Liquidity analysis of State Bank of India

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Abstract: *Modern customer has a high demand for quality of service than he/she had before. There is an urgent need for improving the customer service levels currently provided in the banking industry. Banks need to understand, foresee, the needs and expected levels of customer support which the customer expects when he/she steps into the branch and strive to stand up and excel in providing the service and making banking a truly delightful experience. The banker should change his/her agenda from Customer Satisfaction to Customer delight and then march towards Customer Ecstasy. This will be possible by maintaining the financial soundness of the firm. In this connection it has been given importance through this study. Since most of the Banking slightly deviate into the other areas like insurance, financial services and modern banking services such as Advisory services, Agent for receivables, custodian, instant loan provider, Forfeiter services and factoring services. A conscious attempt has been made to analysis the liquidity of state bank of India (SBI). The present study aimed to understand the financial soundness of the bank, the ratio analysis taken as tool. In this research work the secondary data mainly used, it has been collected in the form of the company manuals, Balance sheets and other documents. The data analyzed by some of the statistical tools such as ANOVA test and Multi variate test is used to analyze the interferences about the operating efficiency.*

Key words: Ratio Analysis, Bank, Forfeiter services, Factoring services,

Background and significance of the study

State Bank of India (SBI) is a large financial services group operating in the banking industry. The bank is engaged in providing trading services, international banking and traditional banking and treasury operations. The Reserve Bank of India holds more than half of SBI's equity capital. SBI has a network

of over 10,000 branches. In addition, the seven associate banks of SBI have more than 4900 branches. SBI along with its subsidiaries is engaged in providing a wide range of financial services including Life Insurance, Merchant Banking, Mutual Funds, Credit Card and Factoring, Security trading and Primary Dealership in the Money Market, Global Markets Direct, the leading business information provider, presents an in-depth business, strategic and financial analysis of State Bank of India. The report provides a comprehensive insight into the company, including business structure and operations, executive biographies and key competitors. The hallmark of the report is the detailed strategic analysis and Global Markets Direct's views on the company. SBI a public sector bank is the largest bank in India. SBI accounts for almost one-fifth of the nation's loans. The Total Income of the Bank for 2007-2008 increased by 30.99% from Rs. 440.07 billion to Rs. 576.45 billion. The Bank has posted a Net Profit of Rs. 67.29 billion for 2007-08 as compared to Rs.45.41 billion in 2006-07, registering a growth of 48.18%.

Besides personal and corporate banking, SBI is also involved in Non Resident Indian (NRI) services through its network in India and overseas. As of May 2008, the bank had 21 subsidiaries and 10,186 branches. SBI was adjudged the best bank in India for 2008 by 'The Banker' magazine of The Financial Times Ltd. In addition to latest results, growth rates and performance data, the magazine also analyzed the available material on technology, acquisitions and key strategic developments.

Banks across Asia are looking to shore up their balance sheets as they prepare for a tougher business environment amid a global economic downturn. SBI, which had no direct exposure to sub-prime mortgages, has said that it would still need to raise USD 2-4 billion capital in 2009 to boost its Tier-1 capital adequacy ratio, but whether it would be done through a rights issue or other means has not been finalized. Tier 1 capital is the core measure of a bank's financial strength from a regulator's point of view. It is composed of core capital, which consists primarily of equity capital and cash reserves. SBI offers the services of banking and as well as a whole array of financial services which include Mutual Funds, Credit Cards, Life Insurance, Merchant Banking, Security Trading & Primary dealership in the Money market. The Bank is actively involved in non-profit activity called community services banking apart from its normal banking activity.SBI is the only Indian bank that figures in Fortune's top 100 banks. Its 11,000 branches and 5,600 automatic teller machines give it a reach throughout the length and breadth of the country; its work force of 200,000 dwarfs all other banks in India (its nearest competitor is Punjab National Bank, which has around 56,000 employees. It is also the second largest bank in the world, measured by the number of branches and employee strength.SBI has entered into a lot of strategic agreements with banks, insurers and other companies. Insurance Australia Group (IAG) has signed a $170 million joint venture agreement with the State Bank of India (SBI) to establish a general insurance company in India. The newly formed company is expected to commence trading in 2009.

SBI will become the first public sector bank in India to enter the custody services sector. State Bank of India (SBI) and Societe Generale Securities Services (SGSS), part of

Societe Generale Group, have announced a joint venture which will offer custody and related services in India. The new company, SBI SG Custodial Services, will be based in Mumbai and offer a range of services to both foreign and domestic investors and clients, covering custody, depository, fund administration, registration and transfer agent services. The joint venture will leverage SBI's strength in the Indian financial sector.

Need of the study

Most of the banks outside the country operate with high profit leaving behind the liquidity sign. The huge loans has been disbursed keeping profitability in view, in case of any eventuality those loans keeping epicenter as profit liquidates which finally leads to doldrums, hence in the country like India the main focus should be on liquidity and not profitability. Hence my study is significant on that count.

Objective of the study

1 To study about the financial performance of State Bank of India.

2. To calculate profitability turnover & financial ratio to assess the financial position of the firm.

3 To study the efficiency and liquidity position using ratios.

4. To study about the factors influencing liquidity and suggest finding for the above study.

Literature review

Rapid changes in financial service industries make it important to determine the efficiency of financial institutions (Berger et al., 1993). Banks play an important role in the financial markets of the developing countries and it is very important to evaluate whether banks operate efficiently or not. There are many research studies that try to look into the efficiency of banks operating within a country and across the countries. These studies can be differentiated on the basis of used methodologies, considered variables, type and number of banks included in the sample.

Many theoretical and empirical studies indicate that in the development of the economy. Financial sector plays an important role. A number of economists linked the efficiency and development of the financial institutions with economic growth and also established channels through which the financial system affects economic growth (McKinnon. 1973; Levine, 1997; Tsuru, 2000; Ahmed and Bebe. 2007). A positive relationship between financial sector development and economic growth was established by economists in various empirical studies (Goldsmith, 1969: King and Levine, 1993a, 1993b, Levine et al., Khan and Senhadji, 2000)

Gelos (2006) studies the determinants of bank interest margins in Latin America using bank and country level data. He finds that spreads are large because of relatively high interest rates (which in the study is proxy for high macroeconomic risk, including from inflation), less efficient banks, and higher reserve requirements. Athanasoglou, et al (2006) studies the profitability behavior of the south eastern European banking industry over the period 1998-02. The empirical results suggest that the enhancement of bank profitability in those countries requires new standards in risk management and operating efficiency, which, according ro the evidence presented in the paper, crucially

affect profits. A key result is that the effect of market concentration is positive, while the picture regarding macroeconomic variables is mixed.

Kailash (III) and Gilbert (1973) studied the impact of size and organizational form of the commercial bank on its efficiency. Cost and output of the banks were collected for this purpose. They used 898 commercial banks that took part in the Lederai Reserve's functional cost analysis program in 1968. Banks were categorized into unit banks, branch banks and holding company subsidiaries on the basis of their organizational form and the amount of assets they had. The minimum average cost (AC) at which bank of the same size and organizational form can operate is called as technical efficiency of the bank while the excel AC of the bank over minimum AC represents the operational inefficiency of the bank.

Aly et al. (1990) analyzed technical, scale and allocative efficiencies in US banking by using non parametric frontier approach on a sample of 322 independent banks. According to them, major contributor to the low score of overall efficiency was technical inefficiency in the banking units as compared allocative inefficiency. Al-Faraj et al. (1993) evaluated the relative efficiency of bank branches of the larges commercial bank in Saudi Arabia by means of Data Envelopment Analysis (DEA) for the improvement of the utilization of available resources at branch level more efficiently. They applied DEA methodology on fifteen branches of the bank located in the eastern province of Saudi Arabia. One year actual input – output data of the bank was used for the study. Eight inputs and seven output factors were identified at branch level on the basis of consultation and personal interviews with the administrators of the several banks. DEA enabled them to identity three inefficient branches out of fifteen bank branches under consideration.

English el al. (1993) assessed output efficiency of individual banks rather than the estimation of technical and allocative input efficiency of banks. Their technique focused on revenues. This allowed them to look explicitly at the output efficiency of banks. Output distance function introduced by shepherd was used as main analytical tool. For the study, data were collected from the Federal Reserve Functional Cost Analysis programme for 1982. The got information on quantities and prices of outputs and inputs. For outputs, they included real estate loans, commercial loans, consumer installment loans, investment in US securities. These quantities were measured in annual average dollar value. Output prices were constructed from the data by taking the ratio of interest income to output Quantity. Interest bearing small deposits (less than $ one lack) , labour , occupancy expense and purchase or borrowed funds. (greater than $ one lack) were used as inputs. From analysis, they found that on average, the banks in their sample were totally inefficient and their results were consistent with inputs efficiency studies. They also determined that the banks with greater assets were technically more efficient than those with relatively less assets and banks on the average were allocatively inefficient i.e. output mix of banks is not revenue maximizing at existing prices. They suggested that banks could increase revenue by increasing investment income at the expense of decrease in both consumer and commercial loans and by increasing total loans relative to investment on average.

McAllister and McManus (1993) criticized the use of translog cost function for the measurement of the scale efficiency in the banking sector. According to them, large banks had very different product mixes than the average banks and thus translog cost function could create problems in measuring scale efficiencies. To solve out this problem, they suggested the use of nonparametric estimation procedure in place of translog function. They found substantial scale inefficiencies for small banks. According to them, full scale efficiency reached by banks at about $500 million in assets and thereafter upto %10 billion in assets, approximately constant average costs prevailed.

Timme (1993) investigated the relationship of concentration of decision management and control in one person on the cost efficiency level of the bank and returns on assets. On the basis of their study, they found that the banks whose chairman of the board and CEO were the same person had significantly less efficiency than those banks that possessed not similar governance structure and concluded that performance was affected by top management structure.

Atunbas et al, (1994) justified the privatization of Turkish public banks on the grounds of efficiency improvement. For the study, they used the stochastic cost techniques for the analysis of performance difference between public and private banks. After analysis, they found a statistically non significant inefficiency difference between private and public banks. So on the basis of statistically insignificant inefficiency difference; they favored the privatization of public banks.

Miller and Noulas (1996) use DEA to estimate the technical efficiency of 201 large sized banks operating in United States. For this estimation, they used data about inputs (total transactions deposits, total non-transactions deposits, total interest expense and total non-interest expense) and outputs (commercial and industrial loans, consumer loans, real estate loans, investments, total interest income and total non-interest income) of the banks from 1984 to 1990. They estimated overall technical, pure technical and scale efficiency for the banks and found large mean estimated scores of scale efficiency as compared to overall technical and pure technical efficiency scores. They also found that the pure technical inefficiency was twice as compared to scale inefficiency and also reported the number of banks operating under decreasing returns to scale, increasing returns to scale and constant returns to scale. From second stage regressions, they found that the profitability and size (measured by total assets) of the banks were significant contributors to overall technical, pure technical and scale efficiencies of the banks.

Resti (1997) used econometric and DEA technique to analyze a panel of 270 Italian banks. According to him, econometric and DEA estimated efficiency scores are same under same conceptual framework and data but if differences present between the estimated efficiency scores, it can be explained by describing the basic features of the models. In Italian banking sector, he found a high variance in efficiency score and direct relationship between productive efficiency and quality of assets. He could not find any evidence of efficiency improvement over the period 1998-1992.

Ayadi et al.(1998) measured the banks performance in Nigeria by applying data envelopment analysis to ten banks by using

financial data from 1991 to 1994. They used interest paid on deposits, total expenses and total deposits as inputs while total loans interest and non-interest incomes were considered as outputs. They reported that banks in existence for long period of time are relatively efficient than other banks in the sample and banks having poor management showed bad performance arid is key determinant of the bad performance of banks in Nigeria.

Chand et al. (1998) used translog formulation of stochastic cost fronties method to estimate the cost inefficiency scores. For this purpose, they used foreign owned multinational banks and local US banks. The banking data of period 1984-1989 were used for the study. From the study they found that foreign owned banks operating in US were significantly less efficient than their local counterparts.

Avkiran (1999) used two DEA models under the assumptions of variable returns to scale to measure the average x-efficiency of Australian trading Banks from 1986 to 1995. In model A, he used interest expense and non-interest expense as inputs while nil interest income and noninterest income as output of the bank. In model B, he used deposits and staff number as inputs of the bank while net loans and non interest income as outputs of the banks. He found mean annual DEA scores ranged from 78.99% to 91.58% in model A and from 37.23% to 70.43% in model B. According to him, DEA efficiency estimates are sensitive to the input and output variables of the model. In his study, the impact of merger on the efficiency of banks is not clear. In one case merger has positive impact on the efficiency of the banks while in another case it has negative impact on the efficiency of bank. Similarly in one case merger raise the efficiency of the bank in first year and fall in the next years while in one case merger has no effect on the efficiency of the bank.

Mendes and Rebelo (1999) used the stochastic cost frontier methodology to study the performance of 221 Portuguese banks from 1990-95. They found that the increased competition in the banking sector did not improve the cost efficiency of banks. Similarly, no clear existence of predictable association between size and cost efficiency was found in the banks.

Jackson and Fethi (2000) analyzed performance of Turkish banking sector by applying DEA and then explored the determinants of efficiency from a set of explanatory variables (bank size, number of branches, profitability, ownership and capital adequacy ratio) by the use of tobit model. They defined performance of a bank in terms of its ability to produce outputs with minimum use of inputs. For this study, they used the data of year 1998 and considered number of employees and sum of non labor expenses as inputs of the bank while loans, demand deposits and time deposits were considered as outputs of the bank. Under CRS specification of DEA, the estimated mean efficiency score for 48 banks was 0.67 while under VRS specification: they found 0.77 as mean efficiency score for Turkish banks. From tobit analysis, they found significant negative impact of capital adequacy ratio and significant positive impact of profitability and size of the bank on estimated efficiency.

Maghyereh (2004) estimated the efficiency of Jordon banking sector after 1990s financial liberalization by using non parametric Data Envelopment Analysis. He used data of eight commercial banks from 1984 to 2001 for this purpose. For the study, he

considered three inputs (number of employees, value of fixed assets and deposits) and three outputs (loans and liquid assets, investment and other income) of the bank by employing intermediation approach. The range of yearly estimated average DEA technical and pure technical efficiency score of all banks for his study was 0.847 to 0.987 and for scale efficiency was from 0.903 to 0.999. After efficiency estimation, he used tobit model to determine the impact of important factors. From analysis, he found positive impact of size, profitability, market power of the bank and financial liberalization on the efficiency of commercial banks.

Sathye (2001) used DEA to measure the X-efficiency in Australian banking. He used 1996 data of 17 domestic and 12 foreign owned banks and estimated 0.58 as average efficiency score. He found that the estimated technical efficiency scores of the banks were very low while the allocative efficiency scores of banks were very high as compared to world standards.

Grigorian and Manole (2002) used DEA to estimate the commercial bank's efficiency in transition countries. They tried to see the impact of tighter prudential standard, foreign ownership, competition, enterprise restructuring, capital market development and legal traditions and rule of low on the performance of the bank in a country. To explain the difference in efficiency between commercial banks, they developed its relationship with a variety of macroeconomic, prudential and institutional variables by using Tobit model. Tobit analysis found a positive impact of foreign ownership and consolidation on commercial bank's efficiency while the prudential tightening had different impact on efficiency across countries.

Sathye (2003) measure the productive efficiency of Indian banks. He used input oriented model of DEA under the assumption of Variable Returns to Scale. Indian Banks Association published data of year 1997-98 were used for the study. He used two models to calculate the efficiency scores of public, private and foreign owned banks. In one model, he used interest expenses and non interest expenses as inputs of the banks while net interest income and noninterest income as outputs of the bank. In the second model, he used deposits and staff number as inputs and net loans and non interest income as outputs of the banks. In first model estimated mean efficiency score was 0.83 while in second model it was 0.62. He found, most of foreign owned banks on the estimated frontier. He also found that the efficiency scores of private owned banks were lower as compare to public owned and foreign owned banks. According to him, lower score of private sector banks could be due to their expansion.

Since SBI of India is a Universal bank. Liquidity Analysis is been worked out by using above financial ratios. From the above table it is clear that the priority sector runs from 25% to 30 %, but the Government policy is 35% for the interest income on the total asset is likely in the downward trend, where the bank earns to 7% to 9% on that count the bank can increased to another 1 % to 1.5% the intermediation cost has come down over a period of time is welcome sign.

The burden shows signs of improvement but the burden to interest income can show some improvement, as far as return on asset and return of equity can be slightly on the higher side, keeping the benchmark of the banking sector, the cost of deposits should contribute to the profitability of banks, the

cost of borrowings may be minimized which shows a high trend. Cost of funds and advances should improved, return on investment is now slightly show a downward trend, which means that the grouping has to be made better. Capital adequacy ratio shows satisfactory signs, the NPA should fall below 0.5 % of course there is a reduction.

Ratio Analysis

Ratio Analysis	2003	2004	2005	2006	2007	2008
Ratio of priority sector advances to total	25.49	27.04	28.59	30.58	30.24	28.61
Ratio of interest income to total asset	8.59	7.71	7.47	7.51	7.02	7.6
Ratio of intermediation cost to total assets	2.19	2.36	2.32	2.46	2.23	1.96
Ratio of burden to total assets	0.61	0.42	0.68	0.91	0.95	0.61
Ratio of burden to interest income	7.08	5.36	9.11	12.11	13.58	8
Return on assets	0.86	0.94	0.99	0.89	0.84	1.01
Ratio on equity	19.15	19.6	19.43	17.04	15.41	16.75
Cost of deposits	7.12	5.9	5.01	4.78	4.59	5.57
Cost of borrowings	2.1	1.42	2.51	4.1	4.12	6.43
Cost of funds	6.96	5.74	4.9	4.74	4.55	5.64
Return on advances	8.69	7.62	7.24	7.63	8.29	9.34
Return on investments	9.61	8.78	8.37	7.77	6.71	7.05
Capital adequacy ratio	13.5	13.53	12.45	11.88	12.34	12.64
Capital adequacy ratio - Tier I	8.81	8.34	8.04	9.36	8.01	8.48
Capital adequacy ratio - Tier II	4.69	5.19	4.41	2.52	4.33	4.16
Ration of net NPA to net advances	4.5	3.48	2.65	1.87	1.56	1.78

Suggestions & recommendations

The above two banks can maintain higher financial strength ratios as it is a measure the amount of bank's capital in relation to the amount of its risk weighted credit exposures. The risk weighing process takes into account, in a stylized way, the relative riskiness of various types of credit exposures that banks have, and incorporates the effect of off-balance sheet contracts on credit risk. The higher the capital adequacy ratios a bank has, the greater the level of unexpected losses it can absorb before becoming insolvent.

Accordingly this research minimum financial strength ratios in the above banks need to be raised to assists in maintaining a sound and efficient financial system of retail banking in India. In addition, the bank has to maintain greater cost efficiency which may be associated with the more efficient provision of public services by the state, such as the rule of law.

During the study we find evidence that an average sized bank in the sample operates at a point that is close to constant returns to scales, while the smaller banks in sample operate with significant unrealized economies of scale. This suggests that consolidation of smaller banks in the region would contribute to greater cost efficiency in banking. Retail banking also respond to relative prices of

inputs by seeking to reduce their use as the price increases. Country – level factors that increase cost efficiency are lower nominal interests, a greater market share of majority foreign – owned banks, and a higher intermediation ratio.

In other words, greater macroeconomic stability and competition in banking from within , as well as development of the supportive institutions promote cost efficiency. Progress in banking reform has non-linear association with cost efficiency. In the initial stages of banking reform, cost efficiency increases significantly, but it then declines as reforms advance further. This may reflect the transition by banks from defensive restructuring (that is cost cutting) to deeper restructuring that increases the quality of and value added to banking services (that is, innovation). Hence the above banks have to concentrate of infrastructure building and information technology adoption.

Banking systems with higher ratios of capital to total asset and banks with lower loan losses also tend to have lower costs. This may to associated with lower risk in retail banking sectors.In addition, merger of seven subsidiaries are more cost efficient than private owned banks.

Policies that many governments and central banks in eastern Europe adopted to promote that transformation of socialist banking systems into market oriented ones have, therefore, contributed to increased cost efficiency in the sectors, a useful indicator of progress. Looking ahead, after the merger will face major new challenges in the form of great competitive pressures with their countries' accession to the European Union. In these countries, policy makers can drawn on lessons from the past and promote further cost efficiencies in retail banking. The liquidity has to be finding tuned, and the banks under study should concentrate on improving higher financial strength.

Conclusion

Financial strength ratios are a measure of the amount of a bank's capital expressed as a percentage of its risk weighted credit exposures. An international standard which recommends minimum capital adequacy ratios has been developed to ensure banks can absorb a reasonable level of losses before becoming insolvent. Applying minimum capital adequacy ratios serves to protect depositors and promote the stability and efficiency of the financial system.

Two types of capital are measure – tier one capital which can absorb losses without a bank being required to cease trading, e.g. ordinary share capital, tier two capital which can be absorb losses in the event of a winding up and so provides a lesser degree of protection to depositors, e.g. subordinated debt.

Indian households are jittery. They are afraid of the backlash of the US financial predicament on the foreign banks, where they have put larger part of their savings following sharp rise in interest rate last year. The share of bank deposits in total household savings that hovered at around 35% in the early part of the current decade has jumped to more than 60% in 2008 – 2009.

A severe dollar $ shortage in the international markets has had its impact felt in India too as banks have almost stopped large lending to tide over the liquidity predicament.

But this is purely a business decisions and the banks' underlying financial strength is quite robust. For instance: Indian markets

experienced the ripple effects of the Lehman bankruptcy, the mood is so bad that there are simply no genuine buyers in the markets. On 15th September the Bombay Stock Exchange (BSE) benchmark Sensex fell by 777.62 points and the Nifty of the National Stock Exchange also dipped below 4,000 marks by falling 242.60 points.

A close looks at their capital adequacy ratio – an indicator to their capital strength can be handy drive this point home. All banks have capital adequacy ratio (CAR), also called capital to risk weighted assets ratio (CRAR) in conformation with the Basel II concurrence.

Direction for future research

Since the study is made by using multivariate analysis the study can be made by using DEA analysis i.e., Data envelopment analysis which is considered as most powerful technique of late.

Besides the study is made by using multivariate analysis of annual report of both the nationalized banks namely indian overseas bank and oriental bank of commerce.

Limitations of the study

- The study is based on the data obtained from the annual reports of the concern i.e. balance sheet.
- The period under study has been only for 5 financial years i.e. 2003 to 2008.
- The study doesn't take into account the other areas such as dividend policy, capital budgeting etc.

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