



Sound Practices for Liquidity Management at Savings Associations

Summary: This Thrift Bulletin provides guidance to management and boards of directors of thrift institutions on liquidity management. OTS recently repealed 12 CFR Part 566, Liquidity, with an interim rule published March 15, 2001. The interim rule still requires thrifts to maintain adequate liquidity to assure safe and sound operation.

For Further Information Contact: Your OTS Regional Office or the OTS Risk Management and Industry Analysis Division.

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I. Introduction

Liquidity is the ability to fund assets and meet obligations as they come due. Liquidity risk is the risk of not being able to obtain funds at a reasonable price within a reasonable period of time to meet financial commitments when due. A savings association should measure its liquidity position on an ongoing basis and estimate how funding requirements are likely to evolve over time and under various scenarios, such as a significant decrease in the availability of wholesale funding. The crucial elements of sound liquidity management are clearly written policies, well-defined responsibilities, strong management information systems, sound forecasting and analysis, thoughtful contingency planning, and diversification and management of funding sources.

Each institution should have a written strategy for the day-to-day management of liquidity. The liquidity strategy should define the institution's general approach to managing liquidity, including various quantitative and qualitative targets. The liquidity strategy should cover specific policies on the composition of assets and liabilities, the use of wholesale funding, and strategies for addressing temporary and long-term liquidity disruptions. The sophistication of an institution's policies, procedures, and information systems for managing liquidity should be related to the strength and stability of its core deposit base, the variability of its cash flows, and its overall financial condition.

II. Liquidity Management

A. Board and Senior Management Oversight

Effective oversight is an integral part of an effective liquidity management program. The board and senior management should understand their oversight responsibilities.

Board of Directors. The board of directors should establish the institution's tolerance for liquidity risk and approve significant policies related to liquidity management. The board should also ensure senior management takes the necessary steps to monitor and control liquidity risk. The board should understand the nature and level of the institution's liquidity risk, and management should inform the board regularly of the liquidity position of the institution.

Senior Management. Senior management should effectively manage the liquidity position of the institution and ensure that appropriate liquidity policies and procedures are established and maintained.

- The institution's board of directors usually delegates responsibility for managing the institution's overall liquidity to a specific committee of senior managers, such as the Asset/Liability Committee (ALCO) or the finance committee, or to a specific unit, such as the treasury unit.
- Senior management should establish procedures, guidelines, and limits for managing and monitoring liquidity to ensure adequate liquidity is maintained at all times.
- Senior management should prepare contingency funding plans.
- Senior management should review the institution's liquidity position on a regular basis and monitor internal and external factors and events that could have a bearing on the institution's liquidity.
- Senior management should review periodically the institution's liquidity strategies, policies, and procedures.

B. Policies and Procedures

A savings association should have clearly defined policies and procedures for managing liquidity. The board of directors has ultimate responsibility for the adequacy of policies and procedures; senior management has responsibility for their design and implementation. Policies and procedures should:

- Delineate lines of responsibility and identify individuals or committees responsible for managing and monitoring liquidity risk.
- Describe an overall liquidity strategy. The liquidity strategy should define the general approach the institution will follow in managing liquidity, including various quantitative and qualitative targets. The liquidity strategy should cover specific policies on the composition of assets and liabilities, including policies on investment in illiquid securities and the use of wholesale funding. There should also be a written strategy for addressing temporary and long-term liquidity disruptions.

- Establish a process for measuring and monitoring liquidity. Although a number of procedures for measuring and monitoring liquidity can be used, the most effective procedures involve pro-forma cash flow projections. These range from simple calculations to complex models for projecting cash inflows and outflows over different planning periods (time bands) to identify cash shortfalls and surpluses in future periods. While liquidity measures based on balance sheet ratios are useful in measuring an institution's current liquidity position and in monitoring trends in liquidity, management should focus its attention on forward looking, pro-forma measures of liquidity.
- Establish quantitative guidelines and limits to ensure adequate liquidity. Guidelines and limits will vary depending on the nature of an institution's operations and circumstances. Guidelines could be set, for example, on the size of cash flow mismatches over specified time horizons.¹ Limits can also be tied to balance sheet ratios.

Examples:

- * Maximum projected cash flow shortfall tolerated for specified time period (for example, one week ahead, one month ahead, one quarter ahead)
 - * Minimum ratio of liquid assets to total assets
 - * Maximum overnight borrowings to total assets
 - * Maximum ratio of FHLB advances to total assets
 - * Maximum ratio of brokered deposits to total assets
 - * Maximum ratio of total wholesale borrowings to total assets
- Establish control procedures to ensure adherence to policies and procedures.
 - Define the necessary procedures for approvals of exceptions to policies, limits, and authorizations. Positions that exceed established limits should receive the prompt attention of appropriate management and should be resolved according to the process described in approved policies.
 - Establish a schedule for the periodic review of the liquidity policies and procedures. Periodic reviews of the liquidity management process and related procedures should address any significant changes in liquidity risk limits, liquidity strategy, information systems, and internal controls that have occurred since the last review.

C. Management Information Systems

Each institution should have adequate information systems for measuring, monitoring, and controlling liquidity risk.

- A management information system should provide timely information on the institution's current and prospective liquidity position.

¹ Because of the subjective nature of the numbers to be found in pro-forma cash flow projections, institutions may find it impractical to establish precise risk limits or precise rules for addressing cash flow mismatches that are projected to occur in future periods. Nevertheless, an institution should make an effort to define its tolerance for cash flow mismatches and should establish strategies for addressing them.

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- An institution should be able to project its liquidity position over various time horizons and scenarios.
- An institution should clearly define assumptions used in projections so that management can evaluate their appropriateness and validity.
- The information system should provide the data needed by management to determine compliance with the institution's liquidity policies, procedures, and limits.

III. Measuring and Monitoring Liquidity

A. Net Funding Requirements

Each institution should establish a process for measuring and monitoring net funding requirements.

- Liquidity measurement involves forecasting cash inflows and outflows over various time horizons to identify potential cash imbalances.
- A cash flow forecast is a useful device to compare cash inflows and outflows on a daily basis (see Appendix A) and over future periods (see Appendix B).
- A common practice is to project net funds deficits for short-term (next 5-10 days) and long-term planning intervals (3-6 months, 6-12 months). Management should take steps to address projected net funding deficits in a timely manner. By projecting cash flows for short- and long-term planning periods, management can significantly reduce the risk that sizable net funds deficits go unnoticed and unattended.
- Management and other staff responsible for managing overall liquidity should be aware of any information, such as a pending decline in earnings, an impending legal action, or a downgrade by a rating agency that could have an adverse impact on perceptions about the financial condition of the institution.

B. Scenario Analysis

Management should consider a variety of scenarios, including stressful scenarios, for analyzing liquidity.

- An institution's liquidity depends on the behavior of cash flows under different conditions. A thorough analysis of various liquidity scenarios should include both internal and external events that could trigger significant cash flow disruptions.
- Scenarios should include a range of possible future environments, including optimistic, pessimistic, and status quo. Stressful events might include a loss of wholesale funding, a significant run-off of deposits, or a sharp increase in loan demand.
- Cash flow timing can differ among scenarios and the assumptions may differ quite sharply. For example, in a general market crisis, the capacity to sell assets may deteriorate significantly.
- An institution should review periodically the assumptions utilized in managing and forecasting liquidity needs.

- In estimating normal funding needs, some institutions use historical data and account for seasonal and other effects believed to determine loan demand and deposit flows. Alternatively, some institutions rely on judgmental business projections, or undertake a customer-by-customer assessment for larger customers and apply historical relationships to the remainder.
- An institution should examine the potential for substantial unanticipated cash outflows from its derivatives and off balance-sheet activities. Potential cash outflows include loan commitments; calls on loans sold with recourse and financial guarantees; payments on swap contracts and other financial derivatives; margin calls; early termination agreements; and so forth.

IV. Contingency Planning

Each institution should have a contingency plan for handling unanticipated stressful scenarios that could result in a significant erosion of institution-specific or general-market liquidity. The plan should be updated on a regular basis. A contingency plan should:

- Define responsibilities and decision-making authority so that all personnel understand what their role is during a problem situation.
- Assess the potential for funding erosion (magnitude and rate of outflow) by source of funds under different scenarios.
- Assess the potential liquidity risk posed by other activities such as asset sales and securitization programs.
- Identify and assess the adequacy of financial resources (source of funds) for contingent needs.²
- Identify the sequence in which key sources of funds will be mobilized and committed for contingent needs.³
- Identify other actions to be taken in the event of an unexpected contingency.
- Address implementation issues such as procedures by which resources are committed for emergency use or released from one use and transferred to another.

V. Managing Access to Funding Sources

Savings associations should carefully manage their access to available sources of funding and understand their funding options.

- An institution should periodically review its efforts to build and maintain relationships with a broad range of depositors and other funds providers. An institution should understand how much funding might be available from various sources under normal and adverse circumstances.

² The plan should identify any back-up facilities (lines of credit), the conditions related to their use, and the circumstances where the association might use them. Management should understand the various conditions, such as notice periods, that could affect access to back-up lines.

³ The degree of uncertainty as to the magnitude and timing of availability of resources may call for different priorities in different situations.

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- Senior management should be aware of the composition, characteristics, and diversification of its funding sources.
- Management should consider developing or expanding markets for asset sales or exploring arrangements for borrowing against assets.



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Appendix A

Sample Short-term Liquidity Forecast

	Day 1	Day 2	Day 3	Day 4	Day 5	Days 6-10
Cash inflows	100	120	130	100	120	620
Cash outflows	90	130	100	150	150	510
Net surplus (deficit)	10	(10)	30	(50)	(30)	110
Cumulative net surplus (deficit)	10	0	30	(20)	(50)	60
Beginning liquid cash surplus ⁴	25	35	25	55	5	0
<i>Plus:</i> Net surplus (deficit)	10	(10)	30	(50)	(30)	110
Ending liquid cash surplus	35	25	55	5	(25)	110
Net cash shortfall	0	0	0	0	25 ⁵	0

⁴ The liquid cash surplus is the level of cash and cash equivalents in **excess** of transactions balances required for day-to-day operations and any minimum reserve of cash for contingencies.

⁵ The institution would have to close the projected cash shortfall by increasing cash inflows (for instance by borrowing) or by reducing cash outflows on or before day 5 to avoid dipping into the reserve for contingencies. The beginning liquid cash surplus on day 6 of zero (\$0) assumes that management will address the net cash shortfall on day 5 by taking some action. Of course, management may address that shortfall before day 5.

Sample Long-Term Liquidity Forecast

Scenario No. 1: Most Likely Forecast

Date: _____

	Forecast 0-30 days	Forecast 31 –60 days	Forecast 61-90 days	Forecast 91-365 days
Cash Inflows:				
Deposits	\$1,000	\$1,200	\$1,500	\$20,000
Maturing loans and investments	600	1,200	1,800	9,000
Loan sales	0	0	0	0
Other	200	100	200	1,500
Total Inflows	\$1,800	\$2,500	\$3,500	\$30,500
Cash Outflows:				
Maturing deposits	800	900	1,000	3,500
Maturing debt	0	0	0	1,000
New Loans	900	1,500	1,600	15,000
Other	200	0	0	1,000
Total Outflows	\$1,900	\$2,400	\$2,600	\$19,500
Net Surplus (deficit)	(\$100)	\$100	\$900	\$11,000
Cumulative net surplus (deficit)	(\$100)	0	\$1,000	\$12,000

Scenario No. 2: 20% Reduction in Deposit Inflows

Date: _____

	Forecast 0-30 days	Forecast 31 –60 days	Forecast 61-90 days	Forecast 91-365 days
Cash Inflows:				
Deposits	\$800	\$960	\$1,200	\$16,000
Maturing loans and investments	600	1,200	1,800	9,000
Loan sales	0	0	0	0
Other	200	100	200	1,500
Total Inflows	\$1,600	\$2,260	\$3,200	\$26,500
Cash Outflows:				
Maturing deposits	800	900	1,000	3,500
Maturing debt	0	0	0	1,000
New Loans	900	1,500	1,600	15,000
Other	200	0	0	1,000
Total Outflows	\$1,900	\$2,400	\$2,600	\$19,500
Net Surplus (deficit)	(\$300)	(\$140)	\$600	\$11,000
Cumulative net surplus (deficit)	(\$300)	(\$440)	\$160	\$12,000