

TOOL  
7

## Risk Analysis in Savings Mobilization

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**R**isk analysis and risk management are necessary to ensure the continuing safety and soundness of a financial intermediary dedicated to capturing savings. What is understood by “risk?” *Risk is the chance or possibility of damage or loss.* In the context of savings mobilization, risk is *the danger caused by an event or a loss that could impair the value of savings on deposit or substantially affect the net worth of the institution.* To prevent this kind of damage from occurring, managers must actively manage risks. For the most part, risk management consists of:

- Identification and evaluation of existing risks;
- Decision-making regarding new transactions and changes in the risk profile, in relation to how much profit will be obtained for the assumed risk; and
- Analysis of results from above and action to manage the risks.

A principal function of risk management is to ensure an adequate ratio of profitability to assumed risk, and to bring that ratio in line with the institution’s goals for liquidity, soundness, and solvency.

In order to attract the volume of resources necessary to fund operations, financial intermediaries rely on three main sources of funds:

- Savings mobilization;
- External credit from outside entities; and
- Shareholder or member capital.

Each option carries risks for the institution as well as for the source of the funds. Creditors, investors, and the institution all assume risk when the institution obtains external credit or raises capital from shareholders. Savings mobilization implies risks for the institution and serious risks for its clients: it puts clients' money at risk.

This tool will address some of the major risks assumed by institutions that mobilize savings as their primary source of funds: liquidity, exchange rate, and reputation risk.

## Liquidity Risk

A savings institution can continue to operate only to the extent that its clients *trust* that the entity will be able to fulfill its obligations and repay savings either upon demand or upon fulfillment of fixed-term contracts. Liquidity refers to the ability of the institution to obtain the liquid funds required to be able to return the full value of deposits, plus interest, to savers as well as meet the withdrawal demands of borrowers and cover the institution's expenses. Liquidity risk stems primarily from the possibility of a mismatch in the cash inflows and cash outflows between assets and liabilities.

Opinions vary on the levels of liquidity required to manage risk. The challenge lies in finding the balance of having sufficient liquidity to be able to meet withdrawal and disbursement demands, but not so much that the institution loses income that could have been earned on the funds that were kept liquid. The *PEARLS International Standards of Excellence* suggest that institutions should maintain a minimum of 15 percent of Short-term Investments + Liquid Assets – Short-term Payables/Savings Deposits, and 10 percent of Liquidity Reserves/Savings Deposits. Non-earning liquid assets should constitute no more than 1 percent of total assets.

While liquidity ratios serve as good indicators of risk, managers should not rely solely on ratios to evaluate their degree of exposure to liquidity risk. The reason for this is that liquidity indicators can be deceptive; even though they may appear to be positive or sufficient, they can be reduced quickly by mismatched maturities, composition, or concentration of assets and liabilities. At a minimum, managers must evaluate cash flow and the balance between assets and liabilities to monitor and manage liquidity risk. One way that managers can

determine the degree of liquidity risk exposure in their institution is by comparing the maturities of liabilities to the maturities of assets and identifying any gaps or margins. A gap analysis signals the amount of resources necessary to face a possible withdrawal of deposits.

In addition to establishing adequate liquidity levels, risk management includes building lines of defense or contingency plans, to minimize potential liquidity problems. Lines of defense can include: lines of credit with other financial institutions, adequate levels of provisions or liquidity reserves, and the establishment of conditions such as a repurchase guarantee or the possibility of immediate liquidation of medium- and long-term financial investments. These types of contingencies would provide the funds necessary for an institution to meet immediate, or unexpected, withdrawal demands without experiencing a liquidity crisis.

Savings institutions should strive to maintain a stable deposit structure, both in terms of product type and account size. Savings products with fixed terms facilitate liquidity management. Term deposits provide relative stability, whereas liquid savings accounts which are payable on demand can exert pressure on the institution's liquidity position at any given time.

An evaluation of the concentration level of deposits identifies the pressure that a few large depositors could exert on the liquidity and profitability of the institution. The evaluation of large-account concentration risk should review the level of concentration both by number of depositors and by points of service (or branch offices). The institution should strive to diversify the sources of funds (or depositors) to reduce the large-account concentration risk. Additionally, institutions can maintain higher liquidity reserves for savings accounts above a certain threshold to mitigate the large-account concentration risk; for example, an institution may have a standard liquidity reserve of 15 percent of total savings deposits, and then a liquidity reserve of 25 percent of total savings deposits for accounts above the threshold.

## **Exchange Rate Risk**

Exchange rate risk arises when the real value of assets, liabilities, and obligations held in a foreign currency are adversely affected by changes in the domestic exchange rate. Of course, this risk is greater in countries

characterized by unstable exchange rates. Savings institutions may attract deposits in a currency that maintains its real value; for example, some credit unions in Guatemala offer savings accounts in both U.S. dollars and the local currency of quetzales. However, if the savings institution does not place those funds in instruments of the same currency in which they were deposited, and if the exchange rate experiences a negative change, the institution will incur losses when savers withdraw their funds.

To manage exchange rate risk, financial institutions need to balance the funds received in foreign currency, in both amounts and terms, with investments in that same currency. Another option for managing this risk is to create a risk reserve in the foreign currency that is equal to but not greater than 10 percent of institutional capital. In the case of a loss, the 10 percent of capital reserves would be there to absorb it.

## **Reputation Risk**

Reputation risk stems from the public perception of an institution. Reputation risk can be particularly damaging for financial intermediaries, since savings mobilization requires earning the trust of depositors, creditors, and the public at large. Reputation risk is very difficult to measure, but must be monitored constantly. It takes time for a savings institution to build a trustworthy reputation in the local market. This reputation can be ruined instantly if the institution does not manage risks adequately. As a clear example, clients will lose confidence in the institution if they are aware of a liquidity crisis, and are likely to transfer their savings to another institution or to an alternative form of savings as a result.

## **Tools for Analyzing Risk**

### ***Cash Flow and Gap Analysis***

The following table can be used to determine the degree of liquidity risk where deposits are not matched appropriately with assets that can be easily liquidated. The table will bring to light if the institution lacks sufficient lines of defense to provide coverage for potential withdrawals of funds. Additionally, the table allows users to evaluate the appropriateness of either increasing or decreasing the terms for attracting funding sources, depending on the liquidity position of the institution.

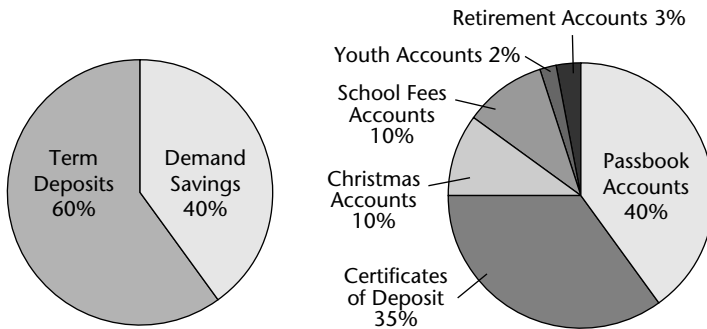


Once the gap, or gap percentage, has been determined, managers can then analyze which term represents the greatest risk of deposit withdrawal. Managers can then decide how to resolve the mismatch and better evaluate the lines of defense the institution that has in place to meet potential withdrawal demand. Additionally, this simple table provides managers with a foundation for establishing a liquidity management plan. It should be noted that a gap does not necessarily reflect problems, because managers can implement a plan to deal with eventual withdrawals and the deficiency can be minimized. The table should be analyzed in relation to the lines of defense set up and the institution's liquidity management plan.

This type of table can also be used to analyze an institution's exchange rate risk in its asset-liability management. It can help managers to identify potential liquidity problems in a foreign currency, allowing them to prevent eventual profitability problems that could result from a currency mismatch or changes in the exchange rate. Managers of an institution that offers products in two currencies should create two tables to analyze the cash flow and gap in each currency and ensure that liabilities are covered by assets of the same currency.

### *Deposit Structure*

The deposit structure analysis is simple—managers review the balance sheet in order to determine the composition of the deposits in the institution according to their potential for withdrawal; that is, demand savings versus term deposits. In the structure analysis, managers establish the percentage that each type of deposit should contribute to the total amount of deposits (the percentage should be set out in formal liquidity management policies). In terms of liquidity management, a safe deposit structure is one in which term deposits represent at least 50 percent of total deposits. Managers might create a pie chart that displays the breakdown of deposits to get a clear picture of the deposit structure. In the following example, the first pie chart separates term deposits from demand savings, while the second chart breaks out the deposits by product.



### ***Monitoring Account Concentration***

The large-account concentration risk must be evaluated constantly, since the rapid withdrawal of one or more large accounts could impact the liquidity position and profitability of the institution. If large volumes of funds are held within a few large accounts (which tend to be interest rate sensitive and relatively volatile), withdrawal could leave the institution with insufficient liquidity to meet withdrawal and disbursement demands.

To monitor the large-account concentration risk, managers can create a table to classify deposits by account balance and by points of service (branch offices). The following table provides a tool to monitor account concentration. The table is organized in descending order, from the largest balance to the smaller balance accounts. The balance of total deposits in each branch office goes in the first column. The balance of the five largest savings accounts in each branch office is entered into the second column. In the third column, the balance of the five largest accounts is divided by the balance of total deposits to calculate the percent of total deposits that the five largest accounts constitute. The same steps are followed throughout the table to find the balance of the 50 largest accounts and determine what percentage of total deposits they make up. The balances are added for the first 5, 10, 20, 30 and 50 accounts, meaning that the 10 largest accounts will include the first 5, the 20 largest will include the 10 largest, and so on. This kind of analysis enables managers to evaluate the degree of exposure the institution has to the withdrawal of funds by the largest depositors.

BRANCH	BALANCE OF DEPOSITS		BALANCES IN THE LARGEST ACCOUNTS							
	5	%	10	%	20	%	30	%	50	%
CENTRAL OFFICE										
BRANCH NO. 1										
BRANCH NO. 2										
BRANCH NO. 3										
CONSOLIDATED										

The analysis is broken down by branch office, because despite the fact that the central office may be able to rescue a branch that has a short-term liquidity problem due to a deposit withdrawal, a high degree of large-concentration in one branch can affect the liquidity position of the institution as a whole. The risk is even greater if the consolidated large-account concentration is high, or if various branches have large stocks of funds in just a few large accounts.

This tool has examined the principal risks assumed by institutions that mobilize savings as their primary source of funds: liquidity, exchange rate, and reputation risk. Managers should monitor the institution's deposit structure to ensure that deposits are collected in a combination of account types with varying maturity periods. The tables presented for a simple cash flow and gap analysis and a large-account concentration analysis can be applied to detect, manage, and minimize the impact that these risks can have on the institution.