, while intriguing in themselves, also carry broader implications. For the MSMEs, these patterns translate into tangible takeaways. A majority might find the PSBs, with their expansive reach and modest loan sizes, a natural fit. But for those MSMEs with heftier debt requirements, PVBs might emerge as the lenders of choice. Let us get further into this and look at the trends across MSME categories.

The data shows an upward trend in outstanding loan amounts across MSMEs. The number of loan accounts for micro-enterprises peaked and then decreased significantly, while small and medium enterprises showed a similar but less drastic pattern of peak and decline. This suggests there has been an increase in average loan sizes per account, particularly for micro enterprises. One interpretation is that MSMEs across segments have been making higher capital investments, requiring larger loans. However, it could also indicate a concentration of credit among fewer, larger enterprises within each MSME category, which may present challenges for smaller businesses trying to access financing. Further analysis would be needed to determine the drivers behind these trends and their implications for smaller MSMEs in India.

When viewed under a microscope, the credit trends of MSMEs from 2018 to 2022 (Figure 5.7) across categories unravel a story of ambition, resilience, adaptability, and the quintessential challenges that accompany transformation.

Micro enterprises—sprouts of the economic garden: The growth trajectory of micro-enterprises has been nothing short of a roller-coaster. The peak in account numbers by December 2020 (at 39.45 million) was followed by a steep fall, concluding at 19.36 million by the end of 2022 (Figure 5.6). This decline, however, when juxtaposed against

Table 5.3. Bank Credit to MSMEs (number in million, amount in ₹ billion)

Financial Years	Micro Enterprises		Small Enterprises		Medium Enterprises		MSMEs	
	No. of Accounts	Amount Outstanding	No. of Accounts	Amount Outstanding	No. of Accounts	Amount Outstanding	No. of Accounts	Amount Outstanding
2018-19	25.56	6591.02	2.30	6380.31	0.26	1974.19	32.07	15106.50
December 2020*	39.45	7631.09	2.32	6522.92	0.53	2709.24	42.30	16863.25
2020-21	38.79	8210.28	2.78	6629.98	0.44	2998.98	42.02	17839.25
2021-22	23.96	8826.94	2.19	7222.74	0.32	4060.89	26.47	20110.57
2022-23** (end-December 2022)	19.36	9786.46	1.68	7342.60	0.32	4376.86	21.37	21505.92

* The RBI Annual Report states this data as December 2020, and it reportedly starts from December 2019. The data for FY 2019–20 does not appear to be available. This is presumably because of COVID-19.

**: Data are provisional.

Source: RBI, Annual Reports 2019–20, 2020–21, 2021–22, and 2022–23.

the persistent rise in credit amount, underscores an underlying complexity. While it is heartening to see these grassroots businesses requiring increased capital—hinting at their transition from nascent setups to more structured operations—the reduction in account numbers suggests hurdles, perhaps in accessing credit or in meeting the regulatory nuances of the evolving landscape.

Small enterprises—the growth pioneers: Small enterprises, though resonating with the broader narrative of fluctuating account numbers, have displayed an insatiable appetite for capital. The growing credit amount, juxtaposed against the dwindling account numbers post-2020, highlights a dual-edged sword. On one side, it mirrors the aspirations of businesses to upscale and innovate; on the flip side, it subtly underlines the challenges they face in accessing credit or navigating the evolving regulatory norms.

Medium enterprises—the catalysts of transformation: Medium enterprises, poised between small-scale units and corporate giants, offer a compelling story. The contraction in account numbers post-2020 contrasts starkly with the more than doubling of the credit extended to them. This dichotomy suggests these enterprises are preparing for bigger ventures, thereby needing larger capital influxes. However, the reduction in account numbers also hints at possible consolidation in the sector or challenges in aligning with new regulatory expectations.

The Udyam paradigm shift: The introduction of the Udyam Registration was a game changer. This transformative step by the government, aimed at a more streamlined and standardised approach to MSME classification, inevitably birthed challenges alongside opportunities. The subsequent contraction in official MSME accounts post-Udyam's introduction underscores the initial teething issues faced by enterprises in adapting

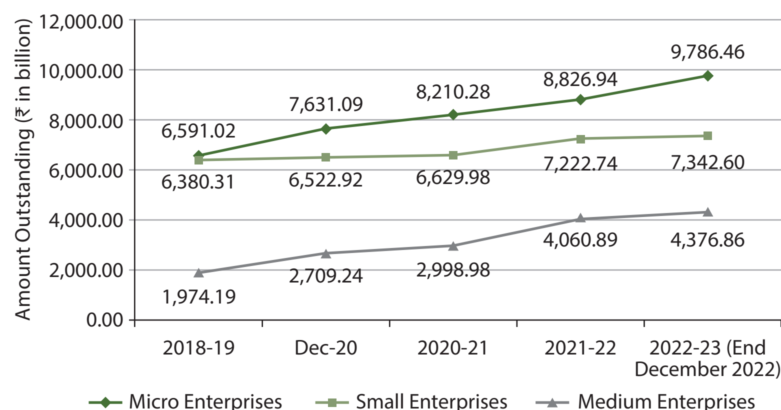

Figure 5.7. Bank Credit to MSME Segments for Amount Outstanding (₹ in billion)

Source: RBI, 'Annual Reports 2019-20, 2020-21, 2021-22, and 2022-23'

to this new framework. While the move promises long-term clarity and ease of operations, the short-term adjustments reveal the sector's vulnerabilities, especially for those struggling with the transition.

The overarching story of MSMEs from 2018 to 2022 is one of duality—promise juxtaposed with challenges, ambition shadowed by adaptation hurdles, and growth tempered by regulatory shifts. While the resilience and ambition of MSMEs shine brightly, highlighting their unwavering spirit to innovate and expand, it is also important to acknowledge the challenges they face. Recognising these hurdles is not just vital for policymakers and financial institutions but is central to ensuring that this pivotal sector continues its harmonious dance of growth and contribution to India's economic tapestry.

5.5. ANALYSIS OF MSME ASSET QUALITY PROFILE

Given below is the compilation of the MSME asset quality profile from March 2021 to March 2023.

Table 5.4. MSME Asset Quality Profile of SCBs (Percentages)

	PSBs + PVBs				
	0 Days Past Due	**Special Mention Account (SMA) 0**	**SMA 1**	**SMA 2**	**GNPA**
March 2021	74.0	7.3	5.7	2.2	10.8
June 2021	72.4	8.6	3.8	3.4	11.9
September 2021	76.3	6.6	2.6	3.1	11.3
December 2021	75.4	8.8	3.1	2.3	10.4
March 2022	79.7	6.4	3.5	1.1	9.3
June 2022	79.6	6.4	3.5	2.2	9.8
September 2022	81.6	6.7	1.9	2.1	7.7
December 2022	82.2	6.3	2.0	2.0	7.4
March 2023	84.6	5.1	2.6	0.9	6.8

Source: RBI, Financial Stability Report (Issue No. 27) June 2023 and (Issue No. 25) June 2022

The data shows an increase in accounts with 0 days past due and special mention accounts (SMA) categorised as SMA 0 from March 2021 to March 2023, along with a decrease in gross non-performing asset (GNPA) percentage over the same period. This indicates an improvement in asset quality and the overall credit health of the MSME sector. The trends are positive signs for the banking sector, suggesting recovery and increased stability in the MSME space post-pandemic. However, continued vigilance is necessary to maintain this momentum and prevent any future deterioration in asset quality as the economy gradually normalises. Overall, the data reflects the resilience displayed by the MSME sector but underscores the need for judicious lending and close monitoring by banks to sustain the gains.

Specifically, over the span from March 2021 to March 2023, the narrative of MSMEs unfolds like a success story, underpinned by concrete figures sourced from the RBI's 'Financial Stability Report'. This timeline provides a deep dive into the asset quality profile of these enterprises in their financial engagements with SCBs.

One metric that prominently emerges from the tableau is the '0 Days Past Due'. March 2021 recorded a figure of 74.0%, which burgeoned to 84.6% by March 2023 (Figure 5.8). This increment of 10.6% in timely loan repayments within just two years vividly underscores the enhanced financial discipline and health of MSMEs. It's a testament to the substantial upswing in the quality of debt servicing by these enterprises.

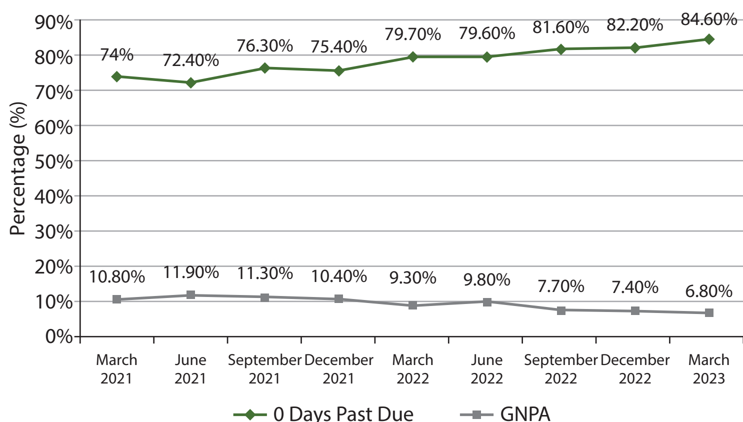

Figure 5.8. MSME Asset Quality Profile March 2021 to March 2023 (percentages)

Source: RBI, 'Financial Stability Report (Issue No. 27) June 2023' and RBI, 'Financial Stability Report (Issue No. 25) June 2022'.

The SMA 0 metric, indicative of loans overdue by 1–30 days, peaked at 8.8% in December 2021. However, by March 2023, it had receded to 5.1%, shedding 3.7% in just over a year. This decline is a clear indicator that MSMEs are addressing their initial financial challenges effectively.

Drawing our attention to the SMA 1 and SMA 2 metrics, which map loans overdue by 31–60 days and 61–90 days, respectively, the tale they tell is equally optimistic. From March 2021 to March 2023, SMA 1 dropped from 5.7% to 2.6%, while SMA 2 reduced from 2.2% to 0.9%. These reductions signal fewer businesses teetering on the brink of becoming non-performing.

However, the *pièce de résistance* of this financial narrative lies in the GNPAs. Starting at a concerning 10.8% in March 2021, this metric, which denotes loans gone sour, showed a remarkable decline, settling at 6.8% by March 2023 (Figure 5.8). This 4% drop symbolises the rejuvenating financial health of the MSME sector.

Thus, the two-year journey from 2021 to 2023 has been nothing short of transformative for the MSME sector. The numbers don't just signify statistical shifts; they narrate a saga of an industry growing in financial resilience, discipline, and strength. The amplified focus on timely debt servicing[8] and the consistent decline in risk metrics points towards a bright future for MSMEs, backed by both their innate capabilities and reinforced external support structures.

5.6. ANALYSIS OF MSME FINANCING BY SMALL FINANCE BANKS (SFBs)

The data reveals the lending patterns of SFBs towards MSMEs over five fiscal years, showing both growth and fluctuations in this segment.

From 2018 to 2022, SFBs' total loans and advances nearly tripled, from ₹ 467.55 billion to ₹ 1358.02 billion. Loans specifically to MSMEs more than doubled, reaching ₹ 391.11 billion in 2022, despite a temporary dip in 2021. The share of advances to MSMEs peaked at 36.7% in 2019 but fell to 27.1% in 2021 before making a modest recovery to 28.8% in 2022 (Figure 5.9).[9]

These fluctuations in the share of MSME advances reflect the varying focus of SFBs on MSMEs in relation to other sectors. Despite these changes, the substantial financing extended to MSMEs affirms SFBs' dedication to their mission of financial inclusion and support for a sector critical to the Indian economy.

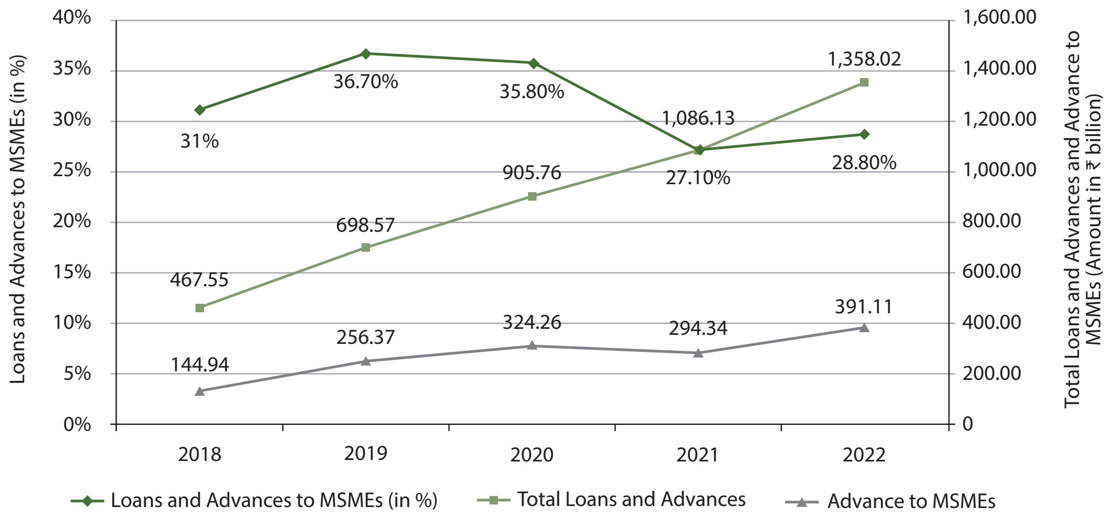

Figure 5.9. Loans and Advances to MSMEs (all figures are % of total SFB advance) and Total Loans and Advances and Advance to MSMEs by SFBs (in ₹ billion)
Source: RBI, 'Report on Trend and Progress of Banking in India, 2021-22, 2020-21, 2019-20 and 2018-19'

The decline in MSME lending in 2021 suggests an impact from broader economic challenges, possibly due to the COVID-19 pandemic, but the rebound in 2022 speaks to the sector's resilience. Overall, SFBs have demonstrated a strong commitment to supporting MSMEs, which is essential for inclusive economic growth.

5.7. NON-BANKING FINANCIAL COMPANY (NBFC) FINANCING TO MSMEs: A GROWING TREND

NBFCs have significantly contributed to the credit extension to the MSME sector, demonstrating their growing importance in India's financial ecosystem. In FY 2021–22, NBFCs saw a 14.6% increase in credit to MSMEs, amounting to over ₹ 1750 billion, signalling a heightened reliance of MSMEs on NBFCs compared to the modest growth of 2.8% in the previous year.[10]

This credit surge is attributed to supportive measures like the Emergency Credit Line Guarantee Scheme (ECLGS) introduced during the COVID-19 pandemic and the co-lending model between banks and NBFCs, enhancing credit accessibility and risk distribution. NBFCs' unique operational flexibility and deep market penetration make them particularly effective for service-oriented MSMEs, which received an 18.5% increase in credit compared to the 8.5% for industrial units in FY22.

Despite the fierce competition from banks and a challenging interest rate environment, NBFCs continue to play a critical role in serving MSMEs, especially in underbanked areas. The future prospects look promising, with expectations of continued growth and a shift towards a more diversified loan portfolio that includes unsecured loans and secured small and medium-sized enterprises (SME) loans.

5.8. ROLE OF PRADHAN MANTRI MUDRA YOJANA (PMMY) AND MICRO UNITS DEVELOPMENT & REFINANCE AGENCY LTD. (MUDRA)

PMMY, managed by MUDRA, has been a pivotal scheme in the landscape of MSME financing in India, offering a lens into the sector's financial trends and preferences over the past four years. An analysis of agency-wise performance from 2018 to 2022 showcases the resilience and evolving dynamics of MSME refinancing.

Throughout this period, total sanction amounts remained above ₹ 3000 billion, reflecting a consistent demand for refinancing, with PSBs and PVBs being significant lenders. PSBs, while having the highest targets, evidenced a slight underperformance in 2021–22, possibly indicating a shift in MSME borrowing trends. Conversely, PVBs exceeded their targets, suggesting their growing appeal to MSMEs, perhaps due to more attractive loan offerings and quicker service.

SFBs and micro finance institutions (MFIs) also demonstrated commendable performance, consistently meeting or exceeding their targets. MFIs particularly stood out for serving grassroots businesses in areas less penetrated by traditional banking. NBFCs, once key contributors, witnessed a

Table 5.5. PMMY, 2018–19, 2019–20, 2020–21, and 2021–22 Agency-wise Performance - Sanction Amounts (in ₹ billion)

Category	Sanction Amount 2018–19	Sanction Amount 2019–20	Sanction Amount 2020–21	Sanction Amount 2021–22	Target (2021–22)
PSBs (incl. regional rural banks or RRBs)	1172.82	1177.29	1301.86	1244.25	1292.00
PVBs (incl. FBs)	640.37	917.80	933.42	1176.79	914.45
SFBs	297.94	295.01	196.47	292.07	200.00
MFIs	634.71	579.67	466.01	491.01	410.06
NBFCs	471.37	405.18	319.83	186.97	243.50
State co-operative banks (SCBs)	0.00	0.00	0.004	0.0036	0.00
Total	**3217.21**	**3374.95**	**3217.59**	**3391.10**	**3060.00**

Source: MUDRA Annual Report 2021–22, 2020–21 and 2019–20

decline in sanctioned amounts in 2021–22, possibly due to stricter regulations and liquidity issues.

The data does not reflect the emerging role of FinTechs, which have begun to challenge traditional lenders with their digital platforms, speed, and innovative credit assessments. Despite not being captured in the PMMY data, their growing influence in the MSME financing sector is significant.

From a broader perspective, the journey of MSME financing through MUDRA from 2018 to 2023 highlights both progress and potential areas for optimisation. PVBs have been particularly active in the smaller loan categories, while PSBs have shown modest growth, suggesting room for strategic improvement (Figure 5.10). The performance of the State Bank of India (SBI) and its associates, along with RRBs, indicates changing market dynamics and the need to deepen rural penetration. The slight increase in accounts for NBFC-MFIs suggests market consolidation, while the restrained growth in sanctioned amounts by NBFCs and the dip in SFB accounts highlight a cautious lending environment and underline challenges that need addressing.

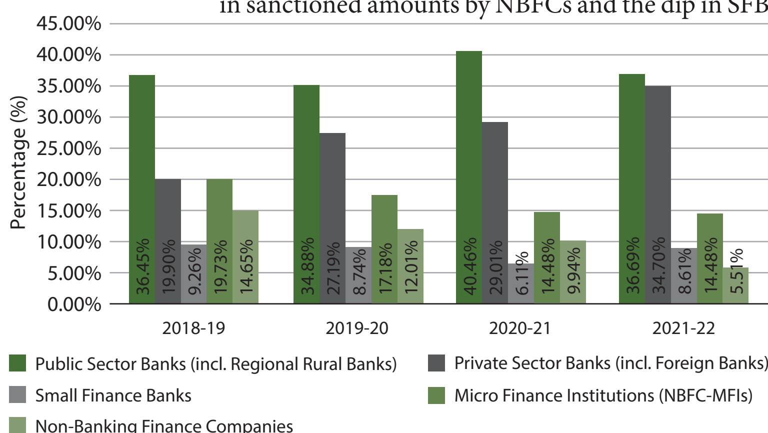

Figure 5.10. PMMY Agency-wise Performance, 2018–19, 2019–20, 2020–21, and 2021–22 (year-wise percentages of sanction amounts)

Source: Based on analysis from data in the following report - MUDRA, 'Annual Report 2021-22, 2020-21 and 2019-20'.

Gender-wise, women entrepreneurs have notably availed themselves of Shishu loans. However, there is a visible decline in their participation in the higher loan categories, implying possible obstacles in accessing larger funds. The Scheduled Caste (SC), Scheduled Tribe (ST), and Other Backward Class (OBC) communities have also made significant strides, especially in the Shishu category. Still, disparities remain when compared to the General category.

The PMMY scheme underscores a dynamic entrepreneurial ecosystem that aims for inclusivity. While it celebrates the achievements of women and traditionally-marginalised communities, the data also points towards the need for more focused interventions to bridge gaps and ensure these groups become empowered contributors to India's economic narrative.

In essence, the PMMY scheme, while making strides towards democratising economic opportunities, underscores a prevailing need to amplify targeted interventions that ensure traditionally marginalised communities aren't merely participants but active and empowered stakeholders in India's entrepreneurial narrative.

5.9. ROLE OF SMALL INDUSTRIES DEVELOPMENT BANK OF INDIA (SIDBI)

SIDBI has significantly contributed to the growth and support of the MSME sector through financing, nurturing, and implementing government initiatives. It offers monetary assistance to banks and NBFCs via refinancing, as well as direct loans and equity. In 2022, there was a notable increase in both direct and indirect funding, especially through NBFCs. Digital innovation is also a key focus, with platforms like 'Quick Bank Loans under an Hour'

Table 5.6. Core Operations of SIDBI (in ₹ billion)

Product Segment	March 2021			March 2022			March 2023		
	Sanction	Disbursement	Outstanding	Sanction	Disbursement	Outstanding	Sanction	Disbursement	Outstanding
Direct Credit	47.46	40.07	115.81	67.60	56.73	141.87	87.80	65.00	184.09
Refinance to Banks	816.37	816.37	1316.64	1227.81	1223.35	1668.32	2420.54	2420.54	2981.73
Refinance to NBFC	75.62	78.02	112.92	131.78	126.77	179.35	220.37	229.80	334.15
Refinance to MFI	27.17	25.83	16.72	41.78	28.93	31.18	41.20	38.12	49.00
Total	966.62	960.29	1562.09	1468.97	1435.78	2020.72	2769.91	2753.46	3548.97

Source: SIDBI Annual Report 2022–23 and 2021–22

and TReDS, managed by Receivables Exchange of India Limited (RXIL).

SIDBI's refinancing activities have significantly boosted MSEs' credit access, with its portfolio expanding by 79% to ₹ 2981.73 billion in March 2023.[11] This growth encompasses a diverse group of 49 banking institutions. Similarly, NBFC financing saw an 86% increase, with disbursements growing by 81% compared to the previous year.

The bank's support for micro finance organisations (MFOs) includes a variety of financial instruments, with a 57% increase in the net portfolio to ₹ 49 billion for FY 2023. Additionally, SIDBI introduced three new financial products under its special liquidity facility or SLF-3 scheme to aid small MFOs and digital finance entities.

Direct loans to MSMEs also saw an upturn, with SIDBI modernising its lending approach to leverage real-time data from public databases. This resulted in the direct finance portfolio expanding to ₹ 184.09 billion in 2023. This modernisation drive signifies SIDBI's ongoing commitment to evolving its processes to serve the MSME sector better. See Boxes 5.1 and 5.2 below for special initiatives by SIDBI.

BOX 5.1. SIDBI's TECHNOLOGICAL EMPOWERMENT FOR MSMEs

SIDBI has embraced the wave of technological progress to empower India's MSME sector, recognising that digitalisation is key to overcoming traditional challenges. With the rise of India Stack, a digital infrastructure that underpins a variety of financial services, SIDBI has facilitated a digital transformation that champions operational efficiency and financial inclusion.

This transformation has unlocked a wealth of data from various digital touchpoints, including credit scores, tax returns, and electronic transactions, providing deep insights into the health and performance of MSMEs. By leveraging AI and machine learning for sophisticated data analytics, SIDBI has revitalised the approach to MSME lending, making it more data-driven and less risk-averse. Jocata Sumpoorn[12] is a part of this effort to provide a data-driven understanding of MSMEs to improve credit access for the sector and fuel its growth.

SIDBI has developed a suite of digital platforms to cater to the specific needs of the MSME sector, such as facilitating loans rapidly, ensuring seamless credit flow, and aiding in technology adoption. Platforms like StandUp India, Udyamimitra, and TReDS, among others, each play a distinct role in enhancing MSME capabilities and their access to finance.

Innovation continues with recent initiatives such as the Udyam Assist Platform and the blockchain-based lending security sharing mechanism, which reflect SIDBI's commitment to evolving and adapting to meet the changing needs of MSMEs.

Additionally, SIDBI extends its support beyond established businesses to the burgeoning startup ecosystem, offering backing through venture capital and alternative investment funds. The SIDBI Fund of Funds for Startups exemplifies this strategic focus, underscoring a vision for a vibrant, entrepreneurial India supported by a robust digital framework.

DCCB's loans include loans to societies for lending to farmers, rural artisans, weavers (handlooms), etc., and individuals. UCBs issue loans to individual members for micro-enterprises and other purposes, including small loans for housing, etc.

BOX 5.2. SIDBI's CHAMPIONING AND NURTURING ENTREPRENEURSHIP

SIDBI stands as a beacon of support for India's entrepreneurial spirit, understanding that each entrepreneurial journey is unique yet linked by the common pursuit of innovation and autonomy. To empower these journeys, SIDBI offers an array of support systems, including mentorship, skill development, and targeted programs like Swavalamban Connect Kendras and Skill to Enterprise Models, which provide entrepreneurs with the tools and knowledge necessary for success.

These initiatives illustrate SIDBI's dedication to fostering entrepreneurship, ensuring that individuals receive the guidance and resources needed to navigate the entrepreneurial landscape. This support is crucial for the MSME sector, which is vital to India's economic ambitions due to its resilience and adaptability. SIDBI's commitment to nurturing this sector is pivotal, not just for its survival, but for its ability to prosper and contribute significantly to India's goal of becoming a $5 trillion economy, thus cementing the MSME sector's role as a cornerstone of the nation's economic progress.

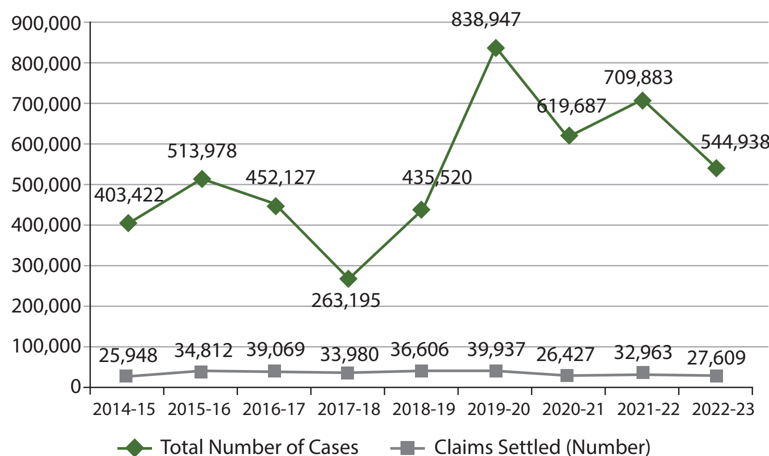

Figure 5.11. CGTMSE Financial Year-Wise Total Number of Cases and Claims Settled (Numbers)

Source: https://dashboard.msme.gov.in/cgtmse.aspx

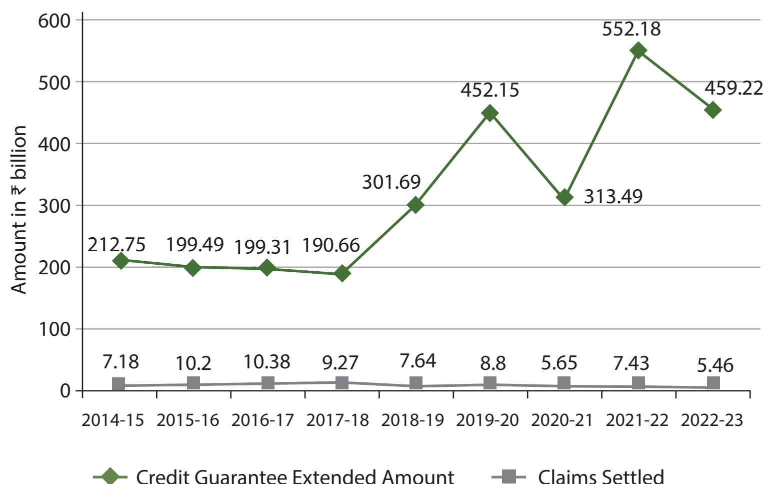

Figure 5.12. CGTMSE Financial Year Wise Credit Guarantee Extended Amount and Claims Settled (in ₹ billion)

Source: https://dashboard.msme.gov.in/cgtmse.aspx

5.10. ANALYSIS OF CREDIT GUARANTEE FUND TRUST FOR MICRO AND SMALL ENTERPRISES (CGTMSE) DATA

CGTMSE has shown fluctuating trends in its credit guarantee scheme across various financial years (Figures 5.11 and 5.12). The scheme, which aims to support MSMEs by providing credit guarantees for their loans, has seen varying levels of applications and claims.

Notably, the fiscal year 2017–18 marked a significant point in the scheme's history, with a peak in the percentage of claims against guarantees following the demonetisation drive in 2016, which likely caused financial strain for many MSMEs. Despite a lower number of applications that year, the claims were relatively high both in number and amount.

In contrast, 2019–20 recorded the highest number of applications, suggesting an increased reliance on the scheme by MSMEs, though this didn't correspond to the highest percentage of claims. Interestingly, the highest amount guaranteed was in 2021–22, yet the claims against these guarantees were not proportionally high, indicating that the year's claims may have been less severe or numerous.

Recent data from 2022–23 shows a decline in the percentage of claims, potentially signalling an improvement in the financial stability and repayment capabilities of MSMEs (Figure 5.13). However, a consistent observation across the years is that the percentage of claims based on the number of cases is higher than that of the claimed amounts, suggesting that while defaults may occur, they are not necessarily large in value.

This analysis highlights the resilience and changing dynamics of the MSME sector, especially

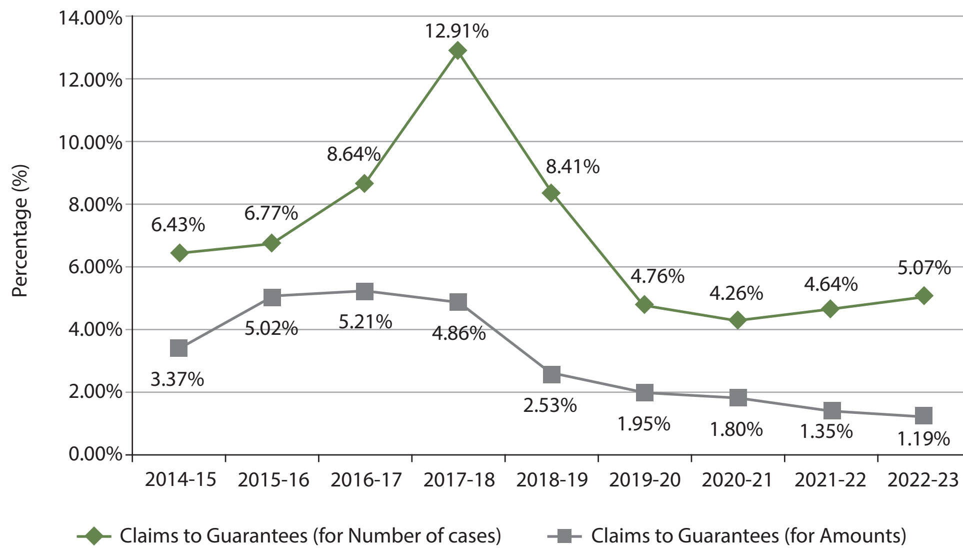

Figure 5.13. Claims to Guarantees Percentages for Number of Cases and Amounts (in percentages)

Source: Based on analysis from data in the following dashboard - https://dashboard.msme.gov.in/cgtmse.aspx.

in response to events like demonetisation and the COVID-19 pandemic, and the crucial role of the CGTMSE in supporting the sector's financial needs.

5.11. ANALYSIS OF TReDS DATA

TReDS is an electronic platform that provides MSMEs with an efficient way to finance their working capital by discounting their trade receivables. Launched by RBI in 2014 and operational through three licensed platforms since 2017, TReDS enables MSMEs to quickly convert their invoices, which are due from corporates, government departments, and public sector undertakings (PSUs), into cash.

The fiscal year 2021–22 marked a remarkable uptick in TReDS usage, with the number of invoices and the total financed amount on the platform more than doubling from the previous year. The success rate also increased, indicating a high proportion of invoices being successfully financed.

The data from the RBI's report on banking trends[13] shows a sustained and significant growth in the use of TReDS over the years. The number of invoices uploaded and financed through TReDS in 2021–22 was nearly sevenfold compared to 2018–19, indicating a rise in both the platform's adoption and the amounts involved.

This trend highlights the platform's reliability and the trust financiers have in the processed invoices. As a result, TReDS has become an indispensable tool for MSMEs to manage liquidity and working capital, suggesting an evolving financial ecosystem in India where digital solutions are increasingly pivotal in overcoming traditional funding challenges for the MSME sector.

In essence, TReDS has emerged as a vital resource for Indian MSMEs, allowing them to manage their finances more effectively, with its growing utilisation reflecting its importance in India's financial framework.

Table 5.7. Progress in MSME Financing Through TReDS

Financial Year	Invoices Uploaded	Amount Uploaded (₹ billion)	Invoices Financed	Amount Financed (₹ billion)
2018-19	251695	67.00	232098	58.54
2019-20	530077	130.88	477969	111.66
2020-21	861560	196.70	786555	170.80
2021-22	1733553	441.12	1640824	403.09

Source: RBI, Report on Trend and Progress of Banking in India 2021–22

5.12. MSMEs AND THE REVOLUTION OF DIGITAL LENDING IN INDIA

As noted earlier, traditional financial avenues often fall short of addressing the unique requirements of MSMEs, resulting in substantial funding gaps. However, with the advent of modern technology and digital innovations, the process of procuring funds for these businesses has seen a significant overhaul. The emergence of digital lending—providing loans through digital means—marks a transformative shift in the way MSMEs perceive and access financial services. The GoI's emphasis on financial inclusivity, combined with tech-aware entrepreneurs having smartphones and internet access, has heightened the visibility of these platforms, which use modern lending techniques with their swift approvals and paperless features. In fact, they have emerged as a blessing for the MSME sector. Let us explore how digital lending platforms are revolutionising MSMEs' access to funds:

Enhancing efficiency and scope: Digital lending platforms[14] leverage technology to speed up loan applications and approvals, significantly reducing processing times. In essence, they offer an end-to-end automated experience, from sharing information to loan management and trimming loan disbursement timelines. This not only benefits MSMEs but also enables lenders to serve a wider audience.

Elevated transparency: A standout benefit of digital lending for MSMEs is enhanced financial transparency. Digital lenders prioritise inclusivity and formalisation of credit, ensuring broad access to information. Traditional lenders often rely on credit histories and collateral, whereas digital lenders utilise varied data—from transactional details to online behaviour—to assess an MSME's creditworthiness. This data-driven strategy allows them to serve a wider spectrum of MSMEs, including those previously considered unsuitable for loans.

According to the 'State of Indian FinTech Ecosystem' report, the digital lending sector in India is projected to grow at a 22% CAGR, reaching $1.3 trillion by 2030.[15] This signifies the progressive role of digital financiers in shaping lending practices. As they gain traction in the financial domain, traditional lenders are expected to innovate further, leading to improvements in customer-oriented services, credit accessibility, and more.

More recently, apart from traditional digital lending, FinTech, empowered by AI, has stepped in, proffering custom solutions for MSMEs. Two examples of AI-propelled FinTech companies that are revolutionising financial services for India's MSMEs are given in Boxes 5.3 and 5.4.

The emergence and subsequent rise of digital lending platforms in India, particularly those driven by cutting-edge technologies like AI, represent a watershed moment in the financial history of the nation. Lendingkart and Kinara Capital are quintessential examples, showcasing how innovative thinking, combined with the power of technology, can bridge the credit gap that has long hindered the growth of MSMEs in India. These platforms have not only democratised access to capital but have also laid the foundation for a more inclusive financial ecosystem. By utilising alternative data, automating risk assessments, and employing predictive analytics, they have set a new gold standard in

BOX 5.3. HARNESSING THE POWER OF AI: LENDINGKART'S INNOVATIVE APPROACH TO MSME LENDING

Lendingkart Technologies Private Limited, an online financial firm, is committed to assisting entrepreneurs and small businesses with working capital loans. It stands out in the financial landscape, seamlessly intertwining artificial intelligence with its core operations. Three aspects deserve mention here: (i) *Automated risk assessment*—At the heart of Lendingkart's operations is a sophisticated machine learning system. This system delves deep into a borrower's financial persona, analysing thousands of data points, from intricate transactional histories to subtle online activities. What is the aim? To craft a comprehensive, accurate profile of a borrower's creditworthiness; (ii) *Predictive analytics*—Venturing beyond traditional metrics, Lendingkart employs predictive analytics to peer into the future. By doing so, they can anticipate potential loan defaults. This forward-thinking approach ensures that every lending decision is both informed and strategic; and (iii) *Tangible impact*—The fusion of AI into Lendingkart's methodology isn't just theoretical. It has yielded remarkable results. The firm boasts a track record of successfully disbursing over 100,000 loans, spanning 1,300+ cities. What's even more impressive? The dramatic reduction in the time taken from the receipt of a loan application to its disbursement is due to their AI-driven approach.

BOX 5.4. KINARA CAPITAL: PIONEERING INCLUSIVE LENDING WITH AI

Kinara Capital stands distinctively in the financial domain, offering non-collateralised loans that are especially tailored to MSMEs. What is their unique proposition? Targeting enterprises often overlooked by traditional financial powerhouses. What do they do differently? First is alternative data scoring—venturing beyond the conventional, Kinara's avant-garde systems harness AI to assess creditworthiness. They delve into an array of non-traditional data points, from a business's utility bill patterns to its supplier relationships, crafting a holistic view of its financial health. The second is portfolio vigilance. Kinara's integration of AI doesn't stop at loan initiation. The technology plays a vigilant role, continuously monitoring loan portfolios. This proactive approach ensures early identification of potential risks, safeguarding both the lender and the borrower. Kinara Capital's impact is palpable. With disbursements exceeding ₹ 20 billion, they've been a beacon of support for numerous MSMEs. Through their innovative lending practices, they've provided the vital capital many businesses need, propelling them towards success and prosperity.

lending, ensuring that even the smallest enterprises can dream big and achieve bigger.

As India marches towards a digital future, it is clear that the conventional paradigms of lending are undergoing a seismic shift. The blend of technology and finance, exemplified by AI-driven platforms, heralds a new dawn for MSMEs—one where their aspirations are not stifled by financial constraints but are fueled by easy, transparent, and swift access to capital. With the projected growth of the digital lending sector, it is evident that the synergy of finance and technology will be the cornerstone of India's economic growth, empowering MSMEs to play an even more pivotal role in the nation's development story.

5.13. DISCUSSION

The analysis of the data collectively suggests a nuanced and evolving MSME financing landscape in India. There is a notable shift in lending patterns, with a possible tightening of credit for smaller MSMEs and a focus on larger or more established businesses, especially by private sector banks. This trend could impact the diversity and inclusivity of the MSME sector.

The overall improvement in asset quality indicates a recovery and resilience in the sector, which is positive for both the banking sector and the broader economy. However, it also necessitates continued support and policy attention to ensure that smaller and emerging[16] MSMEs are not left behind.

The changing dynamics in MSME financing underscore the need for balanced policy approaches to support all segments within this crucial sector for India's economic growth and innovation.

When considering the implications of all the data provided in this chapter, a few additional points emerge that are significant for understanding the broader context and potential future trends in the MSME sector's credit landscape in India:

- *Differential impact across MSME categories:* The data suggests varying impacts on different categories within the MSME sector. While larger MSMEs might be experiencing increased access to credit, smaller or newer businesses, especially in the 'micro' category, could be facing more significant challenges. This differential impact could lead to a disparity in growth and sustainability within the sector.
- *Need for diversified lending strategies:* The observed trends point to a need for more diversified lending strategies by banks, particularly to address the needs of smaller MSMEs. Financial institutions might need to innovate in their product offerings and risk assessment models to cater to this segment without compromising on asset quality.
- *Potential for NBFCs and FinTech involvement:* Given the apparent shift in the lending patterns of traditional banks, there is potential for NBFCs and FinTech companies to fill the gap by catering to smaller MSMEs. These entities, often more agile and innovative in their credit models, could play a crucial role in ensuring broader financial inclusion within the MSME sector.
- *Economic resilience and recovery indicators:* The overall improvement in asset quality and increased credit flow to MSMEs are best viewed as indicators of economic resilience and recovery, particularly in the post-pandemic context. The MSME sector's ability to rebound is crucial for employment generation, industrial diversification, and overall economic stability in India.

- *Policy focus on inclusivity and sustainability:* The data underscores the need for policy measures that not only support MSMEs in terms of credit access but also focus on the inclusivity and sustainability of this support. Policies aimed at encouraging entrepreneurship, innovation, and skill development in the MSME sector can complement financial support strategies.
- *Global competitiveness of Indian MSMEs:* As the sector receives more focused financial support and improves its asset quality, there is an opportunity for Indian MSMEs to enhance their competitiveness on a global scale. This could open up new markets and growth avenues, potentially transforming the sector into a significant player in the global economy.

Thus, the data presented in this chapter highlight a complex and evolving MSME credit landscape in India. They reflect not only the immediate trends in lending and credit quality but also suggest broader economic, policy, and market implications. These insights can be pivotal for stakeholders in shaping strategies and policies that foster a robust, inclusive, and sustainable MSME sector in India. And to better facilitate this in real time, the following recommendations are made:

- A centralised data[17] dashboard, under the aegis of the RBI, is critical for consolidating information on MSME financing from diverse sources into a single, comprehensive platform. This would enable data-driven decisions on financial products, policies, and resource allocation. Integration with identification systems like Udyam and Aadhaar-PAN is critical for data accuracy and efficiency. Such a centralised data dashboard could serve as the nerve centre for all MSME financing-related information. By consolidating diverse data sources, it would eliminate inconsistencies and offer a coherent picture.
- An in-depth analysis of MSME financing beyond superficial metrics is needed to understand the nuances of lending and repayments. This comprehensive approach can inform the design of dynamic financial products and strategic planning by institutions.
- RBI, as a central figure, can guide the MSME financing framework through policy formulation, standardisation, and annual reporting to influence stakeholders.
- Digital advancements like AI and unique identification numbers (UIDs) can revolutionise MSME financing by enabling predictive analytics and real-time gap analysis for an enhanced user experience.
- A specialised regulatory framework for FinTechs is recommended to promote innovation without traditional banking constraints. This can lead to agile, tailored financial solutions and collaboration between FinTechs and banks.
- Using AI to estimate the financing gap by analysing demand and supply can enable strategic allocation of resources, framing of relevant policies, and promoting of stakeholder engagement to address MSME needs effectively.

In summary, a centralised dashboard, in-depth data analysis, RBI leadership, digital advancements, tailored FinTech regulations, and AI-enabled gap analysis are proposed for improving MSME financing.

END NOTES

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17. Getting comprehensive data on MSME financing has been a challenge. There are multiple sources, but the best available source is the RBI, which has multiple reports. That is why a recommendation has been made to create a centralised dashboard under the aegis of the RBI. It is hoped that RBI's Antardrishti dashboard (launched in June 2023) will facilitate getting this centralised single-point data on MSME financing from all sources in real-time.

Digital Financial Services in India

Prabhat Labh

6

6.1. EVOLUTION OF THE DIGITAL FINANCE ECOSYSTEM IN INDIA

6.1.1. Overview

On 25 June 2009, a small newspaper headline announced the establishment of Unique Identification Authority of India (UIDAI). This announcement would have gone completely unnoticed, but for the fact that the government had roped Nandan Nilekani, one of the top brains in the field of technology to lead this initiative.

Within a span of 15 years, how this would transform the lives of a billion people, and establish India at the fore-front of digital revolution was beyond imagination. In less than two years, the first ever Aadhaar Card was issued to Ranjana Sonawne. How profoundly this would change how things get done became evident, when on day 1 of the launch of the Pradhan Mantri Jan Dhan Yojna (PMJDY) in August 2014, 15 million accounts were opened. By August 2023, over 500 million accounts have been opened, making it the single largest financial inclusion initiative in the world. Figure 6.1 depicts the growth in PMJDY accounts over the years (Press Information Bureau[1]).

Riding on the Aadhaar database for digitally identifying and verifying the *bona fide* customers to comply with the 'Know Your Customer' (KYC) requirements, PMJDY enabled account ownership in India to leapfrog from 35.23% in 2011 to 77.53% in the year 2021 as depicted in figure 6.2(Global Findex database[2]).

The *aggregate savings* in these 500 million accounts stands at over ₹ 2 trillion, saved by small savers. Universal reach of PMJDY enabled eliminating *the gender gap in account ownership* for the first time ever.

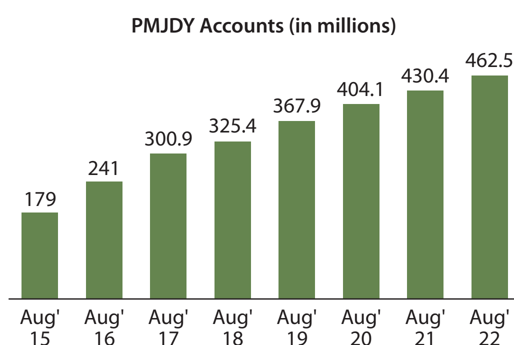


Figure 6.1. Cumulative Number of PMJDY Accounts

Source: Press Information Bureau(pib.gov.in), 28 Aug 2022

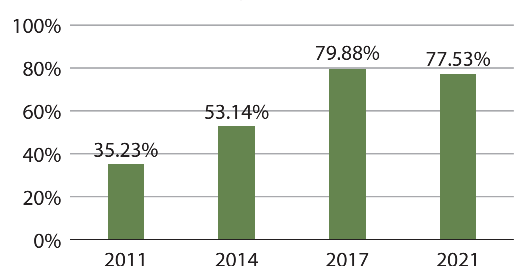


Figure 6.2. Percentage of 15+ Individuals with a Bank Account

Source: The Global Findex Database, World Bank Group

Aadhaar and PMJDY represent merely the tip of the iceberg when it comes to the profound digital transformation in India. Starting with basic banking services, today, it covers a whole gamut of digitally enabled financial services, including utility bill payments, remittances, merchant payments, peer-to-peer (P2P) transfers, government to citizen payments, digitalisation of payments across value chains, buying insurance, accessing and repaying microfinance loans, instant digital loans, etc. Improved availability, accessibility, usability,

and convenience for the customers is resulting in adoption and shifts in consumer behaviour. Business processes employed by the financial service providers are also undergoing profound shifts, leading to increased efficiency, productivity, outreach to new customer segments, reduced costs, and improved liquidity management. All these are enabling the financial service providers to scale their services, acquire and onboard new customers, and effectively serve them.

Establishment of a wide range of digital public infrastructure has been one of the hallmarks of this transformation, fostering an enabling ecosystem for innovations as well as development of new products, business models, and start up enterprises. Digital infrastructure enables the providers to parse out intricate business processes into discreet components. Instead of getting hamstrung for want of technology or capacity, they can simply plug and play the solutions developed by others through application programming interface (API) integration. This modularised approach has lowered the entry barrier for start-ups, reducing both the initial investment to build a minimum viable product and the gestation period to 'go to market'.

The synergy of a conducive policy environment, innovation ecosystem, technology infrastructure, and the availability of risk capital has unlocked entrepreneurship like never before. Incubators in practically every academic institution are catalysing ambitions of youth, who are more inclined to pursue an entrepreneurial career today. Channelling the imagination of youth is driving innovation and transformation across businesses and industries. This has broadened the choice of products and services for the customers. Accessibility, convenience, and availability of digitally-enabled products and services is driving changes in customer behaviour, exhibiting a growing uptake of digital transactions and signalling more digital future. A constantly evolving ecosystem is unleashing new technologies, processes and products every day.

Introduction of business correspondent (BC) model in 2006 marks another pivotal moment, creating a mechanism for delivering banking services outside the bank branches. The cost of establishing and maintaining bank branches defined the limits on how far the branch-based banking could go. The BC model, combined with unique identification, digital verification, and digital payments disrupted this as BCs could offer basic banking services anywhere, using just a smartphone.

Over three million BCs located in every nook and corner of the country today are enabling convenient access to banking services, irrespective of geography, infrastructure, or ticket size. Figure 6.3 below shows the number of villages who did not have a banking touchpoint within 5 km over the last three years (Press Information Bureau[3]).

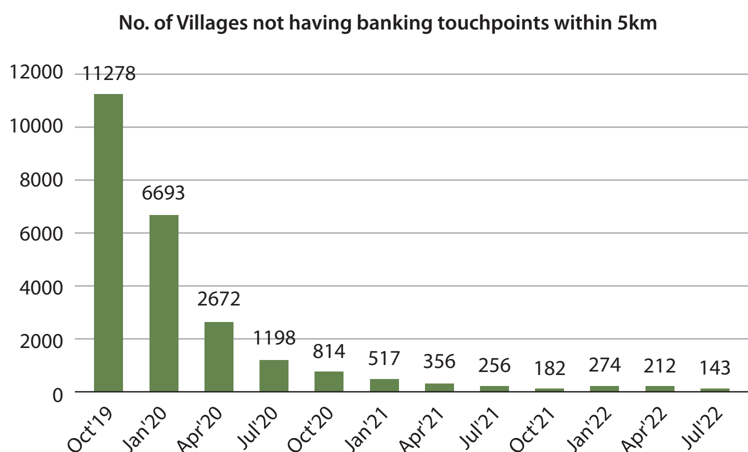


Figure 6.3. Number of Villages Not Having a Banking Access Point within 5 km

Source: Press Information Bureau, 28 Aug 2022

Introduction of differentiated banking licenses in 2015 saw the emergence of small finance banks (SFBs) and payments banks (PBs) designed to cater to diverse customer segments. Reduction in price of smartphones and data access[4] as can be seen in figure 6.4 has been a key driver for phone ownership and connectivity.

In parallel, regulatory provisions supporting these digital initiatives were strengthened. The Payment and Settlement Systems Act of 2007 mandated the entities operating in the payment systems to obtain RBI authorisation. Popularity of retail payment products like cheque truncation system (CTS), Aadhaar enabled payment system (AePS), national automated clearing house (NACH), unified payments interface (UPI), immediate payment service (IMPS) and RuPay cards led to an exponential growth in digital transactions. UIDAI played a pivotal role by enrolling over 1.2 billion people under Aadhaar. Linking the bank accounts to Aadhaar facilitated large-scale roll out of direct benefit transfer (DBT) schemes. Aadhaar, e-KYC, and agency banking made it feasible and viable to open and service 500 million bank accounts at a fraction of the cost compared to earlier business processes.

With the infrastructure and regulations in place, the range of digital financial services available to the public expanded significantly. Transactions like utility payments, remittances, deposits, and withdrawals, etc. started becoming digital. Payment

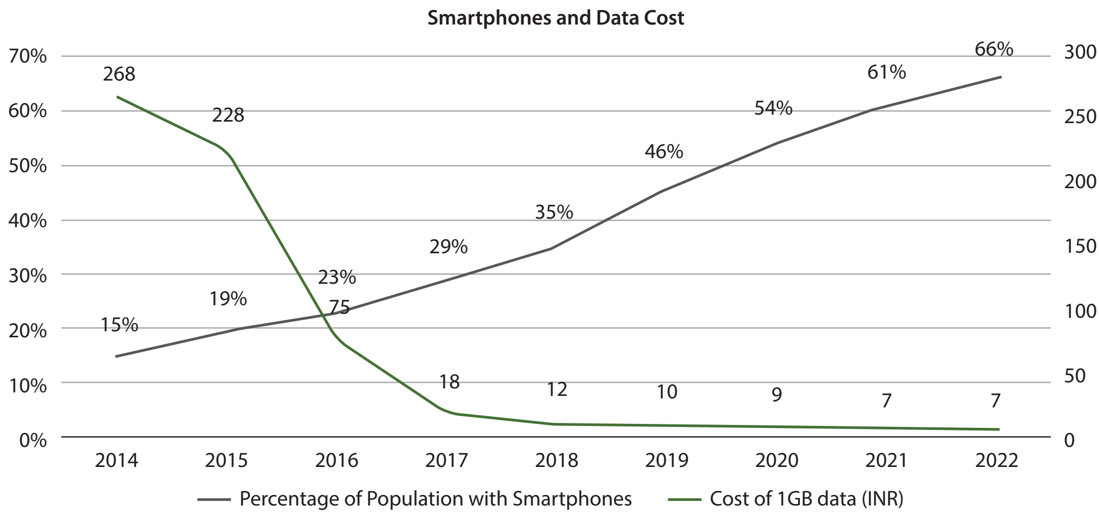


Figure 6.4. Falling Cost of Data and Smartphone Ownership

Source: "Stacking up the Benefits: Lessons from India's digital journey", IMF Working Paper No. , International Monetary Fund, Washington DC (2023)

solutions such as Google Pay, PhonePe, etc. riding on the UPI and AePS infrastructure has created a positive consumer experience and is driving the adoption of digital finance. September 2023 saw over 11 billion transactions taking place using UPI in a single month.

For the financial service providers, embracing digital entailed benefits like lower operational costs, improved liquidity management, reduced operational risks, etc. For the customers, the shift to digital offered the advantages of convenience, real-time transaction, reliability, better financial management, and enhanced overall experience.

Shift to digital payments has catalysed new products like digital loans. Digitalisation goes beyond payments and encompasses the entire customer journey. Visibility in different operational aspects of an individual or micro, small and medium enterprises (MSMEs), like their financials, customers, vendors, inventory, payables, and receivables, etc. enables the lenders to have more robust underwriting.

However, the digital transformation hasn't been without its challenges. The high cash-in-circulation (CIC) to gross domestic product (GDP) ratio denotes that a significant amount of cash is still prevalent in the economy. Lack of awareness or trust in digital transactions, or simply habit formed over time may be behind the preference for cash transactions. The informal or unorganised sector often relies on cash transactions, which does not get recorded. Table 6.1 shows how CIC as a percentage of GDP has increased, particularly after demonetisation (Statista.com[5]).

Table 6.1. Percentage of CIC to GDP

Financial Year	CIC as % of GDP
2015	11.6
2016	12.1
2017	8.7
2018	10.7
2019	11.2
2020	12
2021	14.4
2022	13.7

Source: India: currency in circulation as share of GDP 2022, Statista

6.2. INNOVATIONS AND TECHNOLOGICAL BREAKTHROUGHS

India's digital finance landscape has been marked by groundbreaking innovations like the UPI. Besides being the world's largest and fastest growing digital payment system, digital public infrastructure (DPI) like UPI has spurred further innovations by the private sector. Combining UPI with their prowess in product design, marketing, and customer servicing, payment services like PayTM, G-Pay, PhonePe, etc. have emerged.

UPI's open platform ensures that users are not tethered to a single entity. With QR codes and virtual IDs facilitating transactions, UPI's success has been staggering. By 2022, it had processed 52% of the 88 billion digital transactions, positioning India as a global leader in real-time payments.[6]

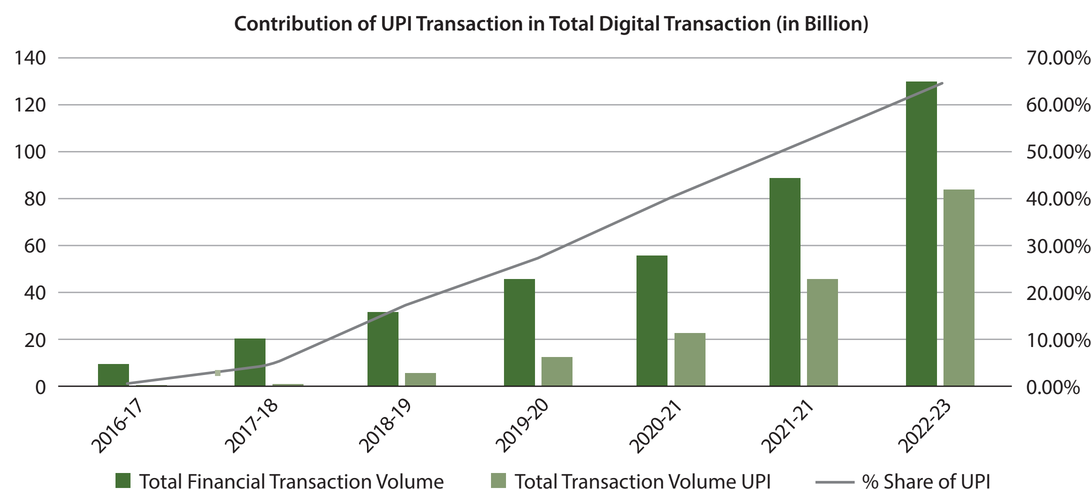


Figure 6.5. Growth of UPI Payments

Source 1: IMF Working Paper No. 23/78.: International Monetary Fund
Source 2: Rise of a New Era in Digital Payments, Ministry of Information and Broadcasting, Press Information Bureau, 2023

Figure 6.5 shows the growth of UPI in the last ten years,[7] while card-based payments are plateauing (Press Information Bureau[8]).

6.2.1. Direct Benefit Transfer

By leveraging the India stack of Aadhaar and linked banked accounts, the government has transferred over ₹ 32,291.62 billion directly into the bank accounts of targeted beneficiaries. A total of 313 schemes under 53 different ministries are now using the DBT for social security, subsidy, and other benefit payments. This has resulted in cumulative savings of over ₹ 2,730.93 billion till date (Direct Benefit Transfer, Government of India[9]).

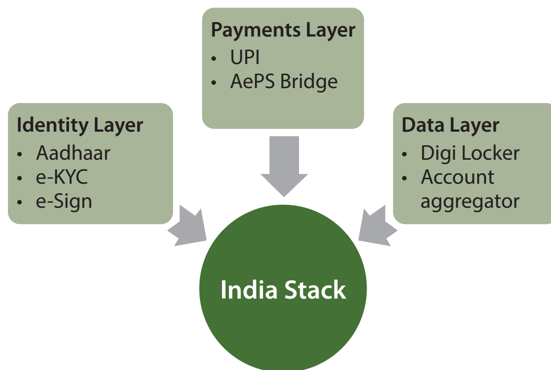
In the year 2022–23 alone, cumulatively, 723 million beneficiaries[10] have received benefits through the DBT System. Major areas where there has been a substantial reduction in leakages includes public distribution system (PDS), Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), subsidy for liquefied petroleum gas (LPG) cylinders and fertiliser.[11]

The DBT system launched in 2013 revolutionised the way beneficiaries were targeted and significantly reduced fraud and leakages in provision of government services. The Jan Dhan-Aadhaar-Mobile (JAM) trinity played a crucial role in this transformation, ensuring efficiency, transparency, and accountability in government-to-person (G2P) transfers.

Table 6.2. Estimated Savings from DBT

S. No.	Ministry/Department	Name of Scheme	Cumulative Savings/Benefits (in ₹ Billion) till March 2022
1	Department of Fertilisers	Fertiliser Subsidy	187
2	Department of Rural Development	Mahatma Gandhi National Rural Employment Guarantee Act	409.87
3	Department of Rural Development	National Social Assistance Programme (NSAP)	5.36
4	Ministry of Women and Child Development	Others	15.24
5	Ministry of Petroleum and Natural Gas	Pratyaksh Hanstantrit Labh (PAHAL)	729.1
6	Department of Food and Public Distribution	Public distribution system (PDS)	1351.97
7	Ministry of Minority Affairs	Scholarship schemes	17.31
8	Department of Social Justice and Empowerment	Scholarship schemes	3.52
9	Others	Others	11.58
	Total		**2730.94**

Source : Estimated Gains, Direct Benefit Transfer (dbtbharat.gov.in)



India's success with digital public infrastructure is now being emulated by multiple other countries like Brazil, Tanzania, etc., and being included in the agenda for multilateral fora such as G20. Such open systems are emerging as formidable alternatives to traditional closed-loop systems. Digital IDs alone can unlock economic value equivalent to 3 to 13% of GDP. In order to attain the intended objectives, the DPIs need to encompass the attributes of being inclusive, citizen-centric, trustworthy, interoperable, supportive of innovation, resilient, politically viable and enable sustainable development goals (SDG).[12]

6.2.2. Open Network for Digital Commerce (ONDC)

ONDC is a first-of-its-kind global initiative to pave the way for reimagining digital commerce. This is an open network, developed on open protocols, based on open-source specifications with established registries, enabling wide-scale participation by digital commerce ecosystem players through multiple gateways.

ONDC aims to:

- Promote interoperability to create an open, inclusive, and competitive marketplace
- Be scale efficient and build for population-scale adoption
- Make digital commerce, small-business friendly
- Pave the way to unlock innovation for reimagining digital commerce

Within a year, over 200,000 merchants from diverse domains, such as Food and Beverages, Grocery, Fashion and Footwear, Home and Kitchen items, Electronics, Beauty and Personal Care, Mobility and Financial Services are live on ONDC. Open network based digital public infrastructure not only help in adoption of e-commerce by small merchants and access the vast market, it is also being adopted by large tech, e-commerce and fintech players. In just the first nine months of 2023, retail purchases on ONDC grew 500 times to cross 600,000. Numerous use cases for ONDC have been unlocked, like for ride-hailing, delivery and logistics, skill-based services, gift card, agricultural commodities, exports, EV charging and so on (Open Network for Digital Commerce[13]).

Digital Finance and Digital Commerce have a synergistic relationship. Availability of Digital Payment and Finance is fundamental for digital commerce, and helps in boosting volumes and increasing efficiencies.

6.2.3. Open Credit Enablement Network (OCEN)

Less than 11% of MSMEs have access to formal credit. Credit gap in the MSME sector is estimated to be between ₹ 17 to 24 trillion. The Open Credit Enablement Network (OCEN) is designed to address humongous challenge by establishing a framework for API-based interaction between lenders, loan agents, collection and disbursement partners, derived data providers, and account aggregators.

High cost of origination, documentation and recovery has been a primary deterrent for lenders in extending short-term loans. OCEN overcomes all these barriers and makes small-ticket, short-

BOX 6.1. ONDC: A ₹ 15,000 BILLION OPPORTUNITY

Primary objectives of ONDC are to expand the reach of e-commerce, digitise small retail shops, optimise supply chains, and provide small producers with better access to markets. Lower commission structure of the ONDC enables sellers to offer better prices.

ONDC offers an alternative to the conventional, siloed structures of e-commerce platforms. Out of over 12 million sellers in India, only about 15,000 are enabled on ecommerce platforms. Gross merchandise value (GMV) of the digital commerce in India stood at ₹ 2.85 trillion in 2020, just 4.3% of total GMV for retail. By leveraging ONDC, MSMEs can enter e-commerce without worrying about the payments, logistics or technology etc, and gain a significant share of the expected GMV of ₹ 15,000 Billion for e-commerce by the year 2026.

BOX 6.2. OCEN 4.0

By enabling lenders to minimise loan processing and collection costs, OCEN 4.0 allows them to give out small-ticket, short-tenor loans at scale. This unlocks short-tenor, cash-flow based lending. OCEN also allows remote lenders to operate in distant geographies, and consented access to alternate sources of data.

tenure loans viable, opening up easy access for a new customer segment. New datasets enable lenders to make underwriting decisions for cash-flow based lending. OCEN allows multiple mechanisms for consent-based data-flow. Besides consented soft pull by the borrower's agent, OCEN also introduces auction based model, where each loan application is shared with multiple lenders.

For collections, OCEN introduces specialised roles, including collections partners that reduces the collection burden.

OCEN therefore fundamentally changes the way credit gets delivered to MSMEs, and has a potential to significantly increase credit flow, employment, and productivity in this segment. It also creates huge avenue for the lenders to deploy credit while keeping operational costs low and managing portfolio quality and risks.

6.2.4. Central Bank Digital Currency and e-Rupee

In December 2022, the Reserve Bank of India (RBI) unveiled the e-rupee, a Central Bank Digital Currency (CBDC). This is a significant development in the financial landscape. E-Rupee complements a primarily bank-driven monetary, financial, and payment systems. Even though digital payments have witnessed a significant uptick, cash, with its unique advantages, continues to be a predominant mode of transaction. The e-rupee mirrors several of the features of cash, but in a digital milieu. For instance: (i) anonymity of transactions, (ii) bypass the need for intermediation, facilitating direct settlements between parties, (iii) e-rupee is a legal tender in its own right, (iv) leveraging near field communication (NFC) technologies, the e-rupee can facilitate offline payments, (v) transactions are definitive, incontestable, and irreversible, mirroring the finality of cash transactions.

However, the e-rupee does diverge from cash-in-certain aspects. Being a digital token, it can be transferred instantly over long distances, a property that physical cash lacks. The e-rupee transactions therefore are not limited by the transacting parties being in the same physical space.

However, e-rupee or any digital currency does not offer the same level of obscurity in its movement. While cash transactions remain discreet when the currency changes hands, the e-rupee does leave a trail. One of the motivations for RBI and central banks around the world in introducing CBDCs is cracking down on money laundering and other financial crimes, as cash is largely untraceable, while CBDCs require an identification proof. While the e-rupee experiment is a year old now, there does not seem to be much traction in its adoption other than some experimental usage.

6.2.5. Digital Lending

Led by fintech lenders such as Capital Float, NeoGrowth, Zest Money, LendingKart, KredX, Indifi, IndiaLends, MoneyView, PayTM, and UPF, the digital lending ecosystem has evolved into a multi-billion-dollar industry. While estimates regarding actual size of the digital lending market widely varies, the 80 or so members of the Digital Lenders Association of India together make over US$ 5 billion in annual disbursements. Digital lending integrates more people into the credit system through diverse products like 'just-in-time' loan, 'buy now- pay later' (BNPL), P2P lending, loan marketplace, embedded finance, supply chain finance, etc. Digital lending targets both individuals as well as MSMEs. Consumer loans include personal loans, consumer finance, educational loans, asset backed loans (e.g., gold loans), BNPL schemes, whereas, MSME financing includes invoice

BOX 6.3. SURGING MARKET FOR DIGITAL LENDING

The book size of the Indian digital lending companies is set to grow from US$ 38.2 billion in 2022 to US$ 515 billion by the year 2030, a compounded annual growth rate of 33.5%. With the account aggregator framework being put in place and restrictions on the first loss deficiency guarantee (FLDG), co-lending is set to increase, which will reduce risk for the lenders, while increase availability of adequate financing for the borrowers. Fintech giants like Paytm are seeing robust demand for digital loans. Its loan disbursals surged 167% year-on-year to ₹ 148.45 billion during the April–June 2023 quarter, while the number of loans also increased 51% year-in-year to 12.8 million.

discounting and business loans. Digital lending has revolutionised the MSME lending. Tapping into data points like transactions, operations, sales, and GST, etc., digital lenders provide quick financing to the MSMEs, which helps them grow their business.

Some features of digital lending distinguish it as a fundamentally different product, and not just a digitalised version of a traditional loan. A number of digital loans are of a ticket size that may be too small for the traditional lenders. The cost structure of customer acquisition, appraisal, approval, documentation, onboarding, and collection determines the minimum viable ticket size for a traditional loan. Digital lending breaks through this barrier, owing to a completely digital process of customer acquisition, appraisal, approval, onboarding, and collection. For example, the average loan size for loans disbursed by PayTM through its platform comes to just around ₹ 12,170 for the month of July and August 2023, which was almost one-fourth the average loan size of ₹ 42,687 for the loans disbursed by the microfinance institutions network (MFIN) members (for FY 2023).

Digital loans can also be for a significantly shorter duration, making them hugely appealing for instant, emergency needs. Ability to process and collect small loans for a shorter duration makes digital loans a distinct product.

6.2.6. Agri-Fintech

Besides its importance in ensuring food and nutrition security, agriculture is the single most important source of livelihood and employment in India. Contrary to its traditional image, the agriculture sector is undergoing a massive transformation driven by digitalisation led by agri-fintechs across the entire agriculture value chain.

The Agri-tech sector has been attracting a lot of investor interest. FY 2023 saw 140 investment deals by venture capital (VC) funds with a total investment of US$ 706 million. While the investment amount decreased from the previous year high of US$ 1,279, the number of deals in fact increased.

Agri-fintechs ride on the digital finance infrastructure and combine digital agriculture solutions to provide inputs, advisory, credit, insurance, farm mechanisation, market access, and payment solutions to the farmers and other value chain actors. In the agriculture *mandis,* it is common to see the agro dealers accept digital payments. Input sales is equally divided between credit and cash. The trend of buying inputs on credit from the agro dealers or the commodity buyers (*addhatiya*) is driven by the unfulfilled credit need. Agriculture market system seems to plays an important role in the adoption of digital payments. When farmers sell their produce in the organised *mandis* (market yards) and get paid in their bank accounts, they are more likely to pay for their input purchases digitally. The unorganised markets on the other hand, permeates the cycle of cash economy. Digitalisation of agricultural trade is closely linked to the how well the commodity value chain is organised and the market system is developed.

The agri stack being set up by the government is the digital foundation to bring various stakeholders together to improve agriculture and enable better outcomes for the farmers by using data and digital

BOX 6.4. THE AGRI-TECH TORCH-BEARERS

Start-ups like Jai Kisan provide flexible financing for agricultural equipment, dairy equipment, and other income generating assets in agriculture. Samunnati revolutionized agriculture lending, by tying up with the farmer producer companies, and providing value chain financing. It has also expanded into agriculture market places, connecting farmers to markets. Stellapps has built an end to end IoT based solution for the dairy value chain, which enhances milk quality, optimizes yield, manages supply chain and ensures timely payments. Avanti Finance has pioneered a lending process that is end to end digital, and provides financing to the farmers and FPOs to enhance their livelihoods.

The transformation driven by Agri fintechs span the entire value chain. Start-ups like DeHaat, Skymet, and WRMS provide access to weather monitoring systems, reducing weather and production risks. WayCool's sensor technology raise agricultural productivity, minimize waste, and boosts farmer income. Kheyti's greenhouse-in-a-box enables smallholder farmers to protect their crops from heatwave. Insure-tech platforms such as GramCover provide information, facilitate purchase of insurance, payment of insurance premium and claims processing. Upaj launched the 'Seed Germination Protection Cover', wherein farmers receive a predetermined payment if the germination rate of the seed is below a certain threshold.

services. Agri stack will make it easier to access credit, farm inputs, localised and specific advisory, and convenient access to markets.

It is important to note that digital payment is a foundational building block for digital agriculture and other domains (e.g. digital health or digital commerce) and they also benefit from the digital public infrastructure, like Aadhaar, e-KYC, and PMJDY.

6.3. IMPACT FOR DIFFERENT CUSTOMER SEGMENTS

The transformation of the digital finance ecosystem in India has significant implications for the customers. As the financial services provider landscape changes from touch-based to tech-based models, new business processes for customer identification, onboarding and servicing are introduced. New product lines are introduced and delivery process for existing products gets revamped. The overall customer experience, value proposition, and satisfaction also shift. This section examines some of the prominent customer segments which are seeing more profound transformations with the emergence of digital finance.

A segmented understanding of the customers is essential to ensure that everyone gets served as per their need, capacity, and context. Accessibility, affordability, awareness, and trust play a critical role in adoption. In the digital finance architecture, different parts of the customer journey and business processes are often managed by different entities, all bound together by a digital platform. Therefore, ensuring consistent customer experience and service quality assumes importance.

6.3.1. Microfinance Customers

Catering to over 64 million unique borrowers through 126 million loan accounts, microfinance industry is one of the biggest in terms of its reach. Microfinance owes its success in scaling to simple and standardised business processes and deep customer connect. However, this very process now poses a question mark on adoption of digital in microfinance industry. Centre meets and connect between the borrowers and loan officers during origination, disbursement, and collection processes are foundational to the microfinance model. Replicating this in the digital ecosystem may not be feasible. As a result, there is reluctance amongst MFIs to fully embrace digital. However, the industry has digitalised several business processes, such as KYC and disbursements, etc. While loan officers still visit the borrowers, MFIs are also offering a digital repayment option. Even when the borrower is not directly using digital payment, MFIs may still use the assisted transaction by BCs to solve the cash and liquidity management challenges. Tying up with BC networks for collection enables the MFI to shift the cash management and logistics costs to the BC network. At least some attribution for the growth in disbursements and profitability in the MFI industry can be given to digitalisation. Sub-K, a fast-growing BC network, which has embraced digitalisation as a key mantra, saw the share of remote credit appraisals surge from 12% to 60%, while digital collections increased from 40% to 62% during the last one year (second quarter of FY 24 over second quarter of FY 23). Sub-K reports that compared to 42% growth for all MFIS, Sub-K grew by 63%, while maintaining good portfolio quality. The benefits are percolating to the clients also, as 24% of the centre meets are now conducted virtually, offering flexibility and saving time.

6.3.2. Small Holder Farmers

For the small holder farmers, digital finance is transforming their livelihoods. While most of farmers are already covered under the Kisan Credit Cards (KCC), RBI recently launched a pilot project to digitise the KCC. During and after COVID-19, the government used the DBT system to provide social safety net payments to 112.87 million farmers. Farmers can also take advantage of crop advisory services, access weather and market information, hire farm machinery, sell their outputs, and access financing against warehouse receipts. As a result, farmers can have better crop selection, crop protection, more efficient farm operations, access to markets and finance, and reduce market and production risks, resulting in increased income and resilience.

6.3.3. Micro and Small Businesses

One of the most visible manifestations of the digital transformation is seen at small merchants and small businesses accepting digital payments. Using QR codes or UPI, they can now accept digital payments without investing in expensive point-of-sale (POS) machines. As the fund is directly and instantly credited to their bank accounts, they can use it to pay their vendors, suppliers, and workers. This has reduced the hassle of cash handling and increased security and convenience.

More importantly, this has brought visibility to the MSME's finances, which was completely inside a black box earlier. This increased visibility is enabling them to access business loans, manage their cash-

flow and working capital, and expand their business.

Despite the obvious benefits, there is also a pronounced hesitation amongst MSMEs in adoption of digital payments. Top reasons for non-adoption includes lack of customer demand, fear of getting cheated, and lack of digital literacy. On the other hand, top reasons for adoption of digital payments include ease of use and customer demand, besides lockdown and demonetisation experiences.

Digitising small and medium-sized businesses (SMBs) by empowering them with digital solutions for core business functions, while offering commerce, payments, and credit opportunities, is a huge opportunity, being tapped by start-ups like Khatabook and OkCredit.

6.3.4. Bank Sakhi/Business Correspondents

Business correspondents (BCs), bank *mitras*, and bank *sakhis* have emerged as the most important link for the customers in rural areas. While the BC model preceded the emergence of digital finance, the BC agents have played a crucial role in facilitating adoption of digital at the last mile. Firstly, a number of digital services are made possible due to people have a bank account linked to a unique Aadhaar number. The network of over 3 million BC agents made it possible to open and service all these accounts in the first place. Secondly, the BC agents provide digital services in an assisted mode, which addresses constraints such as lack of access to smartphone, digital literacy, lack of confidence in undertaking a self-initiated digital transaction, etc. BC agents also builds trust and confidence, which addresses the adoption barrier.

The BC network therefore is a vital part of the digital finance ecosystem. However, this network faces multiple challenges. The commission on the services delivered by the BC networks is unrealistically low. Low income and profitability of the BC agents affects their motivation, productivity, and continuity. Also, the product basket available with most BC agents is rather limited. They are neither trained on, nor are offered the opportunity to carry other products in their basket. With proper training and incentives, the BCs agents can drive faster adoption of digital finance.

With the increased smartphone penetration, the role of BC agents in facilitating transactions may change over time, from service to sales for new product lines such as e-commerce, insurance, etc. Assisted mode of transactions by the BC agents will continue to be important. The BC agents will need to be divided into service agents and sales agents, with differentiated training and handholding. Despite a surge in digital transactions, many customers still prefer to access banking services through traditional channels. This is where the BC network can play an important role in building trust and driving adoption of digital financial services.

6.4. INSIGHTS INTO CUSTOMERS PREFERENCE

The digital financial landscape is a dynamic and evolving space, with various stakeholders striving to understand and cater to the multifaceted needs of the customers. To gain a deeper insight into this landscape, a series of one-question polls were conducted on LinkedIn. The result from these polls is outlined in sections 6.4.1 through 6.4.5 below, and offer a snapshot of the prevailing opinions towards digital financial services.[14]

6.4.1. Cost Efficiency

A slight majority (59%) of the respondents opined that digital financial services have indeed reduced costs. However, a significant segment (41%) felt otherwise, indicating that digitalisation of financial services has not resulted in cost saving for the consumers. Two clarifications emerged, when this was discussed with the providers. Firstly, it is early days of digital finance, and it will be a while before the costs come down. In fact, the providers need to make big investment in digital platforms initially, which will only pay off later. The second was that the interest rates of digital finance should not be compared to traditional bank loans, since it is a completely new product. An ultra-small (as low as ₹ 100) and ultra-short duration loan without collaterals and available instantly, was just not available earlier. Average loan size of PayTM being just 28% of the average MFI loan size, substantiate this.

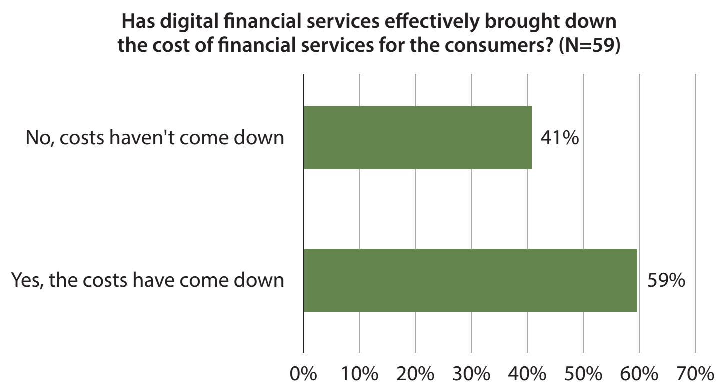


Figure 6.6. LinkedIn Opinion Poll Result: Effect of DFS on Cost of Financial Services

6.4.2. Customer Segments Served by Digital Finance

An overwhelming 81% of the respondents believe that digital finance has enabled the financial institutions to serve new customer segment, which they were not able to serve earlier. This overwhelming response underscores the transformative power of digital platforms in democratising access to financial services.

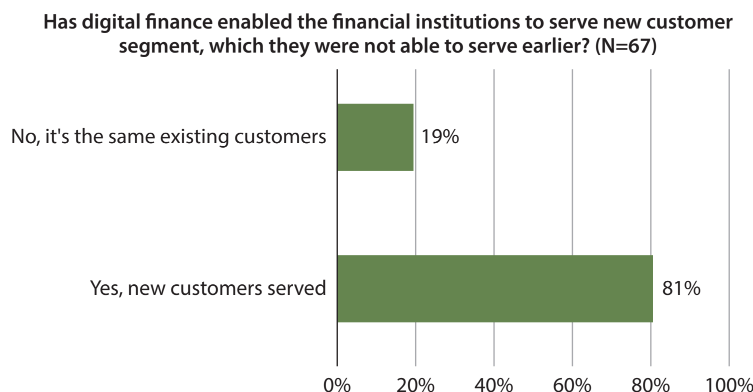


Figure 6.7. LinkedIn opinion Poll Result: Effect of DFS in reaching new customer segments

6.4.3. Efficiency and Productivity Gains Due to Digital Finance

Productivity and efficiency gains are one of the most powerful arguments for digital finance. The survey response was overwhelmingly affirmative on this parameter, with 90% of the respondents agreeing that digital finance has resulted in higher productivity, efficiency, and profitability for the financial service providers. While the customers of digital finance get to experience only the front end of the services, the real transformation has been at the back end. With digitalisation transforming every aspect of the business process and customer journey, it is no wonder that the efficiency and productivity of the financial service providers has significantly increased. Data-based underwriting decisions reduces risk and improves portfolio quality.

With a miniscule increase in the number of bank branches, the banking system is today serving four times more customer than earlier. This is a testimony for the efficiency gains.

However, these efficiency gains also come with a downside. Customers lack familiarity with a number of digital business processes, and this may expose them to risk. This aspect was covered in the next poll question.

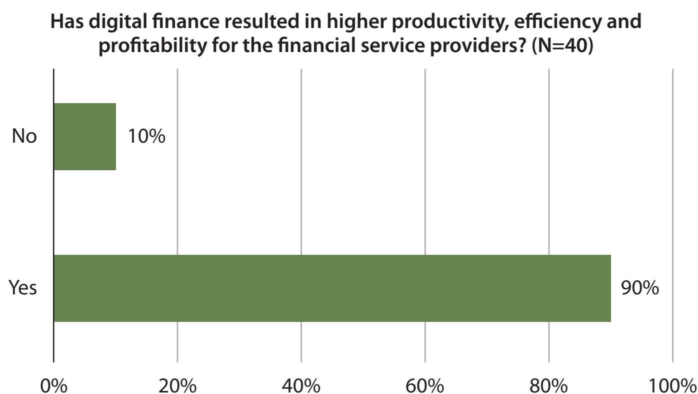


Figure 6.8. LinkedIn Opinion Poll Result: Effect of DFS on Productivity, Efficiency and Profitability

6.4.4. Fraud and Other Risks in Digital Finance

The respondents were near unanimous that the customers were at increased risk of financial frauds, identity thefts, ransomware attack, etc. This then brings to focus the measures for customer protection, probed in the next poll question.

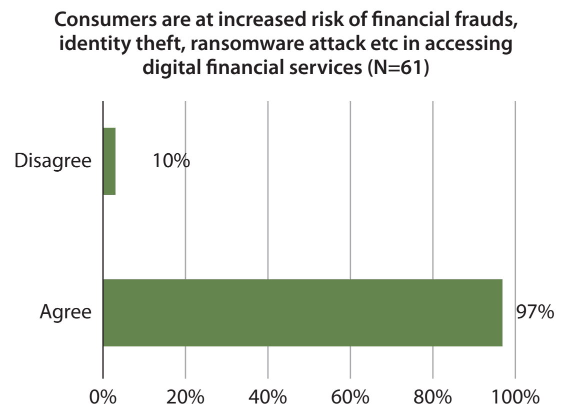


Figure 6.9. LinkedIn Opinion Poll Result: Fraud Risks in accessing DFS

6.4.5. Adequacy of Customer Protection in Digital Finance

In response to the question 'Given the huge amount of risk in digital financial services, are there adequate safeguards in places', just 5% respondents felt that adequate safeguards were in place. Despite the recognised risks, there's an apprehension about the adequacy of safeguards.

About two-third (62%) respondents felt that while some protective measures exist, they may be inadequate. Alarmingly, one in three (32%) respondents believed that the safeguards are largely missing. This spotlights a critical gap in consumer protection.

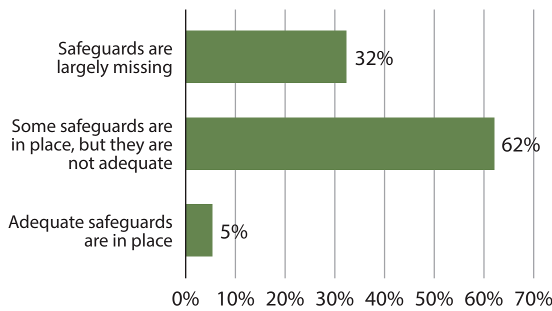


Figure 6.10. LinkedIn Opinion Poll Result: Adequacy of safeguards against risks in DFS

For digital finance to build and retain customer trust, there is an urgent need to invest in customer education, customer protection, and grievance redressal measures.

6.4.6. Data Access and Sharing

Data is like fuel for digital finance. Yet, data access, sharing, and protection has emerged as a key challenge. Data privacy and protection laws are becoming more stringent. The providers will need to ensure consent-based usage of customer data and respect privacy.

In the industry architecture, customer data is held by the financial service provider. Fintechs and BC networks intending to serve the same customers may not have access or rights to use this data, making it difficult to design data-based products. In some cases, players may use a work-around to overcome data access challenge, like using the certain digits from the unique Aadhaar number, combined with the agent code and service code to establish unique customer identity and construct a full picture of the customer behaviour. Artificial intelligence machine learning (AI/ML) tools are helping to gain deeper insights into customer profiles and behaviours.

6.4.7. National Financial Inclusion Strategy (NFIS)

The 2019–24 National Financial Inclusion Strategy (NFIS) of India presents a comprehensive vision and objectives for financial inclusion policies. It aims to make formal financial services affordable and accessible nationwide, with active participation from all stakeholders, and places emphasis on enhancing financial literacy and customer protection. NFIS places strong emphasis on digital finance as a mechanism to achieve its goals. NFIS outlines five goals:

(i) *Universal access to financial services:* Ensure that every village has access to a formal financial service provider within a 5 km radius, using a streamlined digital on-boarding process.

(ii) *Basic bouquet of financial services:* Eligible adults should have access to a basic set of financial services, including savings, credit, insurance, pension, and investment products.

(iii) *Livelihood and skill development:* New entrants to the financial system to be informed about relevant government initiatives, fostering skill enhancement and income generation.

(iv) *Customer protection and grievance redressal:* Awareness of mechanisms to resolve grievances, with a focus on protecting data privacy.

(v) *Effective coordination:* Collaboration among various stakeholders, to improve the quality of last-mile service delivery, enhancing digital finance adoption, and making services more user-friendly.

BOX 6.5. THE DIGITAL PERSONAL DATA PROTECTION ACT 2023 (DPDPA)

DPDPA has a significant impact on the financial sector. It focuses on safeguarding personal data, granting individuals more control over their information. It introduces stringent guidelines for customer data protection and privacy, adding to the extensive regulations in the financial services sector, covering areas like customer protection, data privacy, information security, and cyber risk.

Financial services firms rely heavily on customer data for risk assessment, such as credit, insurance, and fraud risk. DPDPA requires firms to evaluate legal basis for data collection and secure consent. This can potentially impact product pricing. For firms outsourcing part of their business processes, DPDPA mandates a review of outsourcing arrangements and the alignment of governance frameworks to ensure compliance.

DPDPA requires careful handling of data throughout customer journey, and must adhere to DPDPA's requirements. Product design needs to prioritise data protection, transparency, user consent, and data usage policies.

6.5. THE PROVIDER'S PERSPECTIVE

The digital finance landscape in India has witnessed a transformative journey, mirroring global trends while carving out its unique trajectory. As the nation grapples with the challenges and opportunities of this shift, it is time to look at the perspective of the providers, who are at the forefront of this revolution.

6.5.1. Business Case for Digital Finance

Payments are the cornerstone of economic activities. From barter to the sophisticated digital transactions of today, the evolution has been monumental. The digital revolution, characterised by the ubiquity of smartphones and the internet, has transformed the payment landscape. The convenience of instantaneous payments, coupled with the transparency of digital records, has been a boon for fulfilling the financial inclusion objective.

Digital transactions replacing cash is a global phenomenon. Platforms like UPI have been a game-changer, integrating millions into the formal financial ecosystem. Digital finance has not only transformed commerce, it is also redefining the relationship between the state and its citizens. The benefits, such as enhanced efficiency and traceability, also come with challenges like frauds, cybercrimes, and potential financial instability.

For the providers of digital finance, data generated from digital transactions is paving the way for design and rollout of innovative financial services, from personalised loans to tailored insurance products. Besides adherence to the requirements of the international monetary system, such as know your customer (KYC), Anti-Money Laundering (AML), Combating the Financing of Terrorism (CFT) and Foreign Account Tax Compliance Act (FATCA), the providers also struggle to keep up with evolving data privacy laws, e-commerce regulation, taxation, etc. Pricing control in some of the services like cash-in/cash-out, etc. makes them almost unviable, making it difficult for the providers to invest in training of the agents, marketing, customer education, and grievance redressal.

NFIS's goal of universal access also requires investment or cross-subsidisation in more difficult geographies. Given the consumer protection imperative, the government also needs to invest in financial literacy and consumer protection efforts.

6.5.2. Efficiency and Cost-effectiveness

The digital finance has been transformational in driving efficiency and cost-effectiveness. Events like demonetisation and COVID-19 lockdowns have been major catalyst for adoption. Microfinance disbursements are almost 100% digital now, while institutions are increasingly adopting digital workflows. Agents now collect repayment and deposit it at nearby cash collection centres, which facilitates digital transfer. This reduces the risk of carrying cash and ensures immediate fund transfers. Streamlining of operations enhances efficiency and reduces costs.

Large BC companies with deep presence are playing an important supportive role in this. However, challenges persist. There's a concern that a complete shift to digital collections might sever the crucial connection with the customers. Physical interaction cultivates trust and builds deeper understanding, enabling the MFIs to deliver more suitable solutions. Such touchpoints also create opportunity for promoting financial literacy.

6.5.3. Expanding Customer Base

The digital finance industry is at an inflection point, with people becoming more comfortable with digital transactions. However, the high CIC to GDP ratio indicates a significant amount of cash continues in circulation. For a successful transition, there is a need to digitise cash, which requires learning as well as access to digital devices.

The penetration of smartphones and mobile data has supported the use of digital public infrastructures (DPIs) by the masses. Investment in digital and financial literacy, product innovation, and capacity building of BC agents will further drive adoption.

6.5.4. Innovative Product Offerings

Innovation remains at the heart of the digital finance ecosystem. Some fintechs are offering both digital and kiosk options, catering to diverse customer segments, including farmers. Investment products like digital gold and silver are catching up. As the industry matures, the focus is on expanding access and offering more products. Regulatory aspirations, such as the credit UPI, are seen as potential avenues for fintechs and non-banking financial companies (NBFCs). Digital makes it possible to offer products such as P2P lending. Robo advisors, virtual assistants, and chatbots are now seen everywhere. Digital credit and BNPL schemes are reaching a large number of new to credit borrowers. Two of the top payment applications PhonePe and Google Pay now account for over 80% of the volume of payments, and PayTM accounting for another 15%. Person to merchant (P2M) transactions account for 59% of all UPI transactions in volume terms and 25% in value terms.

6.5.5. The Role of Fintech Start-ups

With over 2,000 fintech start-ups, India has one of the most vibrant fintech sectors in the world. Fintech start-ups have emerged as an important catalyst, driving innovation. The COVID-19 pandemic acted as a catalyst, fast-tracking digital adoption, helping services such as PayTM become household names. There is a need to prioritise the inclusion of marginalised groups, such as women and economically-disadvantaged sections.

Digital payments can be harnessed to drive financial inclusion, enhancing account ownership among the unbanked and expanding the utilisation of financial services. The ability to use these innovations requires access to a mobile device, sufficient income, and digital skills.

While digital payments offer security and personal empowerment, especially for women, they also bring risks such as fraud and phishing scams. Over-indebtedness in digital credit and customers receiving incomplete or incorrect information on the fees and costs of financial products are some major challenges.

Fintechs need a customer-centric approach to product design and delivery, focusing on financial literacy and strengthening the customer-protection framework. While fintechs are enjoying a huge confidence from the investor community, a collaborative effort is required between fintechs, investors, and regulators to ensure balanced growth. By addressing challenges like cyber threats and illegal lending apps fintech start-ups can build customer trust.

6.6. OPPORTUNITIES AND RISKS FOR DIGITAL FINANCE

The digital finance landscape is highly dynamic, characterised by rapid technological advancements, evolving customer behaviours, and shifting regulatory paradigms. As the country moves towards a more digitised economy, the opportunities and challenges that arise are multifaceted, demanding a nuanced understanding from both providers and consumers.

6.6.1. Future Landscape of Digital Finance

The next few years promise a transformative phase for digital finance in India. Industry experts project a myriad of developments that will shape the sector.

Expanding scope: The scope of transactions is expanding beyond cash-in and cash-out. Digital platforms are now facilitating a variety of transactions, from utility payments to loan repayments. This diversification is indicative of a broader acceptance of digital financial services.

Business models addressing access: A range of new business models across industries are emerging such as insurance (Acko), credit (Axio, One Card), new-to-credit lending (e.g. Aye Finance, Five Star), segment-specific financial solutions (e.g. Fampay, Jodo, GrayQuest) and embedded financial services (in-platform payments, credit at the point of purchase).

Business models enhancing efficiency: A number of digital solutions are building tools to take over functions of a Chief Financial Officer (referred as CFO tools) to streamline processes and transform business-to-business (B2B) payments and credit (e.g. Cashflo, Credable); building bridges between fintechs and financial institutions (e.g., M2P, Setu) or provide technology solutions to the financial services industry across identity (e.g., Hyperverge), credit assessment (e.g., Perfios), credit monitoring and collections (e.g., Credgenics), etc.

Enhancing customer experience: Digital finance models can differentiate across offerings such as seamless advisory and investing catering to the evolving middle class and democratising access to financial products (e.g., Dezerv, Strata,); targeting evolved user segments, such as active traders, GenZ investors, and those interested in social investing.

Saving options: Traditional saving mechanisms like chit funds remain popular in many parts of the country. Opportunity exists to understand the customer behaviour and preferences, for convenience, flexibility, etc. and designing products which mimic such traditions in a digital ecosystem.

6.6.2. Risks for Digital Finance

The digital finance sector in India, while burgeoning with potential, is not without its challenges. As the landscape evolves, providers grapple with a myriad of risks that require strategic foresight and adaptability. Delving deeper into these concerns, several key areas emerge:

Behavioural biases: Behavioural biases and inertia play an important role in adoption and usage of any service. For instance, there's a noticeable reluctance among individuals to deposit small sums into bank. Digital can solve for such biases. Likewise, communicating interest rate on a monthly basis, or for a shirt term loan duration may hide the actual interest rate.

Innovation gap: Traditional banking institutions often face criticism for their perceived inertia and conservatism. While many banks are partnering with fintechs to roll out digital services, there is room for a lot more innovation and business transformation.

User perspective: From the user's vantage point, digital services offer unparalleled convenience. However, digital platforms, especially digital lending also comes with high-interest rates. This dichotomy of convenience versus cost is a significant concern.

Cybersecurity and consumer protection: The digital finance sector has also been marred by the rise of illegal lending apps and related cybercrimes. Such malevolent activities erode the customer trust in legitimate digital platforms. Over 25,000 cyber fraud cases were reported till August this year, marking a staggering 212% increase over the previous year. The financial repercussions are immense, with losses exceeding ₹ 2 billion. The recovery rate remains abysmally low, with only 2–8% of the stolen money being retrieved. A serious effort is needed to restrict the proliferation of malicious apps in order to build and retain the consumer trust.

In light of this, consumer protection is an important concern as well as imperative for the growth of digital finance. There are different models for dealing with consumer protection, with some effort from the regulators and others by a self-regulatory body, such as the Digital Lenders Association of India or Business Correspondent Federation of India. One tricky challenge has been that often the fintechs or BCs may not have access to customer data, as that is in the domain of the product provider.

Capacity of BC agents: Over 3 million BC agents are the crucial link in the chain to deliver digital financial services. However, this network suffers due to lack of investment in building its capacity, resulting in high churn, low productivity and low customer satisfaction. This is an important risk for the digital finance industry.

END NOTES

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14. As the poll was conducted on Linkedin, this would have been visible primarily to the direct and second degree connections of the author on Linkedin. The poll results carry with it all the biases and skews inherent with a platform such as Linkedin —urban, educated, users of Linkedin, representing sample of people who are disproportionately more familiar with digital services.

Artificial Intelligence and Financial Inclusion in India: A New Dawn

Ramesh Srivatsava Arunachalam

7

7.1. INTRODUCTION

In the vast and culturally rich landscape of India, where over a billion dreams intermingle, the need for financial inclusion[1] has never been more pronounced. While the efforts to bridge the economic divide are ongoing, the advent of artificial intelligence (AI) promises to accelerate this journey, ensuring that financial growth benefits every individual, irrespective of their socio-economic status.

This chapter offers an in-depth analysis of AI's pivotal contributions to enhancing financial inclusion in India. This encompasses a wide range of areas, from groundbreaking credit assessment methodologies to avant-garde approaches in agricultural financing. The chapter's layout is delineated as follows:

In Section 7.2, readers will find a detailed exposition of the role of AI in advancing financial inclusion, highlighting its myriad applications. This section sets the tone and context for the entire chapter, laying the groundwork for subsequent discussions. Sections 7.3 through 7.6 provide a thorough exploration of four cardinal AI applications, offering both a theoretical backdrop and *contextual examples specific to India*. The areas of focus include AI's capability to refine credit scoring to make it inclusive (Section 7.3), the integration of AI in chatbots and voice-based assistants (Section 7.4) to facilitate process and digital literacy, AI's pivotal influence in fraud detection to promote a wider reach and facilitate greater inclusion (Section 7.5), and the innovative strides of AI in reshaping agricultural finance through modern underwriting practices to make it more inclusive (Section 7.6). In Section 7.7, the narrative shifts to address the salient challenges related to data quality and utilisation, emphasising the pivotal role of data integrity in the effectiveness of AI. This section also proposes comprehensive solutions to these challenges. Concluding the chapter, Section 7.8 ponders upon additional critical facets essential to harnessing AI's full potential in bolstering financial inclusion across India.

7.2. WHAT IS THE ROLE OF AI IN FINANCIAL INCLUSION?

In the modern era, the transformative impact of AI on various industries is undeniable. Yet, one of the most profound and socially impactful changes brought about by AI is its role in advancing financial inclusion. Financial inclusion seeks to provide affordable, accessible, and appropriate financial services to all individuals, particularly those who have been marginalised or underserved by traditional financial systems. AI, with its vast array of tools and techniques, has propelled this mission forward in numerous ways.

Historically, a significant portion of the population has remained unbanked or underbanked, often due to geographic isolation, lack of documentation, or the unviability of traditional banking models in serving low-income segments. However, with the advent of AI-driven solutions, this landscape is witnessing a paradigm shift. AI has the unique capability to analyse vast amounts of data, recognise patterns, and make predictive decisions. By leveraging these capabilities, financial institutions and FinTech startups in India have been able to devise innovative solutions to bridge the financial divide.

One of the most groundbreaking contributions of AI in this arena is the alternative credit scoring models. Traditional credit scoring often relies on

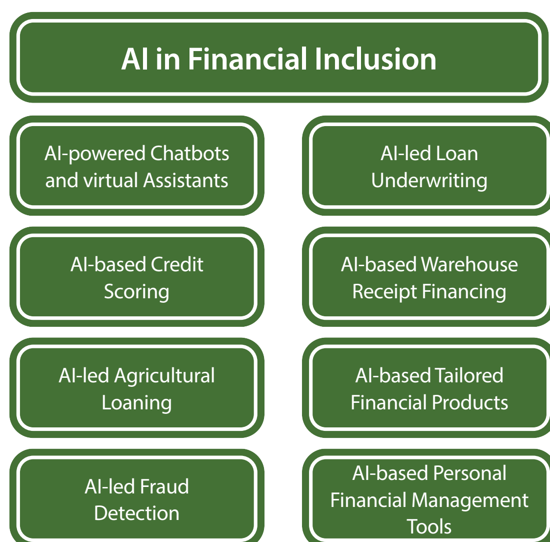

Figure 7.1. Applications of AI in Financial Inclusion (Exhaustive)

historical financial data, leaving out those without a formal credit history. AI, however, can process non-traditional data sources such as mobile phone usage, social media activity, and even e-commerce transactions to predict an individual's creditworthiness. Such models have enabled financial institutions to extend credit to segments that were previously overlooked, fostering economic empowerment and growth.

Here, AI has the potential to revolutionise the loan underwriting process, making it more efficient, accurate, and inclusive: (i) AI algorithms can quickly process vast amounts of applicant data, from credit scores to employment history, reducing the time taken for loan approvals; (ii) As noted above, for those without traditional credit histories, AI can assess creditworthiness using alternative data like utility bill payments, social media activity, or even behavioural traits derived from mobile usage patterns; and (iii) Rather than relying on static risk modelling, AI can continuously learn from new data, adapting and refining its risk assessments. This dynamism can lead to more accurate pricing of loans and a reduction in non-performing assets.

In regions where geographic isolation is a barrier, AI-powered virtual assistants and chatbots have emerged as invaluable tools. These digital entities, equipped with natural language processing (NLP) capabilities, can communicate with users in local dialects, guiding them through banking processes, answering queries, and even assisting in financial planning. Not only do they ensure round-the-clock availability, but they also mitigate the need for physical bank branches in remote areas.

Moreover, AI-driven personal financial management tools have democratised access to financial literacy and planning. These tools offer tailored financial advice based on individual spending patterns, savings goals, and risk appetites. By simplifying complex financial concepts and providing actionable insights, they equip individuals with the knowledge and confidence to make informed financial decisions.

Fraud detection is another domain where AI has shown remarkable prowess. For financial inclusion to be effective, trust in the system is paramount. AI can instantly identify anomalous patterns by analysing transactional data in real time, flagging potential fraudulent activities. This not only safeguards the assets of individuals but also enhances the credibility of financial institutions.

Digital payment platforms, underpinned by AI, have also made significant strides in promoting financial inclusion. Mobile money solutions have become the cornerstone of daily transactions in many developing nations, including India. AI aids these platforms by optimising transaction processing, predicting transaction failures, and offering dynamic pricing models based on user behaviour. Such innovations ensure that even those without a formal bank account can participate in the digital economy, fostering a sense of financial belonging.

Furthermore, AI's capability to harness big data has been instrumental in designing financial products tailored to the unique needs of underserved/underbanked segments. By analysing demographic data, consumption patterns, and local economic indicators, financial institutions can devise products that resonate with specific communities, be it micro-insurance schemes for farmers or savings plans for urban migrants.

The application of AI in agricultural (intelligence-based) loaning, underwriting of loans, and warehouse receipt financing (WRF) offers further testament to the transformative power of AI in reshaping financial services, especially in sectors traditionally considered high-risk or underserviced. Let's delve deeper into these specific applications.

Agriculture is a sector that depends on unpredictable factors such as weather, pest attacks, and market demand. AI's capabilities in predictive analytics and big data processing have started to revolutionise agricultural lending in the following ways: (a) *Predictive crop yield:* By analysing data from satellite imagery, weather patterns, soil quality, and historical crop yields, AI predicts upcoming harvests with high accuracy. This information is invaluable

for lenders in assessing a farmer's ability to repay a loan; (b) *Risk assessment:* Traditional agricultural loaning often categorises the entire sector as high risk. However, with AI, lenders can make nuanced risk assessments based on individual farm practices, crop types, and even environmental sustainability measures adopted by farmers; (c) *Tailored financial products:* AI enables lenders to offer personalised loan products based on the specific needs and risks associated with individual farms or regions. For instance, a farmer growing a drought-resistant crop might receive different loan terms than one growing a water-intensive crop.

In the case of WRF, where farmers or traders secure loans against stored commodities, has been a game-changer in agricultural financing. AI further enhances the effectiveness of WRF by facilitating real-time valuation of stored commodities—AI does this by continuously analysing market demand-supply dynamics, historical price data, and even global macro-economic indicators. AI-powered Internet of Things (IoT) sensors can monitor the quality of stored commodities, detecting issues like moisture levels, temperature fluctuations, or pest infestations. Such monitoring can assure lenders about the quality and value of the collateral. Furthermore, AI can identify discrepancies in warehouse receipts, anomalies in transaction patterns, or even irregularities in commodity quality reports, thereby ensuring the authenticity of the collateral and reducing fraudulent activities.

These applications not just streamline financial processes but also build trust and transparency in sectors historically fraught with uncertainties. By offering predictive insights, real-time data analysis, and continuous learning capabilities, AI ensures that financial inclusion is not just about access but also about relevance and responsiveness to the unique needs of diverse sectors. AI stands as a beacon of innovation in the dynamic interplay of technology and finance, heralding a future where financial services are efficient, equitable, and empowering.

However, it is essential to acknowledge the challenges. While AI offers unprecedented opportunities, its deployment in the financial sector raises concerns about data privacy, algorithmic biases, and the potential for digital exclusion. As we harness the power of AI, it is crucial there is a parallel emphasis on ethical considerations, ensuring that the march towards financial inclusion is both inclusive and just.

Thus, the confluence of AI and financial services has set the stage for a more inclusive financial ecosystem. By breaking down barriers, innovating at the grassroots level, and placing the user at the centre of solutions, AI has redefined what is possible and brought hope to millions. As technology continues to evolve, it holds the promise of a future where financial empowerment is not a privilege but a fundamental right. Let us explore these aspects and more in this chapter, with specific use cases and examples from India as they exist.

7.3. AI-LED INCLUSIVE CREDIT SCORING

7.3.1. The Conceptual Basis of AI-Based Alternative Credit Scoring to Enhance Inclusion

In an era rapidly embracing digitisation, ensuring financial inclusivity remains at the forefront of global economic objectives. One of the most significant barriers to financial inclusivity has been the traditional credit scoring system, which often overlooks individuals with limited or no credit history. This is where the revolutionary approach of AI-based alternative credit scoring comes into play, offering a solution designed for the modern age by harnessing the immense potential of artificial intelligence.

Unlike the conventional systems that primarily lean on credit histories, AI-driven models cast a wider net, drawing information from a plethora of sources. This can range from an individual's utility bill payments and mobile and smartphone usage to social media activity. Once this data is collected, the AI system delves into the intricate task of feature extraction. Here, it identifies patterns and behaviours that might hint at an individual's propensity to repay loans.

After the extraction phase, the model is trained using historical data, honing its ability to predict loan repayment likelihood. The beauty of such a system is its dynamic nature. As more data becomes available, the model continually refines its accuracy, delivering predictions that are both reliable and timely. The value proposition of AI-based credit scoring is manifold. For one, its ability to utilise a broad spectrum of data offers a more rounded perspective of an individual's financial behaviour. This real-time analytical capability starkly contrasts traditional methods, which often involve time-consuming manual checks. Moreover, by centring the process on data and identifiable patterns, AI significantly reduces the human biases that occasionally creep into traditional credit assessments. From a lender's viewpoint, the predictive capabilities of AI are a boon, enabling better risk assessment and management.

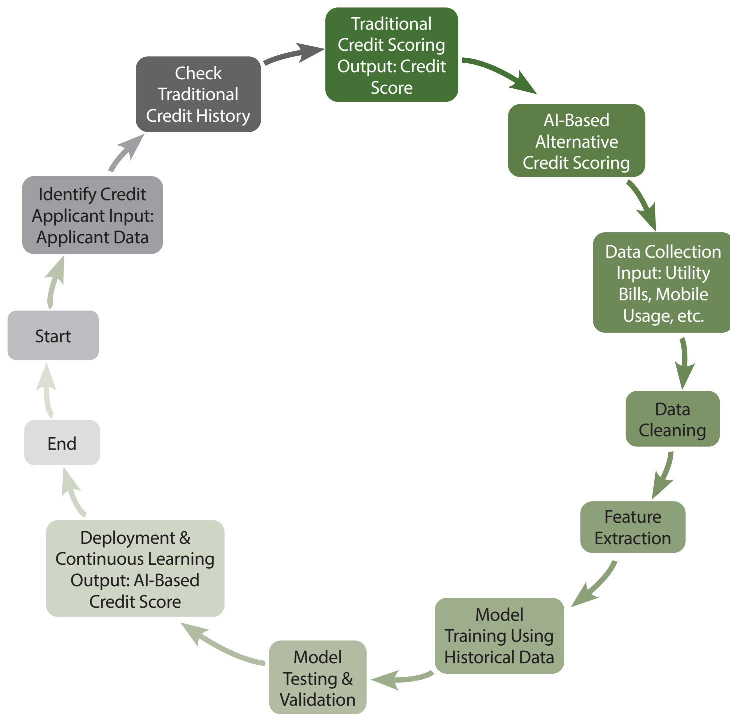

Figure 7.2. AI-Led Alternative Credit Scoring to Enhance Inclusion

The methodology behind the AI-based credit scoring system is rigorous. It begins with the integration of diverse data sources to form a rich dataset. This data then undergoes a meticulous cleaning process, ensuring the removal of any irrelevant or erroneous information. Depending on the nature of the data and the desired outcome, the most appropriate AI models are then chosen. Before these models are thrust into the real world, they undergo a stringent phase of testing and validation on sample datasets. And even after deployment, the learning never stops. These models are designed to adapt, refining their predictions with every new piece of data they encounter.

But beyond the technological marvels and the efficiencies introduced, the most profound impact of AI-based credit scoring is its potential to democratise financial systems. It offers a lifeline to the unbanked, underbanked, and underserved populations in India, assessing their creditworthiness through unconventional yet relevant data. This approach not only provides them with access to vital financial instruments but also incentivises good financial behaviour beyond the usual metrics like credit card and loan repayments. And for those who have faced the disappointment of loan denials due to a lack of traditional credit history, AI's comprehensive view can be the key to unlocking these essential financial services.

To summarise, the traditional credit scoring system possesses several weaknesses. It has a limited scope, being primarily restricted to conventional financial data. Furthermore, it often exhibits exclusivity, overlooking those without established credit histories. Another shortcoming is its rigidity, as the traditional system tends to be less adaptable to changing financial climates and individual circumstances. Additionally, the potential for bias remains inherent as it can inadvertently favour specific demographics. On the other hand, AI-based credit rating systems come with several strengths. They utilise a broader range of data, analysing varied sources to provide a comprehensive view of an individual's financial behaviour. A significant advantage is their capability to include the 'credit invisible'—those such as the unbanked, immigrants, or young adults whom traditional systems might overlook. Additionally, these AI-driven models showcase remarkable adaptability, with the ability to swiftly adjust and refine their predictions based on new data. Furthermore, they are designed to minimise human bias, leading to more equitable credit assessments.

Table 7.1. Comparative Analysis of Traditional Versus Alternative AI-Based Credit Scoring

Attributes	Traditional Credit Scoring	Alternative Credit Scoring
Basis	• Relies heavily on credit history, past loan repayments, and financial transactions over a long period.	• Utilises a broader spectrum of data to evaluate an individual's creditworthiness.
Data Sources	• Primarily uses bank records, credit card transactions, and loan repayment histories.	• Incorporates unconventional data sources such as utility bill payments, social media activity, mobile and smartphone usage, online shopping behaviours, and more.
Inclusivity	• Often excludes those without a credit history, such as young adults, immigrants, or those who haven't accessed formal banking services.	• Designed to include those without traditional credit histories, thereby reaching underserved or marginalised populations.

Attributes	Traditional Credit Scoring	Alternative Credit Scoring
Bias and Fairness	• Could inadvertently favour certain demographic groups with a longer or more robust credit history.	• With proper design, we can reduce human biases by focusing on data and patterns. However, there's a need for continuous monitoring to ensure that the AI doesn't adopt existing biases from the data.
Flexibility	• Relatively static, not easily adaptable to changing financial behaviours or trends.	• Highly dynamic and can evolve with changing financial behaviours and trends.
Scope	• Limited to traditional financial data, ignoring other potential indicators of creditworthiness.	• Expands the horizons of credit assessment by considering a myriad of data points, providing a holistic view of an individual's financial behaviour.

In essence, AI-based alternative credit scoring isn't just another technological advancement; it's a beacon of hope for a more inclusive financial future.

7.3.2. The Case of CreditVidya in India

AI is revolutionising credit assessments in current times, and CreditVidya[2] is at the forefront of this transformation. Leveraging AI, CreditVidya evaluates a broad spectrum of data points, ranging from utility bill payments to online shopping habits and social media insights. This comprehensive data collection creates a detailed financial profile of individuals, ensuring credit decisions are based on actual financial behaviours rather than traditional documentation.

CreditVidya epitomises the fusion of AI and alternative data sources, providing a holistic view of an individual's creditworthiness. Their technology is especially beneficial for those without traditional credit histories. Remarkably, they have brought over 250 million previously underserved Indians, earning between $2 and $10 daily, into the loan market. Moreover, their system has dramatically reduced loan processing costs from about $2 to just below one cent.

CreditVidya's collaboration with 55 top financial institutions in India has led to a notable 25% increase in loan approvals and a 33% decline in delinquencies. Their Medhas platform, which gathers data via a software development kit (SDK) in lenders' mobile apps, houses a vast 250 terabyte (TB) of data and processes 100,000 loan applications daily, a tenfold increase from the prior year.

The company's approach centres on gathering non-traditional data, such as e-commerce transactions and social media activities, with the customer's explicit consent. This data undergoes thorough analysis using CreditVidya's unique AI algorithms to deduce patterns indicating an individual's financial behaviour and the likelihood of loan repayment. The result is a credit risk profile that, unlike traditional scores, reflects a wider array of financial activities. These algorithms are also dynamic, adapting continually to new data and financial trends.

Financial institutions, including banks and non-bank financial companies (NBFCs), integrate CreditVidya's scoring model into their lending processes, especially when dealing with borrowers without a conventional credit history. In post-loan disbursement as well, CreditVidya continues its involvement by monitoring repayment behaviours and refining its models based on feedback. Prioritising data privacy and security, all operations abide by strict security measures. CreditVidya is reshaping credit scoring using AI and diverse data, benefiting financial institutions and expanding financial service access. With a remarkable 55% annual growth, they aim to expand into new regions like Southeast Asia and strive to provide credit access to 3 billion people globally, currently excluded from formal loan systems.

7.4. DEMOCRATISING FINANCIAL KNOWLEDGE

7.4.1. The Conceptual Basis for AI Chatbots and Voice Robos to Enhance Process and Digital Literacy

In a linguistically-diverse country like India, the importance of financial literacy cannot be overstated. The mosaic of languages and dialects presents unique challenges in ensuring that every individual has access to clear and comprehensive financial information, irrespective of their linguistic background. In this context, the emergence of AI-driven interfaces offers a transformative solution.

One of the most compelling advantages of these AI-driven platforms is the promise of 'Ubiquitous Advisors' financial queries, doubts, or concerns don't always arise during conventional business hours. Whether it's late-night savings advice or

early-morning investment queries, AI-driven bots stand ready to assist, offering round-the-clock guidance. Their unwavering availability ensures that individuals are never left without counsel, regardless of when they seek it.

However, availability alone does not bridge the linguistic divide. The phrase 'Language no bar' is profoundly significant in a nation where language is deeply intertwined with identity. AI chatbots, equipped with advanced linguistic algorithms, have the capability to converse seamlessly across a spectrum of Indian languages, from the mellifluous tones of Hindi in the north to the rhythmic cadences of Tamil in the south. This linguistic versatility ensures that financial guidance is accessible and comprehensible, eliminating the risk of misinterpretation or misunderstanding due to language barriers.

Beyond availability and linguistic proficiency, personalisation adds a deeper dimension to effective financial guidance. 'Personalised Guidance' is not just a catchphrase; it is a commitment to understanding and addressing the unique financial landscapes of individuals. Drawing from a wealth of individual data, AI bots transcend generic advice. They delve into an individual's financial behaviour, aspirations, and constraints. As a result, they can craft and offer tailored financial solutions, ensuring that the advice resonates with an individual's needs and circumstances. In essence, integrating AI into the realm of financial literacy in India is not just about technology but also about empowerment. It is about ensuring that every individual, regardless of when they seek advice, which language they speak, or what their unique financial situation might be, has access to informed, relevant, and timely financial guidance.

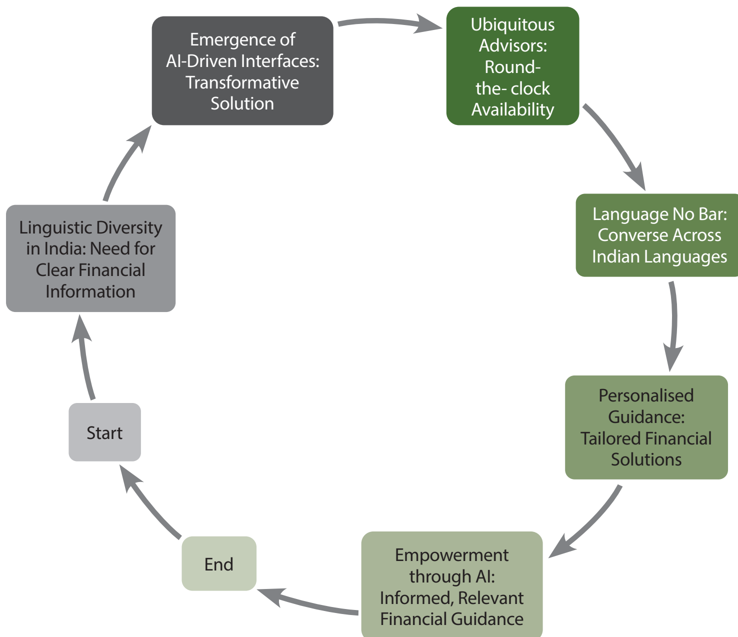

Figure 7.3. AI-Based Chatbots and Voice Robos to Enhance Process and Digital Literacy

7.4.2. Bridging Linguistic Barriers: AI-driven Customer Support from HDFC Bank[3]

India's vast linguistic tapestry, comprising over 19,500 languages and dialects, reflects its rich cultural heritage. However, this very diversity poses significant challenges for the banking sector, where precise communication is essential. Traditional banking mechanisms, predominantly operating in a select few languages, often encounter linguistic barriers, especially in regions characterised by linguistic diversity. This restricts the spread of vital financial services, particularly in rural territories, and leads to potential misunderstandings that can erode the trust customers repose in these institutions.

Recognising this challenge, technological solutions, particularly AI-driven interfaces, have emerged as game-changers. A notable example is HDFC Bank's introduction of an Electronic Virtual Assistant (EVA) developed in collaboration with Senseforth AI Research Pvt Ltd. This AI-powered chatbot, engineered to provide real-time support, is adept at interacting in multiple Indian languages. EVA ensures that financial guidance is linguistically accurate, culturally pertinent, and instantly accessible, with an impressive uptime of 99.9%. Additionally, advanced AI models within EVA offer real-time translation services, ensuring that no banking communication is lost in translation.

HDFC Bank's EVA is more than a mere customer service tool; it's an embodiment of the bank's commitment to driving financial inclusion. Since its launch in March 2017, EVA has engaged with over 530,000 unique users, addressing myriad banking queries. EVA's capabilities are both expansive and precise. It operates with an impressive accuracy level of over 85%, adeptly handles over 50,000 semantic variations, and continuously refines its vast knowledge base through user feedback. The interactions EVA processes undergo a conceptual banking knowledge framework, enhancing its proficiency in answering queries accurately. Furthermore, EVA's operational efficiency translates to tangible benefits for HDFC Bank, dramatically reducing response times and operational costs and providing information in seconds, a task that conventionally takes 8-10 minutes.

In conclusion, EVA's integration signifies a monumental stride towards bridging India's linguistic divide in the financial sector. As AI-driven solutions like EVA become more prevalent, they promise a future where financial literacy and services are accessible to all, irrespective of linguistic or regional diversities. With innovations like EVA, HDFC bank, which is one of the largest private sector banks by assets in India and one of the world's largest by market capitalisation, is not only enhancing the quality of its customer service but also playing a pivotal role in fostering financial inclusion and democratising access to banking services across India.

7.5. FRAUD DETECTION: A SHIELD FOR INDIA'S FINANCIAL NOVICES

7.5.1. The Conceptual Basis – The Digital Sentinel Guarding the Fortresses of Finance to Facilitate Wider Reach and Enhance Inclusion

In the tapestry of India's financial modernisation, the vibrant thread of digital transactions weaves a narrative that spans bustling urban centres to serene, remote villages. Yet, this tale is not without its shadows. Each digital transaction, irrespective of its size, introduces a potential vulnerability. While traditional methods like periodic audits and manual checks laboriously attempt to identify these vulnerabilities, they often fall short, overwhelmed by the sheer volume. It's in this arena that AI shines, offering a beacon of hope in ensuring digital transactional security.

AI's unmatched strength lies in its ability to engage in 'Vigilant Monitoring'. It dives deep into the vast sea of transactions, analysing each interaction, whether a significant business wire transfer or a casual coffee purchase. With its intricate algorithms, AI tirelessly scans for anomalies and suspicious activities, often pre-empting potential threats before they can escalate. But AI's prowess is not confined to mere real-time detection. It is a visionary, offering a 'Proactive Defense' Sifting through historical transactional data, AI identifies patterns, allowing it to predict and prepare for future risks even before they materialise.

Central to AI-based fraud detection are algorithms designed to learn autonomously, making decisions based on patterns and anomalies. These algorithms process colossal datasets at breakneck speeds. They typically operate via two primary methodologies: supervised learning and unsupervised learning. In supervised learning,

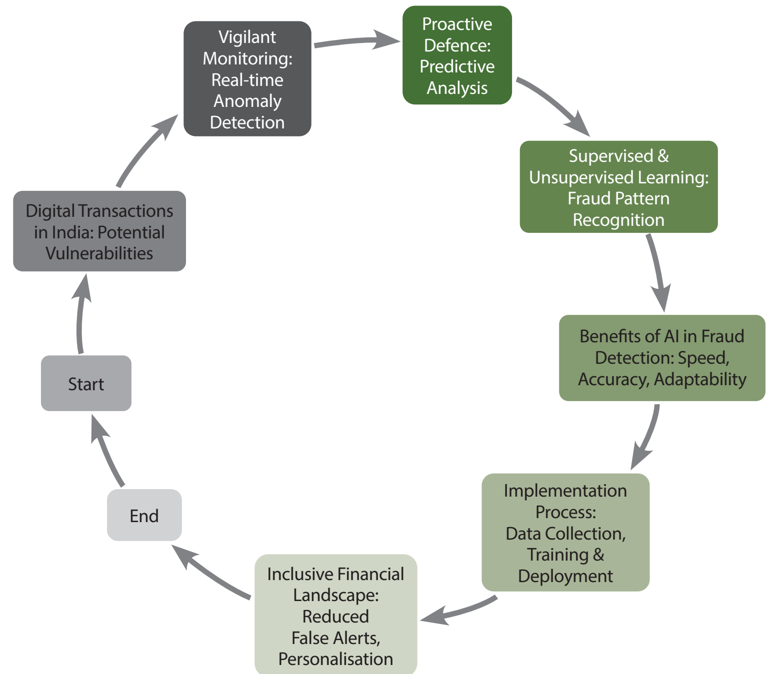

Figure 7.4. AI-Led Fraud Detection to Facilitate Wider Reach and Enable Greater Inclusion

algorithms are trained using data that's already labelled as 'fraudulent' or 'non-fraudulent'. They then apply this understanding to fresh, unlabelled data. On the other hand, unsupervised learning doesn't rely on prior labelled training. Instead, it compares transactions, flagging any that deviate significantly from established norms.

The benefits AI introduces to fraud detection are multifaceted. It is highly adaptable and constantly evolving to stay abreast of the ever-changing tactics employed by fraudsters. Its speed is unparalleled, processing vast datasets in mere moments, a feat traditional systems cannot match. This swift processing and a deeper data analysis ensure remarkable accuracy, significantly reducing false alerts. Beyond detection, AI's predictive analysis capabilities can forecast potential fraud risks, ensuring a proactive defence.

Implementing AI-based fraud detection is a nuanced process. It begins with the crucial step of data collection, ensuring a rich and diverse dataset. From this data, key features are extracted, which the AI then analyses. Once these features are identified, the AI model undergoes training using historical data to recognise patterns associated with fraud. After this training phase, its accuracy is rigorously tested on a separate dataset. Once validated, it's deployed for real-time monitoring. As this model processes fresh data, it continually refines its

detection capabilities, ensuring it remains at the forefront of fraud detection.

AI's refined approach to fraud detection isn't merely about safeguarding financial assets. It is a harbinger of a more inclusive financial landscape. By reducing false alerts, even individuals with limited financial histories can access essential services without facing undue obstacles. AI's ability to understand individual transaction patterns introduces a level of personalisation, ensuring each user isn't shoehorned into a generic fraud detection mould. Moreover, its adaptability ensures relevance across diverse cultural and transactional behaviours, making it a truly global solution. In conclusion, as India forges ahead in its digital journey, AI stands tall, not just as a protector of financial transactions but as a visionary guardian of a more inclusive financial future.

7.5.2. Use of AI for Fraud Detection and Mitigation – The Case of Paytm, UPI, and Others in India[5]

In India's accelerating digital finance landscape, the emphasis on transactional security has surged. Two key players, Paytm and Unified Payment Interface (UPI), stand out for their rigorous use of AI in fraud detection and transactional security as India moves towards a cashless economy.

Established in 2010, Paytm quickly became India's preferred digital payment method. With its growth came the challenge of ensuring the security of its myriad daily transactions. To meet this, Paytm deployed AI and big data analytics. Their AI algorithms analyse transactions, studying both basic metrics like transaction amounts and intricate details such as device used and transaction duration. An essential feature of Paytm's system is its promptness in detecting irregularities, like several high-value transactions from various locations in a short span, marking them for further inspection, highlighting its proactive approach.

Similarly, UPI, simplifying digital payments, faces the onus of securing innumerable daily transactions. UPI's strategy, akin to Paytm, relies heavily on AI for transaction monitoring. The system exhaustively analyses each transaction, flagging deviations from typical user patterns. Deep diving, UPI processes vast data, from basic transaction details to user behaviour. Its use of unsupervised learning helps in spotting unusual transactions. Moreover, UPI's proactive approach, informed by historical data, anticipates potential fraud. A distinct UPI feature is its user-centric approach, seeking user confirmation for unusual transactions, thus bolstering trust and security.

Other prominent platforms like Bharat Interface for Money (BHIM), PhonePe, and MobiKwik also recognise AI's critical role in transactional security, continually enhancing their defences against threats. Leading banks, including HDFC and ICICI, have incorporated AI monitors for their online services, exemplifying the widespread reliance on AI for financial security.

In summary, as India delves deeper into its digital journey, the synergy between digital finance and AI becomes evident. With their pioneering AI measures, Paytm and UPI are setting benchmarks, fortifying trust in digital platforms, and paving the way for the future of India's digital financial landscape.

7.6. THE USE OF AI IN AGRICULTURE FINANCING

7.6.1. The Conceptual Basis— Agricultural Intelligence and AI-Based Underwriting: Pioneering Financial Inclusion in Agriculture

In the contemporary era, the profound integration of AI into various sectors is driving unprecedented transformations. Among its diverse impacts, AI's role in advancing financial inclusion emerges as one of its most socially significant one.

Today, at least 75% of farmers in India are considered small and marginal. Even as they manage substantial agricultural lands, they confront immediate financial demands essential for obtaining seeds, fertilisers, and other agricultural necessities. Their limited incomes and minimal cash reserves only heighten these financial pressures.

These farmers face two primary challenges in accessing formal financing: the absence of necessary collateral and documentation, often due to shared family landholdings or missing key documents such as the Aadhaar or Permanent Account Number (PAN) card, and the difficulty banks face in ascertaining their financial potential. Traditional credit score metrics elude many of these farmers, prompting banks to resort to less reliable assessment methods such as field visits and personal interviews. The loan application process, especially under frameworks like the Kisan Credit Card (KCC), is daunting, characterised by extensive paperwork, compulsory field checks, and the need to provide land title documents. Such rigorous requirements and upfront costs deter many from pursuing these loans. Historically, a significant segment of these farmers remained disconnected from banking, either due to geographic limitations, lack of documentation, or because traditional banking models failed to address

Figure 7.5. AI-Led Innovative Underwriting in Agricultural Finance to Facilitate Inclusion

the needs of economically vulnerable populations. Yet, the advent of AI-driven innovations is reshaping this scenario. AI's unmatched capacity to process vast datasets, discern patterns, and anticipate results has empowered financial institutions and emergent FinTech firms to devise groundbreaking solutions that bridge financial divides.

AI's innovative approach to credit scoring is particularly noteworthy. Unlike conventional methods that heavily rely on past financial histories, AI taps into alternative data streams, such as mobile and smartphone usage and online behaviours, to evaluate creditworthiness. This has allowed financial entities to extend credit opportunities to previously overlooked segments, fostering economic growth and diversification.

Furthermore, AI is set to revolutionise loan underwriting by improving its efficiency, accuracy, and inclusiveness. Its swift data analysis abilities facilitate shorter loan approval times, credit evaluations from unconventional data for those without typical credit histories, and the development of a dynamic risk model that adapts to new information. This adaptability enhances risk assessment, refines loan pricing, and diminishes asset underperformance.

In some geographically remote areas, AI-enhanced chatbots and virtual assistants equipped with NLP have become indispensable. These digital tools communicate in local dialects, navigate users through banking procedures, and provide financial guidance, mitigating the need for physical bank branches. Additionally, AI-driven financial tools make financial literacy accessible to all, offering bespoke financial advice, simplifying complex financial notions, and enabling well-informed decisions.

Moreover, AI-supported digital payment systems have played a pivotal role in championing financial inclusion. In countries like India, mobile financial solutions are integral to everyday transactions. AI's involvement in refining transaction processes, predicting transaction issues, and devising dynamic pricing models ensures the smooth participation of those without traditional banking. By leveraging big data, AI has been pivotal in designing financial services tailored for traditionally underrepresented groups. Insights into demographic trends, consumption behaviours, and regional economic indicators have enabled the crafting of specialised financial products. Within agriculture, a sector susceptible to unpredictable factors like weather and market demand, AI's predictive analytics is revolutionising lending. AI is reshaping agricultural financing by predicting crop yields using satellite images and weather data, making detailed risk assessments, and creating customised loan offerings.

However, the incorporation of AI into financial services is not without its challenges. Issues related to data privacy, potential biases in algorithms, and the risk of digital exclusion emphasise the importance of ethical considerations to ensure that the pursuit of financial inclusivity remains fair and equitable. In conclusion, the collaborative power of AI, agricultural intelligence, and financial services signals the dawn of a new era of all-encompassing financial inclusivity. By dismantling barriers, inspiring ground-level innovations, and focusing on the end-user, AI has expanded what is possible and instilled hope in countless individuals. Continued technological

progress promises a future where financial empowerment (not just inclusion) is universally available and esteemed as a fundamental right.

7.6.2. SatSure — Orbit to Earth: Pioneering Financial Inclusion for Farmers via Satellite Insights and Artificial Intelligence

SatSure,[6] based in Bengaluru, is pioneering the use of satellite imagery, merging it with AI and other datasets to produce actionable insights. Targeting governments, policymakers, and private sectors, SatSure's technology, particularly advanced machine learning, analyses satellite imagery combined with data like weather patterns to provide valuable insights in agriculture and finance.

They have launched SatSure Sage, a SaaS product for the agricultural banking sector. With its capability, SatSure offers insights into facets like crop health and irrigation, enabling a drastic reduction in crop loan disbursement time. Using digital metrics for verification, their system negates ground inspections, facilitating loans up to ₹1.6 lakh. Their achievements include monitoring over 1Million+ Sq.km weekly, facilitating 2Million+ farm loans, settling 500,000+ insurance claims, and filing four patents.[7]

Collaborating with top Indian banks like HDFC Bank, ICICI Bank, and Kotak Mahindra Bank, and partnerships with TransUnion Credit Information Bureau India Limited (CIBIL) and Rabo Partnerships, SatSure is transforming rural lending. Their solution addresses the traditional banking challenges of data inaccuracy and delays, providing a more consistent alternative. This not only assists policymakers and banks but also empowers farmers with better loan access. Highlighting their impact, a banking partner utilising SatSure's product provided 84,000 farm loans in a single season across five Indian states. Overall, SatSure's methods have enabled over 2 million farmer loans, benefiting even those without formal credit histories due to their digitisation of agricultural data.

7.6.3. Supporting Agriculture: AI's Enabling Role towards Sustainable Agri-Finance through Agriculture Intelligence

Agriculture, often regarded as India's lifeline, grapples with myriad uncertainties ranging from volatile weather conditions to erratic market trends. In this context, companies like Cropin[8] are pioneering the use of AI to deliver data-driven insights. Through AI, whether it's forecasting crop yields, evaluating soil vitality, or facilitating timely insurance provisions, farmers—India's foundational backbone—are ensured financial stability. Cropin stands as a prominent global leader in ag-ecosystem intelligence. Its diverse product suite empowers a broad spectrum of stakeholders in the agricultural ecosystem, encompassing financial service providers. By leveraging avant-garde technologies such as AI, machine learning, and remote sensing, Cropin has developed a sophisticated interconnected data platform. This platform aids entities in transitioning their agricultural processes into the digital realm,

BOX 7.1. INTEGRATION OF CIBIL CREDIT REPORT AND SATSURE FARM REPORT

TransUnion CIBIL has unveiled a transformative offering in the agricultural lending landscape with its CIBIL Credit and Farm Report (CCFR). As the Indian agricultural sector evolves, becoming increasingly capital-intensive, the importance of agricultural credit in driving both production and market expansion has never been clearer. Modern farmers rely more on credit than ever before, not just for day-to-day expenses but also for enhancing their production capabilities.

For financial institutions, the challenge has been to develop a sustainable agricultural loan portfolio. This requires efficient and streamlined evaluations of both income and farm attributes. In this context, CCFR emerges as a beacon, seamlessly combining traditional credit history data with farm insights. A notable feature of the CCFR is its integration of farm reports provided by SatSure, which TransUnion CIBIL then amalgamates with its conventional credit scores. The integration of the CIBIL Score with the farm score, derived from SatSure's data, simplifies the credit assessment process. It also makes due diligence and portfolio monitoring more streamlined. Many financial institutions face hurdles when assessing new credit applicants, especially when these applicants lack a CIBIL Score or other alternative data. The need for physical, on-ground verifications further complicates the process. However, the CCFR's holistic approach to risk assessment, which combines both credit and farm parameters, provides a comprehensive overview. For instance, a client with high scores in both credit and farming practices suggests reduced credit risk, paving the way for faster loan approvals.

utilising real-time farm data and insights for optimal decision-making.

Cropin's collaborations and achievements are noteworthy. The company has aligned with over 250 business-to-business (B2B) clients, digitised 26 million acres of farmland, and significantly benefited over 7 million farmers. Their expansive crop knowledge database powers the Cropin Cloud, offering insights into over 500 crops and 10,000 varieties across 92 nations.[9] This database can be extremely useful in facilitating banks, financial institutions, and MFIs to lend more to the agriculture sector, especially small and marginal farmers, thereby enhancing financial inclusion.

In a significant project encompassing 244 villages, 30,000 farm plots, and 77 crop varieties, Cropin provided the World Bank and the Government of India with insights on weather, crop management, and various other parameters. As a testament to their impact, this initiative resulted in a remarkable 30% average increase in yield and productivity and a significant 37% surge in farm revenue.[10]

7.7. THE IMPORTANCE OF DATA QUALITY IN AI AND MACHINE LEARNING WITH REGARD TO FINANCIAL INCLUSION

As noted elsewhere in the chapter, in an era where AI is pivotal in reshaping the financial landscape and democratising access to financial resources, the integrity of data stands paramount. Remember the adage, 'garbage in, garbage out'? This cautionary maxim reminds us that even the most cutting-edge AI models are ineffective if flawed or suboptimal data power them. Thus, for AI to truly revolutionise the financial sector, especially in the realm of financial inclusion, there are several essential steps and considerations that should be emphasised.

Prioritise data quality: It is paramount that organisations prioritise the acquisition of high-quality data. AI models, akin to high-performance engines, derive their efficacy from the data they process. Erroneous or inconsistent data can hinder their performance, making decisions based on such data potentially misleading.

Establish reliable data sources: The foundation of effective AI lies in sourcing data from consistent and trustworthy origins. Organisations should establish partnerships with reliable data providers and ensure that standardised methodologies are employed during data collection.

Implement rigorous data cleaning protocols: Post-acquisition data should undergo a meticulous cleaning process. This includes addressing any data gaps, scrutinising outliers, and ensuring that the data genuinely reflects financial trends.

Leverage statistical and visual tools: Utilise statistical methods and visual aids to further understand and interpret the data. This not only aids in deciphering financial behaviours but also prepares the data for AI model integration.

Ensure robust model validation: Models should be tested across diverse financial scenarios to ensure their versatility and accuracy. Techniques such as k-fold cross-validation can be employed for this purpose.

Augment and refine sparse data: In cases where data might be imbalanced or insufficient, consider using augmentation techniques and feature engineering to enhance the model's precision.

Uphold ethical standards: AI's role in financial inclusion comes with a responsibility. Regularly conduct audits and fairness checks to ensure that AI models are not inadvertently perpetuating biases or disparities.

Emphasise transparency: Foster a culture of transparency within the organisation. Comprehensive documentation, expert reviews, and open communication channels can instil trust and ensure stakeholders have clarity on AI processes.

Stay adaptive: Given the dynamic nature of financial landscapes, AI models should be designed to be adaptable. Periodic updates, informed by the latest financial data, will ensure AI models remain relevant and effective.

Strengthen cybersecurity measures: With the increasing reliance on AI and data, cybersecurity becomes paramount. Implement robust safeguards to counter potential breaches and ensure data integrity.

Institute regular AI audits: Beyond internal checks, external validations and audits should be routine. They offer an objective assessment of AI models, ensuring alignment with evolving financial standards and norms.

Engage in continuous feedback loops: Establish mechanisms to gather feedback from users and stakeholders. This iterative approach ensures that AI tools and models are always aligned with the needs of the market and end-users.

In sum, to harness the transformative potential of AI in financial inclusion, organisations should adopt a holistic approach. This encompasses everything from prioritising high-quality data to upholding ethical standards and ensuring robust cybersecurity measures. With these in place, AI can truly become a powerful and trustworthy tool in the financial sector.

7.8. CONCLUSION

AI stands at the cusp of transforming India's financial ecosystem, especially in the critical realm of financial inclusion. Historically, vast segments of India's diverse populace remained sidelined by traditional financial systems, which predominantly relied on formal financial histories to ascertain creditworthiness. This archaic approach often left many, especially those without such financial footprints, in a challenging position. However, AI is gradually altering this narrative. By harnessing diverse data streams, ranging from mobile and smartphone usage to online transactions, AI is crafting alternative credit scoring models. This innovative approach is facilitating broader access to financial services, seamlessly bridging urban tech hubs and remote rural heartlands. Simultaneously, AI-powered tools are democratising financial literacy, offering personalised financial advice tailored to individual spending habits, regional nuances, and cultural dynamics.

AI's impact extends beyond individual financial access. It is empowering financial institutions to design data-driven, community-centric financial products. For instance, in the agricultural sector, AI meticulously analyses data from soil quality to weather patterns, offering invaluable insights that revolutionise agricultural lending and risk assessment. In WRF, AI, in synergy with the IoTs, ensures real-time valuation and quality checks, bolstering trust and expediting the lending process.

But with great power comes great responsibility. While AI promises a financial renaissance, it's essential to approach its deployment judiciously. Ethical considerations must be at the forefront, ensuring AI doesn't perpetuate biases or exclusions. Additionally, transparency in AI-driven processes is non-negotiable, ensuring all stakeholders, from individuals to institutions, understand and trust the technology. Data integrity and privacy are paramount, especially in a country as diverse as India. Rather than imposing rigid regulations on AI, which could inadvertently stifle innovation and render AI models static and potentially erroneous, a more prudent approach would be to conduct regular audits. Such audits would ensure that models remain relevant, ethical, and aligned with evolving societal norms and financial landscapes. Moreover, the emphasis should be on maintaining impeccable data quality, as AI's effectiveness is intrinsically tied to the calibre of data it processes.

In envisioning the future, AI's potential in India's financial sector seems limitless. Whether it's tailoring insurance policies through a nuanced analysis of health data and lifestyle choices or optimising pension investment strategies, AI's influence is poised to grow exponentially. In essence, while AI offers a transformative pathway to financial empowerment in India, its journey must be navigated with care, balancing innovation with ethical and transparent practices. By doing so, India can truly harness AI's potential, fostering a holistic financial ecosystem that resonates across its vast and varied topography.

END NOTES

1. Financial inclusion is usually defined as the ability of individuals and businesses to access valuable and affordable financial services that cater to their requirements, including transactions, payments, savings, credit, and insurance, all presented responsibly and sustainably. With a significant portion of the population still outside the ambit of sustained access to formal need-based financial services, the transformative potential of AI emerges as a beacon of hope.
2. Based on CreditVidya documents and discussions with industry stakeholders. See 'CreditVidya Extends the Loan Market to Millions of Financially Excluded Indians with AWS,' https://aws.amazon.com/solutions/case-studies/credit-vidya/
3. Based on HDFC Bank documents and discussions with industry stakeholders. See HDFC Bank (2021), 'HDFC BANK and CSC launch chatbot 'EVA' on Digital Seva Portal', https://www.hdfcbank.com/personal/about-us/news-room/press-release/2021/q1/hdfc-bank-and-csc-launch-chatbot-eva-on-digital-seva-portal, HDFC Bank, https://www.hdfcbank.com/personal/ways-to-bank/eva
4. See Financial Express. (January, 2018), 'Ok Google, talk to HDFC Bank; now use Google Assistant to get bank-related queries answered,' https://www.financialexpress.com/life/technology-ok-google-talk-to-hdfc-bank-now-use-google-assistant-to-get-bank-related-queries-answered-1032987/
5. Based on PayTm, UPI, BHIM, PhonePe, and MobiKwik documents and discussions with industry stakeholders.
6. Based on SatSure documents and discussions with industry stakeholders.
7. Sourced from https://www.satsure.co/
8. Based on Cropin documents and discussions with industry stakeholders.
9. Cropin, Transforming a billion lives, one farm at a time, https://www.cropin.com/about
10. Tech Funding News Editorial Team. (September 2022), 'World's first purpose-built industry cloud for agriculture backed by the Bill and Melinda Gates Foundation is here', https://techfundingnews.com/worlds-first-purpose-built-industry-cloud-for-agriculture-launched/

Recoding Women's Financial Inclusion

Indradeep Ghosh and Misha Sharma

8

8.1. INTRODUCTION

Advancing women's financial inclusion is a key policy objective for both advanced and emerging economies. Providing access to formal finance is seen as an important lever in helping poor women seize economic opportunities and build a resilient future for themselves and their families. Over time, however, the narrative on women's financial inclusion has become adjoined to parallel narratives on gender equality and women's empowerment. This has produced several undesirable effects. It has led to a misplaced understanding of the gender gap in formal finance and has accommodated incomplete and often one-sided theories of change alongside weak measurement frameworks. It has also not seriously confronted the poor evidence base on women's financial inclusion, and finally, it has induced exaggerated expectations of the financial industry regarding its role in empowering women.

This chapter does not intend to conduct a landscape assessment of the state of women's financial inclusion. Instead, it intends to sensitise the reader to the many shortcomings in the current approach to such inclusion. Section 8.2 begins by demonstrating that the narrative on women's financial inclusion is conceptually muddled and charts a forward path to clearing up some of these muddled issues. Section 8.3 summarises the evidence base on women's financial inclusion, which points to limited effects of such inclusion on women's empowerment and, when there are effects, to a limited understanding of the causal mechanisms at play. The section then proposes a financial wellbeing perspective for thinking about the impact of financial inclusion on poor women's lives. Finally, Section 8.4 describes the kinds of gender disaggregated data required to enhance the discourse on women's financial inclusion, provides an assessment of the state of gender disaggregated data currently available for the Indian context, and makes recommendations for strengthening this existing state.

8.2. SHARPENING THE NARRATIVE ON WOMEN'S FINANCIAL INCLUSION

In the last decade or so, a substantial corpus of writing on women's financial inclusion has stressed the necessity of action in this important area. Policymakers and financial service providers (FSPs) have responded with enthusiasm and vigor, and their efforts are praiseworthy. Now may also be a good time to sharpen the narrative on women's financial inclusion and iron out some of the wrinkles in how the key imperatives are framed.

This section briefly reflects on the main themes of the current narrative on women's financial inclusion and seeks to bring some clarity to their understanding among researchers, policymakers, and practitioners or FSPs (collectively referred to as stakeholders henceforth).

8.2.1. Gender Gap in Formal Finance

The idea of a 'gender gap' is frequently used by stakeholders to describe inequalities between men and women in respect of various financial inclusion imperatives. The section focuses on two points about such usage. First, economists have pointed out that a simple comparison between the two sexes by looking at the unconditional mean differences between men and women, without accounting for other factors that could potentially also influence those differences (aside from gender, i.e.), should not be construed as a gender gap.

For example, when studying the association between gender and life insurance ownership among adult individuals, other factors that could also potentially impact life insurance ownership such as employment status, income class, and household composition should also be accounted for. This will allow one to assess the differences in life insurance ownership between men and women, who have the same levels of income, employment status, and household composition, thereby facilitating a like-to-like comparison and helping one to formulate a more careful intervention aimed at increasing women's participation in life insurance.

Second, a gender gap in opportunities should not be conflated with a gender gap in outcomes. Men and women should have equal opportunities to benefit from financial inclusion. However, one should allow for the possibility that men and women will choose differently when afforded the same opportunities. Thus, inequality in outcomes need not always signal inequality in opportunities, if the aim is to truly empower women to make choices of their own.

Therefore, the critical question for stakeholders concerned about a gender gap in financial inclusion should be — do women and men of similar socio-economic backgrounds have equal opportunities to access formal finance? Here 'opportunities to access' refers to a set of enabling conditions that aid in ownership and usage of formal finance as one desires. These enabling conditions include access to basic resources such as mobile phone, internet, and digital identity, access to supply-side infrastructural support such as proximity to a bank branch or availability of a cash in-cash out touch point within 15 minutes of walking distance, access to transportation facility to visit the banking services or availability of financial products that are suitable to the specific needs of the individual, etc.

It should be reiterated here that large unconditional mean differences remain meaningful insofar as they point one to inquire further into the reasons for their arising. That is, they indicate the necessity of a more serious and careful study of contextual factors, to separate out those aspects of unconditional mean differences that could be attributable to gender-based discrimination or bias, and those aspects that could be attributed to the different genders choosing differently. Only such a deeper inquiry can produce proper high-resolution problem statements and therefore proper high-resolution recommendations for action.

8.2.2. Women's Control Over Money and Their Influence in Household Decision Making

Often the narrative around women's financial inclusion is centered on women's lack of control over money and their limited say in matters of household decision making. According to a nationally representative survey in India, the National Family Health Survey (NFHS-5) 2019–21, 72% of married women reported making household decisions jointly along with their spouse, 67% of them said that they and their spouse jointly control the money she earns, while 71% of married men reported that they along with their spouse jointly control the money he earns.[1] These numbers do not indicate lack of women's participation in household decision making nor do they indicate lack of control over money. In fact, if anything, they point in the opposite direction.

Sociologists and anthropologists have documented that women in poor households, in particular, bear most of the responsibility for the household's financial management. Guerin (2014) is a typical example of the literature. As Mas and Murthy (2017) point out, this responsibility consists mainly of daily money management, for which the woman cultivates relations in her social network and leverages these relations as and when necessary. A standard savings bank account cannot possibly substitute for those dense networks of promises and obligations within which a poor woman finds both her sustenance as well as her identity. The data available on middle- and higher-income households in India further complicates the picture. For example, the Tata AIA Survey 2022 conducted in urban cities among middle and higher-income class families finds that married women largely depend on their spouse for financial planning and this holds true even for women engaged in paid work. The survey finds that roughly 60% of women engaged in paid work do not independently take financial decisions and if given a choice 56% of all married women are not willing to make their own financial decisions.[2]

We should keep in mind that households are social units as much as they are economic units. The household is a nexus of social relations, replete with meaning. Recognising this social dimension is very important because finance itself is a social relation and therefore it insinuates itself into the household as either synergistic or disruptive with regard to existing relations of emotion and feeling within the household. Formal finance may sometimes disrupt relations that should be nurtured, and it

may sometimes lubricate relations that should be dismantled.[3] Further, intra-household relationships cannot always be reduced to bargaining dispositions or power equations except through a particular kind of theorising lens that solely serves the interest of analytical expediency. Given the real complexity of relations within a typical household, one should exercise care and caution in probing those relations in poor households before insisting that women should take charge of their financial destinies by adopting formal financial products and services. The tendency of formal finance is to atomise society into an aggregate of individuals, which may be questionable in many instances for the sake of a household's integrity and of a community's longevity.[4] Yet it is often presumed that since women care about community, introducing formal finance will automatically redound to the benefit of the community.

8.2.3. The Suitability of Formal Financial Products and Services for Women

The financial lives of poor households are characterised by insufficiency and instability of incomes, and consequently, frequent episodes of illiquidity when money is needed. Whereas formal financial products and services are suitable for managing risk, they are not so well-suited for managing contingency, which is radical uncertainty that manifests in the lives of the poor on an almost daily basis.[5] Thus, Mas and Murthy (2017) draw a clear line between the financial planning or budgeting practices of poor and middle and high-income households. While practices of poor households tend to be irregular, intuitive, and high-frequency, those of middle and higher-income households tend to be regular, disciplined or rational, and low-frequency. This makes for a set of design principles for suitability that are quite unique to poor households and women within them.

For example, general purpose savings accounts are single purpose accounts, and therefore lack the flexibility to accommodate money for multiple purposes and goals, and poor women have limited ability to associate money stored in them with particular stories or feelings.[6] Formal investment accounts require standardised and regular deposits, insurance products require households to pay regular premiums and prioritise risk management even when it is contingency and not risk that has to be solved for, and accessing formal credit from a bank requires credit scores and collateral which the poor don't have. These are only some examples of how the formal financial system fails to design products that are fit-for-purpose with regard to poor women.

Another example of how the particular context of women drives the relevance and adoption of formal financial products is the case of life insurance. A woman who does unpaid work at home in the form of managing household chores and taking care of the family might not find it relevant to buy a life insurance product, given that she earns no income from the work she does. While it is a separate matter that her work is immensely valuable and contributes to the wellbeing of the family and thereby the society and that her death would prove detrimental to the family both emotionally and economically, the fact that women's unpaid work at home largely goes undervalued and unaccounted for means that she will more often than not be inclined not to buy a life insurance product. The proper solution to this problem may lie outside of the immediate sphere of financial inclusion efforts, in terms of regularising a method of imputing monetary value to household production and reporting this as part of gross domestic product (GDP), so that a culture of recognition and acceptance can set in about the lifetime value created by a homemaker, whereupon a monetisation of that value in the form of financial products and services may become possible. This would benefit all women who stay at home and do the work of care giving (although in the case of poor women, this alone might not be enough, for the reasons described in the previous two paragraphs).

8.2.4. The Role of Gender Intentional Design

'Gender intentional' design (alternative terms are 'gender sensitive', 'gender responsive', 'gender accommodating', or 'gender inclusive') in the context of financial inclusion is commonly understood to mean the deliberate use of gender considerations to shape the design of financial products and services such that they become relevant to the context of the individual. Gender intentionality means paying attention to the unique needs of men and women, valuing their perspectives, respecting their experiences, understanding developmental differences between girls and boys, women and men, and ultimately acknowledging and incorporating this understanding in programs, policies, products, and processes.[7]

If there is a practical lesson in all that has been discussed so far in this section, then it is that gender intentionality should encompass both the individual's needs and the needs of the household within which that individual is playing a given role. Rather than

insisting that the role itself should change, and that conventional formal financial products and services should carry the burden of changing those roles, it is more modest and realistic to take such roles as given or as amenable to other kinds of policy actions. This would help to circumscribe the proper domain of action for gender intentional design in financial inclusion, which may consist in, as we have described earlier, the sphere of money management where poor women are concerned. The imperative is then not that FSPs should rig conventional products to be gender intentional without fundamentally rethinking the conventional nature of the products themselves. Rather, it is that a new set of design principles that are anchored directly to the roles that poor women play in their households, should organically produce new categories of products and services, and if necessary, neither products nor services but tools, rather, that make daily money management a smoother, easier, and more hassle-free activity for poor women. The reason that this does not regularly happen may be because it is not profitable for FSPs, but that in no way validates a general approach that would allow the principle of profitability to supersede the aforementioned design principles, because that would privilege profits over meaningful financial inclusion for women.

8.3. WOMEN'S FINANCIAL INCLUSION: FOR WHAT PURPOSE?

The theoretical case for financial inclusion is often stated as follows – access to a suite of financial products and services is expected to provide poor households with the necessary tools to invest in their future, smooth their consumption, and manage financial risks, thereby reducing poverty and inequality (Demirguc-Kunt and Singer 2017). Where women are concerned, an additional dimension of women's empowerment has been emphasised by sector stakeholders. To understand how access to formal finance might or might not impact women's empowerment, it is first important to briefly define what is typically meant by women's empowerment. Women's empowerment is broadly understood as the:

> *…process by which those who have been denied the ability to make strategic life choices acquire such an ability. The ability to exercise choice incorporates three inter-related dimensions: resources (defined broadly to include not only access, but also future claims, to both material and human and social resources); agency (including processes of decision making, as well as less measurable manifestations of agency such as negotiation, deception and manipulation); and achievements (well-being outcomes)…* (Kabeer 1999).

In the case of microcredit, providing small loans to poor women was expected to empower them (Kabeer 2005). The hypothesis was that credit advanced to women would increase their control over household resources, thereby allowing them to allocate resources towards human capital formation within the family. Such a hypothesis drew its inspiration from a series of studies in the late 1990s and early 2000s that found significant gender differences in intra-household resource allocation and welfare gains for the household through greater spending on children's education, nutrition, and health when women were in control of household resources (Duflo 2003; Duflo and Urdy 2004; Haddad, Hoddinott and Alderman 1997; Hoddinott and Haddad 1995; Lundberg, Pollak and Wales 1997; Thomas 1990, 1993).

The hypothesis that microcredit would empower women had been in place since the very early years of microcredit in the 1980s, but it was given a firm theoretical grounding by the empirical literature on resource allocation in households that began appearing in the 1990s. By the 2000s, the microfinance industry had begun to converge on a sustainable, scalable, formal business model of lending to women, accompanied by a narrative which stated that credit's role in ending poverty 'encapsulated the aspirations of leading microfinance institutions' across the globe.[8] On the business side, things turned out well. Negligible to zero default rates and high rates of returns for debt and equity financiers allowed for a dynamic, competitive supply side to develop. What did women accomplish, though? Between 2005 to 2015, a series of studies based on randomized controlled trials (RCTs) found that microcredit had no effect on female empowerment and its impact on low-income households was labelled as 'modestly positive' and 'non-transformative' (Banerjee et al. 2015). A separate body of literature, rooted in sociological and anthropological methods, pointed to adverse effects of targeting women for microcredit (Balasubramanian 2013; Garikipati et al. 2017; Guerin 2014; and most recently, Guerin et al. 2023).

Moving beyond microcredit to other kinds of financial inclusion efforts, three main sources of evidence have been relied upon, all of them offering

literature reviews of interventions and their effects. The first one, chronologically, is Karlan et al. (2014) who compile the results of 18 studies conducted between 2006 and 2013 that sought to ease access to savings products for the poor in various countries of Latin America, Asia, and Africa. While a majority of the studies demonstrated an increase in the frequency of savings account use, less than half of the interventions produced increases in the quantum of savings or in downstream effects such as income or expenditure increases. Only one of the 18 studies (Ashraf 2010) specifically focused on the empowerment of women customers, and found statistically significant increases in women's decision-making power and in the purchase of female-oriented consumer durables. Another of the 18 studies (Dupas and Robinson 2013) found that female vendors were able to benefit more from access to a savings account than male vendors, in terms of saving more and spending more (on both consumption and investment).

The second review paper is that of Demirguc-Kunt et al. (2017). In the context of payments, the paper cites evidence from Africa pointing to the various benefits of moving cash into bank accounts and thereon into the form of mobile money – among them, the utility of building a payments history that can be used for credit-decisioning. For the case of women specifically, two studies are cited, one from Niger (Aker et al. 2016), showing that women receiving mobile money transfers (from the government) are able to exercise greater control over how to spend that money, and one from Kenya (Morawczynski and Pickens 2009), showing that the advent of mobile money made it easier for women to request remittances from their husbands who had migrated to urban areas for work. In the context of formal savings accounts, Demirguc-Kunt et al. echo some of the same sense of ambiguity that has been described in the Karlan et al. review paper. Specifically, for women, they are able to cite a study from Nepal (Prina 2015), which showed that providing savings accounts to female head of households did not increase savings but did allow them to better cope with income shocks and reallocate expenditures away from health and dowries and towards education and food.

Finally, the third source to consider is Garz et al. (2020), which compiles evidence from a number of more recent papers (2016–20) on the impacts of digitalising government cash transfers and introducing mobile money, mostly in Africa. Many of these studies were focused exclusively on women and produced positive outcomes, but the space of positive outcomes is quite varied across the studies, so that it is not a consistent or similar positive outcome that is observed for each study simply because in each case the intervention is specific and context-dependent.

What does the above evidence suggest? On the non-credit side, it is clear that more testing and evaluation are needed. The empirical methods used by economists for impact evaluation are known to have significant shortcomings, so that only replicability of a certain finding across multiple contexts can elevate that finding to the status of an empirically valid truth. Further, successful replicability is not by itself a guarantee of accurate knowledge about the causal mechanism at work. The Garz et al. (2020) paper attempts to close some of this gap by positing various causal mechanisms, but upon a careful reading, one can conclude that these are not so much causal mechanisms as they are intermediate effects. Causal mechanisms are rooted in aspects of context that are simply unobservable to the economist's method, and this precisely is the main thrust of the critiques of RCT methodology coming from commentators such as Deaton and Cartwright (2018). Such critiques deserve to be taken seriously by policymakers and, given the cautions discussed in the previous section, the standard of proof required of the economics literature deserves to be high.

On the credit side, the evidence warrants even greater reflection, especially on account of the work done by sociologists and anthropologists to highlight how formal credit could interact with existing relations within the household or within the community to produce adverse outcomes for women, even when that formal credit is being advanced to those women by design. But the economic evidence on credit also highlights another possibility that the metric of impact could be revised from things like income growth and poverty alleviation to a much simpler (though not easy to implement) criterion, and that is effective money management. Thus, if one reads the evidence as suggesting that the primary uses of microcredit has been to meet consumption needs (healthcare, school fees, food, and utilities, etc.), then one may regard such uses as perfectly valid, since they reduce the episodic poverty experienced by poor households (Merfeld and Morduch 2023; Morduch 2023). And if poor women are bearing most of the burden of money management, then their use of microcredit to smooth consumption may even be considered efficient, if not empowering.

At this juncture, it will be helpful to invert the frame. Rather than ask – does formal finance empower poor women – one may ask – what demands should the empowerment of women make upon formal finance? Once again, the perspective of money management helps to arrive at an answer. For there is now a growing body of work that is beginning to recognise the value of effective money management in promoting financial wellbeing for poor customers. Financial wellbeing or financial health is defined as the extent to which a person or family can smoothly manage their current financial obligations and have confidence in their financial future.[9] Specifically, it measures whether individuals are able to manage their day-to-day finances, cope with emergencies, and plan for their medium and long-term goals. If one is to believe that financial inclusion can propel financial wellbeing for women in the sense of helping them manage money better, then it naturally creates conditions for their financial stability, freedom, security, and control, thereby empowering them across one or more dimensions of women's empowerment (as defined by Kabeer 1999).

For FSPs, setting the ultimate objective of financial inclusion as financial wellbeing is a sufficient burden and responsibility in itself. It also sets out goals for FSPs in more tangible and real terms. One must acknowledge that realising the goal of financial wellbeing for their customers is not an easy task for FSPs and requires not only a fundamental shift in their business strategy but also an uncommon comfort with long-horizons for profitability. This will require an enormous commitment on the part of FSPs and their investors to look beyond scalability and standardised models and rather envision new design principles that integrate the roles poor women play in their households into the product and process design of their offerings.

8.4. GENDER DISAGGREGATED DATA

At this juncture it will be pertinent to turn attention towards the measurement of women's financial inclusion and the attendant need for gender disaggregated data. In light of the arguments made in Sections 8.2 and 8.3, this section focuses on the kinds of gender disaggregated data required, the state of gender disaggregated data currently available for the Indian context, and recommendations for strengthening this existing state.

The need for collecting gender disaggregated data is situated within the context of measuring financial inclusion, for which several frameworks already exist, both at national and international levels. While the rationale for measuring financial inclusion more broadly and gender differences in formal finance more specifically may differ, the kind of data that makes sense to collect across these two requirements is one and the same and is equally applicable to meet both the objectives.

BOX 8.1. GENDER DISAGGREGATED DATA SHOULD HELP ANSWER THE FOLLOWING QUESTIONS

(i) Do women and men of similar socio-economic backgrounds have similar opportunities to access formal finance?

(ii) Do women and men of similar socio-economic backgrounds use formal finance differently? If so, how and why?

(iii) Are there differences in the quality of financial products and services that women and men experience in their engagement with formal financial services?

(iv) Finally, what is the relationship between financial inclusion and wellbeing and does this relationship change by gender?

The qualifying condition 'similar socio-economic backgrounds' is used to emphasise the need for a like-to-like comparison when studying differences between men and women, as articulated in Section 8.2. The questions (i)-(iv) represent an input-output-outcome framework for measuring gender-disaggregated financial inclusion.[10] Here, input refers to 'opportunities to access formal finance', output refers to 'ownership and usage of formal finance' and outcome refers to 'financial wellbeing'.

The input dimension has already been covered in Section 8.2 in detail. To reiterate, men and women of similar socio-economic backgrounds should have equal access to a set of enabling conditions that facilitate the ownership and usage of formal financial products and services. These conditions include proximity to a bank branch or availability of a cash in-cash out touch point within 15 minutes of walking distance, the availability of product information in local language, and even factors such as access to transportation facilities to visit the bank branch, etc. In the context of digital financial services, enabling conditions would include basic resources such as a digital identity, a mobile phone, and an internet connection.

The output dimension refers to the customer's engagement with such products as bank accounts, savings and investment accounts, insurance, and credit. The reason for inclusion of both ownership and usage within the output dimension is that often the distinction between the two cannot be neatly separated. For example, an active health or life insurance policy indicates both ownership of a product and its usage given that the product subscription is active. So too is the case with an outstanding credit account or a fixed deposit account. On the other hand, for products such as recurring deposit accounts or mutual fund accounts or even bank accounts, ownership and usage can be separated more easily since one may own such products but may not be making regular accumulations in them. It is also important to capture aspects of usage that go beyond a simple frequency measure. For example, in the case of health insurance, the health coverage, the ability to make cashless claims, and the proportion of out-of-pocket expenses in total expenses incurred are important product features that can provide insights into the way the product is being used.

The outcome dimension is financial wellbeing, and as discussed in the previous section, this mostly captures the efficacy of financial products and services in facilitating money management.

It is important to supplement the data collected on the input, output, and outcome dimensions for men and women with data on their socio-economic and cultural backgrounds, so that a legitimate (i.e., like-to-like) comparison can be made between them. A strong case can also be made for collecting data on individual personality traits that could potentially have a strong bearing on the financial choices a person makes, literature on which is currently scarce. Such psychological factors can sometimes differ systematically between men and women (Lippa 2010; Weisberg et al. 2011) and may help to explain why men and women of similar socio-economic and cultural backgrounds may choose differently when faced with similar or equal opportunities of access.[11]

Below (Table 8.1) provides an indicative, non-exhaustive list of metrics that could be collected, studied, and tracked to assess gender differences in financial inclusion:

Table 8.1. Financial Inclusion Measurement Framework

Input (1)	Output (2)	Outcome (3)	Contextual Information (4)
Access to supply-side infrastructure • Proximity to cash-in-cash-out touchpoints within 15 minutes of walking distance • Availability of product documents in vernacular language • Availability of a range of products and services via convenient distribution channels	Ownership and usage of formal financial products • Bank/transactional account • Savings/investment account • Insurance (health, life, etc.) • Pension/retirement account • Credit	Financial wellbeing • Ability to manage day-day cashflow needs • Ability to manage debt • Ability to manage and recover from shocks • Ability to plan for medium and long-term goals	Household information • Geographical location • Household composition • Primary source of household income • Household income classification • Religion
Access to basic resources • Mobile phone • Digital ID/know your customer (KYC) document • Internet access	Quality of financial products and services experienced • Customer experience • Product design/features (e.g., health coverage, ability to make cashless claims, etc. in the case of health insurance)		Individual information • Age • Marital status • Paid employment status • Education • Digital financial capability* • Big-5 personality traits** • Household responsibilities and decision- making power
	Accessibility and usage of grievance redressal channels • Incidence and nature of complaints • Turnaround time for complaints resolution • Ease of accessing grievance redressal channels		

Input (1)	Output (2)	Outcome (3)	Contextual Information (4)
	Ownership and usage of informal sources of finance*** • Gold • Physical assets (land, real estate, movable assets) • Informal credit, savings, and insurance mechanisms		

* Digital financial capability is defined as the knowledge, attitudes, and skills that enable a person to actively use digital financial services.[12]

** Refer to the personality and behavioural module from Networks, Employment, dEbt, Mobility and Skills in India Survey (NEEMSIS Survey) for an example of how this data could be collected.[13]

*** Given the role of informal sources of finance in the lives of low-income households, we believe that it is important to collect and understand data on whether and how men and women use these channels differently.

8.4.1. Operationalising Gender Disaggregated Data Collection

In the above-mentioned framework, questions within the 'input' and 'output' dimensions (columns 1 and 2) can be administered both at the household and the individual level. At the household level, questions can be asked to the head of the household or his/her spouse to gauge access and engagement households have with the formal financial system at an aggregate level (for example, does anyone in the household have a bank account, do members of the household use digital payments, etc.). Subsequently, questions at the individual level could be administered to at least one male and one female member of the family (typically the head of the household and his/her spouse), such that collection of gender disaggregated data is possible.

Column 4, which pertains to contextual information is also required both at the household and the individual level. Basic features of the household such as location, religion, primary source of income, etc. can be asked to the head of the household, whereas individual information such as age, marital and employment status, etc. could be administered to at least one male and one female member of the family (typically the head of the household and his/her spouse).

Questions within the 'outcome' dimension (column 3) can be administered to the individual who plays the lead role in managing household finances as it directly speaks to the money management functions that a family is required to perform in order to plan their financial lives, both in the present and for the future. This will allow for two things: first, it will help validate whether or not the responsibility of money management falls on women in low-income households (as articulated in the previous sections) and second, it will allow for gender disaggregated data at the outcome level depending on the gender of the respondent who is asked the questions within the outcome module. This approach will therefore help in understanding the potential differences in the impact that formal finance has on households' financial wellbeing when women are the 'money managers' versus when men take up that role.

Finally, we envision gender disaggregated data collection efforts to be a dynamic, iterative process. The value of collecting data, in the manner proposed through the above framework, is in validating whether or not access as presently conceived induces usage and wellbeing. If the survey finds that men and women have equal opportunities to access finance but that women are not using the products available to them, then it could potentially signal a lack of suitability of these products in its current form for those women. The survey should ideally help FSPs understand the reasons why a product might be unsuitable, such that better financial products and/or tools can be designed to suit their customers. The second iteration of the survey/ framework should then assess access to and usage of those new products/tools so as to understand if progress is being made in the right direction.

8.4.2. Need for Strengthening Gender Disaggregated Data on Financial Inclusion

Existing datasets that currently collect gender wise data on financial inclusion in the Indian context often do not follow a strong theory of change, resulting in weak survey instruments and incomplete datasets at best. The World Bank's Global Findex Survey, launched in 2011 does the most comprehensive job of capturing financial access, usage, and wellbeing at the individual level, for both men and women. However, perhaps its biggest limitation is that the survey is conducted only once every three years and does not adopt a dynamic approach to measuring financial inclusion despite the rapid change witnessed in the financial services industry in the last five years. Other surveys conducted by the Indian Government such as

the National Sample Survey (NSS) Office's All-India Debt and Investment Survey or the NFHS-5 are largely household surveys with questions administered at the aggregate-household level. While a set of questions are also administered at the individual level, it does not suffice in building evidence on gender differences in access and usage of finance. Finally, administrative datasets typically maintained by FSPs and regulators serve as a crucial source of information regarding the access and use of financial products and services. In particular, the Reserve Bank of India's (RBI) supervisory reporting framework collects in-depth information on engagement of individuals with the formal financial system. However, only a limited set of information is made publicly available by the regulator. These largely pertain to bank account, outstanding credit, deposit account, and amount which are tagged by the gender of the accountholder, thereby providing insufficient information on other parameters outlined in Table 8.1.

Given this context, the following recommendations can be useful in strengthening the state of gender disaggregated dataset:

(i) Including new modules/questions in existing government-run surveys across the themes and sub-themes mentioned in Table 8.1. This can be a cost-effective exercise as government-led surveys and other data collection efforts by civil society organisations and academic think tanks can be used to include questions or survey modules that help fill the gaps in the current evidence base.

(ii) launching a new survey with the objective of collecting gender disaggregated data at regular intervals (potentially on an annual basis) on the recommended themes. Given the cost constraints in conducting a large, nationally representative survey, the government may be best suited to lead such an effort in consultation with other policy research institutions, across all the stages of such an effort.

(iii) modifying existing supervisory reporting formats by adding a gender variable and publishing gender-wise data that is already available with the regulator. RBI should consider incorporating gender-disaggregated data as a separate supervisory reporting format, in addition to the existing categorisations.

(iv) RBI should also consider publishing the annual Financial Inclusion Index (FII) score at a gender-disaggregated level as well as make publicly available the gender-wise data using which the scores are calculated, for greater transparency and better policymaking.[14]

(v) FSPs should consider playing an active role in measuring financial inclusion of their customers across the dimensions of access, usage, and wellbeing. Given their understanding of the realities and contexts of their customers, they are in the best position to offer product, services, and tools that suit their needs. A measurement framework such as the one described above, when administered at regular intervals, can help FSPs understand if their services are adding value in the lives of their customers.

8.5. CONCLUSION

In this chapter, it has been argued that women's financial inclusion is not merely the extrapolation of conventional financial products and services to poor woman – rather, it is about understanding the lives of poor women and finding context specific solutions that help them manage their financial lives better.

Various innovative and large-scale efforts have taken shape in the last two decades in India to advance women's financial inclusion. Opening of bank accounts under the Pradhan Mantri Jan Dhan Yojana (PMJDY) has indeed accelerated bank account ownership among rural Indian women. While the program was critiqued for dormancy of accounts in the early years, the average balance in PMJDY accounts has increased with time and has proved to be an important vehicle in delivering social protection benefits directly into the bank accounts of both men and women. The self-help group (SHG) movement too has been a big part of the women's financial inclusion story in India. It has been remarkably successful in providing poor women with institutional platforms to access social and financial capital, thereby promoting their social and economic empowerment. Distributional channels such as Bank Sakhis (women business correspondents) for last mile service delivery under the National Rural Livelihood Mission (NRLM) program has not only helped in facilitating access to finance in hard-to-reach areas but has also proved to be an important vehicle for low-income rural women to access meaningful employment opportunities. Their role in improving the digital financial capability of their customers is also a channel of intervention that promises much hope.

Yet, while the interventions are manifold, the narratives on 'women's financial inclusion' and 'women's empowerment' are often narrow and lack an acknowledgement of the complexity of the issue. These narratives may need much more careful framing and parsing for all the above efforts to truly elevate the condition of poor women. This chapter may be seen as a small contribution to that end.

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END NOTES

1. National Family Health Survey (NFHS-5), 2019–21. https://main.mohfw.gov.in/sites/default/files/NFHS-5_Phase-II_0.pdf
2. TATA AIA Survey, 2022. https://www.tataaia.com/about-us/media-center/2022/indian-women-are-still-financially-dependent.html
3. The claim here is that any financial relation between a household and its external environment, whether that relation is mediated by formal channels or informal ones, is going to interact with existing relations of co-dependency within the household between its different members. These interactions may have positive or negative consequences for the quality of existing intra-household relations. We should not presume that formal financial channels are special in producing only positive consequences for intra-household relationships. See, for example, Nelms and Rea (2017) for how these complexities play out, and not always favourably, in various developing countries in the context of mobile money.
4. The impulse towards atomisation is coded from the very beginning into the theoretical frameworks that inform mainstream economic theory, out of which modern financial economics arises as a distinct sub-discipline. These are frameworks founded upon the axiomatic assumption of methodological individualism, and the consequences of this assumption for how economic theory constructs the real world of human action in its own image have been explored by numerous thinkers, from philosophers like Foucault (1979) to economic sociologists like Mackenzie (2003). The International Political Economy scholarship, such as Bernards (2019), has explored similar themes in the context of fintech as a pathway for financial inclusion.
5. The categories of risk and contingency are differentiated by the understanding that contingency is uncertainty that cannot be described in probabilistic language, whereas risk is uncertainty that can. Therefore, contingency escapes the analytical toolbox available to financial engineers for designing financial solutions to problems of risk management.
6. Mas and Murty (2017) highlight three money management categories that households adopt. They label these as animating money (bottling liquidity), income shaping (scheduling liquidity), and liquidity farming (liquidity on demand). Associating money with particular stories and feelings refers to mentally compartmentalising different stores of money for different purposes, which a single purpose bank account is unable to do.
7. The definition of gender intentional is borrowed from the Glossary of Terms and Concepts on Gender Equality prepared by UNICEF. https://www.unicef.org/rosa/media/1761/file/Genderglossarytermsandconcepts.pdf
8. Towards a new impact narrative for financial inclusion, CGAP. https://www.cgap.org/research/publication/toward-new-impact-narrative-for-financial-inclusion#:~:text=Updated%20theory%20of%20change%20for,services%20contributed%20to%20these%20outcomes.
9. This definition of financial wellbeing is borrowed from the UNSGSA report on Measuring Financial Health: Concepts and Considerations. https://www.unsgsa.org/publications/measuring-financial-health-concepts-and-considerations
10. We take inspiration from the Dvara-XKDR financial inclusion measurement framework that was introduced by Dvara Research and XKDR Forum in the Inclusive Finance India Report, 2022. https://inclusivefinanceindia.org/wp-content/uploads/2023/01/Inclusive-Finance-India-Summit-Report-2022.pdf
11. Taking Sex Differences in Personality Seriously.- https://blogs.scientificamerican.com/beautiful-minds/taking-sex-differences-in-personality-seriously/#:~:text=On%20average%2C%20males%20tend%20to,ability%20are%20negligible%20%5B2%5D.
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The Measurement of Financial Inclusion: The RBI Experience in India

Ramesh Srivatsava Arunachalam

9

9.1. BACKGROUND AND STRATEGIC CONTEXT

9.1.1. Introduction

Financial inclusion is a cornerstone for ensuring equitable growth and development in any economy. It signifies the ease with which the populace can access and use formal financial products and services, ranging from basic banking to investments and insurance. India, with its vast population and varied economic landscape, faces unique challenges in achieving universal financial inclusion. The Reserve Bank of India (RBI) has recognised the importance of tracking and measuring financial inclusion to foster and guide policy initiatives in the right direction. To this end, the RBI has introduced a comprehensive financial inclusion index (FI-Index) to quantify and monitor financial inclusion across the country. It has also created a financial inclusion dashboard—Antardristhi—for its internal use.

9.1.2. Organisation of the Chapter

Section 9.2 demystifies the foundation of the RBI FI-Index, elucidating its methodology and construction. Section 9.3 provides a critical assessment of the RBI FI-index and outlines, in a balanced manner, the strengths and weaknesses of this index. It also examines whether the RBI FI-Index mirrors the ground reality prevailing in the country. Section 9.4, pivotal to this chapter, outlines the policy issues pertaining to the RBI FI-Index and highlights how the RBI has used data from the index to drive financial inclusion in India.[1] Section 9.5 briefly describes Antardrishti—the RBI financial inclusion dashboard (inaugurated for internal RBI working by the Hon'ble RBI Governor on 5 June 2023). Antardrishti explores granular data and offers a layered perspective of the financial ecosystem and the nuances of financial inclusion. Expanding on all the above, Section 9.6 provides an evolutionary analysis of RBI's work on the measurement of financial inclusion in the country. Concluding the narrative, Section 9.7 summarises the key lessons for stakeholders, while Section 9.8 discusses the measurement of financial inclusion in India based on the RBI experience.

9.2. THE RBI FI-INDEX – METHODOLOGY AND CONSTRUCTION

9.2.1. The Conceptual Framework

The RBI FI-Index is more than just a statistical measure; it encapsulates the collective ambition of a nation striving to create a comprehensively inclusive financial environment. Its importance is, therefore, multifaceted. Firstly, it plays a pivotal role in shaping policy decisions. By shedding light on strong areas and those in need of improvement, it allows policymakers to craft targeted strategies for the most significant impact. Moreover, it acts as a unifying metric, synchronising the endeavours of banks, financial institutions, governmental entities, and other stakeholders. Another noteworthy aspect is its potential to heighten public consciousness regarding financial inclusion. By consistently publishing this index, the public is not only made aware but also inspired to participate actively in the formal financial framework. Finally, in the broader global context, the FI-Index stands as a representative gauge, enabling India to juxtapose its achievements *vis-à-vis* other countries.

Primarily, one of the core considerations behind RBI's methodology for constructing the FI-Index is the selection of appropriate indicators. In fact, the RBI

identifies three primary challenges in the creation of the index: choosing relevant indicators, defining their desired level, and determining the weightage for each. This meticulous approach ensures that the FI-Index truly reflects the intricacies of financial inclusion in the country. Historically, many financial indices have predominantly focused on access and usage, often overlooking the pivotal quality dimension. Recognising this, the RBI has ensured that the quality dimension is robustly incorporated into the FI-Index, as shown in Figure 9.1.

Furthermore, the RBI standardises indicators to a universal scale prior to their integration. In other words, each of these indicators is measured against its ideal goal, which embodies the pinnacle of financial inclusion. The challenge, however, lies in determining this ideal level, a task that requires both precision and discernment. The RBI has relied on historical data to achieve this. In terms of weightage, the RBI FI-Index[2] adopts a nuanced approach, allocating different weights to various indicators based on their contribution to the overarching goal of financial inclusion.

Specifically, the index assigns weights of 35%, 45%, and 20% to the access, usage, and quality dimensions, respectively (Figure 9.2[3]). Such distribution accentuates the critical importance of both the usage and quality dimensions in truly realising the goal of financial inclusion. The determination of these weightages and ideal values is not arbitrary. The RBI has collaborated closely with sectoral regulators, governmental bodies, and other stakeholders to arrive at these decisions. Broadly, access, which reflects the supply-side financial infrastructure, has been roughly assigned one-third of the total weight. The remaining two-thirds have been distributed between usage and quality, each bringing its distinct set of indicators to the fore.

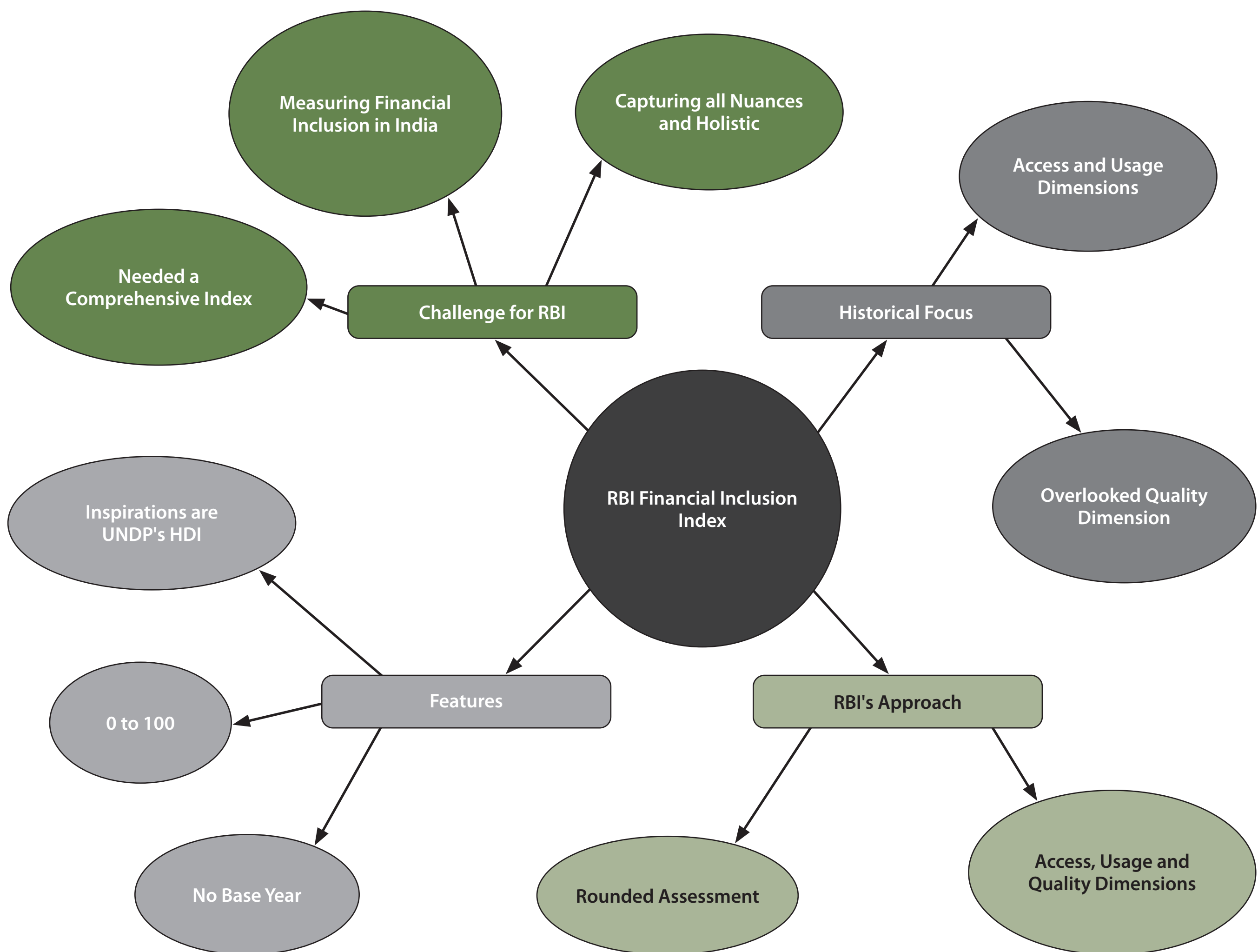

Figure 9.1. The Strategic Context of the RBI Financial Inclusion Index

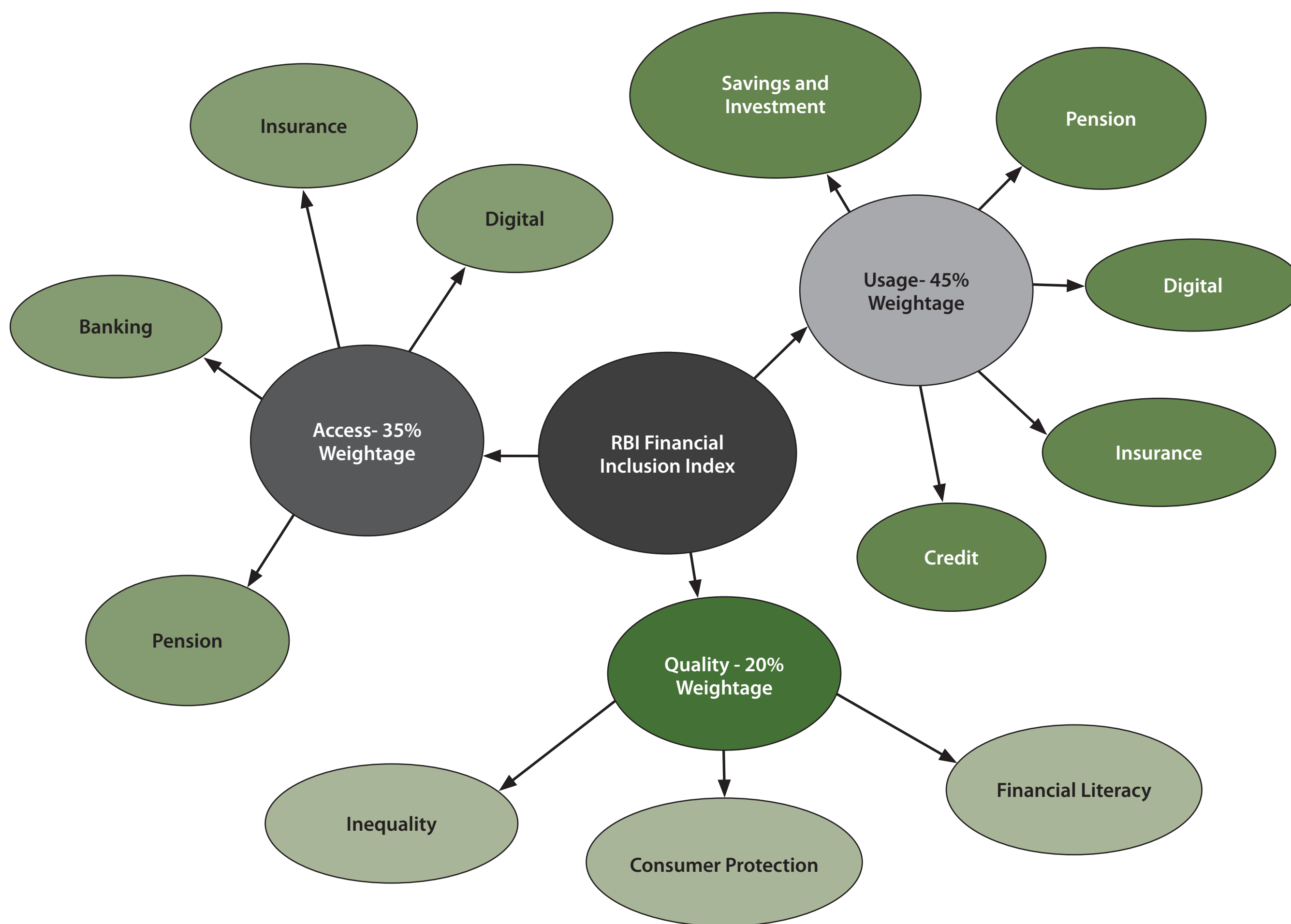

Figure 9.2. RBI Financial Inclusion Index Sub-Indices Description and Weights

Source: 'Financial Inclusion Index for India', RBI, Inaugural address by Shri Shaktikanta Das, Governor, RBI, delivered at the 'Economic Times Financial Inclusion Summit' on 15 July 2021

The access sub-index is segmented into banking, digital, pension, and insurance. This category emphasises supply-side initiatives, focusing on the availability of banking infrastructure and primary services. On the other hand, the usage sub-index, which is divided into segments like savings and investment, credit, digital, insurance, and pension, evaluates how individuals engage with the existing financial infrastructure. Beyond availability and usage, the quality sub-index is of paramount importance. With dimensions like financial literacy, consumer protection, and inequality, this category assesses efforts to enlighten citizens about financial services and ensure their rights are upheld.

Out of the 97 indicators utilised in the index, a majority, 90 to be precise, are primary. The remaining seven indicators evaluate disparities in facilities like bank branches and ATMs. Notably, these indicators are adjusted for inflation using the consumer price index (CPI).[4]

In crafting the FI-Index, the RBI drew inspiration from diverse methodologies, notably the United Nations Development Programme's (UNDP) approach to the human development index (HDI).

Unlike many other indices, the FI-Index does not have a designated 'base year'. Instead, the normalisation of each indicator ranges from 0 to 100, benchmarked against its ideal goal. Engagements with stakeholders played a crucial role in determining the goals and weights for each indicator, emphasising their collective importance in furthering financial inclusion.

In conclusion, the RBI FI-Index is a comprehensive tool meticulously crafted (see Box 9.1) to provide a holistic view of financial inclusion in India. By considering a wide range of dimensions and indicators, the RBI has ensured that the FI-Index offers invaluable insights into the state of financial inclusion in India.

BOX 9.1. THE UNIQUENESS OF THE RBI FI-INDEX METHODOLOGY

Multi-dimensional approach: The index utilises 97 carefully selected indicators across the access, usage, and quality dimensions. Such a multifaceted analysis of different indicators provides insights into how each contributes specifically to the goal of financial inclusion. For example, the presence of bank branches in rural areas signals efforts to expand formal financial access, while grievance redressal mechanisms reflect the focus on the quality of services.

Trend analysis: As the index is periodically published, observing trends over time can reveal the impact of financial inclusion policies and where more impetus is needed. This is done in the next section.

Benchmarking India: The FI-Index score can be compared to other emerging economies to benchmark India's financial inclusion standing.

Correlation with other development indicators: An analysis can be done to study correlations between FI-Index scores and HDI, income, inequality, gender gap, and other indices across states. This can provide insights into the linkage of financial inclusion with broader development.

Evaluation across regions: The current index can be calculated at the state/union territory (UT) level, enabling comparisons across regions. Analysing regional variations can reveal gaps between more financially inclusive states and less inclusive ones. Targeted policy initiatives can then be shaped to address regional disparities.

In summary, the RBI FI-Index offers many avenues for deeper analysis into the state and progress of financial inclusion in India across multiple dimensions.

9.2.2. Strengths and Weaknesses of the RBI FI-Index

Like any analytical tool, the RBI FI-Index has its strengths and areas for potential improvement. A detailed exploration of the strengths and weaknesses of the RBI FI-Index is given in Table 9.1.

Thus, while the RBI FI-Index is a groundbreaking tool for assessing financial inclusion, it is essential to be aware of its inherent strengths and potential areas for improvement, including its inability to provide instantaneous insights into the dynamic construct of this financial inclusion. At best, the RBI FI-Index is a static measure of a dynamic phenomenon unless it is computed from real-time data.

Table 9.1. Strengths and Weaknesses of the RBI FI-Index

Strengths of the RBI FI-Index	Weaknesses of the RBI FI-Index
Comprehensive Measurement: One of the standout features of the FI-Index is its sheer breadth. With a staggering 97 indicators in its arsenal, it provides an exhaustive overview of the state of financial inclusion. This means that policymakers, researchers, and stakeholders can gain insights into almost every conceivable facet of financial access and usage, ensuring that no stone is left unturned.	**Complexity:** Every coin has two sides, and the comprehensive nature of the FI-Index is also its Achilles' heel. With so many indicators, it can be overwhelming, especially for those not steeped in the world of financial inclusion. This complexity might eclipse the key insights, making the index less accessible to the general public or those new to the domain.
Multi-dimensional approach: Beyond its comprehensive nature, the FI-Index's sub-indices offer some level of granularity. By segmenting the data into specific areas, stakeholders are empowered to zoom into particular sectors or dimensions of interest. This makes the index not just a broad sweeping tool but also one that provides depth, catering to both macro and micro-level analysis.	**Data collection challenges:** Gathering data across a spectrum as wide as 97 indicators is a Herculean task. The logistical challenges involved in sourcing accurate and consistent data from such diverse areas can lead to potential discrepancies. These inaccuracies, even if minor, can affect the overall reliability of the index.
Scalability: The straightforward 0 to 100 scale of the FI-Index is a masterstroke in design simplicity. It provides an intuitive benchmark that even those unfamiliar with the intricacies of financial inclusion can grasp. This clarity is invaluable for tracking progress over time and facilitates easy comparisons between regions, states, or even countries.	**Overemphasis risk:** The FI-Index's vastness might inadvertently cast shadows over certain areas. High scores in one dimension could divert attention from other crucial but lagging sectors. This might result in an uneven focus, with some areas receiving disproportionate attention and resources while others remain neglected.

Strengths of the RBI FI-Index	Weaknesses of the RBI FI-Index
Ground reality reflection: The true test of any analytical tool is its resonance with observable realities. The FI-Index, especially in its 'Access' sub-index, mirrors the tangible efforts and advancements achieved so far in India's evolving financial infrastructure. This alignment reinforces the index's credibility and makes it a trusted barometer for gauging the overall state of financial inclusion.	**Subjectivity in weights:** Assigning weights to indicators is as much an art as it is a science. While the process behind the FI-Index is systematic, it is not entirely devoid of subjectivity. Different experts might prioritise indicators differently, and this potential bias could influence the overall scores and rankings.

9.3. THE RBI FI-INDEX – ANALYSING THE DATA

9.3.1. General Analysis of the RBI FI-Index

The span from March 2017 to March 2023[6] has marked significant strides in India's pursuit of comprehensive financial inclusion, as clearly illustrated by the steady ascent of the FI-Index. In fact, since the demonetisation drive of November 2016, India has embarked on a profound journey towards financial inclusivity, a course significantly reflected in the FI-Index, which saw an ascent from 43.4 to 60.1 between March 2017 and March 2023. The demonetisation drive was a critical inflexion point, precipitating a rapid enhancement of financial infrastructure and accelerating progress towards digitisation in the financial sector.

The aftermath of demonetisation galvanised a push for digital financial services, laying the groundwork for substantial advancements in the FI-Index. It was a strategic move that accelerated the integration of digital payments into the mainstream, with the Unified Payments Interface (UPI) emerging as a transformative force in the ecosystem of India's financial services. UPI's inception and exponential growth became synonymous with the country's commitment to achieving a high degree of financial inclusion, dramatically improving the index and its components of accessibility, usage, and quality of financial services. Likewise, the impact of the JAM trinity (Jan Dhan, Aadhar, and Mobile) in scaling up financial inclusion has been phenomenal, and this can be seen in the substantial growth in the FI-Index. This period of India's economic narrative is also a testament to the synergy between policy initiatives and technological innovation, where the FI-Index serves as a barometer for the country's progress due to this techno-economic synergy. Now, if there was one dampener amidst all of this, it was the horrific COVID-19 pandemic (March 2020-December 2021). Any reliable and valid index should reflect reality, and going by the same logic, the RBI FI-Index should also reflect the aforementioned happenings. Let us delve deeper into the data to assess if this is the case.

9.3.2. Cross-Referencing of the RBI FI-Index with External Events

How accurately does the RBI-FI Index represent the reality of financial inclusion in India from 2017 to 2023?

From March 2017 to March 2020, the FI-Index climbed from 43.4 to 53.1, an absolute increase of 9.7 points. This growth reflects a period of economic initiatives and policy support aimed at expanding financial services. The largest annual increase during this time was observed between March 2018 and March 2019, with the index jumping by 3.9 points.

Table 9.2. RBI FI-Index, from March 2017-2023[5]

Year	FI-Index	YoY Absolute Increase	YoY % Increase
March 2017	43.4	NA	NA
March 2018	46	2.6	5.99%
March 2019	49.9	3.9	8.48%
March 2020	53.1	3.2	6.41%
March 2021	53.9	0.8	1.51%
March 2022	56.4	2.5	4.64%
March 2023	60.1	3.7	6.56%

Note: YoY stands for year-over-year.
Source: RBI with source details in the end note.

On average, each year in this period contributed an increase of 3.23 points to the index, underlining a strong, consistent push towards greater financial inclusion. The onset of the COVID-19 pandemic marked a turning point in this upward trend. In the year following March 2020, the index's growth slowed dramatically to an increase of only 0.8 points, the least year-over-year (YoY) rise within the six years we are examining. This slowdown illustrates the immediate and profound impact of the pandemic on financial inclusion efforts, likely due to the economic strains and disruptions in service delivery mechanisms.

Looking at the broader period from March 2020 to March 2023, which encompasses the pandemic and the subsequent recovery phase, the index grew by 7.0 points, settling at 60.1. The average annual increase during these three years was 2.33 points, a noticeable deceleration compared to the pre-pandemic period's average. This reduction reflects the lingering effects of the pandemic, which, despite a later rebound, dampened the overall three-year growth rate. However, it is the rebound in the period between March 2022 and March 2023 that provides a compelling part of the story. In this year alone, the FI-Index rose by 3.7 points, an absolute increase that not only counters the previous year's slump but also surpasses the pre-pandemic year's growth. This suggests a robust recovery, with financial inclusion initiatives potentially benefiting from the accelerated digitalisation that the pandemic ushered in.

The data suggests that if not for the pandemic, the FI-Index could have continued its pre-2020 trajectory, potentially achieving even greater heights. The significant rebound in the latter part of the dataset supports the notion that the mechanisms for financial inclusion have not only weathered the storm but have emerged with renewed vigour, likely setting a new trajectory that could reclaim and exceed the pre-pandemic pace of growth. The correlation between the RBI FI-Index values and ground reality indeed underscores the reliability and validity of the index as a measure of financial inclusion in India. The index's movements align with known economic events and trends, suggesting that it is a responsive and accurate barometer of the country's financial inclusion status.

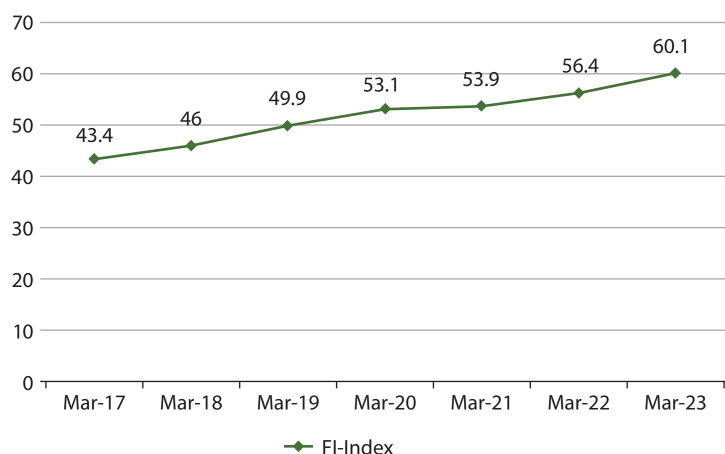

Figure 9.3. RBI FI-Index, from March 2017–March 2023

Source: 'Financial Inclusion Index for India', RBI, Inaugural address by Shri Shaktikanta Das, Governor, RBI, delivered at the 'Economic Times Financial Inclusion Summit' on 15 July 2021; RBI, Press Release (2023–024/930), 'Financial Inclusion Index for March 2023'

During the pre-COVID period of steady economic growth and expansion, the index exhibited a consistent upward trend, reflecting the increasing penetration of financial services among the Indian populace. This positive trajectory aligns with the initiatives of the government and financial institutions to enhance access to financial services, such as the expansion of digital payment systems and the introduction of more inclusive banking models. The dip in growth observed in the FI-Index for the year following the onset of the pandemic mirrors the economic downturn and the operational challenges faced by the financial sector during this period. Lockdowns, social distancing measures, and the broader economic slowdown impacted the delivery of financial services and, by extension, the progress of financial inclusion.

The subsequent recovery and acceleration of growth reflected in the FI-Index are also indicative of the real-world rebound in economic activities and the resilience of the financial sector. The rise in the index's growth rate post-pandemic likely reflects the increased adoption of digital financial services, the government's supportive policies to revitalise the economy, and the overall adaptation of the financial ecosystem to the new normal.

In essence, the FI-Index has not only mirrored the economic impacts of the pandemic but has also captured the recovery phase, thereby reinforcing its role as a credible gauge of financial inclusion in India. This reinforces the index's utility for policymakers, economists, and stakeholders in assessing the effectiveness of financial inclusion policies and in guiding future strategic decisions. The RBI's FI-Index thus provides a narrative of the reality of India's journey towards greater financial inclusion over the years, particularly through the lens of absolute growth values, which offer a clear picture of the progress made and challenges encountered.

9.3.3. General Analysis of the RBI Sub-Indices

Let us reconfirm the above hypothesis with an analysis of the RBI-FI sub-indices.[7] The original data for the RBI FI-Index sub-indices[8] from March 2017 to 2021 is as follows:

Table 9.3. RBI FI-Index Sub-Indices from March 2017-March 2021

Year	Access	Usage	Quality
March 2017	61.7	30.8	48.5
March 2018	63.9	33.7	51.4
March 2019	67.5	38.7	52.6
March 2020	71.6	42.0	53.8
March 2021*	73.3	43.0	50.7

Note: *Some of the data points are provisional.
Source: RBI with source details in the end note.

The strategic expansion of access: The increase in the access sub-index is more than a mere statistical rise; it embodies the strategic expansion of India's financial infrastructure. It is the result of a synergistic partnership between traditional banking institutions, microfinance sectors, and robust government initiatives like the Pradhan Mantri Jan Dhan Yojana (PMJDY). The UPI, of course, played an important role, as already discussed. Together, these initiatives have been pivotal in extending the financial canvas to include both the urban centres and, notably, the farthest regions of the country. The proliferation of financial touch points—banks, ATMs, and a variety of service providers — has not just burgeoned but has also brought financial services within the arm's reach of the common citizen. The improved accessibility of financial services has laid the foundation for an infrastructure that supports the financial inclusion of diverse demographics.

The emergence of an engaged populace: Parallel to the access narrative is the commendable growth of the usage sub-index, which illustrates how the populace increasingly engaged with available financial tools and services. This engagement is most likely the result of a combination of efforts such as targeted financial literacy programs, the introduction of financial products tailored to the needs of different consumer segments, and a revival of trust in the financial system post-demonetisation. The narrative here is not just about numbers; it is about the meaningful inclusion of individuals into the financial mainstream, where they are not just spectators but active participants.

Quality, a critical evaluation: While the strides in access and usage are laudable, the decline in the quality sub-index in 2021 calls for a moment of introspection. As India strides forward on the paths of access and usage, the quality sub-index signals a warning. The dip points to potential inconsistencies in service quality—which may stem from a range of factors, including the adequacy of customer service, the relevance of financial products to the user's needs, and possible technological barriers. More profoundly, this decline could mirror a transient degradation in service quality, a consequence of the devastating effects of the COVID-19 pandemic, which created huge pressures for the financial sector. The challenge now is to ensure that the expansion in services does not come at the expense of quality. The task at hand for policymakers and financial institutions is to address these issues promptly, ensuring that the services not only reach a wider audience but also meet the high standards expected of them. In conclusion, the RBI FI-Index sub-indices provide a clear indication of the progress made and the challenges that lie ahead. They also suggest that the sub-indices matched the on-ground reality as discussed below in terms of the growth and/or decline of the various sub-indices.

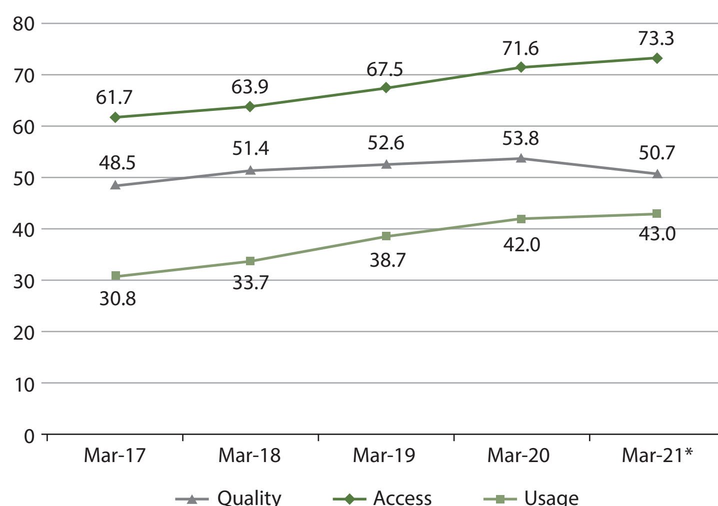

Figure 9.4. RBI FI-Index Sub-Indices, March 2017–March 2021

Source: 'Financial Inclusion Index for India', RBI, Inaugural address by Shri Shaktikanta Das, Governor, RBI, delivered at the 'Economic Times Financial Inclusion Summit' on 15 July 2021

9.3.4. Cross-Referencing of the RBI Sub-Indices with External Events

How accurately do the RBI-FI Sub-Indices represent the financial inclusion reality in India from 2017 to 2021?

Let us delve into the absolute numbers reflected in the RBI FI-Index sub-indices to elucidate the

nuances of financial inclusion from March 2017 to March 2021. The YoY absolute and percentage growth for each sub-index is as follows:

Table 9.4. RBI FI-Index Sub-Indices Absolute and Percentage Growth Analysis

Year	Access Absolute Growth	Access Percentage Growth	Usage Absolute Growth	Usage Percentage Growth	Quality Absolute Growth	Quality Percentage Growth
March 2018	2.20	3.57	2.90	9.42	2.90	5.98
March 2019	3.60	5.63	5.00	14.84	1.20	2.33
March 2020	4.10	6.07	3.30	8.53	1.20	2.28
March 2021	1.70	2.37	1.00	2.38	-3.10	-5.76

Source: 'Financial Inclusion Index for India', RBI, Inaugural address by Shri Shaktikanta Das, Governor, RBI, delivered at the 'Economic Times Financial Inclusion Summit' on 15 July 2021

The access sub-index presents a picture of expanding financial infrastructure and availability over the years. There was a steady increase in absolute terms, with the sub-index rising from 61.7 to 73.3, marking an 11.6-point improvement over the four-year period. The increments were 2.2, 3.6, 4.1, and 1.7 for each subsequent year, indicating not just consistent growth but an accelerating one up until the last year when growth slightly tapered off.

The usage sub-index, indicative of how frequently and extensively financial services are utilised, followed a similar pattern of steady growth. The increases here were 2.9, 5.0, 3.3, and 1.0 points yearly. The peak increase from March 2018 to March 2019 of 5.0 points underscores a period where financial service usage saw its most significant surge, possibly reflecting the success of initiatives aimed at encouraging the adoption of financial services.

The quality sub-index, however, tells a different story. After modest yearly gains of 2.9, 1.2, and 1.2 points, there was a notable decline of 3.1 points in the final year. This decrease in the quality sub-index in absolute terms is especially telling, as it suggests that the perceived or actual quality of financial services suffered during the pandemic because of the logistical challenges and the economic strain of the period.

When comparing the pre- and post-COVID periods (up to March 2020 and thereafter till March 2021), the access and usage sub-indices continued their upward trajectory albeit at a slower pace, but the quality sub-index took a hit, reflecting the adverse effects of the pandemic. The decline in quality suggests that while the availability and usage of financial services improved during the pandemic, their quality may have been compromised due to the rapid shift to digital platforms and the strain on service providers.

In other words, as financial institutions rapidly scaled up digital operations in response to lockdowns and social distancing norms, infrastructural readiness was put to the test. The surge in digital transactions highlighted critical areas requiring enhancement, such as the robustness of information technology (IT) systems, the capacity to handle peak loads, and the need for seamless, user-friendly interfaces.

Transaction failure rates, server downtimes, and errors during transactions became more than just operational hiccups; they represented significant barriers to financial inclusion. Each failed transaction or service interruption not only undermines user confidence but also hampers the continuity of financial activities for consumers and businesses alike. The pivot to digital platforms, though necessary and in many ways beneficial, also exposed the digital divide, with a significant portion of the population facing hurdles due to limited access to reliable internet services or lack of digital literacy.

Moreover, the restrictions imposed during the pandemic also played a role in the perceived decline in quality. With in-person services curtailed customers who were accustomed to face-to-face interactions had to navigate digital channels, often without adequate support or guidance. The abrupt transition likely affected customer satisfaction and perceived service quality, as reflected in the FI-Index.

Thus, the provisional decline in the quality sub-index underscores the urgent need to bolster digital financial infrastructure. It serves as a reminder that while the push towards digitisation is inevitable and beneficial, it must be accompanied by robust support systems, user education, and continuous quality enhancements to ensure that financial inclusion does not come at the cost of compromised service quality.

As the world adapts to the new normal, the financial sector's ability to learn from the pandemic's challenges and to fortify its digital foundations will be instrumental in shaping an inclusive financial ecosystem that is resilient, reliable, and ready for the future. In summary, the absolute numbers reveal that the pandemic affected not the reach or use of financial services but rather their quality. This distinction is critical as it points to the need for a reinforced focus on quality improvement as the financial sector recovers from the pandemic's impacts. The sub-index data align with real-world occurrences, highlighting the FI-Index's role as a reliable and valid measure of the multifaceted nature of financial inclusion in the country.

What, then, are the implications for the future? The intricate dynamics within the FI-Index and its sub-indices have significant implications for India's future financial inclusion roadmap. Policymakers and financial institutions must acknowledge that the path to inclusion is multifaceted. Achieving true financial inclusion involves a balance of access, usage, and quality. The data calls for a holistic strategy that combines expansion initiatives with unwavering commitment to service excellence and user-centricity.

9.4. POLICY[9] DIRECTIONS BASED ON THE RBI FI-INDEX

The FI-Index[10] has emerged as a pivotal tool in the RBI strategic planning and policy formulation process. According to the Hon'ble Governor of the RBI, as well as inferences drawn from an array of RBI publications, the FI-Index has been instrumental in shaping the direction and focus of many of RBI's policy interventions (to enhance financial inclusion across the nation), such as those given below:

(a) *Strengthening financial literacy:* The RBI has embraced a '5 C' strategy to foster a financially literate and empowered citizenry in India. This comprehensive strategy includes:
- **Content:** Integration of financial education into academic syllabi to build a strong foundation from an early age.
- **Capacity:** Improvement of skills and knowledge among financial service providers and educators to ensure that they can effectively guide consumers.
- **Community:** A community-centric approach to spreading financial literacy, harnessing local networks and peer influence.
- **Communication:** Development and execution of potent communication strategies to disseminate financial knowledge effectively.
- **Collaboration:** Formation and reinforcement of partnerships among various stakeholders to create a synergistic environment for financial education.

The National Strategy for Financial Education (NSFE) and the National Strategy for Financial Inclusion (NSFI) both advocate for this encompassing strategy and underscore the urgency of strengthening financial literacy to enhance financial inclusion. This is further demonstrated by the ongoing expansion of Centres for Financial Literacy (CFLs), with a target to inaugurate 1,199 centres in the preliminary phase by 2024.

(b) *Reactivating dormant accounts:* Building on the success of PMJDY in expanding banking access, the RBI is focussed on revitalising dormant accounts. This involves diagnosing the underlying reasons for dormancy, crafting suitable financial products, and tackling operational and infrastructural bottlenecks.

(c) *Synergising service providers with assorted financial products:* The RBI recognises that true financial inclusion is achievable when there is a harmonious match between the right set of financial service providers and a diverse assortment of financial products. This synergy is essential for catering to the varied financial needs of the population.

(d) *Improving banking correspondents network:* With regard to banking correspondents (BCs) in the financial ecosystem, the RBI understands the critical role they play in bridging the last-mile connectivity gap. RBI has taken steps to ensure their sustained presence, bolster their capabilities, and resolve issues related to their certification and remuneration.

(e) *Broadening MSME finance:* Access to credit remains a policy priority, particularly for MSMEs, small and marginal farmers (SMFs), women entrepreneurs, and the microcredit sector. The RBI's revised priority sector lending (PSL) guidelines, which now include startups, health infrastructure, and renewable energy, are indicative of an effort to distribute credit more equitably with a focus on specific priority sectors.

(f) *Facilitating digital financial inclusion:* The RBI is championing digital transactions as

a cornerstone of comprehensive financial inclusion. A pilot project aiming for 100% digital enablement across 42 districts within one year exemplifies this initiative. The RBI also acknowledges the necessity for vigilant monitoring as this project expands to additional districts. The key lesson from the FI-Index is that aggressive expansion should not reduce the quality of services.

(g) *Augmenting customer protection:* With the increase in financial inclusion and digital transactions, the RBI emphasises the critical importance of consumer protection. This encompasses prompt handling of complaints, raising fraud awareness, and strengthening cybersecurity and data protection practices. While various regulatory bodies, including the RBI, have already launched multiple measures, RBI has also issued a call for more intensified and coordinated actions based on deteriorating quality during and after the pandemic.

In conclusion, the annual release of the FI-Index by the RBI every July[11] serves a dual purpose. It evaluates the effectiveness of current initiatives and also sheds light on future directions to enhance financial inclusion across the country. Indeed, as previously mentioned, it is evident from both the Governor's statement and various official RBI documents that the aforementioned policy alterations stemmed from the RBI's monitoring and analysis of the RBI FI-Index. The index is, thus, not only a testament to the RBI's commitment to ensuring that financial services are accessible, available, and beneficial to all segments of Indian society but also a policy tool guiding the development of financial inclusion in India. All of these aspects are diagrammed in Figure 9.5.

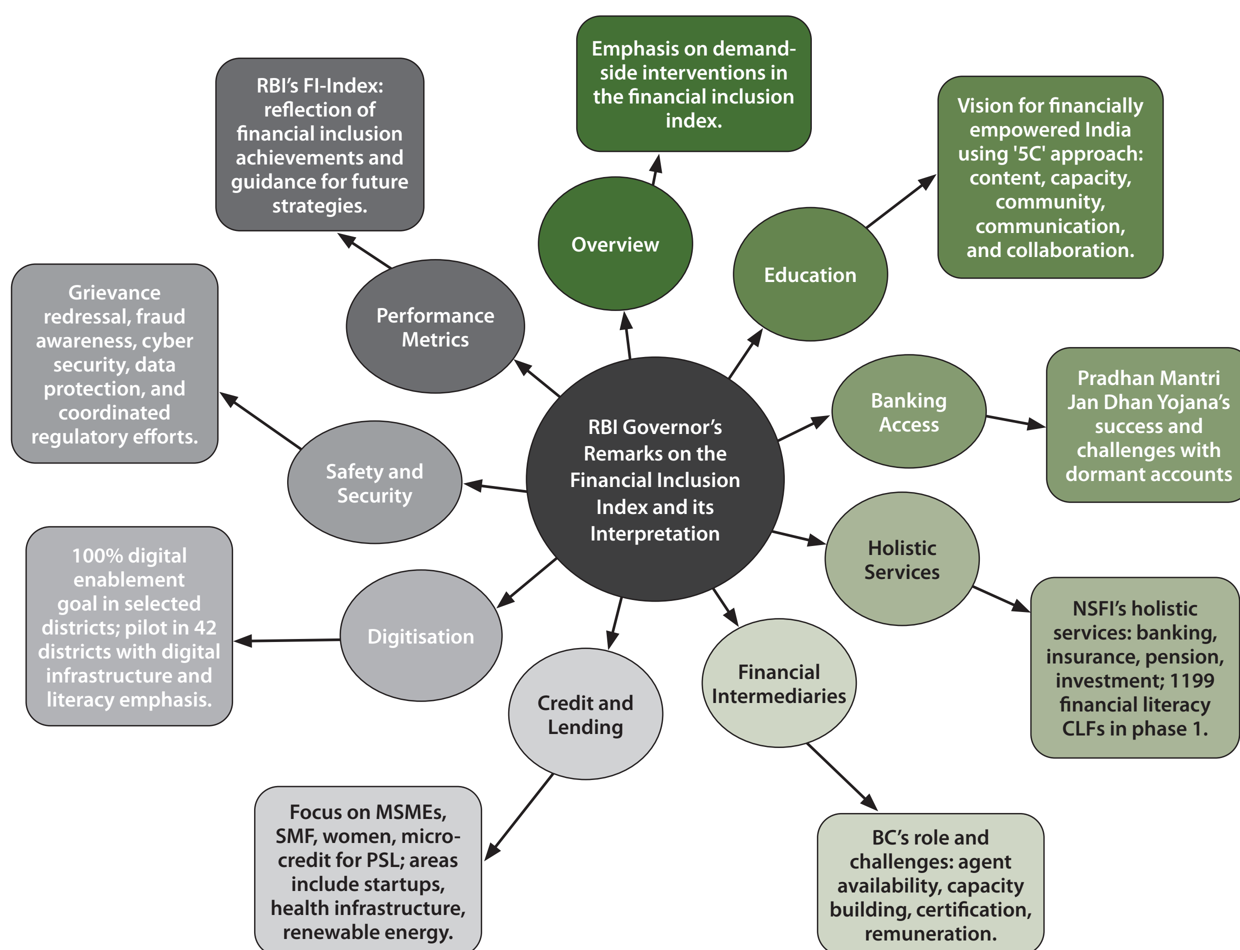

Figure 9.5. RBI Governor's Remarks on the Financial Inclusion Index and Policy Directions From It

Source: 'Financial Inclusion Index for India', RBI, Inaugural address by Shri Shaktikanta Das, Governor, RBI, delivered at the 'Economic Times Financial Inclusion Summit' on 15 July 2021

9.5. ANTARDRISHTI[12] – THE RBI FINANCIAL INCLUSION DASHBOARD

RBI's introduction of 'Antardrishti' inaugurated[13] by Governor Shaktikanta Das on 5 June 2023, marks a significant step toward broadening economic inclusivity. This financial inclusion dashboard aims to bring the periphery into focus, ensuring all citizens are part of the financial fabric.

Antardrishti offers more than traditional analytics, combining advanced data interpretation with cutting-edge technology to include underserved communities in the financial conversation. This tool is pivotal in RBI's strategy to promote financial inclusion, providing up-to-date, accurate data to inform policy decisions aimed towards enhancing the inclusivity and integrity of the economic system. It tracks key financial indicators, such as account usage, credit flow, and digital payments, informing India's policymaking with authentic insights.

Given India's varied cultural and economic landscape, Antardrishti takes a nuanced approach, rejecting uniform solutions in favour of customised strategies that address local challenges. It seeks to develop financial policies and products that cater to the country's diversity, encouraging collaboration among financial institutions, policy analysts, and communities. This collective approach is crucial for developing financial solutions attuned to the needs of Indian citizens.

Antardrishti's integration into India's financial architecture is expected to transform financial inclusion, supplying policymakers with the localised data necessary to devise efficient financial strategies that are conscious of regional socio-economic and cultural nuances. With its launch, the RBI has started a new phase in India's journey

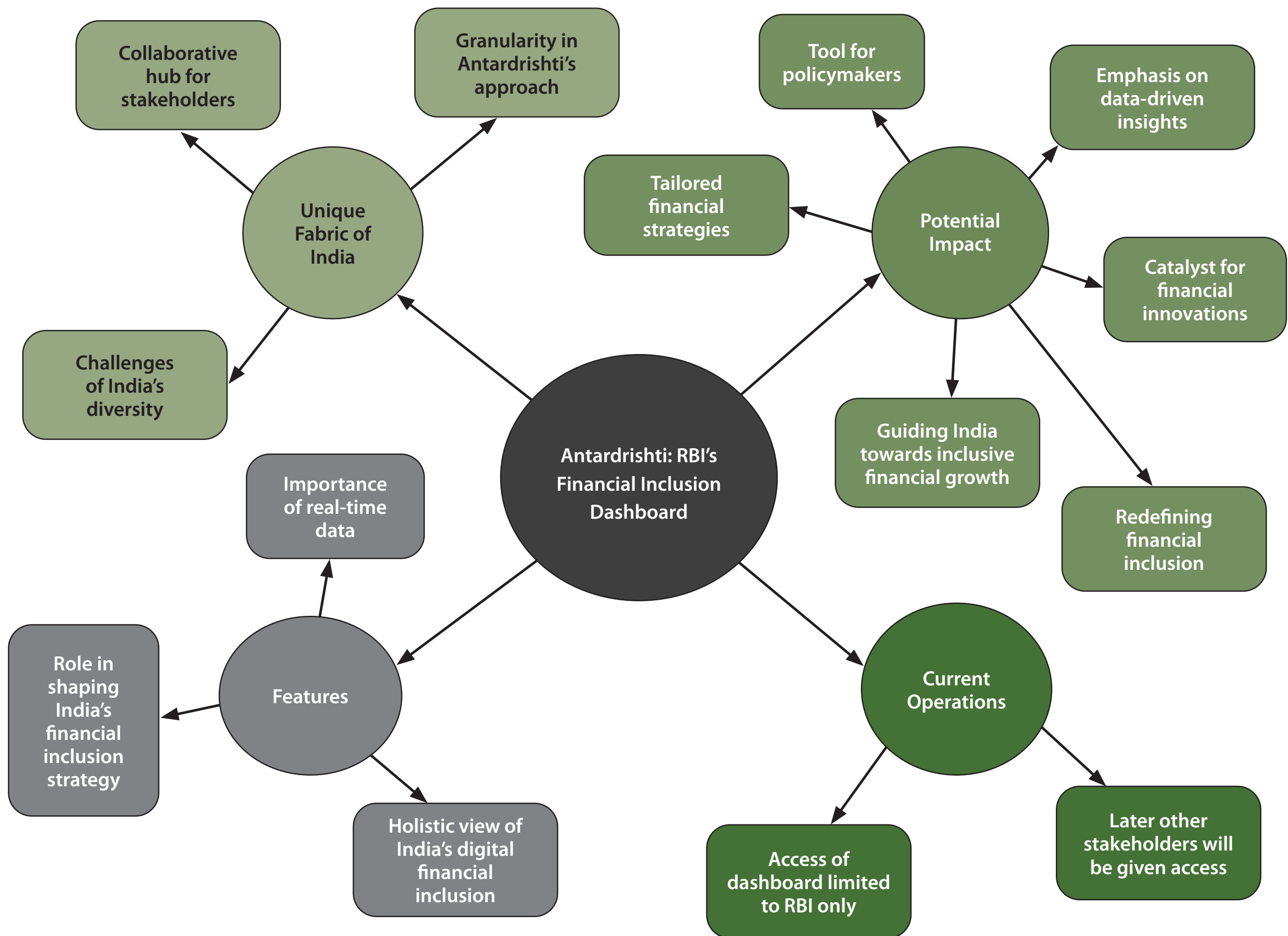

Figure 9.6. Antardrishti, the RBI Financial Inclusion Dashboard Inaugurated by RBI Governor on 5 June 2023 for RBI's Internal Use

toward the measurement of financial inclusion and percolation of inclusive finance.

In essence, Antardrishti embodies RBI's commitment to inclusivity, transparency, and prudent economic expansion. It heralds a future of universal financial service accessibility, guided by rich, contextual data and the active financial engagement of all Indians.

Antardrishti, currently for RBI's internal use, is charted in detail in Figure 9.6 and is a cornerstone for steering India towards a more inclusive economic future.

9.6. RBI'S WORK ON MEASUREMENT OF FINANCIAL INCLUSION: AN EVOLUTIONARY ANALYSIS

9.6.1. Step # 1: FI-Index

The construction of the FI-Index by RBI in 2017 marked a seminal advancement in the quest to measure and understand the reach of financial services across the diverse Indian landscape. While the FI-Index has been invaluable in its role, its principal drawback is its static nature, providing a snapshot view of a dynamic concept like financial inclusion. Furthermore, the FI-Index is not able to capture the ongoing interactions of mutually exclusive individuals or entities within the financial system at any given moment. Thus, it cannot provide a continuous account of those who were financially included at the onset of a specific period, those who transitioned in or out of the financial system during that time, and those who remained financially included at the end of that period.

At this juncture, it is important to note three crucial aspects:

(a) *The imperative for real-time financial inclusion metrics:* The contemporary era, characterised by swift technological evolution and economic dynamism, underscores the urgency for a real-time measure of financial inclusion. Financial inclusion is not merely about having bank accounts; it is about the actual usage of financial services, the quality experienced during transactions, and the affordability of accessing these services. These dimensions are in perpetual motion, demanding a real-time measurement to capture the ever-changing financial inclusion landscape accurately.

(b) *RBI's payment systems and data infrastructure:* RBI's payment systems operate at the core of India's financial infrastructure, acting as the digital spine for a multitude of financial operations. This sophisticated network encompasses a wide array of institutions—from traditional banks, including the public sector, regional rural, private sector, foreign, and cooperative banks, to contemporary entities like payment banks, small finance banks (SFBs), and non-banking financial companies (NBFCs). It meticulously records each transaction facilitated by a suite of money transfer arrangements like real time gross settlement (RTGS), national electronic fund transfer (NEFT), immediate payment service (IMPS), Aadhaar enabled payment system (AePS), Aadhaar payment bridge system (APBS), electronic clearance service (ECS), national automated clearing house (NACH), unified payments interface (UPI), and other sanctioned methods, offering an invaluable repository of data. The robustness of RBI's payment system is fortified by extensive data warehousing and data lake solutions, providing a strong architecture for data storage, management, and in-depth analysis. These warehouses and lakes amass an array of data types, from meticulous transaction details to massive datasets gleaned from varied sources, including social media platforms. These resources are pivotal in supporting an advanced financial information infrastructure.

(c) *The impact of digital intermediaries:* In the digital age, intermediaries such as FinTech firms, banking correspondents, and digital financial service platforms have risen to prominence. They adeptly bridge the gap between traditional banking and the digital financial realm, often reaching segments of the population that conventional banks may not. Their activities, reflected within the RBI's payment systems, contribute significantly to the broadening of financial inclusion.

9.6.2. Step # 2: The Antardrishti dashboard innovation

As noted earlier, recognising the urgent need for dynamic financial inclusion measurement, the RBI launched the Antardrishti dashboard in June 2023 to provide a real-time detailed examination of financial inclusion.

Discussion: RBI's journey from constructing the FI Index *(Step # 1)* to creating the ANTARDRISHTI dashboard *(Step # 2)* has revolutionised the methodology for measuring financial inclusion in India. This not only addresses the limitations of the

past but also actively shapes the future narrative, establishing new international benchmarks for the utilisation of data in informed policymaking. Furthermore, it highlights RBI's explicit recognition of the need for dynamic real-time data to measure financial inclusion accurately.

9.7. LESSONS FOR STAKEHOLDERS

A few lessons are discernible from RBI's work on the measurement of financial inclusion, and they are briefly described below:

Lesson #1: Benchmarking through multi-dimensional indices is critical to measure financial inclusion: The creation of the FI-Index by RBI underscores the significance of a comprehensive, multi-dimensional tool for tracking financial inclusion over time. This index serves as a vital benchmark, incorporating diverse parameters that capture the nuances of access, usage, and quality of financial services. It provides a blueprint for central banks worldwide to craft and adapt their indices to fit local needs, ensuring a consistent and holistic measurement of financial inclusion efforts.

Lesson #2: Customising strategies is critical to address gaps in financial inclusion: The insights drawn from both the FI-Index and Antardrishti dashboard reveal persistent regional disparities and the necessity for targeted strategies that address these gaps. These instruments highlight the importance of recognising and responding to the unique financial needs of various communities. By adopting a granular approach to data analysis and policy design, RBI has ensured that financial services are accessible and relevant to all segments of society, thereby advancing financial inclusion and economic growth in India. Other central banks may want to replicate similar (tailored) strategies across different contexts.

Lesson #3: Long-term commitment of the central bank (regulator) is crucial for promoting inclusivity: The path to achieving full financial inclusion is a marathon, not a sprint. India's journey reflected through the FI-Index and Antardrishti, demonstrates that RBI's ongoing commitment and vision (shaped by decades of work) have played a catalytic role. Thus, central banks need to play an instrumental role in this process, acting as an enabler for policies and initiatives that promote long-term financial inclusion.

Lesson #4: Central banks must use data-driven policies for greater impact: The strategic use of insights from RBI's FI-Index and the Antardrishti dashboard for policymaking by the RBI is evident from this chapter. This underscores the power of data-driven decision-making in creating and implementing policies that can significantly move the needle on financial inclusion. By leveraging data, central banks can ensure that their strategies are not only evidence-based but also aligned with the dynamic realities of the financial markets they serve.

Lesson #5: Central banks must foster collaboration for measurement and enhancement of financial inclusion: The collaborative nature of RBI's Antardrishti, offering controlled access to various regulators, exemplifies how data sharing and coordinated oversight can strengthen the financial system. This lesson highlights the importance of how other central banks can foster partnerships among regulators, financial institutions, and other stakeholders to ensure a cohesive approach to the measurement and enhancement of financial inclusion.

Thus, these five lessons from RBI's experience with the FI-Index and Antardrishti dashboard offer a comprehensive framework for measuring and enhancing financial inclusion. They provide actionable insights for central banks globally to refine their approaches and contribute to a more inclusive financial landscape.

9.8. DISCUSSION AND OUTLOOK

To further enhance the granularity and utility of the insights provided by the FI-Index and 'Antardrishti,' it is suggested that RBI integrate non-payment system data regarding financial inclusion, as outlined in Figure 9.7. Incorporating such diverse datasets into an advanced AI-powered 'supermodel' could unlock unprecedented micro-granular insights into financial behaviour, savings patterns, credit uptake, and more. The potential benefits of such an integrated, AI-driven approach are manifold:

- *Personalised policymaking:* With insights down to the individual or community level, policies can be tailored to address specific barriers to financial inclusion.
- *Predictive analysis:* AI models could predict trends and potential crises, allowing for pre-emptive policy interventions.
- *Inclusive growth:* By identifying underserved areas and demographics, efforts can be directed to ensure that growth is inclusive.
- *Financial literacy:* Targeted financial education programs can be developed based on the understanding of the populace's financial behaviour.

- *Innovation incentives:* Insights from the data can spur innovation in financial products and services, catering to the nuanced needs of different user groups.

Thus, the endeavour towards sustained measurement of financial inclusion is a journey rather than a destination. RBI's initiatives, such as the FI-Index and Antardrishti, represent significant milestones on this journey. By continuing to leverage cutting-edge technologies like high-powered AI models, RBI can ensure that the measurement of financial inclusion in India happens in a seamless and sustained manner with a view to expand the footprints of inclusive finance in India.

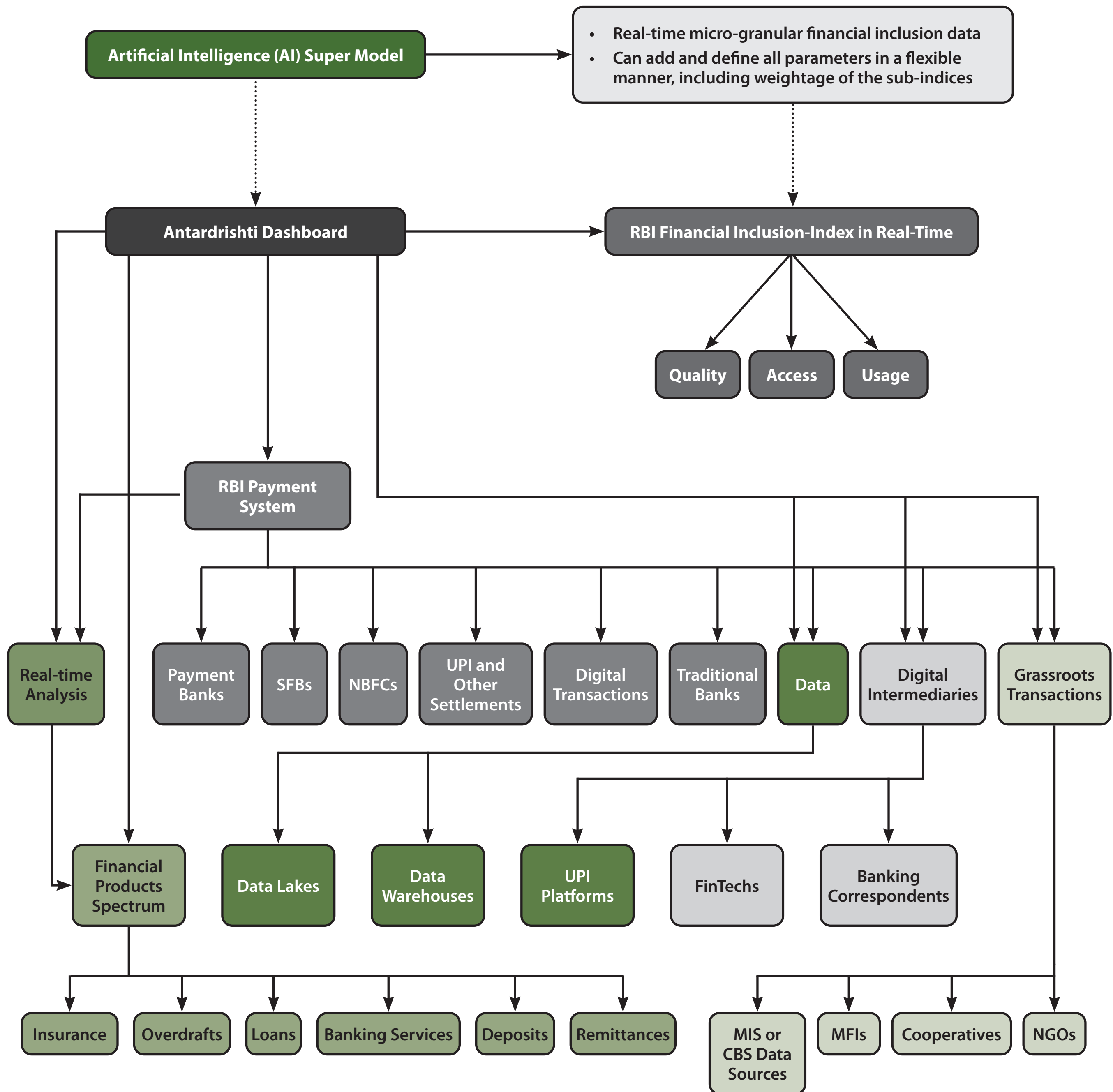

Figure 9.7. Real-Time Measurement of the Financial Inclusion Index from Antardrishti Using a NextGen AI Super Model

END NOTES

1. Much of this relies on the statements and speeches of the Honourable Governor of the RBI.
2. See RBI Press Release (2021-22/703), 'Reserve Bank of India introduces the Financial Inclusion Index', https://www.rbi.org.in/Scripts/BS_PressReleaseDisplay.aspx?prid=52068
3. Das, Shaktikanta, (September 2021), 'Financial Inclusion Index for India', RBI, Inaugural address by Shri Shaktikanta Das, Governor, Reserve Bank of India, delivered at the Economic Times Financial Inclusion Summit on 15 July 2021, https://rbi.org.in/scripts/BS_ViewBulletin.aspx?Id=20502
4. See RBI, Press Release (2022-23/1320), 'Monetary Policy Statement, 2022-23 Resolution of the Monetary Policy Committee (MPC) December 5-7, 2022', https://www.rbi.org.in/Scripts/BS_PressReleaseDisplay.aspx?prid=54818; and RBI, Press Release (2021-22/16), 'Resolution of the Monetary Policy Committee (MPC) April 5-7, 2021', https://rbi.org.in/Scripts/BS_PressReleaseDisplay.aspx?prid=51381
5. March 2021 values are provisional as per the RBI website, last accessed on 24 October 2023. The RBI-FI composite index data is available as of 2023.
6. See RBI. (September, 2021), 'Financial Inclusion Index for India', https://rbi.org.in/scripts/BS_ViewBulletin.aspx?Id=20502; and RBI, Press Release (2023-024/930), 'Financial Inclusion Index for March 2023', https://rbi.org.in/scripts/BS_PressReleaseDisplay.aspx?prid=56380
7. See RBI. (September, 2021), 'Financial Inclusion Index for India', https://rbi.org.in/scripts/BS_ViewBulletin.aspx?Id=20502
8. Data for sub-indices is not available beyond 21 March.
9. As discerned from a content data analysis of the speeches of the Governor RBI and also based on discussions with various stakeholders.
10. See RBI. (September, 2021), 'Financial Inclusion Index for India', https://rbi.org.in/scripts/BS_ViewBulletin.aspx?Id=20502
11. See RBI, Press Release (2021-22/17), 'Statement on Developmental and Regulatory Policies', https://rbi.org.in/Scripts/BS_PressReleaseDisplay.aspx-?prid=51382; and RBI, Press Release (2020-21/454), 'Statement on Developmental and Regulatory Policies', https://www.rbi.org.in/Scripts/BS_PressRelease-Display.aspx?prid=50480
12. See RBI, Press Release (2023-024/346), 'Governor, RBI launches अंतर्दृष्टि (ANTARDRISHTI) Financial Inclusion Dashboard', https://rbi.org.in/scripts/FS_PressRelease.aspx?prid=55796&fn=2754
13. See The Economic Times, (5 June 2023), 'RBI Governor Launches Financial Inclusion Dashboard Antardrishti', https://economictimes.indiatimes.com/news/economy/policy/rbi-governor-launches-financial-inclusion-dashboard-antardrishti/articleshow/100774718.cms; Reserve Bank Innovation Hub (RBiH), 'Financial Inclusion Dashboard Launched by RBI', https://rbihub.in/fin-wrap-issue-10/; and Business Standard, (June, 2023), 'RBI Governor Launches Financial Inclusion Dashboard "Antardrishti"', https://www.business-standard.com/finance/news/rbi-governor-launches-financial-inclusion-dashboard-antardrishti-123060501160_1.html

Inclusive Insurance and Pensions:
State of Progress in India

Ramesh Srivatsava Arunachalam

10

10.1. INTRODUCTION

India, with a population nearing 1.43 billion, is a diverse country with a wide spectrum of socio-economic conditions. Within this demographic expanse, there are approximately 20.42 million individuals[1] facing multi-dimensional poverty.[2] This situation highlights the essential role of insurance, not only as a conventional safety net but also as a critical component of financial security against unforeseen adversities. The function of insurance in India has transitioned from a simple risk mitigation tool to an integral part of the social support system aimed at stabilising the financial foundation of those in the most vulnerable economic situations.

The nation has made significant progress in broadening the scope of insurance and pension coverage for its economically disadvantaged and

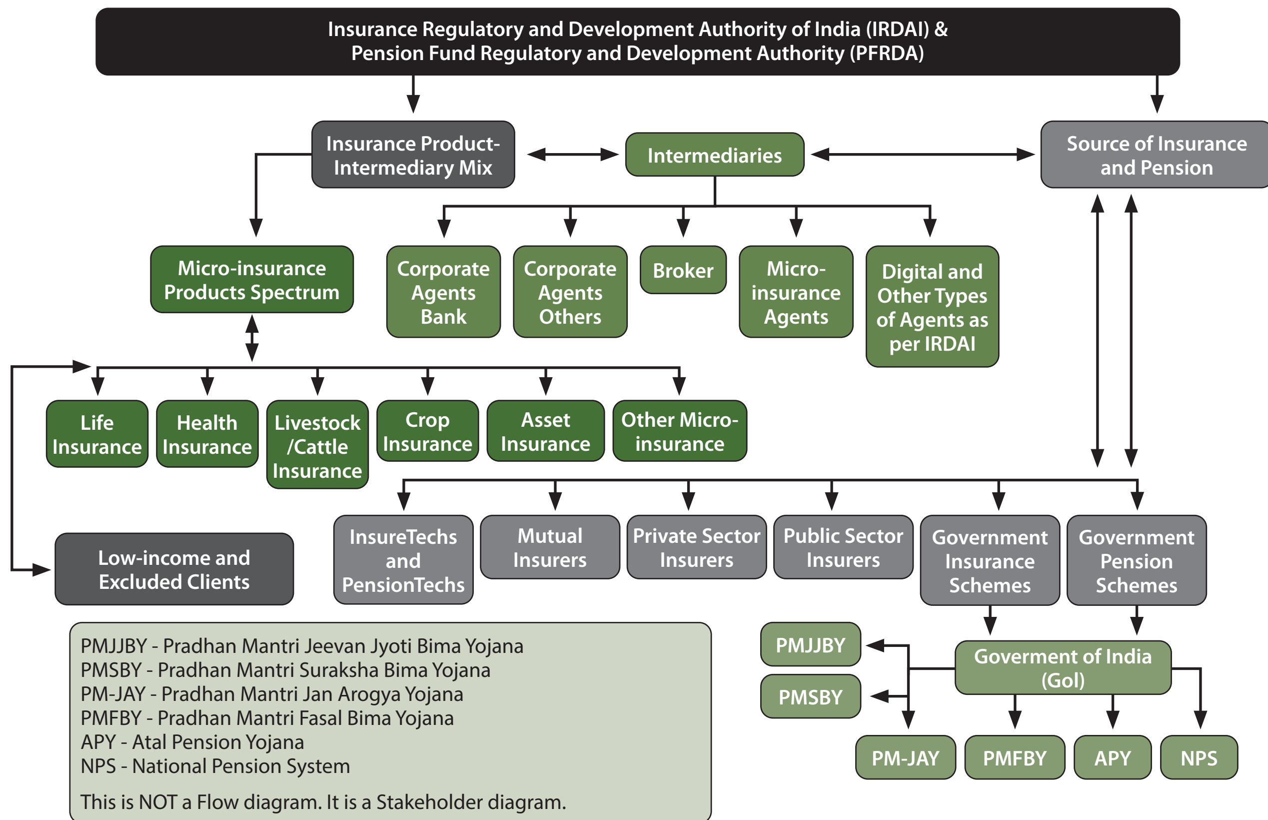

Figure 10.1. Ecosystem for Inclusive Insurance and Pension in India – Stakeholder Diagram

vulnerable populations. This has been achieved through a multiplicity of channels, including government-led schemes that provide a basic level of security, micro-insurance products offered by both state-owned and private insurers tailored for low-income groups, specialised provisions by mutual insurers for the underrepresented, and the advent of technology-driven solutions from InsureTech and PensionTech enterprises. These initiatives represent a collective effort to foster a more inclusive insurance framework, ensuring that the protective benefits of insurance and pension reach all societal strata, particularly those most in need. The insurance and pensions ecosystem in India is comprehensively diagrammed in Figure 10.1 overleaf.

The sequential progression of this chapter addresses each facet of these mechanisms, starting with an overview of the government's role in pioneering and subsidising insurance programmes for low-income people. It then proceeds to assess the contributions of commercial insurers who have developed micro-insurance products that address the nuances of serving economically disadvantaged populations. The text also examines the unique position of mutual insurers in the Indian market, offering community-centred insurance solutions. Furthermore, the narrative highlights the innovative impact of InsureTech and PensionTech companies, which leverage technology to improve the delivery and accessibility of insurance and pension services.

The concluding part of the chapter offers a thorough discussion on the key issues backed by empirical evidence given in this chapter. It also extracts lessons from these experiences (informed by a meta-analysis) in India. The analysis serves to inform and guide stakeholders on the complexities of extending insurance and pension coverage to India's excluded and vulnerable populations. Furthermore, this synthesis of experiences and strategies is intended to support the ongoing refinement of policies and programmes in this vital sector, ensuring that they remain responsive to the needs of all citizens, especially the economically challenged and excluded.

10.2. GOVERNMENT INSURANCE AND PENSIONS SCHEMES

There are several government schemes in India for the multi-dimensional poor, vulnerable and excluded. The key schemes taken up here are the Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY), Pradhan Mantri Suraksha Bima Yojana (PMSBY), Pradhan Mantri Jan Arogya Yojana (PM-JAY), Pradhan Mantri Fasal Bima Yojana (PMFBY) and Atal Pension Yojana (APY). These schemes envisioned and executed with the intent of bridging the gap in insurance and pension services, have played a pivotal role in ensuring that the marginalised sections of society who experience multi-dimensional poverty have access to vital financial safety nets and coping mechanisms. As evident from the plots given below, the schemes have shown robust year-on-year growth with an increase in number of policies, premiums, claims, and female beneficiaries. Table 10.1 provides a comprehensive overview of the schemes along with their composite performance data.

Table 10.1. Overview of Government Schemes

Feature/ Parameter	PMJJBY	PMSBY	PM-JAY	APY	PMFBY
Type of Scheme	• Life Insurance	• Accidental Death & Disability Insurance	• Health Insurance	• Pension Scheme	• Agricultural/Crop Insurance
Enrolment Guidelines	• Linked with bank accounts	• Linked with bank accounts	• Based on deprivation and occupational criteria of SECC data	• Linked with bank accounts	• Farmers should apply during the crop sowing season. Enrolment is either compulsory (for farmers availing crop loans) or voluntary (for non-loanee farmers).
Eligibility	• Age: 18-50 years • Bank account holder	• Age: 18-70 years • Bank account holder	• Based on SECC-2011 data • For the poorest and deprived population	• Age: 18-40 years • Bank account holder	• All farmers, including sharecroppers and tenant farmers, growing the notified crops in the notified areas are eligible.

Feature/ Parameter	**PMJJBY**	**PMSBY**	**PM-JAY**	**APY**	**PMFBY**
Sum Assured	• ₹200,000	• ₹200,000 for accidental death and total permanent disability; • ₹100,000 for partial permanent disability	• No sum assured, but coverage of up to ₹500,000 per family per year	• Not applicable as it is a pension scheme	• The sum assured might vary but is typically equivalent to the scale of finance as decided by the local district authorities. It can be higher than this, but the premium for the additional sum assured has to be borne entirely by the farmer.
Premium	• ₹436 per annum	• ₹20 per annum	• No premium for eligible beneficiaries	• Varies based on pension chosen & age	• 2% of the sum assured for all Kharif crops, 1.5% for all Rabi crops, and 5% for commercial and horticultural crops. The remaining premium is subsidised equally by the state and central government.
Enrolment Period	• Annually renewable	• Annually renewable	• No fixed period (continuous)	• Contributions until the age of 60 years	• Typically, it corresponds with the Kharif and Rabi crop sowing seasons. The exact dates might vary each year, and are notified by the government.
Mode of Payment	• Auto-debit from the bank account	• Auto-debit from the bank account	• No premium; government-funded	• Auto-debit from the bank account	• Payment can be made through banks (for loanee farmers) or directly (for non-loanee farmers) using various methods like cash, cheque, DD, or online modes.
Main Benefits	• Death benefit • Risk coverage for a year	• Benefit on accidental death or disability • Annual risk coverage	• Hospitalisation coverage • Pre-existing diseases covered	• Guaranteed monthly pension in old age • Spouse can continue, or can claim corpus	• Broad Coverage: From pre-sowing to post-harvest losses. • Affordable premiums with government subsidy. • Financial support during unexpected crop losses. • Encourages farmers to adopt modern agricultural practices.
Data and Performance	• As on 30 November 2022: • Cumulative Enrolments: 144.3 million, • Claims Paid: 627,817 • Claims Amount: ₹125,563 million. • As on 30 June 2022: • Female Beneficiaries 45.2 million	• As on 30 November 2022: • Cumulative Enrolments: 313.1 million, • Claims Paid: 107,062 • Claims Amount: ₹21,255 million. • As on 30 June 2022: Female Beneficiaries 121 million	• As on 31 August 2022: • Cards Issued (incl. 46.8 million cards issued by State IT systems): 190 million plus, • Hospital Empanelment: 28,311 (46% Private) • Patients hospitalisation: 39 million plus • Treatments: ₹452,940 million, and • Average Claim Size: Public ₹9,045; Private ₹13,730	• In 2022-23, the Number of Subscribers: 45.95 million, and • AUM Growth: ₹267,000 million	Performance of PMFBY (2016 2022):[3] • Covered Loanee Applications: 334.3 million • Covered Non-Loanee Applications:139.7 million • Total Covered Applications: 474 million • Insured Area: 349.40 million Ha • Average Gross Premium: ₹282,190 million • Average Sum Insured (₹/Ha): 40,654 • Average Claim per Benefitted Farmer (₹): 10,241

10.2.1. Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY)

The scheme[4] has showcased substantial growth and impact since its inception, as evident from the data given below:

The PMJJBY scheme maintained a fixed annual premium of ₹330 from 28 December 2017 to 15 December 2021, before increasing to ₹436 by 30 November 2022, to adapt to economic changes and maintain sustainability. Enrolments grew substantially, from 52.2 million in December 2017 to 144.3 million by November 2022, marking a 176% rise in five years. Claims paid under the scheme rose from 79,312 (₹15,862.4 million) in December 2017 to 627,817 (₹125,563.4 million) by November 2022, possibly influenced by the Covid pandemic's second wave.[5]

The scheme has improved gender inclusivity, with female beneficiaries increasing from 11 million in March 2016 to 45.2 million by 30 June 2022 (Figure 10.2). Yearly growth has been consistent, with a notable enrolment spike between March 2020 and March 2021 of over 30 million. Claims disbursed also consistently increased from 41,437 in March 2016 to 621,372 by 30 June 2022.[6]

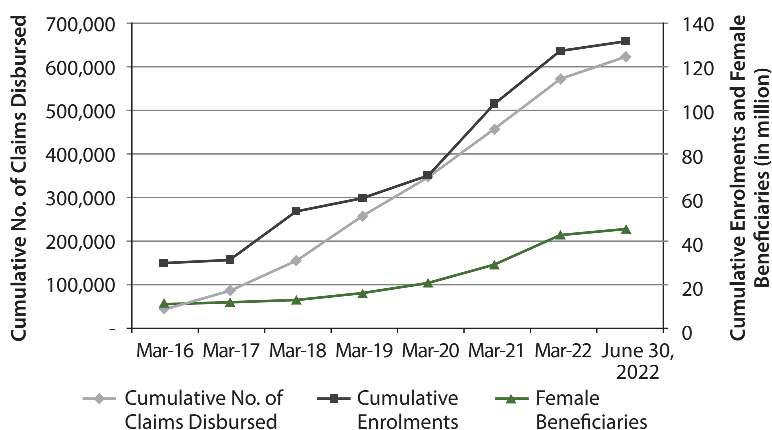

Figure 10.2. Key PMJJBY Trends

To further optimise the PMJJBY, potential enhancements include pre-medical screenings for more precise targeting, digitisation of claims processing for ease and speed, robust verification systems for integrity, expanded public awareness campaigns, and regular feedback collection for ongoing improvements.

10.2.2. Pradhan Mantri Suraksha Bima Yojana (PMSBY)

The PMSBY scheme's premium was consistently set at ₹12 from 18 December 2017 to 15 December 2021 and then increased to ₹20 by 30 November 2022—a 66.7% hike reflecting the scheme's adaptability to economic trends and beneficiary needs. Enrolments grew by 142% from 132.5 million in December 2017 to 321 million by 11 January 2023.[7]

Claims paid escalated from 14,292 in December 2017 to 110,298 by January 2023 (over a six-fold increase), with the total claim amount rising to ₹21,255.6 million by November 2022 (over a six-fold increase). Female participation rose by 233%, from 36.3 million in March 2016 to 121 million by 30 June 2022 (Figure 10.3).[8]

Yearly growth has been strong, with enrolments and claims disbursed consistently rising since 2016. Claims paid reached 119,224, with 30,549 claims rejected by 28 June 2023.

PMSBY has become a key initiative for providing affordable accidental insurance, but opportunities remain for enhancements, such as process and internal audits, to ensure consistent implementation across states.

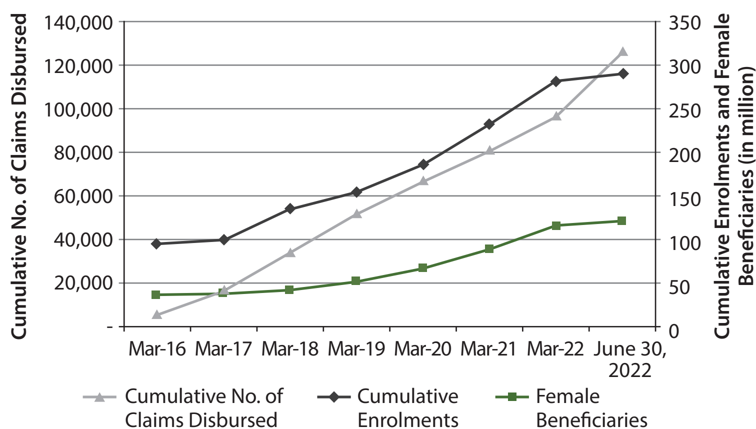

Figure 10.3. Key PMSBY Trends

10.2.3. Pradhan Mantri Jan Arogya Yojana (PM-JAY)

India's healthcare system is challenged by a "triple[9] burden of disease" and a significant disparity in service distribution, with the private sector providing 70% of healthcare services primarily in urban areas, leaving rural areas underserved. Public hospitals, while struggling with funding and resources, contribute to the situation where 62% of healthcare costs are out-of-pocket, driving nearly 60 million Indians into poverty each year.

The Ayushman Bharat initiative, with its key component PM-JAY, is the world's largest health insurance scheme, aiming to protect about 120 million underprivileged families (around 550

million citizens) from the financial burden of hospitalisations. It is government funded and offers ₹500,000 annual coverage per family, targeting the bottom 40% of the population financially vulnerable, based on the 2011 Socio-economic Caste Census. The month-wise trends in card enrolments and hospital admissions are provided in Figure 10.4.

PM-JAY has significantly helped during the COVID-19 pandemic, covering over 160,000 hospitalisations and saving beneficiaries over ₹18,000 million.[10] It has been a stupendous success by any standard. It has successfully enrolled 33 States and Union Territories, issued over 190 million cards, and empanelled 28,311 hospitals (46% private). The scheme has provided treatments worth ₹452,940 million, helping over 39 million patients with nearly equal gender distribution among beneficiaries.[11] Challenges include operational issues such as the denial of treatment by some hospitals and a lack of awareness among potential beneficiaries. Future enhancements include integrating telehealth and a greater emphasis on preventive care. PM-JAY is evolving to reduce financial burdens, democratise healthcare access, and ensure sustainable hospital patient flows, underscoring India's commitment to a healthier nation.

10.2.4. Atal Pension Yojana (APY)

India has seen significant progress in retirement planning, with the NPS and APY experiencing 25.1% subscriber growth and 22.7% increase in assets under management, respectively as of November 2022. The APY's most popular pension option provides a monthly pension of ₹1,000 favoured by 76% of subscribers as of March 2022, indicating potential economic constraints or a re-prioritisation of financial goals; the choice for the higher ₹5,000 pension declined from 47% to 15% between March 2016 and March 2022.

Women's participation in the APY is robust at 44%, contrasting with their 24% representation in the NPS all-citizen-model. Youth engagement is also on the rise, with 44.8% of APY subscribers being between 18 and 25 years old as of August 2022, up from 29.3% in March 2016, showing increased financial literacy among the young.

The Economic Survey 2022-23[12] noted the expansion of pension coverage, from 1.2% of the population in FY17 to 3.7% in FY22, and pension assets grew from 1.2% to 3.2% of the GDP, indicating the sector's growth outpacing the overall economy. Maharashtra leads with 17% of total enrolments.

This trend points (Figure 10.5) towards a more inclusive financial system, where even lower-income

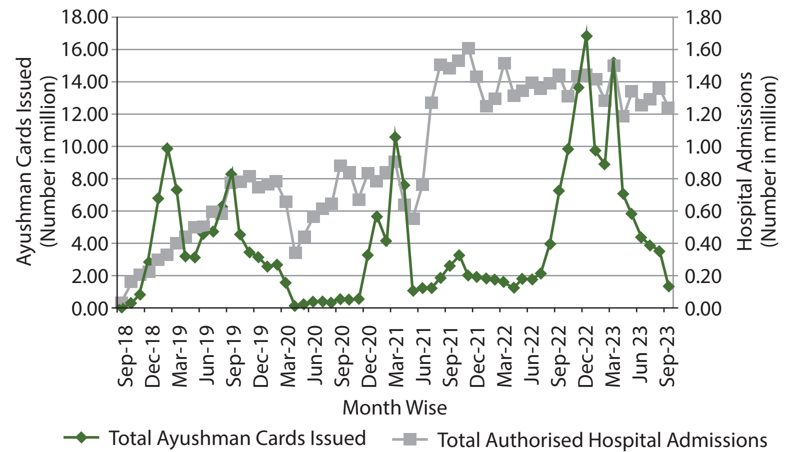

Figure 10.4. Total Ayushman Cards Issued and Total Hospital Admissions (month-wise)

individuals are securing their retirement. The shift to lower pension amounts in APY could reflect economic challenges, risk aversion, or immediate financial needs taking precedence over future savings. The pension sector's growth relative to GDP highlights its increasing economic influence. With the expansion and asset growth, there is a positive outlook for India's pension system. However, challenges such as ensuring sustainability and inclusivity remain. Policy interventions, continuous monitoring, feedback mechanisms, and public awareness campaigns are essential to leverage these schemes fully, especially for those who experience multi-dimensional poverty in India.

As discussed in the conclusion section, continuous monitoring and client feedback, policy interventions, and public awareness campaigns will be crucial to harness the full potential of these government schemes and ensure security for all citizens, especially the multi-dimensional poor (MDP), based on the MPI, and vulnerable in India.

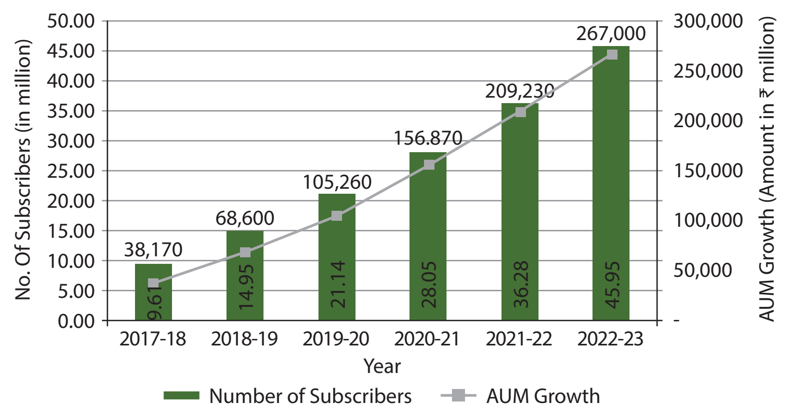

Figure 10.5. APY-Number of Subscribers and AUM Growth

10.3. UNDERSTANDING MICRO-INSURANCE: AN OVERVIEW

The micro-insurance sector in India has seen a significant upswing in recent years, reflecting the concerted efforts of the government and private entities to extend financial protection to the underserved segments of society. This niche of the insurance market is characterised by its affordable premiums, which make it accessible to those with scant financial means, including informal female workers, the broader working class, and economically constrained households.

The widespread adoption of micro-insurance is the result of collaborative endeavours by state and private insurers, who utilise a network of intermediaries to disseminate these services to even the most remote regions. These intermediaries are instrumental in educating communities about the benefits of insurance, thus contributing to the yearly advancements observed in the sector in terms of the growing number of policyholders and the increase in premiums collected.

The micro-insurance landscape in India comprises two main categories: general and life insurance. Life micro-insurance policies, such as term and endowment plans, are available for individuals and groups. General micro-insurance, on the other hand, encompasses health, personal accident, and property insurance, which include safeguards for assets such as livestock and homes for both individuals and groups (Box 10.1). This insurance type is crucial in shielding economically weaker sections from a variety of risks, ranging from health emergencies to asset and accident protection. Tailored products have been developed to meet these specific needs, and government initiatives like the PMFBY further extend benefits to non-loanee farmers, consistent with the Micro-Insurance Regulations set by the Insurance Regulatory and Development Authority of India (IRDAI) in 2015.

In adapting to market needs, general insurance policies for Micro, Small, and Medium Enterprises (MSMEs) have also been included in the micro-insurance landscape. These cater to the wide range of insurance needs of MSMEs and offer security with a reasonable annual premium cap of ₹10,000 per entity, ensuring that businesses of all sizes have the opportunity to protect their operations and assets.

Assessment of the micro-insurance sector in India shows a positive trajectory, with a notable increase in active policies and claims filed. There are 24 life insurance companies offering a total of 26 different micro-insurance products, split into

BOX 10.1. MICRO-INSURANCE COVERAGES

There are a variety of micro-insurance coverages aimed at providing comprehensive protection for both individuals and groups, including bundled policies (see Box 10.2). Health insurance is included to shield against the financial impact of medical situations, ensuring that healthcare remains accessible without becoming a financial strain. There's also asset protection, which encompasses safeguards for homes and personal property against events like natural disasters or theft, as well as coverage for farm animals and essential work-related tools against unforeseen risks. Personal accident insurance offers a financial safety net in the event of accidental injuries or death. To address these diverse needs, insurance companies have developed specialised policies such as Cattle Micro-insurance for livestock, Kisan Agriculture Pumpset Micro-insurance for farmers' equipment, and various others, including policies for silk farmers and broad personal accident coverage, ensuring a tailored approach to securing the livelihoods and assets of their clients.

BOX 10.2. BUNDLED POLICIES, PPB TATA AIG GROUP ACCIDENT GUARD POLICY @ ₹399

A flagship example of a micro-insurance product is the "PPB Tata AIG Group Accident Guard Policy @ ₹399" introduced by India Post. Launched on 16 June 2022 and available through India Post Payments Bank (IPPB) micro-ATMs, the policy offers comprehensive coverage against accident-related eventualities for a modest premium. It includes a suite of benefits such as accidental death, paralysis or mutilation coverage, in-patient and out-patient medical expenses, education benefits for children of the insured, daily cash for in-hospital stays, and family transportation benefits.

individual and group insurance products. As of March 2022, there were nearly 100,000 micro-insurance agents, 80% of whom were affiliated with private insurers. Only 6% of these agents are from NGOs, Self-Help Groups (SHGs), Microfinance Institutions (MFIs), and Business Correspondents, which have direct connections to the core clientele of micro-insurance, whereas 94% are other types of Micro-Insurance Agents (MI Agents), including Common Service Centres (CSCs). CSCs are crucial in delivering various e-services to India's rural communities, thereby playing an essential role in the micro-insurance distribution framework.

In the past five years,[13] the micro-insurance business in the life insurance sector has observed distinct trends (Figures 10.6 and 10.7). The Life Insurance Corporation (LIC) has seen consistent growth in the individual new business segment, except for a decline in 2021-22, which may suggest market saturation or challenges. The private sector, after a dip, showed a recovery in 2021-22, indicating strategic shifts or adaptations. The group new business segment, especially in premium collection, witnessed the private sector making significant strides, aiming for a larger market share.

The year 2020-21 was marked by a surge in demand for life insurance, possibly influenced by the COVID-19 pandemic. LIC observed an increase in group new business lives as compared to the previous year, while the private sector experienced massive growth in both individual and group segments (Figures 10.8 and 10.9), emphasising the need for insurers to adapt to external factors and market dynamics.

The landscape of micro-insurance agents in the Life Insurance sector has also shifted. While LIC has seen a decline followed by stability with agents in categories like NGOs, the private sector has demonstrated growth in the "Other MI Agents" category from 2019-20 onwards, suggesting innovative outreach strategies or attractive incentives. Additionally, a surge in NGO agents for the private sector in 2018-19 indicates the exploration of community-based approaches to expand reach.

These trends reflect an evolution in the outreach and distribution strategies of insurers, with the private sector tapping into newer market segments and LIC maintaining a diverse portfolio of agents. The overall increase in the number of agents underscores the potential of the micro-insurance sector.

In the fiscal year 2021-22,[14] the micro-insurance sector in India marked a rise in new business. The individual segment initiated 877,000 new policies

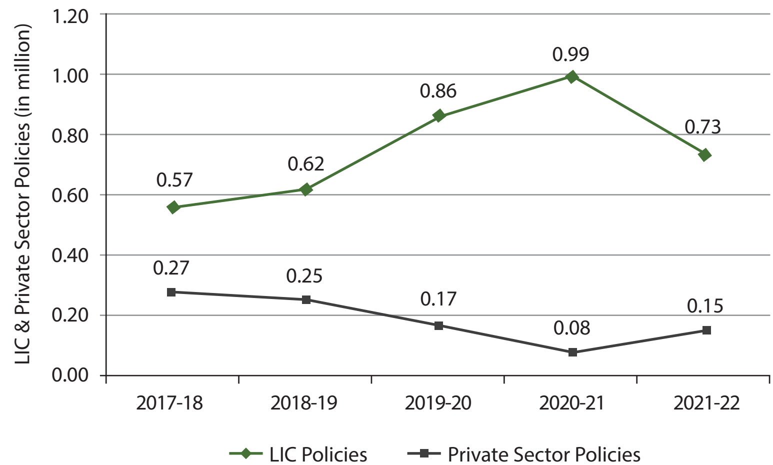

Figure 10.6. Performance of Micro-insurance Business in the Life Insurance Sector – Individual New Business (Policies)

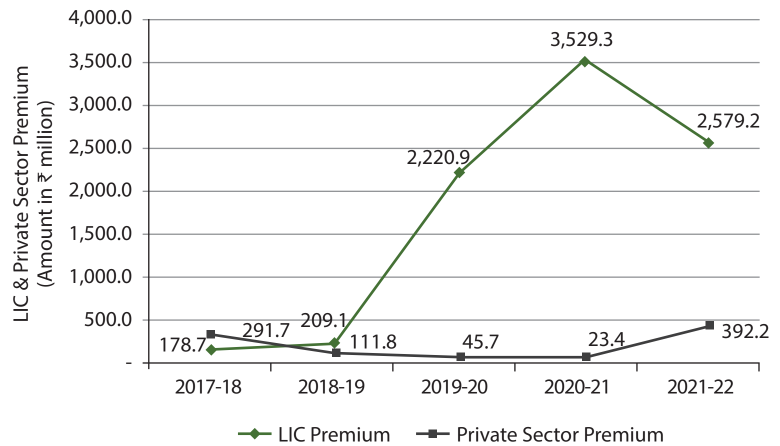

Figure 10.7. Performance of Micro-insurance Business in the Life Insurance Sector – Individual New Business (Premiums)

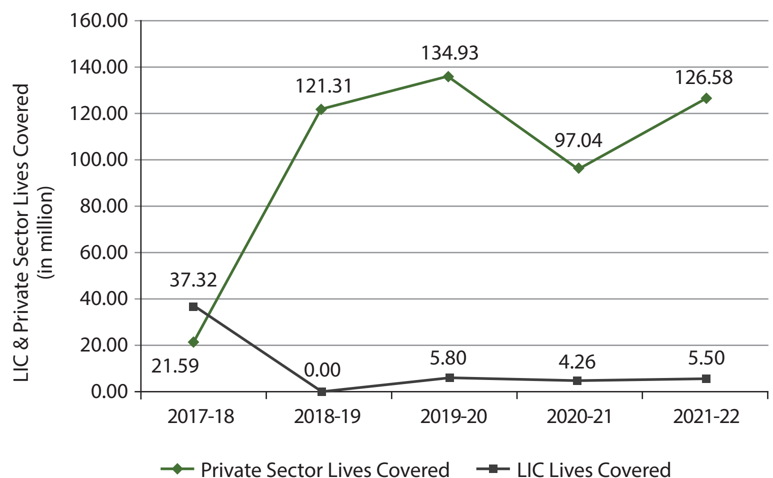

Figure 10.8. Performance of Micro-insurance Business in Life Insurance Sector – Group New Business (Lives Covered)

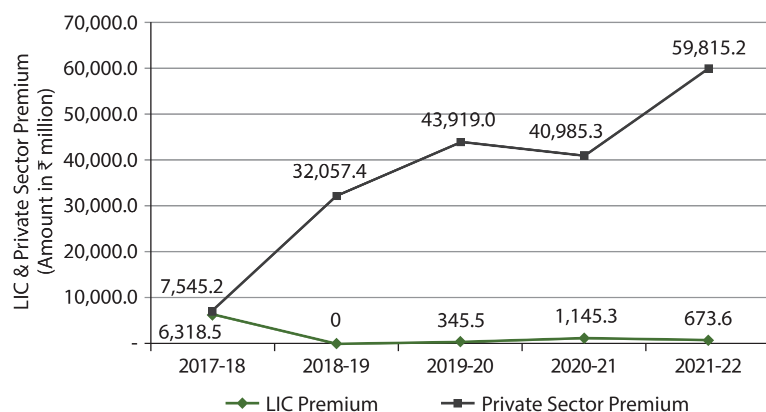

Figure 10.9. Performance of Micro-insurance Business in Life Insurance Sector – Group New Business (Premiums)

with a premium income of ₹2,971.4 million, while the group segment covered 132 million lives, bringing in a premium of ₹60,488.8 million. LIC played a major role with 732,000 policies in the individual segment and nearly 54.97 million lives in the group segment. The private sector also saw growth, with 145,000 new individual policies and a significant impact in the group segment, covering 126.6 million lives with a premium volume of ₹59,815.2 million.

In conclusion, the micro-insurance landscape in India is expansive, with products designed to meet the needs of the target demographic. The involvement of private insurers and the role of CSCs in distribution showcase the collaborative efforts to make insurance accessible to all. The growth trajectory and increasing acceptance of micro-insurance indicate a bright future for the sector in India.

10.4. MUTUAL INSURERS

Mutual insurance models[15] epitomize collective risk-sharing, offering a unique alternative to conventional insurance systems. These models are complex by nature, with their definitions varying according to the perspectives of different organisations. The European Commission views mutual insurers as member-driven associations that emphasise member benefits over profit-making. Similarly, the Association of Mutual Insurers and Insurance Cooperatives in Europe (AMICE) describes them as organisations owned and democratically controlled by members, with the main goal of insuring against risks associated with their membership. The ILO, in 2001, acknowledged their dedication to non-profit service and solidarity, highlighting their role in promoting insurance and health benefits. In India, definitions by the International Cooperative and Mutual Insurance Federation (ICMIF) and the Insurance Institute of India (III) align with community-centric ownership, service to the underserved, and commitment to sustainability.

Mutual insurers historically emerged from community-based initiatives to mitigate risks through cooperatives or mutual associations. These entities prioritise member ownership and interests in their operations and may offer services to non-members. They have evolved from informal gatherings to formal organisations, with regulations concerning dividend distribution varying by region. Supportive state policies and regulations have often been catalysts for the growth of Mutuals, Cooperatives and Community-based Organisations (MCCOs), contributing to their global presence.

The essence of mutual insurance is the community-based approach to risk management, maintaining the risk within the community rather than externalising it. This model focuses on devising insurance products that meet the specific needs of members, providing a communal safety net. Financial results, whether surpluses or deficits, are the members' collective responsibility. In profitable times, benefits may be returned to policyholders as dividends or used to reduce future premiums, demonstrating the mutuals' dedication to serving their members.

In the Indian scenario, there are 19 Cooperative and Mutual Insurers,[16] half of which target the Base of the Pyramid (BoP) demographic. A remarkable 90% of the primary membership in these policies are women. These entities offer diverse products like health insurance, hospital cash plans, credit life insurance, and livestock and asset insurance. Their distribution strategy often involves integration with microfinance loans. These insurers mainly operate in India's Southern and Western regions, impacting over 3.5 million low-income individuals. The average claim processing time is around 30 days, with a claim settlement rate of 60-85% and a low claims rejection ratio of 3-4%.[17]

10.5. TECHNOLOGY-BASED INSURERS IN INDIA: SHOWING EARLY PROMISE TOWARDS INCLUSIVE INSURANCE

The InsurTech landscape in India is diverse and multifaceted. Digital brokers such as PolicyBazaar, Ditto, TurtleMint, and Paytm are leading the way in offering consumers an array of insurance products to choose from. Corporate insurance brokers like Nova Benefits bridge the gap between corporations and insurance providers. On the technological front, Insurance SaaS companies like Ensuredit and Riskcovry offer innovative software solutions

BOX 10.3. THE SPECTACULAR JOURNEY OF VIMOSEWA

VimoSEWA, a cooperative established by SEWA in 1992 and independent by 2009, functions as both a mutual benefit society and an intermediary. VimoSEWA's mission is to provide social security for women in the informal sector through tailored insurance products. With a focus on family-wide coverage, the cooperative has developed and diversified its insurance offerings by collaborating with insurance companies and incorporating community feedback. These offerings are distributed by local women leaders, known as 'Aagewans', and through SEWA Shakti Kendras, which serve as information hubs.

Over the years, VimoSEWA has evolved from offering insurance just for women to covering entire families and has been instrumental in creating insurance products that cater to the specific risks faced by the members. The cooperative has also embraced digital tools, launching a mobile app that facilitated operations during the COVID-19 pandemic, helping to streamline tasks such as enrolment and claims processing. VimoSEWA's efforts are in tandem with the United Nations Sustainable Development Goals, as it continues to empower women within the informal sector.

for the industry. Digital Insurance Underwriters, including Acko and Digit, are redefining the underwriting process with a digital-first approach. Health Clubs, represented by entities like Kenko and Even, emphasise the importance of wellness in the insurance domain.[18]

InsureTech is now slowly spearheading a transformation in the insurance sector towards inclusive insurance. By leveraging technology, these companies offer affordable and accessible solutions. The rise of digital platforms has made purchasing and managing insurance policies more convenient, eliminating the need for brick-and-mortar branches. Notably, the advent of micro-insurance products addresses the needs of those with limited finances. Additionally, the infusion of AI is reshaping the insurance landscape by rapidly processing large data volumes and refining insurance offerings to better match individual requirements. It accelerates claim processes and improves customer experiences. AI-driven predictive analytics help insurers craft innovative products attuned to the evolving needs of India's diverse population. In summary, these InsureTech companies are reimagining insurance in India. Their tech-centric solutions prioritise accessibility, affordability, and simplicity. While their inroads are still nascent, their efforts to reach the underserved sectors underscore the potential for significant growth of inclusive insurance in the coming years.

10.5.1. Technology as the Fulcrum for Inclusive Insurance

In an era where technological advancements are coming to the fore, the insurance sector is witnessing a paradigm shift. Historically marred by intricate processes and dense terminologies, the industry is now embracing a more inclusive and efficient business model fueled primarily by policy and digitisation. Insurance providers are beginning to transition from merely selling policies to devising comprehensive, value-driven solutions, especially catering to the excluded and low-income people. Platforms like Turtlemint and PolicyBazaar exemplify this transformation by utilising digital platforms to offer unparalleled customer experiences. Turtlemint excels in making insurance universally accessible. Their algorithm-driven recommendations cater to individual needs, and their extensive partnerships with insurance companies enhance their reach. PolicyBazaar has significantly influenced the industry by enabling users to compare and purchase tailored policies and also offering robust claim support. Meanwhile, companies like Toffee Insurance are leveraging data analytics to introduce novel offerings, such as mosquito disease protection, reflecting the power of data-driven insights. Known for its unique micro-insurance products tailored for Indian demographics, Toffee Insurance emphasises affordability, simplicity, and inclusivity.

Furthermore, technology has redefined the efficiency of claim processing. Initiatives like Digit Insurance's "Super-Simple Claims" not only elevate the customer experience but also curtail fraudulent claims, resulting in cost savings. Collaborative business models are also emerging as a significant trend, with partnerships between Digit and Amazon Pay expanding the reach of insurance products without necessitating hefty investments. In fact, with the ethos "Make Insurance Simple," Digit Insurance stands out for its transparent, user-friendly

products. Overall, the innovative offerings and strategic partnerships of the InsureTechs highlight their potential for market leadership in the sector in the coming years.

Another notable advancement is the emphasis on financial literacy regarding insurance. Specialising in pension products, PensionMall provides a platform for users to make informed decisions regarding their retirement plans. Likewise, with a focus on the informal sector, pinBox Solutions promotes financial literacy and emphasises the significance of pensions for future security.

10.6. LESSONS FROM INDIAN EXPERIENCE BASED ON A META-ANALYSIS OF LITERATURE IN INDIA: ENABLERS FOR INCLUSIVE INSURANCE

Based on an extensive meta-analysis[19] of key insurance research literature[20] focused on inclusive insurance in India (Figure 10.10), a set of critical enablers for the promotion of inclusive insurance in the post-COVID-19 landscape have been identified. This meta-analysis method involved a thorough examination and synthesis of research findings across a spectrum of sources, including regulators, government schemes, large and small insurance providers, insurance mutuals, tech companies, and various other stakeholders within the Indian context.

As discerned from the meta-analysis of the inclusive insurance market in India, technology emerges as a critical facilitator, with digital platforms, big data analytics, and AI serving as tools to gather insights, tailor products, and streamline processes. These innovations are seen as critical to meeting the unique needs of different customer segments effectively and affordably. The adoption of mobile applications, online platforms, and digital payment systems is also identified as pivotal, especially for making insurance services more accessible to those in remote or previously unreachable locations. Advanced technologies such as telematics, IoT devices, and blockchain are also identified for their potential to enhance transparency, trust, and efficiency throughout the insurance value chain, especially regarding low-income people. Thus, by integrating these technological advancements, the insurance industry in India can expand its reach and

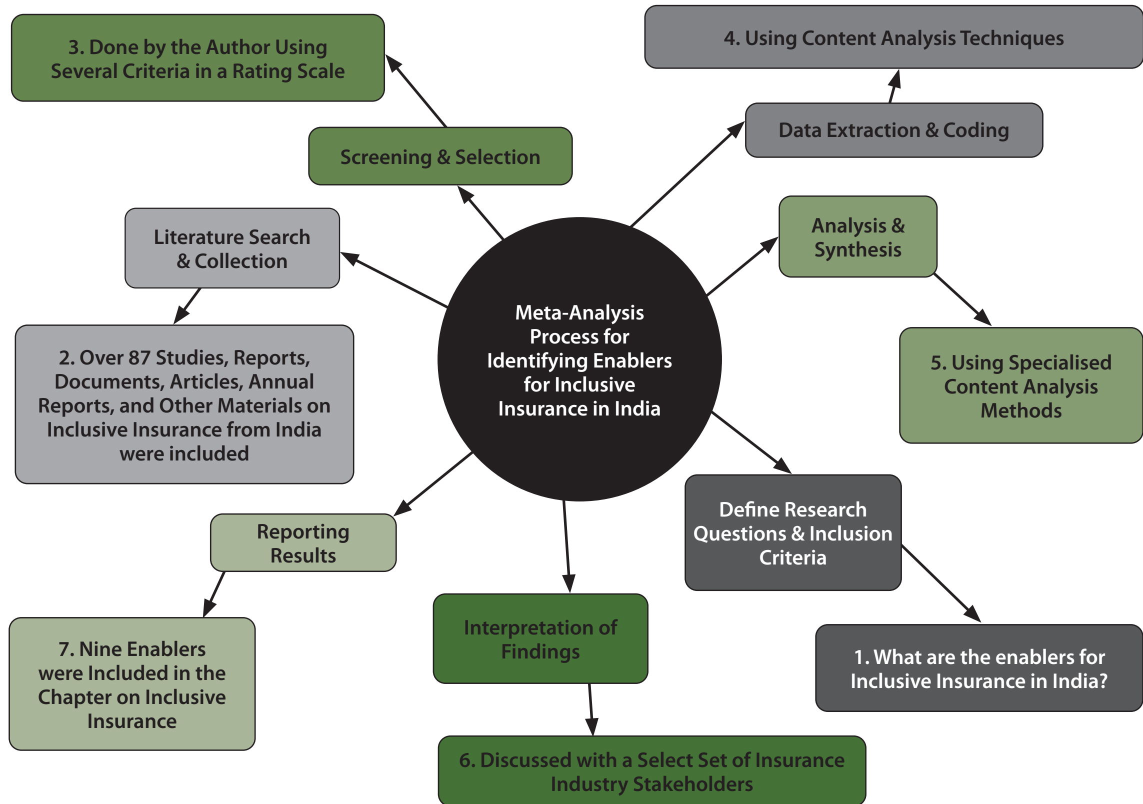

Figure 10.10. Meta-Analysis Process Focussed on Inclusive Insurance in India

foster a culture of inclusivity and equality, ensuring that insurance is not a privilege but a right accessible to all.

Here are nine key enablers (Figure 10.11) to promote inclusivity in insurance as discerned from the aforementioned meta-analysis of 87 studies in India:

Enabler 1: Digital Accessibility is Crucial—In today's rapidly digitising India, the importance of digital accessibility in the insurance sector cannot be overstated. The proliferation of smartphones and the expansion of internet connectivity have transformed the way businesses interact with their clientele. For the insurance domain, this means a shift from traditional, often cumbersome, methods of engagement to more direct and instantaneous digital platforms. These platforms, when optimised, can serve as the primary conduit to reach the underserved, bridging the gap between sophisticated insurance services and those who have historically been excluded from them. Companies venturing into this space must prioritise creating platforms that are not only user-friendly but also resonate with the local, cultural and linguistic nuances, ensuring that their services are both accessible and comprehensible.

Moreover, the emphasis on digital accessibility is not merely about creating an online presence. It is about crafting an experience that is intuitive, seamless, and tailored to the unique needs of diverse user groups. This involves understanding the challenges and limitations faced by underserved populations, such as limited digital literacy or connectivity issues, and designing solutions that cater specifically to these challenges. By doing so, insurance providers can ensure that their platforms are not just another digital tool but a lifeline that brings essential services closer to those who need them the most. Ensuring digital accessibility is a key finding from the meta-analysis.

Enabler 2: Simplicity and Transparency Matter—The world of insurance, with its intricate terminologies and complex product structures, can often be daunting for the average individual. This complexity is amplified for marginalised communities, where financial literacy might not be widespread. It becomes imperative, then, for insurance providers to simplify their offerings. Simplification does not mean diluting the essence of the product but presenting it in a manner that is easy to comprehend and relate to. Transparent operations and clear communication can demystify insurance, making it more approachable and less intimidating for potential customers.

Furthermore, transparency fosters trust, a crucial element in the insurance domain. When customers understand what they are signing up for, without hidden clauses or convoluted terms, they are more likely to invest their trust and money. Technology can play a pivotal role in this by streamlining processes, providing clear and concise information, and ensuring that the customer is kept in the

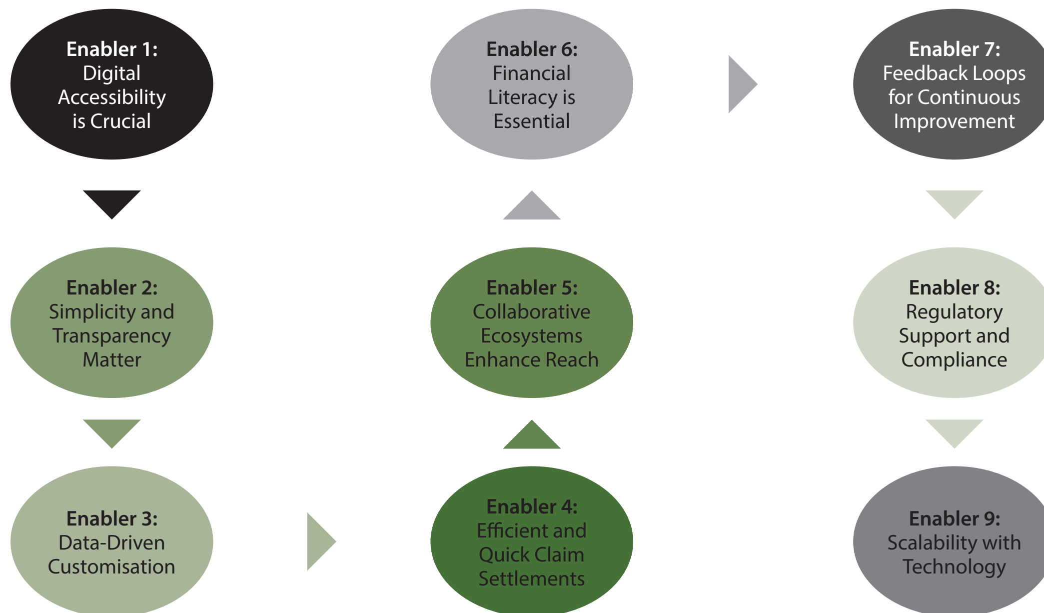

Figure 10.11. Key Enablers

loop at every stage. By prioritising simplicity and transparency, insurance providers can break down barriers, paving the way for higher adoption rates among communities that have traditionally been wary of insurance. Simplicity and transparency are important aspects highlighted by the meta-analysis.

Enabler 3: Data-Driven Customisation— In the age of information, data stands as one of the most valuable assets for businesses. For the insurance industry, data-driven insights can be transformative. Advanced analytics and AI offer a lens into the specific needs and preferences of different customer segments. Rather than adopting a one-size-fits-all approach, insurers can leverage these insights to craft tailored products that resonate deeply with their target audience. This level of customisation ensures that the insurance offerings are not just generic products but solutions that address the unique challenges and requirements of each (underserved and/or excluded) segment.

The potential of data-driven customisation extends beyond product creation. It encompasses the entire customer journey, from onboarding to claim settlements. By understanding customer behaviour, preferences, and pain points, insurance providers can refine their processes, making them more aligned with the expectations of their clientele. This not only ensures a higher uptake of insurance products but also fosters loyalty and long-term engagement. In a domain where trust and reliability are paramount, data-driven customisation can be the differentiator that sets an insurance provider apart from its competitors. Several studies in the meta-analysis touched upon this issue.

Enabler 4: Efficient and Quick Claims Settlement—One of the most significant touch points between an insurance provider and its customers is the claim settlement process. Historically, this process has been fraught with delays, bureaucracy, and inefficiencies, leading to dissatisfaction and mistrust among policyholders. Especially for the low-income segment, where each day of delay can translate into financial hardships, the need for swift and efficient claims settlement is paramount. Technology-driven initiatives can revolutionise this aspect of insurance. By automating and streamlining the claim verification and approval processes, technology can drastically reduce the time taken to settle claims.

Moreover, the integration of advanced technologies like AI and blockchain can further enhance the efficiency and transparency of claims settlement. AI can assist in the quick verification of claims, identifying potential frauds, and ensuring that genuine claims are processed without unnecessary delays. On the other hand, blockchain can bring about a level of transparency that was previously unattainable. Every step of the claims process, from submission to approval, can be recorded on a decentralised ledger, ensuring that both the insurer and the insured have a clear view of the process. Such technological interventions can go a long way in enhancing trust and credibility in the insurance domain. This was an issue that was highlighted by a few documents in the meta-analysis.

Enabler 5: Collaborative Ecosystems Enhance Reach—The insurance industry, traditionally viewed as a standalone sector, is undergoing a paradigm shift. The realisation that insurance can be seamlessly integrated into various other sectors has given rise to collaborative ecosystems. By forging partnerships with FinTech firms, e-commerce platforms, telecom companies, and even non-traditional players, insurers can significantly enhance their reach without massive infrastructural investments. These collaborations offer a dual advantage: they provide insurance companies with a ready customer base and allow them to leverage the technological prowess of their partners.

Furthermore, these collaborative ecosystems are not just about expanding reach; they are about creating holistic solutions that cater to the diverse needs of customers. For instance, an e-commerce platform can offer purchase protection insurance at the point of sale, or a telecom company can bundle insurance products with their subscription plans. Such integrations make insurance an integral part of the customer's journey rather than an afterthought. Agriculture is another domain where collaborations can happen for the benefit of low-income people. Overall, collaboration allows insurance providers to tap into markets and segments that were previously inaccessible, driving the agenda of inclusive insurance. The meta-analysis highlighted this aspect of strategic partnerships as a key indicator of success.

Enabler 6: Financial Literacy is Essential— While technology and product innovations are crucial, they can only be effective if the target audience understands the value and benefits of insurance. Financial literacy, especially in the context of insurance, becomes a cornerstone for driving adoption among marginalised communities. Digital platforms, with their interactive capabilities, offer a unique opportunity to educate potential customers. Through videos, interactive tools, gamified modules, and local language-led voice-based mobile advisors, these platforms can demystify insurance, making it relatable and understandable. The use of voice

was mentioned in a couple of studies in the meta-analysis as it was seen as capable of overcoming digital and process literacy on the go.

The importance of financial literacy goes beyond just understanding insurance products. It's about empowering individuals to make informed financial decisions, helping them understand the nuances of risk management, and showcasing the role of insurance in safeguarding their financial well-being. By leveraging technology to drive financial literacy campaigns, insurance providers can ensure that their products are not just available but are also valued and sought after by the target audience.

Enabler 7: Feedback Loops for Continuous Improvement—In the dynamic world of insurance, staying static is not an option. To remain relevant and cater to the evolving needs of customers, continuous improvement is essential. Technology offers a unique advantage in this regard: real-time feedback loops. By capturing and analysing feedback from customers, insurance providers can gain invaluable insights into the effectiveness of their products, identify pain points, and refine their offerings accordingly. A couple of studies in the meta-analysis talked about this issue.

This iterative process of feedback and refinement ensures that insurance products are always aligned with the needs and expectations of the target audience. Moreover, by actively seeking and acting upon feedback, insurance providers can foster a sense of belonging and trust among their customers. It sends a clear message that the customer's voice is valued and that the company is committed to delivering the best possible solutions. In the long run, these feedback loops can be the differentiator, ensuring sustained engagement and loyalty.

Enabler 8: Regulatory Support and Compliance—As technology-driven insurance initiatives gain momentum, the regulatory landscape needs to evolve in tandem. While technology offers numerous advantages, it also brings forth challenges in terms of data privacy, security, and ethical considerations. A robust regulatory framework is essential to ensure that technological innovations do not come at the cost of customer protection. InsurTechs and regulators need to collaborate, striking a balance between fostering innovation and ensuring compliance. This point also came up in the meta-analysis.

The role of regulators is not just to set guidelines but to actively participate in the innovation journey. By understanding the potential and challenges of technology-driven initiatives, regulators can create an environment that is conducive to growth while safeguarding the interests of the customers. Such a collaborative approach can ensure that the insurance industry remains at the forefront of innovation, driving the agenda of inclusivity and accessibility.

Enabler 9: Scalability with Technology—One of the most significant advantages of technology-driven insurance initiatives is scalability. Once a successful model is developed, it can be replicated across states and regions with relative ease by leveraging technology. This scalability ensures that the benefits of inclusive insurance are not confined to a specific geography but are made available to a broader audience.

Scalability, however, is not just about expanding reach. It is about ensuring that as the initiative scales, the quality and efficacy of the service remain consistent. Technology offers tools and platforms that can manage this growth, ensuring that processes are streamlined, feedback is captured and acted upon, and the essence of the initiative remains intact. In essence, technology ensures that scalability does not dilute the impact but amplifies it, bringing the vision of inclusive insurance to fruition. Some studies in the meta-analysis touched upon this issue.

Thus, technology-driven insurance initiatives have charted a clear roadmap for the future of inclusive insurance. By leveraging the myriad advantages offered by technology and focusing on the core tenets of customer-centricity, simplicity, and continuous innovation, InsureTechs can contribute to the goal of protecting the underserved and excluded segments of society.

10.7. CONCLUSION

Overall, India's rich tapestry, characterised by unparalleled diversity and intricate needs, showcases an advanced and multifarious approach to insurance and pensions. As we progress further into the digital epoch, the insurance sector is poised at a momentous crossroads. Melding technology into the insurance landscape is more than a mere digital evolution; it represents a strategic transformation, propelling the industry towards heightened inclusivity and expansive accessibility. Let us look at the key takeaways from the chapter:

Increased Strategic Choice. The Indian government still remains a central pillar in the inclusive insurance domain, steadfastly ensuring the well-being of its citizens through flagship programmes like PMJJBY, PMSBY, PM-JAY, PMFBY and APY.[21] While these initiatives have faced hurdles and have their shortcomings, their profound influence on the nation's socio-economic

fabric is indisputable. *PM-JAY, in particular, stands out as an exemplary endeavour credited with safeguarding myriad lives in recent times.*

Simultaneously, commercial insurance entities under the IRDAI are amplifying their impact, narrowing the gap between governmental strategies and public needs with a diverse suite of micro-insurance offerings using a wide range of intermediaries. Parallelly, mutual insurers such as VimoSewa (and many others, including Dhan Foundation) are using community-driven paradigms, enriching the broader insurance ecosystem. The mutuals have social acceptability at the grass-roots levels, greater adaptability of insurance products (tailored to the needs of low-income clients) and superior information that helps them overcome information asymmetry. The growing presence of InsureTech and PensionTech outlines the critical role technology is likely to play in the future, underscoring the sector's dynamic metamorphosis in India.

Thus, India's insurance landscape stands poised for a transformative leap, with technology acting as the catalyst bridging traditional values with contemporary needs. Envisioned is a future where insurance envelops every Indian, transcending socio-economic divides and offering sanctuary and protection. It is clear that the roadmap for this evolution is punctuated with technological advancements, ceaseless innovations, and an indomitable spirit of inclusiveness. In this forthcoming epoch, insurance is poised to metamorphose from a mere financial instrument to an emblem of hope, security, and unwavering assurance for every citizen.

However, despite all the advances given through this chapter, critical questions persist: Are the schemes adequately addressing the needs of the most vulnerable, especially those grappling with multi-dimensional poverty? Is there a scenario where individuals might be overlapping their coverages via multiple channels? What percentage of the population remains entirely outside the ambit of any insurance coverage? What about the 20.42 million identified by NITI Aayog as multi-dimensionally poor? How many of them are covered under what type of scheme? It is important that we know that the poorest and most vulnerable are included in at least one of the schemes, and unfortunately, not much can be said about that from the data today. Likewise, data on claims can be significantly enhanced. One potential solution to these quandaries is the creation of a real-time database where every insurance policy and pension is tagged with a unique ID, enabling detailed tracking and analysis. Entrusted under the purview of the respective regulatory authorities (IRDA for insurance and PFRDA for pension), the benefits of such a system would be manifold.

As India stands at the cusp of a transformative era in insurance, with the potential to craft a future that is more inclusive and resonant with the needs of its diverse populace, the following strategic recommendations should facilitate the acceleration of this journey:

Bolster Awareness of Government Initiatives

(a) ***Proposed Action:*** Introduce a unified 'National Insurance SMART Card' or a dedicated mobile application reminiscent of the Co-WIN platform. This would serve as a one-stop repository, amalgamating details of all insurance schemes an individual is enrolled in.

(b) ***Anticipated Impact:*** Such consolidation can be a game-changer in enhancing data accessibility, streamlining management, and fostering awareness among citizens about their insurance entitlements.

Operational Excellence and Accountability

(a) ***Proposed Action:*** Implement comprehensive internal and procedural audits, with a heightened focus on government-sponsored insurance initiatives. While these programmes are conceptualised at the central government level, their execution largely takes place at the state level. This decentralised approach may lead to variations in priorities and objectives, as well as occasional communication challenges. Addressing these nuances will ensure the smooth and effective implementation of these crucial schemes.

(b) Anticipated Impact: By pinpointing and rectifying operational bottlenecks, these audits will bolster transparency, enhance efficiency, and foster public trust in the system.

Leveraging Collaborative Synergies

(a) ***Proposed Action:*** Encourage the commercial insurance sector and mutual insurers to form strategic alliances with FinTech entities, telecommunication giants, and other grass-roots networks.

(b) ***Anticipated Impact:*** Such collaborations can be instrumental in augmenting the reach of insurance services, ensuring that even the most remote and underserved regions benefit from comprehensive insurance coverage.

Revolutionising Data-Driven Decision Making

(a) ***Proposed Action:*** Emphasise the collection of comprehensive, real-time data, which can be tagged with unique identifiers. Harness the prowess of Artificial Intelligence to analyse this data trove.

(b) ***Anticipated Impact:*** The digital age has ushered in an avalanche of real-time data. By leveraging AI analytics on this data, stakeholders can glean unparalleled insights. This can range from predicting emerging trends to decoding intricate customer behaviours. Such data-driven insights can be the bedrock of evidence-based policymaking, ensuring that the insurance sector remains agile, responsive, and aligned with the evolving needs of its clientele.

By adopting and executing these strategic recommendations, India can pave the way for an insurance ecosystem that is not only more inclusive but also more attuned to the aspirations and needs of its vast and diverse population.

END NOTES

1. Other stakeholders argue that there are between 400-500 million informal sector workers who are in need of insurance and related products. That may be true, but for this chapter, NITI Aayog's eclectic framework of multi-dimensional poverty is used. Traditionally, poverty estimation relied solely on income or monetary measures. However, a new approach has evolved to incorporate multiple dimensions and non-income factors. NITI Aayog took a significant step in 2021 by releasing the first-ever Multi-dimensional Poverty Index [MPI] for India. This initiative aims to improve India's position in globally accepted indices, underscoring the importance of comprehensive poverty alleviation efforts. It serves as a valuable complement to monetary poverty statistics by providing insights into "how many are poor" and "how poor are the poor." It provides a holistic understanding of poverty by considering dimensions such as health, education, and living standards.
2. NITI Aayog, 'India National Multi-dimensional Poverty Index A Progress Review 2023', https://niti.gov.in/sites/default/files/2023-08/India-National-Multidimentional-Poverty-Index-2023.pdf, and India's national MPI captures multiple and simultaneous deprivations faced by households across the three macro dimensions of health, education and living standards.
3. Data from https://agricoop.gov.in/Documents/RecentInitiative/G_7_V3_PMFBY_3_0_Smart_Scheme_for_Farming_Risk_Protection_020523_0.pptx
4. As of 26 April 2023, PMJJBY has witnessed over 161.9 million enrolments. The scheme has disbursed ₹132,904 million for 6,64,520 claims.
5. Ministry of Finance (GoI), 'Annual Report 2022-2023 and 2017-2018.
6. Department of Financial Services, (June 2022), 'Pradhan Mantri Jeevan Jyoti Bima Yojana',
7. Ministry of Finance (GoI), 'Annual Report' 2022-2023 and 2017-2018.
8. Department of Financial Services, (June 2022), 'Pradhan Mantri Suraksha Bima Yojana',
9. The persistence of chronic infectious diseases, non-infectious illnesses, and injuries - Agarwal, P., Kumar S., and Nisar, S., 2021. 'Mutual and cooperative insurers in India' in Insuring Bharat: Scaling Up People Led Risk Protection, pp 16-33. https://sewainsurance.org/wp-content/uploads/2021/03/A-study-on-Mutual-and-Cooperative-Insurance-in-India.pdf
10. Grewal, H., Sharma, P., Dhillon, G., Munjal, R.S., Verma, R.K, and Kashyap, R., 2023. 'Universal Health Care System in India: An In-Depth Examination of the Ayushman Bharat Initiative', Cureus, Jun, 15(6): e40733. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10360977/
11. National Health Authority (NHA), 'Annual Report 2022-23', https://nha.gov.in/img/resources/Annual-Report-2021-22.pdf
12. Ministry of Finance (GoI), 'Economic Survey 2022-2023', https://www.indiabudget.gov.in/economicsurvey/
13. Data compiled from IRDAI annual reports.
14. See IRDAI, 'Annual Report 2021-22', https://irdai.gov.in/documents/37343/366637/Annual+Report+2021-22.pdf/5ac27b18-2520-1186-8807-00e0342d9f2d?version=1.0&t=1671780581841&download=true
15. See Agarwal, Payal, Kumar Shailabh and et.al., (2021) Insuring Bharat: Scaling Up People Led Risk Protection - 'A study on mutual and cooperative insurers in India' https://sewainsurance.org/wp-content/uploads/2021/03/A-study-on-Mutual-and-Cooperative-Insurance-in-India.pdf
16. Report of the Committee on Standalone Micro-insurance Company, IRDAI, August 2020, https://irdai.gov.in/document-detail?documentId=395546
17. See Agarwal, Payal, Kumar Shailabh and et.al., (2021) Insuring Bharat: Scaling Up People Led Risk Protection - 'A study on mutual and cooperative insurers in India' https://sewainsurance.org/wp-content/uploads/2021/03/A-study-on-Mutual-and-Cooperative-Insurance-in-India.pdf

18. The InsureTech industry in India is witnessing significant growth, largely driven by a change in consumer preferences towards healthcare products and a substantial surge in funding. A remarkable rise of 167% in funding is a testament to this growth, with the InsureTech market predicted to unlock an opportunity of $339 billion by 2025, expanding at a CAGR of 57%. The year 2021 stood out prominently, with 34 InsureTech startups raising a collective total of $822 million in funding. The pandemic's impact has underlined the critical importance of health insurance, prompting organisations to offer comprehensive health insurance packages that include not just regular medical check-ups but also mental health counselling and tailored fitness programmes. The future seems bright for InsureTechs, with increasing mobile usage facilitating broader access to information and a discernible shift in investment attitudes, emphasising the importance of health insurance and wellness benefits.
19. A meta-analysis can be defined as a type of research that uses a statistical approach to combine the findings of numerous empirical and other studies into a summary of available findings on the given topic.
20. Ministry of Finance (GoI) annual reports, IRDAI annual reports, NHA annual report, Department of Financial Services reports, and NITI Aayog multi-dimensional poverty index report.
21. All these schemes are operating under the oversight of the regulators—IRDAI and PFRDA.

About the Authors

Ramesh Srivatsava Arunachalam Ramesh Srivatsava Arunachalam is the author of seventeen (critically acclaimed) bestselling books in finance and governance. An international economic development and financial (inclusion) sector professional, his areas of specialisation include financial inclusion, SME finance and development, insurance, pensions, agriculture, technology and artificial intelligence, investment banking, strategic governance, risk management, internal audits, competitive and corporate strategies, and regulation and supervision. An Industrial Engineer from the prestigious National Institute of Technology (NIT), Trichy, India, and an MBA (with Dual Concentration, Strategy and Marketing) from the Carlson School of Management, the University of Minnesota, Minneapolis, USA, Ramesh has authored numerous reports, studies, papers, and monographs. He has also been a columnist with the Hindu Business Line (1995-97), Moneylife (2011-2013 and 2020), and The Business and Financial Times (2021-2023). During the last 35 years, Ramesh has completed 355 professional assignments and worked in 710 districts of India and 33 countries in North America, Asia, Africa, Europe, and the Caribbean across multiple projects (in senior positions) with diverse clients.

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The Inclusive Finance India Report is a comprehensive and well-researched account on cumulative progress made in India towards reaching the ambitious goal of universal Financial Inclusion. The report covers a review of the performance of diverse institutional structures and delivery models in inclusive finance – the commercial banks, the new specialized banks, Co-operative Banks, non banking finance companies, self-help groups, microfinance institutions, banking agents and fintechs.

The report covers the initiatives in the digital technology that help overcome last-mile delivery challenges and provides an overview of the new initiatives and breakthroughs in digital financial inclusion. This publication tracks the performance of programmes and schemes of the Government to promote Financial Inclusion, as well as contributions and new initiatives of the ecosystem players such as investors, academic and research institutions, large apex institutions and regulators. This edition of the report also provides an overview of specialized areas of Artificial Intelligence and its relevance to the Financial Inclusion, Gender aspects in Financial Inclusion, update on MSME, Micro-Insurance and Pensions. Also, measurement of Financial Inclusion is another critical chapter in this edition of Inclusive Finance India Report.

The report aims to inform the policy development process on inclusive finance, highlight the positive impact of various institutions, models and initiatives and identify and highlight policy and practice gaps.

The report is authored by multiple experts in the sector and researchers engaged in the Financial Inclusion landscape. The Inclusive Finance India Report has earned its place at the top reference document on the annual trends and progress of financial inclusion covering as wide-ranging data-based analysis of all streams and models of financial inclusion; a must-have for every stakeholder interested and involved in Financial Inclusion in India.

ISBN: 978-81-955245-9-4
9 788195 524594

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