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An Introduction to Liquidity and Asset-liability Management

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When a formerly credit-only microfinance institution (MFI) starts raising voluntary savings and using those deposits to finance the loan portfolio, the liquidity and asset-liability management of the institution becomes more complex. The institution not only has to deal with the fluctuating demand and varying interest rates and terms on loans, but also with erratic deposit demands and withdrawals and changing interest rates and terms on savings. Liquidity and asset-liability management in savings institutions requires a coordinated, planned approach.

Liquidity Management

Liquidity refers to the ability of an institution to meet demands for funds. Liquidity management means ensuring that the institution maintains sufficient cash and liquid assets (1) to satisfy client demand for loans and savings withdrawals, and (2) to pay the institution's expenses. Liquidity management involves a daily analysis and detailed estimation of the size and timing of cash inflows and outflows over the coming days and weeks to minimize the risk that savers will be unable to access their deposits in the moments they demand them. In order to manage liquidity, an institution must have a management information system in place—manual or computerized—that is sufficient to generate the information needed to make realistic growth and liquidity projections. The information needed includes:

- The actual deposit liabilities of the MFI as of a certain date according to client name, maturity, amount, and type of account.

- A history of deposit and loan inflows and outflows.
- A history of overall daily cash demands to determine the amount of cash that needs to be kept on-site and in demand deposit type accounts.

A liquidity shortage, no matter how small, can cause great damage to a savings institution. It takes a long time to build client relationships, a liquidity crisis can destroy those relationships instantly. In order to avoid a liquidity crisis, management needs to have a well-defined policy and established procedures for measuring, monitoring, and managing liquidity.

Liquidity Management Policy

A savings institution should have a formal liquidity policy that was developed and written by the officials with the assistance of management. The policy should be reviewed and revised as needed, no less than annually. The policy should be flexible, so that managers may react quickly to any unforeseen events. A liquidity policy should specifically state:

- Who is responsible for liquidity management.
- What is the general methodology of liquidity management. How will liquidity be monitored or, in other words, what liquidity management tools will be used. What are the time frames to be used in cash flow analysis, the level of detail, and the intervals at which the cash flow tools used are to be updated.
- The level of risk that the institution is prepared to take in minimizing cash to enhance profitability. Specifically, the policy should establish minimums and maximums for total cash assets and for the amount to be kept on-site.
- How often decisions about liquidity should be reviewed, including: assumptions used to develop the cash flow budget, the minimum cash requirement as described in daily cash forecasting, and any of the established ratio targets.
- The signatory authority limits of the liquidity manager should excess cash be on deposit at another institution. Often liquidity decisions need to be made rapidly to avoid a crisis; therefore the liquidity manager should have some

authority. This authority should have limits; for example, another signature should be required for unusually large transactions. If liquid funds are not invested in another financial institution or other type of investment, then there should be very specific policies on how excess funds are to be handled, such as who has access to them and where they are to be kept.

- Which assets are considered to be liquid.
- Established limits for the maximum amount to be invested in any one bank, to limit exposure to a bank failure.
- Who may access or establish a line of credit for short-term liquidity needs.
- What are acceptable reasons or scenarios for accessing the line of credit.

Liquidity and Asset-liability Management

Asset-liability management (ALM) is the process of planning, organizing, and controlling asset and liability volumes, maturities, rates, and yields in order to minimize interest rate risk and maintain an acceptable profitability level. Simply stated, ALM is another form of planning. It allows managers to be proactive and anticipate change, rather than reactive to unanticipated change.

An MFI's liquidity is directly affected by ALM decisions. Managers must always analyze the impact that any ALM decision will have on the liquidity position of the institution. Liquidity is affected by ALM decisions in several ways:

- Any changes in the maturity structure of the assets and liabilities can change the cash requirements and flows.
- Savings or credit promotions to better serve clients or change the ALM mix could have a detrimental effect on liquidity, if not monitored closely.
- Changes in interest rates could impact liquidity. If savings rates are lowered, clients might withdraw their funds and cause a liquidity shortfall. Higher interest rates on loans could make it difficult for some clients to meet interest payments, causing a liquidity shortage.

Asset-liability Management

As an institution begins to mobilize savings the ALM challenges increase dramatically. Most savings institutions offer several types of savings products. Each product type has varying attributes and reacts differently to market changes; the challenge of ALM lies in the differing characteristics of each product.

The objective of ALM is to maintain a match in the terms of rate sensitive assets (those assets that will move in search of the most competitive interest rates) with their funding sources (savings, deposits, equity, and external credit) in order to reduce interest rate risk while maximizing profitability. Interest rate risk is defined as the risk that changes in the current market interest rates will adversely impact the institution's financial performance. For example, due to changes in the market an MFI is forced to adjust the interest rate on deposits upward to remain competitive, but its earning assets are concentrated in long-term, fixed-rate loans, and investments. Financial performance will be impaired because the institution cannot adjust its income earned on loans upward as fast as the cost of funds is increasing. Interest rate risk to some degree is unavoidable, but it is manageable.

Interest rate risk may increase in the following scenarios:

- When longer-term fixed-rate loans and investments are funded with deposits that are short-term and can be repriced quickly or that have variable interest rates with short-term adjustment periods. For example, a one-year fixed-rate loan is funded by certificates of deposit with three-month maturities.
- In an environment of high or unpredictable inflation. If clients deposit their funds in an institution when inflation is high, they still expect to earn a real rate of return. In order to pay a real rate of return, the institution must earn enough on its assets to pay a real rate of return on its liabilities. This scenario requires that managers constantly monitor interest rates and make adjustments to assets and liabilities in a timely fashion. The effect of inflation would be exacerbated if the rates on loans and investments were fixed and deposits were short-term or with variable interest rates.

- If the assets and liabilities have a high sensitivity to interest rate changes. Assets and liabilities which are considered highly sensitive to interest changes include: lines of credit and bank loans, large deposits, and any deposits being paid above market interest rates.
- When the local market is competitive. Competition usually reduces the margin between the interest rate charged on loans and the rate paid on deposits. In a competitive environment, the institution may not be able to increase rates earned on loans or lower the rate paid on deposits without affecting client demand and the profitability of the institution.

Managers should strive to reduce or manage the effect interest rate risk will have on the institution's profitability. There are numerous ways that management can reduce interest rate risk. Loans and investments can all have short-term maturities (nothing with a maturity greater than one to three months). As loans are repaid and deposits mature, then the interest rates can be adjusted as needed to maintain profitability. This is by far the simplest approach. The shortness of the term allows management to eliminate interest rate risk, but may impact profitability, since this approach reduces the type of loans and savings products that may be offered and the level of service provided to clients.

If the institution has the capacity, managers can use variable interest rates to manage risk. Variable rates allow the institution to grant longer-term loans as long as managers have the ability to change interest rates on a monthly or quarterly basis. With variable interest rates, the client assumes the risk on loans if rates should increase and the MFI assumes the risk of increasing rates on deposits.

Interest rate risk can be managed by matching the maturities and interest rates of loans and investments with the maturities and interest rates of deposits, equity, and external credit in order to maintain adequate profitability. This is known as gap management, or the management of the spread between interest rate sensitive assets and interest rate sensitive liabilities.

Lastly, if an institution accepts deposits in a foreign currency in addition to the local currency, it must be able to loan or invest those funds in assets denominated in the same foreign currency. If not, then foreign exchange risk becomes a serious problem.

Monitoring the ALM Position

In order to successfully monitor the ALM position of a savings institution:

- Managers must have effective liquidity management plans in place.
- Managers must be able to identify the core or stable deposit base in the institution and match that against longer-term assets to reduce the interest rate risk. Stable deposits include: equity, certificates of deposit with penalties for early withdrawal, retirement savings, savings with a stated purpose, and regular savings accounts with small balances. Within each savings account type managers must determine the amount or percentage of funds that can be used to fund longer-term loans.
- Managers must be able to identify the minimum net margin (gross income – cost of funds) necessary to fund financial costs, operating expenses, and contributions to capital.

All of this can be accomplished if the institution has (1) an effective management information system—manual or computerized—that provides the necessary data; (2) formal, written liquidity and ALM policies, (3) tools in place to monitor liquidity, the gap position of the institution, the core deposits, and the net margin; and (4) a commitment by both officials and managers to change both deposit and loan interest rates as demanded by the local market.

ALM Policy

As in all operational areas, ALM must be guided by a formal policy that was developed and written by the officials with the assistance of operational management. The policy should be reviewed by officials annually and revised as needed. The ALM and liquidity policies may be two separate policies or one comprehensive policy. In any case, the ALM and liquidity policies cannot be written in isolation, as decisions on lending, investments, liabilities, and equity are all interrelated. The ALM policy should discuss:

- Who is responsible for monitoring the ALM position of the institution.
- What tools will be used to monitor ALM.

- How often the ALM position will be analyzed and discussed with officials and management.
- What are the acceptable parameters or ranges for ALM ratios or indicators.

In addition, management must have established the following to strengthen ALM:

- Short and long-term minimum capital or equity/total assets goal ratios.
- The maximum percentage of assets to be held by any one client, in different types of loans and investments, in fixed-rate investments and loans with a maturity greater than one year, and invested in fixed assets.
- The desired diversification of savings and deposits to eliminate potential concentration risk (having too much in any one type of deposit or with any one client).
- Maximum maturities for all types of loans, investments, and deposits.
- Establishment of fixed or variable interest rate loans and deposits.
- Pricing strategies for loans and savings products that are based on what it actually costs to offer the products and what the local market will bear.

Liquidity management, ensuring that the institution maintains sufficient cash plus liquid assets to meet withdrawal and disbursement demands and pay expenses, is essential in savings mobilization. ALM, the process of planning, organizing, and controlling asset and liability volumes, maturities, rates, and yields in order to minimize interest rate risk and maintain an acceptable profitability level, is another key component of savings mobilization. The two are very closely tied. A savings institution must have effective liquidity and asset-liability management in order to ensure that low-cost funds will always be available for savers when they demand repayment of their funds deposited.

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