



Monetary Authority of Singapore

STRENGTHENING LIQUIDITY RISK MANAGEMENT PRACTICES FOR FUND MANAGEMENT COMPANIES

INFORMATION PAPER

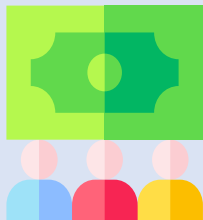
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Introduction



Fund management companies (FMCs) should put in place effective liquidity risk management (LRM) frameworks and practices for collective investment schemes (CIS) to enable them to fulfil redemption requests in a timely and orderly manner and safeguard the interests of all investors, including those that have not made redemption requests.

To do so, FMCs should minimise potential mismatches between the liquidity of a CIS' underlying assets and the redemption terms offered to investors and have in place LRM tools to mitigate and manage any potential liquidity mismatches that might arise and ensure fair treatment of all investors.



This information paper sets out MAS' supervisory expectations of effective LRM frameworks and practices and includes key findings from our thematic liquidity inspections and review of prospectuses, which focused on CIS offered to retail investors.

The findings, including examples highlighted in this information paper, are non-exhaustive. FMCs should also take guidance from International Organization of Securities Commissions' (IOSCO) publications¹ on liquidity risk management.



¹ Examples of publications by IOSCO are (i) Recommendations for Liquidity Risk Management for Collective Investment Schemes dated February 2018 (FR01/2018) and (ii) Open-ended Fund Liquidity and Risk Management – Good Practices and Issues for Consideration dated February 2018 (FR02/2018).

Introduction

FMCs should review their LRM frameworks and practices, taking into account the size, scale and complexity of their businesses and the risk profiles of the CIS that they manage.



Where FMCs observe any gaps in their LRM frameworks and practices, specific remediation/enhancement measures should be identified and implemented in a timely manner. FMCs should also continuously enhance their LRM frameworks and practices in a risk-based and proportionate manner.

Format of information paper

Areas covered in this information paper are as follows and should be read together with MAS' Guidelines on Liquidity Risk Management Practices for Fund Management Companies (Guidelines):



A. Governance

Supervisory expectations

Regulation 13B(1)(a) of the Securities and Futures (Licensing and Conduct of Business) Regulations requires FMCs to put in place a risk management framework to identify, address and monitor the risks associated with the assets under their management. This includes the liquidity risk associated with the CIS managed by the FMCs².



Oversight structure

An FMC's LRM framework and practices must be supported by sound governance. There should be clear responsibility and accountability by its Board and senior management (BSM) for their effective implementation. BSM should have effective oversight of the liquidity risk associated with the FMC's CIS by ensuring that they are kept updated on liquidity risk matters regularly and as and when required³.

Key individuals responsible for LRM should be independent and have sufficient stature to discharge their duties effectively. Appropriate escalation procedures should also be established, including having key individuals responsible for LRM having direct access to BSM or any committee(s) delegated the responsibility for overseeing liquidity risk, to highlight liquidity issues or concerns and take corresponding mitigating actions on a timely basis. Proper records of information and assessments submitted/presented to BSM or any relevant committee(s) and decisions taken should also be maintained⁴.

² Paragraph 3.1 of Guidelines

³ Paragraph 3.2 of Guidelines

⁴ Paragraphs 3.3 and 3.6 of Guidelines

A. Governance

Supervisory expectations



LRM policies and procedures (LRM P&Ps)

LRM P&Ps should be established to guide the FMC's staff in monitoring and managing CIS' liquidity risk on an ongoing basis.

There should also be regular reviews of the effectiveness of the FMC's LRM framework and practices, including updating the LRM P&Ps and performing ad-hoc reviews when there are material changes (*e.g. investment strategies and universe*) that affect the liquidity profiles of the CIS managed, so that they stay current and relevant. Changes to the LRM frameworks and practices, including justifications for doing so should be well documented⁵.

General practices observed

Oversight structure

- While the Board of an FMC was ultimately accountable, dedicated committee(s) were set up to oversee risk management, including liquidity risk, for the CIS managed by the FMC.
- The committee(s) typically comprise the FMC's Chief Executive Officer (CEO), and heads of different front office functions (*e.g. distribution, portfolio management, business development*) and support functions (*e.g. risk management, compliance, legal, and finance*)⁶.



⁵ Paragraph 3.5 of Guidelines

⁶ The committee could be local, regional or group depending on the FMC's set-up. For regional/group risk management committees, the equivalent member composition could include regional/group senior management of the business and support functions.

A. Governance

General practices observed

Oversight structure

- Committee meetings were held at least on a quarterly basis. The frequency of such meetings could be increased at the FMC's discretion when necessary. Notably, most committees met more frequently and/or required more frequent reporting during periods of heightened market volatility.
- Dedicated and independent risk management function/team was responsible for monitoring and managing liquidity risk on an ongoing basis. Head of the risk management function/team, also known as Chief Risk Officer in some instances, had sufficient stature to discharge his/her duties effectively and had direct access to the CEO and/or regional/global head who were part of the committee(s) responsible for overseeing risk management for the region/group.



LRM P&Ps

- LRM P&Ps were put in place to cover the management of liquidity risk over the entire life cycle of a CIS. The areas covered include the following:
 - Governance and oversight (*e.g. product approval and activation of LRM tools*);
 - Roles and responsibilities of functions/teams (*e.g. product due diligence and ongoing monitoring*);
 - Details of the LRM framework (*e.g. methodology, metrics, thresholds/limits and types of LRM tools available*); and
 - Breach review and escalation (*e.g. breach of internal liquidity thresholds/limits*).



A. Governance

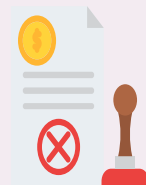


Areas of improvement

1. Enhance oversight by senior management (SM)

The following shortcomings were observed in one or more FMCs:

- No independent review and approval of risk parameters used for liquidity risk monitoring by SM (*e.g. assumptions on trading volume used to compute days to liquidate for a specific asset class or CIS*).
- SM was not kept updated on potential liquidity concerns (*e.g. CIS experiencing significant daily redemptions*) and follow-up actions on a timely basis. Monthly committee meetings, which involved SM and where potential liquidity issues could be surfaced and discussed, were suspended for a period of time even though there was increased market volatility and reduced liquidity.
- SM did not pick up and query irregular or inconsistent information submitted/presented to them (*e.g. results from ongoing monitoring of liquidity risk indicated that 17% of a CIS' assets could be liquidated in 3 days but the CIS' corresponding days to liquidate (DTL) was shown as 3 i.e. the CIS could be fully liquidated in 3 days*).



Key takeaways

In addition to the expectations set out under “Governance”, BSM should:

- Ensure they are kept apprised of all relevant liquidity risk matters on a timely basis;
- Ensure all liquidity risk-related matters are reviewed and approved by individual(s)/committee(s) that include individual(s)/committee member(s) who are independent of portfolio management function; and
- Take greater care in reviewing information submitted/presented to them to ensure decisions are based on accurate and complete information.

B. Initial Design of Product

Supervisory expectations



New product approval

It is imperative for liquidity risk of a CIS to be considered upfront, during the initial design of the product. This is to ensure alignment of the liquidity profile of a CIS' underlying assets, given the CIS' proposed investment objective and strategy and the redemption terms offered to investors. As such, during the initial design of the CIS, FMCs should consider the following factors⁷, amongst others:

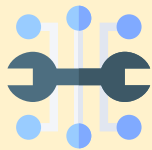
- Investment objective and strategy of the CIS;
- Liquidity profile of the CIS' proposed underlying assets;
- Target investors' expectations in terms of when and how easily they can liquidate their investments;
- Target investor profiles;
- Redemption terms (*e.g. dealing frequency, notice period and settlement period*) to minimise liquidity mismatches;
- LRM tools that should be placed to mitigate and manage potential liquidity mismatches and ensure all investors are treated fairly; and
- Disclosure to investors on the terms, circumstances and implications of using the LRM tools.

If there are subsequent changes to an existing CIS' investment objective, strategy or investment universe, which would affect its underlying asset holdings, a review of the CIS' redemption terms and LRM tools, amongst others, should be conducted to ensure they continue to be fit for purpose.

⁷ Paragraphs 4.1 and 4.2 of Guidelines

B. Initial Design of Product

Supervisory expectations



Adoption of LRM tools

When incorporating LRM tools in a CIS, FMCs should ensure they have the necessary systems, processes and controls in place to govern their application.

There should also be processes to review the methodology and parameters used to calibrate the LRM tools on a regular basis and as and when required to ensure they continue to be appropriate given the characteristics of the CIS managed and prevailing market conditions.



Regular reviews should also be performed to assess the effectiveness of the LRM tools applied and whether additional LRM tools should be put in place to assist in the management of liquidity mismatches and ensuring fair treatment of all investors, where relevant. Proper records should also be maintained for all assessments performed and decisions taken.

B. Initial Design of Product

General practices observed

New product approval

- A structured approach (*e.g. use of a checklist or assessment template*) was adopted to assess and document the various risks such as liquidity risk associated with launching a new CIS.
- Assessments were obtained from both front office functions (*e.g. portfolio management, trading and fund distribution*) and support functions (*e.g. operations, compliance, legal and risk management*) to ensure that the CIS can be effectively managed, including from a liquidity risk perspective and that the redemptions terms were realistic and appropriate. An FMC had also created model portfolios based on the proposed investment objectives and strategies of new CIS to assess their liquidity profiles.



- A new product committee, comprising SM from both front office and support functions, would review the assessments conducted prior to approving the launch of a new CIS.
- A post launch review would also be conducted to ensure the CIS was performing as expected in areas such as investment performance and settlement process.



B. Initial Design of Product

General practices observed

Adoption of LRM tools

- Varying types of LRM tools were available, such as swing pricing, anti-dilution levy, suspension, redemption limits/gates and short-term borrowing, based on disclosures in CIS' offering documents.

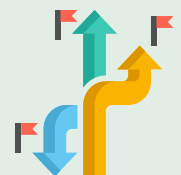
More common tools

- Suspension
- Redemption limits/gates
- Short-term borrowing
- Deferral of redemptions

Less common tools

- Swing pricing and other anti-dilution or cost adjustment measures
- In-kind redemption

- The types of LRM tools that were available, the circumstances when they could be applied and the impact on investors were disclosed in the CIS' offering documents (*e.g. prospectuses*). Thresholds for activating redemption limits/gates were also specified. FMCs which adopted swing pricing also disclosed the maximum swing factors that could be applied to their CIS under normal market conditions and provided for the possibility for the swing factors to increase beyond the maximum specified in the CIS' offering documents under exceptional circumstances.
- For swing pricing, FMCs managing CIS offered to retail investors commonly adopted partial swing pricing and adjusted the net asset value (NAV) of a CIS by certain swing factors when predetermined swing thresholds for net subscriptions or net redemptions were reached.



B. Initial Design of Product

General practices observed

Adoption of LRM tools

- In setting swing thresholds for a particular CIS, FMCs typically considered factors, such as size of assets under management, characteristics of asset holdings and historical fund flows (including number of times swing thresholds were triggered in the past). FMCs were also mindful not to set the thresholds too high to manage the dilution impact on remaining investors of the CIS or too low resulting in unnecessary costs and increase in the volatility of the CIS' NAV.
- In determining the swing factors, FMCs typically took into account historical transaction costs to proxy the cost to be incurred by the CIS to meet redemptions/subscriptions requests and any associated market impact. Specifically, FMCs would consider the following indicators amongst others:

- (i) the indicative bid-offer spreads of the different assets held by the CIS (*e.g. mid-to-bid, mid-to-offer spreads*) at a recent point in time; and/or
- (ii) average costs over a recent period (*e.g. broker commissions, custodian charges, sales tax, stamp duty where relevant*) to liquidate a portion of the CIS' assets.



- In addition to periodic reviews, FMCs also performed more frequent ad-hoc reviews to adjust the swing thresholds and/or factors during periods of heightened market volatility/stress to ensure adjustments made to NAV are fair and reflective of prevailing market conditions. The ad-hoc reviews would typically incorporate insights gathered from trading teams including actual trades executed in the market at the relevant point in time.

B. Initial Design of Product



Areas for improvement

1. Enhance oversight and implementation of LRM tools

The following shortcomings were observed in one or more FMCs:

Lack of four-eyes principle when computing swing factors, which resulted in valuation errors not being picked up. As a result, investors were disadvantaged (*e.g. remaining investors in the fund bore additional cost*).

Insufficient internal guidance and clarity on the circumstances and thresholds for applying swing pricing which may result in inconsistencies in the implementation of swing pricing or failure to activate swing pricing when required.

Lack of proper documentation on the reasons for adjusting swing thresholds and/or factors.

Inadequate assessment of fund administrator's ability and capacity to support the implementation of LRM tools which hampered the ability of an FMC to implement more frequent adjustments to swing thresholds/factors during periods of heightened market volatility/stress.

Insufficient information (*e.g. illustrative examples*) provided to investors to raise awareness on the purpose, mechanism, and impact of the application of certain LRM tools, such as swing pricing.

B. Initial Design of Product

2. Conduct proper assessment on the applicability of LRM tools

- In assessing whether swing pricing should be put in place for its CIS, an FMC had erroneously focused on whether the historical bid-offer spreads of the CIS' underlying assets were consistent with that seen in the market instead of the dilution impact of transaction costs arising from significant redemptions/subscriptions on remaining investors. Hence, it had erroneously concluded that swing pricing was not necessary.



Key takeaways

In addition to the expectations set out under “Initial Design of Product”, FMCs should:

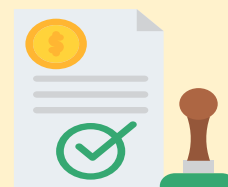
- Conduct proper assessments on the applicability of LRM tools, including anti-dilution tools such as swing pricing, to better manage liquidity risk of CIS and ensure fair treatment of all investors;
- Put in place necessary processes, including appropriate checks and balances, to ensure proper and timely implementation of relevant LRM tools;
- Ensure assessments and decisions relating to the oversight and implementation of LRM tools are properly documented;
- Conduct proper due diligence on service providers to ensure they are able to effectively support the FMC in its management of liquidity risk and implementation of LRM tools prior to their appointments and on a regular basis thereafter; and
- Provide sufficient information to investors on the terms, circumstances and implications (*e.g. impact on investors' redemption rights*) of applying LRM tools for informed decision making.



C. Ongoing Liquidity Risk Management

Supervisory expectations

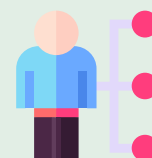
To effectively manage liquidity risk through the lifecycle of a CIS, FMCs should have systems and processes to monitor a range of liquidity metrics relating to areas, such as profile of investors, characteristics of underlying assets and redemption patterns on an ongoing basis and assess their impact on the CIS' ability to meet redemptions requests in a timely and orderly manner. If a liquidity shortage is anticipated or identified, the FMC can then take appropriate actions to manage the shortfall and minimise the disruption or detriment to investors. FMCs should also consider any change to their underlying assumptions used when performing liquidity risk monitoring and assessment⁸.



When developing models to measure liquidity risk for CIS, FMCs should ensure that the model is reviewed regularly to ensure their reliability. Adjustments should also be made to model assumptions and parameters to reflect changing market conditions.

General practices observed

- Independent risk management teams were responsible for ongoing monitoring and assessment of CIS' liquidity risk with inputs from front office functions (*e.g. portfolio management*) and other support functions (*e.g. operations and compliance*).



⁸ Paragraphs 5.1 to 5.3 of Guidelines

C. Ongoing Liquidity Risk Management

General practices observed

Use of liquidity metrics

- Various metrics were used to monitor the liquidity of CIS on an ongoing basis.



Examples

Certain liquidity metrics focusing on the liabilities of CIS (*e.g. daily outflows and large redemption*⁹) were monitored daily while those relating to assets¹⁰ (*e.g. DTL and percentage of assets that can be liquidated within predefined timeframe(s)*) were monitored at least monthly with a few doing so daily or fortnightly.

In addition, redemption patterns over different and longer periods (*e.g. weekly, monthly, quarterly*), investor concentration and liquidity coverage ratio (LCR) were also scrutinised.

- Where a CIS was distributed through third-party distributors and granular investor information was not available to the FMC, some FMCs used models to proxy investor concentration and/or made certain assumptions concerning investor profiles.
- For FMCs who were not monitoring the liquidity profile of CIS' assets daily, they were able to increase their monitoring frequency during periods of heightened market volatility/stress.
- Thresholds/limits were established for liquidity metrics and any breaches of these thresholds/limits would be assessed and followed up. The outcomes of the ongoing monitoring performed were also reported to SM and/or committee(s) overseeing risk management on a regular basis.



⁹ FMCs have defined large redemptions as a certain percentage of NAV and/or an absolute amount.

¹⁰ On the underlying assets of the CIS (individually and on a portfolio basis).

C. Ongoing Liquidity Risk Management

General practices observed

Deployment of LRM models

- FMCs utilised either internal or external LRM models to monitor and assess liquidity risk. These models consider various factors depending on asset class.

| Examples of factors utilised (non-exhaustive) | |
|---|---|
| Equities | trading volume, participation rate and market capitalisation |
| Fixed Income | bid-offer spread, types of issuer, issue size, currency, country, and credit rating |

- Prior to using these models, assessments would be conducted to ensure the reasonableness of their outputs. Reviews would also be conducted by a few FMCs on an ongoing basis to ensure their reliability.
- Some FMCs were cognisant of the constraints of their existing LRM models, which were primarily based on historical datasets.



As such, during periods of heightened market volatility/stress, they implemented supplemental measures, such as obtaining direct feedback from portfolio managers and traders on actual trading volumes and transaction costs observed in the market and incorporating them in their liquidity risk analysis to better reflect a CIS' liquidity profile during such times.

C. Ongoing Liquidity Risk Management

General practices observed

Maintenance of CIS' Liquidity Risk Profile

- To better manage the impact of significant redemptions on CIS' liquidity risk profile and remaining investors, FMCs also required their key investors (*e.g. large direct institutional investors*) to provide advance notification of any large redemption. This would allow them to take appropriate steps to manage the redemption in an orderly manner over a longer period to minimise market impact.
- FMCs also liquidated the CIS' assets in a pro-rata manner, to the extent possible, to maintain the CIS' overall liquidity profile to safeguard the interests of remaining investors.



Areas of improvement

1. Enhance Clarity and Guidance on Managing Liquidity Risk

The following shortcomings were observed in one or more FMCs:

- Not all liquidity metrics monitored and thresholds/limits applied were specified in the LRM P&Ps. Similarly, possible follow-up actions (*e.g. escalation to SM and/or relevant committee(s)*) for breaches of thresholds/limits were not stated in the LRM P&Ps. This may result in inconsistencies and/or lapses in the monitoring, including any follow-up actions to be taken.
- Lack of documentation of the LRM reviews and follow-up conducted (*e.g. an FMC did not document its review and follow-up of breaches of an internal threshold for a risk metric*).



C. Ongoing Liquidity Risk Management

2. Improve the Range and Reliability of Liquidity Metrics Deployed

The following shortcomings were observed in one or more FMCs:

All government bonds were categorised under the most liquid bucket although they were of varying credit quality which would affect their liquidity profiles.

Inconsistent treatment of bonds with incomplete market data where such bonds were included in computing the liquidity profiles of fixed income CIS but excluded from balanced CIS.

Certain key liquidity metrics (*e.g. redemption patterns and investor concentration*) were not monitored, and some were erroneously computed (*e.g. DTL*). Assumptions and parameters used and outputs generated by LRM models were not reviewed to ensure they continue to be appropriate and/or reflective of prevailing market conditions, in particular during periods of heightened market volatility/stress.

Inconsistent definitions of certain liquidity metrics (*e.g. investor concentration and DTL*) across different reports, templates and policies, or within the same document, that were used or referred to by staff which could lead to inconsistencies in computing and analysing the results of the liquidity metrics.

Feedback from sub-managers (where the management of CIS has been sub-delegated to third party managers) was not obtained on the reasonableness of the liquidity risk metrics/profiles generated during periods of heightened market volatility/stress.

C. Ongoing Liquidity Risk Management

Key takeaways

In addition to the expectations set out under “Ongoing Liquidity Risk Management”, FMCs should:

- Critically assess the range and relevance of liquidity metrics to be adopted and reasonableness of the assumptions used;
- Exercise due care when computing liquidity metrics and adopt a consistent definition and computation approach across different documents or within the same document, and across CIS. Any deviation should be justified and properly documented;
- Conduct timely reviews, including obtaining feedback from relevant parties on the reasonableness of underlying assumptions used to compute different liquidity metrics and/or the computed liquidity scores via-a-vis actual markets conditions and make appropriate adjustments where necessary;
- Provide adequate guidance to staff on LRM practices such as setting out clearly the liquidity metrics and thresholds/limits used for monitoring and the corresponding follow-up actions, including possible escalation, should the thresholds/limits be breached;
- Review investors’ historical redemption patterns and expected future liquidity demands of the CIS under varying market conditions to assess the profile and liquidity needs of investors (*e.g. engage key investors so that it is aware if they intend to make any large redemptions*) and take appropriate steps to manage the redemption in an orderly manner; and
- Assess and evaluate the liquidity of the underlying assets of the CIS (individually and on a portfolio basis) under varying market conditions regularly. FMCs could analyse variations in spread and/or price volatilities (based on the underlying assets of the CIS) under stressed and normal market conditions to better proxy actual transaction cost across time and different market developments.



D. Stress-testing

Supervisory expectations

A good LRM framework does not only consider the CIS' assets and redemptions in a business-as-usual setting. FMCs should also satisfy themselves that the CIS can withstand liquidity stresses during extended periods of market disruptions or idiosyncratic concerns by complementing their LRM tools with regular stress testing.



Regular stress-testing should be conducted and at a frequency relevant to the CIS. In determining the frequency, FMCs should consider the redemption terms of the CIS and the liquidity profile of its underlying assets. In conducting the stress-testing, FMCs should consider a combination of stress factors that can happen concurrently and use different stress test scenarios. FMCs should also review the stress test assumptions regularly and ensure the stress tests are based on reliable and up-to-date information¹¹.



The results of the stress tests should be used by FMCs to adjust their liquidity risk management frameworks and practices, redemption terms and/or LRM tools of their CIS to enable them to fulfil redemption requests in a timely and orderly manner and treat all investors fairly.

General practices observed

- FMCs performed regular stress-testing on both sides of a CIS' balance sheet. Assets were stress tested at least monthly while liabilities were stress tested at least quarterly. The results of the stress testing were also combined on a quarterly basis to arrive at the stressed LCR.



¹¹ Paragraphs 6.1 to 6.3 of Guidelines.

D. Stress-testing

General practices observed

- FMCs performed historical and/or hypothetical stress testing¹². Historical stress tests were based on past market events, such as the global financial crisis and Covid-19¹³. Examples of common stress factors used in stress testing are set out in the table below. FMCs that utilised external models for monitoring liquidity risk were able to rely on the risk analytics provided by such third-party service providers to perform stress testing, which often covered more types of scenarios given their access to more extensive datasets.

| Examples of stress factors | |
|---|--|
| Asset | Liability |
| <ul style="list-style-type: none">➤ Reduction in trading volume➤ Increase in transaction costs➤ Increase in market volatility | <ul style="list-style-type: none">➤ Amount of outflow: 1-day largest redemption/highest redemption rate or cumulative worst outflow over a certain duration (<i>e.g. 5 days worst outflow</i>)➤ Increase in redemption volume (<i>e.g. redemption volume doubled</i>) |

- FMCs considered a combination of factors and would monitor the following metrics to determine if there were any concerns from stress testing:

- Percentage of assets that can be liquidated under stressed conditions over specific time horizon (*e.g. 1 day, 5 days, 10 days etc*); and
- Stressed LCR which measures the amount of assets that can be liquidated under stressed conditions to meet heightened levels of redemption over specific time horizon (*e.g. 1-day 3-day, 5-day stressed LCR*).

¹² FMCs considered expanding the types of stress tests performed following MAS' inspection.

¹³ Following market stresses observed during the onset of Covid-19 in March 2020, certain third-party service providers had included this event as an additional stress tests scenario in their risk models.



D. Stress-testing



Areas of improvement

1. Improve stress-testing execution

The following shortcomings were observed in one or more FMCs:

- Stress factors were not applied to all assets held by a CIS as part of the stress testing exercise. 
- Relied on historical outflows for stress testing even for relatively new CIS that had not experienced significant outflows due to the timing of their launch. Proxies (*e.g. historical outflows of other CIS with similar investment strategy and/or investment universe*) were not used to project their worst possible redemption levels.
- When identifying a CIS' largest/worst 1-day redemption level, a relatively short look-back period (*e.g. past one month*) was used to calculate the stressed LCR which might not have included periods of heightened market volatility/stress.
- Stressed liquidity metric(s) and threshold(s)/limits(s) for triggering further discussion or follow-up actions, were not set out in the LRM P&Ps. 

Key takeaways

In addition to the expectations set out under “Stress-testing”, FMCs should:

- Critically assess the calibration for the different stress factors in a hypothetical stress testing scenario;
- Ensure stress factors are consistently applied to all assets of a CIS during stress testing unless exceptions are necessary. If so, the justifications for doing so should be properly documented; and
- Ensure the LRM P&Ps provide adequate guidance to staff on stress testing matters to ensure consistent implementation.

Conclusion

- Effective liquidity risk management of CIS is important to enable FMCs to fulfil redemption requests in a timely and orderly manner and safeguard the interests of all investors, including those that have not made redemption requests.
- FMCs generally have put in place adequate LRM frameworks and practices that are commensurate with the size, scale and complexity of their businesses and the risk profiles of the CIS that they managed. Nonetheless, there are areas of improvement such as enhancing SM's oversight of liquidity risk, and the FMC's monitoring and management of liquidity risk throughout the CIS's entire product life cycle. This includes ongoing review of the assumptions used and assessing the reliability of the LRM models, tools and metrics. In addition, FMCs could improve the execution of liquidity stress tests and ensure that clear and proper guidance are set out in the LRM P&Ps.
- FMCs should continuously enhance their LRM frameworks and practices to better manage liquidity risk of CIS and ensure fair treatment of all investors.
- MAS will continue to provide guidance and share our supervisory expectations and observations from our inspections and engagements to improve industry practices¹⁴.



¹⁴ E.g. Guidelines and MAS Circular CMI 09/2020 dated 10 March 2020 on Ongoing Monitoring and Management of Liquidity Risks.