A Camel Model Analysis of State Bank Group

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The economic importance of banks to the developing countries may be viewed as promoting capital formation, encouraging innovation, monetization, influence economic activity and facilitator of monetary policy. Performance evaluation of the banking sector is an effective measure and indicator to check the soundness of economic activities of an economy. In the present study an attempt was made to evaluate the performance & financial soundness of State Bank Group using CAMEL approach. It is found that in terms of Capital Adequacy parameter SBBJ and SBP were at the top position, while SBI got lowest rank. In terms of Asset Quality parameter, SBBJ held the top rank while SBI held the lowest rank. Under Management efficiency parameter it was observed that top rank taken by SBT and lowest rank taken by SBBJ. In terms of Earning Quality parameter the capability of SBM got the top rank while SBP was at the lowest position. Under the Liquidity parameter SBI stood on the top position and SBM was on the lowest position. SBI needs to improve its position with regard to asset quality and capital adequacy, SBBJ should improve its management efficiency and SBP should improve its earning quality.

JEL Classification: G21, G24 and L25

1. Introduction

The economic development of a country depends more on real factors such as the industrial growth & development, modernization of agriculture, expansion of internal trade and foreign trade. The role and importance of banking sector and the monetary mechanism cannot be under-estimated in the development of a nation. Hence the banks and financial institutions play significant and crucial role by contributing in Economic planning such as lying down of specific goals and allocating particular amount of money that constitute the economic policy of the government. A sound financial system is indispensable for the growth of a healthy and vibrant economy. A sound banking industry comprises a paramount component of the financial services sector. Performance of the banking sector is an effective measure and indicator to check the performance of any economy to a large extent. The banking sector's performance is perceived as the replica of economic activities of the economy as a healthy banking system plays as the bedrock of economic, social and industrial growth of an economy. Banking system in our economy has been allotted a crucial and noteworthy role in financing the planned economic growth. The studies of McKinnon (1973) and Shaw (1973) emphasized the role of financial system in economic growth and opined that there is a strong correlation between economic growth and financial system development. One more study concluded that

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development of financial system excels the economic growth through various channels (Levine and Zervos, 1998). The banks according to Gerschenkron (1968) substituted for the absence of a number of elements crucial to industrialization. The German investment banks were a powerful invention like a steam engine, which played the capital-supplying functions a substitute for the insufficiency in the financial system.

Banks are playing crucial and significant role in the economy in capital formation due to the inherent nature, therefore banks should be given more attention than any other type of economic unit in an economy. Evaluation of financial performance of the banking sector is an effective measure and indicator to check the soundness of economic activities of an economy. The banking sector's performance is perceived as the replica of economic activities of the economy. The stage of development of the banking industry is a good reflection of the development of the economy. There is a substantial improvement over the earlier supervisory system of banking sector in terms of recovery, management efficiency, assets quality, earning quality and internal control system to regulate the level of risk and financial viability of commercial banks. The regulators have augmented bank supervision by using CAMEL (capital adequacy, asset quality, management quality, earnings and liquidity) rating criterion to assess and evaluate the performance and financial soundness of the activities of the bank. The CAMEL supervisory criterion in banking sector is a significant and considerable improvement over the earlier criterions in terms of frequency, check, spread over and concentration. During this period, the banking sector has experienced a paradigm change and it was the time to make performance appraisal of operations. Reserve Bank of India recommended two supervisory rating models named as CAMELS (Capital Adequacy, Assets Quality, Management, Earning, Liquidity, Systems and Controls) and CACS (Capital Adequacy, Assets Quality, Compliance, Systems and Controls) for rating of Indian commercial Banks and Foreign Banks operating in India.

1.1 State Bank of India (SBI) - A Brief History

The SBI was established on 1 July 1955. At present SBI is India's largest bank with assets of US$360 billion and 14,119 branches, including 173 foreign offices in 37 countries across the globe. Including the branches that belong to its associate banks, SBI has 21,500 branches. SBI has been ranked 285th in the Fortune Global 500 rankings of the world's biggest corporations for the year 2012. It has a market share among Indian commercial banks of about 20% in deposits and loans.

The present research has been structured as follows. This part is the explanation about the concept of the study and describes its need; the second part reviews some of the international and Indian studies relating to CAMEL analysis; the third part explains the methodology used for the research; the fourth part deals with analysis and discussion of the data and presents the results and the last part of the study concludes the study.

2. Review of Literature

In order to evaluate the financial performance of banking sector the researchers, academicians and policy makers have investigated several studies in different time

periods. A study conducted by Barr et al. (2002) viewed that "CAMEL rating criteria has become a concise and indispensable tool for examiners and regulators". This rating criterion ensures a bank's healthy conditions by reviewing different aspects of a bank based on variety of information sources such as financial statement, funding sources, macroeconomic data, budget and cash flow. Said and Saucier (2003) used CAMEL rating methodology to evaluate the liquidity, solvency and efficiency of Japanese Banks, the study evaluated capital adequacy, assets and management quality, earnings ability and liquidity position. Sarker (2005) in Bangladesh examined the CAMEL model for regulation and supervision of Islamic banks by the central bank. This study enabled the regulators and supervisors to get a Shariah benchmark to supervise and inspect Islamic banks and Islamic financial institutions from an Islamic perspective. Nurazi and Evans (2005) investigated whether CAMEL(S) ratios could be used to predict bank failure. The results suggested that adequacy ratio, assets quality, management, earnings, liquidity and bank size are statistically significant in explaining bank failure. Olweny and Shipo (2011) found that poor asset quality and low levels of liquidity are the two major causes of bank failures. Poor asset quality led to many bank failures in Kenya in the early 1980s. Ongore and Kusa (2013) concluded that the financial performance of commercial banks in Kenya was driven mainly by board and management decisions, while macroeconomic factors have insignificant contribution.

Satish, Jutur and Surender (2005) concluded that the Indian banking system looks sound and information technology will help the banking system grow in strength in future. Al-Tamimi (2010) investigated factors influencing the performance of Islamic banks and conventional banks in (UAE) during 1996 to 2008. The study resulted that liquidity and concentration were significant determinants of conventional banks performance while cost and number of branches significantly influenced the performance of Islamic banks. Gupta and Kaur (2008) conducted the study with the main objective to assess the performance of Indian private sector banks using CAMEL model and gave rating to top five and bottom five banks. Reddy and Prasad (2011) discussed the financial performance of selected regional rural banks during post reorganization period. The study adopted CAMEL model to examine the overall performance of Andhra Pragathi Grameena Bank and Sapthagiri Grameena Bank. Siva and Natarajan (2011) empirically tested the applicability of CAMEL and its consequential impact on the performance of SBI Groups. The study found that CAMEL scanning helps the bank to diagnose its financial health and alert the bank to take preventive steps for its sustainability. Sangmi and Nazir (2010) opined that liquidity management is one of the most important functions of a bank. If funds tapped are not properly utilized, the institution will suffer loss. Alabede (2012) concluded that in the presence of the effect of global financial condition, only assets quality and market concentrations are significant determinants of the Nigerian banks' performance. The study suggested reducing nonperforming assets and introducing a policy to encourage fair competition among the banks.

3. Research Methodology

CAMEL is a ratio-based model to evaluate the performance of banks. It is an instrument to rate/rank the banks. The present study is a descriptive research study based on analytical research design. Out of Indian public sector banks only State Bank

group has been selected for the purpose of present study. This group enjoys the dominant position among Indian commercial bank owing to its largest market share. This group includes State Bank of India (SBI), State Bank of Bikaner and Jaipur (SBBJ), State Bank of Hyderabad (SBH), State Bank of Mysore (SBM), State Bank of Patiala (SBP), State Bank of Travancore (SBT) is taken for study. The data of the sample banks for a period of 2009-2011 have been collected from the published annual reports of the banks. Twenty financial ratios have been used to assess the performance of banks. Three year average has been calculated with the help of simple arithmetic mean. One-way ANOVA has been used to determine whether there is any significant difference between the means of CAMEL ratios. Kolmogorov-Smirnov and Shapiro-Wilk tests are applied to determine the normality of population distribution.

3.1 Objective of the Study

The objectives of our study are:
1. To analyze the financial position and performance of the State Bank Group using CAMEL model.
2. To give recommendations and suggestion for improvement of performance and financial position of State Bank India and its subsidiaries.

3.2 Hypothesis of the Study

There is no significant difference in performance of SBI and its subsidiaries as assessed by CAMEL model.

4. Analysis and Discussion

4.1 Capital Adequacy

Capital adequacy has come forth as one of the prominent indicators of the financial health of a banking system. It is very useful for a bank to conserve & protect stakeholders' confidence and preventing the bank from being bankrupt. It reflects whether the bank has enough capital to bear unexpected losses arising in the future.

4.1.1 Capital Adequacy Ratio (CAR)

This ratio is propounded to ensure that banks can take up a reasonable level of losses arising from operational losses. The higher the CAR ratio, indicates stronger the bank and the more will be the protection of investors. The banks need to maintain 9% capital adequacy ratio as per latest RBI norms. CAR = (Tier-I Capital + Tier-II Capital)/Risk Weighted Assets. Tier 1 capital includes permanent shareholders' equity; perpetual non-cumulative preference shares, Disclosed reserves and Innovative capital instruments. Tier 2 capital includes Undisclosed reserves, Revaluation reserves of fixed assets and long-term holdings of equity securities, General provisions/general loan-loss reserves; Hybrid debt capital instruments and subordinated debt.

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Table 1.1

Sr. No.	Bank	Capital Adequacy Ratio (%)				
		2009	2010	2011	Average	Rank
1.	SBI	14.25	13.39	11.98	13.20	**3**
2.	SBBJ	14.52	13.30	11.68	13.16	**4**
3.	SBH	11.53	14.90	14.25	13.56	**1**
4.	SBM	12.99	12.42	13.76	13.05	**6**
5.	SBP	12.60	13.26	13.41	13.09	**5**
6.	SBT	14.03	13.74	12.54	13.43	**2**

It is found that SBH ranked on the top position with highest CAR of 13.56 followed by SBT (13.43) and SBI (13.20). SBM scored the lowest position.

4.1.2 Debt-Equity Ratio

This ratio represents the degree of leverage of a bank. It shows how much proportion of the bank business is financed through equity and how much through debt. It is calculated by dividing total borrowings with shareholders' net worth. Higher ratio is an indication of less protection for the depositors and creditors and vice-versa.

Table 1.2

Sr. No.	Bank	Debt-Equity Ratio (Times)				
		2009	2010	2011	Average	Rank
1.	SBI	1.45	1.56	1.83	1.61	**6**
2.	SBBJ	1.19	1.23	1.05	1.15	**3**
3.	SBH	1.42	1.13	0.99	1.18	**4**
4.	SBM	1.68	0.85	0.89	1.14	**2**
5.	SBP	0.99	0.91	1.24	1.04	**1**
6.	SBT	1.13	1.14	1.65	1.30	**5**

In above table, SBP is on the top position with least average of 1.04 followed by SBM (1.14) and SBBJ (1.15). SBI scored the lowest position.

4.1.3 Advances to Assets

This is a ratio indicates the relationship between the total advances and total assets. This ratio indicates a bank's aggressiveness in lending which ultimately produces better profitability. Higher ratio is preferred to a lower one.

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Table 1.3

Sr. No.	Bank	Advances/Assets Ratio (%)				
		2009	2010	2011	Average	Rank
1.	SBI	56.30	60.00	61.80	59.36	**5**
2.	SBBJ	64.40	65.00	65.50	64.96	**2**
3.	SBH	56.90	59.80	60.70	59.13	**6**
4.	SBM	63.30	65.00	65.40	64.56	**3**
5.	SBP	62.60	60.90	63.30	62.26	**4**
6.	SBT	66.10	64.70	64.90	65.23	**1**

In above table, SBT is on the top position with highest average of 65.23 followed by SBBJ (64.96) and SBM (64.56). SBH scored the lowest position.

4.1.4 Government Securities to Total Investments

This ratio reflects the risk involved in a bank's investment. It is calculated by dividing the amount invested in government securities by total investment. Since government securities are risk-free, higher the proportion of government securities in total investment, lower will be the risk involved in a bank's investment and vice versa.

Table 1.4

Sr. No.	Bank	Government Securities/ Total Investments (%)				
		2009	2010	2011	Average	Rank
1.	SBI	81.97	76.64	78.05	78.88	**6**
2.	SBBJ	94.62	96.01	97.16	95.93	**2**
3.	SBH	86.65	83.64	81.20	83.83	**5**
4.	SBM	87.25	92.75	88.34	89.44	**3**
5.	SBP	97.24	95.66	97.82	96.90	**1**
6.	SBT	88.50	85.79	80.10	84.79	**4**

In above table, SBP is on the top position with highest average of 96.90 followed by SBBJ (95.93) and SBM (89.44) on second and third positions. SBI scored the lowest position.

4.1.5 Composite Capital Adequacy

On the basis of group averages of four ratios of capital adequacy as expressed in table 1.5, SBBJ and SBP was at the top position with group average of 2.75, followed by SBT (3.00), SBM (3.50). SBI scored the lowest position due to its poor performance in Debt-Equity, Advances to Assets and Government Securities to Total Investments ratios.

Table 1.5

Bank	CAR		Debt-Equity		Advances/ Assets		Govt. Securities/ Total Investments		Group Rank	
	%	Rank	Times	Rank	%	Rank	%	Rank	Avg	Rank
SBI	13.20	3	1.61	6	59.36	5	78.88	6	5.00	**6**
SBBJ	13.16	4	1.15	3	64.96	2	95.93	2	2.75	**1.5**
SBH	13.56	1	1.18	4	59.13	6	83.83	5	4.00	**5**
SBM	13.05	6	1.14	2	64.56	3	89.44	3	3.50	**4**
SBP	13.09	5	1.04	1	62.26	4	96.90	1	2.75	**1.5**
SBT	13.43	2	1.30	5	65.23	1	84.79	4	3.00	**3**

4.2 Assets Quality

The quality of assets is an important parameter to examine the degree of financial strength. The foremost objective to measure the assets quality is to ascertain the composition of non-performing assets (NPAs) as a percentage of the total assets.

4.2.1 Net NPAs to Net Advances

It is the most standard measure to judge the assets quality, measuring the net non-performing assets as a percentage of net advances. Net NPAs = Gross NPAs - Net of provisions on NPAs - interest in suspense account.

Table 2.1

Sr. No.	Bank	Net NPAs to Net Advances (%)				
		2009	2010	2011	Average	Rank
1.	SBI	1.79	1.72	1.63	1.71	**6**
2.	SBBJ	0.85	0.77	0.83	0.81	**2**
3.	SBH	0.38	0.55	0.87	0.60	**1**
4.	SBM	0.50	1.02	1.38	0.96	**5**
5.	SBP	0.60	1.04	1.21	0.95	**4**
6.	SBT	0.58	0.91	0.98	0.82	**3**

In table 2.1, SBH is on the top position with least average of 0.60 followed by SBBJ (0.81) and SBT (0.82) on second and third positions respectively. SBI scored the lowest position with highest percentage of 1.71.

4.2.2 Total Investments to Total Assets Ratio

This ratio indicates the extent of deployment of assets in investment as against advances. This ratio is used as a tool to measure the percentage of total assets locked up in investments. A higher ratio shows the conservative policy of a bank to provide safeguard to the investments against NPAs.

Table 2.2

Sr. No.	Bank	Total Investments to Total Assets Ratio (%)				
		2009	2010	2011	Average	Rank
1.	SBI	18.90	28.10	24.20	23.73	**5**
2.	SBBJ	14.50	25.10	21.50	20.36	**2**
3.	SBH	17.60	27.20	26.70	23.83	**6**
4.	SBM	17.50	25.30	24.80	22.53	**3**
5.	SBP	15.20	23.90	21.30	20.13	**1**
6.	SBT	16.50	26.60	25.30	22.80	**4**

In table 2.2, SBP is on the top position with least average of 20.13 followed by SBBJ (20.36) and SBM (22.53). SBH scored the lowest position with highest ratio of 23.83.

4.2.3 Net NPAs to Total Assets

This ratio reflects the efficiency of bank in assessing the credit risk and recovering the debts. In this ratio, the Net NPAs are measured as a percentage of Total Assets. The lower the ratio reflects, the better is the quality of advances.

Table 2.3

Sr. No.	Bank	Net NPAs to Total Assets Ratio (%)				
		2009	2010	2011	Average	Rank
1.	SBI	1.00	1.03	1.00	1.01	**6**
2.	SBBJ	0.54	0.49	0.54	0.52	**2**
3.	SBH	0.21	0.32	0.52	0.35	**1**
4.	SBM	0.31	0.66	0.89	0.62	**5**
5.	SBP	0.37	0.63	0.73	0.57	**4**
6.	SBT	0.38	0.58	0.63	0.53	**3**

In table 2.3, SBH is on the top position with least average of 0.35 followed by SBBJ (0.52) and SBT (0.53) respectively. SBI scored the lowest position with highest ratio of 1.01.

4.2.4 Percentage Change in Net NPAs

This ratio measures the movement/trend in net NPAs in current year in relation to net NPAs in the previous year. The higher the reduction in net NPAs levels reflect, the better is for the bank.

Table 2.4

Sr. No.	Bank	Percentage Change in Net NPAs (%)				
		2009	2010	2011	Average	Rank
1.	SBI	30.34	12.32	13.58	18.74	**2**
2.	SBBJ	20.97	7.23	26.33	18.17	**1**
3.	SBH	191.01	74.27	94.76	120.01	**6**
4.	SBM	44.38	132.26	56.06	77.56	**5**
5.	SBP	21.49	83.10	28.60	44.39	**4**
6.	SBT	-29.94	86.84	28.70	28.53	**3**

In table 2.4, there is no decrease in the percentage of net NPAs of State Bank Group. Percentage of net NPAs of all banks increased except in the case of SBT, where there was a decrease of 29.94% of net NPAs in 2009 as compared to previous year. SBBJ is on the top position with least average of 18.17 followed by SBI (18.74) and SBT (28.53) respectively. SBH scored the lowest position with highest ratio of 120.01.

4.2.5 Composite Asset Quality

On the basis of group averages of four ratios of assets quality as expressed in table 2.5, SBBJ was at the first position with group average of 1.75, followed by SBT and SBP with ranking of (2.5). SBI scored the lowest position with 6.0 rank due to its poor performance in net NPAs to net advances, total investments to total assets and net NPAs to total assets ratios.

Table 2.5

Bank	Net NPAs to Net Advances		Total Investments to Total Assets Ratio		Net NPAs to Total Assets Ratio		Percentage Change in Net NPAs		Group Rank	
	%	Rank	%	Rank	%	Rank	%	Rank	Avg	Rank
SBI	1.71	6	23.73	5	1.01	6	18.74	2	4.75	**6**
SBBJ	0.81	2	20.36	2	0.52	2	18.17	1	1.75	**1**
SBH	0.60	1	23.83	6	0.35	1	120.01	6	3.50	**4**
SBM	0.96	5	22.53	3	0.62	5	77.56	5	4.50	**5**
SBP	0.95	4	20.13	1	0.57	4	44.39	4	3.25	**2.5**
SBT	0.82	3	22.80	4	0.53	3	28.53	3	3.25	**2.5**

4.3 Management Efficiency

Management efficiency is another essential component of the CAMEL model that guarantee the growth and survival of a bank. Management efficiency means adherence with set norms, ability to plan and respond to changing environment, leadership and administrative capability of the bank.

4.3.1 Total Advances to Total Deposits

This ratio evaluate the efficiency and capability of the bank's management in applying the deposits (including receivables) available excluding other funds viz. equity capital, etc. into rich earning advances.

Table 3.1

Sr. No.	Bank	Total Advances to Total Deposits Ratio (%)				
		2009	2010	2011	Average	Rank
1.	SBI	73.10	78.58	81.02	77.56	**1**
2.	SBBJ	76.10	76.37	76.51	76.32	**4**
3.	SBH	69.94	72.39	73.02	71.78	**6**
4.	SBM	77.82	75.96	78.72	77.50	**2**
5.	SBP	72.63	71.79	75.56	73.32	**5**
6.	SBT	77.54	75.58	79.17	77.43	**3**

In table 3.1, SBI is on the top position with highest average of 77.56 followed by SBM (77.50) and SBT (77.43) on second and third positions respectively. SBH scored the lowest position with least percentage of 71.78.

4.3.2 Profit per Employee

It is calculated by dividing the profit after tax earned by the bank with the total number of employees. The higher the ratio, higher is the efficiency of the management and vice versa.

Table 3.2

Sr. No.	Bank	Profit per employee (In lakhs)				
		2009	2010	2011	Average	Rank
1.	SBI	4.74	4.46	3.85	4.35	**4**
2.	SBBJ	3.55	4.00	5.00	4.18	**6**
3.	SBH	4.87	5.58	7.89	6.11	**2**
4.	SBM	3.48	4.41	5.00	4.29	**5**
5.	SBP	4.68	4.45	5.20	4.77	**3**
6.	SBT	5.00	6.00	8.00	6.33	**1**

In table 3.2, SBT is on the top position with highest average of 6.33 followed by SBH (6.11) and SBP (4.77) respectively. SBBJ scored the lowest position with least ratio of 4.18.

4.3.3 Business per Employee

Business per employee reveals the productivity and efficiency of human resources of bank. It is followed as a tool to measure the efficiency of employees of a bank. Higher the ratio, the better it is for the bank and vice versa. In table 3.3, SBP is on the top position (920.58) followed by SBH (877.70) and SBT (747.33) respectively. SBI scored the lowest position with least ratio of 632.21.

Table 3.3

Sr. No.	Bank	Business per Employee(In lakhs)				
		2009	2010	2011	Average	Rank
1.	SBI	556.00	636.00	704.65	632.21	**6**
2.	SBBJ	555.39	628.00	751.00	644.79	**5**
3.	SBH	839.82	755.62	1037.68	877.70	**2**
4.	SBM	602.00	672.00	795.00	689.66	**4**
5.	SBP	910.24	895.21	956.30	920.58	**1**
6.	SBT	658.00	696.00	888.00	747.33	**3**

4.3.4 Return on Equity

It is a measure of the profitability of a bank. In calculation of this ratio, Profit after tax is expressed as a percentage of equity. In table 3.4, SBT is on the top position with highest average of 26.87% followed by SBH (22.41%) and SBBJ (20.92%) respectively. SBI scored the last position with least average of 14.82%.

Table 3.4

Sr. No.	Bank	Return on Equity (%)				
		2009	2010	2011	Average	Rank
1.	SBI	17.05	14.80	12.62	14.82	**6**
2.	SBBJ	21.46	20.39	20.91	20.92	**3**
3.	SBH	20.87	22.02	24.35	22.41	**2**
4.	SBM	18.47	18.06	15.77	17.43	**4**
5.	SBP	18.20	16.01	16.65	16.95	**5**
6.	SBT	30.64	26.88	23.09	26.87	**1**

4.3.5 Composite Management Efficiency:

On the basis of group averages of four ratios in table 3.5, SBT was at the first position with group average of 2.00, followed by SBH (3.00) and SBP (3.50) respectively. SBBJ

Table 3.5

Bank	Total Advances to Total Deposits Ratio		Profit per Employee		Business per Employee		Return on Equity		Group Rank	
	%	Rank	lakh	Rank	In lakh	Rank	%	Rank	Avg	Rank
SBI	77.56	1	4.35	4	632.21	6	14.82	6	4.25	**5**
SBBJ	76.32	4	4.18	6	644.79	5	20.92	3	4.50	**6**
SBH	71.78	6	6.11	2	877.70	2	22.41	2	3.00	**2**
SBM	77.50	2	4.29	5	689.66	4	17.43	4	3.75	**4**
SBP	73.32	5	4.77	3	920.58	1	16.95	5	3.50	**3**
SBT	77.43	3	6.33	1	747.33	3	26.87	1	2.00	**1**

scored the lowest position with 6.0 rank due to its poor performance in total advances to total deposits, profit per employee and business per employee ratios.

4.4 Earning Quality

The quality of earnings is a very important criterion which represents the quality of a bank's profitability and its capability to maintain quality and earn consistently.It primarily determines the profitability of bank and explains its sustainability and growth offuture earnings.

4.4.1 Operating Profit to Total Assets

This ratio reflects how much a bank can earn profit from its operations for every rupee invested in its total asset.In this ratio operating profit are expressed as percentage of total assets.

Table 4.1

Sr. No.	Bank	Operating Profit to Total Assets (%)				
		2009	2010	2011	Average	Rank
1.	SBI	2.13	1.82	2.23	2.06	**3**
2.	SBBJ	2.04	1.80	1.95	1.93	**5**
3.	SBH	1.88	2.08	2.38	2.11	**2**
4.	SBM	1.78	2.18	2.41	2.12	**1**
5.	SBP	1.50	1.80	2.24	1.84	**6**
6.	SBT	2.27	1.79	1.80	1.95	**4**

In table 4.1, SBM is on the top position with highest average of 2.12 followed by SBH (2.11) and SBI (2.06) on second and third positions respectively. SBP scored the lowest position with least percentage of 1.84.

4.4.2 Net Profit to Total Assets:

This ratio reflects the return on assets employed or the efficiency in utilization of assets. It is calculated by dividing the net profits with total assets of the bank. Higher the ratio reflects better earning potential of a bank in the future.

Table 4.2

Sr. No.	Bank	Net Profit to Total Assets (%)				
		2009	2010	2011	Average	Rank
1.	SBI	0.94	0.87	0.67	0.82	**5**
2.	SBBJ	0.87	0.83	0.87	0.85	**4**
3.	SBH	0.80	0.92	1.09	0.93	**2**
4.	SBM	0.83	0.98	0.96	0.92	**3**
5.	SBP	0.76	0.72	0.80	0.76	**6**
6.	SBT	1.23	1.15	1.02	1.13	**1**

In table 4.2, SBT is on the top position with highest average of 1.13 followed by SBH (0.93) and SBM (0.92) respectively. SBP scored the lowest position with least ratio of 0.76.

4.4.3 Interest Income to Total Income

Interest income is considered as prime source of revenue for banks. The interest income to total income reflects the capability of the bank in generating income from its lending business.

Table 4.3

Sr. No.	Bank	Interest Income to Total Income (%)				
		2009	2010	2011	Average	Rank
1.	SBI	83.40	82.58	83.72	83.23	**6**
2.	SBBJ	86.84	87.22	88.23	87.43	**5**
3.	SBH	88.12	88.27	88.86	88.41	**4**
4.	SBM	87.11	89.31	89.96	88.79	**3**
5.	SBP	90.18	89.85	89.55	89.86	**1**
6.	SBT	87.79	89.23	89.99	89.00	**2**

In table 4.3, SBP is on the top position with highest average of 89.86 followed by SBT (89.00) and SBM (88.79) respectively. SBI scored the lowest position with least ratio of 83.23.

4.4.4 Spread or Net Interest Margin (NIM) to Total Assets

NIM is the difference between the interest income and the interest expended. It is expressed as a percentage of total assets. A higher spread indicates the better earnings given the total assets.

Table 4.4

Sr. No.	Bank	Net Interest Margin (NIM) to Total Assets (%)				
		2009	2010	2011	Average	Rank
1.	SBI	2.48	2.35	2.86	2.56	**4**
2.	SBBJ	2.52	2.41	3.02	2.65	**2**
3.	SBH	2.12	2.25	2.92	2.43	**5**
4.	SBM	2.28	2.88	3.36	2.84	**1**
5.	SBP	1.75	2.11	2.97	2.27	**6**
6.	SBT	2.75	2.57	2.60	2.64	**3**

In table 4.4, SBM is on the top position with highest average of 2.84 followed by SBBJ (2.65) and SBT (2.64) respectively. SBP scored the last position with least ratio of 2.27.

4.4.5 Composite Earning Quality

On the basis of group averages of four ratios of quality of earning as expressed in table 4.5, SBM was at the top position with group average of 2.12, followed by SBT and Hyderabad with an average of (2.50) and (3.12) respectively. SBP scored the

lowest position with 6.0 rank due to its poor performance in Operating Profit to Total Assets, Net Profit to Total Assets and Net Interest Margin (NIM) to Total Assets ratios.

Table 4.5

Bank	Operating Profit to Total Assets		Net Profit to Total Assets		Interest Income to Total Income		Net Interest Margin (NIM) to Total Assets		Group Rank	
	%	Rank	%	Rank	%	Rank	%	Rank	Avg	Rank
SBI	2.06	3	0.82	5	83.23	6	2.56	4	4.50	**5**
SBBJ	1.93	5	0.85	4	87.43	5	2.65	2	4.00	**4**
SBH	2.11	1.5	0.93	2	88.41	4	2.43	5	3.12	**3**
SBM	2.11	1.5	0.92	3	88.79	3	2.84	1	2.12	**1**
SBP	1.84	6	0.76	6	89.86	1	2.27	6	4.75	**6**
SBT	1.95	4	1.13	1	89.00	2	2.64	3	2.50	**2**

4.5 Liquidity

Risk of liquidity can have an effect on the image of bank. Liquidity is a crucial aspect which reflects bank's ability to meet its financial obligations. An adequate liquidity position means a situation, where organization can obtain sufficient liquid funds, either by increasing liabilities or by converting its assets quickly into cash.

4.5.1 Liquid Assets to Total Assets

This ratio measures the overall liquidity position of the bank. The liquid assets include cash in hand, money at call and short notice, balance with Reserve bank of India and balance with banks (India and Abroad). The total assets include the revaluation of all the assets.

Table 5.1

Sr. No.	Bank	Liquid Assets to Total Assets (%)				
		2009	2010	2011	Average	Rank
1.	SBI	10.80	9.20	10.04	10.01	**1**
2.	SBBJ	9.20	7.70	9.60	8.83	**3**
3.	SBH	9.10	8.41	9.75	9.08	**2**
4.	SBM	5.30	6.60	5.65	5.85	**6**
5.	SBP	7.23	7.90	7.48	7.53	**4**
6.	SBT	4.90	6.64	6.83	6.12	**5**

In table 5.1, SBI is on the top position with highest average of 10.01 followed by SBH (9.08) and SBBJ (8.83) on second and third positions respectively. SBM scored the last position with least percentage of 5.85.

4.5.2 Liquid Assets to Total Deposits

This ratio measures the liquidity available to the depositors of a bank. It is calculated by dividing the liquid assets with total deposits.

Table 5.2

Sr. No.	Bank	Liquid Assets to Total Deposits (%)				
		2009	2010	2011	Average	Rank
1.	SBI	14.06	11.96	13.15	13.05	**1**
2.	SBBJ	11.01	9.07	11.22	10.43	**3**
3.	SBH	11.13	10.22	11.74	11.03	**2**
4.	SBM	6.50	7.66	6.80	6.98	**6**
5.	SBP	8.39	9.23	8.94	8.85	**4**
6.	SBT	5.83	7.76	8.34	7.31	**5**

In table 5.2, SBI is on the top position with highest average of 13.05 followed by SBH (11.03) and SBBJ (10.43) respectively. SBM scored the lowest position with least ratio of 6.98.

4.5.3 Liquid Assets to Demand Deposits:

This ratio reflects the ability of bank to honour the demand from depositors during a particular year. In order to provide higher liquidity for depositors, bank has to invest these funds in highly liquid form. It is calculated by dividing the liquid assets with total demand deposits.

Table 5.3

Sr. No.	Bank	Liquid Assets to Demand Deposits (%)				
		2009	2010	2011	Average	Rank
1.	SBI	94.26	78.46	93.65	88.79	**6**
2.	SBBJ	115.67	118.25	168.89	134.27	**3**
3.	SBH	90.46	105.55	107.41	101.14	**4**
4.	SBM	94.23	102.55	95.90	97.56	**5**
5.	SBP	160.16	146.34	159.19	155.23	**1**
6.	SBT	108.78	164.89	165.54	146.40	**2**

In table 5.3, SBP is on the top position with highest average of 155.23 followed by SBT (146.40) and SBBJ (134.27) respectively. SBI scored the lowest position with least ratio of 88.79.

4.5.4 Approved Securities to Total Assets

This ratio is calculated by dividing the total amount invested in Approved securities with Total Assets. Approved securities include investments made in the state-associated/owned bodies like Electricity Corporations, Housing Development Corporations, Regional Rural Banks and corporation bond. In table 5.4, SBI is on the

top position with (0.103) followed by SBM (0.100) and SBP (0.083) respectively. SBH scored the lowest position with least ratio of 0.043.

Table 5.4

Sr. No.	Bank	Approved Securities to Total Assets (%)				
		2009	2010	2011	Average	Rank
1.	SBI	0.19	0.09	0.03	0.103	**1**
2.	SBBJ	0.12	0.05	0.03	0.066	**4**
3.	SBH	0.07	0.04	0.02	0.043	**6**
4.	SBM	0.18	0.10	0.02	0.100	**2**
5.	SBP	0.13	0.08	0.04	0.083	**3**
6.	SBT	0.12	0.05	0.01	0.060	**5**

4.5.5 Composite Liquidity

On the basis of group averages of four ratios of liquidity as expressed in table 5.5, SBI was at the top position with group average of 2.25, followed by SBP with average of (3.00) and SBBJ (3.25) respectively. SBM scored the last position with 6.0 rank due to its poor performance in Liquid Assets to Total Assets, Liquid Assets to Total Deposits and Liquid Assets to Demand Deposits ratios.

Table 5.5

Bank	Liquid Assets to Total Assets		Liquid Assets to Total Deposits		Liquid Assets to Demand Deposits		Approved Securities to Total Assets		Group Rank	
	%	Rank	%	Rank	%	Rank	%	Rank	Avg	Rank
SBI	10.01	1	13.05	1	88.79	6	0.103	1	2.25	**1**
SBBJ	8.83	3	10.43	3	134.27	3	0.066	4	3.25	**3**
SBH	9.08	2	11.03	2	101.14	4	0.043	6	3.50	**4**
SBM	5.85	6	6.98	6	97.56	5	0.100	2	4.75	**6**
SBP	7.53	4	8.85	4	155.23	1	0.083	3	3.00	**2**
SBT	6.12	5	7.31	5	146.40	2	0.060	5	4.25	**5**

4.6 Composite Ranking (overall performance) of State Bank Group

In order to assess the overall performance of State Bank Group, we calculated the composite rating and results are presented in table 6.

Table 6

Bank	C	A	M	E	L	Average	Rank
SBI	5.00	4.75	4.25	4.50	2.25	4.15	**6**
SBBJ	2.75	1.75	4.50	4.00	3.25	3.25	**2**
SBH	4.00	3.50	3.00	3.12	3.50	3.42	**3**
SBM	3.50	4.50	3.75	2.12	4.75	3.72	**5**
SBP	2.75	3.25	3.50	4.75	3.00	3.45	**4**
SBT	3.00	3.25	2.00	2.50	4.25	3.00	**1**

Table 6 depicts the group ranking of the State Bank Groups in India for the period of 2009-2011. It is found that under the capital adequacy ratio parameter SBBJ and SBP were at the top position, while SBI got lowest rank. Under the asset quality parameter, SBBJ held the top rank while SBI held the lowest rank. Under management efficiency parameter it is observed that top rank taken by SBT and lowest rank taken by SBBJ. In terms of earning quality parameter the capability of SBM got the top rank in the while SBP was at the lowest position. Under the liquidity parameter SBI stood on the top position and SBM was on the lowest position.

4.7 Tests of Normality

For testing the normality of data, we proposed the hypothesis that the population distribution is normal. For this Kolmogorov-Smirnov and Shapiro-Wilk tests were applied and results are depicted in table 7 and table 8.

4.7.1 Kolmogorov-Smirnov Test

Table 7

Bank	Statistic	df	P - Values
SBI	0.336	5	0.067
SBBJ	0.157	5	0.200
SBH	0.223	5	0.200
SBM	0.214	5	0.200
SBP	0.274	5	0.200
SBT	0.184	5	0.200

4.7.2 Shapiro-Wilk Test

Table 8

Bank	Statistic	df	P - Values
SBI	0.787	5	0.063
SBBJ	0.980	5	0.937
SBH	0.929	5	0.592
SBM	0.925	5	0.563
SBP	0.867	5	0.254
SBT	0.978	5	0.921

The results highlighted that calculated P- values are greater than the chosen alpha level of 0.05 for all banks, which means data are normally distributed.

4.8 ANOVA Results

For determining whether there is any significant difference between the means of CAMEL ratios, we applied one-way ANOVA test on the data shown in table 6. The results of one-way ANOVA test are presented in table 9.

Table 9

Sources of Variation	Sum of Squares	Degree of Freedom	Mean Square	F-Value
Between Groups	3.967	5	0.793	0.968
Within Groups	19.644	24	0.819	
Total	23.611	29		

The results of ANOVA test highlighted the calculated values of F-ratio is less than the tabulated values (for 5, 24 d.f. at 5% level of significance is 2.62). It means there is no statistically significant difference between the mean values of CAMEL ratios and we do not reject the null hypothesis. It signifies that there is no significant difference in performance of SBI and its subsidiaries assessed by CAMEL model.

5. Conclusion

During the process of evaluation of performance of State Bank Group our study highlighted that, the different banks have obtained different ranks with respect to CAMEL ratios. Our study concluded that in terms of capital adequacy ratio parameter SBBJ and SBP were at the top position, while SBI got lowest rank. The possible reason for this was the poor performance of SBI in debt-equity, advances to assets and government securities to total Investments ratios. In terms of asset quality parameter, SBBJ held the top rank while SBI held the lowest rank. The possible reason for this was the poor performance of SBI in net NPAs to net advances, total investments to total assets and net NPAs to total assets ratios. Under management efficiency parameter it is observed that top rank taken by SBT and lowest rank taken by SBBJ. The possible reason for this was the poor performance of SBBJ in total advances to total deposits, profit per employee and business per employee ratios. In terms of earning quality parameter the capability of SBM got the top rank in the while SBP was at the lowest position. The possible reason for this was the poor performance of SBP in operating profit to total assets, net profit to total assets and net interest margin to total assets ratios. Under the liquidity parameter SBI stood on the top position and SBM was on the lowest position. The possible reason for this was the poor performance of SBM in liquid assets to total assets, liquid assets to total deposits and liquid assets to demand deposits ratios.

The present study also depicted that though ranking of ratios is different for different banks in State Bank group. But there is no statistically significant difference between the CAMEL ratios. It signifies that the overall performance of State Bank group is

same; this may be because of adoption of modern technology, banking reforms and recovery mechanism. SBI needs to improve its position with regard to asset quality and capital adequacy, SBBJ should improve its management efficiency and SBP should improve its earning quality. The present study is limited in scope as it relates to State Bank Group only.

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