

THE IMPACT OF LIQUIDITY MANAGEMENT ON BANK PROFITABILITY AND STABILITY

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ABSTRACT

Banking sector is one of the fastest growing sectors in India. Today's banking sector becoming more complex. Evaluating Indian banking sector is not an easy task. There are so many factors, which need to be taken care while differentiating good banks from bad ones. Performance evaluation of the banking sector is an effective measure and indicator to check the soundness of economic activities of an economy. The contribution of RBI and other policy maker, the banking industry has witnessed regulatory requirements like BASEL III norms. These regulatory changes have influenced prominent improvement in efficiency and performance of the Indian Scheduled Commercial Banks in the past few years. In the present study an attempt was made to evaluate the performance & financial soundness of select public Sector Banks like Bank of Baroda, PNB, and Union bank of India, Bank of India, and SBI using CAMEL approach from 2018 to 2022 as well one way ANOVA method.

Keywords : Banks, CAMEL, H-Score, Liquidity, Liquidity Management

INTRODUCTION

The banking arena in the country has witnessed significant changes in the last two decades due to the outbreak of reforms in the financial sector. The process of liberalization initiated in 1991 has made ingress of new private sector banks possible and permitted the foreign sector banks to increase their branches in the banking sector. As a result of which, the nationalized banks were forced to face the cutthroat competitions created in the market, which is created due to the entry of private banks, foreign banks and NBFC's. The private banks and foreign banks are coming up with their attractive policies and providing the customer with better services with the aid of hi-technology and new ways of providing convenience to customer. Influenced by the new found technology and increased thrust on product innovation, the nationalized banks in the country also witnessed a phenomenal growth in the last two decades. In the above background it is essential to examine the liquidity position of select public Sector Banks by using the CAMEL Model. Since, CAMEL Model attempts to detect problems before they manifest themselves. CAMEL model is basically a ratio based model used for evaluating the performance of banks and is used for ranking or rating of the banks

OBJECTIVE OF THE STUDY

1. To find out how does effective liquidity management contribute to bank profitability?
2. To investigate what are the consequences of poor liquidity management on bank stability?
3. Analyze how the liquidity management strategies affect a bank's risk profile and capital adequacy?

LITERATURE REVIEW

For the years 1998 to 2007, Mathuva (2009) looked studied the correlations between profitability, capital adequacy ratio, and cost income ratio (CIR). According to the study, capital adequacy has a variety of effects on the banks profitability. Using the CAMEL technique, Mishra et al. (2012) and Misra (2013) examined the performance of 12 public and private sector banks from 2000 to 2011. It was determined that private sector banks were expanding more quickly than public sector banks. Low economic soundness was demonstrated by Union Bank and SBI. Using the CAMEL technique, it evaluated the State Bank Groups operations and financial stability. According to the study's findings, the company has to strengthen its position in terms of asset quality and capital sufficiency. In Turkey between 2001 and 2009, Erol (2013) compared the performance of Islamic banks to that of

regular banks. The findings demonstrated that Islamic banks outperformed conventional banks in terms of profitability and asset management ratios, but lagged behind in terms of sensitivity to market risk criteria.

Rostami (2015) examined how the CAMELS models various parameters affected the efficiency of Iranian banks. In this study, the Q-ratio Tobins served as a performance measure. It was discovered that there was a meaningful relationship between each CAMEL model category and the Q-ratio, Tobin; which serves as a measure of bank performance. For the years 2009 to 2013, Majumdar (2016) evaluated the financial performance of 15 Bangladeshi banks. The CAMEL model was used to assess the financial stability of a few banks. The data had undergone an ANOVA test, average, and composite ranking. The investigation found that the performance of a few selected institutions had varied significantly. The research recommended that banks take the necessary action to fix these flaws. Through the use of the CAMEL technique, Ramya (2017) analyses the financial performance of the State Bank of India during the research period of 2012–2016. It was determined that action must be taken to strengthen SBI's position in relation to a few factors, including the debt-to-equity ratio, operating profit, and the ratio of non-interest income to total income.

LIQUIDITY ANALYSIS ON THE BASIS OF CAMEL MODEL

CAMEL model is the mechanism which issued for the critical analysis of the balance sheet of banks and the presentation of such analysis to provide for the assessment of the health of the banks. In the present research work, CAMEL model has been used as a measuring rod to measure the capital adequacy, assets quality, management efficiency, earning quality and liquidity of five nationalized banks.

LIQUIDITY

Financial soundness is significantly impacted by liquidity, which also assesses a bank's operating efficiency. It reveals a bank's ability to cover short-term obligations and deal with unforeseen depositor withdrawals. A company's liquidity demonstrates its capacity to transform its assets into cash without suffering any losses. The banks' liquidity ensures that depositors can access their money whenever necessary and demonstrates the stability and durability of the industry. While having too much money hurts profitability, having too little liquidity increases the chance of going bankrupt. This study is limited to one parameter, the cash deposit ratio, in order to identify the liquidity for the five selected banks. The conclusion for the liquidity will be reached after taking into account the Mean (μ) on the chosen metric.

Table1 : Cash Deposit Ratio of Selected Banks

Name of the Banks	2018	2019	2020	2021	2022
Bank of Baroda	-09.59%	00.95%	00.04%	-0.008%	-02.88%
Punjab National Bank	00.007%	-02.99%	-00.02%	-00.22%	01.04%
Union Bank of India	03.50%	00.07%	02.68%	-01.49%	00.89%
Bank of India	-00.24%	03.22%	03.16%	06.39%	02.54%
State Bank of India	00.15%	01.82%	03.39%	-05.57%	01.26%

Table2 : Metrics for Liquidity

Name of the Banks	Mean(μ)	Median(Med.)	Standard Deviation(σ)
Bank of Baroda	-1.22%	0.07%	4.40%
Punjab National Bank	0.61%	0.95%	2.08%
Union Bank of India	1.85%	2.68%	1.52%
Bank of India	-0.19%	-0.22%	3.85%
State Bank of India	0.57%	1.04%	1.82%

Table3: Overall Rank of Liquidity based on Mean(μ) Values

Rank Allotted	I	II	III	IV	V
Name of the Bank	Union Bank of India	Punjab National Bank	State Bank of India	Bank of India	Bank of Baroda

The three preceding tables collectively show that Union Bank of India has a far superior liquidity situation than Punjab National Bank, State Bank of India, and Bank of India, in that order. In terms of liquidity, Bank of Baroda achieved the lowest ranking. Due to its highest Standard Deviation (σ) of 4.40 percent among the selected banks, Bank of Baroda is considered to have the highest level of volatility.

MEASURING THE PROFITABILITY AND LIQUIDITY:

FULMER MODEL – HSCORE:

Fulmer (U.S.1984) has used step-wise Multiple Discriminate Analysis to Evaluate 40 financial ratios to a sample of 60 companies - 30 failed and 30 successful. He has reported a 98 percent accuracy rate in classifying the test companies one year prior to failure and an 81 percent accuracy rate more than one year prior to bankruptcy. This model is applied to find the financial healthiness of the companies under study. The following is the Fulmer Model:

$$H = 5.528V_1 + 0.212V_2 + 0.073V_3 + 1.270V_4 + 0.120V_5 + 2.335V_6 + 0.575V_7 + 1.083V_8 + 0.894V_9 - 6.075$$

$H < 0$, then the firm is classified as 'Failed' otherwise 'Successful'

Where,

V_1 = Retained Earnings/Total Assets

V_2 = Sales/Total Assets

V_3 = EBIT/EQUITY

V_4 = Cash Flows//Total Debt

V_5 = Debt/Total Assets

V_6 = Current Liabilities/Total Assets

V_7 = Log Tangible Total Assets

V_8 = Working Capital/Total Assets

V_9 = Log EBIT/Interest

The following table shows the ratios used in the H-score and its Co-efficient. The H- Score intends to cover the profitability, Efficiency, Liquidity and Solvency status of a firm. Using these H-scores of the five banks are calculated and presented to know the financial healthiness of the banks in the following table

H-SCORE RATIOS AND CO-EFFICIENTS

1	RE/T.A	Profitability	5.528
2	Sales/TA	Efficiency	0.212
3	EBIT/Equity	Profitability	0.73
4	Cash Flow/Total Debt	Liquidity	1.27
5	Total Debt/TA	Solvency	0.12
6	C.L/T.A	Solvency	2.335
7	Log Tan. TA	Solvency	0.575
8	Working Capital/Total Debts	Liquidity	1.083
9	Log. EBIT/Interest	Solvency	0.894

Source: Computed

$$H - \text{Factor} = 5.528 * X1 + 0.212 * X2 + 0.73 * X3 + 1.27 * X4 - 0.12 * X5 + 2.335 * X6 + 0.575 * X7 + 1.083 * X8 + 0.894 * X9 - 6.075$$

X1	=	Average Retained Earnings/Average Total Assets
X2	=	Revenues/Average Total Assets
X3	=	EBIT/Total Equity*
X4	=	Cash Flows from Operations/Average Total Debt**
X5	=	Average Total Debt / Total Equity*
X6	=	Total Current Liabilities/Average Total Assets
X7	=	log (Average Tangible Assets)
X8	=	Average Working Capital/Average Total Debt**
X9	=	log (EBIT) / Interest Expense***

*Total Equity = (Market Cap + Preferred Stock Equity + Non controlling Interests)

**If Average Total Debt is Zero, this quantity is assumed to be zero.

***If Interest Expense is Zero, this quantity is assumed to be zero.

H SCORE OF SELECT BANKS

Company	2018	2019	2020	2021	2022	Healthiness Status
STATEBANKOFINDIA	23.71	23.74	19.67	24.57	24.45	Successful
PUNJAB NATIONAL BANK (With Merger of Oriental Bank of Commerce and United Bank of India)	27.96	28.30	23.58	11.33	19.62	
BANK OF BARODA	18.81	31.94	8.19	22.14	23.22	
UNION BANK OF INDIA (With Merger of Andhra Bank and Corporation Bank)	27.70	23.59	25.34	20.59	20.89	
BANK OF INDIA	29.96	20.46	20.90	19.60	21.06	

The overall financial healthiness statuses of the banks for the five year period have been consolidated in the above table. In the period 2018-2022 all five Banks have shown “Successful” Status.

CONCLUSION:

The above study is a humble effort to describe the various ratios which are helpful for the assessment of Liquidity Management on Bank Profitability and Stability of banking sector. The ratios described in the present study are used by various researchers for the evaluation of banks performance in their respective studies. In the present study we used important parameters like, Earning Quality and Liquidity for assessing Liquidity Management of the selected nationalized banks in India and to determine the factors that predominantly affect the Liquidity Management of the Indian banking sector with efficiently and accurately.

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