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# Emerging Issues Series

**The Changing Character of  
Liquidity and Liquidity Risk  
Management: A Regulator's  
Perspective**

**Paul A. Decker**

**Emerging Issues Series  
Supervision and Regulation  
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# **The Changing Character of Liquidity and Liquidity Risk Management: A Regulator's Perspective**

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**April 2000**

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## **The Changing Character of Liquidity and Liquidity Risk Management: A Regulator's Perspective<sup>1</sup>**

Liquidity risk management techniques are constantly evolving. Customers today increasingly use banks as a means to access the payments system and, consequently, maintain minimal transaction balances. This has resulted in a situation where all banks are facing high loan demand while their core deposits continue to erode. Most multinational and regional banks turned to wholesale funding sources to fund asset growth years ago; we are now seeing small banks being forced to turn to alternative funding sources, such as subordinated debt, Federal Home Loan Bank loans, and purchased fed funds to meet their needs. Liquidity risk management techniques must continue to improve in response to the increasing volatility of these funding sources. Managers who fail to develop an effective strategy for maintaining adequate liquidity may find that, at best, their business plans are adversely affected by funding difficulties, and at worst, their bank's ongoing viability is threatened. Recent volatility in the wholesale funding markets has highlighted both the importance of sound liquidity risk management practices and the fact that financial institutions can and have experienced liquidity problems even during good economic times. As a result, bank management's ability to adequately meet daily and emergency liquidity needs while controlling liquidity risk through risk identification, monitoring, and controls is receiving increasingly intense regulatory scrutiny. To meet the new demands of liquidity risk management, banks have evolved new techniques.

### **Liquidity Trends**

Banks have been very active recently in reevaluating and altering their risk management practices. This has resulted in the development of new trends in liquidity risk management.

**Funding pools.** Many multinational banks are moving away from back up lines of credit as their principle source of liquidity in a funding crisis. Disadvantages to lines of credit include commitment fee costs, material adverse change clauses, and potentially adverse reactions by the funding markets should these backup lines be utilized.

While many banks still maintain these lines, they no longer rely on them as their principle source of back up liquidity (merely to meet the rating agencies' requirements). These banks now rely principally on segregated pools of liquid assets, generally, marketable securities, to provide a secondary source of liquidity. To be effective, these segregated pools, sometimes known as *liquidity warehouses*, should contain readily marketable securities. Two keys to making this approach work include are to fill them with investment grade securities to preclude the possibility that they could not be readily sold in adverse markets and to avoid the use of securities from thinly traded markets that could preclude rapid liquidation without incurring a substantial discount.

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**Funding strategies.** Banks are revising their funding strategies to avoid funding concentrations. Most banking experts agree that excessive funding concentrations severely reduce the bank's ability to survive a liquidity crisis. Many banks are taking advantage of the good economic times to diversify their funding sources.

While most banks have developed a contingency funding plan, the vast majority require some level of enhancement, including triggering guidelines, metrics development, better quantification of funding sources, adequacy of projected funding sources, and development of common contingency scenarios. Many banks do not have predefined triggers to automatically implement their contingency plan, and management should develop critical warning signals that would be used as a benchmark during periodic liquidity reviews.

In some cases, banks increasingly are stress testing their funding plans, using various interest rate shocks and adverse economic and competitive scenarios to ascertain their impact on both the funding portfolio and market access. At a minimum, the funding plans are generally tested with an interest rate shock simulation incorporating a drop or gain of at least 200 basis points. On the horizon, banks are seeking ways to link their liquidity risk models with their market risk models. The goal is to stress test their portfolios, load the resulting data into their liquidity models, and see what will happen to their funding positions.

**Communication.** Some banks are working to improve the communication lines between the treasury function and back-office operational areas. At present, the treasury area relies on informal lines of communication to keep it updated on operational events that could affect funding. As a result, the treasury area is frequently unaware of a disruptive event, such as a wire transfer failure or the need to fund a large loan commitment draw down, until it is either too late or very costly to cover the resulting funding shortfall.

Bank management is paying more attention to investor relations than ever before. This is because dependence on wholesale funding sources has resulted in the growing importance of credit risk in the placement decisions of funds providers. Funds providers are increasingly sensitive to credit risk and will terminate a funding relationship at the slightest hint of developing credit problems at an institution. This has forced institutions to increase their attention to managing both funding relationships and rating agency relations.

**Reporting systems.** Reporting systems are not as effective as they could be in determining the funding implications of off-balance sheet commitments. Many banks perform a historical survey and then develop a guideline for a level of funding to be held against off-balance sheet commitments. Unfortunately, they seldom, if ever look at the guideline again. As the bank's strategic objectives change and new products are offered, the level of off-balance sheet liabilities tends to grow while the level of funding does not, since the bank's reporting process is not measuring the true level of liabilities. This lack of review, coupled with the informal lines of communication between treasury and the operating areas of the bank, has frequently resulted in costly funding mistakes. Many banks have realized this and are developing better off-balance sheet reporting systems.

In addition, many institutions have a tendency to ratchet down their report generation during good economic times, either reducing the level of information contained in the report or discontinuing some reports altogether. This practice appears acceptable as long as the remaining reports provide management with adequate information to properly manage risk. Banks should realize, however, that to manage liquidity risk during adverse economic conditions, a greater information flow embodying greater detail would be needed. Therefore, policies should be in place to ratchet up the reporting process during periods of deteriorating conditions.

**ALCO structure.** A well-managed organization's ability to identify, monitor, and control inherent liquidity risks depends upon the maintenance of an active asset and liability committee (ALCO) structure that has responsibility for developing and maintaining appropriate risk management policies and procedures, MIS reporting, limits, and oversight programs. While the size and organizational structure of the ALCO varies between banks, there appears to be a trend developing to streamline ALCO operations by eliminating various subcommittees and managing liquidity risk through one central body. Proponents of this structure argue that the principal benefit of a single committee is greater efficiency, since many of the individuals serving on the subcommittees also serve on the central committee. One streamlined committee sharply reduces costly duplication of time and effort while making the decision process more efficient.

## **Liquidity Risk**

Traditionally, *liquidity* has been defined as the ability of an institution to replace liability runoff and fund asset growth promptly and at a reasonable price. Liquidity risk is the potential that an institution will be unable to meet its obligations as they come due. This is generally because the bank cannot liquidate assets or obtain adequate funding (funding liquidity risk) or that it cannot easily unwind or offset large exposures without significantly lowering market prices because of thinly traded securities markets or market disruptions (market liquidity risk). While the following is not all-inclusive, it does present several criteria can serve as a guide to determine the level of inherent liquidity risk in an institution:

The composition, size, and availability of asset-based liquidity sources in relation to the institution's liquidity structure and liquidity needs should be gauged. Factors to consider include the levels of money market assets (Eurodollar placements, Fed funds, etc.); unpledged, marketable securities; and securitization and asset sales activities. Thus, a bank that utilizes predominantly short-term liabilities for funding will generally require more asset-based liquidity. Conversely, a bank utilizing predominantly long-term liabilities, such as core deposits, for funding generally will require lower asset-based liquidity.

The nature, volatility, and maturity structure of funding liabilities given the institution's core business (for example, whether it is predominantly a wholesale bank) must be considered. Factors to review include level of dependence on credit sensitive funding sources, the relationship of wholesale versus retail funding sources, and large funding concentrations, both by type of instrument and by funding source. Bank management must make sure that the liability structure makes sense given the nature of the assets generated by the core business. Community banks are predominantly retail banks characterized by long-term asset structures supported by a stable and long-term liability structure. Conversely, a wholesale bank is characterized by a

short-term asset structure supported by a short-term liability structure. This arrangement is considered adequate, since the asset and liability roll-off are closely matched.

Funding diversification is extremely important in determining the level of inherent liquidity risk in an institution. Factors to assess include:

- The proportion of funding from various types of relationships, such as brokers, professional money managers, out of market sources, and foreign.
- Sources of funds providers, for possible over-reliance on specific types of funds providers, funding instruments, and maturities.
- The portion of funding sources with common exposures. Bankers should look at their funds providers to ensure that they do not have common exposures. Many bankers have learned the hard way over the years that their funds providers were not as diversified as they thought. It is entirely possible to utilize funds providers located all over the country that have a common exposure in such areas as subprime lending or Texas real estate. Deterioration in these areas of concentration can result in an unexpected drying up of funding from traditional providers, which can cause large-scale funding problems.

Funding gap assessment is very important, especially the institution's short-term exposures. Factors to assess include projected funding needs, assessment of bank's ability to cover any potential funding gaps at reasonable pricing, and trends in asset quality. All funding analysis techniques assume that assets pay when due. Banks experiencing asset quality problems must revise their funding analysis to embody a more realistic set of assumptions about asset roll-off.

The composition of the off-balance sheet portfolio and its probable impact on funding must be evaluated. Factors that must be assessed include off-balance sheet liability levels, composition of the off-balance sheet liabilities, and the off-balance sheet monitoring program.

The institution's funding strategies should be evaluated to ensure that they remain valid. Factors to consider include cash flows, secondary liquidity of the securities portfolio, monitoring and metrics program, policies and procedures, an assessment of institutional funding costs compared to its competitors, and an assessment of management's ability to effectively control liquidity risk

A factor that is increasingly important is the rating services' view of the institution. The two factors to assess are current ratings and rating agency perspective on the condition of the institution and rating trends.

A detailed assessment of the institution's contingency funding program should be made. Factors to evaluate include the monitoring and metrics program, a viability assessment of the contingency plan in light of the abilities of management, an assessment of policy and strategic goals, and a review of the structure and responsibilities of the crisis management team

### **Best Practices for Managing Liquidity Risk**

Recent volatility in the wholesale funding markets has served to highlight the importance of sound liquidity risk management practices and reinforce the lesson that those banks with well-

developed risk management functions are better positioned to respond to new funding challenges. The banking industry has developed many innovative solutions in response to these challenges, some of which are presented here.

Because banks vary widely in their funding needs, the composition of their funding, the competitive environment in which they operate, and their appetite for risk, there is no one set of universally applicable methods for managing liquidity risk. While there is little commonality in their approach to liquidity risk management, well-managed banks utilize a common six-step process to manage it.

- 1. Strategic Direction** - Bank management, generally through ALCO, must articulate the overall strategic direction of the bank's funding strategy by determining what mix of assets and liabilities will be utilized to maintain liquidity. This strategy should address the inherent liquidity risks, which are generated by the institution's core businesses. For instance, if the bank has major positions in global capital markets, then liquidity should be managed to lessen the impact of sudden changes in global markets. Or if the bank funds commercial loans with core deposits, then liquidity should be managed to reduce the impact of a decline in asset quality or a runoff of core deposits. This strategy must be documented through a comprehensive set of policies and procedures and communicated throughout the bank.
- 2. Integration** - Liquidity management must be an integral part of asset/liability management. The bank's asset and liability management policy should clearly define the role of liquid assets along with setting clear targets and limits. In the past, asset/liability management's goal was primarily to maximize revenue while liquidity management was managed separately. This resulted in situations where asset and liability profiles structured for maximum profitability had to be reconfigured (often at a loss) to meet sudden liquidity demands. While the struggle between maximizing profitability and providing adequate liquidity continues to this day, the best ALCO groups have realized that liquidity management must be integral to avoid the steep costs associated with having to rapidly reconfigure the asset/liability profile from maximum profitability to increased liquidity. Some of the greatest changes in risk management have occurred in the integration area. Instead of liquidity management being the responsibility of a small group of staff, it is now integrated into the day-to-day decision-making process of core business line managers. This is frequently done through the use of loan growth and balance sheet targets that are "pushed down" to business line managers. Some banks achieve this goal through the use of a transfer pricing system - giving "liquidity-generating business lines" an internal earnings credit while charging "liquidity-using business lines cost centers for funding. Another innovative method is to require business lines to structure deals as if they had to fund them on a stand-alone basis.
- 3. Measurement Systems** - Most banking experts agree that maintaining an appropriate system of metrics is the linchpin upon which the liquidity risk management framework rests. If they are to successfully manage their liquidity position, management needs a set of metrics with position limits and benchmarks to quickly ascertain the bank's true liquidity position, ascertain trends as they develop, and provide the basis for projecting possible funding scenarios rapidly and accurately. In addition, the bank should establish appropriate



benchmarks and limits for each liquidity measure. The varied funding needs of institutions preclude the use of one universal set of metrics. As a result, banks frequently use a combination of stock and flow liquidity measures or have gone to exclusive reliance on models. Stock measures look at the dollar levels of either assets or liabilities on the balance sheet to determine whether or not these levels are adequate to meet projected needs. Flow measures use cash inflows and outflows to determine a net cash position and any resultant surplus or deficit levels of funding. Models are built utilizing hypothetical scenarios to develop measures, benchmarks, and limits.

Balance-sheet-based measures are generally best suited to smaller institutions which fund their business lines, generally loans, with core deposits. These banks generally develop their measurement system and their corresponding benchmarks and limits based on either selected peer group analysis or on studies of historical liquidity needs over time. In addition, most of these banks utilize flow measures to determine their net cash position. While this combination works well for smaller banks, regional and global institutions that have significant trading operations and are heavily reliant on purchased funding find that stock and flow measures are no longer adequate to meet their needs. As a result, these banks have either developed or have purchased model-based measurement systems to assist them in liquidity measurement. Two common models in use include:

- **Cash Capital** – Under this scenario, the model assumes that the bank is unable to secure any outside funding. The model is designed to indicate how long the bank can continue to meet its short-term funding obligations through asset sales. The model calculates this by assessing the marketability of all bank assets and applying suitable discounts to each. Once the discounted value of the assets is found, management will set its benchmarks and limits. This model usually has a general limit, which is frequently expressed in terms of a management set limit on the percentage of the discounted value of the bank's assets to total short-term funding. This general limit is then broken down more finely with sub-limits set on different types of short-term funding.
- **Liquidity Barometers** – This model calculates the length of time an institution can survive by liquidating its balance sheet using just two assumptions - that the bank continues to operate under normal operating conditions or that the bank has suffered a complete loss of access to the money market.

- 4. Monitoring** - Banks must be able to track and evaluate their current and anticipated liquidity position and capacity. A monitoring system must be developed, consisting of guidelines, limits, and trend development, that enables management to monitor and confirm that compliance is within approved funding targets and, if not, to pinpoint the variances. The most successful banks create objective targets for each liquidity measure, which often have multi-level trigger points, to maximize their liquidity position. Because banks vary widely in their funding needs, no one set of universally applicable liquidity measures or targets can be applied to all institutions. A recent trend in liquidity monitoring is *incremental reporting*, which monitors liquidity through a series of basic liquidity reports during stable funding periods but ratchets up both the frequency and detail included in reports produced during periods of liquidity stress. This type of reporting provides flexibility to meet management's increased information needs during stress periods without the delay involved in developing new reports.

The key to any incremental reporting program's success is making sure that the incremental reporting structure is adequate to meet management's projected information needs and reasonable in light of such factors as the reliance on wholesale funding, off-balance sheet commitments, the operating profile, management capability, and risk appetite. In addition, it is generally considered a sound practice to periodically audit the monitoring process to confirm the adequacy and accuracy of the system as well as compliance with approved funding level guidelines.

- 5. Balance Sheet Evaluation** - Banks operate in a dynamic funding market. As a result, both the bank's balance sheet and market access trends should be periodically evaluated for emerging patterns that could adversely affect liquidity, and the bank should develop strategies to manage these trends. Bank funding requirements should be reviewed by an analysis of the behavior of cash flows on both the asset and liability sides of the balance sheet, as well as off-balance sheet items. Experience indicates that off-balance sheet funding requirements, such as loan commitments, are not incorporated into these periodic cash flow analyses. Therefore, a periodic statistical analysis of off-balance sheet items' historical funding patterns should be run to ensure that naturally occurring contingent liabilities will not exert unexpected strains on the funding process at some point in the future. Part of any balance sheet analysis is a review of future funding needs. As part of this assessment process, the best banks have expanded the scope of their stress testing efforts from their contingency planning to their funding profile. They run a number of scenarios to establish that they will still be able to meet their funding needs at reasonable pricing levels in a variety of economic conditions. The results of these stress tests should be reviewed by ALCO, and any weaknesses found should result in changes in balance sheet strategies as well as amendments to the bank's funding policy.

Because many banks are becoming more reliant on credit-sensitive funding, it is vital that the bank be perceived by third-party funding sources as being both profitable and managed in a safe and sound manner. Thus, banks dependent on third-party funding should be continuously assessing counterparty/investor name acceptance in the money markets for any hints of resistance through a periodic monitoring program. While these monitoring programs vary, nearly all monitor the following areas:

- Turn downs and non-renewals, especially among key counterparties, during stressful market periods.
- Decreased renewal rates for institution's time deposit products (CDs, etc.).
- Unexpected declines in uninsured deposit balances.
- Rate spread trends monitored for adverse turns.

An equally important aspect of any monitoring program is communication, ensuring that any weaknesses detected are promptly brought to management's attention. All too often, there are large time lapses between when market weaknesses have been detected and when management is made aware of them. Finally, any balance sheet analysis should address funding concentrations. Funding concentrations should be carefully assessed, since the industry trend is away from concentrations. Many banking experts believe that excessive funding concentrations can severely reduce a bank's ability to survive a liquidity crisis. Any excessive concentrations found should be addressed promptly.

**6. Contingency Liquidity Plan Preparation** - Banks should have a formal contingency plan of policies and procedures to use as a blueprint in the event the bank is unable to fund some or all of its activities in a timely manner and at a reasonable cost. Industry experts generally agree that these crises tend to develop very rapidly. Their onset is no longer measured in days but rather hours. The former funding manager at one of these unfortunate banks once told the author that the only good news on the day the funding crisis broke was that they had secured all of the funding necessary to meet their daily position in the morning, since no one would sell them funds in the afternoon. A comprehensive contingency funding plan can provide a useful framework for meeting both temporary and long-range liquidity disruptions. A good plan should emphasize a reliable but flexible administrative structure, realistic action plans, ongoing communications at all levels, and a set of metrics backed by adequate management information systems. Periodic testing of contingency MIS requirements ensures the availability of timely reports for rapid decision-making. The development of a contingency funding plan is a complex undertaking. There are several areas where the best practices in the industry should be incorporated.

Implementation. There is some diversity within the industry on how to implement the contingency plan. Some banking organizations have developed predefined triggers that automatically implement the plan, while others rely on a set of critical warning signals that require senior management to review the situation and decide whether to implement it. To assist banks in developing their liquidity crisis warning signal criteria, the following list of the most common early warning signs is offered:

- Traditional funds providers start to disappear.
- Individual deal sizes begin to decrease as funders become more conservative.
- There are difficulties accessing longer-term money (particularly over quarter-end reporting dates).
- It becomes more difficult to manage rising funding costs in a stable market.
- Customers start to cash in CDs and other time deposit products prior to maturity.
- The bank begins to be closed out of some markets and is increasingly being forced to rely on brokers.
- Counterparty resistance develops to bank off-balance sheet products.

Policy and strategy considerations. Funding policies and strategies should be in place to deal with various issues in a consistent manner during a liquidity crisis. Some of these issues include:

- Bank and affiliate funding and off-balance sheet product strategies.
- Identification of sensitive markets to avoid.
- Establishment of formal pricing policies.
- Payout of deposit products prior to maturity.
- Direct vs. broker/dealer funding methods.
- Management of secondary market trading/discount of bank and holding company liability instruments.

Crisis management team development. The formation of a crisis management team is vital to the success of any contingency funding plan. Experience has shown that a team of highly

skilled staff members is necessary to quickly assess the evolving situation, rapidly decide a course of action, implement the actions, monitor the situation, and take corrective actions as necessary. It is also imperative that senior management assumes an active role in this crisis management team, starting with the careful evaluation of potential team members. Other actions considered to be best practices in this area include:

- Designate by position those individuals who will be members of the crisis committee.
- Specify both under what condition(s) a liquidity crisis exists and what the threshold will be for this group/committee to be activated.
- Designate each member of the crisis management group's crisis management authorities and responsibilities, including their geographic area of operation (if applicable).
- Specify the corporate communication channels and how information will flow to regulators, to customers, to the press, and to the public.

Administrative considerations. Management must ensure that it is properly managing the risks associated with a liquidity crisis. Some of the risk management procedures commonly found in contingency plans include:

- More frequent meetings of the ALCO committee to ensure that all funding strategies are being executed in an orderly and timely manner, that the situation is being closely monitored, and that senior management and the board of directors are being adequately informed of the developing situation.
- Actively keeping the bank's best customers informed of unfolding events.
- Handling media relations.
- Increasing frequency and scope of liquidity monitoring metrics.

Reporting considerations. Contingency plans should have good liquidity metrics and MIS support to ensure that management has accurate and timely information on which to base decisions. As mentioned earlier, metrics distribution should be on an incremental reporting basis. Under incremental reporting, guidelines are set that mandate the frequency of metrics reporting. In general, the deeper the crisis, the more frequent the distribution of metrics. At a minimum, contingency monitoring reporting should include the following reports:

- A large funder report.
- An asset & liability run-off report.
- A liquidity report with limits and benchmarks.
- A flow analysis report (Gap, modified Gap, etc.).

Balance sheet considerations. The bank should have a good estimated flow of funds time line for the liquidation of various portions of its balance sheet. It should be emphasized that these estimates should be realistic and based on tangible research. Remember, one of a bank examiner's favorite questions is, "How do you know you can obtain that level of funding from this balance sheet?" These estimates should be updated periodically, in light of changing market conditions. This should be backed by evidence of the following:

- There should be a realistic analysis of cash inflows, cash outflows, and funds availability at various time intervals (commonly 7, 10, 15, 30, 45, 60 and 90 days).
- Generally, well-written plans will specify a sequence for the timely liquidation of various balance sheet items.

- Generally, it is considered a best practice to periodically test the back-up lines of credit as part of the contingency plan. Having said that, there is a caution to observe. Given the credit risk sensitivity of the money markets, many banks are reluctant to test their lines for fear of inadvertently sending an adverse message to the inter-bank markets. As a general rule of thumb, only banks with ample market access should conduct wide-ranging testing on their back-up lines of credit.

## **Other Best Practices**

- 1. Off Balance Sheet Management Practices** - In many banks, the liquidity risk management systems have no provision for formally incorporating the funding requirements of off-balance sheet commitments. Instead, a network of informal communications serves to alert the funding desk of necessary adjustments for imminent funding requirements. It is considered a best practice to periodically supplement this informal working arrangement with a statistical analysis of the historical funding patterns of various types of off-balance sheet items. Incorporating the resulting funding requirements into calculations of future funding requirements enhances the accuracy of funding projections, while assuring management that naturally occurring contingent liabilities will not strain the funding process. A second best practice is to establish formal lines of communication between the operational areas and the treasury area to alert the funding area to any funding requirements caused by balance sheet commitments.
- 2. Funds Management** - While many retail funded banks still rely on deposits and capital as their primary funding source, most regional and multinational banks long ago outstripped these funding sources, forcing them to rely heavily on purchased funds. Today, the industry is moving away from exclusively managing the liability side of the balance sheet toward managing both the asset and liability sides for maximum effectiveness. Banks are actively engaged in managing assets through securitization of the loan book, loan sales, various asset finance options (equities, governments, etc.), and liabilities through FHLB borrowings, brokers notes, retail CDs, callable CDs, and subordinated debt. The selection and maintenance of a diversified group of funding sources for both the liability and asset sides of the balance sheet, as well as the establishment and maintenance of relationships with liability holders, rating agencies, correspondents, and investors, is a complex and ongoing process. Other factors that must be considered in funding source selection include integration with the bank's interest rate sensitivity, risk appetite, profit planning, diversification, and capital management objectives.

When reviewing a bank that is using a diversified funds management approach, regulators generally ask themselves several questions:

- How diversified are the funding sources? There should be a wide diversity of sources including, but not limited to, private banking, corporate, nonbank financial institutions, bank correspondent relationships, brokered deposits, central bank, insurance companies, and government agencies.
- What types of funding instruments are offered by the bank? A wide diversity of funding instruments, as practical, should be utilized, including demand and time deposits, Fed

funds, TT&L note option, CDs, bankers acceptances, repurchase agreements, loan securitization, brokers note programs, loan sales (participations), and private placements.

- Does the bank have a history of funding diversification and funding instrument innovation? The bank should display a pattern of constant innovation in developing new funding sources and utilization of new funding instruments.
- What is the bank's maturity pattern for funding instruments? Staggered maturity patterns, floating rate borrowings, and rollovers should be utilized as much as possible.

**3. Funding Relationship Management** - As a bank becomes more reliant on third-party funding, many banking experts consider it a best practice to have an on-going program of funds provider and rating agency relations. It is vital that the bank be perceived by third parties as being profitable and well run. Issues that need to be addressed in assessing the bank's relationship management efforts include:

- Does the bank have a proactive program in dealing with issues involving rating agencies? There should be evidence of an active rating agency relations program. Rating agencies revise debt ratings more quickly today than ever before, and banks need ongoing relationships with the rating agencies so that they can make their views on any adverse developments known. This ability to discuss situations informally with the rating agencies has proven effective in maintaining favorable ratings.
- Does the bank have an active funds provider relations program? Third-party funding providers, both domestic and foreign, are much more credit sensitive to any sign of bank weakness than ever before. Active funds provider relations programs have proven effective in forestalling "funder flight" caused by some temporary adverse publicity. Unfortunately, these programs do not appear capable of preventing funder flight in the event a more serious and lasting problem is uncovered.
- Does the bank know which funding sources are the most credit sensitive? The bank must know who its most sensitive funding sources are and structure its relations program accordingly.

## Summary

Liquidity crises are not confined to periods of economic downturn. They can and do happen at any point in the economic cycle. During the past 18 months, a period characterized by good economic conditions, the industry has seen an institution-specific liquidity crisis, a country-specific liquidity crisis, and a global market contagion. There is a lesson to be learned. Liquidity risk can rise to crisis proportions at any point in the economic cycle. Good liquidity risk management practices can reduce its likelihood, while a good contingency funding plan can reduce its impact.

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