"AN ANALYTICAL STUDY OF CASH MANAGEMENT WITH RELATION

TO LIQUIDITY AND PROFITABILITY OF TIRUPATI URBAN

CO-OPERATIVE BANK LTD, NAGPUR"

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ABSTRACT

Cash being one of the pivotal aspects of any business organisation, its proper management by having an optimum cash balance plays a very significant role towards the profitability and liquidity of any concern. A business concern should always keep sufficient cash for meeting its obligations. The main aspect of cash management is to maintain an optimum cash balance. The objective of cash management is to avoid the situation of excessive and inadequate cash and to maintain optimum level of cash after achieving the profitability and liquidity so as to maximize the wealth of the shareholder as whole. This paper aims to study the optimum cash balance required by Tirupati Urban Co-operative Bank Ltd by applying Baumol's model. The major objective behind this research work is to find out the level of cash balance for the Financial Year 2013-2014, which was being maintained by the organization, to find out the estimated cash flows, to determine optimum cash balance by applying Baumol's model and also to determine the amount of opportunity cost forgone in case of excess cash balance.

KEYWORDS: Cash Management, Opportunity Cost, Baumol's Model, Surplus Cash, Receipts and Payments

INTRODUCTION

Cash is one of the pivotal aspects of any business organisation. It is one of the most important components of current assets. It is needed at all times to keep the business going. A business concern should always keep sufficient cash for meeting its obligations. Any shortage of cash will hamper the operation of a concern and any excess of it will be unproductive. There are two ways of viewing the term 'cash'. In a narrow sense it includes actual cash in the form of notes, coins and bank drafts held by a firm and the deposits withdraw able on demand. Thus, cash is the balancing figures between debtors, stock and creditors. Without adequate cash to meet working capital demands, it is impossible to extend credit, order stock or pay creditors. For maintaining adequate cash balance the any bank or firm requires a sound cash management system. Cash management refers to the management of cash balance. In other words it means planning, organising, directing and controlling of cash. The main aspect of cash management is to maintain an optimum cash balance. The objective of cash management is to avoid the situation of excessive and inadequate cash and to maintain optimum level of cash after achieving the profitability and liquidity so as to maximize the wealth of the shareholder as whole. Efficient cash management processes are pre-requisites to execute payments, collect receivables and manage liquidity. Since it is a vital component of working capital, optimum cash balance helps in maintaining adequate working capital for smooth working of the organization. This paper aims to study the optimum cash balance required by Tirupati

Urban Co-operative Bank Ltd by applying Baumol's model. The major objective behind this research work is to find out the present level of cash balance, being maintained by the organization. to find out the estimated cash flows, To determine optimum cash balance by applying Baumol's model and also to determine the amount of opportunity cost forgone in case of excess cash balance which has got an impact on profitability of the bank.

ABOUT TIRUPATI URBAN CO-OPERATIVE BANK LTD, NAGPUR

Tirupati Urban Co-op Bank Ltd, a Primary Urban Co-op Bank, registered under Co-op. Societies Act 1960 and a licensed Bank by RBI, was established on 4th April 1996, at Nagpur. Being one of the leading and best performing Banks in Co-op Banking Sector, is working with total 16 branches and Head office (Twelve branches in city of Nagpur and one each at Wardha and Airoli, (New Mumbai), Chandrapur & Aurangabad with its area of operation as entire State of Maharashtra. The bank branches are catering all types of banking services, round the week, with modern facilities like ATM.

CASH MANAGEMENT OF TIRUPATI URBAN CO-OPERATIVE BANK LTD. NAGPUR

Generally Cash inflows of any bank are in the form of various types of deposits and cash outflows in the form of loans and advances. Tirupati Urban Co-operative Bank Ltd accepts deposits like saving deposit, current deposit, short term deposits, fixed deposits with monthly and quarterly interest etc. while it provides loans housing loan, Vehicle loan, personal loan, loans to traders, SSIs, industries, businessman, developers etc. For doing this the bank requires adequate cash balance. In this paper for the financial year 2013-2014 the cash management system of Tirupati Urban Co-operative Bank Ltd. has been studies with the intention to find out the optimum cash balance by applying Baumol's Model. For finding out the total cash requirements, like every organization TUBCL also does an estimation of cash requirements every year in the form of cash budget. They had also prepared the cash budget for the financial year 2013-2014. Following table shows the extract of cash budget for the various quarters for financial year 2023-2014. By looking at table 1, we can get a view about the estimation of cash balance in all four quarters.

Table 1: Showing Extract of Cash Budget of TUCBL

Details	April Rs.	May Rs.	June Rs.
Balance of Cash at the end	217571185	233980775	234850637
Details	**July Rs.**	**August Rs.**	**September Rs.**
Balance of Cash at the end	236576264	239730479	256224195
Details	**October Rs.**	**November Rs.**	**December Rs.**
Balance of Cash at the end	257390247	261856669	266230388
Details	**January Rs.**	**February Rs.**	**March Rs.**
Balance of Cash at the end	281363445	289060359	303576300

Source: (Extract of Estimated statement of Cash Balance TUCBL)

From the above table, it is evident that average estimation of cash requirement is highest during the last quarter i.e. in the month of January, February and March of financial year 2013-2014 while the estimated cash balance is lowest at the first quarter i.e. during the month of April, May and June. But that was only the estimation on the basis of the past experience by the bank. The real cash transaction of every quarter and the entire financial year helps to make correct analysis about the adequate cash requirement and measurement of optimum cash balance with the help of Baumol's Model.

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RECEIPTS AND PAYMENTS OF CASH

The receipt and payment account of any bank or any organisation helps us to know the exact amount of cash balance available with that bank or with any organisation. In case of TUBCL also the receipts and payments of Finaicial Year 2013-2014 gives a clear cut information about the exact cash balance, with the help of which one can decide whether there is inadequate or excess or adequate cash balance at the end of financial year. The receipt during the year 2013-2014 are in the form of Interest on loan against deposits- (Recurring deposits & Fixed deposits) Rs. 9222801, Deposits from public: (Recurring deposit, Fixed deposits, Savings A/C) Rs. 2,03,9,88435/- , Management charges: Rs. 177287, Locker rent: Rs. 309666, Recovery from debtors: Rs. 37,75,000/-, Receipt of interest on loans Rs.1213825/-. While the total payments for the year includes; Payment of fixed deposits: Rs. 7712820/-, Payment of interest: Rs. 743922/-, Payment to creditors: Rs. 1025363/-, Miscellaneous expenses: Rs. 24054/-, Commission paid to recurring a/c holder: Rs. 15384/-. The excess of total receipts over total payments represents surplus cash balance, which has been shown in the table 2. Below.

Table 2: Receipts & Payments Account as on 31/03/2014

Particular	31st march 2014
RECEIPTS	218687014
PAYMENTS	9521543
surplus	209165471

Source: (Extract of Estimated statement of Receipts and payment Account of TUCBL for F.Y. 2013-2014).

Thus from the above Receipts and Payment A/c the total surplus cash generate by TUCBL is Rs. 209165471 for the F.Y. 2013-2014. If the entire Receipts and payments Accounts is divided into these four quarters, we can get the surplus cash balance of each quarter. Table 3 gives us an idea about the cash balance of various quarters. The surplus is arrived at by calculating excess of Receipts over payments.

Table 3: Receipts and Payment Statement Quarter Wise

PARTICULARS			
Receipt	205379385	218452257	218586446
Payment	1456188	1516790	3484742
Surplus Cash	203923197	216935467	215101704
PARTICULARS	**July**	**August**	**September**
Receipt	220864826	225714809	241111235
Payment	19,35,000	20,30,000	17,66,000
Surplus Cash	218929826	223684809	239345235
PARTICULARS	**October**	**November**	**December**
Receipt	244182944	248964613	253559266
Payment	21,40,000	22,75,000	25,95,400
Surplus Cash	242042944	246689613	250963866
PARTICULARS	**January**	**February**	**March**
aReceipt	265697422	273991409	282771558
Payment	23,95,000	20,80,000	25,25,000
Surplus Cash	263302422	271911409	280246558

Source: (Extract of Estimated statement of Receipts and payment Account of TUCBL for F.Y. 2013-2014)

From the above table we can see that the total amount of receipts and payments increases as we approaches towards the end of the financial year. The amount especially payments rises constantly from first quarter to second and

from second to third and finally fourth quarter shows the highest payment amount. From the above table we can calculate how total cash was required by the bank for its disbursements. Apart from this the bank also needs to keep in mind the Statutory Liquidity Ratio factor as per the rate given by Reserve Bank of India in its monetary policy which is at present 21.5% of total demand and time liabilities of any bank. It has been reduced from 22.0% since 9th August 2014 The total cash required by the bank throughout the Financial Year for the payment and disbursements(including all quarters) was Rs. 9521543/-. Apart from that the bank also requires to fulfill its SLR norms. SLR is the Indian government term for reserve requirement that the commercial banks in India require to maintain in the form of gold, cash or government approved securities before providing credit to the customers. Here in this case the SLR for the Financial Year 2013-2014 was 21.5% of total demand and time liabilities, it means 21.5% of Fixed Deposit , Saving Account, Recurring Deposit , Current Account etc. Now this demand and time liabilities can be in the form of gold , cash or government approved securities. The total receipts of the bank for the F.Y. 2013-201 is Rs. 218687014/- out of which the amount of total deposits which are part of demand and time liabilities is Rs. 2,03,9,88435/-. It means after calculating the bank needs to have at least Rs. 4,38,57,514/- by way of SLR (i.e. 21.5% of Rs. 2,03,9,88435/-). Out of which the bank is having gold reserves of Rs. 1, 20,00,000/- Rs. 1,50,00,000/- in the form of approved government securities and balance Rs. 1,68,57,514/- in the form of liquid cash i.e. cash in hand and bank. (Source: Data from TUBCL Annual Financial Report).

Hence from the above analysis we can say that the total annual cash requirement for TUCBL is Rs. 1,68,57,514 in the form of SLR plus Rs. 9521543 = Rs. 2,63,79,057/-. Now the bank has maintained a surplus cash balance of Rs. 209165471 during the year. It means it has maintained a cash balance of excess of Rs. 18,27,86,414/-. Generally it is customary practice of the bank to hold excess cash of Rs. 4-5 crores over and above requirements because of speculative , transaction and precautionary motive. Considering that if we subtract the average of 4to 5 crore it comes as 4.5 crores. Still it is having an excess cash balance of Rs. 13, 77, 86,414/-. Now the question is that this excess amount of Rs. 13, 77, 86,414/- is more than the optimum cash balance. To find out this, Baumol's Model. has been applied in this research to get an exact amount of optimum cash balance.

ABOUT BAUMOL'S MODEL

William J. Baumol developed a model which is usually used in inventory management but has its application in determining the optimum cash balance also. As per this model the optimum cash balance is the trade off between opportunity cost or cost of borrowing or holding cash and the transaction cost (i.e. cost of converting marketable securities into cash etc). The optimum cash balance is reached at a point where the total cost is minimum. It means the point of intersection between Transaction cost and holding cost. This model is based on the following formula:

$C = \sqrt{\frac{2AT}{H}}$. Where C= Optimum Cash balance, A =Annual cash requirement, T is the transaction cos or cost per transaction and H= Holding cost. On the basis of the data mentioned earlier in this paper, we can have A= Rs. Rs. 2,63,79,057/-. + Rs. 4,50,00,000/- = Rs.7,13,79,057/- , which is the annual cash requirement. As per data given by the bank the T i.e. transaction cost is which is Rs. 50/- per transaction and H, the holding cost is 12%. By fitting these data into this formula, we can get the optimum cash balance:

Hence C= $\frac{\sqrt{2} * 7,13,79,057 * 50}{12\%}$ = Rs. 2,43,891/-

Therefore on the basis of the above calculation we can say that the the optimum cash balance for all the times is Rs. Rs. 2, 43,891 for all times. It means the bank requires constantly the amount of Rs.2, 43,891/- to maintain its optimum cash balance. The optimum cash balance with the help of Baumol's Model is arrived at Rs Rs.2, 43,891/-. If we consider the average monthly surplus cash balance for the Financial Year 2013-2014, we can arrive at figure of Rs. 1,74,30,456/-. and if we consider it daily basis we can have a average surplus cash balance of Rs. 5,81,015/-. This is well above the optimum limit. The bank must take it into consideration. The average daily cash balance exceeds the optimum balance by Rs. 3, 37, 124. This excess average daily cash balance is costing the bank very very dearly. Because of this every day the bank is foregoing an opportunity cost of Rs. 40,455/- approximately on daily basis if we take into consideration of average market rate of interest being 12% (Ref: Table 4).

Table 4: Opportunity Cost Foregone By Bank

Details	Amount Rs.
Average daily cash balance by bank	Rs. 5,81,015/-
Optimum cash balance as per Baumol's Model	Rs.2, 43,891
Excess cash	Rs. 3,37, 124
Opportunity cost forgone by bank : Rs. 3,37, 124 X 12%	Rs. 40,455/-

The forgone of opportunity cost of Rs. 40,455/- approximately on daily basis affect the bank profitability adversely. This is because the bank is holding excess of cash more than its requirements. The forgone of opportunity cost of Rs. 40,455/- on daily basis means a total loss in the net benefit of Rs. 1,45,63,800/- per annum which is considered a very big amount especially for co-operative bank.

CONCLUSIONS AND SUGGESTION

From the above analysis and interpretation of Tirupati Urban co-operative Bank Lttd. we can say that the bank is having very much excess liquidity i.e. excess of Rs. 3,37, 124/- over and above its optimum cash balance. This shows that the bank needs to further streamlined its cash management system and also needs to frame better cash management policies. Mere cash balance in excess of requirement will not add anything to the concern. If it is not being put to use in proper manner, it definitely have an adverse affects in its profitability. It can also be seen that in the last financial year the bank's has forgone opportunity cost of Rs. 1, 45, 63, 800 in the financial year 2013-2014. This has resulted in lowering of bank profitability by Rs. 1, 45, 63, 800/-. It concluded that the general basic principle is the more highly liquid an investment is, the less return one will get. Therefore it is suggested that the bank must take it into consideration and work on this direction by streamlining its cash management policies. The surplus cash which is at the disposal of the bank , should be invested in various financial instruments or it can be utilised in other purpose i.e. for providing credit to various priority sector of the economy. This will not only help the bank in enhancing the bank's profitability but also helps to develop the entire economic system, since there will be an idle flow of cash into the system for utilization in various sectors of the economy. If the bank takes proper care about its cash management system and manage its excess liquidity (i.e. over the optimum cash balance level) by having proper investment policies, it will definitely enhance its profitability and also help in enriching its capital base.

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