



LIQUIDITY RISK MANAGEMENT: GETTING THERE

Alok Tiwari

A bank must at all times maintain overall financial resources, including capital resources and liquidity resources, which are adequate, both as to amount and quality, to ensure that there is no significant risk that its liabilities cannot be met as they fall due.

Liquidity Risk is the current and prospective risk to earnings or capital arising from a bank's inability to meet its obligations when they come due without incurring unacceptable losses. Liquidity Risk includes the inability to manage unplanned decreases or changes in funding sources. Liquidity Risk also arises from the failure to recognize or address changes in market conditions that affect the ability to liquidate assets quickly and with minimal loss in value.

Lessons from Crisis

A bank can fail even in a well-functioning market and a firm failure is a means by which markets 'weed out' risky or mistaken business models. However, our society is reluctant to bear the consequences of a bank failing, if it has large deposits or a key role in the payment system. So society may prefer regulators to attempt to 'weed out' banks' mistakes in managing liquidity and other risks before markets do so.

A market failure analysis is conducted before making new rules in any market. If no market failure is found in the analysis then there will be no case for regulatory intervention. However, in the current scenario, there is broad agreement that a serious risk exists and that regulatory authorities should attempt to reduce this risk. Recent events have highlighted that even banks that appear otherwise solvent can suffer liquidity problems, for several reasons. Creditors may be uncertain about a bank's solvency position, leaving them unwilling to lend even though the bank may be fundamentally solvent. Even if they do not doubt the bank's solvency, they may doubt that it is liquid. As a result if they make short-term deposits they will not be repaid in a timely fashion. This may be compounded by the fact that a 'run' on a bank can be self-fulfilling: even if the 'run' starts on the basis of unfounded rumors that it might be insolvent or illiquid, the 'run' itself may lead to the feared outcome.

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Growing importance

Liquidity Risks appear to differ from other business risks in at least two ways. First, Liquidity Risks can grow in severity very rapidly. Once, rumours that bank is in trouble emerge, depositors may withdraw funds from it very quickly, in part because the existence of a bank run increases each depositor's incentive to withdraw his or her funds. Since it is hard for depositors to assess the viability of individual banks, fears about the bank could also quickly spread to other banks.

A second special feature of Liquidity Risk appears to be that it is hard to predict. Experts have argued that banks' internal stress tests have underestimated the risk of a liquidity shortage. Indeed, if panic and herd behaviour contribute to liquidity shortages, it might well be hard to assess their probability from historical data.

It is believed that financial institutions will be under increasing pressure from regulators to demonstrate they are measuring and managing Liquidity Risk. For many institutions, it will act as an opportunity not just to comply with the requirements, but also to use this as a starting point to take a much more holistic view of the risks across the entire balance sheet, integrating market, credit and Liquidity Risks.

Nevertheless, increased globalization of banks and the financial system, the increasingly concentrated number of banks that provide market volume and liquidity, the increased reliance on secured funding, and the lack of harmonization of global liquidity standards suggested that a closer look was needed.

Past mistakes

Although bank's management have strong incentives to build in some resilience to liquidity stress by holding sufficient amounts of liquidity, these incentives may well prove insufficient. This would not be a problem if the consequences of a bank's insufficient resilience to liquidity stress were confined solely to shareholders and managers. But, as recent events have shown, this is not the case.

So far, Liquidity Risk had not received its due importance, mostly due to lack of awareness and soft regulations. Banks expect that central banks will provide liquidity support in case of market-wide stress and assume that retail depositors will stay due to the deposit insurance schemes, thus inducing moral hazard into the system. Central banks can also support only up to a limit, after which the banks are on their own to survive, which was seen in the recent crisis.

The market turmoil that began in mid-2007 re-emphasised the importance of liquidity to the functioning of financial markets and the banking sector. In advance of the turmoil, asset markets

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were buoyant and funding was readily available at low cost. The reversal in market conditions illustrated how quickly liquidity can evaporate and that illiquidity can last for an extended period of time.

In the wake of these events, the study conducted by the Basel Committee on Banking Supervision (BCBS) yielded startling revelations that many banks had failed to take account of a number of basic principles of Liquidity Risk management when liquidity was plentiful. Many of the most exposed banks did not have an adequate framework that satisfactorily accounted for the Liquidity Risks posed by individual products and business lines, and therefore incentives at the business level were misaligned with the overall risk tolerance of the bank. Most banks had not considered the amount of liquidity they might need to satisfy contingent obligations, either contractual or non-contractual, as they viewed funding of these obligations to be highly unlikely. Many banks viewed severe and prolonged liquidity disruptions as implausible and did not conduct stress tests that factored in the possibility of market wide strain or the severity or duration of the disruptions. Contingency funding plans (CFPs) were not always appropriately linked to stress test results and sometimes failed to take account of the potential closure of some funding sources.

The Awakening

As a response to the financial developments and lessons learned from the turmoil, BCBS conducted a fundamental review of its Sound Practices for Managing Liquidity in Banking Organisations of 2000. The new guidance issued in September 2008 has been significantly expanded in a number of key areas including guidance for supervisors. In particular, more detailed guidance is provided on:

- the importance of establishing a Liquidity Risk tolerance;
- the maintenance of an adequate level of liquidity, including through a cushion of liquid assets;
- the necessity of allocating liquidity costs, benefits and risks to all significant business activities;
- the identification and measurement of the full range of Liquidity Risks, including contingent Liquidity Risks;
- the design and use of severe stress test scenarios;
- the need for a robust and operational contingency funding plan;
- the management of intraday Liquidity Risk and collateral; and
- public disclosure in promoting market discipline.



The revised guidance is arranged around following 17 principles.

Fundamental	Principle 1	<ul style="list-style-type: none"> Bank is responsible for sound management of Liquidity Risk Supervisor to assess adequacy of liquidity and Liquidity Risk framework, to take prompt action if bank is deficient in order to protect depositors and financial system
	Governance of Liquidity Risk management	
Bank	Principle 2	Clearly define Liquidity Risk appetite
	Principle 3	Senior management oversight
	Principle 4	Incorporate liquidity costs in pricing
	Measurement and management of Liquidity Risk	
	Principle 5	Robust framework for comprehensive cashflow projection
	Principle 6	Monitor and control Liquidity Risk exposures and funding across legal entities, business lines and currencies
	Principle 7	Diversification of liquidity funding sources
	Principle 8	Active management of intra-day liquidity positions and risks
	Principle 9	Active management of collateral positions
	Principle 10	Conduct stress tests on regular basis on variety of scenarios
	Principle 11	Formal Contingency Funding Plan (CFP) for emergency situations
	Principle 12	Maintain a cushion of unencumbered high quality liquid assets as insurance against range of scenarios
	Public Disclosure	
Principle 13	Public disclosure of information on regular basis	
Supervisor	Role of Supervisors	
	Principle 14	Comprehensive assessment of adequacy of bank's liquidity and Liquidity Risk management framework
	Principle 15	Supplement the regular assessment with internal reports, prudential reports and market information
	Principle 16	Intervene to require effective and timely remedial action by bank to address deficiencies
	Principle 17	Communicate with other supervisors, within and across borders, to facilitate effective cooperation in supervision and oversight of Liquidity Risk management



As a response, various regulators have come up with detailed frameworks for Liquidity Risk management in line with the guidance proposed by BCBS. They intend to tighten the Liquidity Risk management for the banks in their regimes, enhance the Liquidity Risk management capabilities and encourage, greater use of stress testing and improvements in contingency funding plans.

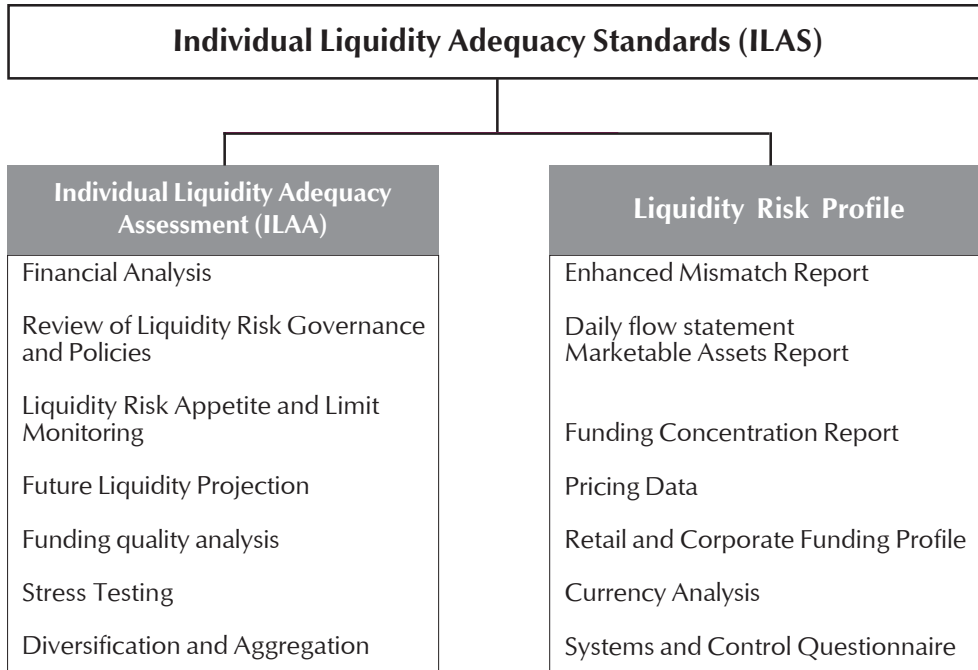
FSA's Approach: Timely and Apt response

Among others it has been found that the new liquidity standards being introduced by Financial Services Authority (FSA) of UK is prudent and highly detailed. FSA has proposed to introduce a completely new liquidity regime, which intends to overhaul the liquidity regulation in UK and has made it applicable to almost all banks and investment firms.

The new liquidity standards are designed around the following five key strands

Systems and Controls	A new systems and controls framework based on the recent work of the Basel Committee on Banking Supervision (BCBS) and the Committee of European Banking Supervisors (CEBS)
Adequate Liquidity and Self Sufficiency	<ul style="list-style-type: none">● All FSA-regulated entities must have adequate liquidity● No dependence on other divisions of their group to survive liquidity stresses, unless permitted to do so by the FSA
Individual Liquidity Adequacy Standards	<ul style="list-style-type: none">● A new domestic quantitative framework for liquidity management for many of the firms that being supervised by the FSA● This framework is based on banks being able to survive liquidity stresses of varying magnitude and duration.
Group wide and cross border management of liquidity	<ul style="list-style-type: none">● A New framework for allowing banks to deviate form self-sufficiency through waivers and modifications● This would not result in undue risk for stakeholders concerned
Reporting	A new reporting framework for liquidity, which will enable the regulator to collect granular, standardized liquidity data at an appropriate frequency so that they can form firm-specific, sector and market-wide views on Liquidity Risk exposures

As part of the proposed Individual Liquidity Adequacy Standards (ILAS), Individual Liquidity Adequacy Assessment (ILAA) is a key component. ILAA would enable the FSA to assess banks' compliance with the rule more effectively, it informs about the bank's ongoing assessment and quantification of Liquidity Risks, risk mitigation measures and required current and future liquidity needs.



ILAS requires the assessment of liquidity adequacy by both, the bank (through Individual Liquidity Adequacy Assessment) and the FSA (through Supervisory Liquidity Review Process), this approach is very similar to the ICAAP/SREP approach followed under Pillar II of Basel II. In line with ICAAP, ILAA would be a board approved document which would review the liquidity governance, policies, roles and responsibilities, defining and monitoring of Liquidity Risk appetite, liquidity forecasting and measure the liquidity adequacy through detailed stress testing. As part of ILAA, banks would also produce detailed quantitative reports on every aspect of liquidity. These reports are highly granular in nature which is a departure from the earlier reporting requirements.



Following are the main components of ILAA

Components	Objectives
Firm Overview	<ul style="list-style-type: none"> ● Financial Position of the firm ● Liquidity ratios ● Profitability ratios
Liquidity Governance Review	<ul style="list-style-type: none"> ● Assessment of liquidity governance in the firm ● Management structure, roles and responsibilities ● Assessment of comprehensiveness of policies and procedures
Liquidity Risk Appetite	<ul style="list-style-type: none"> ● Review Liquidity Risk appetite ● Review various liquidity limits and their relationship with risk appetite ● Reconciliation of Limits and Positions against limits with LRP
Liquidity Source Analysis	Review of the quality of Liquidity Funding sources
Liquidity Projections	<ul style="list-style-type: none"> ● Liquidity Projection ● Assessment for Future Liquidity Adequacy
Stress Testing	Firm specific, Market wide, Combined Stress Tests on, <ul style="list-style-type: none"> ● Wholesale funding risk ● Retail funding risk ● Intra-day Liquidity Risk ● Intra-group Liquidity Risk ● Cross-currency Liquidity Risk ● Off-balance sheet Liquidity Risk ● Franchise viability Liquidity Risk ● Marketable asset risk ● Non-marketable asset risk ● Funding diversification risk Monitoring of results vis-à-vis limits Management action plan for breaches
Aggregation and Diversification	<ul style="list-style-type: none"> ● Aggregation of results of stress test ● Impact of diversification in liquidity funding sources



Along with ILAA, banks are required to produce detailed quantitative reports to FSA at varied frequency, which will provide FSA with quantitative liquidity data that is granular, frequent, standardized and based on firms' contractual commitments and exposures. It will enable the FSA to conduct internal stress testing, construct market-wise view as well as perform peer analysis. Detailed components of LRP are given below

Reports	Key highlights
Daily flows	<ul style="list-style-type: none">● Daily cashflows for period up to 3 months● To spot potential liquidity squeezes early and analyze survival periods
Enhanced Mismatch Report	Contractual cashflows and ILAS risk drivers, across full maturity
Marketable Asset	Details of assets maintained by firm for liquidity purposes
Funding Concentration	<ul style="list-style-type: none">● To identify funding concentration on a firm wide basis● Details of firm's borrowings from unsecured wholesale lenders, by counterparty class
Pricing Data	<ul style="list-style-type: none">● Daily transaction prices and volumes for wholesale unsecured liabilities.● Details by product, tenor, currency
Retail and Corporate Funding	<ul style="list-style-type: none">● Firm's retail and corporate funding profile● To assess stickiness of retail deposits
Currency Analysis	Analysis of FX exposures on firm's Balance sheet
Systems & Controls Questionnaire	To monitor firm's compliance with systems and controls requirements



Challenges and benefits

Other key challenges would include, deriving the limits for various Liquidity Risk drivers from the Liquidity Risk appetite, behavioral analysis of various sources of funds under normal and stressed situations, identification of appropriate stress scenarios for firm-specific, market-wide and combined stresses, estimating changes in cashflows from off-balance sheet transactions like derivatives, correlations among various risk drivers and changes in the same under various stress levels.

Detailed stress testing and granular data reporting will have a significant cost impact as it will require enhancement in systems and training. Also given the stricter liquidity requirements banks would be required to shore up its liquidity base in terms of increased holding of liquid assets. With this bank's will benefit with reduced probabilities of failure and reduced costs of systemic instability. However, given the benefits entailed, the costs in the long term are justified.

In principle, liquidity regulation should make liquidity crises less frequent. The benefit of crises prevented is their probability multiplied by their cost, were there no such regulation. The benefit of liquidity regulation is measured by multiplying the probability of a liquidity crisis occurring by the cost of such crisis. Such a number would indicate the monies saved in the absence of regulation. The probability of liquidity crises appears low – although, as recent events show, they do happen and when they do, they can be very severe. Such crises could have negative effects short of the failure of a bank. These could include sharp falls in profits, large-scale asset sales at fire-sale prices that disrupt asset markets and sudden changes in the volume and terms of bank loans, which might reduce activity in the wider economy.

Considering the recent events in the banking and financial industry across the globe, few pointers that clearly tell about the Liquidity Risk management includes:

- the quality and robustness of individual banks' liquidity stress testing,
- the quality and effectiveness of the contingency plans put in place to deal with stressed circumstances, and
- their reliance on the deposit insurance,
- the nature and frequency of the information available on the liquidity position of banks.

