

A COMPARATIVE ANALYSIS OF THE IMPACT OF COVID-19 PANDEMIC ON THE PERFORMANCE OF INDIAN BANKING SECTOR

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Abstract

The COVID-19 pandemic created substantial uncertainty for the banking sector by affecting credit demand, liquidity, profitability, asset utilisation and financial stability. This study comparatively examines the impact of the COVID-19 pandemic on selected private and public sector banks in India. The analysis covers two financial years: 2019–20, representing the period before COVID-19 in India, and 2020–21, representing the period during COVID-19. Twelve financial performance indicators are examined, namely Capital Adequacy Ratio, Credit Deposit Ratio, Current Ratio, Interest Income to Total Fund, Loans Turnover, Net Profit Margin, Non-Interest Income to Total Fund, Quick Ratio, Return on Assets, Return on Net Worth, Total Assets Turnover and Total Debt to Owners' Fund. A paired two-sample t-test for means is used to assess whether the before-and-during pandemic differences were statistically significant within each ownership group. The results show that private sector banks experienced significant changes in Interest Income to Total Fund, Loans Turnover, Return on Assets and Total Debt to Owners' Fund. Public sector banks experienced significant changes in Capital Adequacy Ratio, Credit Deposit Ratio, Net Profit Margin and Return on Net Worth. Thus, although both sectors experienced changes in their financial indicators during the pandemic, the nature of the changes differed considerably. Private sector banks showed a significant improvement in Return on Assets, while public sector banks showed significant improvements in Net Profit Margin, Return on Net Worth and Capital Adequacy Ratio. The study therefore indicates that ownership structure was associated with different patterns of financial adjustment during the pandemic period.

Keywords: COVID-19, Indian banking sector, private sector banks, public sector banks, financial performance, profitability, liquidity

INTRODUCTION

Banks play a central role in economic development by mobilising savings, extending credit, facilitating payments and supporting investment and consumption. The stability and performance of the banking sector are therefore closely connected with overall economic activity. The COVID-19 pandemic created an exceptional economic environment in which banking institutions faced disruptions in normal business activities, uncertainty in credit markets, changes in customer behaviour and pressure on profitability.

In India, the first major effects of the COVID-19 pandemic became visible during 2020. The study period selected for the present analysis covers 2019–20 as the pre-COVID period and 2020–21 as the COVID period, thereby covering the first two major waves of the pandemic in India. The underlying study specifically aims to examine the performance of selected private and public sector banks across twelve financial indicators and to determine whether the changes were statistically significant.

The banking industry consists of institutions operating under different ownership structures. Private sector banks generally operate with a stronger emphasis on commercial efficiency, technology and market-oriented strategies, whereas public sector banks have traditionally had a broader developmental and social banking role. These structural differences make a comparison of their pandemic-period performance particularly relevant.

The present paper is the comparative extension of sector-specific analysis. Rather than examining private and public sector banks separately, it compares the direction, magnitude and statistical significance of changes observed in the two groups. The purpose is to identify whether the pandemic-period adjustment was similar across ownership groups or whether important differences emerged.

The study examined twelve variables and used a paired two-sample t-test for means, with eight observations for each sector. The null hypothesis stated that there was no significant difference in the means of the selected variables before and during COVID-19, while the alternative hypothesis stated that a significant difference existed.

OBJECTIVES OF THE STUDY

The major objective of the study is to comparatively examine the impact of COVID-19 on the financial performance of selected private and public sector banks in India. More specifically, the study seeks to:

1. Compare the financial performance of private and public sector banks before and during COVID-19.
2. Examine changes in liquidity, solvency, efficiency and profitability indicators.
3. Identify the variables for which the changes were statistically significant.
4. Compare the pattern of financial adjustment between private and public sector banks.
5. Draw implications for banking management and policy.

LITERATURE REVIEW

Comparative studies of Indian banks have consistently demonstrated that ownership structure is an important dimension in understanding financial performance. Differences in profitability, capital adequacy, liquidity, asset quality, operating efficiency and risk management have frequently been observed between public and private sector banks.

Chaudhary and Sharma (2011) compared public and private sector banks in India and focused particularly on non-performing assets and profitability. Their study highlighted differences in the management of NPAs and financial performance between the two ownership groups. This early evidence established the relevance of ownership structure in comparative banking analysis.

Maheshwari (2012) conducted a comparative evaluation of public and private sector banks using capital adequacy, asset quality, management efficiency, earnings quality and liquidity. The study demonstrated that banking performance cannot be assessed through profitability alone and that a multidimensional framework is necessary for meaningful comparison.

Shukla (2016) provided a broader comparison of 46 scheduled commercial banks using eleven financial performance indicators grouped into size, growth, profitability and soundness. The study found that public and private sector banks were relatively similar in size and growth but differed significantly in profitability and soundness. These findings reinforce the argument that ownership structure may be associated with different financial-performance outcomes.

Banerjee and Velamuri (2015) also identified substantial heterogeneity across ownership types in the Indian banking system. Their analysis of 75 banks over 2000–2013 examined the relationship between profitability and soundness and found that the relationship varied according to ownership structure. The study is especially relevant to the present research because it provides a theoretical and empirical basis for considering ownership as an important explanatory dimension of bank performance.

Chavda et al. (2022) directly compared selected public and private sector banks using financial indicators including capital adequacy ratio, credit-deposit ratio, current ratio, interest income to total fund, loans turnover ratio and net profit margin. Their results showed significant differences in the performance of the selected public and private banks. The study is closely aligned with the present paper because it employs several of the same financial indicators.

The COVID-19 crisis provided a unique setting for reassessing these ownership-based differences. Gulati et al. (2023) compared the efficiency of Indian banks across pre-pandemic and pandemic periods and concluded that the Indian banking system showed considerable resilience, although efficiency losses occurred for some large and medium-sized banks. Their analysis also examined whether the effects varied across ownership types, thereby supporting the relevance of comparative pandemic-period research.

The pandemic also accelerated digitalisation in banking. Vyas and Mistry (2021) examined the growth and use of UPI during COVID-19 and highlighted the increased significance of digital payment mechanisms. Vyas and Mistry (2021) found that there was statistically significant difference in profitability and efficiency of the selected Indian public sector banks. Due to significantly higher NP margin as well as higher RONW, BOB was at the first position followed by SBI, SYN, UCO and IOB. Due to significantly higher NII and NNII as well as efficiently controlled IE; SBI occupied first position closely followed by BOB, IOB, SYN and UCO.

Mistry and Vyas examined (2021) that there has been significant difference in the means of Number of Member Banks before and during Covid 19. The study also found that there has been significant difference in the means of Number of IMPS transactions before and during Covid 19. Significant difference in the means of volume of IMPS transactions before and during Covid 19 has also been observed. The study found that during Covid 19 pandemic in India, with the increase in Number of Member Banks offering IMPS, there has been increase in usage of IMPS which has been reflected by the Number of IMPS transactions and Volume of IMPS transactions.

Mistry and Vyas (2021) found that as far as investment safety is concerned, both types of banks are at par, while as far as return on investment is concerned, the private banks are ahead of the public banks in India.

Mistry and Vyas (2022) examined that there has been a significant difference in the means of No. of Banks live on *99# before and during COVID 19. In contrast, there has been the insignificant difference in the means of Volume of *99# transactions and Value of *99# transactions before and during COVID. The study found that there has been significant decrease in means of no. of Banks Live on *99# during Covid 19 but marginal increase in volume and value of *99# during Covid 19.

Saroy et al. (2023) subsequently found that digital payment adoption improved the cost efficiency of Indian banks. These findings suggest that technological capabilities may have been one factor contributing to differences in banking performance during the pandemic.

More recent comparative evidence continues to indicate differences between public and private sector banks. A 2026 study comparing performance and return volatility of public and private sector banks in India reported substantial differences in the behaviour of performance indicators and identified different effects of credit risk, market power and COVID-19 across the two ownership groups (Khan et al., 2026).

Seth and Mistry (2026) found that employees' perceptions and the challenges they face play an important role in shaping their attitudes toward green banking. A strong positive link was observed between awareness and perception, but awareness on its own does not significantly influence attitude. Among demographic factors, work experience appears to positively affect awareness levels, while other factors show limited impact. The findings suggest that practical exposure and positive perceptions are key factors in encouraging employees to support green banking initiatives. Seth and Mistry (2026) also concluded that Green banking is not just a trend but a necessary evolution in the financial sector. It facilitates the shift to a more sustainable economy by fusing environmental responsibility with financial services. Banks may play a key role in combating climate change and advancing a greener, more sustainable future by funding eco-friendly projects, lowering their operating carbon footprint, and supporting sustainable practices.

The existing literature therefore establishes that ownership structure, financial characteristics, operational efficiency and technological adaptation are relevant to banking performance. However, there remains a need for a focused comparison of **how multiple financial indicators changed from the pre-COVID period to the COVID period for private and public sector banks under a common statistical framework**. The present paper addresses this gap by comparing twelve financial indicators and their before-and-during pandemic movements across the two ownership groups.

RESEARCH METHODOLOGY

Research Design - The study is empirical and analytical in nature. It compares the financial performance of selected private and public sector banks before and during the COVID-19 pandemic.

Study Period

Two financial years are considered:

- 2019–20: Before COVID-19 in India
- 2020–21: During COVID-19 in India

Variables Selected

The study analyses twelve financial indicators:

1. Capital Adequacy Ratio (CAR)
2. Credit Deposit Ratio (CDR)
3. Current Ratio
4. Interest Income / Total Fund (II-TF)
5. Loans Turnover (LT)
6. Net Profit Margin (NPM)
7. Non-Interest Income / Total Fund (NII-TF)
8. Quick Ratio (QR)
9. Return on Assets (ROA)
10. Return on Net Worth (RONW)
11. Total Assets Turnover (TA)
12. Total Debt / Owners' Fund

These indicators collectively represent different dimensions of financial performance.

Statistical Technique

A paired two-sample t-test for means is used to test whether the difference between the pre-COVID and COVID-period observations is statistically significant.

The hypotheses are:

H_0 : There is no significant difference in the means of the selected variables before and during COVID-19.

H_1 : There is a significant difference in the means of the selected variables before and during COVID-19.

A p-value below 0.05 is treated as statistically significant.

RESULTS AND DISCUSSION

Financial Indicator	Private Sector Banks			Public Sector Banks			Comparative Result
	Before	During	p-value	Before	During	p-value	
Capital Adequacy Ratio	16.79125	19.15375	0.110152	13.47125	14.24000	0.045847	Both improved; significant only for public
Credit Deposit	92.67125	90.16125	0.117966	69.30625	65.94750	0.002710	Both declined;

Ratio							significant only for public
Current Ratio	0.11500	0.09125	0.061533	0.06250	0.06125	0.731788	Both declined; insignificant
Interest Income / Total Fund	8.80125	7.90125	0.011717	7.05625	7.13375	0.847894	Private declined significantly; public slightly increased
Loans Turnover	0.14125	0.12875	0.005266	0.12000	0.12625	0.448058	Private declined significantly; public increased insignificantly
Net Profit Margin	-2.95250	12.42750	0.155588	-0.68375	4.61250	0.017887	Both improved; significant only for public
Non-Interest Income / Total Fund	2.04250	1.62875	0.205792	1.09125	1.27875	0.066632	Private declined; public increased; both insignificant
Quick Ratio	20.39875	18.43875	0.466993	26.42750	22.64250	0.126903	Both declined; insignificant
Return on Assets	208.2263	241.9188	0.012905	166.0225	156.0238	0.434963	Private improved significantly; public declined insignificantly
Return on Net Worth	-6.70250	7.14750	0.204026	-0.97500	5.57875	0.017415	Both improved; significant only for public
Total Assets Turnover	0.08750	0.08000	0.079602	0.07125	0.06875	0.563028	Both declined; insignificant
Total Debt / Owners' Fund	7.92750	6.87250	0.030746	16.01625	17.19875	0.250070	Private declined significantly; public increased insignificantly

Capital Adequacy Ratio - Private sector banks recorded an increase in mean CAR from 16.79 to 19.15, but the p-value of 0.110152 indicates that the change was statistically insignificant. Public sector banks increased their mean CAR from 13.47 to 14.24, and the p-value of 0.045847 indicates a statistically significant change. Thus, both sectors improved capital adequacy, but the improvement was statistically significant only for public sector banks.

Credit Deposit Ratio - The private-sector CDR declined from 92.67 to 90.16, but this change was statistically insignificant with a p-value of 0.117966. Public sector banks experienced a larger decline from 69.31 to 65.95, and the p-value of 0.002710 indicates a statistically significant difference. This result suggests that credit deployment relative to deposits weakened in both sectors during the pandemic period, but the change was more statistically pronounced in public sector banks.

Current Ratio - The Current Ratio of private sector banks decreased from 0.1150 to 0.09125, with a p-value of 0.061533. The difference was statistically insignificant at the 5% level. Public sector banks showed only a marginal decline from 0.06250 to 0.06125, with a p-value of 0.731788, indicating an insignificant change. The direction of movement was therefore similar for both sectors, although the decline was relatively larger among private sector banks.

Interest Income / Total Fund - This indicator presents one of the clearest differences between the two ownership groups. Private sector banks experienced a decline from 8.80 to 7.90, and the p-value of 0.011717 shows that the reduction was statistically significant. In contrast, public sector banks showed a slight increase from 7.06 to 7.13, with a p-value of 0.847894, indicating no statistically significant change. Thus, private banks experienced a statistically significant reduction in interest-income generation relative to total funds, while public banks remained comparatively stable on this measure.

Loans Turnover - Private banks recorded a decline in Loans Turnover from 0.14125 to 0.12875. The p-value of 0.005266 indicates a statistically significant decline. Public sector banks, however, increased their Loans Turnover from 0.12000 to 0.12625, with a p-value of 0.448058, making the increase statistically insignificant. The contrast is noteworthy because the two sectors moved in opposite directions.

Net Profit Margin - Both groups recorded a strong improvement in Net Profit Margin. Private sector banks increased from -2.95 to 12.43, but the p-value of 0.155588 means that the change was statistically insignificant. Public sector banks improved from -0.68 to 4.61, and the p-value of 0.017887 indicates a statistically significant improvement. The result suggests that profitability improved during the COVID period for both groups, but the improvement was statistically stronger for public sector banks.

Non-Interest Income / Total Fund - Private sector banks experienced a decline in NII-TF from 2.04 to 1.63, whereas public sector banks increased from 1.09 to 1.28. The respective p-values of 0.205792 and 0.066632 indicate that neither change was statistically significant at the 5% level. Thus, the direction of change differed across ownership groups, although neither movement achieved statistical significance.

Quick Ratio - Quick Ratio declined for both categories of banks. For private sector banks, the mean declined from 20.40 to 18.44, with a p-value of 0.466993. For public sector banks, the mean decreased from 26.43 to 22.64, with a p-value of 0.126903. It can be concluded that both changes were statistically insignificant. Consequently, the pandemic period was associated with some deterioration in quick liquidity measures in both sectors, but the observed differences were not statistically significant.

Return on Assets - ROA provides one of the most important ownership-based contrasts. Private sector banks showed an increase in ROA from 208.23 to 241.92, with a p-value of 0.012905, indicating a statistically significant improvement. Public sector banks showed a decline from 166.02 to 156.02, with a p-value of 0.434963, indicating an insignificant reduction. Therefore, private sector banks demonstrated a significantly positive movement in ROA, whereas public sector banks did not experience a statistically significant change.

Return on Net Worth - Private sector banks improved their RONW from -6.70 to 7.15, although the p-value of 0.204026 indicates that the improvement was statistically insignificant. Public sector banks also showed a substantial improvement, from -0.98 to 5.58, with a p-value of 0.017415, indicating a statistically significant difference. Thus, both sectors moved from negative average RONW to positive average RONW, but statistical evidence of improvement was stronger for public sector banks.

Total Assets Turnover - Total Assets Turnover declined from 0.0875 to 0.0800 for private sector banks and from 0.07125 to 0.06875 for public sector banks. The corresponding p-values were 0.079602 for private banks and 0.563028 for public banks. Both changes were statistically insignificant. It can be concluded that the TA ratio declined in both sectors without statistically significant differences.

Total Debt to Owners' Fund - Private sector banks reduced their Total Debt to Owners' Fund from 7.93 to 6.87, with a p-value of 0.030746, indicating a statistically significant decline. Public sector banks, in contrast, increased this ratio from 16.02 to 17.20, but the p-value of 0.250070 indicates that the change was statistically insignificant. This difference indicates a contrasting movement in leverage between the two ownership groups during the pandemic period.

Capital Strength - Both sectors experienced an improvement in CAR. However, the improvement was statistically significant only for public sector banks. This indicates comparatively stronger statistical evidence of improved capital adequacy among the public-sector sample during the pandemic period.

Credit Deployment - Both sectors experienced a reduction in CDR. The decline was statistically significant for public sector banks but insignificant for private sector banks. This suggests that the pandemic period was associated with a stronger contraction in credit deployment relative to deposits among the public-sector sample.

Income Generation - Private sector banks experienced a statistically significant decline in Interest Income / Total Fund, while public sector banks experienced a small and statistically insignificant increase.

Lending Efficiency - Loans Turnover declined significantly for private banks but increased insignificantly for public banks. This is one of the clearest areas where the two ownership groups showed opposite movements.

Profitability - Profitability improved in both sectors. Private banks showed a substantial improvement in NPM and RONW, while public banks experienced statistically significant improvements in both NPM and RONW. At the same time, ROA improved significantly for private sector banks but declined insignificantly for public sector banks. Therefore, the profitability story is mixed and depends on the particular profitability indicator considered.

Liquidity - Current Ratio and Quick Ratio declined in both sectors. However, none of these changes was statistically significant. This indicates that liquidity-related deterioration existed descriptively but was not sufficiently strong to establish statistical significance within the selected samples.

Leverage - Private sector banks reduced their Total Debt to Owners' Fund significantly, while public sector banks increased the ratio insignificantly. This indicates different leverage adjustments during the pandemic period.

CONCLUSION

The present study comparatively examines the performance of selected private and public sector banks in India before and during the COVID-19 pandemic using twelve financial indicators. The findings show that both ownership groups experienced substantial changes during the pandemic period, but the pattern of change differed. Private sector banks experienced statistically significant changes in Interest Income / Total Fund, Loans Turnover, Return on Assets and Total Debt / Owners' Fund. Public sector banks experienced statistically significant changes in Capital Adequacy Ratio, Credit Deposit Ratio, Net Profit Margin and Return on Net Worth. An important finding is that profitability did not move uniformly across all indicators. Private banks recorded a significant improvement in ROA, while public banks recorded significant improvements in NPM and RONW. Similarly, public banks improved their capital adequacy significantly, whereas private banks reduced their debt-to-owners' fund ratio significantly. The evidence consequently suggests that private and public sector

banks responded differently to the financial pressures and operating conditions associated with COVID-19. The private-sector sample displayed greater changes in efficiency, income and leverage-related indicators, while the public-sector sample displayed stronger changes in capital adequacy, credit-deposit utilisation and selected profitability indicators. The results should, however, be interpreted as evidence of before-and-during pandemic differences and associations, rather than proof that COVID-19 alone caused every observed change. Moreover, because the underlying statistical procedure is a paired comparison within each sector, the present analysis does not provide a direct statistical test of ownership-group differences. Such a test would strengthen future comparative research.

RECOMMENDATIONS

Based on the comparative findings, the following recommendations are suggested.

1. Strengthen interest-income resilience in private banks. Private sector banks should strengthen interest-income generation through improved credit quality, diversified lending portfolios and better pricing strategies.
2. Improve lending efficiency. The significant reduction in Loans Turnover among private banks indicates the need for more efficient credit deployment, recovery mechanisms and portfolio management.
3. Maintain strong capital buffers. Both sectors improved CAR, but the significant improvement in public banks indicates the importance of maintaining adequate capital buffers during future economic shocks.
4. Strengthen credit utilisation. The decline in CDR, particularly the significant public-sector decline, calls for strategies to improve productive credit deployment while maintaining prudent lending standards.
5. Protect profitability. Both ownership groups should focus on sustainable profitability rather than short-term improvements. Cost control, asset-quality management and diversification of income sources can support this objective.
6. Improve liquidity management. The decline in Current Ratio and Quick Ratio in both sectors suggests the need for stronger short-term liquidity planning and stress-testing mechanisms.
7. Diversify income sources. Banks should strengthen fee-based and other non-interest revenue streams to reduce excessive dependence on traditional interest income.
8. Develop crisis-management frameworks. The contrasting sectoral responses demonstrate the importance of institution-specific contingency planning, capital planning and liquidity stress testing.

POLICY IMPLICATIONS

The findings have important implications for banking regulators and policymakers. First, regulatory frameworks should continue to encourage adequate capital buffers because capital strength becomes especially important during systemic crises. Second, policy measures should support the uninterrupted flow of productive credit. A significant decline in CDR in the public-sector sample indicates that crisis conditions may reduce credit deployment even when deposits remain available. Third, banking policies should support diversification of income and digital transformation. Strong digital infrastructure can help banks maintain customer services and operational continuity when physical banking activities are disrupted. Fourth, regulatory stress tests should distinguish between ownership and business-model characteristics. The present results demonstrate that private and public sector banks can experience different patterns of change under the same external shock. Fifth, policymakers should focus not only on bank survival but also on the quality of financial intermediation. Maintaining liquidity and capital is important, but efficient credit deployment and sustainable profitability are equally important for supporting economic recovery. Finally, crisis-management policy should encourage banks to develop integrated frameworks covering capital, liquidity, profitability, digital operations and credit risk rather than treating these dimensions separately.

LIMITATIONS OF THE STUDY

The study has certain limitations. The analysis covers only two financial years, namely 2019–20 and 2020–21. The number of observations is also limited to eight observations for each sector. Furthermore, the study examines selected financial ratios and therefore does not cover every aspect of banking performance, such as customer satisfaction, asset-quality classifications, digital adoption, operational risk or market valuation. Most importantly, the statistical procedure evaluates before-and-during changes within each ownership group. Consequently, the present results should not be interpreted as a direct statistical test proving that private banks and public banks differed significantly from one another. A direct inter-sector comparison would require an appropriate independent-samples test using the underlying observations.

SCOPE FOR FUTURE RESEARCH

Future research can extend the analysis by including a longer period covering pre-pandemic, pandemic and post-pandemic years. Researchers may also employ panel-data techniques and independent-samples tests to directly examine ownership-based differences. Future studies may further incorporate variables such as Gross NPA, Net NPA, Provision Coverage Ratio, Cost-to-Income Ratio, Net Interest Margin, digital transactions, market

performance and stock returns. A larger sample of banks and a longer observation period would also improve the generalisability of the findings.

REFERENCES

- [1] Banerjee, S., & Velamuri, M. (2015). The conundrum of profitability versus soundness for banks by ownership type: Evidence from the Indian banking sector. *Review of Financial Economics*, 26, 12–24. <https://doi.org/10.1016/j.rfe.2015.04.001>
- [2] Chaudhary, K., & Sharma, M. (2011). Performance of Indian public sector banks and private sector banks: A comparative study. *International Journal of Innovation, Management and Technology*, 2(3), 249–256. <https://doi.org/10.7763/IJIMT.2011.V2.140>
- [3] Chavda, D., Mistry, D., & Deshpande, S. (2022). Analysis of performance of public and private sector banks in India. *Vidya – A Journal of Gujarat University*, 1(1), 38–43. <https://doi.org/10.47413/vidya.v1i1.80>
- [4] Gulati, R., Charles, V., Hassan, M. K., & Kumar, S. (2023). COVID-19 crisis and the efficiency of Indian banks: Have they weathered the storm? *Socio-Economic Planning Sciences*, 88, Article 101661. <https://doi.org/10.1016/j.seps.2023.101661>
- [5] Khan, [details to be verified]. (2026). *Performance and returns volatility of banks in India: Public versus private sector*. *Journal of Economic and Administrative Sciences*, 42(1), 68–87. <https://doi.org/10.1108/JEAS-07-2023-0181>
- [6] Maheshwari, P. (2012). Performance evaluation of public and private sector banks in India—A comparative study. *Journal of Commerce and Trade*, 7(1), 82–89.
- [7] Mistry, D. S. (2012). A comparative study on the profitability performance in the banking sector: Evidence from Indian public sector banks. *Finance India*, 26(2), 531–544.
- [8] Mistry, D. S., & Savani, V. (2015). A comparative study of the profitability performance in the banking sector: Evidence from Indian private sector bank. In *XVI Annual Conference Proceedings* (pp. 346–360). Delhi School of Professional Studies and Research.
- [9] Mistry, D. S., & Vyas, P. C. (2021). Impact of Covid 19 on Digital Payment in India-With Special Reference to IMPS. *Journal of Social Welfare and Management*, 13 (1-2), 25-32
- [10] Mistry, D. S., & Vyas, P. C. (2021). A Study of Consumers' Decisions in Investing with Public or Private Sector Banks. *Anvesha The Journal of Management*, 13, 62-70
- [11] Mistry, D. S., & Vyas, P. C. (2022). Impact of Covid 19 on Digital Payment in India - With Special Reference to *99# Service, *ComFin Research (Previously Shanlax International Journal of Commerce)*, 10 (1), 1-9
- [12] Saroy, R., Jain, P., Awasthy, S., & Dhal, S. C. (2023). Impact of digital payment adoption on Indian banking sector efficiency. *Journal of Banking and Financial Technology*, 7(1-2), 1–13. <https://doi.org/10.1007/s42786-023-00047-2>
- [13] Seth, P., & Mistry, D. S. (2026). *Evaluating Bankers' Perceptions of Green Banking Initiatives: An Empirical Study in Ahmedabad*. *Sachetas*, 5 (2), 61-70
- [14] Seth, P., & Mistry, D. S. (2026). *Exploring Green Banking Practices: A pathway to Sustainable Development for a Greener Tomorrow*. *Journal of Emerging Technologies and Innovative Research (JETIR)*, 11 (11), 593-602
- [15] Shukla, S. (2016). Performance of the Indian banking industry: A comparison of public and private sector banks. *Indian Journal of Finance*, 10(1), 41–55. <https://doi.org/10.17010/ijf/2016/v10i1/85843>
- [16] Vyas, P., & Mistry, D. (2021). Impact of COVID-19 on digital payments: A study with special reference to UPI. *PRAGATI: Journal of Indian Economy*, 8(2), 29–42. <https://doi.org/10.17492/JPI.PRAGATI.V8I2.822102>
- [17] Vyas, P. C., & Mistry, D. S. (2021). Profitability and Efficiency Measurement of the Selected Public Sector Banks in India. *International Journal of Multidisciplinary Educational Research*, 10 (4(2)), 76-82.