

Liquidity Risk Supervision and Challenges in Liquidity Risk Management

The experiences of banks in several advanced economies in confronting liquidity stress during the current financial market turmoil have revealed the increasingly complex nature of liquidity risk, while also underscoring the importance of managing liquidity risk effectively. Liquidity risk – defined as the failure of a financial institution to meet expected and unexpected cash flow needs as they arise – is inherent in the financial intermediation function assumed by banking institutions and is a central component of the prudential regulation and supervisory framework. The sound management of liquidity risk is critical both to avert a threat to the solvency of a banking institution, as well as a loss of confidence in the broader financial system which can amplify the systemic nature of liquidity risk.

Implementation of the Liquidity Framework and supervisory assessments of liquidity risk

Banking institutions in Malaysia are required to comply with the Liquidity Framework, introduced by the Bank in 1998, in the assessment of their liquidity positions. The Framework sets out a standard measurement approach that focuses on the ability of a banking institution to manage its liquidity mismatches through the projection of a maturity profile of its assets, liabilities and off-balance sheet commitments over a one-year horizon. The maturity profile reflects the behavioural characteristics of cash flows, and not necessarily their contractual maturities. Based on these projections, banking institutions are expected to maintain adequate liquidity buffers composed primarily of high quality marketable securities to cushion the impact of liquidity shocks transpiring either from institution-specific events (e.g. a “name crisis”), or market-wide stress scenarios (e.g. closure of an important funding market). The Framework also requires banking institutions to identify and monitor, through defined ratios, concentrations of funding sources in large deposits and wholesale or offshore funding markets.

Compliance with the Liquidity Framework has contributed towards ensuring adequate liquidity buffers at the institutional level, in line with the nature and complexity of a banking institution’s activities. It has additionally spurred improvements in the day-to-day liquidity risk management practices of banking institutions. Notably, the requirement for banking institutions to hold liquefiable assets as a proportion of liabilities while taking into account the shape of their actual funding profiles has resulted in enhancements to banking institutions’ infrastructure and systems to support forward projections of cash flows. Banking institutions have correspondingly developed more detailed and structured approaches to monitoring liquidity risk, for example by enhancing internal risk reports to capture more detailed information on flows arising from treasury activities and foreign operations, thereby supporting a more rigorous assessment of sources and drivers of funding liquidity risk. The Framework has also encouraged the institutionalisation of liquidity risk governance structures, with responsibility for the review of liquidity positions formally assigned to the asset-liability management committees, or ALCOs. The constitution of ALCOs comprising members drawn from both business units and control functions has also resulted in the closer integration of the liquidity risk management process with the business activities of banking institutions, thus promoting more effective enterprise-wide risk management approaches.

The Liquidity Framework is reinforced through ongoing supervisory reviews of individual institutions’ liquidity positions and risk management practices. More recently, heightened supervisory attention has been directed towards liquidity stress testing to determine how funding requirements are likely to evolve under both normal and abnormal adverse conditions. A survey conducted by the Bank in early-2009 on stress testing practices of several banking institutions indicates that the level of sophistication of liquidity stress tests performed by banking institutions varied markedly, with

methodologies of stress testing for liquidity risk generally at a less developed stage than for credit risk and market risk. A key challenge noted was the difficulties faced by banking institutions in assessing the impact of synchronised market behaviours on their respective liquidity positions. Banking institutions have responded by adopting a more inclusive approach in the development of stress scenarios, with the broader involvement and interaction of personnel from business units, risk management functions and senior management in providing sound expert judgment in the stress testing exercise where data limitations have impeded the modelling of extreme liquidity events.

Supervisory reviews have also been conducted to assess the robustness of banking institutions' contingency funding plans, including arrangements for their effective implementation, to deal with liquidity stress scenarios. Greater attention has also been focused on the second round and reputational effects related to the execution of contingency funding measures. These assessments overlay a continuing process of engagement between the Bank and banking institutions to develop contingency funding plans that appropriately reflect possible behaviours of funding flows under a variety of stress scenarios, including those associated with abnormal conditions.

Trends and continuing challenges in liquidity risk management

Extreme liquidity pressures experienced during the turmoil in global financial markets have raised new challenges for banking institutions. Some of the specific challenges being addressed include:

Centralisation of funding and liquidity risk management

Treasury functions of banking institutions operating within financial groups are increasingly being centralised to facilitate the more efficient management of group funding sources and external funding relationships. Such arrangements, however, increase the prospect of group-wide liquidity difficulties when one or more individual banking institutions serving as key funding providers for the group as a whole are affected by liquidity stress. This difficulty is often further magnified through the effects of reputational contagion which curtail external funding support. Bank Negara Malaysia has therefore increased its emphasis on the effective monitoring of material intra-group liquidity risks, and requires banking institutions to preserve the granular monitoring of risk positions at the entity-level, in addition to the monitoring of group-level liquidity risk positions. Operational, regulatory, legal and Shariah constraints that may potentially hinder intra-group liquidity support facilities, especially under stress conditions, are also covered in the Bank's supervisory assessments of the effectiveness of centralised liquidity functions.

Foreign currency liquidity risk

Dealings by Malaysian banking institutions in multiple currencies introduce an additional layer of complexity in the management of liquidity risk. While still currently at a modest level, this is expected to increase in tandem with the growing demand for foreign currency financing to support the growth of cross-border investments and trades in goods and services, as well as the greater participation in global financial markets by banking institutions.

A large number of Malaysian banking institutions currently assume full convertibility between currencies, particularly in relation to the ability of ringgit liquidity surpluses to meet foreign currency liquidity shortfalls. This has not posed material concerns for banking institutions in Malaysia to date, with foreign-currency denominated assets forming 6.6% of total assets held domestically, of which approximately 75.5% are US dollar-denominated. However, the expansion of banking institutions' foreign currency activities will potentially increase their exposure to liquidity mismatches associated with sudden changes in the liquidity of foreign exchange markets. This is particularly important for

Malaysia where – pending the further deepening of its foreign exchange market with a sufficiently liquid ringgit swap market – ringgit liquidity surpluses may not adequately cover foreign currency liquidity deficits, particularly under stressed conditions. Adjustments to the Liquidity Framework for banking institutions are therefore being proposed to better anticipate and mitigate the risk of an overestimation of liquidity buffers when efficient access to foreign exchange markets is temporarily affected by adverse market conditions.

Islamic finance

The lack of empirical evidence to support behavioural assumptions has posed a challenge for Islamic banks to accurately estimate the extent to which the unique contract features of Islamic financial transactions may affect their liquidity risk profiles. For example, the use of *mudharabah* contracts, where principal amounts are not guaranteed and returns are dependent on the performance of underlying assets, should, in principle, reduce the funding liquidity risks faced by Islamic banks. However, in practice, Islamic banks face considerable competitive pressure on the profit rates of the *mudharabah* accounts that are being offered. The dominance of trade-based financing contracts involving assets being held in the form of fixed and illiquid assets or inventories, such as through *murabahah*, *ijarah*, or *istisna'* contracts, also potentially reduce balance sheet liquidity.

These challenges are being addressed through ongoing initiatives to better understand the behavioural characteristics of cash flows for different Shariah contracts and their impact on balance sheet liquidity, towards supporting the more effective identification, measurement and management of liquidity risk. The development of a wide range of funding options in the Malaysian Islamic Interbank Money Market has also been instrumental in supporting the liquidity needs of Islamic banking institutions. These include interbank placements based on *mudharabah*-type contracts, sell-and-buy-back agreements as alternatives to repurchase agreements, and Islamic derivatives such as Islamic rate swaps and Islamic FX forwards. Total outstanding instruments increased from RM55.2 billion in 2001 to RM211.0 billion in 2008, while turnover of securities traded on the Islamic Interbank Money Market increased from RM39.7 billion in 2001 to RM185.2 billion in 2008. The growing acceptance of Islamic finance as well as the emergence of more Islamic institutional investors such as takaful operators and Islamic fund managers in recent years have also widened sources for Islamic funding, thus facilitating the diversification of funding strategies for Islamic banks.

Future enhancements

Enhancements to the regulatory framework will be undertaken to promote further improvements in liquidity risk management practices within banking institutions. This will include a review of the Liquidity Framework to:

- require banking institutions with large foreign multi-currency operations to manage liquidity risk by currency;
- introduce more detailed qualitative and quantitative standards to be observed by banking institutions for their cash flow projections; and
- allow the use of internal measurement approaches, where it can be demonstrated that they provide a level of resilience equal to or greater than the minimum regulatory requirement.

The enhancements to the Liquidity Framework will also be supplemented by the issuance of qualitative liquidity risk management standards in 2009, incorporating developments in international standards and practices in liquidity risk management and lessons from the current turmoil.