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Bite-size Briefings [February ED No.3]: Liquidity Stress Testing for Funds

A series of briefings that take a "bite-size" look at international trends in different jurisdictions, drawing on Baker McKenzie's expert financial services practitioners.

Liquidity Stress Testing for Funds

This edition takes a bite-size look at liquidity stress testing for funds in Hong Kong, Thailand, Singapore, United Kingdom, Australia and the United States, focusing on investment management centres rather than where funds are located.

Open-ended investment funds which issue new units to customers and redeem existing units on demand can experience liquidity mis-matches when the underlying assets in which a fund invests take longer to liquidate, for example, in the case of high yield bonds. Another instance is where the value of underlying assets i.e., the net asset value (or NAV) is uncertain and so, therefore, the value of individual units. In an economic environment where rates of return on many conventional asset classes can be low, the "reach for yield" can increase the risk of a "mismatch" between the liquidity of underlying assets and investor expectations over the ease of redemption. For this reason, regulators globally are placing increased importance on ensuring that liquidity is appropriately managed with adequate tools, but avoiding as the International Organization of Securities Commissions (IOSCO) says (see statement) a "one-size fits all" approach, recognising that funds vary in nature and the characteristics of asset classes are always changing.

Hong Kong

As an international financial centre and core trading hub in Asia, Hong Kong's securities market is vulnerable to fluctuations in global market conditions, as well as regional and idiosyncratic stress. Since the global financial crisis, the management of liquidity risks by fund managers of both public and private funds has been a major focus of the Securities and Futures Commission (SFC), giving rise to various regulatory inspections and developments.

Liquidity guidelines

Following the publication of IOSCO's Principles of Liquidity Risk Management for Collective Investment Schemes in March 2013, the SFC conducted a focused review of the liquidity risk-management practices of managers of SFC-authorised funds. Based on the review results and IOSCO's regulatory principles, the SFC formulated detailed guidance in 2016 to assist fund managers to ensure effective liquidity risk management of their funds (the majority of which are open-ended funds). The SFC further adopted and codified a number of relevant IOSCO liquidity risk management principles in its **Fund Manager Code of Conduct** (FMCC), the revised version of which came into effect in November 2018.

The updated FMCC now requires fund managers to regularly conduct assessments of liquidity in different scenarios, including stressed situations, and sets out a number of suggested risk-management control techniques and procedures for funds. These include requiring fund managers to set and enforce concentration limits, monitor liquidity mismatches between the funds' underlying investments and their redemption obligations using quantitative metrics or qualitative factors, and consider various specified factors to assess the liquidity of a fund's assets.

Stress-testing

In terms of stress-testing, the SFC has made it clear that ongoing liquidity stress testing on funds is critical to assess the impact of plausible severe adverse changes in market conditions, particularly in light of current global market volatility. Specifically, fund managers are expected to develop stress test scenarios based on historical market conditions and previous redemption demands on the fund or similar funds, which should include assessments of the impact of a specific stress factor and a combination of multiple stress factors. Fund managers are also encouraged to develop stress test scenarios based on forward-looking hypothetical scenarios, where appropriate. The SFC expects that stress test results are reviewed by a committee responsible for liquidity risk management, and/or senior management, to determine whether further actions are warranted.

In 2019, the SFC conducted a further survey and inspection of selected licensed fund managers of SFC-authorised funds, to understand their liquidity risk management processes and assess their compliance with both the 2016 Guidance and the enhanced requirements under the FMCC. In a circular issued in August 2019, the SFC highlighted a number of deficiencies and inadequacies in fund managers' liquidity risk management practices arising from the inspections, and cautioned fund managers to implement robust risk management systems and establish well-documented liquidity risk management policies and procedures for the funds they manage. In particular, the SFC reminded fund managers that, at times of significant changes in the markets, they should perform more frequent and enhanced liquidity stress testing to assess the potential impact on liquidity as well as the adequacy of their action plans and liquidity risk management tools.

The importance of establishing a sound risk governance structure was again highlighted in the most recent edition of the **SFC Compliance Bulletin: Intermediaries** published on 20 January 2020. Examples were cited of funds concentrated in hard-to-sell assets, particularly illiquid bonds issued by the same group, and funds with long or extendable redemption dates. The clear regulatory message is that liquidity and credit risk management will remain a key focus of the SFC's supervision of fund managers in Hong Kong, particularly in times of market uncertainty and deteriorating credit outlook.

Thailand

Approach to liquidity

The Office of the Securities and Exchange Commission of Thailand (SEC) regulates the liquidity of Thai funds through its principle-based regulations, specific requirements on fund liquidity management and liquidity reporting requirements which are incorporated in the first two. Unlike its European counterparty, the European Securities and Markets Authority (ESMA), the SEC has yet to issue any guidelines or regulations on liquidity stress testing for Thai investment funds. The SEC instead only relies on the three aforementioned regulatory tools. The principle-based regulations broadly require funds to have sufficient liquidity at all times,[1] although funds with certain liquidity needs are regulated more stringently. Provident funds in particular are specifically required to ensure that their investments—while relatively lightly regulated in terms of scope—will be liquid enough to meet redemption requests from investors.[2] Money Market Funds with liquidity policies are also required to ensure compliance with and report on certain liquidity metrics, e.g., the average remaining maturity of their assets and their highly liquid assets to NAV ratio.[3]

Liquidity management

As for the specific liquidity management requirements, the SEC issued a set of guidelines[4] (Guidelines) in 2004 to which only debt-focused mutual funds—namely, money market mutual funds, debt instrument mutual funds and mixed-policy mutual funds focused on debt instrument investments[5] —are subject. These funds are required to maintain, at least, the applicable level of liquidity specified in the guidelines to accommodate redemption requests from their investors. Fund liquidity is based on the quality of assets held by the fund. In turn, liquid assets are classified as either tier I (e.g., cash, bank deposits, debt instruments maturing in seven days or less) or tier II assets (e.g., debt instruments maturing in 14 days or less), with the former being treated as more liquid. Funds with a redemption window of one to seven days—treated as funds with frequent redemption windows—are required to hold tier I assets of at least 20 percent of their assets and tier I and tier II assets of at least 60 percent. The ratios are lower for those with a redemption window of more than seven days. The Guidelines also require two monthly reports on fund liquidity be submitted to the SEC.

On 6 August 2019, the SEC issued a public hearing document[6] on amending the Guidelines in which it proposed the following to better manage any potential liquidity mismatches by means of:

- an amended list of funds that are subject to specific liquidity management requirements with greater clarity on the reach of such requirements, namely:
    - redefining "mixed mutual fund focused on debt instrument investments" as mixed mutual funds with a policy to invest in debt instruments at least 60 percent of their "net exposure" or whose "benchmark" comprises debt instruments at least 60 percent; and
    - exempting "mutual funds for institutional or ultra-high-net-worth investors" from the requirements;
- updated definitions of tier I and tier I assets with a greater degree of stringency, for example:
    - only cash denominated in Thai baht is **automatically** considered a tier I asset;
    - fixed deposits are no longer treated as tier I asset;
    - THB government bonds with a remaining maturity of longer than five years are no longer treated as tier II assets (unless certain conditions are met);
    - not all listed shares are tier I or tier II assets: only the composite stocks of the SET50 and SET100 indices are considered tier I and tier II assets, respectively;
- guidelines on measuring liquidity of funds' offshore investments and on cash reserves;
- revised liquidity assessment methodologies reflecting the so-called "price impact" from trades which will now be in line with the IOSCO's Principles of Liquidity Risk Management; and
- updated fund liquidity report forms and frequencies.

As at the time of writing, the new guidelines and principles proposed in this consultation have not taken effect.

Singapore

The Monetary Authority of Singapore (MAS) has introduced a liquidity risk management framework for Singapore licensed and registered fund management companies (FMCs) with respect to the management of collective investment schemes (CIS). This framework provides 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.

Overview of framework

Under Singapore law, FMCs are statutorily required to put in place a risk management framework to identify, address and monitor the risks associated with the customer assets that they manage, which is appropriate to the nature, scale and complexity of the assets.

To supplement this requirement, the MAS issued the Guidelines on Liquidity Risk Management Practices for Fund Management Companies on 16 August 2018, which are specific to the management of liquidity risk in CIS. The MAS also amended the Code on Collective Investment Schemes (CIS Code) to address, amongst others, liquidity risk in money market funds (MMF) by introducing additional portfolio requirements. The proposed Guidelines and CIS Code amendment take into account the international recommendations promulgated by the Financial Stability Board and IOSCO.

Key Areas Covered in Guidelines

The proposed Guidelines cover the key components of an FMC's liquidity risk management framework, and apply to FMCs that have discretionary authority over both retail and non-retail funds:

- **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.
- **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.

- **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.
- **Disclosure to investors.** FMCs are required to disclose the liquidity management tools adopted by CIS and the impact that such tools may have on investors' redemption rights, in the CIS offering documents.
- **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.

Key Areas Covered in CIS Code

The CIS Code now makes reference to the proposed Guidelines and emphasises the responsibility of FMCs to put in place sound liquidity risk management practices on a proportionate basis, that is commensurate with the FMCs' role and the scale and complexity of operations and the schemes that the FMCs manage. Further, the CIS Code now requires MMFs offered to retail investors in Singapore to:

- maintain a dollar-weighted average portfolio maturity that does not exceed 60 calendar days for short term MMFs, and six months for other MMFs; and
- invest at least 10% of the MMF's net asset value in daily maturing liquid assets; and 20% of the MMF's net asset value in weekly maturing liquid assets.

United Kingdom

Incidences of liquidity stress

The Bank of England's July 2019 Financial Stability Report described fund liquidity risk as a "global issue" having the potential to become a systemic issue. Liquidity risk came to prominence in 2016 when following the UK's referendum to leave the EU, a number of non-UCITS retail schemes (NURSs) invested in commercial property — and therefore particularly susceptible to illiquidity — had to suspend or "gate" redemptions given the number of investor withdrawals. Subsequently, the UK's markets and conduct regulator, the Financial Conduct Authority, undertook a review of illiquid assets and open-ended funds publishing a Policy Statement (PS19/24) in September 2019. This also took into account similar issues arising when a high profile but underperforming UCITS fund, the LF Woodford Equity Income Fund, suspended redemptions in June 2019 after many withdrawals and following the decision of a major investor to exit. Following the public uproar, there was friction between the FCA and the EU over whether UCITS rules on illiquid investments are too lax — currently UCITS may not invest more than 10% of their assets in unlisted and therefore less illiquid securities, with the UK regulator in turn being criticised over the quality of its supervision. In 2020, ESMA is asking all EU national regulators to look at whether market participants in their jurisdictions are adhering to the rules in their day-to-day business.

Liquidity management

Reflecting these concerns, ESMA's Guidelines on liquidity stress tests for UCITS, alternative investment funds (AIF) and money market funds, while taking a principles-based approach, will oblige managers of UCITS and EU AIF Managers, as well as EU depositaries overseeing UCITS and EU AIFs, to improve the stress testing of assets and liabilities in their funds. Liquidity stress testing is described by ESMA as **a risk management tool . . . which simulates a range of conditions, including: normal and stressed (i.e., extreme, unlikely or unfavourable) plausible conditions, to assess their potential impact on the funding (liability), assets, overall liquidity of a fund and, the necessary follow-up action.** The requirement for liquidity stress testing (at least annually, but preferably quarterly), which can be adapted to the nature, scale and complexity of the fund, must be integrated and embedded into a fund's risk management framework. More controversially because of the cost and qualitative nature — and although not required by the UCITS and AIF Managers Directives, the Guidelines recommend also that funds perform "reverse stress testing" i.e., exploring scenarios and circumstances where a fund would lack sufficient liquidity to meet investor withdrawal requests. Managers must

also notify national regulators of material risks and actions taken to address them. The Guidelines take effect from 30 September 2020 and as the UK remains subject to EU law until 31 December 2020, in common with managers in EU-27 Member States, firms in the UK will need to demonstrate compliance.

The FCA has already introduced new rules for NURSs to require (i) earlier suspension of dealing where there are "material uncertainties" over valuations, (ii) measures to improve the quality of risk management and, (iii) crucially, better disclosure to investors of potential liquidity risks. It is evaluating whether to apply these changes to UCITS funds generally. An important take away, however, is that the FCA does not want to stop open-ended funds from investing in illiquid (or less liquid assets) providing investors understand and accept the risks.

Australia

Liquidity mis-matches for funds

The approach to managing liquidity mis-matches in Australia has not been heavy handed. Their management in the space of money market funds has been thought by Australian Securities and Investment Commission (ASIC) not to require regulation (contrary to the EU's approach), because such funds only make up a small percentage (9.5%) of the Australian short term funding market, and only 0.5% of financial system assets in Australia. This is far lower than for markets such as the U.S. and Europe. Further, the current Australian regulatory framework is consistent with the recommendations of IOSCO. While ASIC has identified the risk of liquidity mismatches for funds, it allows the self-management of these risks in line with current laws.

The Australian Prudential Regulatory Authority (APRA) has implemented the Net Stable Funding Ratio (NSFR) as recommended under the Basel III regulatory accord. A Funds NSFR is calculated by dividing the current available stable funding by the required stable funding.

Liquidity stress more generally

APRA has implemented the capital reforms suggested in Basel III, to ensure that regulated institutions in the banking industry are more resilient against liquidity stress and can effectively managing liquidity risk. The resilience of a banking institution is measured through the employment of liquidity stress tests. APRA conducts stress testing to assess the impact of adverse scenarios on an institution's balance sheets, as well as providing data for capital planning, and developing potential actions to rebuild a regulated institution's resilience in the event of adverse economic conditions. Stress testing is particularly important in Australia given the lack of significant prolonged economic stress in the past 30 years.

In 2017, APRA collaborated with the Reserve Bank of Australia, the Reserve Bank of New Zealand, and the ASIC to design the economic parameters and scenarios to conduct stress testing and operational risk scenarios. The 2017 test was first run independently by regulated banking institutions, and later with APRA's parameters to allow greater comparability across the banks. The 2017 test projected a severe impact in the profitability of banking institutions for the first two years before beginning to recover after year three. Overall, regulated entities remained above the regulatory minimum levels of capital in what APRA considers a 'very severe stress scenario', providing reassurance over the resilience of Australian banking institutions. Nor did the test did not take into account other factors and management steps that would likely be taken to increase capital and respond to the risks presented in the scenario.

The Prudential Standard for Liquidity (APS 210) mandates that institutions which APRA considers to fall within certain categories of deposit taking institution will need to conduct regular stress testing exercises. The results from these stress tests must discussed internally and lessons learnt integrated into risk management practices, as well as being disclosed to the institution's board and to APRA. At present APS 210 requires some deposit taking institutes to maintain a NSFR of at least 100%, as well as allowing APRA to designate higher amounts to certain institutions.

United States

Even before IOSCO's focus on liquidity management, the U.S. Securities and Exchange Commission (U.S. SEC) and other U.S. financial regulators had voiced concerns over liquidity management, and much of their post-financial crisis rule-making directly or indirectly touched upon liquidity. But the IOSCO principles drew even

more attention to the issue and spurred the U.S. SEC to develop a regulatory framework that, at least in part, aligns with the IOSCO principles while still continuing many of the unique features of the U.S. market.

The current U.S. liquidity regime varies depending on the type of fund:

- Private funds are largely not subject to substantive liquidity requirements; the U.S. regulators' worries have manifested themselves largely in broad reforms focused on managing systemic risks and targeted enforcement efforts against insufficient or incorrect liquidity disclosures;
- Money market funds have always been subject to detailed liquidity requirements that were more recently updated to specifically consider redemption needs and impose redemption fees/gates; and
- Other types of open-end retail funds became subject, for the first time, to a comprehensive liquidity management regime in 2016.

Money Market Liquidity Reforms

During the financial crisis, U.S. mutual funds struggled with regulatory requirements to maintain a stable net asset value and meet daily redemptions as investments in their underlying portfolios became less liquid, forcing managers and the U.S. SEC to scramble to provide temporary fixes. As a result, money market reform was a relatively high priority for the U.S. SEC and in 2014, the regulator adopted the first in a series of liquidity reforms; the core rule regulating money market funds (Rule 2a-7 under the Investment Company Act of 1940) was amended to permit the imposition of liquidity fees of up to 2% or gates for up to 10 days in response to liquidity crunches (defined as periods when a fund's weekly liquid assets represent less than 30% of its total assets). Such liquidity fees becomes mandatory when a fund's weekly liquid assets fall below 10% of its assets. The U.S. SEC then implemented a second round of reforms that required that money market funds invest no more than 5% of their assets in any particular issue and periodically test their ability to maintain at least 10% of their assets in weekly liquid assets and a stable net asset value per share.

Other Open-End Funds

Due to certain historical quirks, other U.S. retail funds had never been subject to comprehensive liquidity requirements; even a long-standing core requirement that open-end funds maintain at least 15% of their net assets in liquid investments had been imposed through SEC guidance rather than regulation. In some respects, the rule (Rule 22e-4) is modest: it is principles-based and gives funds the authority to evaluate their own portfolios. But it still represents a significant expansion of liquidity regulation: investments must be classified into one of four liquidity categories and maintain certain "highly liquid" investment minimums. But where the minimum is breached, a fund is still permitted to purchase other securities (including illiquid securities) if it reports the breach to its board and, in certain cases, to the regulator.

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[1] See, e.g., Notification of the Capital Market Supervisory Board No. TorNor. 87/2558 re: Investments by Funds § 4;
[2] Notification of the Capital Market Supervisory Board No. TorNor. 87/2558 § 9(2) [Thai language].
[3] See, e.g., Notification of the Capital Market Supervisory Board No. TorNor. 87/2558 § 16; Notification of the Office of the Securities and Exchange Commission No. SorNor. 87/2558 § 38 [Thai language].
[4] Circular Letter No. GorLorTor.Nor.(Wor) 57/2547 re: Guidelines on Maintaining Liquidity for Mutual Funds Focused on Debt Instrument Investments dated 22 November 2004 [Thai language].
[5] Excluding non-retail funds, retirement mutual funds (RMF), funds with automatic redemptions and funds with longer than 15 days of redemption windows.
[6] Public Hearing Document No. OrNorJor. 23/2562 re: Principles on Liquidity Management for Funds Focused on Debt Instrument Investments [Thai language].