CONSULTATION PAPER

P004 - 2006
May 2006

Liquidity Risk Supervision - A Revised Minimum Liquid Asset Framework

MAS Monetary Authority of Singapore

TABLE OF CONTENTS

Table of Contents i

Executive Summary 1

1 Introduction 2
1.1 Objective 2
1.2 Current Liquidity Risk Supervision Framework 2

2 The Review 3
2.1 Motivations 3
2.2 Key Findings 3

3 The Proposals 5
3.1 Liquidity Risk Management Guidelines 5
3.2 Revising the Minimum Regulatory Requirements 5
3.2.1 Qualifying Liabilities 5
3.2.2 Eligible Liquid Assets 6
3.2.3 MLA Requirement for Non-BS Banks 7
3.2.4 MLA Requirement for BS Banks 8
3.2.5 Tier 1 MLA Requirement 9
3.3 MLA Drawdown 9

4 Conclusion 10

EXECUTIVE SUMMARY

The current risk-based liquidity risk supervision framework, as articulated in MAS Notice 613, has been in place since 2001. The framework allows banks to adopt a general methodology or risk-sensitive methodology to determine regulatory liquidity reserves depending on their level of sophistication. While it has worked well, certain aspects of the framework could be fine-tuned.

MAS is therefore proposing changes to the minimum regulatory liquidity requirements, including a revised set of 'Qualifying Liabilities' to replace 'Liabilities Base', an expanded range of eligible liquid assets, a revised computation formula and maintenance period, and a revised Tier 1 requirement. In addition, to ensure that banks are able to deal with liquidity stress situations on a timely basis, the process for drawing down of liquid reserves will be streamlined.

1 INTRODUCTION

1.1 OBJECTIVE

1.1.1 Liquidity risk is defined as the risk to a bank's earnings or capital arising from its inability to meet its obligations as they fall due, without incurring significant costs or losses. Liquidity stress can lead to financial distress or even insolvency. More importantly, if not dealt with adequately and in a timely manner, the liquidity stress of an individual bank may trigger a crisis of confidence in the banking sector as a whole.

1.1.2 Thus, the objective of MAS' liquidity risk supervision framework is to contribute towards promoting a stable financial system by requiring banks to have robust liquidity risk management capabilities. MAS' approach for liquidity risk supervision is consistent with the objectives and principles of financial supervision, as articulated in the MAS monograph '*Objectives and Principles of Financial Supervision in Singapore'*.

1.2 CURRENT LIQUIDITY RISK SUPERVISION FRAMEWORK

1.2.1 MAS Notice 613 ("MAS 613") stipulates the Minimum Cash Balance ("MCB") and Minimum Liquid Assets ("MLA") requirements. In 2001, MAS 613 was revised to phase in a risk-based liquidity risk supervision framework in place of a 'one-size-fits-all' 18% MLA requirement. Banks that meet MAS' bank-specific liquidity assessment requirements were assigned a base MLA ranging between 12% and 15% of liabilities base ("LB"). The MLA requirements for these banks, also known as 'BS banks'[1], were determined by the higher of the banks' base MLA or cash flow volatility[2], subject to a maximum of 18% of LB.

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[1] The other banks are known as 'non-BS banks'.

[2] This is defined as three times the standard deviation of the bank's projected 30-calendar day SGD net cumulative cash flow mismatches over the 125 business days before the computation date, expressed as a percentage of LB.

1.2.2 The bank-specific liquidity assessment is a rigorous on-site review process to assess the bank's liquidity risk management policies and practices. In particular, the following elements are assessed:

- Liquidity Policy and Management Oversight
- Maturity Mismatch Analysis
- Scenario Analysis
- Contingency Funding Plan
- Diversification and Stability of Liabilities
- Access to Interbank and Other Wholesale Markets
- Management of Liquidity in Individual Currencies
- Intra-group Liquidity Management

2 THE REVIEW

2.1 MOTIVATIONS

2.1.1 The key motivations for the review are:

(a) To enhance the current liquidity risk supervision framework, with a view to encourage banks to adopt forward-looking liquidity management practices; and

(b) To fine-tune the requirements under MAS 613 with more risk-sensitive and forward-looking measures.

2.2 KEY FINDINGS

2.2.1 The key findings of the review are as follows:

Overall Framework

2.2.1.1 The existing framework, where banks can adopt either a general methodology or a risk-sensitive methodology for determining

their MLA requirement, has worked well. However, the existing cash flow volatility measure for BS banks does not distinguish between positive and negative cash flows. Also, the lagged MLA maintenance period for non-BS banks does not accurately reflect their current liquidity needs. Hence, there is a need to fine-tune both the MLA computation for BS banks and the maintenance period for non-BS banks.

2.2.1.2 The first line of defence against liquidity crises is a bank's own risk management policies and practices. MAS will therefore continue to focus on reviewing a bank's liquidity risk management policies and practices. In this regard, MAS will also evaluate the liquidity risk management of non-BS banks against the existing assessment criteria under the bank-specific liquidity risk supervision framework.

Minimum Regulatory Requirements

2.2.1.3 The following aspects of regulatory MLA requirements can be fine-tuned:

- The components of LB can be redefined to reflect a more appropriate coverage;
- The eligible liquid assets for meeting MLA requirements can be expanded to afford banks greater flexibility in managing their portfolio of liquid assets; and
- With the implementation of Asset Maintenance ("AM"), banks should meet their AM and MLA requirements separately, given the different objectives of these two requirements.

MLA Drawdown Procedures

2.2.1.4 Since MLA is maintained primarily as a buffer for liquidity stress situations, to facilitate the timely use of MLA for dealing with such

situations, banks should be allowed to utilise their MLA without having to go through a time-consuming approval process.

3 THE PROPOSALS

3.1 LIQUIDITY RISK MANAGEMENT GUIDELINES

3.1.1 MAS intends to publish a set of Liquidity Risk Management Guidelines to convey MAS' expectations of banks for liquidity risk management and to assist banks in enhancing their existing practices. Banks are encouraged to adopt these Guidelines, taking into account the nature, size and complexity of their operations.

3.2 REVISING THE MINIMUM REGULATORY REQUIREMENTS

3.2.1 Qualifying Liabilities

3.2.1.1 A revised set of 'Qualifying Liabilities' will replace the current LB. In assessing whether a particular class of liability or obligation should be included, MAS took into account the liquidity characteristics of that class of liability or obligation.

3.2.1.2 The composition of Qualifying Liabilities will be as follows:

- Gross SGD liabilities to non-bank customers;
- Net cumulative SGD interbank liabilities of up to one month[3]; and
- 15% of SGD undrawn commitments.

3.2.1.3 All existing exclusions from LB, such as funds received through reverse repurchase agreements of Singapore Government

[3] However, if this item is a net asset, then the net asset will not be allowed to be deducted from Qualifying Liabilities.

Securities (SGS), swaps, issuance of subordinated debt and bills of exchange, subject to the relevant qualifying criteria, will continue to be excluded from the computation of Qualifying Liabilities.

3.2.2 Eligible Liquid Assets

3.2.2.1 The range of assets which qualify as eligible liquid assets will be expanded. Besides cash and SGS, investment grade SGD-denominated debt securities issued by supranationals, statutory boards, banks and corporates will also qualify as eligible liquid assets. To ensure sufficient market liquidity, such debt securities need to have a minimum issue size of S$250 million and would be subject to the following valuation haircuts:

Description	Moody's	S&P	Fitch	Haircut
Long Term Issue Ratings by Rating Agencies	Aaa Aa1 Aa2 Aa3	AAA AA+ AA AA-	AAA AA+ AA AA-	10%
	A1 A2 A3	A+ A A-	A+ A A-	20%
	Baa1 Baa2	BBB+ BBB	BBB+ BBB	30%

Description	Moody's	S&P	Fitch	Haircut
Short Term Issue Ratings by Rating Agencies	P-1	A-1	F1	10%
	P-2	A-2	F2	20%
	P-3	A-3	F3	30%

Note: If more than one rating is available, the lowest rating will be used. Where a particular debt issue is assigned both long term and short term ratings, the higher haircut will be applied.

3.2.2.2 Eligible liquid assets are subject to the following additional requirements:

- The assets should be unencumbered;
- The assets cannot be exposed to the risks of the bank itself and parties related to the bank[4];
- The assets cannot be used to meet MCB or AM requirements;
- The assets cannot be convertible debt securities;
- Where the bank holds more than 20% of the total market value of a particular issue of debt security, a 50% haircut should be applied; and
- The assets should be marked-to-market.

3.2.2.3 Bills of exchange, subject to the relevant qualifying criteria, will continue to be recognised as eligible liquid assets, and, together with SGS, will not be subject to haircuts.

3.2.3 MLA Requirement for Non-BS Banks

3.2.3.1 Banks will continue to have the option of adopting the risk-sensitive bank-specific framework or remaining in the general framework. Banks in the general framework, i.e. a non-BS bank, will continue to be subject to the flat MLA requirement of 18% of its Qualifying Liabilities.

3.2.3.2 Instead of the current 2-week computation / 2-week maintenance period, non-BS banks will be required to compute their MLA requirements daily and maintain MLA on the second business day after the computation day (e.g. Monday's MLA requirement will be maintained on Wednesday). This will ensure that the level of reserves maintained is more reflective of a bank's current liquidity needs.

[4] Parties related to the bank would include the immediate or ultimate holding company of the bank, all subsidiaries, associated companies, and subsidiaries and associated companies of any holding company of the bank.

3.2.4 MLA Requirement for BS Banks

3.2.4.1 The MLA requirement of BS banks will be the amount computed using a revised cash flow volatility formula, subject to a floor of 5% of its Qualifying Liabilities and a cap of between 10% and 15% of its Qualifying Liabilities. The specific MLA cap to be assigned to each BS bank will depend on the strength and robustness of the bank's liquidity risk management as assessed by MAS.

3.2.4.2 The current cash flow volatility computation formula is $3\sigma_{1\text{-mth}}$[5]. While this volatility measure is able to provide estimates of tail events (i.e. stress events), it does not distinguish between positive and negative cash flows. Thus, a BS bank with positive cash flows maintains the same amount of liquid assets as one with negative cash flows so long as their volatilities are similar. To attain greater risk sensitivity, the new computation formula will incorporate a projected 1-week Net Cumulative Cash Flows ("$NCCF_{1\text{-week}}$") component with an appropriate volatility measure, $3\sigma_{1\text{-week}}$[6], as follows:

$$\text{MLA Requirement} = 3\sigma_{1\text{-week}} - NCCF_{1\text{-week}}$$

3.2.4.3 Deducting $NCCF_{1\text{-week}}$ from $3\sigma_{1\text{-week}}$ would result in an MLA requirement which is more reflective of a BS bank's funding risk and would incentivise the bank to proactively manage its cash flows. Thus, BS banks with positive $NCCF_{1\text{-week}}$ would have lower MLA requirements, and those with negative $NCCF_{1\text{-week}}$ would have higher MLA requirements.

3.2.4.4 Notwithstanding the 1-week period used for computation, MAS expects banks to profile and monitor their cash flows over any longer period as necessary.

[5] $3\sigma_{1\text{-mth}}$ is defined as 3 times the standard deviation of a bank's projected 30-calendar day net cumulative cash flow mismatches over the 125 business days before the computation day.

[6] $3\sigma_{1\text{-week}}$ is defined as 3 times the standard deviation of a bank's projected 7-calendar day net cumulative cash flow mismatches over the 125 business days before the computation day.

3.2.5 Tier 1 MLA Requirement

3.2.5.1 In consideration that SGS may be readily converted to cash with same day settlement, and would largely serve the same purpose as cash balances in meeting liquidity needs under stress situations, all banks (BS and non-BS banks) will be required to maintain at least 50% of their MLA requirements in Tier 1 assets, comprising cash and SGS. This requirement will replace the existing minimum 10% SGS requirement. Banks are expected to ensure that pertinent arrangements have been made for their Tier 1 MLA to be readily available to meet their immediate liquidity needs.

3.3 MLA DRAWDOWN

3.3.1 A bank is required to meet its MLA requirement at all times and it may utilise its MLA only in a liquidity stress situation. It is the bank’s responsibility to ascertain the need for a MLA drawdown and to justify that the drawdown of its MLA reserves are indeed needed for liquidity stress purposes.

3.3.2 To facilitate timely drawdowns by banks to deal with liquidity stress situations, banks will only need to give prior notice to MAS in writing of their intent to draw down their MLA and the reasons for doing so. Banks which have drawn on their MLA will be required to keep MAS informed of developments during the stress situation. Where necessary, MAS may take certain supervisory actions, including escalating the liquidity crisis event to the Head Office and home regulator in cases involving foreign banks in Singapore. Should significant prudential concerns arise over the drawdown, MAS reserves the right to curtail the use of MLA at any time. To prevent abuse, banks which fail to provide the necessary notification and adequate justification will be heavily penalised. Banks are required to inform MAS and restore their MLA as soon as they have absolved themselves from the liquidity crisis.

3.3.3 To minimise disruptions to the financial system due to net debit positions in MEPS, MAS will be empowered to unilaterally lend against a bank's MLA for the purpose of facilitating end-of-day cheque clearing and GIRO settlements. MAS may impose penalty charges on the net debit bank for any MLA shortfall arising therein.

4 CONCLUSION

4.1 MAS would like to seek feedback on the following changes to the regulatory liquidity requirements:

(a) Imposing MLA requirements on a revised set of 'Qualifying Liabilities';
(b) Expanding the range of eligible liquid assets;
(c) Revising the computation of MLA requirements for BS banks;
(d) Revising the computation and maintenance period for non-BS banks;
(e) Replacing the existing minimum SGS requirement with a minimum Tier 1 MLA requirement; and
(f) Formalising the procedures for MLA drawdown.

4.2 MAS invites interested parties to provide their feedback on these proposals by 30 June 2006. Electronic submission is encouraged. Written comments may be submitted to:

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