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Performance Evaluation of Select Banks using CAMELS Model

Sarvamangala K. J.a, G. Sudarsana Reddyb

a. Asst. Professor of Commerce, Seshadripuram College, Tumakuru-572105, Karnataka b. Professor. Department of Studies & Research in Commerce, Tumkur University, Tumakuru-572103, Karnataka DOI: https://doi.org/10.55248/gengpi.5.0524.1419

ABSTRACT

Banks play a crucial part in economic development by motivating and mobilizing savings and channelling it to those who need it. The growth the business firms depends on the financial institutions. Therefore, it is necessary for the economy of the country to prosper. Indian banking industry includes banks from public, private, foreign and cooperative sector. To support the country, the banks should do well and soundly. The paper aimed to know the performance of selected banks through application of CAMELS model. As of January 2024, there were 12 public sector and 22 private sector banks which forms population of the study. The top two public and private sector banks were chosen using judgemental sample method. The select banks are State Bank of India and Canara Bank from public sector; and ICICI Bank and Axis Bank are from private sector. The study is based on annual reports from 2017-2018 to 2021-2022. The analysis found that there were differences in performance in different relationships. The performance of private banks appears to be better than public sector banks in all aspects.

Keywords: Performance, Evaluation, Public, Private, Banks, CAMELS.

1. INTRODUCTION

As old as human civilization, banks are oldest financial institutions. We cannot live without banks. They are very much needed for the economy country to prosper. The main tasks of a bank are to obtain deposits from customers and distribute them to the most profitable and desired field of activity. A banking institution is engaged in accepting money, deposits and sanctioned loans. But over time, the bank's activities grew and diversified. Indian baking has achieved significant milestones in recent years, especially reaching remote areas and achieved the inclusive growth. Today, it offers customers various services for improving the lives of citizens.

The banking system, which forms the core of the financial sector, plays a pivotal role in transmitting monetary policy impulses throughout the economic system. An efficient banking encourages savings, and investment, which faster economic growth. We know that a well-developed banking system and a free market develop sooner and more steadily. A well-established banking system is considered a basic condition for the growth of an economic. The bank mobilises community savings into productive channels. Bank profits are the most important thing in the economy. Using the CAMELS model is one way to analyse the performance of banks.

The CAMELS model was developed in the U.S to assess the general condition of a bank. Valid for all banks. The CAMELS model is a relational internal assessment, monitoring, regulatory and supervisory tool that assesses the financial wellness of banks through on-site and off-site monitoring mechanisms. CAMELS is a systematic, methodical and attentive tool in the evaluation process. The CAMELS model encourages financial institutions to transparency, evaluation and change using proven methods. It includes analysis of both qualitative and quantitative values. However, the qualitative approach refers to the subjective elements that help financial institutions function. The Model is a powerful internal assessment tool that guides banks before they fail and take corrective actions, although the CAMEL assessment system was developed by the US banking system. CAMEL model: C - solvency, A - asset quality, M - management quality, E - profitability, L - liquidity and S - sensitivity.

A good well-established banking system is essential for an economy conducive to economic growth and development. Over time, several researchers studied banks performance and financial condition using the CAMELS model.

2. Review of Literature

The existing literature is done to raise awareness of research gaps. Mishra and Aspal (2011) studied performance of SBI and its subsidiary banks using CAMEL model during 2009-2011. Another research done by Reddy, D.M and K.V.N Prasad (2011) on regional rural banks during 2006-2010. For the years 2005-2010 with 20 nationalized banks (Prasad and Ravindar, 2013), which related the performance of public and private banks. Another study by (Nandi, J.K., 2013) done with 10 public sector banks and 10 private sector banks in India. Public sector banks were performing better than private sector banks in terms of both financial performance and consistency of performance. Kumar and Sharma (2014) analysed the banking sector taking the CAMEL

model for six years from 2007-2008 to 2012-2013. The sample consists of eight banks (HDFC, ICICI, SBI, KOTAK, Mahindra Bank, AXIS, BOB, BOI and PNB) which had the highest market capitalization. Manindekaur, RituPriya (2017) revealed assessment of Bank of Baroda and Punjab central banks using CAMELS model using secondary data for five year period 2011-2015-2015.

3. Research Gap

Only a few reviews are given above, but there are a good number of studies done from different sectors of banks but the studies are old. There is no study on the financial performance evaluation of SBI, Canara, ICICI and Axis bank using the CAMELS model during the period 2017-18 to 2021-22. Therefore, there a need for the current study.

4. Statement of the Problem

The financial system, especially banks, has undergone many changes in recent years in the form of reforms, regulations and standards. There were studies that analysed the performance of state and private banks based on profitability factors and financial ratios. However, this study used the ratio analysis technique to know the performance of banks taking CAMELS model choosing two banks each public sector and private sector. After a review of the existing published research works, the researcher noted that there is no study that assessed the financial performance of SBI, Canara, ICICI and Axis Bank using CAMELS model for the period 2017-18-2021. - 22. The study seeks to know the performance in terms of capital adequacy, assets quality, quality of management, quality of earnings, liquidity position and sensitivity.

5. Objective of the Study

The paper aimed to know the performance of select banks using the CAMELS model.

6. Research Design

The study is desk research. The population comprises of 12 public sector and 22 private sector banks in India. The researcher used a judgmental sampling technique to choose two banks each from public and private sector banks. State Bank of India and Canara Bank from public sector and ICICI and Axis Bank are from private sector banks. Five years' annual reports from 2017–18 to 2021–22 were obtained from the websites of banks.

7. Data Analysis and Discussion

The secondary data obtained analysed through the CAMELS Model for measuring efficiency and financial performance of select banks. The acronym "CAMLES" stands for the following six factors: C-Capital Adequacy, A-Assets Quality, M-Management Quality, E-Earnings Quality, L-Liquidity, and S-Sensitivity.

7.1 Capital Adequacy

The most vital measure in evaluating a bank's financial health is capital adequacy. It shows how well-equipped the bank is to manage unexpected losses. It shows the bank's base capital for unforeseen loan losses and whether there any need for making provisions. It has significance. Capital Adequacy Ratio Debt Equity Ratio, Total Advances to Total Assets: Government Securities to Total Investment. Table 1 presents the Capital adequacy ratios

Table 1 Capital Adequacy Ratios of Select Banks (in per cent)

Ratio	Bank	2017-18	2018-19	2019-20	2020-21	2021-22	Average	Rank
	SBI	12.6	12.72	13.06	13.74	13.83	13.19	4
CAR	Canara	13.22	11.9	13.65	13.18	14.9	13.37	3
CAR	ICICI	18.42	16.89	16.11	19.12	19.16	17.94	1
	Axis	16.57	15.84	17.53	19.12	18.54	17.52	2
	SBI	1.65	1.82	1.36	1.64	1.68	1.63	3
DER	Canara	1.09	1.13	1.09	0.85	0.7	0.972	1
DLK	ICICI	1.74	1.53	1.39	0.62	0.63	1.182	2
	Axis	2.33	2.29	1.74	1.41	1.6	1.874	4
TATA	SBI	56.01	59.38	58.85	54.02	54.82	56.62	4

	Canara	61.87	61.56	59.7	55.39	57.34	59.17	3
	ICICI	58.28	60.83	58.75	59.63	60.87	59.67	2
	Axis	63.59	61.77	62.44	62.62	60.22	62.13	1
GSI	SBI	80.95	79.99	78.35	79.39	79.78	79.69	2
	Canara	88.82	89.46	91.51	92.12	93.38	91.06	1
	ICICI	69.72	72.12	76.63	81.33	86.1	77.18	3
	Axis	67.62	68.72	80.38	81.45	81.55	75.94	4

- O Capital Adequacy Ratio (CAR): The CAR of all four sample banks showed an increasing trend during the study period, except for ICICI Bank. However, ICICI Bank's average CAR ranked first, followed by Axis, Canara and SBI. All the sample banks maintained a higher CAR than the nine per cent prescribed by the RBI.
- O Debt Equity (DE) Ratio: It indicates the degree of debt of the bank. In other words, the proportion of equity and debt used in financing the banking business. A higher ratio is an indication of less protection for depositors and creditors. Put in simply, the lower the ratio, the better. Table 1 shows all sample banks' recorded DE ratio except SBI. SBI's DE ratio is above one in all years, indicating the bank's inability to maintain its liquidity position. The DE ratio of Canara Bank and ICICI Bank declined and was recorded 0.7 times and 0.63 times respectively in 2021-22, indicating good liquidity position. Axis Bank's position is much worse than that of SBI. On average, Canara Bank ranks first, followed by ICICI, Axis and SBI.
- O Total Advances to Total Assets (TATA): This ratio conveys a bank's assertiveness in lending, which ultimately leads to better profitability performance. From Table 1, we can see that total loans of all banks to total assets showed a mixed trend and the ratio decreased except for ICICI Bank. The ratio at all select banks is above 50 per cent, which indicates their aggressiveness and the possibility of making good profits. Axis Bank took the top spot, followed by ICICI, Canara and SBI.
- O Government Securities to Total Investment: The risk connected with a bank's investment is studied through this ratio. The ratio is arrived by dividing the amount invested in government securities by the total investment. Since government securities are risk-free, more proportion of government securities in the total investment, the lower the risk associated and vice versa. Table 1 shows that except SBI, all other sample banks increased their investments in government securities. On average, Canara is ahead of SBI, ICICI and Axis Bank with 91 per cent.

7.2 Assets Quality

A crucial factor in assessing the financial strength is asset quality. Quality of assets is measured through the percentage of non-performing assets (NPAs) in total assets. The calibre of any bank's assets determines its capacity and strength. Assessing the current situation and the bank's future viability requires a thorough examination of asset quality. The ratio shows how well a bank evaluates credit risk and collects outstanding debts. The bank's performance will be better the lower the ratio. The most common way to gauge asset quality is to look at net NPAs as a percentage of net advances. The Net NPAs to Total Assets Ratio, Net NPAs to Net Advances Ratio, and Total Investment to Total Assets Ratio are the ratios used in the Assets Quality measurement. Table 2 shows the asset quality of the select banks.

- Net NPAs to Total Assets (NNPATA): The ratio declined below to one per cent at al sample banks except Canara Bank. The lowest average ratio was recorded at ICICI, followed by Axis, Canara and SBI. Averages at SBI were high, so the bank was unable to manage NPAs to total assets.
- Net NPAs to Net Advances (NNPANA): The ratio declined faster in private sector sample banks than in public sector sample banks. The average ratio was low for Axis, followed by SBI, ICICI and Canara Bank. Axis Bank maintained a good quality of advances. Because this bank has better credit quality in its loan book.

Table 2 Asset Quality Measurement Ratios (%)

Ratio	Bank	2017-18	2018-19	2019-20	2020-21	2021-22	Average	Rank
	SBI	3.21	17.9	1.31	0.81	0.56	4.76	4
NNPATA	Canara	4.63	3.3	2.52	2.12	1.52	2.82	3
MINIAIA	ICICI	3.16	1.39	0.9	0.74	0.49	1.34	1
	Axis	2.4	2.29	1.02	0.7	0.47	1.38	2
NNPANA	SBI	3.01	2.23	3.31	1.5	1.02	2.21	2
NNPANA	Canara	7.48	5.36	4.22	3.82	2.65	4.71	4

	ICICI	5.43	2.29	1.54	1.24	0.81	2.26	3
	Axis	3.77	3.71	1.63	1.12	0.79	2.2	1
	SBI	30.17	26.27	26.5	29.81	29.7	28.49	4
TITA	Canara	23.35	22.02	24.34	22.68	22.98	23.07	3
	ICICI	23.09	21.54	22.72	22.86	21.98	22.44	2
	Axis	22.26	21.84	17.13	22.7	23.45	21.48	1

O Total Investment to Total Assets (TITA): The ratio recorded declined for select banks except Axis Bank. Axis Bank took the top spot, followed by ICICI, Canara and SBI. Axis Bank is at the top, showing the bank has been able to invest well.

7.3 Management Quality

Another crucial element of the CAMELS model that ensures a bank's expansion and survival is quality of management. Adherence to established standards, the bank's leadership and administrative prowess, and its capacity to plan and adapt to a changing environment are all indicators of quality management. Return on net worth, Profit per employee, Business per employee, and Total advances to total deposit ratios are used to measure quality of management. Ratios pertaining to the Quality of management are given in Table 3.

Table 3 Ratios used for Measuring Management Quality (Rs. in Crore)

Ratio		Bank	2017-18	2018-19	2019-20	2020-21	2021-22	Average	Rank
		SBI	71.49	75.08	71.73	66.53	67.48	70.46	3
TATD		Canara	72.74	71.4	69.1	63.22	64.76	68.24	4
IAID		ICICI	91.34	89.84	83.69	78.68	80.69	84.85	2
		Axis	96.91	90.21	89.27	88.18	86.12	90.14	1
		SBI	-0.02	0.01	0.07	0.09	0.15	0.06	3
PPE		Canara	-0.07	0.01	-0.04	0.03	0.07	0	4
(Rs. Crore)	in	ICICI	0.11	0.07	0.11	0.21	0.24	0.148	1
		Axis	0.01	0.08	0.03	0.09	0.15	0.072	2
		SBI	16.7	19.81	22.32	24.96	27.78	22.31	1
BPE		Canara	15.4	17.6	18.04	18.7	20.59	18.07	2
(Rs. Crore)	in	ICICI	12.98	14.29	14.26	16.87	18.17	15.31	4
,		Axis	14.98	16.84	16.34	16.99	17.82	16.59	3
		SBI	-3.78	0.48	7.74	9.94	13.92	5.66	3
ROE		Canara	-16.74	1.4	-8.05	6.71	12.82	-0.77	4
		ICICI	6.6	3.16	7.07	12.21	14.77	8.76	1
		Axis	0.53	8.09	2.34	7.55	12.91	6.28	2

O Total Advances to Total Deposits (TATD): This ratio decreased at all sample banks during the study period. Axis Bank took the top spot, followed by ICICI, SBI and Canara Bank. Axis Bank was efficient enough in managing the deposits, but Canara bank was not efficient and capable at managing the deposits.

Profit per Employee (PPE): In rupee terms profit per employee recorded an increased trend in all sample banks. On average, the highest profit per employee was recorded at ICICI Bank at Rs.0.148 crore, while it was zero at Canara Bank. Second and third places went to Axis and SBI respectively.

- Business per Employee (BPE): This ratio increased in all sample banks. SBI earned the highest business per employee at an average of Rs
 22.31 crore, Canara Bank, Axis and ICICI. It shows that SBI was better and more efficient for human resources.
- Return on Equity (ROE): This ratio increased in all sample banks. SBI and Canara Bank recorded negative ROE in 2017-18. The average ROE was highest for ICICI at 8.76 per cent, followed by Axis, SBI and Canara Bank.

7.4 Earning Quality

Earnings quality is another significant criterion that indicates a bank's profitability and ability to continuously earn high standards is the quality of its earnings. It mostly establishes the bank's profitability and provides an explanation for its long-term growth in earnings. Net Profit to Average Assets, Spread or Net Interest Margin to Total Assets, Non-Interest Income to Total Income are the ratios used to assess Earning Quality. Table 4 portrays quality of earnings of sample banks.

Table 4 Ratios used for Measuring Earnings Quality (in per cent)

Ratio	Bank	2017-18	2018-19	2019-20	2020-21	2021-22	Average	Rank
NPAA	SBI	-0.19	0.02	0.38	0.48	0.67	0.272	3
	Canara	-0.66	0.08	-0.28	0.23	0.47	-0.032	4
NIAA	ICICI	1.03	0.58	1.02	1.65	1.83	1.222	1
	Axis	0.06	0.63	0.21	0.73	1.21	0.568	2
	SBI	2.17	2.4	2.48	2.44	2.63	2.42	3
SR	Canara	1.97	2.08	1.81	2.08	2.15	2.02	4
	ICICI	2.62	2.8	3.03	3.17	3.36	2.99	1
	Axis	2.69	2.71	2.75	2.94	2.82	2.78	2
	SBI	16.82	13.15	14.95	14.09	12.84	14.37	4
Non-IITI	Canara	14.41	12.32	13.77	18.08	19.2	15.56	3
	ICICI	24.07	18.63	18.03	19.34	17.65	19.54	1
	Axis	19.33	19.28	19.87	18.91	18.43	19.16	2
	SBI	83.17	86.85	85.05	85.9	87.16	85.63	1
Net-IITI	Canara	85.59	87.68	86.23	81.92	80.79	84.44	2
	ICICI	75.93	81.37	81.97	80.66	82.35	80.46	4
	Axis	80.67	80.72	80.13	81.09	81.57	80.84	3

- Net Profit to Average Assets (NPAA): This ratio recorded less than one in all sample banks. The net profit of SBI and Canara banks relative to average assets is lower in all the years observed. The top average ratio was ICICI at 1.22 present, followed by Axis and SBI. Canara Bank recorded a negative ratio this year due to the Covid-19 pandemic. The business of all banks suffered due to the COVID-19 lockdown.
- o *Spread (SR):* The spread ratio increased at all banks examined during the investigation period. The spread has been continuously increased across all banks in all years except Canara Bank in 2019-20. The average spread was highest at 2.99 per cent for ICICI Bank, followed by Axis, SBI and Canara Bank. This increase in this ratio represents the possibility of achieving a higher gross return on total assets.
- Non-interest Income to Total Income (Non-IITI): This ratio recorded increasing trend in Canara Bank while the ratio in the other three banks is decreasing. However, ICICI recorded the highest value (19.54 per cent), followed by Axis, Canara and SBI.
- Net Interest Income to Total Income (Net-IITI): This ratio decreased at Canara bank while the other three banks ratio increased. On average, total income of all select banks is more than 80 per cent of net interest income. SBI achieved the highest ratio at 85.63 present, followed by Canara Bank, Axis Bank and ICICI Bank.

7.5. Liquidity

The risk of liquidity can impact a bank's reputation. Liquidity is a vital factor that showcases a bank's ability to fulfil its financial responsibilities. A bank with good liquidity position is when an organization can easily access liquid funds by either increasing liabilities or converting assets into cash quickly. Various ratios, such as Liquid Assets to Total Assets, Liquid Assets to Demand Deposits, and Government Securities to Total Assets, are used to measure liquidity. Table 5 gives liquidity position of sample banks.

- Liquid Assets to Total Assets (LATA): The ratio increased in all sample banks under the observation period, showing that the sample banks showed interest in maintaining a good liquidity position. On average, Canara Bank has more liquid assets. It ranks first with 11.47 per cent, followed by ICICI, Axis and SBI Bank.
- Liquid Assets to Total Deposits (LATD): The ratio increased over the entire study period. However, ICICI Bank took the top spot, followed by Canara, Axis and SBI Bank.
- Liquid Assets to Demand Deposits (LADD): LADD ratio of all sample banks recorded above cent per cent during the study period. However,
 Canara Bank has the highest liquidity with an average ratio of 289.47 per cent, followed by SBI, ICICI and Axis Bank.

Table 5 Ratios used for Measuring Liquidity (in per cent)

Ratio	Bank	2017-18	2018-19	2019-20	2020-21	2021-22	Average	Rank
	SBI	5.55	6.04	6.35	7.56	7.91	6.68	4
LATA	Canara	8.09	9.52	9.43	15.46	14.83	11.47	1
LATA	ICICI	9.57	8.33	10.85	10.82	11.89	10.29	2
	Axis	6.29	8.39	10.63	6.19	9.44	8.19	3
	SBI	7.09	7.64	7.75	9.32	9.74	8.31	4
LATD	Canara	9.51	11.04	10.92	17.65	16.75	13.17	2
LAID	ICICI	15	12.29	15.46	14.28	15.76	14.56	1
	Axis	9.58	12.25	15.21	8.73	13.51	11.86	3
	SBI	100.91	108.07	110.45	119.65	142.57	116.33	2
LDD	Canara	199.78	284.24	258.04	361.34	344.03	289.47	1
LDD	ICICI	94.62	83.41	116.56	97.77	105.9	99.65	3
	Axis	45.43	75.29	107.94	54.49	87.18	74.07	4
	SBI	24.86	21.01	20.76	23.66	23.7	22.8	1
GSTA	Canara	20.74	19.7	22.27	20.9	21.45	21.01	2
	ICICI	16.09	15.55	17.41	18.59	18.93	17.31	3
	Axis	15.05	15.01	13.77	18.49	19.13	16.29	4

Government Securities to Total Assets (GSTA): The share of GSTA increased in three banks except SBI. The GSTA ratio of Canara Bank's fluctuates from year-to-year under the study period. The GSTA ratio of ICICI Bank and Axis bank increased year on year in all the years of study. Axis Bank's GSTA ratio showed an upward trend from year to year. SBI's GSTA ratio is at the top with a highest average of 22.80 followed by Canara Bank (21.01) and ICICI (17.31) in the second and third positions. Axis Bank came last with the lowest average of 16.29.

7.6 Sensitivity to Market Ratio

Sensitivity is the final category and measures an institution's sensitivity to market risks. For example, loans in the energy sector, medical sector and agriculture can be assessed. Sensitivity reveals the degree to which the outcome is affected by interest rates, exchange rates and commodity prices, all of which can be expressed through beta. Sensitivity to Market = (Interest Expenses / Total Deposits) 100. Table 6 presents the sensitivity to market ratio.

Table 6 Sensitivity to Market Ratio (in per cent)

2017-18	5.40	5.50	5.70	6.10
2018-19	5.30	5.40	5.60	6.10
2019-20	4.90	5.70	5.40	5.80
2020-21	4.20	4.50	4.30	4.90
2021-22	3.80	4.10	3.70	4.20
Average	4.72	5.04	4.94	5.42
Rank	1	3	2	4

Table 6 shows the interest expenses to total deposit ratio of all the sample banks decreased, indicating risk is less. The sensitivity to market ratio of SBI recorded first place with lowest average of 4.72 followed by ICICI, Canara and Axis bank.

8. Findings

The following are drawn from above analysis and discussion of data:

- Capital Adequacy: CAR of sample banks was higher than required by RBI guidelines i.e. H. nine per cent. Canara Bank's leverage ratio is
 better than the first and fourth axes. The ratio of advances to balance was variable and the ratio decreased except for ICICI Bank. All banks
 have a ratio above 50 per cent, which indicates their aggressiveness and the possibility of a good profit. All sample banks increased their
 investments in government securities. Canara averages 91%, followed by SBI, ICICI and Axis Bank.
- 2. Asset Quality: Net NPA to total assets ratio fell below one per cent in all the sample banks except Canara Bank. The lowest average ratio was recorded in ICICI followed by Axis, Canara and SBI. In private banks, the ratio of net loans to net loans fell faster than in public sector banks. Axis' average ratio was low, followed by SBI, ICICI and Canara Bank. Axis Bank seems to have maintained the quality of advances. The ratio of total investment to total assets decreased in sample banks except Axis Bank, signifying Axis bank was able to invest well.
- 3. Management Quality: The loan-to-deposit ratio decreased in all the sample banks during the study period. Axis Bank being listed first shows that Axis Bank has managed its deposits quite efficiently. Profit per employee increased in all sample banks. On average, ICICI Bank had the highest profit per employee. Business activity per employee increased in all sample banks during the study period. SBI has the highest turnover rate per employee. The return on equity of the sample banks improved over the observation period. On average, ROE was highest in ICICI.
- 4. Earnings Quality: The ratio of net profit to average assets was lower than all sample banks during the study period. The net profit of public sector banks SBI and Canara is lower compared to average assets in all the years under review. The highest average rate was for ICICI. The spread ratio exhibited a continuous upward trend in all the select banks except Canara Bank. The average spread was highest in ICICI Bank. The ratio of non-interest income to total income increased only in Canara Bank. Canara Bank's net interest margin to total income decreased, while the ratio of the other three banks increased. The total income of all the banks included in the sample is on average more than 80 per cent of the interest margins. SBI had the highest quota.
- 5. Liquidity: The same banks maintained good liquidity as their liquid assets to balance sheet ratio increased during the sample period. The ratio of liquid assets to deposits increased for all the same banks from the first year to the last year. The ratio of liquid assets to demand deposits of all the sample banks increased by more than 100 per cent during the study period. However, Canara Bank holds the largest liquidity. The share of government securities investments in the balance sheet increased in three banks, except SBI.
- 6. Sensitivity Ratio: The ratio of interest expense to deposits decreased in all sample banks, indicating that the risk is lower.

9. Conclusion

The CAMELS rating model is a widely used method in assessing the performance of banks. According to this model, twenty key figures were calculated among six heads. Two public-sector banks and two private-sector banks are being studied taking a five-year period 2017-18 to 2021-22. The sample banks are: SBI, Canara, ICICI and Axis Bank and data was obtained from annual reports. The findings showed that there were differences in performance with respect to the different ratios. To conclude select private banks performance is better than public sector banks.

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