

Risk of Liquidity Management in Banks – A Case Study of Karnataka Vikas Grameena Bank, Dharwad

'Shri B.V. Kapparashetty, "Dr. S.S. Hugar

'Assistant Professor, CSI College of Commerce, Dharwad

"Professor, P.G. Studies in Commerce, Karnatak University, Dharwad

Abstract

Liquidity management is an important part of fund management. Liquidity risks are primarily linked to the nature of the assets and liabilities of the bank. It originates from mismatches in the maturity pattern of assets and liabilities. Liquidity risk management is usually followed through fundamental and technical approaches. The former aims at ensuring the liquidity for long run sustenance of the bank, while the latter approach targets the liquidity in the short run. The two approaches supplement each other. Asset management and liability management are the two alternatives available to control liquidity exposure. Working Fund Approach and Cash Flow Approach are the other two methods to assess the liquidity position. Liquidity risk originates from the mismatches in the maturity pattern of assets and liabilities. Maturity Gap concept is employed to estimate the liquidity risk of a bank.

The overall position of the KVG Bank that is indicates through the maturity gap over the period from 2010-11 to 2014-15 shows that the Bank's Net Interest Income (NII) is negative. There is need for reducing the gap between rate sensitive assets and rate sensitive liabilities given a certain level of risk and to avoid liquidity problem.

Key words

Liquidity risk, maturity pattern, Rate Sensitive Asset.

Introduction

The core activity of a bank is attaining profitability through fund management. It involves acquisition and deployment of financial resources. Liquidity management is an important part of fund management. It relates primarily to the dependability of cash flows – both inflows and outflows and the ability of the bank to meet maturing liabilities and customer demands for cash within the basic pricing policy framework. Liquidity risk therefore originates from the potential inability of a bank to generate cash to cope with any decline in liabilities or an increase in assets. Liquidity risks are primarily linked to the nature of the assets and liabilities of the bank. It originates from mismatches in the maturity pattern of assets and liabilities. Bank therefore should continuously monitor the liquidity position in the long run and also on a day-to-day basis.

Management of Liquidity Risk

Liquidity risk management is usually followed through two strategic approaches viz. fundamental approach and technical approach. These two methods distinguish from each other in their strategic approach to eliminate liquidity risk. The fundamental approach aims at ensuring the liquidity for long run sustenance of the bank. The technical approach targets the liquidity in the short run. These two approaches supplement each other in eliminating the liquidity risk and ensuring profitability. Long run sustenance is the driving factor in the fundamental approach. Hence, the bank tries to tackle or eliminate the liquidity risk in the long run by basically controlling its asset liability position. Two alternatives available to control the liquidity exposure under this approach are asset management and liability management. This implies that liquidity can be imparted into the system either by liability creation or by asset liquidation whichever suits the situation.

Technical approach focuses on the liquidity position of the bank in the short run which is primarily linked to cash flows arising due to operational transactions. When technical approach is adopted to eliminate liquidity risk it is the cash flows position that needs to be tackled. The bank should know its cash requirements and the cash inflows and adjust these two to ensure a safe level for its

liquidity position. "Working Funds Approach" and "Cash Flow Approach" are the two methods to assess the liquidity position in the short run. Working Funds Approach concentrated on the actual cash position and depending on the factual data it forecasts the cash flows i.e. estimates, any change in the deposits/withdrawals/ credit accommodation, etc.

Developing a Structure for Managing Liquidity – Basel Committee's Suggestions

Keeping in view the liquidity risk and the need for proper management of the liquidity of banks the Basel Committee on banking supervision has identified the following principles viz.

1. Each bank should have an agreed strategy for the day-to-day management of liquidity. This strategy should be communicated throughout the organisation.
2. A bank's Board of Directors should approve the strategy and significant policies related to the management of liquidity. The Board should also ensure that senior management takes the steps necessary to monitor and control liquidity risk. The Board should be informed regularly of the liquidity situation of the bank and immediately if there are any material changes in the bank's current or prospective liquidity position.
3. Each bank should have a management structure in place to execute effectively the liquidity strategy. This structure should include the ongoing involvement of members of senior management. Senior management must ensure that liquidity is effectively managed, and that appropriate policies and procedures are established to control and limit liquidity risk. Banks should set and regularly review limits on the size of their liquidity positions over particular time horizons.
4. A bank must have adequate information systems for measuring, monitoring, controlling and reporting liquidity risk. Reports should be provided on a timely basis to the bank's Board of Directors, senior management and other appropriate personnel.

Liquidity Risk Management in Karnataka Vikas Grameena Bank

Karnataka Vikas Grameena Bank is one of the leading regional banks in India. The Bank came into existence subsequent to the amalgamation of the other 4 Grameena Banks in the study area. The Bank covers 9 districts of Bagalkot, Belgaum, Bijapur, Dharwad, Gadag, Haveri, Uttara Kannada, Udupi and Dakshina Kannada of Karnataka state. The Bank has 516 branches in 2015 spread over in rural, semi-urban and urban areas. The Bank has staff strength of 3280. The Banks capital resources stood at Rs. 199732 thousand in 2015. The total deposits of the Bank in 2014-15 were Rs. 9914.54 crores while total advances stood at Rs. 7229.52 crores.

Liquidity risk of a bank originates from the mismatches in the maturity pattern of assets and liabilities. Maturity Gap is the difference between the total value of Rate Sensitive Assets (RSAs) and the total value of Rate Sensitive Liabilities (RSLs) placed under a particular maturity time bucket $RSG = RSAs - RSLs$. If RSAs are equal to RSLs during a particular maturity bucket, RSG will be zero and it implies that interest rate risk will be zero. If RSG is positive it indicates that the change in interest income due to changes in interest rates is more than the change in interest expended. It has favourable effect on bank's profitability and the liquidity of the bank. The maturity gap relating to different time buckets and their effect on KVG bank's liquidity risk and return are provided in Table-1.

Table-1 : Analysis of Asset-Liability Maturity Gap (Rs. in Crores)

Year	Particulars	1-14 days	15-28 days	29 days to 3 months	3-6 months	6 months to 1 year	1 year to 3 years	3 years to 5 years	5 years & above
2010-11	Assets	206.08	78.32	197.80	226.36	199.73	917.13	752.93	2335.68
	Liabilities	290.92	290.94	1029.38	630.41	1006.53	2936.35	220.21	148.02
	Gap	-84.84	-212.62	-831.58	-404.05	-806.80	-2019.22	+532.72	+2187.66
	Cumulative Gap	-84.84	-297.46	-1129.04	-1533.09	-2339.89	-4359.11	-3826.39	-1638.73
2011-12	Assets	194.34	159.38	288.25	260.70	243.19	1197.54	805.29	2939.83
	Liabilities	315.58	315.58	1079.02	756.90	1257.94	3077.62	295.59	192.36
	Gap	-121.24	-156.20	-790.77	-496.19	-1014.75	-1880.08	+509.70	+2747.47
	Cumulative Gap	-121.24	-227.44	-1068.21	-1564.40	-2579.15	-4459.23	-3949.53	-1202.06
2012-13	Assets	314.12	0.00	394.12	409.30	315.21	1714.12	1517.06	2764.49
	Liabilities	1855.07	663.72	1901.00	1297.97	2112.55	387.70	291.01	644.15
	Gap	-1540.75	-663.72	-1506.88	-888.67	-1797.34	+1326.42	+1226.05	+2120.34
	Cumulative Gap	-1540.95	-2204.67	-3711.55	-4600.22	-6397.56	-5071.14	-3845.09	-1724.75
2013-14	Assets	355.10	55.63	446.24	455.23	393.79	1953.34	1074.05	4037.93
	Liabilities	1674.38	2135.02	1783.26	1373.31	2392.32	390.40	262.13	833.39
	Gap	-1319.28	-2079.39	-1337.02	-918.08	-1998.53	+1562.94	+811.92	+3205.54
	Cumulative Gap	-1319.28	-3398.67	-4735.67	-5653.77	-7652.30	-6089.36	-5277.44	-2072.90
2014-15	Assets	659.56	122.92	1340.86	1588.31	1768.98	2908.97	1728.68	2897.04
	Liabilities	1792.49	743.73	1581.70	1270.23	1600.34	4420.54	622.03	531.82
	Gap	-1132.93	-620.81	-240.84	+318.08	+168.64	-1511.57	+1106.65	+2365.22
	Cumulative Gap	-1132.93	-1753.74	-1994.58	-1676.50	-1507.86	-3019.43	-1912.78	+452.44

Source: Annual Reports of KVG Bank.

The figures in Table-1 reveal that the maturity gap of asset-liability of KVG Bank have been of different dimensions. Asset Liability cumulative maturity gap in all the time buckets except the higher time buckets of 3-5 years and 5 years and above been negative. The negative trend is observed from 2010-11 till 2012-13 for all the time buckets upto 1 to 3 years buckets. The position is improved in 2013-14 and 2014-15 when positive trend is observed for 1-3 years bucket and 6 months to 1 year buckets respectively. The overall position that is indicated from the figures in the above table is that the KVG Bank's Net Interest Income (NII) is negative during the major part of the study period between 2010-11 and 2014-15.

Major Findings

- The analysis of the KVG Bank's liquidity risk management reveals that the cash outflow in the form of interest payment and other obligations is higher than the cash inflow in the form of interest income and other earnings. Hence the Net Interest Income is negative for the larger part of the study period from 2010-11 to 2014-15.

- The maturity pattern of advances of KVG Bank reveal that major portion of the funds is deployed in the assets maturing in 1-3 years and over 5 years followed by the assets maturing during the period of 3-5 years.
- The data regarding KVG Bank reveal that more funds are invested in higher time buckets during the study period. Thus the Bank's liquidity is affected due to such investments in longer time buckets of maturity.
- Maturity pattern of deposits of KVG Bank with other banks indicate that these deposits are recorded in lower time buckets between 1-4 days and 6 months to 1 year only. Hence, shorter time bucket of deposits of the Bank has been useful in enhancing its liquidity position.

Conclusion and Suggestions

Liquidity risk management by banks has assumed greater significance in the wake of the recent market turmoil caused by subprime crisis and potential source of instability. Current liquidity risk models have demonstrated to undervalue extreme events affecting funding and market risk. The study of the KVG Bank has revealed that the maturity gap of asset liability has been of different dimensions. The overall position that is indicated is that the Bank's Net Interest Income is negative during the major part of the study between 2010-11 and 2014-15. There is need for reducing the gap between rate sensitive assets and rate sensitive liabilities in the best interest of maintaining bank's liquidity management satisfactorily by reducing maturity mismatch so as to avoid liquidity problems.

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