A Comparative Review of US and International Fund Liquidity Regulation through the Lens of IOSCO's Recommendations for Liquidity Risk Management

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Abstract

Following the global financial crisis, securities regulators from many countries focused attention on market liquidity and fund liquidity regulation. This article compares the US Securities and Exchange Commission's fund liquidity risk management and disclosure regime with the Board of the International Organization of Securities Commissions' Recommendations for Liquidity Risk Management for Collective Investment Schemes.

In October 2016, the US Securities and Exchange Commission (SEC or Commission) adopted a formal liquidity risk management rule (the Liquidity Rule) and related disclosure regime for US registered open-end investment companies (mutual funds and exchange-traded funds).[1] The Liquidity Rule and related disclosure requirements, hailed by US regulators as part of a "comprehensive five-part plan to enhance the regulation of the risks arising from the portfolio composition and operations of funds and investment advisers",[2] were one of many fund liquidity regulations taking shape globally. In this article, we compare elements of the US liquidity risk management and disclosure regime with key features of the Board of the International Organization of Securities Commissions (IOSCO) "Recommendations for Liquidity Risk Management for Collective Investment Schemes" (IOSCO Recommendations).[3] We also include comparisons with certain aspects of liquidity risk management regulations and guidance from the Hong Kong Securities and Futures Commission (SFC),[4] the UK Financial Conduct Authority (FCA),[5] the French Autorité des Marchés Financiers (AMF)[6] and Ontario Securities Commission (OSC).[7] Through this comparative review, we seek to explore similarities and differences among US and international regulators' means of addressing shared policy concerns.

Background: from financial crisis to regulatory action

Market liquidity was "a key concern in the … global process of regulatory reform" in the years following the global financial crisis.[8] In the US, the September 2008 bankruptcy of Lehman Brothers precipitated significant redemptions from money market funds,[9] which were by rule required to sell positions that did not meet certain credit quality guidelines. This forced selling, along with significant redemptions principally from large institutional

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1 See *Investment Company Liquidity Risk Management Programs*, SEC Rel. No.IC-32315, 81 Fed. Reg. 82,142 (18 November 2016) (Adopting Release) (adopting r.22e-4 under the Investment Company Act 1940, as amended (1940 Act), 1940 Act r.30b1-10 and Form N-LIQUID; and amending Forms N-1A (available at: *https://www.sec.gov/about/forms/formn-1a.pdf* [Accessed 7 September 2018]), N-CEN and N-PORT).

2 Mary Jo White, SEC Chair, "Statement on Open-End Fund Liquidity Risk Management Programs and Swing Pricing" (22 September 2015) (Chair White Statement at Proposal).

3 The Board of IOSCO, *Recommendations for Liquidity Risk Management for Collective Investment Schemes: Final Report*, FR01/2018 (February 2018) (IOSCO Final Report).

4 See SFC, *Consultation Conclusions on Proposals to Enhance Asset Management Regulation and Point-of-sale Transparency and Further Consultation on Proposed Disclosure Requirements Applicable to Discretionary Accounts* (November 2017) (SFC Conclusions).

5 FCA, *Discussion Paper: Illiquid Assets and Open-Ended Investment Funds*, DP17/1 (February 2017) (FCA Paper); FCA, *Liquidity Management for Investment Firms: Good Practice* (February 2016) (FCA Good Practice Paper).

6 See AMF, *The AMF Clarifies the Framework Applicable to Investment Funds' Liquidity Risk Management Tools* (6 March 2018) (AMF News Release).

7 See OSC, *Report on Staff's Continuous Disclosure Review of Mutual Fund Practices Relating to Portfolio Liquidity*, OSC Staff Notice 81-727 (25 June 2015) (OSC Report).

8 The Board of IOSCO, *Principles of Liquidity Risk Management for Collective Investment Schemes: Final Report*, FR03/2013 (March 2013) (2013 IOSCO Report).

9 Unless the context indicates otherwise, references to "money market funds" herein refers to investment companies registered under the 1940 Act and regulated pursuant to r.2a-7 thereunder.

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shareholders, further depressed prices of short-term securities and put money market funds in danger of "breaking the buck" (i.e. failing to maintain a net asset value of $1.00 per share). Notably, only one money market fund actually did so.[10] The SEC responded to these events with two rounds of regulatory reform, first in January 2010 and then in July 2014.[11] Among other things, the initial round of reforms "for the first time … mandat[ed] liquidity requirements so that money market funds could better meet redemption demands"[12] and the second round of reforms provided all money market funds with the ability to impose liquidity fees and redemption gates "to help curb heavy redemptions during times of stress".[13]

In July 2010, the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act) was signed into law in the US.[14] The Dodd-Frank Act created the Financial Stability Oversight Council (FSOC) and empowered it to "identify risks to the financial stability of the United States that could arise from the … ongoing activities, of … nonbank financial companies".[15] It was this authority that the FSOC cited in publishing its 2014 "Notice Seeking Comment on Asset Management Products and Activities", specifically seeking "information about whether risks associated with liquidity and redemptions, leverage, operational functions, and resolution in the asset management industry could affect U.S. financial stability".[16] The responses to the FSOC Notice were cited extensively in the SEC's liquidity risk management proposal.[17]

Significant growth in assets under management in the years following the financial crisis, together with episodic market disruptions, helped to focus and maintain regulators' attention on the perceived potential for liquidity concerns in non-money market investment funds.[18] Indeed, while acknowledging that "most open-end funds have been generally resilient" and that "[t]hey have not created financial stability concerns in recent periods of stress and heightened volatility, with the exception of some money market funds", the Financial Stability Board (FSB) stated that "it is important to ensure that any financial stability risks associated with the asset management sector are properly understood and addressed".[19] The FSB published in June 2016 a consultative document with policy recommendations related to liquidity mismatch between fund investment assets and redemption terms and conditions for fund units, leverage within funds, operational risk and challenges in transferring investment mandates or client accounts, and securities lending activities of asset managers and funds.[20] This publication was followed in 2017 by the FSB Policy Recommendations, discussed further below.[21]

In addition to the work of the FSB and IOSCO, and as noted previously, other international regulators were active in responding to the perceived potential for liquidity concerns in non-money market investment funds during this time. The OSC published the OSC Report on 25 June 2015.[22] The FCA Good Practice Paper followed in February 2016.[23] Finally, two SFC publications preceded the November 2017 SFC Conclusions[24]: the Circular to Management Companies of SFC-Authorized Funds on Liquidity Risk Management in July 2016 and the Consultation Paper on Proposals to Enhance Asset Management Regulation and Point-of-Sale Transparency in November 2016 (setting forth proposals regarding, among other things, liquidity risk management).

[10] See, e.g. Mary L. Schapiro, SEC Chair, Testimony on "Perspectives on Money Market Mutual Fund Reforms", before the Committee on Banking, Housing, and Urban Affairs of the US Senate (21 June 2012) (Schapiro Testimony); Jack W. Murphy, Stephen T. Cohen, Brenden P. Carroll and Justin A. Goldberg, *Overview of SEC's Recent Money Market Fund Reforms*, 47 Sec. & Comm. Reg. 263, 264 (19 November 2014) (Murphy, Cohen & Carroll).
[11] See Murphy, Cohen & Carroll (2014); see also Financial Stability Board (FSB), *Policy Recommendations to Address Structural Vulnerabilities from Asset Management Activities* (12 January 2017) (FSB Policy Recommendations), fn.2 ("regulatory reforms with respect to [money market funds] have been implemented (or are currently in process of being implemented) in many jurisdictions to address financial stability issues that arose during the 2007–09 global financial crisis").
[12] Schapiro Testimony (2012).
[13] Murphy, Cohen & Carroll (2014), p.264.
[14] Dodd-Frank Wall Street Reform and Consumer Protection Act 2010, Pub. L. No.111-203, 124 Stat. 1376.
[15] Dodd-Frank Act s.112(a)(1)(A).
[16] "Notice Seeking Comment on Asset Management Products and Activities", Docket No.FSOC-2014-0001, 79 Fed. Reg. 77,488 (24 December 2014) (FSOC Notice), fn.1 and accompanying text.
[17] See *Open-End Fund Liquidity Risk Management Programs; Swing Pricing; Re-Opening of Comment Period for Investment Company Reporting Modernization Release*, SEC Rel. No.IC-31835, 80 Fed. Reg. 62,274 (15 October 2015) (Proposing Release).
[18] See, e.g. G. Girardi, C. Stahel and Y. Wu, *Cash Management and Extreme Liquidity Demand of Mutual Funds* (21 June 2017), p.2 available at: *https://www.sec.gov/dera/staff-papers/working-papers/20jun17_girardi_cash-mgmt-extreme-liquidity-demand-mutual-funds-1* [Accessed 4 August 2018] ("[t]he recent growth in open-ended investment funds has prompted concerns that large-scale fund redemptions could trigger asset sales that significantly depress asset prices … . The idea that funds in aggregate, if not individually, could be a concern for systemic risks has drawn attention of domestic and international regulators"); A. Banegas, G. Montes-Rojas and L. Siga, *Mutual Fund Flows, Monetary Policy and Financial Stability*, Finance and Economics Discussion Series, Division of Research & Statistics and Monetary Affairs (Board of Governors of the Federal Reserve System, 26 July 2016), pp.2–3 ("the U.S. mutual fund industry saw massive inflows in the years following the onset of the financial crisis … This dramatic growth in assets under management, together with the recent selloff episodes that took place in 2013 and 2014, brought mutual funds to the center of the debate on the potential disruptions to financial markets that might arise from the mutual fund industry once the Fed normalizes the stance of monetary policy"); International Monetary Fund, "Market Liquidity—Resilient or Fleeting?" in *Global Financial Stability Report* (October 2015), Ch.2, pp.50, 52 ("[i]n recent years, important transformations in financial markets have had potentially conflicting effects on market liquidity … [A] key development has been the rise of larger but more homogeneous buy-side institutions, particularly investment funds. Mutual funds have become more important for financial intermediation while becoming more sensitive to redemption pressures, more prone to herd behavior … and less likely to absorb order flow imbalances or to make markets").
[19] FSB, *Consultative Document: Proposed Policy Recommendations to Address Structural Vulnerabilities from Asset Management Activities* (22 June 2016) (FSB Proposed Policy Recommendations), p.1.
[20] FSB Proposed Policy Recommendations (2016).
[21] FSB Policy Recommendations (2017).
[22] OSC Report (2015).
[23] FCA Good Practice Paper (2016).
[24] SFC Conclusions (2017).

Overview of US liquidity risk management and disclosure regime

The October 2016 adoption of the Liquidity Rule reflected the SEC's approach to addressing policy concerns similar to those underlying the FSB's, IOSCO's and other international regulators' efforts to address the perceived potential for liquidity concerns in non-money market investment funds. Although rooted in the "broad, principles-based foundational framework" of the liquidity risk assessment requirements,[25] the Liquidity Rule and associated disclosure requirements represent one of the more prescriptive and intrusive regulatory changes facing the US fund industry in many years.

The Liquidity Rule requires that SEC-registered open-end management investment companies (excluding money market funds)[26] adopt written liquidity risk management programmes addressing specified requirements. First, and principally, funds are required to assess, manage and periodically review (no less frequently than annually) their "liquidity risk", defined as the risk that the fund could not meet requests to redeem shares issued by the fund without significant dilution of remaining investors' interests in the fund.[27] This assessment, management and periodic review must include consideration of certain specified factors (Liquidity Risk Factors) as applicable:

- the fund or In-Kind Exchange-traded Fund's (ETF's) investment strategy and liquidity of portfolio investments during both normal and reasonably foreseeable stressed conditions, including whether the investment strategy is appropriate for an open-end fund, the extent to which the strategy involves a relatively concentrated portfolio or large positions in particular issuers, and the use of borrowings for investment purposes and derivatives;
- short-term and long-term cash flow projections during both normal and reasonably foreseeable stressed conditions;
- holdings of cash and cash equivalents, as well as borrowing arrangements and other funding sources; and
- for an ETF:
  - — the relationship between the ETF's portfolio liquidity and the way in which, and the prices and spreads at which, ETF shares trade, including the efficiency of the arbitrage function and the level of active participation by market participants (including authorised participants); and
  - — the effect of the composition of baskets on the overall liquidity of the ETF's portfolio.[28]

Funds (but not In-Kind ETFs) are also required to classify each portfolio investment (including each derivatives transaction) into one of four liquidity categories: highly liquid investments, moderately liquid investments, less liquid investments or illiquid investments.[29] These categories are defined as follows[30]:

- *highly liquid investment*: any cash held by a fund and any investment that the fund reasonably expects to be convertible into cash in current market conditions in three business days or less without the conversion to cash significantly changing the market value of the investment;
- *moderately liquid investment*: any investment that the fund reasonably expects to be convertible into cash in current market conditions in more than three calendar days but in seven calendar days or less, without the conversion to cash significantly changing the market value of the investment;
- *less liquid investment*: any investment that the fund reasonably expects to be able to sell or dispose of in current market conditions in seven calendar days or less without the sale or disposition significantly changing the market value of the investment, but where the sale or disposition is reasonably expected to settle in more than seven calendar days; and
- *illiquid investment*: any investment that the fund reasonably expects cannot be sold or disposed of in current market conditions in

[25] Adopting Release (2016), p.82,154.

[26] The Liquidity Rule applies generally to SEC-registered open-end management investment companies, including exchange-traded funds (ETFs) and exchange-traded managed funds (ETMFs) but not funds regulated as money market funds under the 1940 Act r.2a-7. See 1940 Act r.22e-4(a)(4)–(5) and Adopting Release (2016), fn.31. As in the Adopting Release, references herein to ETFs should be understood to include ETMFs unless otherwise noted. Certain ETFs, referred to as "In-Kind ETFs" are exempt from certain, but not all, of the Liquidity Rule's requirements. An In-Kind ETF is an ETF that meets redemptions through in-kind transfers of securities, positions and assets other than a de minimis amount of cash and that publishes its portfolio holdings daily. The SEC staff has provided guidance on determining whether an ETF satisfies this de minimis requirement. See SEC Staff, *Investment Company Liquidity Risk Management Programs Frequently Asked Questions* (2018) (Staff FAQs), FAQs 9, 11–13.

[27] Rule 22e-4(b)(1)(i) and (a)(11) of the 1940 Act. Neither the Liquidity Rule nor the Adopting Release (2016) define "significant dilution", although the SEC notes that "for purposes of this definition, the term 'significant' is not meant to reference slight [net asset value] movements … nor is it limited only to fire-sale situations. Instead, a fund's liquidity risk management program should focus on the fund's ability to meet redemptions in a manner that does not harm shareholders. In particular, 'significant' dilution of remaining investors' interests in the fund can occur at much lower levels of dilution than what would occur in a fire sale situation"—Adopting Release (2016), p.82,159.

[28] Rule 22e-4(b)(1)(i) of the 1940 Act.

[29] Rule 22e-4(b)(1)(ii) of the 1940 Act.

[30] See Rule 22e-4(a)(6), (12), (10) and (8) of the 1940 Act, respectively.

> seven calendar days or less without the sale or disposition significantly changing the market value of the investment.

Neither the Liquidity Rule nor the SEC has defined "significantly changing the market value of the investment" but the SEC staff has advised that "what constitutes a significant change in market value may vary by fund, asset class, or investment" and thus

> "a fund does not need to employ as a price impact assumption a fixed amount or percentage, and a fund may have differing standards for different investments and/or asset classes, although a fund may also choose to use a fixed number if reasonably determined".[31]

Although the Liquidity Rule permits funds to classify investments by asset class,[32] when funds classify and review investments or asset classes, they must determine whether trading varying portions of a position in a particular portfolio investment or asset class, in sizes that the fund would reasonably anticipate trading, is reasonably expected to significantly affect its liquidity and, if so, the fund must take this determination into account when classifying the liquidity of that investment or asset class.[33]

The Liquidity Rule does not require other specific considerations in making liquidity classification determinations but instead requires funds to make liquidity classification determinations "using information obtained after reasonable inquiry and taking into account relevant market, trading, and investment-specific considerations".[34] Funds are required to undertake this classification exercise at least monthly in connection with related SEC reporting requirements.[35] Specifically, the liquidity classification of each fund investment is to be disclosed to the SEC monthly on a non-public basis.[36] The compliance dates for the liquidity classification requirements and associated disclosure requirements have been delayed.[37]

Funds (but not In-Kind ETFs) are also required to determine, and review at least annually, a highly liquid investment minimum (a percentage of the fund's net assets that the fund invests in highly liquid investments that are assets—HLIM), taking into consideration the Liquidity Risk Factors noted above.[38] Funds must also adopt and implement policies and procedures for responding to circumstances when fund net assets fall below the HLIM (an HLIM Shortfall), which must include compliance with certain requirements to report to the fund board of directors and to the SEC.[39] During an HLIM Shortfall, a fund's HLIM may not be changed without approval from the fund's board of directors, including a majority of directors who are not interested persons of the fund (as defined in the Investment Company Act 1940 (1940 Act) s.2(a)(19) ("independent directors")).[40] The compliance dates for the HLIM requirements and associated reporting requirements have been delayed.[41]

Under the Liquidity Rule, funds, including In-Kind ETFs, must also comply with a codified 15% limit on illiquid investments (15% Limit). Specifically, no fund or In-Kind ETF may acquire any illiquid investment if, immediately after the acquisition, the fund or In-Kind ETF would have invested more than 15% of its net assets in illiquid investments that are assets.[42] Additionally, if a fund or In-Kind ETF holds more than 15% of its net assets in illiquid investments that are assets, it must comply with certain requirements to report to the fund board of directors and to the SEC.[43]

[31] Staff FAQs (2018), FAQ 22.
[32] Rule 22e-4(b)(1)(ii)(A) of the 1940 Act.
[33] Rule 22e-4(b)(1)(ii)(B) of the 1940 Act. This requirement is also referred to as the "market depth" analysis.
[34] Rule 22e-4(b)(1)(ii) of the 1940 Act. The SEC originally proposed to require that funds consider a specified list of factors in making liquidity classification determinations. The final version of the Liquidity Rule does not include such a list but the SEC provided guidance on similar factors that "a fund could consider in assessing the liquidity of its portfolio investments": existence of an active market for an asset class or investment; exchange-traded nature of an asset class or investment; frequency of trades or quotes; average daily trading volume; volatility of trading prices; bid-ask spreads; standardisation or simplicity of asset class' or investment's structure; maturity and date of issue of fixed income securities; restrictions on trading; and limitations on transfer. See Adopting Release (2016), p.82,186–191.
[35] Rule 22e-4(b)(1)(ii) of the 1940 Act.
[36] See Form N-PORT Item C.7 and Adopting Release (2016), p.82,193. On 28 June 2018, the SEC adopted certain amendments to the reporting requirements originally adopted concurrently with the Liquidity Rule. See *Investment Company Liquidity Disclosure*, SEC Rel. No.IC-33142, 83 Fed. Reg. 31,859 (10 July 2018) (Disclosure Amendment Release). Pursuant to the disclosure amendments, the requirement to publicly report aggregate liquidity classification information (a requirement that accompanied the Liquidity Rule's adoption) was rescinded and replaced with narrative discussion in shareholder reports regarding the operation and effectiveness of the liquidity risk management programme. See Form N-1A Item 27(d)(7)(b) and Disclosure Amendment Release (2018), p.31,860. The disclosure amendments included other technical revisions to the liquidity-related reporting requirements, including permitting funds to report the liquidity classification of a position across multiple liquidity categories in three specified circumstances. See Form N-PORT Item C.7 and Disclosure Amendment Release (2018), p.31,864. Under the disclosure amendments, a new requirement was adopted to publicly report fund holdings of cash and cash equivalents not reported in other parts of Form N-PORT. See Form N-PORT Item B.2.f and Disclosure Amendment Release (2018), p.31,866.
[37] See *Investment Company Liquidity Risk Management Programs; Commission Guidance for In-Kind ETFs*, SEC Rel. No.IC-33010, 83 Fed. Reg. 8,342 (27 February 2018) (Delaying Release).
[38] Rule 22e-4(b)(1)(iii) and (a)(7) of the 1940 Act.
[39] Rule 22e-4(b)(1)(iii)(3) of the 1940 Act.
[40] Rule 22e-4(b)(1)(iii)(1) of the 1940 Act.
[41] See Delaying Release (2018).
[42] Rule 22e-4(b)(1)(iv) of the 1940 Act. The 15% Limit is "harmonised" with the liquidity classification requirements, in that the 15% Limit applies to investments classified as illiquid investments pursuant to the classification requirements (including the market depth analysis, which the SEC believes may result in some funds "determin[ing] that a greater percentage of holdings are illiquid"). See Adopting Release (2016), p.82,177, 97. Since the compliance dates for the liquidity classification requirements have been delayed, the SEC provided guidance to assist funds in identifying illiquid investments for purposes of compliance with the 15% Limit until the liquidity classification requirements are in full effect. See Delaying Release (2018), p.8,348–49. Since In-Kind ETFs are not subject to the liquidity classification requirements, this guidance may be used generally by In-Kind ETFs for purposes of compliance with the 15% Limit. Delaying Release (2018), p.8,349.
[43] Rule 22e-4(b)(1)(iv)(A)–(B) of the 1940 Act.

The Liquidity Rule also mandates that any fund that engages in or reserves the right to engage in redemptions in-kind, and any In-Kind ETF, must establish policies and procedures regarding how and when it will engage in such redemptions in-kind.[44]

Under the Liquidity Rule, a Fund's or In-Kind ETF's board of directors, including a majority of the independent directors, is required to: initially approve the fund's or In-Kind ETF's liquidity risk management programme; approve the designation of the person(s) designated to administer the programme ("programme administrator"); and review, no less frequently than annually, a written report prepared by the programme administrator that addresses the operation of the programme and assesses its adequacy and effectiveness of implementation, including, if applicable, the operation of the HLIM and any material changes to the programme.[45] The SEC describes the board's role under the Liquidity Rule as "one of general oversight" and "expect[s] that directors will exercise their reasonable business judgment in overseeing the [liquidity risk management] program on behalf of the fund's investors".[46]

Finally, the Liquidity Rule includes certain recordkeeping requirements[47] and the SEC adopted certain related prospectus disclosure requirements together with the Liquidity Rule.[48]

Concurrent with the Liquidity Rule's adoption, the SEC adopted amendments to the 1940 Act r.22c-1 to permit (but not require) registered open-end management investment companies (excluding money market funds and ETFs), under certain circumstances, to use swing pricing.[49]

IOSCO Recommendations and US liquidity risk management and disclosure

Background on the IOSCO Final Report and similarities with US policy objectives

As discussed above, following the 2013 IOSCO Report, IOSCO worked with the FSB in considering systemic risks arising from asset management activities. In 2017, the FSB published a related set of recommendations and eight of the nine liquidity-related FSB recommendations were addressed to IOSCO.[50] IOSCO published a consultation paper in July 2017[51] and concluded its response to the FSB recommendations with the 2018 IOSCO Recommendations.[52] The work of IOSCO and the FSB sought to address what these entities viewed as "four potential sources of systemic risk"[53]:

- liquidity mismatch between fund investments and redemption terms and conditions for open-ended fund units[54];
- leverage within investment funds[55];
- operational risk and challenges in transferring investment mandates in stressed conditions[56]; and
- securities lending activities of asset managers and funds.[57]

The similarities between these policy concerns and former SEC Chair Mary Jo White's "five-part plan to enhance the regulation of the risks arising from the portfolio composition and operations of funds and investments advisers" are striking. Indeed, Chair White's plan included measures to:

- strengthen the management of fund liquidity;

[44] Rule 22e-4(b)(1)(v) of the 1940 Act.
[45] Rule 22e-4(b)(2) of the 1940 Act.
[46] Adopting Release (2016), p.82,212.
[47] Rule 22e-4(b)(3) of the 1940 Act.
[48] See Form N-1A Items 11(c)(7)–(8).
[49] See *Investment Company Swing Pricing*, SEC Rel. No. IC-32316, 81 Fed. Reg. 82,084 (18 November 2016) (Swing Pricing Adopting Release) (adopting the Liquidity Rule, 1940 Act r.30b1-10 and Form N-LIQUID; and amending Forms N-1A, N-CEN and N-PORT). "Swing pricing" refers to adjusting fund share net asset value in order to effectively pass trading and other costs associated with purchases or redemptions of fund shares on to the purchasing or redeeming shareholder. Swing Pricing Adopting Release (2016), p.82,084.
[50] See FSB Policy Recommendations (2017).
[51] The Board of IOSCO, *Consultation on CIS Liquidity Risk Management Recommendations*, CR04/2017 (July 2017).
[52] IOSCO Final Report (2018), Foreword.
[53] IOSCO Final Report (2018), p.1.
[54] Compare with SFC Conclusions (2017) (setting forth, inter alia, amendments to the Fund Manager Code of Conduct, including "[a] Fund Manager should establish and regularly monitor measures of liquidity mismatches between the funds' underlying investments and their redemption obligations using quantitative metrics or qualitative factors"); FCA Paper (2017), p.5 ("open-ended funds investing in illiquid assets may experience difficulties if investors expect to be able to withdraw their money quickly and at short notice. Many funds offer daily dealing opportunities to investors, but hold assets that are not revalued on a daily basis. This creates a tension, as assets cannot be sold in a day to meet daily redemption requests"); AMF News Release (2018) ("[l]iquidity risk is the risk of an excessive mismatch between the liquidity of the assets in which a fund has invested and the redemption terms for investors").
[55] Compare with SFC Conclusions (2017) ("[t]he SFC is of the view that disclosure of leverage is key information that should be provided to investors … [however,] the SFC does not propose to prescribe the method for calculating leverage at this stage"); FCA Paper (2017), p.40 (citing the *Collective Investment Schemes Sourcebook* (COLL) at 5.5.4R ("General Power to Borrow") and 5.5.5R ("Borrowing Limits")).
[56] Compare with SFC Conclusions (2017) (setting forth, inter alia, amendments to Fund Manager Code of Conduct, including "[a] Fund Manager should establish, implement and maintain a business continuity and transition plan").
[57] Compare with SFC Conclusions (2017) (setting forth, inter alia, amendments to Fund Manager Code of Conduct, including: (1) provisions relating to a collateral valuation and management policy and a cash collateral reinvestment policy governing securities lending (and the "cash collateral reinvestment policy should ensure that assets held in the cash collateral reinvestment portfolio are sufficiently liquid with transparent pricing and low risk to meet reasonably foreseeable recalls of cash collateral, and measures are in place to manage the associated liquidity risk"); (2) an eligible collateral and haircut policy relating to securities lending; (3) provisions requiring the fund manager of a fund that is the securities lender to engage in certain stress testing concerning the cash collateral reinvestment portfolio; and (4) provisions for disclosure of securities lending information to investors).

- better address risks related to funds' use of derivatives;
- plan for the transition of client assets;
- stress test funds and advisers; and
- enhance data reporting.[58]

These overlapping policy considerations make the distinctions between the IOSCO Recommendations and the US liquidity risk management and disclosure regime all the more interesting.

Summary of key similarities and differences between the IOSCO Recommendations and US liquidity risk management and disclosure regime

The IOSCO Recommendations and the US liquidity risk management and disclosure regime share several themes and are consistent in many respects. However, in some cases, they diverge in emphasis, as summarised below:

- the IOSCO Recommendations and the Liquidity Rule share a focus on liquidity risk assessment and are in agreement over many of the particular considerations relevant to this assessment. Notably, the IOSCO Recommendations emphasise considerations pertinent to whether a strategy is appropriate for an open-end structure;
- the IOSCO Recommendations and the Liquidity Rule each contemplate classifying the liquidity of fund holdings. However, the Liquidity Rule's focus on this feature is conspicuously greater than that of the IOSCO Recommendations;
- the IOSCO Recommendations suggest portfolio limitations related to liquidity risk management but, on this score, the IOSCO Recommendations are not as prescriptive as the Liquidity Rule's requirements relating to an HLIM or the 15% Limit;
- the IOSCO Recommendations devote substantial attention to stress testing as an important liquidity risk management tool. In contrast, under the Liquidity Rule, stress testing is permissive and only lightly discussed in Commission guidance[59]; and
- the IOSCO Recommendations also devote attention to contingency planning and liquidity risk management tools (e.g. in-kind redemptions, swing pricing, suspensions of redemption, side letters, lock-ups), only some of which are available under US regulations.

Detailed comparison of the IOSCO Recommendations with US liquidity risk management and disclosure regime

The comparison in Table 1 below sets out the primary considerations and sub-considerations under the IOSCO Recommendations, in the order provided in the IOSCO Final Report, and notes similarities to and distinctions from the US liquidity risk management and disclosure regime. From this detailed review, one may better understand the shared and distinct underlying features of the IOSCO and US approaches to fund liquidity risk management and consider the implications in light of the shared policy considerations informing each regime.

Conclusion

In the discussion above and in Table 1 below, we have explored certain similarities and differences among US and international regulators' means of addressing shared policy concerns relating to fund liquidity risk management. We have seen how, despite shared policy goals, the different regulatory regimes emphasise differing elements of liquidity risk management, including differing degrees of emphasis concerning classifying the liquidity of portfolio investments, explicit portfolio limitations, stress testing, contingency planning and liquidity risk management tools.

More than mere variations on a theme, these distinctions have real consequences for funds and their investors. The effectiveness,[60] relative costs[61] and

[58] Chair White Statement at Proposal (2015); see also Mary Jo White, SEC Chair, *Enhancing Risk Monitoring and Regulatory Safeguards for the Asset Management Industry*, Address at the New York Times DealBook Opportunities for Tomorrow Conference (11 December 2014) (Chair White Five-Part Plan Speech).

[59] As noted above, former SEC Chair White's five-part plan included measures to require stress testing by funds and investment advisers. Chair White explained that "[s]tress testing is an important tool routinely used by banking regulators. Implementing this new mandate in asset management, while relatively novel, will help market participants and the Commission better understand the potential impact of stress events"—Chair White Five-Part Plan Speech (2014). Such regulations have not been proposed.
The mandate for stress testing in the US asset management industry is set out in s.165(i) of the Dodd-Frank Act. On 20 March 2018, the US House of Representatives passed (by a vote of 395 to 19) the "Alleviating Stress Test Burdens to Help Investors Act", which would eliminate the Dodd-Frank Act's stress testing mandate as it applies to non-bank financial companies, including funds and investment advisers. Alleviating Stress Test Burdens to Help Investors Act 2018, H.R. 4566, 115th Cong. On 21 March 2018, the bill was received in the Senate and referred to the Senate Committee on Banking, Housing, and Urban Affairs.
Separately, it is noted that, under the Undertakings for Collective Investment in Transferable Securities (or UCITS) regime, the "UCITS Directive is less prescriptive about [duties to conduct regular stress testing], although it includes requirements to use an appropriate liquidity risk management process and where appropriate to conduct stress tests to assess the fund's liquidity risk under exceptional circumstances"—FCA Paper (2017), p.39 (citing COLL 6.12.11R). The SFC's "view is that a fund manager should perform liquidity stress testing on its funds on an ongoing basis to assess the impact of plausible severe adverse changes in market conditions". SFC Conclusions (2017), p.18. Similarly, the OSC recommended that funds have "written stress testing policies and procedures in place to ensure the fund can effectively execute redemptions in stressed market conditions"—OSC Report (2015), p.4. In "early 2017[,] the AMF … published an instructional guide on stress tests"—AMF News Release (2018).

[60] As the Commission recognises, "[r]edeemability is a defining feature of open-end investment companies" and "recent events have demonstrated the significant adverse consequences to remaining investors in a fund when it fails to adequately manage liquidity"—Adopting Release (2016), p.82,142–143.

[61] "The costs incurred by funds in complying with our rules overwhelmingly come out of investors' pockets"—Hester M. Peirce, SEC Commissioner, *Looking at Funds through the Right Glasses*, Remarks at the 2018 Mutual Funds and Investment Management Conference (19 March 2018) (Peirce Speech).

compliance burdens[62] of liquidity risk management regulations must be considered when evaluating liquidity risk management regimes and potential modifications. US and international regulators hopefully will continue to collaborate and learn from others' experiences in seeking to better calibrate their fund liquidity risk management regimes.

Table 1[63]

Distinctions from US liquidity risk management and disclosure regime	**Primary considerations and sub-considerations under IOSCO recommendations**	**Similarities to US liquidity risk management and disclosure regime**
	CIS[64] Design Process Recommendations	
	The responsible entity should draw up an effective liquidity risk management process, compliant with local jurisdictional liquidity requirements	Similar to requirements for a board-approved programme administrator (r.22e-4(b)(2)(ii)) and for a written liquidity risk management programme (r.22e-4(b)).
	When considering creating a new CIS, the responsible entity must be able to (demonstrate that they can) comply with the relevant explicit or principles-based local liquidity requirements that will apply to the CIS.	Similar to the portion of first liquidity risk consideration: whether the investment strategy is appropriate for an open-end fund (r.22e-4(b)(1)(i)(A)).
	Where the CIS is likely to be at a greater risk of liquidity problems, the responsible entity should construct (and perform) a more rigorous liquidity risk management process.	SEC guidance contemplates more frequent liquidity risk reviews where determined to be appropriate (Adopting Release (2016), p.82,167) and more frequent liquidity classifications "if changes in relevant market, trading, and investment-specific considerations are reasonably expected to materially affect one or more of its investments' classifications" (r.22e-4(b)(1)(ii)).
Regarding the reference to "an appropriate level of granularity", the IOSCO Final Report expresses scepticism of considering the liquidity of instruments on an asset class basis. See IOSCO Final Report (2018), fn.18, which accompanies the recommendation regarding an appropriate level of granularity ("[c]onsideration at the level of the asset class may not be sufficiently granular …"). The Liquidity Rule's liquidity risk assessment provisions do not specifically address the level of granularity with which portfolio investments are to be considered but its liquidity classification provisions explicitly endorse asset class-level classifications (r.22e-4(b)(1)(ii)(A)).	The responsible entity should fully consider the liquidity of the types of instruments in which the CIS's assets will be invested, at an appropriate level of granularity, and should seek to ensure that, taking account of the CIS's portfolio as a whole, these are consistent with the CIS's ability to comply with its redemption obligations or other liabilities.	Similar to first liquidity risk consideration: the fund's investment strategy and liquidity of portfolio investments during both normal and reasonably foreseeable stressed conditions, including whether the investment strategy is appropriate for an open-end fund, the extent to which the strategy involves a relatively concentrated portfolio or large positions in particular issuers, and the use of borrowings for investment purposes and derivatives (r.22e-4(b)(1)(i)(A)).
	The responsible entity should set appropriate liquidity thresholds which are proportionate to the redemption obligations and liabilities of the CIS	
Although this recommendation is suggestive of the Liquidity Rule's HLIM and 15% Limit provisions, these portfolio limitations are written into the Liquidity Rule text. Moreover, the Liquidity Rule requires board and SEC reporting where these limitations are breached; the recommendation from IOSCO indicates only that the thresholds should signal the need for more extensive liquidity risk assessment.	The responsible entity should set appropriate internal definitions and thresholds for the CIS's liquidity, which are in line with the principle of fair treatment of investors and the CIS's investment strategy. The thresholds should act as a signal to the responsible entity to carry out more extensive in-depth, quantitative and/or qualitative liquidity analysis as part of the risk management process (with the intention that the responsible entity would then take appropriate remedial steps if the analysis revealed vulnerabilities).	
	The responsible entity should carefully determine a suitable dealing frequency for units in the CIS	

[62] "[W]e have learned that the liquidity classification requirement in the [Liquidity Rule], commonly referred to as 'bucketing,' is a much tougher implementation project than anticipated … . In light of the proposed changes—the proposed qualitative liquidity disclosure and the proposed N-PORT cash and cash equivalents disclosure—and the additional complexities the Commission has witnessed since adoption of the bucketing requirement, wouldn't it make sense to ask for comment on whether bucketing remains a meaningful requirement? … For the Commission, funds' liquidity risk management programs, funds' qualitative liquidity disclosure, disclosure of their portfolio holdings (as will be required by Form N-PORT), identification of the holdings funds consider illiquid, the 15 percent limit on illiquid investments, and disclosure of funds' cash and cash equivalents likely provide sufficient information for an evaluation of fund liquidity. Yet we are not even asking whether bucketing remains necessary"—Peirce Speech (2018).

[63] All rules mentioned in this table are referring to rules promulgated under the 1940 Act. Please note that the text in the second column is taken directly from the IOSCO Recommendations.

[64] "CIS" refers to "collective investment scheme".

Distinctions from US liquidity risk management and disclosure regime	**Primary considerations and sub-considerations under IOSCO recommendations**	**Similarities to US liquidity risk management and disclosure regime**
In the US, local requirements (1940 Act s.22(e)) govern these considerations.	Where there is not a specified local requirement, the responsible entity should ensure that they set a dealing frequency for units in the CIS which is realistic and appropriate … .	
	Deciding that a CIS should be open-ended and the terms on which it is open-ended (to the extent the applicable law and regulation allows such discretion) is a significant design decision to be made. Often responsible entities may be subject to market pressure to provide very frequent dealing options when designing open-ended CIS even when they wish to invest in assets which are, or are likely to become, less liquid. Responsible entities should give due consideration to the structure of the fund and the appropriateness of, for example, the dealing frequency having regard to the target investor base, the investment strategy and objectives and also the expected liquidity of the assets. The investment strategy and objectives should be designed to give strong assurance that redemptions can be met in both normal and reasonably foreseeable (i.e. extreme but plausible) stressed market conditions.	Similar to: • the portion of first liquidity risk consideration: the fund's investment strategy and liquidity of portfolio investments during both normal and reasonably foreseeable stressed conditions, including whether the investment strategy is appropriate for an open-end fund (r.22e-4(b)(1)(i)(A)). • SEC guidance regarding second liquidity risk consideration: that shareholder ownership concentration and distribution channels may impact short-term and long-term cash flow projections (Adopting Release (2016), p.82,165; r.22e-4(b)(1)(i)(B)). Also similar to requirement to consider these liquidity risk considerations "during both normal and reasonably foreseeable stressed conditions" (r.22e-4(b)(1)(i)(A)–(B)).
	The responsible entity should ensure that the CIS' dealing (subscription and redemption) arrangements are appropriate for its investment strategy and underlying assets throughout the entire product life cycle, starting at the product design phase	Similar to portion of first liquidity risk consideration: whether the investment strategy is appropriate for an open-end fund (r.22e-4(b)(1)(i)(A)) and related SEC guidance: "… it is a common best practice for a fund and its management to consider the appropriateness of a fund's investment strategy in the context of launching an open-end fund, and then for an open-end fund to continue to manage its liquidity risk such that its strategy and holdings remain appropriate for the open-end structure" (Adopting Release (2016), p.82,161).
The Liquidity Rule does not require an explicit written record or demonstration of these considerations as part of a fund's initial design process.	As part of the initial design process for open-ended CIS, a documented assessment should be conducted of the liquidity risks likely to face the CIS, having regard to its proposed investment strategy, its target investors (as available to the responsible entity) and the assets and instruments it is intended to invest in. The assessment should set out why the relevant design features of the proposed CIS constitute an appropriate structure within which to manage liquidity risk in both normal and reasonably foreseeable stressed market conditions. … In particular, having open-ended structures, especially those offering frequent (e.g. daily) redemptions for CIS investing in illiquid assets such as infrastructure or real estate, would need a justification through such documented assessment.	
Generally not available to US-registered open-end funds: redemption restrictions, gates (except money market funds (MMFs), which are not subject to the Liquidity Rule), lock-ups, side letters, side pockets, suspensions.	[T]he responsible entity should consider in the design of the CIS an appropriate range of additional liquidity management tools to help manage redemptions in stressed market conditions (particularly those that could lead to severe market dislocation). … Examples of tools which may be permissible in certain jurisdictions would include: exit charges, limited redemption restrictions, gates, dilution levies, *in specie* transfers, lock-up periods, side letters which limit redemption rights or notice periods. … Additional measures include side pockets or suspensions.	Generally available to US-registered open-end funds: redemption fees, in-kind redemptions, swing pricing.
	The responsible entity should consider liquidity aspects related to its proposed distribution channels	Similar to SEC guidance regarding second liquidity risk consideration: that shareholder ownership concentration and distribution channels

Distinctions from US liquidity risk management and disclosure regime	Primary considerations and sub-considerations under IOSCO recommendations	Similarities to US liquidity risk management and disclosure regime
		may impact short-term and long-term cash flow projections (Adopting Release (2016), p.82,165; r.22e-4(b)(1)(i)(B)).
	The responsible entity should consider how the planned marketing and distribution of the CIS are likely to affect its liquidity. This should also include consideration of market conditions when forecasting their expectations for the volume, type and distribution of investors as well as the effectiveness of individual distribution channels.	Similar to SEC guidance regarding second liquidity risk consideration: that shareholder ownership concentration and distribution channels may impact short-term and long-term cash flow projections (Adopting Release (2016), p.82,165; r.22e-4(b)(1)(i)(B)). ("A fund's distribution channels could affect its cash flow predictions because certain distribution channels are generally correlated with particular purchase and redemption patterns. Additionally, we note that investors in mutual funds distributed through certain channels also may have similar purchase and redemption characteristics relating to their financial and tax-related needs.")
	In some jurisdictions, it is common for investors to hold their investments through aggregated nominee accounts, making it more difficult for the responsible entity to be fully aware of the make-up of the underlying investor base (for example, a holding of one million units in an aggregated account could represent a small number of investors each with large individual holdings or many more investors each with a smaller number of units). In this situation a responsible entity should take all reasonable steps to obtain investor concentration information from nominees to assist its liquidity management (for example, via contractual arrangements).	Similar to SEC guidance regarding second liquidity risk consideration: that shareholder ownership concentration and distribution channels may impact short-term and long-term cash flow projections (Adopting Release (2016), p.82,165; r.22e-4(b)(1)(i)(B)). ("[A] fund may wish to consider … whether its distribution channels (particularly, whether the fund's shares are held through omnibus accounts) could make it difficult for a fund to be fully aware of the composition of its underlying investor base, including investor characteristics that could affect the fund's short-term and long-term flows").
	The responsible entity should ensure that it will have access to, or can effectively estimate, relevant information for liquidity management	
	For example, where the CIS plans to invest in other CIS the responsible entity should be satisfied that it can obtain information about the underlying CISs' approaches to liquidity management and any other pertinent factors such as potential redemption restrictions used by the underlying CISs.	SEC staff guidance in the context of liquidity classification considerations reflects a similar approach: "The staff believes that a fund that invests in other pooled investment vehicles ('pools') may focus on the liquidity of the pool's shares or interests when classifying those investments. For pool shares that trade on exchanges (e.g., shares of ETFs and closed-end funds), the staff believes that it may be appropriate for a fund to evaluate their liquidity in much the same way that it would evaluate the liquidity of other exchange-traded investments (e.g., common stock), and generally only 'look through' to the pool's underlying investments under circumstances when the fund has reason to believe that doing so could materially alter its view of the liquidity of the pool's shares. For pools that offer redeemable securities or withdrawal rights (e.g., mutual funds or private funds), the staff believes that a fund generally would focus on the pool's ordinary redemption rights or practices, and 'look through' to the pool's underlying investments only under circumstances when the fund has a reason to believe that the pool may not be able to honor those rights or meet redemptions in accordance with its customary practice" (Staff FAQs (2018), FAQ 23).
	The responsible entity should ensure that liquidity risk and its liquidity risk management process are effectively disclosed to investors and prospective investors	US disclosure requirements cover general liquidity risk disclosure (Form N-1A Items 4, 9), disclosure on days for meeting redemption requests (Form N-1A Item 11(c)(7)) and methods expected to be used to meet redemption requests (Form N-1A Item 11(c)(8)). Additionally, a fund is required to provide, in shareholder reports, a brief discussion of the operation and effectiveness of

Distinctions from US liquidity risk management and disclosure regime	Primary considerations and sub-considerations under IOSCO recommendations	Similarities to US liquidity risk management and disclosure regime
		the fund's liquidity risk management programme over the preceding year (Form N-1A Item 27(d)(7)(b)).
	For example, disclosure of what actions the responsible entity would take in the event of a liquidity problem would be useful information.	Form N-1A Item 11(c)(8) requires disclosure of "[t]he methods that the fund typically expects to use to meet redemption requests, and whether those methods are used regularly, or only in stressed market conditions".
	Explanation of any tools or additional measures that could affect redemption rights (see Recommendation 17) should be included in the CIS's offering documents.	The use of in-kind redemptions and swing pricing would be disclosed (Form N-1A Items 11(c)(8) and 23(d) for redemptions in-kind; Form N-1A Items 4(b)(2)(ii) and (iv), 6(d), 13(d) and (e) for swing pricing).[65]
	Basic day-to-day liquidity information (for example, the dealing frequency of the CIS and how to buy/sell units) should be disclosed to investors.	US disclosure requirements address these points (Form N-1(a) Items 6 and 23).
Individual investment liquidity classification information will be non-public (Form N-PORT Item C.7).	Additional disclosure requirements to investors should include one or more of the following: A commitment in the initial offering documentation to provide to investors on a periodic basis and, where appropriate, on an aggregate basis information regarding the investment portfolios of the CIS that may allow investors to assess the liquidity risk attached to the CIS, e.g. holdings of various asset classes/types of securities, detailed holdings of individual securities. Disclosure in the CIS offering documents of the general approach the CIS will take in dealing with situations where it is under liquidity pressure from a heightened level of net redemption requests.	Information on holdings of cash and cash equivalents will be made public (Form N-PORT Item B.2.f). Form N-1A Item 11(c)(8) requires disclosure of "[t]he methods that the fund typically expects to use to meet redemption requests, and whether those methods are used regularly, or only in stressed market conditions". Form N-1A Item 27(d)(7)(b) requires a fund to provide, in shareholder reports, a brief discussion of the operation and effectiveness of the fund's liquidity risk management program over the preceding year.
	At the time of the launch of the CIS, disclosure of liquidity in the offering documents can be focused on the types of prospective assets targeted by the investment strategy.	US disclosure requirements address these points (Form N-1(a) Items 4 and 9).
Individual investment liquidity classification information will be non-public (Form N-PORT Item C.7).	Thereafter it can be disclosed or reported based on the actual investment strategy and/or assets and instruments held by the CIS.	Information on holdings of cash and cash equivalents will be made public (Form N-PORT Item B.2.f).
	Day-to-day liquidity management recommendations	
	The responsible entity's liquidity risk management process must be supported by strong and effective governance	Similar to requirements for a board-approved programme administrator (r.22e-4(b)(2)(ii)), which may not be composed solely of fund portfolio managers (r.22e-4(a)(13)).
	Again, related to the particular governance structure and size of the responsible entity, there should be an appropriate degree of independent oversight involved in reviews of the liquidity risk management process.	Similar to requirements for a board-approved programme administrator (r.22e-4(b)(2)(ii)), which may not be composed solely of fund portfolio managers (r.22e-4(a)(13)).
	The responsible entity should effectively perform and maintain its liquidity risk management process	
	In performing its liquidity risk management process, the responsible entity should take account of the investment strategy, liquidity profile and redemption policy of the CIS. The liquidity risk management process must also take account of obligations of the CIS other than investor redemptions (for example, delivery and payment obligations such as margin calls, obligations to counterparties and other creditors).	Similar to first liquidity risk consideration: the fund's investment strategy and liquidity of portfolio investments during both normal and reasonably foreseeable stressed conditions, including whether the investment strategy is appropriate for an open-end fund, the extent to which the strategy involves a relatively concentrated portfolio or large positions in particular issuers and the use of borrowings for investment purposes and derivatives (r.22e-4(b)(1)(i)(A)).

[65] Form N-1A swing pricing disclosure requirements are effective 19 November 2018.

Distinctions from US liquidity risk management and disclosure regime	**Primary considerations and sub-considerations under IOSCO recommendations**	**Similarities to US liquidity risk management and disclosure regime**
	Risk management and measurement arrangements that are more adaptive (rather than static) and systems that can rapidly alter underlying assumptions to reflect current circumstances are likely to be at the forefront of good liquidity risk management, as are those which utilise a wide range of information and different perspectives and those which incorporate varied scenario analysis in their performance.	Liquidity risk assessments are to reflect consideration of normal and reasonably-foreseeable stressed market conditions (r.22e-4(b)(1)(i)(A)–(B)); liquidity classifications are to reflect "current market conditions" and consider any relevant market, trading or investment-specific considerations (r.22e-4(a)(6), (8), (10), (12), (b)(1)(ii)).
	Regular periodic reviews of the effectiveness of the liquidity risk management process should be undertaken by the responsible entity and the process should be updated as appropriate.	The programme administrator is required to report annually to the board on the operation of the programme and assesses its adequacy and effectiveness of implementation, including, if applicable, the operation of the highly liquid investment minimum and any material changes to the programme (r.22e-4(b)(2)(iii)).
	The responsible entity should regularly assess the liquidity of the assets held in the portfolio	Similar to the requirement for monthly liquidity classifications of portfolio investments (r.22e-4(b)(1)(ii)).
	The responsible entity should ensure compliance with defined liquidity limits and the CIS's redemption policy, whether these are set by national regulation, set out in the liquidity risk management process, detailed in the CIS's documentation or other internal thresholds.	This recommendation is suggestive of the Liquidity Rule's HLIM and 15% Limit provisions.
Under the Liquidity Rule, there are "no derivatives-specific factors that a fund would have to evaluate in classifying a derivatives transactions' liquidity" (Adopting Release (2016), p.82,184). Also, the liquidity classifications of assets segregated to cover, or pledged to satisfy margin requirements in connection with, derivatives transactions are not defined with respect to the underlying derivatives (although certain reporting requirements apply with respect to such segregated/pledged assets) (Adopting Release (2016), p.82,185; Form N-PORT Item B.8 and General Instructions, para.F and Disclosure Amendment Release (2018), fn.20).	The liquidity assessment of the CIS's assets should consider obligations to creditors, counterparties and other third parties.	Liquidity risk assessment considerations include consideration of the use of borrowings for investment purposes and derivatives (r.22e-4(b)(1)(i)(A)).
	The time to liquidate assets and the price at which liquidation could be effected should form part of the assessment of asset liquidity, as should financial settlement lags and the dependence of these on other market risks and factors.	The Liquidity Rule's liquidity categories are defined in terms of the number of days for conversion to cash (or sale or disposition) in current market conditions without significantly changing the market value of the investment, and the classification requirements involve consideration of relevant market, trading and investment-specific considerations (r.22e-4(a)(6), (8), (10), (12), (b)(1)(ii)).
The Liquidity Rule and related guidance do not contain an explicit requirement for integrating liquidity considerations into investment decisions (although the HLIM or 15% Limit may, in practice, impact investment decisions).	*The responsible entity should integrate liquidity management in investment decisions*	
The Liquidity Rule and related guidance do not contain an explicit requirement for integrating liquidity considerations into investment decisions (although the HLIM or 15% Limit may, in practice, impact investment decisions).	The responsible entity should consider the liquidity of the types of instruments it intends to purchase or to which the CIS could be exposed, as well as liquidity effects of the investment techniques/strategies it uses, before transacting; and the impact that the transaction or techniques/strategies will have on the overall liquidity of the CIS. Responsible entities should only carry out transactions if the investment or technique/strategy employed does not compromise the ability of the CIS to comply with its redemption obligations or other liabilities.	
Considerations related to asset type, trading information and time to convert an investment to cash (or sell or dispose of an investment) without significantly changing the market value of the investment are part of the liquidity classification provi-	The assessment of liquidity risk includes the consideration of the type of asset and where applicable trading information (for example, volumes, transaction sizes and number of trades, issue size) as well as an analysis, for each type	

Distinctions from US liquidity risk management and disclosure regime	Primary considerations and sub-considerations under IOSCO recommendations	Similarities to US liquidity risk management and disclosure regime
sions of the Liquidity Rule; they are not explicitly a part of the liquidity risk assessment under the Liquidity Rule (r.22e-4(a)(6), (8), (10), (12), (b)(1)(ii)). Notably, SEC guidance related to liquidity classifications includes specific references to the exchange-traded nature of an asset class or investment, diversity and quality of market participants, frequency of trades or quotes/average daily trading volume, volatility of trading prices and bid-ask spreads (Adopting Release (2016), p.82,187–90).	of asset, of the number of days it would take the responsible entity to sell the asset without materially moving the market prices. For OTC securities other information may be more meaningful in delivering comparable analysis, such as the quantity and quality of secondary market activity, buy/sell spreads and the sensitivities of the price and spreads.	
The Liquidity Rule and related guidance generally address assets segregated to cover, or pledged to satisfy margin requirements in connection with, fund derivatives transactions (rather than evaluating the liquidity of assets received from a counterparty as collateral). Although the first liquidity risk consideration includes consideration of the use of borrowings for investment purposes and derivatives (r.22e-4(b)(1)(i)(A)), the Liquidity Rule does not require that the liquidity classification of assets segregated to cover, or pledged to satisfy margin requirements in connection with, fund derivatives transactions be treated differently from the liquidity classification of other assets.[66]	Liquidity risk management must also consider collateral arrangements (for example, to take account of the risk of deterioration in the quality of collateral received from a counterparty in a derivative transaction, if it were to become illiquid). The liquidity "quality" of securities accepted as collateral should be evaluated on an ongoing basis in light of collateral arrangements actually in place (for example, segregation of collateral accounts, unavailability of collateral for investment purposes, haircut thresholds and so on).	
	The liquidity risk management process should facilitate the ability of the responsible entity to identify an emerging liquidity shortage before it occurs	
	The liquidity risk management process should aim to assist the responsible entity in identifying liquidity pressures before they crystallise, thus enabling it to take appropriate action respecting the principle of fair treatment of investors.	Similar to SEC guidance regarding the Liquidity Rule's portfolio limitations: "if a fund's illiquid investments exceed 15% of net assets, this could indicate that the fund is encountering liquidity pressures that could significantly impair the fund's ability to meet its redemption and other legal obligations. In this case, we believe it would be appropriate for a fund to review and potentially update its liquidity risk management procedures for handling the fund's high levels of illiquid investment holdings" (Adopting Release (2016), p.82,162) and SEC Staff guidance regarding monitoring liquidity classifications in relation to the HLIM and 15% Limit portfolio limitations: "[t]hese requirements are critical to the functioning of rule 22e-4, and as such, the staff believes that regular monitoring is essential to compliance with the rule" (Staff FAQs (2018), FAQ 24) and "[r.]22e-4 requires an intra-month re-evaluation of an investment's liquidity classification when a fund becomes aware of changes in relevant market, trading and investment-specific considerations that are *reasonably expected* to *materially affect* an existing classification of that particular investment" (Staff FAQs (2018), FAQ 28 (original emphasis)).
	As such, the responsible entity should seek to maintain the investment strategy and attempt to maintain alignment between the funds' investment strategy and its liquidity profile taking into account investors' best interests, including ensur-	Similar to the Liquidity Rule's definition of "liquidity risk" (r.22e-4(a)(11)) and SEC guidance: "There can be significant adverse consequences to remaining investors in a fund that does not adequately manage liquidity. As noted above, the proportion of illiquid assets held by

[66] The SEC originally proposed that assets segregated to cover, or pledged to satisfy margin requirements in connection with, fund derivatives transactions would be classified "using the liquidity of the derivative instruments they are covering"—see Proposing Release (2015), p.62,302 ("[t]hus, although we expect that assets used by a fund to cover derivatives and other transactions would be liquid when considered in isolation, when evaluating their liquidity for purposes of the proposed rule, the fund would have to consider that they are being used to cover other transactions and, consistent with our position in Release 10666, are 'frozen' and 'unavailable for sale or other disposition.' Because these assets are only available for sale to meet redemptions once the related derivatives position is disposed of or unwound, a fund should classify the liquidity of these segregated assets using the liquidity of the derivative instruments they are covering"). This approach was rejected in the Liquidity Rule as adopted—see Adopting Release (2016), pp.82,182–183 (explaining that certain requirements to determine and disclose the proportion of a fund's most liquid assets segregated to cover, or pledged to satisfy margin requirements in connection with, certain fund derivatives transactions "replace the proposed requirement for a fund to consider the 'relationship of [an] asset to another portfolio asset' in classifying and reviewing the liquidity of its portfolio assets, as well as the derivatives-focused guidance that the Commission provided in the [Proposing Release (2015)] regarding this proposed classification factor"). Reporting requirements related to the proportion of a fund's most liquid assets segregated to cover, or pledged to satisfy margin requirements in connection with, certain fund derivatives transactions were subsequently amended so that such reporting will be non-public—see Form N-PORT Item B.8 and General Instructions, para.F and Disclosure Amendment Release (2018), fn.20.

Distinctions from US liquidity risk management and disclosure regime	Primary considerations and sub-considerations under IOSCO recommendations	Similarities to US liquidity risk management and disclosure regime
	ing that remaining investors are not left with a disproportionate share of potentially illiquid assets.	a fund can increase if the fund sells its more liquid portfolio assets to meet redemptions. This in turn could adversely affect the fund's risk profile and cause the fund to have difficulty meeting future shareholder redemptions" (Adopting Release (2016), pp.82,150–151).
	The responsible entity should be able to incorporate relevant data and factors into its liquidity risk management process in order to create a robust and holistic view of the possible risks	
	The more that a responsible entity knows about its investor base, the better able it will be to plan for and manage future liquidity needs. While acknowledging that there are operational hurdles that impede responsible entities from accessing information, such entities should make reasonable efforts to understand their investor base. This involves at least considering the marketing and distribution channels of the CIS, and analysing the historical redemption patterns of different types of investors.	Similar to SEC guidance regarding second liquidity risk consideration: that shareholder ownership concentration and distribution channels may impact short-term and long-term cash flow projections (Adopting Release (2016), p.82,165; r.22e-4(b)(1)(i)(B)) ("a fund may wish to consider the extent to which its redemption practices could depend on its distribution channels, as well as whether its distribution channels (particularly, whether the fund's shares are held through omnibus accounts) could make it difficult for a fund to be fully aware of the composition of its underlying investor base, including investor characteristics that could affect the fund's short-term and long-term flows. A fund's distribution channels could affect its cash flow predictions because certain distribution channels are generally correlated with particular purchase and redemption patterns").
	The responsible entity should conduct ongoing liquidity assessments in different scenarios, which could include fund level stress testing, in line with regulatory guidance.	
Stress testing is not required under the Liquidity Rule. SEC guidance regarding liquidity risk assessments and the HLIM portfolio limitation indicate a more permissive and light-touch approach concerning stress testing: "In assessing, managing, and periodically reviewing its liquidity risk, a fund may take into account considerations in addition to the factors set forth in rule 22e-4 and must do so to the extent necessary to adequately assess and manage the fund's liquidity risk. For example … if a fund elects to conduct stress testing to determine whether it has sufficient liquid investments to cover different levels of redemptions, a fund may wish to incorporate the results of this stress testing into its liquidity risk assessment and management. We continue to believe that stress tests that analyse the proposed factors could be particularly useful to a fund in evaluating its liquidity risk" (Adopting Release (2016), p.82,161) ("we do not believe that a general stress testing requirement would be an adequate substitute for the highly liquid investment minimum requirement"—Adopting Release (2016), p.82,246).	Stress testing can assess how the liquidity profile of, or redemption levels of, a CIS can change when faced with various stressed events and market situations. … Given the diversity of the CIS universe, stress testing arrangements, as further set out below, should be appropriate for the size, investment strategy, underlying assets and investor profile of the CIS, taking into account other relevant market and regulatory factors. Stress testing should be supported by strong and effective governance. … Appropriate stress testing should be carried out based on normal and stressed scenarios (for example, atypical redemption requests). … Stress testing should be based on reliable and up-to-date information. … Responsible entities could also conduct stress testing related to other market risks and factors. … It is also useful to conduct stress tests which start from the assumption that the responsible entity has been obliged to implement additional liquidity management tools, which then identifies situations where this might occur, and which works through the consequence of operating in those situations. … Stress testing results have the potential to contribute, as appropriate, into all stages of the CIS's product life cycle. … Stress testing should be carried out at a frequency relevant to the specific CIS, especially in anticipation of reasonably foreseeable stressed market conditions to which the CIS would be sensitive.	
	The responsible entity should ensure appropriate records are kept, and relevant disclosures made, relating to the performance of its liquidity risk management process	The Liquidity Rule includes specified recordkeeping requirements (r.22e-4(b)(3)); a fund is required to provide, in shareholder reports, a brief discussion of the operation and effectiveness of the fund's liquidity risk management programme over the preceding year (Form N-1A Item 27(d)(7)(b)).

Distinctions from US liquidity risk management and disclosure regime	**Primary considerations and sub-considerations under IOSCO recommendations**	**Similarities to US liquidity risk management and disclosure regime**
	Contingency planning recommendations	
Generally not available to US-registered open-end funds: redemption restrictions, gates (except MMFs, which are not subject to the Liquidity Rule), lock-ups, side letters, side pockets, suspensions.	*The responsible entity should put in place and periodically test contingency plans with an aim to ensure that any applicable liquidity management tools can be used where necessary and, if being activated, can be exercised in a prompt and orderly manner.* *The responsible entity should consider the implementation of additional liquidity management tools to the extent allowed by local law and regulation in order to protect investors from unfair treatment, amongst other things, or prevent the CIS from diverging significantly from its investment strategy.*	Generally available to US-registered open-end funds: redemption fees, in-kind redemptions, swing pricing.