

CONSULTATION PAPER

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Liquidity Risk Management Framework for Fund Management Companies

The logo of the Monetary Authority of Singapore (MAS), featuring the letters 'MAS' in a white serif font inside a gold circle, which is set against a dark blue square background.

MAS

Monetary Authority of Singapore

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1 Preface

1.1 The Monetary Authority of Singapore (“MAS”) proposes to introduce a liquidity risk management framework for fund management companies (“FMCs”) with respect to the collective investment schemes (“CIS”) that they manage. This framework seeks to provide guidance on sound practices in liquidity risk management of CIS, to address the risks to investors from potential liquidity mismatches between the CIS’ portfolio liquidity and redemption terms. MAS intends to introduce the framework in the form of guidelines (“Guidelines”) to accord proportionality to FMCs in implementing the liquidity risk management practices in line with their roles in managing the CIS, the business models and fund structures that they employ.

1.2 In addition, MAS is proposing to amend the Code on Collective Investment Schemes (“CIS Code”) to impose additional portfolio requirements for money market funds (“MMF”) due to their systemic relevance in the event of a crisis.

1.3 MAS invites comments from FMCs and other interested parties on the proposed Guidelines and the amendments to the CIS Code.

Please note that all submissions received will be published and attributed to the respective respondents unless they expressly request MAS not to do so. As such, if respondents would like (i) their whole submission or part of it, or (ii) their identity, or both, to be kept confidential, please expressly state so in the submission to MAS. In addition, MAS reserves the right not to publish any submission received where MAS considers it not in the public interest to do so, such as where the submission appears to be libellous or offensive.

1.4 Please submit written comments by 27 November 2017 to –

Capital Markets Intermediaries Department II
Monetary Authority of Singapore
10 Shenton Way, MAS Building
Singapore 079117
Fax: (65) 62203973
Email: LRM_consultation@mas.gov.sg

1.5 Electronic submission is encouraged. Please use this [template](#) for your submission to facilitate our collation efforts.

2 Introduction

2.1 Effective liquidity risk management of CIS is important to safeguard the interests of investors. It minimises the risk that redemption requests cannot be met, or are met in a manner that compromise the interests of the CIS' remaining investors.

2.2 There is an existing requirement for FMCs to put in place a risk management framework to identify, address and monitor the risks associated with the customer assets that it manages¹. To supplement this requirement, MAS proposes to issue a set of Guidelines which are specific to the management of liquidity risk in CIS. MAS also proposes to amend the CIS Code to address liquidity risk in MMFs by introducing additional portfolio requirements for MMFs. The proposed Guidelines and CIS Code amendment take into account the international recommendations promulgated by the Financial Stability Board² ("FSB") and the International Organization of Securities Commissions³ ("IOSCO").

2.3 The applicability, key areas and implementation of the proposed Guidelines and CIS Code provisions are summarised in the following sections, and detailed in Annexes B and C respectively.

3 Applicability of the Guidelines

3.1 Open-ended CIS provides investors the right to redeem units on a regular basis. Effective liquidity risk management is important for the smooth operation of an open-ended CIS, so that investors' redemption requests can be met in a timely and orderly manner. MAS proposes to apply the Guidelines to FMCs which manage open-ended CIS. Specifically, this would include licensed FMCs⁴ and registered FMCs⁵ which are responsible for the portfolio management of an open-ended CIS. The determination of the applicability of these Guidelines should be based on the substance of the FMC's role

¹ Paragraph 13(B)(1) of the Securities and Futures (Licensing and Conduct of Business) Regulations states that the holder of a capital markets services licence for fund management shall – (a) put in place a risk management framework that identifies, addresses and monitors the risks associated with assets under its management) which is appropriate to the nature, scale and complexity of the assets.

² The FSB issued its recommendations to address structural vulnerabilities from asset management activities in January 2017

³ The IOSCO consulted on its recommendations on liquidity risk management for collective investment schemes in July 2017. IOSCO has also published a set of policy recommendations for MMFs in October 2012 to specifically address the liquidity risks in MMFs.

⁴ FMCs which are required to hold a capital markets services licence for fund management under section 82(1) of the Securities and Futures Act (Cap. 289)

⁵ FMCs which are registered under paragraph 5(1)(i) of the Second Schedule to the Securities and Futures (Licensing and Conduct of Business) Regulations (Rg.10)

in relation to the open-ended CIS. FMCs which have discretionary authority for making investment or trading decisions for a CIS should implement the liquidity risk management practices set out in these Guidelines. The CIS Code will be amended to make reference to the proposed Guidelines and to emphasise the responsibility of FMCs to put in place sound liquidity risk management practices. The proposed amendment is set out below:

New chapter 3.1(i) of the CIS Code

Liquidity risk management

The manager should assess and adopt the liquidity risk management practices that are set out in the Guidelines on Liquidity Risk Management Framework for Fund Management Companies, on a proportionate basis that is commensurate with its role and the scale and complexity of its operations and the schemes that it manages.

3.2 FMCs which are sub-managers with delegated authority to manage a portion of the portfolio are expected to assess and adopt the Guidelines to the extent possible, taking into account the liquidity risk management policies of the main manager. The Guidelines would not apply to FMCs which do not have discretionary authority for the fund, such as FMCs which provide research or non-discretionary advice to another FMC.

3.3 While liquidity risk management may be less critical to closed-ended CIS, FMCs which manage closed-ended funds should be mindful of liquidity issues which may arise at the point of termination of the CIS or divestment of the CIS' assets.

Question 1. MAS seeks comments on the applicability of the Guidelines, i.e. to apply the Guidelines to licensed and registered FMCs which have responsibility for the portfolio management of an open-ended CIS on a proportionate basis that is commensurate with their roles and the scale and complexity of their operations and the CIS that they manage.

4 Key Areas Covered in the Guidelines and the CIS Code

4.1 The proposed Guidelines cover the key components of an FMC's liquidity risk management framework while the proposed amendments to the CIS Code address liquidity risks that are specific to MMFs:

- (i) **Governance.** An FMC's liquidity risk management process must be supported by strong and effective governance. The Board and senior management of the

FMC should ensure that the FMC has a liquidity risk management function, and subject it to effective oversight.

- (ii) **Initial design of product.** The evaluation of liquidity risks that the CIS may face throughout its life cycle should begin at the product design stage. In particular, the FMC should ensure that the CIS' dealing (subscription and redemption) arrangement is aligned with its investment strategy and liquidity profile. The FMC should consider the appropriateness of liquidity management tools that may be used in the event of a liquidity problem. Liquidity management tools should only be used where fair treatment of investors is not compromised.
- (iii) **Ongoing liquidity risk management.** After the launch of the CIS, an FMC is expected to monitor and manage the CIS' liquidity risks on an ongoing basis so that it is able to anticipate or identify an emerging liquidity issue before it occurs, and take steps to minimise investor detriment.

For MMFs in particular, MAS proposes to amend the CIS Code to require MMFs to hold a minimum amount of liquid assets to limit asset-liability mismatches and strengthen their ability to meet redemptions. MAS also proposes to impose additional portfolio weighted average maturity requirements on an MMF.

- (iv) **Stress testing.** An FMC should satisfy itself that its CIS can withstand liquidity stresses during market disruptions. As such, regular stress testing should be conducted based on historical market conditions and forward-looking hypothetical scenarios.

Question 2. MAS seeks comments on the proposed Guidelines as set out in [Annex B](#).

Question 3. MAS seeks comments on the proposed additional portfolio requirements for MMFs under the CIS Code as set out in [Annex C](#).

5 Implementation and Transitional Arrangements

5.1 The Guidelines and additional portfolio requirements for MMFs under the CIS Code are targeted to be issued in Q1 2018. MAS proposes to provide a transitional period of three months for FMCs to assess and adopt the sound practices in the Guidelines, where appropriate, and for MMFs to comply with the revised CIS Code.

5.2 FMCs are encouraged to engage MAS as they implement and/or enhance their liquidity risk management framework. MAS will adopt a consultative approach at the start

to assessing an FMC's level of compliance and adequacy of liquidity risk management processes.

Annex A

LIST OF QUESTIONS

- Question 1.** MAS seeks comments on the applicability of the Guidelines, i.e. to apply the Guidelines to licensed and registered FMCs which have responsibility for the portfolio management of an open-ended CIS on a proportionate basis that is commensurate with their roles and the scale and complexity of their operations and the CIS that they manage. 5
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Annex B

**PROPOSED GUIDELINES ON LIQUIDITY RISK MANAGEMENT PRACTICES
FOR FUND MANAGEMENT COMPANIES**

1. Introduction

1.1 These Guidelines, issued pursuant to section 321 of the Securities and Futures Act (Cap. 289) ["SFA"], aim to provide guidance to Fund Management Companies ["FMCs"] on sound liquidity risk management practices with respect to the management of collective investment schemes ["CIS"]. These guidelines apply to:

- (a) Licensed FMCs, which hold a capital markets services licence for fund management; and
- (b) Registered FMCs, which are registered under paragraph 5(1)(i) of the Second Schedule to the Securities and Futures (Licensing and Conduct of Business) Regulations (Rg. 10) ["SF(LCB)R"].

1.2 These Guidelines should be read in conjunction with the provisions of the SFA, the SF(LCB)R, Code on Collective Investment Schemes ["CIS Code"] and other relevant legislation, as well as other guidelines and FAQs issued by MAS. FMCs should also continue to take into account MAS' Guidelines on Risk Management Practices that provide guidance on general risk management practices for financial institutions supervised by MAS. The requirements on authorised schemes under the CIS Code will also continue to apply.

1.3 The International Organisation of Securities Commissions ["IOSCO"] has also published the Principles of Liquidity Risk Management for Collective Investment Schemes and the Principles on the Suspension of Redemptions that provide guidance on the management of liquidity and suspension of redemptions in open-ended funds. In addition to the liquidity risk management practices set out in these Guidelines, FMCs should take into account and comply with the international standards prescribed in these reports by the IOSCO, where relevant.

1.4 Effective liquidity risk management of CIS is important to mitigate potential mismatches between the liquidity of the CIS' underlying assets and the redemption terms under which the CIS is offered to investors. It minimises the risk whereby FMCs are unable to meet investors' redemption requests in an orderly manner, and seeks

to ensure fair treatment of investors, including those who have not made redemption requests.

- 1.5 MAS recognises the heterogeneity in the business models of FMCs and the fund structures that they employ. In particular, open-ended CIS provide investors the right to redeem units on a regular basis, and with little or no advance notification. In this regard, it is pertinent for managers of open-ended CIS to put in place effective liquidity risk management frameworks and practices, to ensure that their CIS remain capable of fulfilling redemption requests in a timely manner when there are significant fund withdrawals.
- 1.6 In addition, FMCs may be appointed to different roles in the management of a CIS (e.g. investment manager, sub-manager or advisor). The applicability of these Guidelines to an FMC should be determined based on the substance of the FMC's role in managing the investment portfolio of the open-ended CIS. FMCs which are responsible for the portfolio management of open-ended CIS and have discretionary authority for making investment decisions for the CIS are expected to implement the liquidity risk management practices set out in these Guidelines. Sub-managers of open-ended CIS which have delegated authority for a portion of the portfolio should take into account the principles set out in these Guidelines, where relevant, as well as the liquidity risk management standards imposed by the main manager of the CIS. On the other hand, these Guidelines will be less relevant to FMCs which do not have discretionary authority over the management of the investment portfolio.⁶
- 1.7 While liquidity risk management may be less critical for closed-ended CIS, FMCs which manage closed-ended CIS should still be mindful of potential sources of liquidity risks at certain stages of the life cycle of the fund⁷. Each FMC should consider how best to apply and adopt the liquidity risk management practices set out in these Guidelines, taking into account the size, scale and complexity of its business.

2. Governance

- 2.1 The liquidity risk management process must be an integral part of an FMC's broader risk management process. Regulation 13B(1)(a) of the SF(LCB)R requires FMCs to put in place a risk management framework to identify, address and monitor the risks

⁶ For example, FMCs which provides research or non-discretionary advice to other FMCs.

⁷ For example, FMCs which manage private equity funds or venture capital funds should consider liquidity issues at the point of termination or divestment of the fund.

associated with customer assets that it manages. This includes the liquidity risks associated with the CIS managed by FMCs.

- 2.2 An FMC's liquidity risk management process must be supported by strong and sound governance. In this regard, the Board and senior management of an FMC should ensure that the firm has a liquidity risk management function, and subject it to effective oversight.
- 2.3 There should be clear responsibility and accountability in an FMC for implementing its liquidity risk management framework, and monitoring and managing the liquidity risks associated with its CIS. FMCs which manage retail CIS with daily dealing are expected to have in place a dedicated risk management function whose oversight includes liquidity risk that is independent of the portfolio management function. FMCs with smaller set-ups or managing CIS with less frequent dealing and/or only offered to accredited or institutional investors are minimally expected to designate a senior staff to be responsible for liquidity risk management. It is important that the liquidity risk management function has sufficient stature to discharge its duties effectively. The liquidity risk management function should also have direct access to the Board and the senior management to highlight issues or concerns in carrying out their duties.
- 2.4 An FMC's liquidity risk management policies and procedures should cover the entire product life cycle of a CIS. These policies and procedures should be reviewed regularly and updated as and when there are material changes which affect the liquidity profile of the CIS, so that they stay current and relevant. For example, where the FMC introduces a CIS which invest in a new asset class or if the investor profile of the CIS has changed substantially, the FMC should assess whether its policies and procedures for liquidity risk management warrant an update to take into account these developments. FMCs should also have review, escalation and remediation processes in place for any breaches or non-adherence to the policies and procedures, such as breaches of internal liquidity thresholds. Last but not least, FMC should maintain appropriate records of the liquidity risk management process to facilitate oversight and review of its effectiveness.
- 2.5 It is important that FMCs are able to meet the liquidity needs of the CIS that they manage in an orderly manner, which may include meeting redemption requests at short notice during stressed situations. Therefore, the FMC should proactively consider contingency plans that enable the FMC to readily assess and decide on the actions required in a stressed event with unusually high redemption requests. These

contingency plans should be commensurate with the liquidity risks inherent in the CIS, which would be determined by factors such as but not limited to its redemption terms and permitted cash holdings. FMCs should also be periodically tested to ensure that they are able to exercise applicable liquidity management tool(s) without delay and in a transparent, fair and orderly manner. To this end, the FMC is strongly encouraged to articulate clearly in its internal policy the parties responsible for making decisions on the activation of the contingency plan and the exercise of liquidity management tools, and the steps to be taken in the event of a liquidity issue.

3. Initial Design of Product

- 3.1 The evaluation of liquidity risk that a CIS may face throughout the product cycle and the implementation of arrangements to set the foundation for effective liquidity risk management should begin at the product design stage. During the design of the CIS, FMCs should consider whether the CIS' dealing (subscriptions and redemptions) arrangements are aligned with its investment strategy and the liquidity profile of the underlying assets. In addition, the FMC should consider liquidity management tools that may be used in the event of a stressed situation, and put in place appropriate disclosures and contractual provisions regarding the activation of such tools. Specifically, MAS would expect FMCs to take into account the considerations that follow, during the design of a CIS.
- 3.2 The dealing frequency of the CIS should reflect the overall liquidity of the underlying assets held by the fund, and vice versa. The FMC should assess that the subscription and redemption policy of the CIS is realistic and appropriate taking into consideration the investment strategy, liquidity of the assets that the CIS will invest in, and the tools in place to manage the CIS' liquidity.
- 3.3 Large and unexpected redemptions by investors, such as a sudden withdrawal by an institutional investor that had invested in a significant portion of the CIS, are a key source of liquidity risk. Therefore, the FMC is encouraged to take steps to understand the CIS' distribution channels and investor profile and concentration, and assess how these would affect its liquidity. This would include consideration of the investors' historical and expected redemption patterns in its liquidity assessment of the CIS. For example, the FMC could have agreements with key investors to provide advance notice before they make any large redemptions, to enable the FMC to assess the liquidity implications on the CIS and take appropriate steps to manage the redemption in an orderly manner. Where the CIS is distributed through third-party distributors and granular investor information is not available to the FMC, the FMC

should take reasonable steps to enquire and obtain information about the investor profile and concentration of the CIS, including establishing regular dialogues with fund platforms and distributors to keep abreast of subscriptions, redemptions and changes in the overall profile of investors.

- 3.4 The activation of liquidity management tools, such as suspension of redemptions, redemption gates and swing pricing, can be vital during a stressed situation. These tools help to manage the liquidity of a CIS in various ways, including by slowing the rate of redemptions and according fair treatment to investors who remained invested in the CIS. These investors should not be made to bear a disproportionate share of the costs associated with meeting redemptions. The FMC should therefore consider the appropriateness of liquidity management tools or exceptional measures that the CIS may use when faced with a liquidity problem, taking into account the nature of assets held by the CIS and its investor base. Liquidity management tools should only be used where fair treatment of investors is not compromised.
- 3.5 Disclosures relating to the liquidity of the CIS allow investors to make an informed determination as to whether their liquidity risk appetite matches the liquidity risk profile of the fund. Investors should also be informed about the measures that the FMC may take in the event of a liquidity problem and how these may affect them. As such, the FMC should include clear and simple-to-understand disclosures in the CIS' offering documents to explain the specific liquidity management tools that may be activated in the event of a liquidity problem, and the impact that such tools may have on investors' redemption rights. Where the CIS is distributed through third-party distributors, the FMC should work with its distributors to communicate to end-investors the liquidity issues concerning the CIS that they have invested in.

4. Ongoing Liquidity Risk Management

- 4.1 FMCs are expected to monitor and manage the liquidity risk in the CIS post-launch. This includes ongoing monitoring of investors' profile and redemption patterns and conducting regular assessments on the liquidity profile of the CIS' liabilities and assets. This is to facilitate the FMC's ability to anticipate or identify an emerging liquidity shortage before it occurs, and take appropriate steps to minimise disruption or detriment to investors. This section describes some of the considerations that are relevant to an FMC's ongoing monitoring and management of liquidity risk.
- 4.2 The FMC should regularly monitor and assess trends in the CIS' investor profile and concentration, and investors' redemption patterns. This should be done with a view

to maintain alignment between the CIS' investment strategy and its liquidity profile, and to verify that the assumptions made at the CIS design stage remain relevant. Other sources of liquidity risks, such as liabilities to counterparties should also be considered. Besides considering historical trends, the FMC should also take into account expected future liquidity demands of the CIS at different stages of its life cycle under varying market conditions.

- 4.3 The investment strategy, liquidity profile and redemption policy of the CIS are also relevant factors which have implications for the FMC's ongoing liquidity risk management process. Any changes to the underlying assumptions which affect liquidity risk assessment at the initial design of the CIS would also have to be taken into consideration when reviewing the processes during the life of the CIS. These processes include but are not limited to, assessing the liquidity of underlying assets of the CIS, determining the internal liquidity thresholds and performing stress testing.
- 4.4 In order to facilitate the FMC's ability to meet its redemption obligations and other liabilities, the FMC should integrate liquidity as one of the relevant considerations in the FMC's investment management decisions. The FMC should also regularly assess and evaluate the liquidity of the underlying assets of the CIS, individually and on a portfolio basis. For example, in performing the assessment, FMCs could:
- (a) Use appropriate liquidity metrics or indicators, such as the number of days and cost to liquidate assets without significant market impact and redemption coverage ratio;
 - (b) Consider other quantitative and qualitative factors, such as asset class, credit quality, asset and investment concentration and cash flow projections;
 - (c) Monitor the use of temporary borrowing to meet redemptions; and
 - (d) Consider the use of collateral arrangements and monitor the liquidity of underlying securities held as collateral, especially when these holdings amount to a significant portion of the CIS' net asset value.
- 4.5 FMCs should establish appropriate internal thresholds for the CIS' liquidity which are proportionate to the redemption obligations and liabilities of the CIS as part of their ongoing liquidity risk monitoring procedures. These thresholds should act as indicators for the FMC to conduct further liquidity analysis as part of its risk management process. This allows the FMC to take remedial actions on a timely basis when the analysis reveals vulnerabilities, before a liquidity problem arises. For example, stricter liquidity requirements should be imposed for daily dealing CIS,

which may include requiring the CIS to hold a larger proportion of liquid assets, as compared to a CIS which allows redemption of units on a less frequent basis.

- 4.6 The FMC may suspend redemptions only in exceptional circumstances, after having determined that a suspension is in the best interest of investors. Essentially the FMC is expected to ensure that the objective criteria for reaching the decision to suspend are met and that any alternative course of action, such as sale of remaining fund assets, has been considered and assessed to be not feasible and/or not in the best interest of investors. The decision to suspend redemptions should be reviewed and approved by the senior management and/or Board of the FMC and notified to MAS immediately. The activation of the suspension should be consistent with the disclosure set out in the CIS' offering document or prospectus. Further, the FMC should work closely with its distributors and other service providers to inform the relevant stakeholders (e.g. investors and regulators) of developments relating to the suspension. The FMC should also regularly re-assess on whether to continue with the suspension against the interests of its investors, with the view to resuming normal operations as soon as practicable. The decision to suspend redemptions should be documented, including the reason(s) for the decision and the actions planned (e.g. orderly disposal of fund assets) to resume normal operations of the CIS. Where redemptions have been suspended, the FMC should not accept new subscriptions.

5. Stress Testing

- 5.1 A good liquidity risk management framework does not only consider redemptions in a business-as-usual setting. The FMC should also satisfy itself that the CIS can withstand liquidity stresses during periods of market disruptions or idiosyncratic concerns. The FMC should complement its liquidity risk management tools with regular stress testing. Liquidity stress testing of the CIS should be performed at a frequency relevant to the specific CIS. For example, an FMC is strongly encouraged to perform more regular stress tests on CIS with daily dealing, or CIS which are more susceptible to varying market conditions, such as those which invest in thinly traded markets. For CIS that employ similar investment strategy or invest into similar underlying assets, the FMC can consider performing stress testing of such CIS in aggregate.
- 5.2 For stress tests to be effective, the FMC is strongly encouraged to take into account the correlation between related scenarios and specific features of the CIS, including the investors' profile, the CIS' dealing frequency and the behaviour of other market participants that are also relevant during the product design and ongoing monitoring

processes. The FMC could consider using stress test scenarios based on (i) backward-looking historical market conditions and redemption patterns of the CIS; and (ii) forwarding-looking hypothetical scenarios, where appropriate. In general, the FMC should explore extreme but plausible scenarios in their stress tests.

- 5.3 As the stress test results could provide useful insights on the FMC's liquidity risk management processes, FMCs should have in place reporting channels to escalate significant findings to the relevant governance bodies with oversight of the liquidity risk management process, where appropriate.
- 5.4 As financial markets and the operating environment are dynamic, stress test scenarios and assumptions should correspondingly not remain static. Hence, it is important that the FMC regularly reviews the reasonableness and relevance of its stress test assumptions, and satisfy itself that stress tests are based on reliable and up-to-date information. To facilitate these regular reviews, it is important for the FMC to maintain proper documentation on the key features of the stress tests, such as the choice of stressed scenarios used, assessment of the stress tests results, considerations on the need to take further actions and the actual actions taken to address the issues identified from stress test results. The feedback from actual stress events experienced by the FMC could also be used to improve the quality of future stress tests.
- 5.5 If the FMC decides not to perform stress testing, the FMC is expected to maintain documentation of the rationale as these factors should be considered when the FMC reviews this decision on a regular basis. The decision not to perform stress testing should be reviewed and approved by the senior management and/or Board of the FMC.

Annex C

PROPOSED ADDITIONAL PORTFOLIO REQUIREMENTS FOR MMFS

1. Portfolio Weighted Average Maturity

1.1 A short-term MMF should maintain a portfolio weighted average maturity (WAM⁸) that does not exceed 60 calendar days.

1.2 A MMF should maintain a portfolio WAM that does not exceed six months.

2. Liquid Asset Holdings

2.1 A MMF (including a short-term MMF) should invest:

- (a) at least 10% of its NAV in daily maturing liquid assets, such as cash or securities, that will mature or are exercisable and payable within one business day; and
- (b) at least 20% of its NAV in weekly maturing liquid assets, such as cash or securities, that will mature or are exercisable and payable within five business days.

⁸ WAM should be calculated based on each non-deposit investment's remaining term to maturity, or if shorter, to the next interest rate reset, and weighted based on the market value of the non-deposit investments.

