



Monetary Authority of Singapore

LIQUIDITY RISK

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1 INTRODUCTION

These guidelines provide guidance on sound liquidity risk management practices. The extent and degree to which an institution adopts these guidelines should commensurate with the size, nature and complexity of its activities.

2 FUNDAMENTALS

2.1 Liquidity risk refers to the risk of an institution being unable to meet its financial obligations as they fall due without incurring unacceptable costs or losses through fund raising and assets liquidation. It could be a result of the inability of the financial institutions to manage unplanned decreases or changes in funding sources and the failure to recognise or address changes in market conditions that affect the institution's ability to liquidate assets quickly and with minimal loss in value.

2.2 Liquidity risk often arises from other forms of financial risk such as credit and market risks. Real or perceived problems in any business area may hinder an institution's ability to raise funds at reasonable prices, thereby increasing liquidity risk. For example, large credit losses due to loan defaults could cause liquidity problems for an institution if providers of funding were to become concerned about the impact of the losses on the institution's creditworthiness. For insurers, the nature of their business typically results in a lower exposure to liquidity risk compared with banks. However, perceived reputational issues with a life insurer may result in large surrenders over a short period that require the insurer to liquidate assets at depressed prices. For general insurers, even though their policies do not have cash values, a series of large claims over a short period may still result in liquidity shortfalls. Therefore, an institution's consideration of liquidity risk should capture all risk factors that it is exposed to, and it must manage these risks soundly.

2.3 A liquidity crisis could have a negative impact on earnings and capital and, in the extreme, cause the collapse of an otherwise solvent institution. Earnings and growth potential could be negatively affected if an institution's liquidity position constrains it from undertaking a transaction at normal market prices.

2.4 An institution should have a strategy to manage its liquidity risk prudently and adequately. The strategy should take into account the institution's risk profile, risk appetite as well as market and macroeconomic conditions. Policies and processes should be established to support the

execution of this strategy and ensure compliance with the liquidity requirements. These should cover the identification, measurement, evaluation, monitoring, reporting and control or mitigation of liquidity risk over an appropriate set of time horizons.

3 PRINCIPLES FOR SOUND LIQUIDITY RISK MANAGEMENT

3.1 Application of Guidelines

This section outlines the key principles for sound liquidity risk management. Institutions should also take into account relevant regulatory requirements and industry standards such as the Basel Committee on Banking Supervision *Principles for Sound Liquidity Risk Management and Supervision* published in September 2008, where appropriate. Insurers should adopt the principles and sound practices provided in these guidelines to the extent applicable to the nature of their business.

3.2 Governance

3.2.1 An institution should consistently observe prescribed liquidity requirements.

3.2.2 An institution should assess its liquidity risk profile (including on- and off-balance sheet risks) in the context of the markets and macroeconomic conditions in which it operates.

3.2.3 An institution should have a robust liquidity management framework that requires maintaining sufficient liquidity to withstand a range of stress events. This includes appropriate policies and processes for managing liquidity risk that have been approved by the institution's Board of Directors ("Board"). These policies and processes should also provide a comprehensive institution-wide view of liquidity risk and are consistent with the institution's risk profile.

3.3 Strategies, Policies and Procedures

3.3.1 An institution should have liquidity strategies, policies and processes that establish an appropriate and properly controlled liquidity risk environment including:

- (a) clear articulation of an overall liquidity risk appetite that is appropriate for the institution's business and its role in the financial system and that is approved by its Board;

- (b) sound day-to-day and intraday liquidity risk management practices;
- (c) effective information systems to enable active and timely identification, aggregation, monitoring and control of liquidity risk exposures and funding needs (including active management of collateral positions) institution-wide;
- (d) adequate oversight by the institution's Board in ensuring that management effectively implements policies and processes for the management of liquidity risk in a manner consistent with the institution's liquidity risk appetite; and
- (e) regular review by the institution's Board (at least annually) and appropriate adjustment of the institution's strategy, policies and processes for the management of liquidity risk in the light of the institution's changing risk profile and external developments in the markets and macroeconomic conditions in which it operates.

3.4 Measurement and Management of Liquidity Risk

An institution should establish and regularly review funding strategies and policies and processes for the ongoing measurement and monitoring of funding requirements and the effective management of funding risk. The policies and processes should take into account how other risks (e.g. credit, market, operational and reputation risk) may impact the institution's overall liquidity strategy, and include:

- (a) an analysis of funding requirements under alternative scenarios;
- (b) the maintenance of a cushion of high quality, unencumbered, liquid assets that can be used, without impediment, to obtain funding in times of stress;
- (c) diversification in the sources (including counterparties, instruments, currencies and markets) and tenor of funding, and regular review of concentration limits;

- (d) regular efforts to establish and maintain relationships with liability holders; and
- (e) regular assessment of the capacity to sell assets.

3.5 Contingency Funding Plan

An institution should have robust contingency funding plans to handle liquidity problems. An institution's contingency funding plan should be formally articulated, adequately documented and set out the institution's strategy for addressing liquidity shortfalls in a range of stress environments without placing reliance on lender of last resort support. The institution's contingency funding plan should establish clear lines of responsibility, include clear communication plans (including communication with the supervisor) and be regularly tested and updated to ensure it is operationally robust. Interactions with other related entities should also be considered.

3.6 Stress Testing and Scenario Analysis

An institution should include a variety of short-term and protracted institution-specific and market-wide liquidity stress scenarios (individually and in combination), using conservative and regularly reviewed assumptions, into its stress testing programmes for risk management purposes. The results of the stress tests should be used by the institution to adjust its liquidity risk management strategies, policies and positions and to develop effective contingency funding plans.

3.7 Foreign Currency Management

Where an institution's foreign currency business is significant, or the institution has significant exposure in a given currency, the institution should undertake separate analysis of its strategy and monitor its liquidity needs separately for each such significant currency. This includes the use of stress testing to determine the appropriateness of mismatches in that currency and, where appropriate, the setting and regular review of limits on the size of its cash flow mismatches for foreign currencies in aggregate and for each significant currency individually.

3.8 Asset Encumbrance

An institution's levels of encumbered balance-sheet assets should be managed within acceptable limits to mitigate the risks posed by excessive levels of encumbrance in terms of the impact on the institution's cost of funding and the implications for the sustainability of its long-term liquidity

position. An institution should provide adequate disclosure of such risks and to set appropriate limits to mitigate the identified risks.

Ref	Sound Practice	Yes/No
<p>3</p> <p>4</p>	<p>Is the liquidity policy reviewed at the Board (or head office) and senior management/ALCO level at least annually and when there are any material changes in the institution's current and prospective liquidity risk profile?</p> <p>Are significant and frequent policy exceptions reviewed and approved regularly?</p> <p>Procedures</p> <p>Are appropriate procedures and processes established to implement the liquidity policy?</p> <p>Are the procedures and processes reviewed and updated periodically?</p> <p>ALCO</p> <p>Does ALCO comprise senior management from each major section of the institution that assumes and/or manages liquidity risk?</p> <p>Does ALCO meet on a frequency that is commensurate with the institution's business activities?</p> <p>Are the terms of reference, composition, minimum quorum and frequency of meeting of the ALCO formalised and clearly documented?</p>	
<p>B</p> <p>1</p>	<p><u>Risk Measurement, Monitoring and Controls</u></p> <p>Funding Requirements</p> <p>Are net funding requirements identified by assessing cash inflows against outflows?</p> <p>Is the maturity mismatch profile constructed to measure both near- and long-term liquidity needs?</p> <p>Are all cashflows (including off-balance sheet items)</p>	

Ref	Sound Practice	Yes/No
	<p>captured under the maturity profile? If not, are these excluded cashflows approved by senior management/ALCO?</p> <p>Are cashflow exclusions reviewed periodically to ensure that the exclusions remain appropriate?</p> <p>Does the maturity profile have adequate time bands to effectively monitor both near- and long-term liquidity needs?</p> <p>Are the assumptions underlying the behaviour of assets, liabilities and off-balance sheet items, used in preparing the maturity profile, clearly detailed?</p> <p>Are the behavioural assumptions supported by empirical evidence?</p> <p>Are the behavioural assumptions approved by senior management/ALCO and well-documented?</p> <p>Are the behavioural assumptions reviewed periodically to ensure their continuing validity?</p> <p>Does the maturity profile have appropriate granularity to reflect the nature of business?</p> <p>Are limits on the acceptable size of the cumulative funding mismatch position for the near-term time bands (particularly positions from sight up to one month) established?</p> <p>Is there a maturity mismatch analysis of all cashflows denominated in Singapore Dollars?</p> <p>Is there a separate maturity mismatch analysis of each foreign currency which represents a significant portion of the institution's total funding and/or is considered to be not easily convertible?</p> <p>Are maturity mismatch limits established for individual currencies?</p>	

Ref	Sound Practice	Yes/No
2	<p>Funding Concentrations</p> <p>Are appropriate concentration limits established?</p> <p>Is there a system for monitoring compliance with the concentration limits?</p> <p>Are the concentration limits reviewed periodically and when market conditions warrant a review?</p> <p>Is there an ongoing analysis of the funding liabilities to assess the exposure to funding concentration risks (by type of funding instruments, nature of funds provider and maturity profile)?</p>	
3	<p>Funding Capacity</p> <p>Is the “normal” funding capacity in both retail and wholesale markets well estimated?</p> <p>Is there a process to monitor the ability to raise funds in both retail and wholesale markets?</p>	
4	<p>Intra-Group Liquidity</p> <p>Is intra-group liquidity analysed and monitored effectively?</p> <p>Are regulatory or legal impediments to accessing liquidity from related sources addressed in the intra-group liquidity analysis and monitoring program?</p>	
5	<p>Scenario Analysis</p> <p>Are plausible event-driven scenarios constructed to analyse the behaviour of cashflows under these scenarios on a periodic basis?</p> <p>Does the scenario analysis encompass a range of specific events and at minimum, include the following scenarios:</p> <ul style="list-style-type: none"> • institution-specific crisis scenario; and 	

Ref	Sound Practice	Yes/No
6	<p>• general market crisis scenario?</p> <p>Are the assumptions underlying the behaviour of the cashflows of assets, liabilities and off-balance sheet items clearly detailed under all crisis scenarios?</p> <p>Are these assumptions approved by senior management/ALCO?</p> <p>Are the behavioural assumptions reviewed periodically to ensure their continuing validity?</p> <p>Does senior management/ALCO review the results of the scenario analysis?</p> <p>Are the results of the scenario analysis and any resulting actions reported to and discussed with the Board?</p> <p>Contingency Plan</p> <p>Does the institution have a contingency funding plan? Is the plan reviewed regularly (at least annually) by the Board?</p> <p>Is the contingency plan comprehensive? Does the plan:</p> <ul style="list-style-type: none"> • designate the personnel responsible for identification of crisis and contingency management; • define clearly the responsibilities of all personnel in a crisis situation; • specify the early warning indicators to identify an approaching liquidity crisis event; • establish reporting procedures to ensure that all necessary information is available for the Board and/or senior management to make quick decisions; • set out procedures for making up cashflow shortfalls in crisis situations; • outline courses of action for altering asset and 	

Ref	Sound Practice	Yes/No
7	<p>liability behaviour; and</p> <ul style="list-style-type: none"> • detail the plan for public relations and media management? <p>Is the contingency management information system tested regularly to ensure the availability of timely reports for rapid decision-making during periods of liquidity disruptions?</p> <p>Limits and Ratios</p> <p>Have the Board and/or senior management/ALCO established limits on the nature and amount of liquidity risk that the institution is willing to assume?</p> <p>Are the types of limits documented in the liquidity policy and reviewed periodically (at least annually)?</p> <p>Is there a system for monitoring compliance with the established limits?</p> <p>Is the responsibility for monitoring limits assigned to a function independent of the funding desks?</p> <p>Is there a defined procedure for reporting limit exceptions to the appropriate authorities?</p>	