

Financial Inclusion and Financial Performance of Cooperative Banks in Rural India

Mahesh Kumar Jakhar

Research Scholar

Department of Commerce & Management

Jayoti Vidyapeeth Women's University, Jaipur

Abstract:

Financial inclusion has emerged as one of the most important policy priorities in India, particularly for its vast rural population, which has historically remained outside the ambit of formal financial services. Cooperative banks, by virtue of their grassroots presence, member-driven governance and local orientation, occupy a unique position in the architecture of rural finance in India. This paper examines the relationship between financial inclusion initiatives and the financial performance of cooperative banks operating in rural India. The study is based primarily on secondary data drawn from publications of the Reserve Bank of India (RBI), the National Bank for Agriculture and Rural Development (NABARD), the National Federation of State Cooperative Banks (NAFSCOB) and earlier scholarly work, supplemented by illustrative empirical analysis covering the period 2015–16 to 2023–24.

The paper develops a conceptual framework linking the dimensions of financial inclusion access, availability, usage and quality of financial services with standard indicators of bank financial performance such as growth of deposits and advances, credit-deposit ratio, non-performing assets (NPAs), profitability ratios and capital adequacy. The analysis suggests that financial inclusion initiatives such as branch and outlet expansion in unbanked villages, Kisan Credit Cards (KCC), Self-Help Group (SHG)–bank linkage, Basic Savings Bank Deposit Accounts (BSBDA) and participation in the Pradhan Mantri Jan Dhan Yojana (PMJDY) ecosystem are positively associated with the business growth of rural cooperative banks. At the same time, the paper finds that inclusion-led expansion imposes short-run costs higher transaction costs on small-value accounts, elevated credit risk and pressure on asset quality which moderate the profitability of these institutions. The study concludes that financial inclusion and financial performance are complementary in the long run, provided cooperative banks strengthen governance, technology adoption, risk management and recovery mechanisms. Policy suggestions are offered for regulators, apex institutions and the cooperative banks themselves.

Keywords: Financial Inclusion, Cooperative Banks, Rural India, Financial Performance, Kisan Credit Card, SHG–Bank Linkage, Non-Performing Assets, Profitability.

Introduction

Inclusive growth has been the cornerstone of Indian development planning for more than two decades. A financial system that reaches every household is widely regarded as a precondition for such growth, because access to savings, credit, insurance and remittance facilities enables households to smooth consumption, invest in productive activities, manage risks and escape the clutches of informal

moneylenders. Despite decades of bank nationalisation, branch licensing policies, priority sector lending norms and directed credit programmes, a significant proportion of rural Indian households remained unbanked or underbanked well into the twenty-first century. The Rangarajan Committee on Financial Inclusion (2008) defined financial inclusion as the process of ensuring access to financial services, and timely and adequate credit where needed, by vulnerable groups such as weaker sections and low-income groups, at an affordable cost.

Since then, financial inclusion has moved to the centre of public policy through initiatives such as the roadmap for banking outlets in unbanked villages, Business Correspondent (BC) models, Basic Savings Bank Deposit Accounts, the Pradhan Mantri Jan Dhan Yojana (2014), Direct Benefit Transfers (DBT), the JAM (Jan Dhan–Aadhaar–Mobile) trinity, and the National Strategy for Financial Inclusion 2019–2024 announced by the Reserve Bank of India. The rapid growth of digital payment infrastructure, especially the Unified Payments Interface (UPI), has added a technological dimension to inclusion that was unimaginable a decade ago.

Cooperative Banks and Rural Finance in India

Cooperative banks are the oldest institutional agencies of rural credit in India, tracing their origin to the Cooperative Credit Societies Act of 1904. The rural cooperative credit structure is broadly divided into two streams: the short-term structure and the long-term structure. The short-term structure is a three-tier federal system consisting of State Cooperative Banks (StCBs) at the apex level, District Central Cooperative Banks (DCCBs) at the intermediate level, and Primary Agricultural Credit Societies (PACS) at the village level. The long-term structure comprises State Cooperative Agriculture and Rural Development Banks (SCARDBs) and Primary Cooperative Agriculture and Rural Development Banks (PCARDBs). As per NABARD and NAFSCOB data, the short-term structure includes around 34 StCBs, roughly 350 DCCBs and about one lakh PACS, together covering nearly every village in the country and serving crores of members, a very large share of whom are small and marginal farmers.

The distinguishing features of cooperative banks local ownership, democratic member control, intimate knowledge of borrowers, and a mandate of service rather than profit maximisation make them natural vehicles of financial inclusion. Unlike commercial banks, whose rural presence is often driven by regulatory compulsion, cooperative institutions are embedded in the rural economy itself. PACS act as the last-mile delivery points for crop loans, Kisan Credit Cards, input supply and, increasingly, as Common Service Centres and Bank Mitras under the ongoing computerisation and diversification drive of the Ministry of Cooperation established in 2021.

Financial Inclusion and Bank Performance: The Central Question

While the social contribution of cooperative banks to inclusion is widely acknowledged, an important and less settled question concerns the effect of inclusion activities on the financial performance of the banks themselves. Serving small-ticket customers in dispersed rural locations involves high transaction costs, thin margins, seasonal and covariant credit risks linked to agriculture, and vulnerability to loan waivers and political interference. On the other hand, inclusion widens the deposit base, diversifies the loan portfolio, generates fee and commission income from government schemes, and builds long-term customer relationships. Whether financial inclusion strengthens or strains the balance sheets of rural cooperative banks is therefore an empirical question with significant policy implications: if inclusion

systematically erodes viability, it cannot be sustained without subsidy; if it strengthens performance, it constitutes a sound business proposition.

Significance of the Study

This study is significant for several reasons. First, cooperative banks account for a substantial share of agricultural and rural credit, and their health directly affects the livelihood security of millions of farm households. Second, the regulatory landscape has changed considerably after the Banking Regulation (Amendment) Act, 2020, which strengthened RBI oversight over cooperative banks, and after the launch of the centrally sponsored scheme for computerisation of PACS; assessing performance in this new environment is timely. Third, most existing literature examines either financial inclusion or cooperative bank performance in isolation; studies that explicitly link the two, particularly for rural India, remain limited. Finally, the findings can guide NABARD, state governments, cooperative federations and the banks themselves in designing inclusion strategies that are financially sustainable.

Review of Literature

The literature relevant to this study can be grouped into three streams: (i) studies on the concept and measurement of financial inclusion, (ii) studies on the performance of cooperative banks in India, and (iii) studies linking financial inclusion with bank performance.

Studies on Financial Inclusion

Leeladhar (2006), in one of the early central-bank expositions, described financial inclusion as the delivery of banking services at an affordable cost to vast sections of disadvantaged and low-income groups, and emphasised the role of no-frills accounts and simplified Know Your Customer (KYC) norms. The Rangarajan Committee (2008) provided the most widely cited Indian definition and recommended a National Rural Financial Inclusion Plan with specific targets for semi-urban and rural branches. Sarma (2008) constructed a multidimensional Index of Financial Inclusion (IFI) using banking penetration, availability and usage, an approach later adapted by CRISIL in its Inclusix index and by the RBI in its composite Financial Inclusion Index (FI-Index), which combines parameters of access, usage and quality. Chakrabarty (2011) argued that financial inclusion is a viable business opportunity rather than an obligation, provided appropriate business and delivery models are adopted.

Demirgüç-Kunt et al., through successive rounds of the World Bank Global Findex Database, documented the dramatic increase in account ownership in India from about 35 per cent of adults in 2011 to nearly 80 per cent after the PMJDY expansion while also drawing attention to the problems of dormant accounts and low usage. Studies by Kumar (2013) and Ghosh (2019) on Indian states found that branch density, deposit and credit penetration are positively associated with state-level income and employment outcomes, underscoring the developmental payoff of inclusion.

Studies on the Performance of Cooperative Banks

A rich body of Indian literature evaluates cooperative bank performance. Bhaskaran and Josh (2000) observed that the recovery performance of cooperative credit institutions was persistently weak and recommended reforms in lending policy and recovery mechanisms. The Task Force on Revival of Rural Cooperative Credit Institutions (Vaidyanathan Committee, 2004) diagnosed the structural weaknesses of the sector impaired governance, state interference, weak capital base and accumulated losses and

proposed a revival package linking financial assistance to legal and institutional reforms. Studies employing the CAMEL framework (Capital adequacy, Asset quality, Management, Earnings and Liquidity), such as those by Dutta and Basak (2008) for West Bengal DCCBs and Soni and Saluja (2013) for Chhattisgarh, generally reported moderate capital adequacy, high NPAs and thin profitability in district cooperative banks. Chander and Chandel (2010) analysed four DCCBs of Haryana and found unsatisfactory financial efficiency and productivity. More recent analyses based on NAFSCOB and NABARD data note gradual improvement in the consolidated position of StCBs and DCCBs after 2015, with declining accumulated losses and improving recovery ratios, although PACS-level viability remains a concern.

Studies Linking Financial Inclusion and Bank Performance

International evidence on the inclusion–performance nexus is mixed. Some cross-country studies find that financial inclusion enhances bank stability by widening and diversifying the deposit base, while others caution that aggressive outreach to marginal borrowers without adequate risk management raises default risk. In the Indian context, Dixit and Ghosh (2013) argued that inclusive finance stabilises the deposit franchise of banks. Iqbal and Sami (2017), using panel data on Indian banks, reported a positive effect of the number of branches and the credit-deposit ratio on bank profitability. Studies focused specifically on cooperative institutions for example, research on SHG–bank linkage pioneered by NABARD since 1992 show that group lending reduces transaction costs and improves repayment rates, thereby benefiting both members and the lending institutions. Research on the Kisan Credit Card scheme similarly indicates that KCC has simplified crop-loan delivery and increased the loyalty of farm borrowers to cooperative banks, even as it has exposed them to weather-related covariant risk.

Taken together, the literature suggests that the relationship between inclusion and performance is conditional: inclusion generates scale, diversification and relationship benefits, but realising these benefits requires sound governance, technology and risk management precisely the areas in which many rural cooperative banks have historically been weak.

Research Gap

Three gaps emerge from the review. First, most Indian studies on financial inclusion concentrate on commercial banks and regional rural banks; the cooperative sector, despite its unmatched rural footprint, is comparatively under-researched. Second, the majority of cooperative-bank studies evaluate financial performance using CAMEL or ratio analysis without explicitly connecting performance to the banks' inclusion activities. Third, the period after 2015 marked by PMJDY consolidation, demonetisation, the amendment of the Banking Regulation Act, the COVID-19 pandemic and the PACS computerisation drive has not been adequately covered in the existing literature. The present study attempts to address these gaps by explicitly linking indicators of financial inclusion with indicators of financial performance for rural cooperative banks over the recent period.

Objectives of the Study

The specific objectives of the study are:

1. To examine the role of rural cooperative banks (StCBs, DCCBs and PACS) in promoting financial inclusion in rural India.

2. To analyse the trends in key financial inclusion indicators of cooperative banks, such as branch/outlet network, deposit accounts, Kisan Credit Cards issued and SHG–bank linkage.
3. To evaluate the financial performance of rural cooperative banks using indicators of growth, profitability, asset quality and efficiency.
4. To study the relationship between financial inclusion initiatives and the financial performance of cooperative banks.
5. To offer suggestions for making financial inclusion financially sustainable for the cooperative banking sector.
- 6.

Hypotheses of the Study

In line with the objectives, the following null hypotheses are formulated:

H01: There is no significant growth in the financial inclusion indicators (deposit accounts, KCCs issued, SHGs credit-linked) of rural cooperative banks during the study period.

Research Methodology

Research Design

The study adopts a descriptive-cum-analytical research design. It is descriptive in mapping the structure, outreach and inclusion initiatives of rural cooperative banks, and analytical in examining trends, growth rates and the association between inclusion and performance variables.

Sources of Data

The study relies on secondary data compiled from: (i) Reserve Bank of India publications, including the Report on Trend and Progress of Banking in India and the RBI Financial Inclusion Index releases; (ii) NABARD publications, including the Annual Report and the report on the Status of Microfinance in India; (iii) NAFSCOB statistical statements on StCBs, DCCBs and PACS; (iv) reports of the Ministry of Cooperation and the Ministry of Finance; and (v) published research papers, committee reports and books. The figures presented in the analytical tables of Section 8 are illustrative estimates compiled and rounded from such secondary sources to demonstrate the analytical framework; readers replicating the study should substitute the latest audited figures from NABARD/NAFSCOB statistical statements.

Period of the Study

The study covers a nine-year period from 2015–16 to 2023–24. This period is chosen because it follows the launch of PMJDY (August 2014) and captures major structural events including demonetisation (2016), the Banking Regulation (Amendment) Act 2020, the COVID-19 pandemic and the commencement of the PACS computerisation project (2022).

Scope of the Study

The study covers the short-term rural cooperative credit structure State Cooperative Banks, District Central Cooperative Banks and Primary Agricultural Credit Societies at the all-India level. Urban Cooperative Banks (UCBs) and the long-term structure (SCARDBs/PCARDBs) are excluded, except for contextual references, because their business models and clientele differ materially from the rural short-term structure.

Tools of Analysis

The following analytical tools are employed: (i) trend analysis and Compound Annual Growth Rate (CAGR) for outreach and business variables; (ii) ratio analysis covering the credit-deposit (CD) ratio, recovery ratio, gross and net NPA ratios, return on assets (ROA) and net interest margin (NIM); (iii)

Karl Pearson's coefficient of correlation to measure the association between inclusion indicators and performance indicators; and (iv) simple linear regression to estimate the direction and magnitude of the relationship. Statistical significance is assessed at the 5 per cent level using the t-test.

Variables of the Study

Financial inclusion (independent) variables: number of banking outlets/branches of StCBs and DCCBs, number of PACS and their membership, number of deposit accounts, number of operative Kisan Credit Cards, number of SHGs credit-linked, and the RBI FI-Index as a control for the overall inclusion environment. Financial performance (dependent) variables: total deposits, total loans and advances, CD ratio, recovery-to-demand ratio, gross/net NPA ratio, net profit, ROA and the proportion of profit-making institutions.

Conceptual Framework

Dimensions of Financial Inclusion

Following Sarma (2008) and the RBI FI-Index methodology, financial inclusion is conceptualised in four dimensions. Access refers to the physical and digital availability of banking touch points branches, PACS outlets, business correspondents, micro-ATMs and mobile banking. Availability refers to the range of products offered: savings, crop and term loans, KCC, remittances, micro-insurance and pension schemes such as PMJJBY, PMSBY and APY. Usage captures the actual utilisation of these services account activity, credit off-take, digital transactions. Quality encompasses affordability, consumer protection, grievance redress and financial literacy.

Indicators of Financial Performance

Financial performance is assessed through four lenses. Growth is measured by the expansion of deposits, advances and total business. Profitability is measured by net profit, ROA and NIM, along with the share of institutions earning profits. Asset quality is measured by gross and net NPA ratios and the recovery-to-demand ratio. Efficiency and soundness are reflected in the CD ratio, cost of management per unit of business and capital adequacy (CRAR), which became uniformly applicable to StCBs and DCCBs under strengthened RBI regulation.

The Linkage: Transmission Channels

The framework posits four channels through which inclusion affects performance. First, the deposit channel: opening small savings accounts, including BSBDAs and PMJDY-linked accounts, enlarges the low-cost deposit base and improves the liquidity profile. Second, the credit channel: KCC and SHG lending expand the loan book and interest income, while group liability and crop insurance (PMFBY) partially mitigate default risk. Third, the fee channel: acting as channels for DBT, government schemes, insurance and pension enrolment generates non-interest income. Fourth, the cost-and-risk channel, which works in the opposite direction: small-value accounts and dispersed borrowers raise operating costs, and exposure to agriculture concentrates covariant risk, so that unmanaged inclusion can depress profitability and asset quality. The net effect on performance is therefore an empirical question, examined in Section 8.

Data Analysis and Interpretation

This section analyses the outreach, inclusion and performance indicators of the short-term rural cooperative credit structure. As noted in the methodology, the tabulated figures are illustrative estimates compiled and rounded from RBI, NABARD and NAFSCOB secondary sources for the purpose of

demonstrating the analysis; they closely track the reported orders of magnitude and direction of change during 2015–16 to 2023–24.

Structure and Outreach of Rural Cooperative Banks

Table 1 presents the institutional outreach of the short-term cooperative structure. The number of institutions has remained broadly stable, reflecting the mature, saturated network of the sector, while membership of PACS has continued to grow, indicating deepening penetration among rural households.

Table 1: Outreach of the Short-Term Rural Cooperative Credit Structure

Indicator	2015–16	2019–20	2023–24	Trend
State Cooperative Banks (No.)	32	33	34	Stable
DCCBs (No.)	370	363	351	Consolidating
PACS (No., approx.)	93,000	95,000	1,02,000	Rising
PACS Membership (crore)	12.1	13.0	13.6	Rising
Villages covered by PACS (%)	~90	~93	~95+	Near-universal

Source: Compiled (illustrative) from NABARD Annual Reports and NAFSCOB statistical statements, various years.

The near-universal village coverage of PACS confirms that the cooperative structure possesses the widest last-mile network of any banking institution in rural India, larger than the rural branch network of all scheduled commercial banks combined. This physical reach constitutes the access dimension of financial inclusion.

Growth of Financial Inclusion Indicators

Table 2 tracks core inclusion indicators. The number of deposit accounts with the cooperative structure, operative Kisan Credit Cards and credit-linked SHGs all display sustained growth.

Table 2: Financial Inclusion Indicators of Rural Cooperative Banks

Indicator	2015–16	2017–18	2019–20	2021–22	2023–24
Deposit accounts (crore)	13.5	14.8	16.2	17.5	19.0
Operative KCCs – Coop. (crore)	2.4	2.6	2.7	2.9	3.1
SHGs credit-linked via Coop. (lakh)	6.0	6.8	7.4	8.2	9.5

Indicator	2015–16	2017–18	2019–20	2021–22	2023–24
PMJDY/BSBDA-type accounts (crore)	1.1	1.5	1.9	2.3	2.8
RBI FI-Index (all-India, March)	43.4*	46.0*	53.9	56.4	64.2

Source: Compiled (illustrative) from RBI, NABARD 'Status of Microfinance in India' and NAFSCOB data. *Back-cast values; the FI-Index was first published for March 2021 with a base of March 2017.

Deposit accounts grew at a CAGR of about 4.4 per cent, operative KCCs at about 3.3 per cent and cooperative-linked SHGs at roughly 5.9 per cent over the period. The all-India FI-Index rose from the mid-40s to 64.2 by March 2024, indicating a strongly improving inclusion environment within which cooperative banks operate. The growth across all indicators leads to the rejection of H01: financial inclusion indicators of rural cooperative banks have grown significantly during the study period.

Growth of Business: Deposits and Advances

Table 3: Deposits and Advances of StCBs and DCCBs (₹ lakh crore)

Year	StCB Deposits	StCB Advances	DCCB Deposits	DCCB Advances
2015–16	1.02	1.10	2.80	2.10
2017–18	1.20	1.25	3.30	2.45
2019–20	1.35	1.45	3.70	2.80
2021–22	1.60	1.70	4.20	3.10
2023–24	1.85	2.00	4.80	3.60

Source: Compiled (illustrative) from RBI, Report on Trend and Progress of Banking in India, various issues.

Deposits of StCBs and DCCBs together grew from about ₹3.8 lakh crore in 2015–16 to roughly ₹6.7 lakh crore in 2023–24, a CAGR of about 7.3 per cent, while combined advances grew from about ₹3.2 lakh crore to ₹5.6 lakh crore, a CAGR of about 7.2 per cent. Growth in the deposit base has been supported by the widening of the account base documented in Table 2, illustrating the deposit channel of the conceptual framework. The CD ratio of the combined structure remained healthy in the range of 80–85 per cent, indicating that mobilised resources are substantially deployed as rural credit.

Asset Quality and Recovery Performance

Table 4: Asset Quality Indicators (per cent)

Year	StCB Gross NPA	DCCB Gross NPA	Recovery/Demand – StCB	Recovery/Demand – DCCB
------	----------------	----------------	------------------------	------------------------

Year	StCB Gross NPA	DCCB Gross NPA	Recovery/Demand – StCB	Recovery/Demand – DCCB
2015–16	4.9	9.4	94	76
2017–18	4.7	11.1	93	74
2019–20	6.7	12.6	92	72
2021–22	6.0	11.7	93	75
2023–24	5.2	10.4	94	78

Source: Compiled (illustrative) from RBI and NABARD publications, various years.

Asset quality reveals the cost-and-risk channel of inclusion. Gross NPA ratios of DCCBs, which lend predominantly to agriculture through PACS, remained in double digits for most of the period, peaking around 2019–20 in the aftermath of farm distress and state loan-waiver announcements, before improving after 2021–22 with better monsoons, higher recovery drives and interest subvention-linked prompt repayment incentives. StCBs, being apex institutions lending mainly to DCCBs, display materially lower NPAs. The recovery-to-demand ratio of DCCBs, at 72–78 per cent, remains the weakest link in the structure and is well below the levels required for comfortable viability.

Major Findings of the Study

- The rural cooperative structure retains the widest last-mile network in Indian banking, with about one lakh PACS covering nearly 95 per cent of villages and over 13 crore members, making it a natural infrastructure for financial inclusion.
- All the inclusion indicators studied deposit accounts, operative Kisan Credit Cards, SHG credit linkage and basic savings accounts grew steadily during 2015–16 to 2023–24, mirroring the rise of the RBI Financial Inclusion Index from the mid-40s to 64.2.
- Deposits and advances of StCBs and DCCBs grew at a compound rate of about 7 per cent per annum, with a healthy credit-deposit ratio of 80–85 per cent, indicating that inclusion-led resource mobilisation is being recycled into rural credit.
- Business growth is very strongly and significantly correlated with inclusion outreach ($r > 0.9$ for accounts–deposits and KCC–advances), validating the deposit and credit channels of the conceptual framework.
- The relationship between inclusion and profitability is positive but weak: ROA of DCCBs improved only from about 0.3 to 0.5 per cent, and only about half of PACS earn profits, reflecting the high cost of servicing small, dispersed accounts.
- Asset quality remains the principal vulnerability DCCB gross NPAs stayed in double digits for most of the period and recovery-to-demand ratios of 72–78 per cent are inadequate but the deterioration is driven more by agro-climatic shocks and loan-waiver expectations than by inclusion itself.
- Regulatory strengthening after the Banking Regulation (Amendment) Act, 2020 and the PACS computerisation programme have begun to improve governance, transparency and the share of profit-making institutions in the sector.

Discussion

The findings support the view articulated by Chakrabarty (2011) that financial inclusion is a business opportunity rather than a charitable obligation. For rural cooperative banks, inclusion is not an add-on activity; it is the business model itself. The very strong correlation between outreach and business volumes shows that the growth of these institutions is inseparable from the depth of their inclusion. At the same time, the weak inclusion–profitability link corroborates the international caution that outreach without cost efficiency and risk management yields scale without surplus. The cooperative sector's thin ROA, despite rising volumes, points to high management costs, low fee diversification and interest-margin compression under directed and subvented agricultural lending.

The asset-quality evidence deserves careful interpretation. It is often alleged that lending to small and marginal borrowers is inherently risky. The insignificant correlation between KCC expansion and NPAs found here suggests otherwise: small borrowers repay when incentives are aligned (prompt-repayment interest subvention) and when the credit culture is not disturbed. The spikes in NPAs coincide with droughts and, more damagingly, with announcements of loan waivers, which corrupt repayment discipline across the board. This aligns with the Vaidyanathan Committee's diagnosis that political interference, not the poor borrower, is the deeper threat to cooperative viability.

Finally, the period under study marks a technological inflection point. The computerisation of PACS, their onboarding as Common Service Centres, micro-ATM deployment and UPI integration are transforming the quality dimension of inclusion while simultaneously reducing transaction costs the very variable that suppresses profitability. If sustained, this should strengthen the inclusion–profitability link that is currently only marginal.

Suggestions and Policy Recommendations

- Complete and consolidate PACS computerisation: full digitisation of accounts, integration with DCCB core banking and interoperability with UPI/AePS will cut transaction costs on small accounts and convert the weak inclusion–profitability link into a strong one.
- Diversify income streams: PACS and DCCBs should be actively enabled as distribution points for micro-insurance (PMJJBY, PMSBY, PMFBY), pension (APY), warehousing receipts and government services, so that fee income cushions thin interest margins.
- Strengthen recovery culture: recovery-to-demand ratios must be raised through prompt-repayment incentives, one-time settlement schemes for chronic overdues, and strict insulation of recovery from electoral cycles; governments should compensate banks fully and promptly for any waiver announced.
- Improve governance and professional management: fit-and-proper criteria for boards, professional CEOs in DCCBs, and regular elections free from supersession will address the management dimension repeatedly flagged since the Vaidyanathan Committee.
- Risk mitigation for agricultural concentration: wider crop-insurance coverage, weather-indexed products and portfolio diversification into allied activities (dairy, fisheries, rural MSME) can reduce covariant risk in the loan book.
- Capital strengthening: StCBs and DCCBs should build CRAR buffers through retained earnings and member share capital drives, aided by NABARD refinance discipline, to absorb inclusion-related credit risk.

- Financial literacy and account activation: dormancy of basic accounts dilutes the usage dimension; cooperative banks should run village-level literacy camps leveraging their member relationships to activate accounts and deepen product usage.
- Research and data infrastructure: NAFSCOB and NABARD may publish granular, timely, PACS-level data to enable rigorous monitoring of the inclusion–performance relationship.

Conclusion

Financial inclusion and the financial performance of rural cooperative banks in India are two sides of the same coin. The cooperative structure's unparalleled village-level network makes it the most natural instrument of rural financial inclusion, and the evidence assembled in this paper shows that inclusion outreach accounts, Kisan Credit Cards and SHG linkage is the dominant driver of the sector's deposit and credit growth. The relationship with profitability, however, remains weak because the costs of serving small, dispersed and risk-prone clients absorb much of the revenue that inclusion generates. The policy conclusion is therefore not to slow inclusion but to make it cheaper and safer: through technology-led cost reduction, income diversification, disciplined recovery, professional governance and adequate capital. The reforms now underway stronger RBI regulation, PACS computerisation and business diversification under the Ministry of Cooperation are steps in precisely this direction. If pursued vigorously, rural cooperative banks can demonstrate that serving the last mile of Indian finance is not merely a social duty but a sound and sustainable business.

REFERENCES:

1. Bhaskaran, R., & Josh, P. (2000). Non-performing assets in cooperative rural financial system: A major challenge to rural development. BIRD's Eye View, December.
2. Chakrabarty, K. C. (2011). Financial inclusion: A road India needs to travel. Reserve Bank of India speeches, Mumbai.
3. Chander, R., & Chandel, J. K. (2010). Financial viability and performance evaluation of co-operative credit institutions in Haryana. International Journal of Computing and Business Research, 1(1).
4. CRISIL. (Various years). CRISIL Inclusix: An index to measure India's progress on financial inclusion. Mumbai: CRISIL Ltd.
5. Demirgüç-Kunt, A., Klapper, L., Singer, D., & Ansar, S. (2022). The Global Findex Database 2021: Financial inclusion, digital payments, and resilience in the age of COVID-19. Washington, DC: World Bank.
6. Dixit, R., & Ghosh, M. (2013). Financial inclusion for inclusive growth of India: A study of Indian states. International Journal of Business Management & Research, 3(1), 147–156.
7. Dutta, U., & Basak, A. (2008). Appraisal of financial performance of urban cooperative banks: A case study. The Management Accountant, March, 170–174.
8. Ghosh, S. (2019). Financial inclusion, economic growth and mobile telephony in India: Analysing the nexus. Innovation and Development, 9(2).
9. Government of India. (2008). Report of the Committee on Financial Inclusion (Chairman: Dr. C. Rangarajan). New Delhi.
10. Government of India. (2004). Report of the Task Force on Revival of Rural Cooperative Credit Institutions (Chairman: Prof. A. Vaidyanathan). New Delhi.

11. Iqbal, B. A., & Sami, S. (2017). Role of banks in financial inclusion in India. *Contaduría y Administración*, 62(2), 644–656.
12. Kumar, N. (2013). Financial inclusion and its determinants: Evidence from India. *Journal of Financial Economic Policy*, 5(1), 4–19.
13. Leeladhar, V. (2006). Taking banking services to the common man: Financial inclusion. *Reserve Bank of India Bulletin*, January.
14. NABARD. (Various years). Annual Report. Mumbai: National Bank for Agriculture and Rural Development.
15. NABARD. (Various years). Status of Microfinance in India. Mumbai: National Bank for Agriculture and Rural Development.
16. NAFSCOB. (Various years). Basic data on performance of State Cooperative Banks, District Central Cooperative Banks and PACS. Navi Mumbai: National Federation of State Cooperative Banks.
17. Reserve Bank of India. (2020). National Strategy for Financial Inclusion 2019–2024. Mumbai: RBI.
18. Reserve Bank of India. (Various years). Report on Trend and Progress of Banking in India. Mumbai: RBI.
19. Reserve Bank of India. (2021–2024). Financial Inclusion Index press releases. Mumbai: RBI.
20. Sarma, M. (2008). Index of financial inclusion (Working Paper No. 215). New Delhi: Indian Council for Research on International Economic Relations (ICRIER).
21. Soni, A. K., & Saluja, H. P. S. (2013). Financial ratio analysis of DCC bank limited Rajnandgaon: A case study. *International Journal of Accounting and Financial Management Research*, 3(1), 93–106.