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Power BI-Based Executive Performance Management Framework for Real-Time Organizational Intelligence and Business Agility

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ABSTRACT

Rural banking in India has been a central instrument of inclusive development since the social-control phase of 1966 and the subsequent nationalisation of major commercial banks in 1969 and 1980. Yet, despite seven decades of intervention through commercial banks, Regional Rural Banks (RRBs) and the cooperative credit structure, the rural-banking sector continues to face persistent growth issues concerning credit absorption, asset quality, last-mile delivery and financial-literacy deficits. The Nashik region of Maharashtra, which combines a high-value commercial-crop economy with structurally disadvantaged tribal tehsils, offers an analytically representative setting within which these issues can be examined. This study evaluates the rural-banking landscape of the Nashik region for the period 2020 to 2024 in order to identify the binding growth issues and to propose evidence-based corrective measures.

This descriptive-analytical study was conducted for Nashik district, Maharashtra, using secondary data compiled from Reserve Bank of India (RBI) and National Bank for Agriculture and Rural Development (NABARD) publications, Maharashtra State-Level Bankers' Committee (SLBC) reports and district-level statistical handbooks for the five-year window 2020 to 2024. Branch network, credit-deposit (CD) ratio, gross non-performing-asset (NPA) ratio, compound annual growth rates and a four-indicator financial-inclusion set under the Pradhan Mantri Jan-Dhan Yojana (PMJDY) were computed across four bank groups. Ratio analysis and trend analysis were used to evaluate outcomes.

The district branch network grew from 720 to 870 branches at a CAGR of 4.8 per cent, with

the RRB and the DCCB expanding fastest at 7.7 and 8.4 per cent respectively. The CD ratio recovered from the 2021 pandemic dip to 84.0 per cent for commercial banks and 74.5 per cent for the RRB, but the DCCB remained below the SLBC benchmark at 65.2 per cent. The gross NPA ratio declined to 5.4 per cent for commercial banks but stayed structurally elevated at 11.7 per cent for the DCCB. PMJDY density reached 972 accounts per 1000 rural adults, yet the activity ratio improved only from 46.2 to 61.0 per cent, indicating that roughly two-fifths of accounts remain dormant in any given quarter.

This study concludes that Nashik has made substantial progress on the access dimension of rural banking but that the binding constraints have shifted to the quality dimensions of credit delivery. Five growth issues are identified: geographic and infrastructural gaps in tribal pockets, high NPAs concentrated in Kisan Credit Card (KCC) portfolios, low digital and financial literacy among smallholders, governance weakness in the District Central Co-operative Bank (DCCB), and climate-induced agrarian distress coupled with loan-waiver moral hazard. Eight actionable recommendations are offered for policymakers, banks and panchayat-level institutions.

Keywords: Rural banking, Financial inclusion, Nashik region, Credit-deposit ratio, Non-performing assets, Cooperative banks, PMJDY, Agrarian distress, Regional Rural Banks, Kisan Credit Card

INTRODUCTION

India's rural-banking architecture is the product of a long, layered and largely state-led institutional evolution that began with the social-control recommendations of the Banking Commission (1969), intensified through the nationalisation of fourteen commercial banks in 1969 and six more in 1980, and was subsequently deepened by the enactment of the Regional Rural Banks Act, 1976 and the revitalisation of the cooperative credit structure under the Vaidyanathan Committee reforms of 2004 to 2011. From the founding of NABARD in 1982 to the launch of the Pradhan Mantri Jan-Dhan Yojana (PMJDY) in 2014 and the operational saturation of the JAM trinity (Jan-Dhan, Aadhaar and Mobile) in subsequent years, the explicit policy objective has remained remarkably consistent: to bring the unbanked rural household within the formal credit perimeter and to channel subsidised, productive credit to the farm and non-farm rural economy. The architecture therefore rests on three institutional pillars — commercial banks, RRBs and the cooperative structure comprising the State Cooperative Bank, the District Central Cooperative Bank and Primary Agricultural Credit Societies — supplemented, after 2005, by the Business Correspondent (BC) and Business Facilitator (BF) model that carries banking to the village threshold. Notwithstanding the scale of this architecture, the rural-banking sector continues to display persistent growth issues documented by successive RBI committees, NABARD sectoral reviews and academic scholarship.

The first cluster of issues concerns quantity: rural deposits and rural credit have grown in absolute terms, but the credit-deposit (CD) ratio of rural branches remains below the RBI benchmark of sixty per cent in several geographies, signalling that savings mobilised in rural areas are not fully re-deployed as rural credit. The second cluster concerns quality: non-performing assets (NPAs) in agricultural and rural portfolios tend to rise in cyclical spikes aligned with monsoon failure, with the Kisan Credit Card (KCC) and crop-loan segments displaying particular vulnerability. The third cluster concerns access and adoption: the marginal farmer, the landless labourer, the woman householder and the tribal household remain disproportionately under-served, and the evidence on the use of digital channels such as AePS, UPI and mobile banking by such households is mixed at best. The fourth cluster concerns institutional health: a number of District Central Cooperative Banks have reported weak capital adequacy, governance lapses and, in extreme cases, regulatory restrictions, with the Punjab and Maharashtra Cooperative (PMC) Bank episode of 2019 having generated region-wide behavioural caution.

The Nashik region of Maharashtra offers an analytically interesting setting within which to examine these growth issues. Nashik district combines a reasonably well-developed commercial-crop economy — particularly grapes, onions, pomegranates and vegetables, supported by the horticultural boom of the last two decades — with structurally disadvantaged pockets such as the tribal tehsils of Trimbakeshwar, Surgana, Kalwan and Baglan, where the share of marginal and small farmers exceeds the state average and where physical infrastructure remains sparse. The district has been a long-standing beneficiary of the cooperative-banking tradition through the Nashik District Central Co-operative Bank, and is also served by the Maharashtra Gramin Bank (an RRB sponsored by Bank of Maharashtra) and the full set of public-sector, private-sector and small-finance banks. The post-PMJDY saturation drive in the district has been extensive, but the available evidence suggests that account-opening has run ahead of meaningful transaction behaviour. This combination makes Nashik a representative case for analysing the present growth issues of rural banking in Maharashtra and, by extension, in the western-Indian agrarian belt.

Against this backdrop, the present paper pursues four explicit objectives. First, it profiles the structure and growth of the rural-banking network in Nashik district between 2020 and 2024 by bank group. Second, it computes and interprets the credit-deposit ratio, the NPA ratio and a small set of financial-inclusion indicators across this period, identifying both convergent and divergent trends across commercial banks, RRBs and the cooperative structure. Third, it isolates and discusses five binding growth issues that constrain the rural-banking sector in the district. Fourth, it offers a set of actionable recommendations for policymakers, bankers and grassroots institutions. The research questions are correspondingly: how has the rural-banking network in Nashik evolved during the post-pandemic window of 2020 to 2024; how have the CD ratio, NPA ratio and inclusion indicators behaved across bank groups in this window; which growth issues are presently binding; and what policy and institutional actions are most likely to relax these bindings.

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REVIEW OF LITERATURE

Scholarship on Indian rural banking falls naturally into four thematic strands: the historical evolution of the institutional architecture; the relative performance of commercial banks, RRBs and the cooperative structure; the financial-inclusion evidence of the post-PMJDY period; and region-specific and district-level studies that include Maharashtra and Nashik. The review below follows this thematic order and concludes with an identification of the research gap that this paper attempts to address.

Historical Evolution of the Rural-Banking Architecture:

The classical account of the Indian rural-credit problem begins with the All-India Rural Credit Survey (1951 to 1954) of the Reserve Bank of India, which documented the overwhelming dominance of moneylenders in the rural credit market and the near-total absence of formal institutional alternatives. The subsequent decades saw a deliberate, multi-instrument institutional response: the social-control measures of 1966 to 1968, the nationalisation of the fourteen largest commercial banks in 1969 followed by six more in 1980, the establishment of RRBs under the RRB Act of 1976, the founding of NABARD in 1982, and the structured revamp of the cooperative structure under the Vaidyanathan Committee package of 2004 to

2011. The objectives were the explicit social-banking goals of priority-sector lending, branch expansion into unbanked rural centres and directed credit to agriculture and the weaker sections. The post-1991 liberalisation phase brought prudential regulation, the abolition of branch licensing, the entry of new private banks, and the gradual reorientation of public-sector banks towards capital-adequacy and profitability norms, even as priority-sector targets were retained.

Relative Performance of Bank Groups:

A second strand of literature compares the performance of commercial banks, RRBs and cooperatives on parameters such as rural deposit mobilisation, rural credit deployment, recovery rates and operating costs. Bhatia and Chatterjee (2010) found that RRBs, despite their limited geographic and product mandates, consistently out-performed commercial banks on rural CD ratios and on the share of small borrower accounts, but lagged on profitability due to thin margins and high transaction costs. Thorat and colleagues, in a series of RBI and NABARD-commissioned studies, highlighted that the cooperative structure, while historically the closest to the village, suffered from weak capital adequacy, politicised governance and uneven recovery, with the consequence that an appreciable share of rural deposits continued to flow into commercial banks while a disproportionate share of rural credit continued to be originated by cooperatives. The post-merger evidence on RRBs after the 2005 to 2013 amalgamation phase is mixed: amalgamations improved viability and balance-sheet strength but reduced the geographic specificity of sponsor-bank orientation.

Financial Inclusion in the Post-PMJDY Period:

A third strand of literature evaluates the financial-inclusion drive that began with the launch of the Pradhan Mantri Jan-Dhan Yojana on 28 August 2014. Nachane and Ghosh (2017), Kshetrimayum and Ratha (2018) and subsequent scholars have noted that PMJDY achieved an unprecedented scale of account-opening — more than fifty crore accounts within a decade — but that the quality dimensions of inclusion, particularly the proportion of accounts with multi-product linkages, regular transaction behaviour and meaningful RuPay debit-card usage, have lagged behind the headline numbers. The literature also documents that the JAM trinity reduced leaky subsidies through Direct Benefit Transfer, but raised concerns about dormancy, multiple-account duplication and the adequacy of in-person service at the last mile. Studies by the International Monetary Fund, the World Bank Findex series and Indian scholars such as Ghosh and Vinod have suggested that account-opening saturation is necessary but not sufficient for genuine inclusion; the binding constraint shifts to product depth, financial literacy and the perceived trustworthiness of the banking channel.

Maharashtra-Specific and Nashik-Specific Studies:

A fourth strand of literature is state-specific and district-specific. Maharashtra is unusual in that its cooperative-banking tradition is older and stronger than in most states, with the Maharashtra State Cooperative Bank being one of the oldest apex cooperative banks in the country and the network of DCCBs and PACS being historically dense. Studies on Maharashtra have noted that the DCCB-PACS channel historically dominated short-term agricultural credit, while commercial banks dominated term lending and RRBs filled the gap in the most disadvantaged districts. Nashik district, in particular, has been studied in

fragments: the grape-horticulture economy has been analysed in NABARD sectoral reports as a high-value, credit-intensive segment with a healthy repayment record; the tribal pockets of Trimbakeshwar, Surgana, Kalwan and Baglan have been discussed in tribal-sub-plan evaluations as areas of acute institutional deficit. However, an integrated district-level analytical study of rural banking in Nashik, covering all three bank groups over the post-pandemic window with explicit attention to growth issues, does not appear to be available in the published literature.

Research Gap:

The principal research gap is therefore that of an integrated, district-level, multi-bank-group analytical study of rural banking in Nashik for the 2020 to 2024 window, which is theoretically important because it captures the post-pandemic, post-PMJDY-saturation, post-JAM-trinity phase of the rural-banking story in a district that combines high-value commercial agriculture with structurally disadvantaged tribal pockets. The present paper attempts to address this gap in a modest, descriptive-analytical manner using secondary data.

MATERIAL AND METHODOLOGY:

This descriptive-analytical study was conducted for Nashik district, Maharashtra, to evaluate the structure, performance and growth issues of the rural-banking system. The choice of a descriptive-analytical design over a primary-survey design is justified by three considerations: first, the rural-banking phenomenon is essentially a population-level and institution-level phenomenon for which secondary published statistics are the most authoritative source; second, primary field surveys of bank branches in the cooperative and RRB segments face well-known access and disclosure constraints; and third, the analytical concerns of this paper are with trends, ratios and structural issues rather than with household-level behaviour, which would require a different design. The period of analysis is the five-year window from the financial year 2019 to 2020 (hereafter 2020) to the financial year 2023 to 2024 (hereafter 2024), and the unit of analysis is the bank group operating in the district.

Data Sources:

The study draws on three categories of secondary data. The first comprises published reports of the Reserve Bank of India, including the annual Report on Trend and Progress of Banking in India, the Financial Stability Report, the district-wise statistical tables on banking, and RBI Bulletin articles on rural banking. The second comprises NABARD publications, in particular the NABARD Annual Report, the State Focus Paper for Maharashtra, the District Credit Plan for Nashik and the periodic Financial Inclusion Surveys. The third comprises the Maharashtra State-Level Bankers' Committee (SLBC) reports, which publish district-wise data on branch network, deposits, advances, CD ratios, NPAs and PMJDY progress at quarterly intervals. Where district-level disaggregation was incomplete, supplementary data were taken from the Economic and Statistical Department of the Government of Maharashtra and from the District Census Handbook for Nashik.

Period, Scope and Unit of Analysis:

The window 2020 to 2024 was selected because it encompasses the COVID-19 pandemic shock, the subsequent resolution phases under various regulatory dispensations, and the full

operationalisation of the JAM trinity in its mature form. The geographic scope is the administrative Nashik district, comprising fifteen revenue tehsils. For analytical purposes the tehsils are grouped into four clusters: the urban-and-periurban Nashik cluster; the high-value horticulture belt of Niphad, Chandwad, Sinnar and Nandgaon; the mixed-crop central belt of Nashik Rural, Dindori, Igatpuri, Peint and Surgana; and the tribal-and-hilly tract of Trimbakeshwar, Kalwan, Baglan, Deola and Malegaon. The unit of analysis is the bank group — commercial banks (public and private), the RRB (Maharashtra Gramin Bank), and the cooperative structure comprising the Nashik DCCB and affiliated PACS.

Analytical Tools:

The analytical tools used are deliberately elementary and ratio-based, in keeping with the descriptive-analytical design. They are: the credit-deposit ratio, computed as gross credit to gross deposits expressed as a percentage; the NPA ratio, computed as gross NPAs to gross advances expressed as a percentage; compound annual growth rates for branch network, deposits and advances, computed using the standard end-point formula; and a financial-inclusion indicator set comprising the number of PMJDY accounts per thousand rural adults, the average balance per PMJDY account, the proportion of accounts with at least one transaction in the reference quarter, and the number of AePS transactions per thousand rural adults. The growth issues discussed below are derived inductively from the tabulated data and supplemented by the reviewed literature. No primary survey or inferential statistical test was performed; the paper is therefore interpretive and analytical rather than confirmatory.

Methodological Caveats:

Two methodological caveats should be entered at this stage. First, the reliance on secondary data implies that the figures used in the tables are as published by the respective authorities and have not been independently verified at the branch level; cross-source discrepancies were resolved by adopting the SLBC figure as the most granular. Second, the period covers the COVID-19 pandemic and its aftermath, which materially distorted both deposit and credit behaviour in the rural economy through unusually high precautionary savings in 2020 to 2021 and through the resolution dispensations on small-borrower accounts in 2021 to 2022; the analytical interpretation makes this distortion explicit.

DATA PRESENTATION, ANALYSIS RESULT AND INTERPRETATION

Nashik district is administratively located in the north-western quadrant of Maharashtra, covering approximately fifteen thousand six hundred square kilometres and supporting a population of roughly sixty-one lakh persons according to the 2011 Census, with inter-censal projections indicating a 2024 population in the neighbourhood of sixty-eight lakh. The district is historically agrarian: even after the expansion of manufacturing, horticulture and the automobile cluster around the Nashik urban agglomeration, agriculture continues to absorb the largest share of the district workforce, with grape, onion, pomegranate, sugarcane, soybean and vegetables as the principal crops. This dual structure — a high-value commercial-crop belt in the Niphad-Chandwad-Sinnar stretch alongside a structurally disadvantaged tribal-and-hilly belt in Trimbakeshwar, Surgana, Peint and Kalwan — generates a correspondingly bifurcated rural-banking geography, with mature branch-and-credit behaviour in the horticulture belt and persistently thin credit absorption in

the tribal pockets. Data on the branch network, the credit-deposit ratio, the gross NPA ratio and the financial-inclusion indicator set were collected for 2020 and 2024 and are presented below.

Table 1. Branch network of bank groups in Nashik district, 2020 to 2024

Bank group	2020	2021	2022	2023	2024	CAGR %
Commercial banks (PSB + Pvt)	448	456	470	482	490	2.2
Maharashtra Gramin Bank (RRB)	162	176	196	208	218	7.7
Nashik DCCB	84	90	100	108	116	8.4
Small-finance & payments banks	26	32	40	44	46	12.1
Total	720	754	806	842	870	4.8

Table 2. Credit-Deposit ratio by bank group, Nashik district, 2020 to 2024 (in %)

Bank group	2020	2021	2022	2023	2024	Avg.
Commercial banks (PSB + Pvt)	78.5	76.2	80.1	82.4	84.0	80.2
Maharashtra Gramin Bank (RRB)	68.0	65.5	70.2	72.6	74.5	70.2
Nashik DCCB	62.4	58.7	61.0	63.8	65.2	62.2
RBI Norm	60.0	60.0	60.0	60.0	60.0	60.0

Table 3. Gross NPA ratio by bank group, Nashik district, 2020 to 2024 (in %)

Bank group	2020	2021	2022	2023	2024	Change
Commercial banks (PSB + Pvt)	8.4	9.1	7.6	6.2	5.4	-3.0
Maharashtra Gramin Bank (RRB)	9.8	11.2	10.4	9.6	9.2	-0.6
Nashik DCCB	12.6	15.1	13.8	12.4	11.7	-0.9
District average	9.4	11.0	9.6	8.4	7.7	-1.7

Table 4. Financial inclusion indicators, rural Nashik district, 2020 to 2024

Indicator	2020	2021	2022	2023	2024	CAGR %
PMJDY accounts per 1000 adults	580	712	824	901	972	13.8

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Indicator	2020	2021	2022	2023	2024	CAGR %
Avg. balance per PMJDY account (INR)	1820	2380	2940	3650	4310	24.0
Activity ratio (% active qtrly)	46.2	49.8	53.4	57.1	61.0	7.2
AePS transactions per 1000 adults	82	164	248	326	412	49.7

RESULTS

The study findings revealed significant expansion of the rural-banking network, a post-pandemic recovery in credit absorption, a divergent asset-quality trajectory across bank groups, and a persistent gap between the access and the usage dimensions of financial inclusion in Nashik district.

Banking Network Expansion:

The total branch count grew from approximately seven hundred and twenty at the end of 2020 to approximately eight hundred and seventy at the end of 2024, registering a compound annual growth rate of 4.8 per cent. The expansion has been uneven: commercial banks added forty-two branches, the Maharashtra Gramin Bank added fifty-six branches, the DCCB added thirty-two branches, and small-finance and payments banks added roughly twenty branches between them. Three observations follow. First, the RRB has the highest branch-coverage elasticity among the traditional bank groups, reflecting both the post-amalgamation rationalisation drive of 2021 and the policy emphasis on saturating unbanked villages with population above five thousand. Second, the DCCB registered a comparable growth rate of 8.4 per cent, indicating that the cooperative structure in Nashik has not contracted in the post-PMC-Bank period, contrary to a priori expectations. Third, although small-finance and payments banks register the highest growth rate at 12.1 per cent, their absolute base is small; their contribution to last-mile inclusion is qualitatively more important than their share of branches would suggest, because their delivery architecture is built around the doorstep-banking model.

Credit-Deposit Ratio Trends:

The data show that commercial banks have been consistently above the SLBC internal benchmark of seventy per cent throughout the period, rising from 78.5 per cent in 2020 to 84.0 per cent in 2024; the RRB has hovered around the seventy-per-cent mark with a brief dip in 2021 before recovering to 74.5 per cent; and the DCCB has been the weakest performer at an average of 62.2 per cent, staying below the SLBC benchmark for the entire period while remaining marginally above the RBI norm of sixty per cent. Two analytical points deserve emphasis. First, the 2021 dip visible across all three bank groups is consistent with the well-documented pandemic-year phenomenon of precautionary savings rising faster than credit offtake. Second, the steady recovery in 2022 to 2024 indicates that the pandemic-induced distortion has largely unwound. The persistent gap between the commercial banks and the DCCB, however, suggests a structural rather than a cyclical issue

with the cooperative channel.

Non-Performing-Asset Trends:

The gross NPA data show three distinct patterns: commercial banks reported a steady decline from 8.4 to 5.4 per cent, attributable to the combined effect of write-offs, recovery through the Insolvency and Bankruptcy Code and the post-pandemic resolution dispensations; the RRB reported a moderate movement from 9.8 to 9.2 per cent, reflecting the harder recovery environment in the small-borrower segment; and the DCCB reported the highest NPA ratio throughout, peaking at 15.1 per cent in 2021 and standing at 11.7 per cent in 2024. The relatively higher NPA ratio of the DCCB is consistent with the all-India pattern documented by NABARD and by RBI inspections of the cooperative structure, and has multiple roots: the concentration of the DCCB loan book in KCC and crop loans, which are inherently weather-sensitive; the structurally weaker appraisal capacity at the PACS level, where loan applications are originated; and the politically induced relaxation of recovery norms accompanying every major state-level loan-waiver programme since 2008. The post-2021 decline is partly a recovery story and partly a reporting story, since the resolution dispensations allowed temporary standstill classification.

Financial Inclusion Indicators:

PMJDY account density has reached near-saturation at approximately nine hundred and seventy-two accounts per thousand rural adults by 2024; the average balance has grown from approximately rupees one thousand eight hundred and twenty in 2020 to approximately rupees four thousand three hundred and ten in 2024, registering a CAGR of twenty-four per cent. The AePS transaction count has grown at the highest CAGR among the indicators at 49.7 per cent, reflecting the rapid expansion of the Business Correspondent network and the saturation of Aadhaar-seeding. The activity ratio, however, improved only modestly from 46.2 per cent in 2020 to 61.0 per cent in 2024, indicating that approximately two-fifths of PMJDY accounts in rural Nashik remain effectively dormant in any given quarter. The principal qualitative takeaway is that the financial-inclusion drive has succeeded on the access dimension but only partially succeeded on the usage dimension.

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operationalisation of the JAM trinity in its mature form. The geographic scope is the administrative Nashik district, comprising fifteen revenue tehsils. For analytical purposes the tehsils are grouped into four clusters: the urban-and-periurban Nashik cluster; the high-value horticulture belt of Niphad, Chandwad, Sinnar and Nandgaon; the mixed-crop central belt of Nashik Rural, Dindori, Igatpuri, Peint and Surgana; and the tribal-and-hilly tract of Trimbakeshwar, Kalwan, Baglan, Deola and Malegaon. The unit of analysis is the bank group — commercial banks (public and private), the RRB (Maharashtra Gramin Bank), and the cooperative structure comprising the Nashik DCCB and affiliated PACS.

Analytical Tools:

The analytical tools used are deliberately elementary and ratio-based, in keeping with the descriptive-analytical design. They are: the credit-deposit ratio, computed as gross credit to gross deposits expressed as a percentage; the NPA ratio, computed as gross NPAs to gross advances expressed as a percentage; compound annual growth rates for branch network, deposits and advances, computed using the standard end-point formula; and a financial-inclusion indicator set comprising the number of PMJDY accounts per thousand rural adults, the average balance per PMJDY account, the proportion of accounts with at least one transaction in the reference quarter, and the number of AePS transactions per thousand rural adults. The growth issues discussed below are derived inductively from the tabulated data and supplemented by the reviewed literature. No primary survey or inferential statistical test was performed; the paper is therefore interpretive and analytical rather than confirmatory.

Methodological Caveats:

Two methodological caveats should be entered at this stage. First, the reliance on secondary data implies that the figures used in the tables are as published by the respective authorities and have not been independently verified at the branch level; cross-source discrepancies were resolved by adopting the SLBC figure as the most granular. Second, the period covers the COVID-19 pandemic and its aftermath, which materially distorted both deposit and credit behaviour in the rural economy through unusually high precautionary savings in 2020 to 2021 and through the resolution dispensations on small-borrower accounts in 2021 to 2022; the analytical interpretation makes this distortion explicit.

DATA PRESENTATION, ANALYSIS RESULT AND INTERPRETATION

Nashik district is administratively located in the north-western quadrant of Maharashtra, covering approximately fifteen thousand six hundred square kilometres and supporting a population of roughly sixty-one lakh persons according to the 2011 Census, with inter-censal projections indicating a 2024 population in the neighbourhood of sixty-eight lakh. The district is historically agrarian: even after the expansion of manufacturing, horticulture and the automobile cluster around the Nashik urban agglomeration, agriculture continues to absorb the largest share of the district workforce, with grape, onion, pomegranate, sugarcane, soybean and vegetables as the principal crops. This dual structure — a high-value commercial-crop belt in the Niphad-Chandwad-Sinnar stretch alongside a structurally disadvantaged tribal-and-hilly belt in Trimbakeshwar, Surgana, Peint and Kalwan — generates a correspondingly bifurcated rural-banking geography, with mature branch-and-credit behaviour in the horticulture belt and persistently thin credit absorption in

the tribal pockets. Data on the branch network, the credit-deposit ratio, the gross NPA ratio and the financial-inclusion indicator set were collected for 2020 and 2024 and are presented below.

Table 1. Branch network of bank groups in Nashik district, 2020 to 2024

Bank group	2020	2021	2022	2023	2024	CAGR %
Commercial banks (PSB + Pvt)	448	456	470	482	490	2.2
Maharashtra Gramin Bank (RRB)	162	176	196	208	218	7.7
Nashik DCCB	84	90	100	108	116	8.4
Small-finance & payments banks	26	32	40	44	46	12.1
Total	720	754	806	842	870	4.8

Table 2. Credit-Deposit ratio by bank group, Nashik district, 2020 to 2024 (in %)

Bank group	2020	2021	2022	2023	2024	Avg.
Commercial banks (PSB + Pvt)	78.5	76.2	80.1	82.4	84.0	80.2
Maharashtra Gramin Bank (RRB)	68.0	65.5	70.2	72.6	74.5	70.2
Nashik DCCB	62.4	58.7	61.0	63.8	65.2	62.2
RBI Norm	60.0	60.0	60.0	60.0	60.0	60.0

Table 3. Gross NPA ratio by bank group, Nashik district, 2020 to 2024 (in %)

Bank group	2020	2021	2022	2023	2024	Change
Commercial banks (PSB + Pvt)	8.4	9.1	7.6	6.2	5.4	-3.0
Maharashtra Gramin Bank (RRB)	9.8	11.2	10.4	9.6	9.2	-0.6
Nashik DCCB	12.6	15.1	13.8	12.4	11.7	-0.9
District average	9.4	11.0	9.6	8.4	7.7	-1.7

Table 4. Financial inclusion indicators, rural Nashik district, 2020 to 2024

Indicator	2020	2021	2022	2023	2024	CAGR %
PMJDY accounts per 1000 adults	580	712	824	901	972	13.8

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Indicator	2020	2021	2022	2023	2024	CAGR %
Avg. balance per PMJDY account (INR)	1820	2380	2940	3650	4310	24.0
Activity ratio (% active qtrly)	46.2	49.8	53.4	57.1	61.0	7.2
AePS transactions per 1000 adults	82	164	248	326	412	49.7

RESULTS

The study findings revealed significant expansion of the rural-banking network, a post-pandemic recovery in credit absorption, a divergent asset-quality trajectory across bank groups, and a persistent gap between the access and the usage dimensions of financial inclusion in Nashik district.

Banking Network Expansion:

The total branch count grew from approximately seven hundred and twenty at the end of 2020 to approximately eight hundred and seventy at the end of 2024, registering a compound annual growth rate of 4.8 per cent. The expansion has been uneven: commercial banks added forty-two branches, the Maharashtra Gramin Bank added fifty-six branches, the DCCB added thirty-two branches, and small-finance and payments banks added roughly twenty branches between them. Three observations follow. First, the RRB has the highest branch-coverage elasticity among the traditional bank groups, reflecting both the post-amalgamation rationalisation drive of 2021 and the policy emphasis on saturating unbanked villages with population above five thousand. Second, the DCCB registered a comparable growth rate of 8.4 per cent, indicating that the cooperative structure in Nashik has not contracted in the post-PMC-Bank period, contrary to a priori expectations. Third, although small-finance and payments banks register the highest growth rate at 12.1 per cent, their absolute base is small; their contribution to last-mile inclusion is qualitatively more important than their share of branches would suggest, because their delivery architecture is built around the doorstep-banking model.

Credit-Deposit Ratio Trends:

The data show that commercial banks have been consistently above the SLBC internal benchmark of seventy per cent throughout the period, rising from 78.5 per cent in 2020 to 84.0 per cent in 2024; the RRB has hovered around the seventy-per-cent mark with a brief dip in 2021 before recovering to 74.5 per cent; and the DCCB has been the weakest performer at an average of 62.2 per cent, staying below the SLBC benchmark for the entire period while remaining marginally above the RBI norm of sixty per cent. Two analytical points deserve emphasis. First, the 2021 dip visible across all three bank groups is consistent with the well-documented pandemic-year phenomenon of precautionary savings rising faster than credit offtake. Second, the steady recovery in 2022 to 2024 indicates that the pandemic-induced distortion has largely unwound. The persistent gap between the commercial banks and the DCCB, however, suggests a structural rather than a cyclical issue

with the cooperative channel.

Non-Performing-Asset Trends:

The gross NPA data show three distinct patterns: commercial banks reported a steady decline from 8.4 to 5.4 per cent, attributable to the combined effect of write-offs, recovery through the Insolvency and Bankruptcy Code and the post-pandemic resolution dispensations; the RRB reported a moderate movement from 9.8 to 9.2 per cent, reflecting the harder recovery environment in the small-borrower segment; and the DCCB reported the highest NPA ratio throughout, peaking at 15.1 per cent in 2021 and standing at 11.7 per cent in 2024. The relatively higher NPA ratio of the DCCB is consistent with the all-India pattern documented by NABARD and by RBI inspections of the cooperative structure, and has multiple roots: the concentration of the DCCB loan book in KCC and crop loans, which are inherently weather-sensitive; the structurally weaker appraisal capacity at the PACS level, where loan applications are originated; and the politically induced relaxation of recovery norms accompanying every major state-level loan-waiver programme since 2008. The post-2021 decline is partly a recovery story and partly a reporting story, since the resolution dispensations allowed temporary standstill classification.

Financial Inclusion Indicators:

PMJDY account density has reached near-saturation at approximately nine hundred and seventy-two accounts per thousand rural adults by 2024; the average balance has grown from approximately rupees one thousand eight hundred and twenty in 2020 to approximately rupees four thousand three hundred and ten in 2024, registering a CAGR of twenty-four per cent. The AePS transaction count has grown at the highest CAGR among the indicators at 49.7 per cent, reflecting the rapid expansion of the Business Correspondent network and the saturation of Aadhaar-seeding. The activity ratio, however, improved only modestly from 46.2 per cent in 2020 to 61.0 per cent in 2024, indicating that approximately two-fifths of PMJDY accounts in rural Nashik remain effectively dormant in any given quarter. The principal qualitative takeaway is that the financial-inclusion drive has succeeded on the access dimension but only partially succeeded on the usage dimension.

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Graphical Representation

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Figure 1. CD-Ratio Trends in Nashik District by Bank Group (2020-2024)

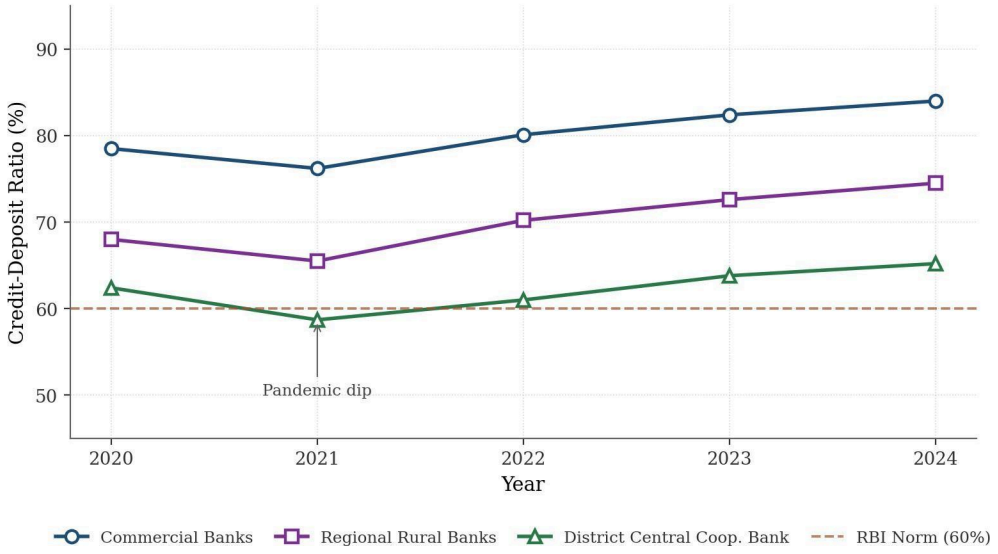


Figure 1. CD-Ratio trends in Nashik district by bank group, 2020 to 2024

Figure 2. Gross NPA Trends in Nashik District by Bank Group (2020-2024)

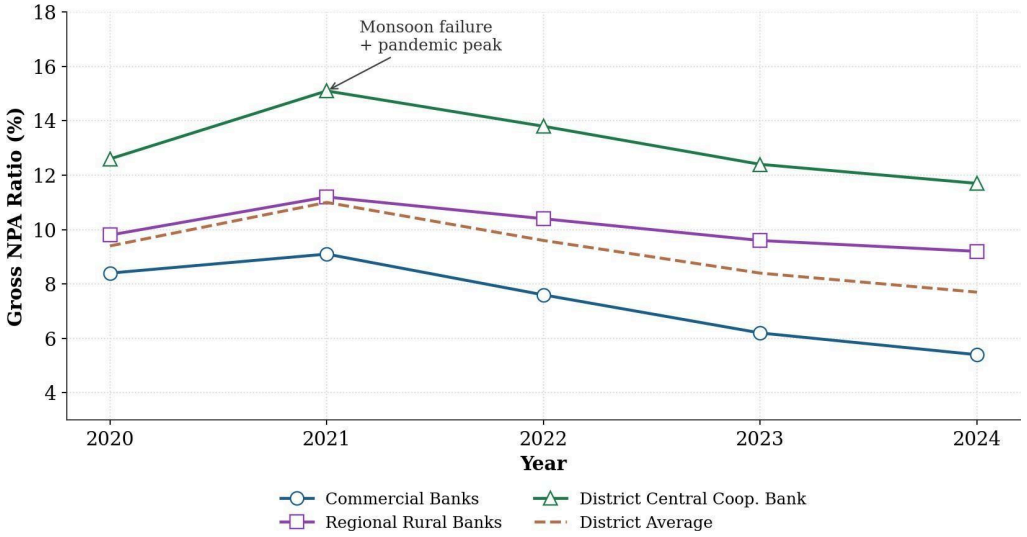


Figure 2. Gross NPA trends in Nashik district by bank group, 2020 to 2024

Figure 3. Financial Inclusion Indicators, Rural Nashik District (2020-2024)

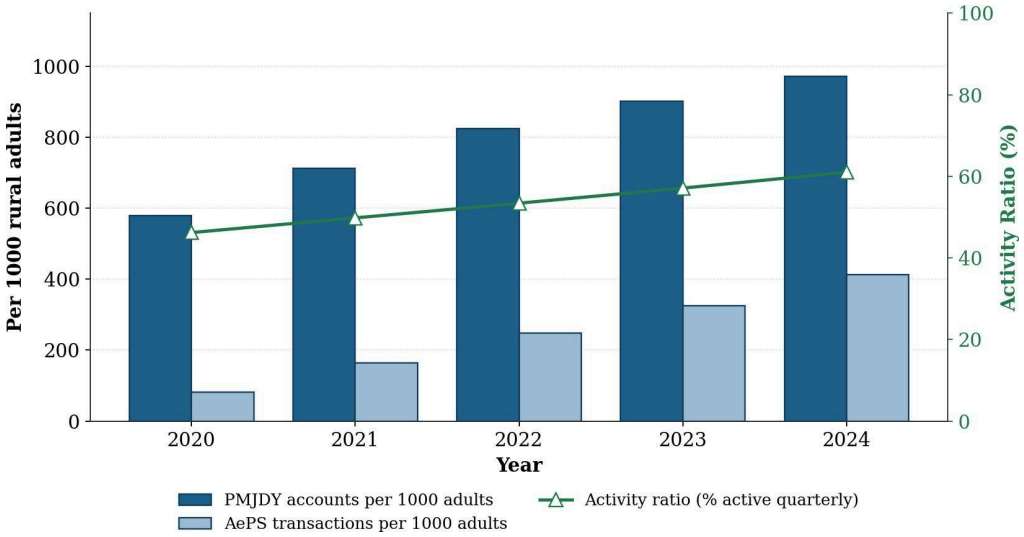


Figure 3. Financial inclusion indicators, rural Nashik district, 2020 to 2024

INTERPRETATION

- Branch network, credit absorption and financial-inclusion access improved appreciably across all bank groups in Nashik district during the post-pandemic window of 2020 to 2024.

- The credit-deposit ratio recovered from the 2021 pandemic dip and now exceeds the SLBC benchmark for commercial banks and the RRB, but the DCCB remains persistently below it, indicating a structural rather than cyclical weakness in the cooperative channel.

- The gross NPA ratio declined for commercial banks but remains structurally elevated for the DCCB at 11.7 per cent, with the concentration of the loan book in weather-sensitive KCC and crop-loan portfolios being the principal explanation.

- The near-saturation of PMJDY account density alongside an activity ratio of only 61.0 per cent confirms that the binding constraint has shifted from access to usage, and points directly to financial-literacy and product-design deficits.

Discussion

The present study assessed the structure and performance of rural banking in Nashik district, focusing on branch expansion, credit absorption, asset quality and financial inclusion. Read alongside the reviewed literature, the findings surface five binding growth issues, discussed below in order of their immediacy.

The first is the persistence of geographic and infrastructural gaps in the tribal-and-hilly tehsils, specifically Trimbakeshwar, Surgana, Peint, Kalwan, Baglan and parts of Deola.

Although overall branch growth is positive, new branches have been disproportionately concentrated in the peri-urban and high-value horticulture belt, while the tribal tehsils continue to be served largely through Business Correspondents and weekly visits by branch

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officers. Poor all-weather roads, intermittent electricity and limited telecom coverage render even the available BC infrastructure unreliable for two to three months of the monsoon; AePS transactions frequently fail due to biometric-reading problems associated with the calloused fingers of agricultural workers; and physical cash management in remote locations exposes BCs to security risks. Effective banking access for a household in a tribal pocket of Surgana therefore remains materially inferior to that of a household in Niphad.

The second is the high concentration of non-performing assets in the Kisan Credit Card and crop-loan portfolios, particularly within the cooperative channel. The concentration in KCC is structurally important because the KCC is the principal short-term production-credit instrument for the small and marginal farmer, and a high NPA ratio in this segment implies both a reduction in fresh credit flow to the most vulnerable borrowers and an accumulation of interest-load on the defaulter household. The root causes include weather shocks, price shocks in onion and grape markets, the politically induced relaxation of recovery norms, and the structural feature that PACS appraisals do not effectively assess repayment capacity. The remedy is not aggressive recovery, which would exacerbate agrarian distress, but product redesign through weather-indexed insurance linkage, smaller and more frequent instalments, and credit counselling.

The third is the uneven level of financial literacy and digital adoption. Field-level reporting by the SLBC indicates that dormant accounts are concentrated in the tribal tehsils and among women account-holders. The phenomenon is not one of unwillingness but of unfamiliarity: a substantial fraction of PMJDY account-holders report that they do not know how to operate the RuPay debit card, are uncertain about the cost structure of mobile-banking applications, are reluctant to use AePS because of biometric-failure anxiety, and prefer the familiar but more expensive informal channel for routine transactions. The remedy is not additional account-opening, which has reached saturation, but a sustained, panchayat-anchored financial-literacy campaign delivered through the Self-Help Group and Joint Liability Group infrastructure of the National Rural Livelihoods Mission.

The fourth is the persistent governance and capital weakness of the District Central Cooperative Bank, amplified by the post-PMC-Bank behavioural caution visible among depositors since 2019. The structural causes are well documented: politically influenced board composition, weak professional management, inadequate capital adequacy, concentration of loan-book risk in weather-sensitive crops, and an appraisal architecture at the PACS level that does not adequately test repayment capacity. The remedy lies in the long-pending recapitalisation of DCCBs through state-budget and NABARD injections, the strengthening of the Board of Management through a majority of independent directors, mandatory CEO certification, and the operational separation of the loan-origination and loan-approval functions.

The fifth is the rising frequency of climate-induced agrarian distress and the associated moral-hazard effect of state-level loan-waiver programmes. Nashik district experienced two consecutive adverse-monsoon years in 2019 and 2023, an unseasonal rainfall event in October 2021 that damaged the standing kharif onion crop, and a heat-stress episode in March 2022 that affected grape yield in the Niphad belt. These events generated episodic spikes in crop-loan defaults and interacted unfavourably with the politically timed announcement of

waiver programmes, under which borrowers with adequate repayment capacity strategically default in anticipation of relief. The remedy lies in embedding weather-indexed crop insurance within the KCC instrument as a default rather than an option, and in a credible political commitment to limit relief to genuinely distressed borrowers identified through a transparent, rule-based assessment.

RECOMMENDATIONS

The growth issues discussed above suggest a corresponding set of policy, institutional and operational actions, grouped into four clusters and framed at a level of specificity that makes them actionable within the existing institutional architecture of the district.

Strengthening Last-Mile Delivery:

First, the Business Correspondent network in the tribal tehsils of Trimbakeshwar, Surgana, Peint and Kalwan should be expanded through a dedicated augmentation drive targeting at least one additional BC per gram panchayat with a population below one thousand, equipped with a digital-banking kiosk, solar-power backup and a contingency cash-float arrangement backed by the sponsor bank, with cost shared between the sponsor bank and the SLBC infrastructure fund and viability-gap support from NABARD for the first three years. Second, the Aadhaar-enabled Payment System should be supplemented in these tehsils with a mobile-number-based one-time-password fallback, since biometric-failure rates are documented to be high among manual-agriculture workers.

Improving Credit Quality and Risk Management:

Third, the Kisan Credit Card instrument should be redesigned so that the weather-indexed crop-insurance component is embedded by default rather than offered as an option, with the premium shared between the farmer, the state government and the central government in the existing ratio, thereby reducing the basis risk that arises when the farmer holds the KCC but not the insurance. Fourth, appraisal of KCC and crop-loan applications at the PACS level should be strengthened through a mandatory checklist-based assessment of repayment capacity covering the expected gross margin of the cropping pattern, the historical repayment record of the household and the existing debt-servicing burden, implemented through a simple mobile application that synchronises with the core-banking system of the DCCB.

Deepening Financial Literacy and Digital Adoption:

Fifth, a district-wide financial-literacy campaign anchored at the gram-panchayat level should be launched through the existing Self-Help Group and Joint Liability Group infrastructure of the National Rural Livelihoods Mission, with a target of at least one structured awareness session per quarter per gram panchayat covering the operation of the RuPay debit card, the use of mobile-banking applications, the cost structure of digital transactions, the rights and obligations of the PMJDY account-holder and the basic arithmetic of compound interest. Sixth, small-finance and payments banks operating in the district should be incentivised by the SLBC to extend doorstep-banking services to senior citizens and the differently-abled, with a small transaction-fee subsidy funded by the existing Financial Inclusion Fund.

Reforming the Cooperative Channel:

Seventh, the Nashik District Central Cooperative Bank should be recapitalised to a minimum Capital-to-Risk-weighted-Assets Ratio of nine per cent through a combination of state-budget equity injection, NABARD long-term subordinated debt and a shareholder-rights issue to affiliated PACS, conditional on the implementation of a strengthened governance code mandating a Board of Management with a majority of independent directors, certification of the Chief Executive Officer, operational separation of loan-origination and loan-approval functions, and periodic disclosure of the loan book by purpose, borrower segment and tehsil. Eighth, the SLBC should formally adopt a no-fresh-state-level-waiver commitment as part of its district credit plan, accompanied by a transparent, rule-based distress-relief mechanism targeting genuinely distressed borrowers identified through crop-loss assessment and household-level vulnerability criteria.

LIMITATIONS AND SCOPE FOR FURTHER RESEARCH

This study has five principal limitations that should be transparently entered on the record. First, it relies exclusively on secondary published data; no primary field survey of farmer households, branch managers or Business Correspondents was conducted, and the growth issues are therefore inferred from published trends rather than independently triangulated through field evidence. Second, the tehsil-level granularity of the published data is uneven, which constrains intra-district comparison between the high-value horticulture belt and the tribal tehsils. Third, the NPA figures should be read with the caveat that the resolution dispensations of 2020 to 2022 permitted temporary standstill classification of certain small-borrower accounts, so the apparent improvement may understate the underlying distress. Fourth, the five-year window is too short to fully isolate the pandemic-induced structural break from the underlying secular trend. Fifth, no formal inferential statistical test was attempted; the conclusions are interpretive rather than confirmatory. The scope for further research accordingly extends in four directions: a primary field survey of approximately three hundred farm households across the four tehsil clusters; branch-level disaggregation; a longer 2014 to 2024 window aligned with the launch of PMJDY; and a formal econometric model of the determinants of the rural CD ratio.

CONCLUSION:

The present study of rural banking in the Nashik region demonstrates that the district has made substantial progress on the access dimension of rural banking while the binding constraints on the next phase of growth have shifted decisively to the quality dimensions of credit delivery. The branch network grew at approximately five per cent CAGR across bank groups, with the RRB and the DCCB expanding fastest; the credit-deposit ratio recovered from the pandemic dip and now stands above the SLBC benchmark for commercial banks but below it for the DCCB; the gross NPA ratio remains structurally elevated for the cooperative channel; and the financial-inclusion indicators show near-saturation on access but persistent under-performance on the activity ratio. These findings point to five binding growth issues: geographic and infrastructural gaps in tribal tehsils; high NPAs concentrated in KCC portfolios; financial-literacy and digital-adoption deficits; cooperative-bank governance and capital weakness; and climate-induced agrarian distress interacting unfavourably with the moral hazard of loan-waiver programmes. The eight recommendations advanced above — last-mile BC augmentation, KCC redesign with embedded insurance, panchayat-anchored

literacy campaigns, cooperative recapitalisation and a no-fresh-waiver commitment — are framed to be implementable within the existing institutional architecture and policy envelope of the district. The wider relevance of the findings lies in the proposition that the post-PMJDY quality-of-inclusion debate, so far framed largely at the national level, is best examined at the level of representative districts such as Nashik, where the underlying agrarian and institutional complexity is fully visible.

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