

## International Journal of Agriculture Extension and Social Development

Volume 8; SP-Issue 8; August 2025; Page No. 51-55

Received: 13-06-2025  
Accepted: 15-07-2025

Indexed Journal  
Peer Reviewed Journal

### A CAMEL-based assessment of NABARD's financial performance and institutional resilience (2009-2024)

<sup>1</sup>Bokka Sanjana, <sup>2</sup>Digambar S Perke, <sup>3</sup>Sachin S More, <sup>4</sup>Shriniwas V Bharti, <sup>5</sup>Dheeraj T Pathrikar and <sup>6</sup>Gunjal AA

<sup>1</sup>M.Sc. Scholar, Department of Agricultural Economics, CoA, VNMKV, Parbhani, Maharashtra, India

<sup>2</sup>Associate Dean and Principal, CoA, Dharashiv, VNMKV, Parbhani, Maharashtra, India

<sup>3</sup>Professor and Head, Department of Agricultural Economics, CoA, VNMKV, Parbhani, Maharashtra, India

<sup>4,5</sup>Assistant Professor, Department of Agricultural Economics, CoA, VNMKV, Parbhani, Maharashtra, India

<sup>6</sup>M.Sc. Scholar, Department of Agricultural Economics, CoA, VNMKV, Parbhani, Maharashtra, India

DOI: <https://doi.org/10.33545/26180723.2025.v8.i8Sa.2340>

Corresponding Author: Bokka Sanjana

#### Abstract

The CAMEL framework of capital adequacy, asset quality, management effectiveness, earnings capacity, and liquidity was used to analyze the financial performance of the National Bank for Agriculture and Rural Development (NABARD) from 2009-10 to 2023-24. While the reduction in shareholder equity support during periods of high asset growth was a negative, the analysis shows the strong capital adequacy of NABARD, where advances formed almost 87% of the average total assets. High credit-to-deposit ratios showed that asset quality was strong, and a steady fall in the investment-to-asset ratio indicated a conscious change from a passive to an active role in lending in rural areas. While a falling asset turnover rate indicated that income growth was not matching the growth in assets, efficiency in management was impressively maintained, with expenditures kept under control and a steady expenditure-to-income ratio. Earnings capacity indicated moderate profitability, but increasing pressure on core income was indicated by a steady fall in operating profit ratios. Liquidity management, while being characterized by sharp spikes that captured changing short-term funding patterns, showed dynamism. Overall, the performance of NABARD indicates that the institution has been able to achieve a balance between financial prudence and development objectives, showing stability, resilience, and capacity to respond to a changing economic environment.

**Keywords:** NABARD, CAMEL model, financial performance, capital adequacy, asset quality, inclusive growth

#### Introduction

The National Bank for Agriculture and Rural Development (NABARD) is spearheading rural India's revolution as the apex development finance institution responsible for providing credit, developing rural infrastructure and triggering inclusive growth. Its very role requires something more than developmental extension it requires sustained financial security to weather the vicissitudes of unstable agricultural economies, shifting economic conditions and policy-initiated expansion of credit.

It is important to examine the financial performance of NABARD to gauge its performance in achieving its twin mandates. It has been functioning in a regime of fluctuating interest rates, international economic instability and unprecedented shocks like the COVID-19 pandemic over the last fifteen years. These forces have put it to the test of providing capital adequacy, maintaining asset quality, achieving operating efficiency, maintaining earnings and liquidity.

To make a sweeping judgment, the CAMEL framework, which assesses Capital Adequacy, Asset Quality, Management Efficiency, Earnings Capacity and Liquidity Capacity is used in this study to examine the financial

performance of NABARD during the period 2009-10 to 2023-24. The analysis not only brings out the strengths and working efficiency of the institution but also pinpoints key areas that require strategic focus so that it achieves long-term sustainability while achieving its development goals.

#### Objective of the study

To measure the financial performance of NABARD using CAMEL Model.

#### Methodology

The CAMEL model is a widely used framework for analyzing the financial performance of banks and financial institutions. It evaluates an institution's strength based on five key parameters. Capital Adequacy, Asset Quality, Management Efficiency, Earnings Quality, Liquidity.

Capital Adequacy assesses the bank's capital strength and its ability to absorb potential losses. Asset Quality examines the quality of the bank's loan portfolio and risk of non-performing assets (NPAs). Management Efficiency evaluates the effectiveness of the bank's management in strategic decision making and operations. Earnings Quality analyzes the profitability, sustainability and growth of the

institution's earnings. Liquidity measures the bank's ability to meet short-term obligations and maintain financial stability.

It is used by banking regulators (e.g., RBI, Federal Reserve, Basel Committee) to monitor financial health. Helps in early detection of financial distress and risk management. Used by investors and analysts to assess banking sector performance. Ensures financial system stability by identifying weak institutions before crises occur.

Under this following ratios are calculated:

#### Capital Adequacy

- Total Advance to Assets ratio
- Total Advance/Assets
- Shareholder's funds to Total Assets
- Shareholder's funds/Total Assets

#### Asset Quality

- Credit Deposit ratio
- Total Advances/Total Deposits
- Total Investment to Total Asset ratio

#### Management Efficiency

- Total Expenditure to Total Income ratio
- Total Expenditure/Total Income
- Total Asset turnover ratio
- Total Income/Total Asset

#### Earnings Capacity

- Total Income ratio
- Interest Earned-Interest Paid/Total Income
- Operating Profit ratio
- Earnings before Interest and Taxes/Total Assets

#### Liquidity Capability

- Cash to Deposit ratio
- Cash/Total Deposits
- Interest Expenditure to Interest Earned ratio
- Interest Expenditure/Interest Earned

#### Research Gap

While the CAMEL model has been comprehensively applied to measure banking performance in India, there have been few studies dealing with NABARD in a thorough manner and even those are limited to short time frames or a few indicators. While profitability, liquidity and efficiency concerns are identified as chronic, long-term, in-depth examination over several economic cycles is missing. This research fills the gap by analyzing the financial performance of NABARD over half a decade with the entire CAMEL model.

### Results and Discussion

#### Capital Adequacy

Capital adequacy reflects the institution's ability to withstand unexpected losses while maintaining solvency.

#### Total Advance to Assets Ratio

It shows what percentage of bank's assets are used for loans and other lending activities.

**Table 1:** Total Advances to Asset Ratio (Rs.in crores)

Sr. No	Year	Advances	Total Assets	Ratio
1	2009-10	120505.84	136292.13	88.42
2	2010-11	126027.99	158872.26	79.33
3	2011-12	152625.95	182075.20	83.83
4	2012-13	184962.87	213277.41	86.72
5	2013-14	212894.36	254574.16	83.63
6	2014-15	246096.03	286101.52	86.02
7	2015-16	260493.44	310384.92	83.93
8	2016-17	305224.38	348609.91	87.55
9	2017-18	352110.55	406641.61	86.59
10	2018-19	430272.61	487470.48	88.27
11	2019-20	480396.46	532074.95	90.29
12	2020-21	603117.88	658657.82	91.57
13	2021-22	680882.72	758469.38	89.77
14	2022-23	731891.69	802856.31	91.16
15	2023-24	795104.30	910862.56	87.29
			MEAN	86.96

(Source: Balance sheet of NABARD)

NABARD's Total Advances to Total Assets ratio, which averaged 86.96% and reached a peak of over 91% in a number of years, suggested an aggressive credit orientation.

#### Shareholder's funds to Total Assets ratio

The ratio of shareholder equity to total assets provides insight into the extent to which a business is financed by the equity of its shareholders rather than debt. It is an essential indicator of the bank's stability, capital and ability to withstand losses.

**Table 2:** Shareholder's funds to Total Assets Ratio (Rs.in crores)

Sr. No	Year	Shareholder's funds	Total Assets	Ratio
1	2009-10	12695.52	136292.13	9.31
2	2010-11	13888.72	158872.26	8.74
3	2011-12	16407.68	182075.20	9.01
4	2012-13	19286.51	213277.41	9.04
5	2013-14	21856.54	254574.16	8.59
6	2014-15	20203.67	286101.52	7.06
7	2015-16	27126.00	310384.92	8.74
8	2016-17	25420.64	348609.91	7.29
9	2017-18	32915.93	406641.61	8.09
10	2018-19	43673.75	487470.48	8.96
11	2019-20	49030.99	532074.95	9.22
12	2020-21	41147.51	658657.82	6.25
13	2021-22	61471.66	758469.38	8.10
14	2022-23	67368.37	802856.31	8.39
15	2023-24	73669.90	910862.56	8.09
			Mean	8.33

(Source: Balance sheet of NABARD)

The average ratio of shareholders' funds to total assets was 8.33%, but in 2020-21, it fell sharply to 6.25% as a result of the abrupt rise in assets without a corresponding rise in equity. Selective capital building is reflected in this recent surge.

#### Asset Quality

Asset quality is a measure of a financial institution's overall risk value and the health of its lending portfolio and other assets, which indicates the likelihood that borrowers will pay back their debts.

### Credit Deposit Ratio

It demonstrates the extent to which a bank uses its deposit base for loans and advances.

**Table 3:** Total Advances to Total Deposits (Rs. in crores)

Sr. No	Year	Total Advances	Total deposits	Ratio
1	2009-10	120505.84	69996.02	172.16
2	2010-11	126027.99	82776.06	152.25
3	2011-12	152625.95	95397.75	159.99
4	2012-13	184962.87	114060.85	162.16
5	2013-14	212894.36	165445.96	128.68
6	2014-15	246096.03	186454.96	131.99
7	2015-16	260493.44	189786.33	137.26
8	2016-17	305224.38	194414.81	157.00
9	2017-18	352110.55	214449.97	164.19
10	2018-19	430272.61	224146.66	191.96
11	2019-20	480396.46	236463.08	203.16
12	2020-21	603117.88	241572.10	249.66
13	2021-22	680882.72	252126.69	270.06
14	2022-23	731891.69	278100.87	263.17
15	2023-24	795104.30	301958.07	263.32
			MEAN	187.13

(Source: Balance Sheet of NABARD)

A greater reliance on non-deposit borrowings was indicated by the Credit-Deposit ratio, which averaged 187.13% before skyrocketing to over 270% by 2021-2022.

### Total Investment to Total Asset Ratio

The ratio of total assets to total investment shows how much of a bank's total assets are invested in bonds, government securities and other financial products.

**Table 4:** Total Investment to Total Assets ratio (Rs.in crores)

Sr. No	Year	Total Investment	Total asset	Ratio
1	2009-10	37649.90	136292.13	27.62
2	2010-11	19305.80	158872.26	12.15
3	2011-12	18209.82	182075.20	10.00
4	2012-13	15614.33	213277.41	7.32
5	2013-14	23310.83	254574.16	9.16
6	2014-15	21102.41	286101.52	7.38
7	2015-16	26465.92	310384.92	8.53
8	2016-17	26270.21	348609.91	7.54
9	2017-18	30985.43	406641.61	7.62
10	2018-19	39610.29	487470.48	8.13
11	2019-20	34006.15	532074.95	6.39
12	2020-21	45052.34	658657.82	6.84
13	2021-22	65725.28	758469.38	8.67
14	2022-23	48003.10	802856.31	5.98
15	2023-24	69286.60	910862.56	7.61
			Mean	9.39

(Source: Balance sheet of NABARD)

A shift from low-risk investment to credit usage, increasing the developmental effect and exposure to credit risk, is reflected in the Total Investment to Total Assets ratio, which fell from 27.62% (2009-10) to less than 8% after 2013.

### Management Efficiency

Management efficiency shows how much bank management or administration can generate business and profits.

### Total Expenditure to Total Income Ratio

A bank's cost control and operational efficiency can be inferred from the Total Expenditure to Total Income Ratio.

**Table 5:** Total Expenditure to Total Income Ratio (Rs.in crores)

Sr. No	Year	Total expenditure	Total Income	Ratio
1	2009-10	5692.34	7964.80	0.71
2	2010-11	7378.15	9202.01	0.80
3	2011-12	8726.53	10978.49	0.79
4	2012-13	10276.01	12940.60	0.79
5	2013-14	12654.32	15570.12	0.81
6	2014-15	14437.83	17916.42	0.81
7	2015-16	17077.37	20864.87	0.82
8	2016-17	18547.96	22434.67	0.83
9	2017-18	20157.61	24596.30	0.82
10	2018-19	24837.37	29899.19	0.83
11	2019-20	27630.99	33004.28	0.84
12	2020-21	28812.15	35008.18	0.82
13	2021-22	30335.99	37175.18	0.82
14	2022-23	33048.98	39850.37	0.83
15	2023-24	40778.69	48846.60	0.83
			Mean	0.81

(Source: Balance sheet of NABARD)

The Total Expenditure to Total Income ratio remained tightly controlled (0.71-0.84), with mean 0.81 demonstrating effective cost management even during expansion.

### Total asset turnover ratio

The total asset turnover ratio measures how effectively a bank generates revenue from all of its assets.

**Table 6:** Total Asset Turnover ratio (Rs. in crores)

Sr. No	Year	Total Income	Total Assets	Ratio
1	2009-10	7964.80	136292.13	5.84
2	2010-11	9202.01	158872.26	5.79
3	2011-12	10978.49	182075.20	6.03
4	2012-13	12940.60	213277.41	6.07
5	2013-14	15570.12	254574.16	6.12
6	2014-15	17916.42	286101.52	6.26
7	2015-16	20864.87	310384.92	6.72
8	2016-17	22434.67	348609.91	6.44
9	2017-18	24596.30	406641.61	6.05
10	2018-19	29899.19	487470.48	6.13
11	2019-20	33004.28	532074.95	6.20
12	2020-21	35008.18	658657.82	5.32
13	2021-22	37175.18	758469.38	4.90
14	2022-23	39850.37	802856.31	4.96
15	2023-24	48846.60	910862.56	5.36
			MEAN	5.88

(Source: Balance sheet of NABARD)

With an average of 5.88, the total asset turnover ratio fell after 2015-16, indicating that income growth was slower than asset growth, especially during the pandemic years.

### Earnings Capacity

Earnings capacity is the expected earnings of workers who choose to maximize the present value of future actual earnings while expected earnings are the expected values of real earnings.

### Total Income Ratio

The total income ratio, which is calculated by dividing the difference between interest earned and interest paid by total income, shows the bank's net interest margin relative to its total income.

**Table 7:** Total Income Ratio (Rs. in crores)

Sr. No	Year	Interest earned-Interest Paid	Total Income	Ratio
1	2009-10	1664.86	7964.80	20.90
2	2010-11	1975.27	9202.01	21.47
3	2011-12	1977.96	10978.49	18.02
4	2012-13	2264.90	12940.60	17.50
5	2013-14	1885.62	15570.12	12.11
6	2014-15	2403.27	17916.42	13.41
7	2015-16	2349.69	20864.87	11.26
8	2016-17	2884.52	22434.67	12.86
9	2017-18	3506.15	24596.30	14.25
10	2018-19	4107.36	29899.19	13.74
11	2019-20	5199.69	33004.28	15.75
12	2020-21	7205.86	35008.18	20.58
13	2021-22	7300.10	37175.18	19.64
14	2022-23	6454.25	39850.37	16.20
15	2023-24	6519.51	48846.60	13.35
			MEAN	16.07

(Source: Balance sheet of NABARD)

With early highs above 20% giving way to persistent compression brought on by concessional lending, narrow spreads, and increased funding, the total income ratio averaged 16.07%.

### Operating Profit to Total Asset ratio

The operating profit ratio measures a bank's capacity to produce operating profits from its asset base. Earnings before interest and tax, or EBIT, is calculated as a percentage of total assets.

**Table 8:** Operating Profit Ratio (Rs. in crores)

Sr. No	Year	EBIT	Total Assets	Ratio
1	2009-10	2272.46	136292.13	1.67
2	2010-11	1823.86	158872.26	1.15
3	2011-12	2251.96	182075.20	1.24
4	2012-13	2664.58	213277.41	1.25
5	2013-14	2871.39	254574.16	1.13
6	2014-15	3478.58	286101.52	1.22
7	2015-16	3707.26	310384.92	1.19
8	2016-17	3886.70	348609.91	1.11
9	2017-18	4438.68	406641.61	1.09
10	2018-19	5061.82	487470.48	1.04
11	2019-20	5373.29	532074.95	1.01
12	2020-21	6196.03	658657.82	0.94
13	2021-22	6839.19	758469.38	0.90
14	2022-23	6801.39	802856.31	0.85
15	2023-24	8067.91	910862.56	0.89
			MEAN	1.11

(Source: Balance sheet of NABARD)

Despite increasing operating profits, NABARD's asset utilization efficiency has decreased over time, averaging just 1.11%, according to the Operating Profit to Total Assets ratio. This suggests that asset growth has outpaced profit generation, a sign of declining profitability efficiency.

### Liquidity Capacity

The ability of a bank to meet its short-term obligations is known as liquidity capacity.

### Cash to Deposit Ratio

The cash to deposit ratio, which determines the proportion of total deposits held in cash, provides insight into a bank's liquidity position and short-term obligations.

**Table 9:** Cash to Deposit Ratio (Rs. in crores)

Sr. No	Year	Cash	Total Deposits	Ratio
1	2009-10	9628.33	69996.02	13.76
2	2010-11	10765.27	82776.06	13.01
3	2011-12	8544.37	95397.75	8.96
4	2012-13	9193.95	114060.85	8.06
5	2013-14	13622.08	165445.96	8.23
6	2014-15	13314.79	186454.96	7.14
7	2015-16	18547.87	189786.33	9.77
8	2016-17	13158.84	194414.81	6.77
9	2017-18	18684.68	214449.97	8.71
10	2018-19	12124.96	224146.66	5.41
11	2019-20	11997.17	236463.08	5.07
12	2020-21	4751.09	241572.10	1.97
13	2021-22	6073.49	252126.69	2.41
14	2022-23	16854.99	278100.87	6.06
15	2023-24	37354.14	301958.07	12.37
			Mean	7.85

(Source: Balance sheet of NABARD)

With a mean of 7.85%, NABARD's cash-to-deposit ratio exhibits significant variations over time. Although it shows sufficient liquidity in some years, the steep drop in others shows irregularities in keeping a steady liquidity position to cover immediate obligations.

### Interest Expenditure to Interest Earned ratio

The Interest Expenditure to Interest Earned Ratio, which displays the proportion of interest income allocated to interest expenses, is a measure of the bank's interest spread efficiency.

**Table 10:** Interest Expenditure to Interest Earned ratio (Rs. in crores)

Sr. No	Year	Interest Expenditure	Interest Earned	Ratio
1	2009-10	4988.45	6653.31	0.75
2	2010-11	6193.87	8169.14	0.76
3	2011-12	7534.01	9511.97	0.79
4	2012-13	8954.76	11219.66	0.80
5	2013-14	11297.40	13183.02	0.86
6	2014-15	12930.29	15333.56	0.84
7	2015-16	15439.85	17789.54	0.87
8	2016-17	16269.22	19153.74	0.85
9	2017-18	17848.55	21354.70	0.84
10	2018-19	22199.60	26306.96	0.84
11	2019-20	23784.07	28983.76	0.82
12	2020-21	24235.65	31441.51	0.77
13	2021-22	26574.22	33874.32	0.78
14	2022-23	30370.10	36824.35	0.82
15	2023-24	36912.84	43432.35	0.85
			MEAN	0.82

(Source: Balance sheet of NABARD)

NABARD's average Interest Expenditure to Interest Earned

ratio of 0.82 indicates that interest expenses take up a sizable amount of interest income. Over the years, the ratio stayed relatively constant, indicating steady but moderate interest spread management effectiveness.

### Conclusion

NABARD's financial performance (2009-10 to 2023-24) based on the CAMEL model reflects high stability and resilience. Capital adequacy was high with aggressive credit deployment, though shareholder support weakened during high-speed asset growth. Asset quality was strong with a shift from investment to rural loans, while management efficiency was stable with controlled expenses. Asset turnover reflected intense usage, though recent declines reflected lower growth in income compared to assets. Earnings reflected moderate profitability, though operating profit ratios declined, reflecting core income pressure. Liquidity was managed with caution but shifted sharply, reflecting fluctuation in short-term funding plans. Overall, NABARD managed to balance its developmental requirements with institutional stability and financial management.

### References

- Hassan AA, Badugu D. Analyzing financial statement of National Bank for Agriculture and Rural Development (NABARD). *International Journal of Innovative Research Technology*. 2016;3(5):100-4.
- Jaggi GS. Financial performance of axis bank in India. *International Journal of Creative Research Thoughts*. 2023;11(6):376-84.
- Kanchan, Choudhary R. Financial performance analysis using camel model with reference to listed small finance banks in India. *International Journal for Multidisciplinary Research*. 2023;5(2):1-15.
- Kaur J, Kaur M, Singh S. Financial performance analysis of selected public sector banks: A camel model approach. *International Journal of Business and Economics Research*. 2015;13(6):4327-48.
- Kaur M, Sunanda, Tungal G, Pandey A. Financial performance analysis of selected micro-finance companies - A CAMEL model approach. *International Journal of Trend in Research and Development*. 2019;6(4):39-47.
- Kaur R, Chandel JK. Financial and operational performance analysis of NABARD. *International Journal of Enhanced Research in Management and Computer Applications*. 2021;10(4):11-7.
- Kumar V, Malhotra B. A camel model analysis of Private Banks in India. *EPRA International Journal of Economic and Business Review*. 2017;5(7):87-93.
- Mistry PG, Suthar KS, Dalvadi YM. A Study of Financial Performance Measurement of Small Finance Banks in India Using the CAMEL Model. *RESEARCH REVIEW International Journal of Multidisciplinary*. 2023;8(7):57-64.
- Richitha M, Chodisetty RS. Analysis of bank performance using camel model-with special reference to federal bank ltd-An empirical evidence. *EPRA International Journal of Research and Development*. 2024;9(1):117-25.
- Sharma S, Chopra IP. A Comparative study of Public and Private Banks in India using CAMEL model. *International Journal of Creative Research Thoughts*. 2018;6(1):704-17.
- Sharma A, Kumar V. A Case Study of the Financial Performance of the National Bank for Agriculture and Rural Development (NABARD). *International Journal of Research Publication and Reviews*. 2024;5(1):2972-9.
- Shiralashetti AS, Poojari L. A study on financial performance of canara bank using CAMEL model approach. *Journal of Emerging Technologies and Innovative Research*. 2019;6(4):717-25.
- Talreja J, Shivappa D. Financial performance analysis of selected banks using CAMEL Model. *International Journal in Management & Social Science*. 2016;4(6):37-53.