Consultation on
CIS Liquidity Risk Management Recommendations

BOARD OF THE

INTERNATIONAL ORGANIZATION OF SECURITIES COMMISSIONS

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Foreword

In 2013, the Board of the International Organization of Securities Commissions ('IOSCO') published a Report which contained *Principles of Liquidity Risk Management for Collective Investment Schemes* ('2013 Liquidity Report') against which both the industry and authorities were asked to assess the quality of regulation and industry practices concerning liquidity risk management of collective investment schemes ('CIS').[1]

The 2013 Liquidity Report took into account the lessons learned from the financial crisis of 2007-10 and reflected the level of common approach among member jurisdictions having responded to those events. The 2013 Liquidity Report was designed as a practical guide for authorities and industry practitioners and focused, for the most part, on the liquidity risk management of open-ended CIS.[2] They were addressed to the entity/entities responsible for the overall operation of the CIS. It was recognized that implementation may vary from jurisdiction to jurisdiction, depending on local conditions and circumstances.

Since then, IOSCO has actively engaged with the Financial Stability Board ('FSB') in their analysis of the potential systemic risks arising in relation to the liquidity risk management of CIS, among other matters. The FSB, on January 12, 2017, issued recommendations as to how the residual risks arising should be addressed.[3] Eight of its nine recommendations relating to liquidity are addressed to IOSCO.[4] In addition, a number of member jurisdictions have conducted further significant work either on updating their own regulatory framework or guidance with regard to liquidity risk management of CIS.[5]

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1 IOSCO, *Principles on Liquidity Risk Management for Collective Investment Schemes*, Final Report, Report of the Board of IOSCO, March 2013, available at: https://www.iosco.org/library/pubdocs/pdf/IOSCOPD405.pdf

2 By open-ended CIS, in this document we mean a registered/authorised/public CIS which provides redemption rights to its investors from its assets, based on the net asset value of the CIS, on a regular periodic basis during its lifetime - in many cases on a daily basis, although this can be less frequently.

3 FSB, *Policy Recommendations to Address Structural Vulnerabilities from Asset Management Activities* ('FSB Policy Recommendations'), January 12, 2017, available at: http://www.fsb.org/wp-content/uploads/FSB-Policy-Recommendations-on-Asset-Management-Structural-Vulnerabilities.pdf .

4 The seven recommendations relevant to liquidity which are addressed by the proposals being consulted on here are Recommendations 2-8 of the FSB Policy Recommendations. Regarding Recommendation 1 of the FSB Policy Recommendations, please see the IOSCO June 2016 Statement on 'Priorities Regarding Data Gaps in the Asset Management Industry', available at: https://www.iosco.org/library/pubdocs/pdf/IOSCOPD533.pdf

5 See for example:

- Financial Conduct Authority, *Liquidity Management for Investment Firms: Good Practice*, Feb 2016, available at: https://www.fca.org.uk/news/liquidity-management-for-investment-firms-good-practice
- French AMF, *Guide to the Use of Stress Tests as Part of Risk Management within Asset Management Companies*, Aug 2016, available at: http://www.amf-france.org/en_US/Actualites/Communiques-de-presse/AMF/annee-2016.html?docId=workspace%3A%2F%2FSpacesStore%2F08cf82bc-2b26-4251-b7d6-a901f1c2217f
- French AMF, *Public consultation by the AMF on the terms for implementing gates in UCITS and AIFs*, Dec 2016, available at: http://www.amf-france.org/en_US/Publications/Consultations-publiques/Archives.html?docId=workspace%3A%2F%2FSpacesStore%2F49e6bd83-3397-4ae4-bcc7-35975b6e9dcc

Reducing systemic risk is one of the three objectives of IOSCO. This forms part of the work of IOSCO to develop, implement and promote adherence to internationally recognized and consistent standards of regulation, oversight and enforcement. Principle Six of the IOSCO Principles and Objectives states that each regulator should "… *have or contribute to a process to monitor, mitigate and manage systemic risk, appropriate to its mandate.*"

The FSB's recommendations are addressed to the relevant authorities. By taking forward the liquidity issues addressed to it, the present consultation constitutes a first step in IOSCO's response to the recommendations that the FSB has turned to IOSCO to provide further guidance on.

To this end, IOSCO wishes to build further on the overall approach previously set out in the 2013 Liquidity Report taking into account the financial stability focus emphasized in the FSB Recommendations but also encompassing investor protection considerations. IOSCO proposes to re-affirm and enhance the guidance set out in the 2013 Liquidity Report as proposed in this consultation on *Recommendations of Liquidity Risk Management for Collective Investment Schemes* ('2017 Liquidity Recommendations').

Effective liquidity risk management is important to safeguard the interests and fair treatment of investors, and maintain the orderliness and robustness of CIS and markets. The revisions to the text are intended to supplement the approach set out in the 2013 Liquidity Report with additional recommendations and more detailed guidance to uphold these objectives by addressing the particular issues highlighted in the recommendations of the FSB. The topics covered in this consultation include disclosure to investors, achieving alignment between asset portfolio and redemptions terms, availability and effectiveness of liquidity risk management tools and fund level stress testing. Furthermore, as part of this supplement to the 2013 Liquidity Report, IOSCO is providing an additional chapter detailing recommendations around contingency planning. IOSCO is also consulting on issues relating to exchange traded funds (ETFs).[6] Questions relating to possible gaps in data to support optimal supervision are not dealt with here as IOSCO will consider those questions separately.[7]

- Hong Kong SFC, *Circular to Management Companies of SFC-authorised Funds on Liquidity Risk Management*, July 2016, available at: http://www.sfc.hk/edistributionWeb/gateway/EN/circular/doc?refNo=16EC29
- Ontario Securities Commission, *OSC Staff Notice 81-727 Report on Staff's Continuous Disclosure Review of Mutual Fund Practices Relating to Portfolio* Liquidity, June 2015, available at: http://www.osc.gov.on.ca/documents/en/Securities-Category8/ni_20150625_81-727_portfolio-liquidity.pdf
- Romania ASF, *Methodology for the Stress Test on Romanian Open-end and Closed-end Investment Funds*, July 2016 (yet to be published)
- US SEC, *Investment Company Liquidity Risk Management Programs, Investment Company Act Release No. 32315*, Oct. 2016, available at: https://www.sec.gov/rules/final/2016/33-10233.pdf
- US SEC, *Investment Company Reporting Modernization, Investment Company Act Release No. 32314*, Oct 2016, available at: https://www.sec.gov/rules/final/2016/33-10231.pdf
- US SEC, *Investment Company Swing Pricing, Investment Company Act Release No. 32316*, Oct 2016, available at: https://www.sec.gov/rules/final/2016/33-10234.pdf

6 In June 2013, the IOSCO Board published a report, 'Principles for the Regulation of Exchange Traded Funds', which contains nine principles intended to guide the regulation of ETFs and foster industry best practices, available at: http://www.iosco.org/library/pubdocs/pdf/IOSCOPD414.pdf

7 Statement on IOSCO's Priorities Regarding Data Gaps in the Asset Management Industry June 2016, available at: https://www.iosco.org/library/pubdocs/pdf/IOSCOPD533.pdf

IOSCO expects that authorities will actively promote the implementation by responsible entities of the 2017 Liquidity Recommendations. However, as noted in the 2013 Liquidity Report, when the recommendations are being implemented, they have to be transposed within the context of the specific legal structures prevailing in each jurisdiction. Hence, the implementation of the proposed recommendations may vary from jurisdiction to jurisdiction, depending on local conditions and circumstances. Following adoption of the proposed recommendations and once a period of time for initial implementation has passed (e.g. 2-3 years), IOSCO intends to assess implementation across the relevant jurisdictions.

IOSCO is simultaneously publishing for comment a consultation report titled *Open-ended Fund Liquidity and Risk Management – Good Practices and Issues for Consideration* ('Good Practices Document') which provides practical information on measures that may be taken to address liquidity risk management. Topics covered include: ensuring consistency between a fund's redemption terms and its investment strategy; liquidity risk management tools; and stress testing. When implementing the 2017 Recommendations, these good practices provide responsible entities with a useful reference point against which to assess whether their own practices follow a similar approach, or to the extent that they vary, whether they can achieve similar outcomes, and furthermore assist with evolving the most effective approach to the responsible management of liquidity.

How to Submit Comments

Comments may be submitted by one of the following two methods **on or before Monday 18 September 2017**. To help us process and review your comments more efficiently, please only use one method.

Important: All comments will be made available publicly, unless anonymity is specifically requested. Comments will be converted to PDF format and posted on the IOSCO website. Personal identifying information will not be edited from submissions.

- **Email** • Send comments to consultation-04-2017@iosco.org.
  - The subject line of your message must indicate *CIS Liquidity Risk Management Recommendations.*
  - If you attach a document, indicate the software used (e.g., Microsoft WORD, ASCII text, etc.) to create the attachment.
  - Do not submit attachments as HTML, PDF, GIFG, TIFF, PIF, ZIP or EXE files.
- **Paper**

Send three copies of your comment letter to:

Shane Worner, International Organization of Securities Commissions (IOSCO), Calle Oquendo 12 28006 Madrid Spain

Your comment letter should indicate prominently that it is a "*Comment on CIS Liquidity Risk Management Recommendations*".

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Chapter 1: Executive Summary

IOSCO has published *Principles of Liquidity Risk Management for Collective Investment Schemes* ('2013 Liquidity Report') and, separately, *Principles on the Suspension of Redemptions*[8] ('2012 Suspension Report') and *Principles on the Valuation of Collective Investment Schemes* ('2013 Valuation Report').[9] While covering a broader range of matters, those three reports provide an overall framework for the management of liquidity in open-ended CIS, and are particularly relevant to those CIS offering investors the ability to frequently redeem units/shares.

In early 2017 the FSB made a number of recommendations to further address "structural" vulnerabilities in the asset management sector, including CIS. The FSB has identified four key structural vulnerabilities linked to the CIS sector that it believes present potential financial stability risks.[10] The potential for liquidity mismatch between CIS investments and redemption terms and conditions for open-ended CIS units/shares is one of those vulnerabilities.

From an investors' protection perspective, effective liquidity risk management is also important to safeguard the interests and fair treatment of investors, and maintain the robustness of funds and market integrity. In response, therefore, IOSCO intends to put its framework for the liquidity risk management of CIS on an enhanced footing, by re-issuing and enhancing its 2013 guidance as *Recommendations of Liquidity Risk Management for Collective Investment Schemes* (2017 Liquidity Recommendations). IOSCO believes that the approaches already set out in the 2013 Liquidity Report are appropriately formulated and therefore is not re-opening the existing text for consultation, except in so far as the existing text might need to be adjusted for consistency with the proposed additional text.

In the 2017 Liquidity Recommendations, IOSCO proposes to include one additional chapter detailing recommendations related to contingency planning. IOSCO also proposes to consult on the potential significance of ETFs in this context to determine whether there are any additional matters to be dealt with in that regard.

In addition, IOSCO wishes to consult on the following supplements to the 2013 Liquidity Report:

> Recommendation 3:[11] additional guidance on determining the appropriate dealing frequency for a CIS. This contributes to the response to FSB Recommendation 3[12];

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8 IOSCO, *Principles on Suspensions of Redemptions in Collective Investment Schemes*, Final Report, Report of the Board of IOSCO, January 2012, available at: http://www.iosco.org/library/pubdocs/pdf/IOSCOPD367.pdf

9 IOSCO, *Principles for the Valuation of Collective Investment Schemes*, Final Report of the Board of IOSCO, May 2013, available at: http://www.iosco.org/library/pubdocs/pdf/IOSCOPD413.pdf.

10 These are outlined in greater detail in section 2.1.

11 "*The responsible entity should carefully determine a suitable dealing frequency for units in the CIS.*"

12 FSB Recommendation 3: In order to reduce the likelihood of material liquidity mismatches arising from an open-ended fund's structure, authorities should have requirements or guidance stating that funds' assets and investment strategies should be consistent with the terms and conditions governing fund unit redemptions both at fund inception and on an ongoing basis (for new and existing funds), taking into account the expected

Recommendation 4:[13] a substantial rewording of the current Recommendation 4[14], elaborating on matters previously covered in the supporting guidance under Principle 1[15] of the 2013 Liquidity Report, which sets out how to ensure the type of assets which a CIS is invested in are aligned with meeting the redemption expectations of the CIS investors as well as other liabilities. This reworded recommendation sets out that responsible entities should conduct a formalized risk review to decide what the appropriate design features should be, having regard to the anticipated liquidity of the assets the CIS would likely hold given its investment strategy. This contributes to the response to FSB Recommendation 3.

Recommendation 7:[16] additional guidance on key design features to assist with increased transparency/disclosure in CIS with regard to liquidity risk. This responds to FSB Recommendation 2.[17]

Recommendation 12:[18] additional guidance on maintaining the investment strategy as well as meeting redemptions in stressed market conditions. This contributes to the response to FSB Recommendations 3;

Recommendation 13:[19] additional guidance on how responsible entities can develop a strong understanding of the obligations and liabilities of a CIS and incorporate this in liquidity risk management. This contributes to the response to FSB Recommendation 3;

Recommendation 14:[20] a substantial rewording to emphasize guidance on the

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liquidity of the assets and investor behaviour during normal and stressed market conditions. In this regard, IOSCO should review its existing guidance and, as appropriate, enhance it.

13 "*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."*

14 *"Where permissible and appropriate for a particular CIS, and in the interests of investors, the responsible entity should include in the CIS's constitutional documents the ability to use specific tools or exceptional measures which could affect redemption rights."*

15 "*The responsible entity should draw up an effective liquidity risk management process, compliant with local jurisdictional liquidity requirements.*"

16 "*The responsible entity should ensure that liquidity risk and its liquidity risk management process are effectively disclosed to prospective investors*."

17 FSB Recommendation 2: Authorities should review existing investor disclosure requirements and determine the degree to which additional disclosures should be provided by open-ended funds to investors regarding fund liquidity risk, proportionate to the liquidity risks funds may pose from a financial stability perspective. Authorities should enhance existing investor disclosure requirements as appropriate to ensure that the required disclosures are of sufficient quality and frequency. In this regard, IOSCO should review its existing guidance and, as appropriate, enhance it.

18 "*The liquidity risk management process should facilitate the ability of the responsible entity to identify an emerging liquidity shortage before it occurs."*

19 "*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."*

20 "*The responsible entity should conduct assessments of liquidity in different scenarios, including stressed situations.*"

organization and design of liquidity stress tests appropriate to CIS. This corresponds to FSB Recommendation 6;[21]

Recommendation 16:[22] a new recommendation which advocates appropriate periodic operational test(s) to test readiness to use additional liquidity management tools[23], with an aim of ensuring that these tool(s), if being applied, can be implemented in an orderly and prompt manner. This corresponds to FSB Recommendations 4[24] and 7;[25]

Recommendation 17:[26] a new recommendation which advocates the availability and, in appropriate circumstances, use of additional liquidity management tools to protect investors from unfair treatment and to prevent the CIS from diverging significantly from its' investment strategy. This new recommendation corresponds to FSB Recommendations 5[27] and 8.[28]

These supplements are designed to improve investor protection, enhance governance and management practices further as well as addressing the specific recommendations of the FSB.

Securities regulators should have mechanism to address, or contribute to address, crisis situations consistent with their jurisdictional legal and regulatory framework, having due regard to the costs and benefits of relevant actions.

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21 FSB Recommendation 6: Authorities should require and/or provide guidance on stress testing at the level of individual open-ended funds to support liquidity risk management to mitigate financial stability risk. The requirements and/or guidance should address the need for stress testing and how it could be done. In this regard, IOSCO should review its existing guidance and, as appropriate, enhance it.

22 *"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."*

23 Additional liquidity management tools refer to tools not used as part of normal liquidity management but appropriate in certain stressed liquidity conditions for the CIS.

24 FSB Recommendation 4: Where appropriate, authorities should widen the availability of liquidity risk management tools to open-ended funds, and reduce barriers to the use of those tools to increase the likelihood that redemptions are met even under stressed market conditions. In this regard, IOSCO should review its existing guidance and, as appropriate, enhance it.

25 FSB Recommendation 7: Authorities should promote (through regulatory requirements or guidance) clear decision-making processes for open-ended funds' use of exceptional liquidity risk management tools, and the processes should be made transparent to investors and the relevant authorities. In this regard, IOSCO should review its existing guidance and, as appropriate, enhance it.

26 "*The responsible entity should consider the implementation of additional liquidity management tools to the extent allowed by local law and regulation, when to do so will protect investors from unfair treatment, amongst other things, or prevent the CIS from diverging significantly from its investment strategy."*

27 FSB Recommendation 5: Authorities should make liquidity risk management tools available to open-ended funds to reduce first-mover advantage, where it may exist. Such tools may include swing pricing, redemption fees and other anti-dilution methods. In this regard, IOSCO should review its existing guidance and, as appropriate, enhance it.

28 FSB Recommendation 8: While asset managers have the primary responsibility to exercise exceptional liquidity risk management tools regarding the open-ended funds they manage, authorities should provide guidance on their use in stressed conditions. Where jurisdictions consider it appropriate, authorities should provide direction in extraordinary circumstances regarding open-ended funds' use of such liquidity risk management tools taking into account the costs and benefits of such action from a financial stability perspective. In this regard, IOSCO should review its existing guidance and, as appropriate, enhance it.

Chapter 2: Why Supplement the 2013 Liquidity Report?

2.1 Analysis of Systemic Risks

While IOSCO affirms the overall appropriateness of the 2013 Liquidity Report, it is also part of the role of IOSCO to continue to identify and respond, as appropriate, to emerging risks. The environment in which CIS operate can be affected by a number of significant factors driving change, such as monetary policy, regulatory change, technological change and changes in market confidence. These factors can impact both market liquidity and the behavior of investors in stressed market conditions. A number of these factors may be at work in the current period.[29] Nevertheless, evidence of a sustained effect on current market liquidity is not conclusive, as outlined by the IOSCO Committee 2 (C2) examination of liquidity in the secondary corporate bond markets.[30] Market spreads remain healthy and CIS liquidity remains strong. However, even if such factors have not translated into an evident deterioration in market liquidity, they are evidence of the constantly changing market environment for which those responsible for managing CIS must be prepared. Securities regulators should have mechanism to address, or contribute to address, crisis situations consistent with their jurisdictional legal and regulatory framework, having due regard to the costs and benefits of relevant actions.

It is in that wider context that IOSCO has contributed to the work of the FSB in developing recommendations to address "structural" vulnerabilities from asset management activities. The fourteen recommendations which the FSB has developed seek to address four potential sources of systemic risk:

i. liquidity mismatch between fund investments and redemption terms and conditions for open-ended fund units;
ii. leverage within investment funds;
iii. operational risk and challenges in transferring investment mandates in stressed conditions; and
iv. securities lending activities of asset managers and funds.

Among these four "structural" vulnerabilities, the FSB has highlighted liquidity mismatch and leverage as key vulnerabilities. The FSB Recommendations for liquidity mismatch focus on open-ended funds (public and private, including exchange-traded funds (ETFs) but excluding money market funds (MMFs)). With this consultation, IOSCO wishes to respond to the liquidity mismatch recommendations as addressed to it by the FSB and to that end has formulated the proposals applicable to open-ended CIS being discussed here.

2.2 Key Challenges for Responsible Entities

IOSCO has observed three particular challenges for responsible entities which it considers appropriate to highlight, and which are addressed within the additional recommendations and

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29 IMF, *Global Financial Stability Report*, Chapter 2, 'Market Liquidity – Resilient or Fleeting?', Oct 2015, available at: https://www.imf.org/External/Pubs/FT/GFSR/2015/02/pdf/c2_v2.pdf

30 IOSCO C2 did not find substantial evidence showing that liquidity in the secondary corporate bond markets has deteriorated markedly from historic norms for non-crisis periods, available at: https://www.iosco.org/library/pubdocs/pdf/IOSCOPD537.pdf

guidance:

Firstly, with regard to the pre-launch design process, most open-ended CIS offer regular, if not daily, dealing. When responsible entities consider daily dealing appropriate, it is particularly important that other design features of the CIS should be sufficiently robust to ensure alignment of the daily dealing feature with the liquidity of assets of the CIS.

Secondly, even where a prudent liquidity management strategy is in place, it remains important to test that liquidity risk management strategy. Stress testing recommendations can be particularly useful to a CIS in evaluating its liquidity risk, its capacity to respond to liquidity risks, as well as validating and supporting a good liquidity risk management strategy.

Thirdly, under certain circumstances, CIS may be allowed to limit redemption rights, if permitted by applicable law and regulation, by the use of various additional liquidity management tools. However, an ability to limit, defer or suspend redemption rights, if permitted by applicable law and regulation, should not be seen as freeing the responsible entities from their duty to endeavor faithfully to meet redemption demand in an orderly fashion. Such additional liquidity management tools may be relied on in liquidity management planning, but only in instances of stressed market conditions where to do otherwise could lead to management of the CIS which is not in the best interest of investors or lead to undermining of the investment strategy. Where there is an expectation that additional liquidity management tools can be proportionate to deal with stressed market conditions, there needs also to be a strong level of assurance that the CIS can actually implement such options in an orderly, prompt and transparent manner. While the implementation of additional liquidity management tools may potentially pose reputational risk to the responsible entity or the CIS, such risk can be mitigated through effective investor communication and putting in place sound contingency plans. Therefore, IOSCO, in producing additional recommendations and guidance around additional liquidity management tools, is encouraging authorities to promote clear decision making processes and planning for CIS implementation of such tools.

2.3 Consultation on Proposed 2017 Liquidity Recommendations

Attached to this consultation document (Appendix A) is the full text of the proposed 2017 Liquidity Recommendations.

IOSCO is asking a number of questions in this consultation concerning specific proposed changes as detailed at the relevant point in this consultation paper. Furthermore, IOSCO is setting out below some questions regarding the Good Practices Document, and one general question regarding the scope of the 2017 Liquidity Recommendations. It is also asking some questions specific to ETFs in section 2.4.2.

Question 1

- The 2013 Liquidity Report related to open-ended CIS and where determined by the responsible entity, to some closed-ended CIS. Should the proposed text laid out below apply also to the same range of CIS? Should certain CIS or types of CISs be excluded from any particular requirements, or be subject to a different requirement, because of their investment strategies, ownership concentrations, redemption policies, or some other factor that makes

them more or less prone to liquidity risk?

Good Practices Document

Question 2

- Do respondents agree with the general considerations around liquidity risk management? Are there other issues that should be included?

Question 3

- Does the Good Practices Document cover the key considerations regarding liquidity risk management tools, including their use in normal and stressed scenarios? Are there other issues that should be considered? Are there other key tools that should be included? Do you agree with the pros and cons in regards to the use of each tool? Are there other pros and cons that should be considered?

Question 4

- Do you agree with the general considerations regarding stress testing? Are there other issues that should be included?

2.4 Exchange-Traded Funds (ETFs)

The majority of this IOSCO consultation seeks to improve investor protection, enhance governance and management practices as well as addressing the specific recommendations of the FSB. However, the additional issue arises as to whether measures to mitigate liquidity mismatch may require tailoring to address the specific characteristics of ETFs. Therefore, IOSCO wishes to outline below a number of issues and questions specific to ETFs.

2.4.1 ETFs Background

Certain ETFs track the performance of an index and, in order to achieve this, they purchase components of the index. Indices can deliver exposure which relate to (amongst others) different markets, sectors, industries, stocks, commodities and currencies. Some ETFs may pursue "active" strategies in that they do not passively track an index but rather the entity responsible for managing the portfolio has discretion in relation to portfolio holdings in pursuance of a specified investment objective.

ETFs can be structured as either physical or synthetic. A physical ETF has a portfolio consisting of physical securities included in the underlying index in appropriate portions or a portfolio that is representative of the underlying index. A physical ETF may also use derivative instruments, but mainly for ancillary purposes (e.g. currency hedging). Conversely, an ETF which implements a synthetic structure will seek to generate a return primarily through the use of derivatives. Typically, the synthetic ETF will enter into a swap agreement whereby it will receive the return of its underlying index from a swap counterparty in exchange for paying out an agreed return to the swap counterparty. Some synthetic ETFs may use futures to track an index.

ETFs cover a range of asset classes, with equity ETFs being the largest ETF category, followed by bond ETFs which have grown significantly in recent years. Other asset classes, such as commodities or currencies, are also represented within the ETF universe. ETFs may also cover

more sophisticated strategies, such as smart beta or absolute returns, whilst some ETFs have extended their offers to leveraged exposure or hedge, via for example inverse ETFs, which provide short exposure to an index.

Shares in ETFs can only be subscribed or redeemed directly from the ETF by institutional investors (broker-dealers) known as "Authorised Participants" (the process of placing deals directly with the ETF is known as primary market trading). ETF shares are created when an Authorised Participant provides a specific basket of securities or other assets, or cash to the ETF in return for the issue of new ETF shares. Once the Authorised Participant subscribes for shares in the ETF, it can either hold onto these shares or trade them in the secondary market either on the exchange or OTC market to other investors. In the secondary market (whether on the exchange or OTC market), ETF shares are traded throughout the day at market prices determined by supply and demand, which may or may not reflect the intraday indicative NAV (iNAV) per unit of the ETF. Authorised Participants do not receive direct compensation from an ETF for transacting in shares and have no legal obligation to create or redeem ETF shares. Authorised Participants have no duty to provide liquidity.[31] Furthermore, through the arbitrage activity in the secondary market facilitated by the transparency of the ETF's portfolio, Authorised Participants can realise profits from any premiums or discounts between the intraday price of the ETF and its NAV and in turn, such mechanism can enable ETF units to be traded at a price which moves in line with the NAV of the underlying securities portfolio. Authorised Participants provide the only channel through which new shares are issued and existing (or surplus) shares are redeemed by other market participants, who lack direct access to the primary market.

The process of subscription for shares in an ETF, which necessarily requires the ETF to increase market exposure, can be achieved in one of two ways -- through subscription on an in-kind basis or through payment of cash. The subscription processes will be different but they will both seek to achieve the same result – increase of exposure by acquisition of, typically, a basket of index constituents. The redemption of shares in an ETF involves the opposite process.

Where an ETF's dealing model requires in-kind creation and redemption, the ETF will receive a specified basket of securities and other assets from the Authorised Participant. The ETF does not therefore, need to deploy cash to purchase securities in the market in order to issue shares as it receives them from the Authorised Participant. Similarly, upon redemption, the ETF delivers to the redeeming Authorised Participant a basket of securities or other assets. In this way, the process of in-kind creation and redemption can, to a certain extent, mitigate liquidity concerns by reducing the ETF's need to deploy cash to purchase assets in the market or to receive cash by selling assets in the market. Where the ETF's dealing model is cash based, the ETF will need to purchase or sell the securities and other assets in the underlying market. In either case, the costs that the ETF experiences as a result of creation or redemption transactions are typically borne by the Authorised Participant. Some or all of these costs may, in turn, be built into the spread quoted by the Authorised Participant on the secondary market and so the net asset value of the ETF's shares should not be adversely affected by the primary market's dealing costs.

2.4.2 ETFs – Issues and Questions

ETFs appear to present the following distinctive potential issues:

[31] However, ETFs can act on an agent or principal-based model as liquidity providers on the secondary market.

- For in-kind redemptions, transferring illiquid or less liquid instruments to redeeming Authorised Participants could result in a liquidity cost to the Authorised Participants or other market participants, which could increase the cost of their participation and interfere with their role in the ETF arbitrage mechanism, resulting in ETF shares trading at increased bid-ask spreads and/or a premium or discount to net asset value and ultimately impact investors. Declining liquidity in an ETF's basket assets also could affect the ability of an Authorised Participant or other market participants to readily assemble the basket for purchases of creation units and to sell securities received upon redemption of creation units;

- while, ETF portfolio structures are generally considered insulated from investor redemption pressure, significant selling of ETF shares by investors on secondary markets could lead to significant redemptions from the underlying fund via the operation of the Authorised Participant mechanism. This would seem heightened in the case of an ETF cash-based dealing model;

- the cessation, even temporarily, of Authorised Participants arbitrage operation could lead to potentially significant discrepancies between ETF share prices and the value of the underlying securities; and

- the lack of contingency arrangements to provide liquidity to secondary market investors in the event of market stress.

The mechanisms involved in portfolio construction and maintenance in ETFs can be complex and there may also be other distinctive risks arising from the operation of the typical mechanisms of ETFs.

There are a number of questions outlined below specifically concerning ETFs which seek views on whether IOSCO should do further work on ETFs with respect to liquidity issues:

Question 5

- Should ETFs be subject to different liquidity requirements than other CIS?

  a) If not, should ETFs be included within the scope of the 2017 Liquidity Recommendations?

     (i) If yes, are changes needed to be brought to the 2017 Liquidity Recommendations to reflect ETFs specificities? Which ones?

     (ii) If not, please explain why ETFs should not be included within the scope of the 2017 Liquidity Recommendations if they have partly similar liquidity issues as other CIS.

  b) If ETFs should be subject to different liquidity requirements than other CIS, what should they be?

Question 6

- Are there key liquidity related issues specifically regarding ETFs?

Chapter 3: The Proposed Additional Guidance and Recommendations

In this chapter, IOSCO sets out the additional supporting guidance which it proposes to provide to develop and enhance the existing framework which it set out originally in the 2013 Liquidity Report. It will then outline the proposed additional recommendations.

3.1 Existing Recommendations

Recommendation 3

The responsible entity should carefully determine a suitable dealing frequency for units in the CIS

Under the above recommendation, it is proposed to add the following additional guidance:

"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 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."

Recommendation 4

It is proposed to replace existing Recommendation 4 with the following, noting that text not in italics is retained from the previous Recommendation 4:

"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

The initial design of a CIS presents an opportunity to put arrangements in place to underpin effective liquidity risk management. CIS should be designed so as to facilitate redemption objectives and other commitments being met and, if that cannot be done in a particular situation, the situation being managed in a prudent and orderly fashion which is in the best interest of investors.

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.[32] *This should include consideration as to the quality of information about the investor base which is made available by different distribution channels for the CIS.*

Given the importance of design decisions, the assessment should be subject to an internal approval process at a senior management and/or board level within the responsible entity where it can be reviewed and updated on an ongoing basis from both portfolio management and risk management perspectives.

Liquidity Risk Management Practices - Liabilities

There should be due regard in the design process, based on market knowledge and other information reasonably available to the responsible entities, to the likely risk appetite of target investors. As such, responsible entities should seek to engage with constituent elements of the distribution chain to take reasonable steps to improve their understanding of the underlying type of investors and the behavioural characteristics associated with such relevant types of investors.

Liquidity Risk Management Practices - Assets

In carrying out the design phase process, there should be due regard to the current and historical liquidity of the assets and instruments to be invested in, and where applicable, to the impact of limits which could be set, including limits on illiquid assets, concentration of assets, individual counterparty risk, CIS size, trading, limits on time allowed to correct unintended limit breaches and any other limits which could be imposed.

Liquidity Risk Redemption-constraining 'Additional Liquidity Management Tools'

Having completed the design phase analysis of liquidity of the proposed assets, the characteristics of target investors and the features of every-day liquidity management practices, the responsible entity should consider in the design of the CIS an appropriate range of additional liquidity management tools for managing redemptions to assist in the management of stressed market conditions, subject to applicable law and regulation and any regulatory requirements and provided it is in the best interest of unit-holders within the CIS.

The responsible entity should consider the appropriateness of tools and additional measures for their CIS, taking into account the nature of assets held by the CIS and its investor base.

Tools and additional measures should only be used where fair treatment of investors is not compromised, and where permitted by the law and regulation applicable to the CIS.

Examples of tools which may be permissible in certain jurisdictions would include: exit charges, limited redemption restrictions, gates, dilution levies, in specie transfers,[33] lock-up periods, side letters which limit redemption rights or notice periods. Some of these tools (e.g.

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[32] 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. For further details, please see boxes 1 and 3 of the IOSCO 2017 'Open-ended Fund Liquidity and Risk Management – Good Practices and Issues for Consideration'.

[33] Retail investors should generally not be required to accept *in specie* transfers when they wish to redeem part or all of their investments.

notice periods) may be built-in to the CIS's dealing policy, but others may be contingent (e.g. a limit to redemptions met the same day only if redemption requests exceed a certain percentage of the NAV).

Additional measures include side pockets[34] or suspensions. CIS's should not be managed in such a way that the investment strategy relies on the availability of these measures, should liquidity problems be experienced."

With regard to the above draft additional recommendations and guidance, the following question is being asked:

Question 7

- Does this guidance on the design phase process capture the best of current good practices in the design of CIS?

Recommendation 7

The responsible entity should ensure that liquidity risk and its liquidity risk management process are effectively disclosed to investors and prospective investors

Under the above amended recommendation,[35] it is proposed to add the following additional guidance:

"*The relevant disclosures concerning liquidity of the CIS should be properly designed taking into account the nature of the assets the CIS intends to invest in and the degree of sophistication of the investor profile.*

Disclosures concerning liquidity have the potential to provide investors with information to determine whether their liquidity risk appetite matches the liquidity risk profile of the CIS. In particular, such disclosure is most likely to be beneficial where the CIS is invested in assets or instruments which have a record of significantly varying liquidity across the financial cycle or where there is insufficient historical evidence[36] to assess whether liquidity will vary significantly across the financial cycle.

Additional disclosure requirements to investors may include one or more of the following:

- *A clear 'liquidity risk' assessment in the initial offering documentation for the CIS setting out an assessment of the likely liquidity risk positioning of the CIS, including for example, the liquidity risks associated with the relevant market(s), sector(s), and/or asset class(es) invested in by the CIS;*

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34 In some jurisdictions, side pockets may be considered to be 'normal tools' rather than 'additional measures' for certain types of CIS. Their creation and use in this manner is generally not suitable for CIS offered to retail investors because illiquid or hard to value assets are not normally suitable for retail investors.

35 The original Recommendation 7 – "The responsible entity should ensure that liquidity risk and its liquidity risk management process are effectively disclosed to prospective investors."

36 For example, where a particular asset has only come into existence in recent times, and therefore does not provide a sufficient period of historical evidence. A further example includes where an asset is primarily traded off market, and thus does not provide sufficient historical evidence of performance.

- *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.*

The disclosure of the liquidity of assets to investors may be transparently done by profiling the projected or actual asset portfolio/asset class(es) which the CIS is currently or expected to invest in. 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. Thereafter it can be disclosed or reported based on the actual investment strategy and/or assets and instruments held by the CIS. While disclosure regarding liquidity should be balanced against maintaining confidentiality where this is in the interests of investors, sufficient detail should be disclosed to make investors aware of material liquidity risks.

Where additional liquidity management tools (see Recommendation 17) are included in the design of a CIS, the details of how such liquidity management tools would operate, which groups and/or committees with designated responsibility would exercise their activation (and how) and what the activation of such tools would mean for investors should be set out for potential investors in the initial offering documentation. Furthermore, the CIS should explain why it considers these additional liquidity management tools to be appropriate in the relevant circumstances, and how the mechanisms of such tools have been designed to be fair to all investors. The liquidity management process and the liquidity management tools that may be employed by the CIS should be appropriately disclosed in the CIS's offering documents."

Question 8

- Does Recommendation 7 capture appropriate additional liquidity disclosures?

Recommendation 12

The liquidity risk management process should facilitate the ability of the responsible entity to identify an emerging liquidity shortage before it occurs

Under the above recommendation, it is proposed to add the following additional text:

"During stressed market conditions, the responsible entity should ensure that the interests of investors are safeguarded and CIS investors are being treated fairly.[37] 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 ensuring that remaining investors are not left with a disproportionate share of potentially illiquid assets. One such step could involve the monitoring and management of large redemptions by investors to the extent reasonably practicable."

[37] Of relevance is the 'IOSCO Principles for the Valuation of Collective Investment Schemes', May 2013, available at: http://www.iosco.org/library/pubdocs/pdf/IOSCOPD413.pdf

Question 9

- Should additional wording be included in Recommendation 12 concerning how responsible entities should proceed when faced with the need to sell assets to the extent that might lead the CIS to vary from its investment strategy?

Recommendation 13

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

It is proposed to replace existing guidance under Recommendation 13 with the following language, noting that text not in italics is retained from the previous Recommendation 13:

"In performing the liquidity risk management process, the responsible entity should consider quantitative and qualitative factors to seek to ensure that in all but exceptional circumstances the CIS can meet its liabilities as they fall due.

Key information should be taken into account which, where known or available or subject to sensible estimate, could improve the capability to predict liquidity risk. Consistent and verifiable statistical methods can be used to generate data and scenarios where appropriate – scenarios can relate to the behavior of investors and/or the CIS assets.[38]

One of the key challenges in liquidity management is taking appropriate account of the uncertainty in future investor behavior both in normal market conditions and, in particular, in stressed markets. The more that a responsible entity knows about its investor base, the better able it will be to anticipate future behavior and to plan accordingly for this. While acknowledging that there are operational hurdles[39] 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 analyzing the historical redemption patterns of different types of investors.

As large and unexpected redemptions are a key source of liquidity risk, in combination with other data, for example historical fund flows, this investor information would allow estimates of the pattern(s) of subscriptions and redemptions and identification of realistic stress scenarios when performing the liquidity assessment by the responsible entity, such as a sudden withdrawal by investors (especially institutional investors) holding a significant portion of the funds to meet their own liquidity requirements, or a pattern of withdrawal by a category/type of investors to be identified.

This investor base knowledge could include investor profiles of the various types of investors which may allow the responsible entity to understand why investors are investing in the CIS, their risk appetite and in what circumstances they may wish to redeem. The responsible entity

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38 For example, the responsible entity may consider whether publicity about the relatively poor performance of a CIS compared to its peer group might lead to an increase in redemption requests and/or a decrease in new subscriptions.

39 Examples of operational hurdles include third party distribution channels (e.g. use of platforms) and the use of nominee structures.

should conduct assessments of the characteristics of the investor base in a CIS, analyse the potential impact that these characteristics have on the level of redemptions under different scenarios and take this into account in liquidity management for the CIS.

Data on liabilities such as collateral needs and potential margin calls, should be assessed alongside potential redemption demands.

Where possible, responsible entities should interact with relevant intermediaries to secure pre-notification about removal from a "best-buy" list or similar.

While ensuring the fair treatment of all investors, and no preferential disclosure to select investors,[40] a responsible entity could keep up-to-date with investors who have a large unit-holding in the CIS regarding whether they intend to make significant redemptions. However, this should be done in a way that avoids any conflicts of interest between the responsible entity and such investors - that cannot be properly managed - from arising."

Question 10

- Does the proposed additional guidance under Recommendation 13 constitute the appropriate approach for a CIS to assess its redemption obligations and liabilities? If not, what else would you suggest?

Recommendation 14

It is proposed to replace existing Recommendation 14[41] with:

"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 can assess how the liquidity profile of, or redemption levels of, a CIS can change when faced with various stressed events and market situations. It is an important component of a responsible entity's liquidity risk management process. Stress testing should support and strengthen the ability of the responsible entities in managing liquidity risk appropriately in the best interests of investors. Specifically, stress testing can be used by responsible entities to assess the liquidity characteristics of the CIS's assets relative to the CIS's anticipated redemption flows under stressed market conditions and to tailor the CIS's asset composition, liquidity risk management, and contingency planning accordingly. Stress testing can enable responsible entities to pre-empt and respond promptly to the threat of a liquidity or redemption shock.

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.[42] For instance,

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40 Certain jurisdictions may permit investment funds to enter into different contractual arrangements with different investors.

41 The original Recommendation 14 – "The responsible entity should conduct assessments of liquidity in different scenarios, including stressed situations."

42 For example, stress testing would be more important and relevant to CIS with less liquid underlying assets

fund level stress tests may not be required where this would be disproportionate taking into account the size, investment strategy, nature of the underlying assets and investor profile of the CIS.

Stress testing should be supported by strong and effective governance. In particular, the performance and oversight of stress testing should be sufficiently independent from the portfolio management function. Responsible entities should maintain appropriate documentation of stress testing and should be able to provide the relevant information to authorities upon request.

Appropriate stress testing should be carried out based on normal and stressed scenarios (for example, atypical redemption requests). Scenarios should include backward-looking historical scenarios and forward looking hypothetical scenarios, and could be based on parameters calculated using statistical techniques or concrete stress events.

Stress testing should be based on reliable and up-to-date information. Stress testing scenarios should be appropriate to the CIS. For example, the responsible entity could analyze the number of days that it would take to sell assets and meet liabilities in the stressed scenarios simulated, taking into account where practical and appropriate the expected behavior of other market participants (e.g. the behavior of other CIS managed by the same responsible entity) in the same conditions, any known inter-fund relationships such as inter-fund lending arrangements, and any actions the responsible entity would take (e.g. imposition of contingent liquidity management tools). In respect of collateral, stress testing could be used to demonstrate that the quantity of liquid assets is sufficient to meet settlement of margin calls on derivatives positions.

Responsible entities could also conduct stress testing related to other market risks and factors. For example, it may be appropriate to assess the impact of a credit rating downgrade of a security held by the CIS as one factor, as such a downgrade can affect the security's liquidity and that of the CIS. Reputational risk from a problem with another aspect of the responsible entity's business, or problems experienced in a similar CIS run by another entity, could also cause unexpected redemption requests.

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. This approach has the potential to improve the understanding of the circumstances in which the CIS may need to resort to additional measures, but it may not be appropriate for all CIS.

Feedback from any real situations experienced ("back-testing") should be used to improve the quality of output from future stress testing.

Stress testing results have the potential to contribute, as appropriate, into all stages of the CIS's product life cycle, including in the product design stage when determining the dealing and distribution arrangements and asset composition, and in performing investment and liquidity risk management (e.g. in calibrating holdings of liquid assets and other investments, and the use of different liquidity risk management tools and contingency planning) on an ongoing basis.

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and open-ended CIS with daily dealing arrangements.

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."

Question 11

- Are there procedures or practices that responsible entities currently use to implement their stress tests which have been found to be particularly informative to responsible entities and which are not consistent with or included in the approach set out here? If so, please provide examples.

Question 12

- Are there procedures or practices that responsible entities have not found to be particularly useful which the proposed approach to liquidity stress testing would encourage and why?

Question 13

- Is the proposed approach to the design and operation of stress testing processes realistic and does it deal with the key issues?

Question 14

- Does the proposed additional guidance under Recommendations 3, 7 and 12 add effectively to the available guidance?

Question 15

- Does Recommendation 14 capture the best of current good practices in stress testing?

3.2 New Recommendation

It is proposed to add the following additional recommendations and chapters:

"Contingency Planning Recommendations

Recommendation 16

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 testing of operational capacity should be such that to the extent possible and on a reasonable basis, the CIS can use all liquidity management tools, including in stressed market conditions, that will allow for the continued orderly management of the CIS and maintain investor confidence in the management of the CIS.

Having included the appropriate mechanisms in the design of the CIS, the responsible entities should engage in sufficient contingency planning to ensure that any additional liquidity management tool that the CIS can use under applicable law and regulation can be exercised in a prompt and orderly manner. To this end, the responsible entities should plan for such events having regard to whether:

a) the operational capacity exists to implement and unwind any such tools in a transparent, fair and orderly manner to the best interest of investors;
b) in those jurisdictions where relevant, the operational capacity continues to exist to exercise such tools at short notice if required by a relevant authority to do so;
c) the legal basis for the exercise of every tool disclosed in the CIS documentation continues to be assured by the responsible entity to the satisfaction of the relevant decision makers;
d) the escalation process for the implementation of any such tools can be conducted in a prompt and orderly manner;
e) there continues to be procedural clarity as to who is responsible for initiating consideration of and deciding on the exercise any such tools;
f) there are policies in place as to when the tools will be actively considered and that these policies are documented, clear, accessible to relevant decision makers, continue to be aligned with the nature of the CIS and to be understood clearly by relevant decision makers. These policies should take into account applicable law and regulation and be sufficiently detailed to make the governance of and responsibility for the relevant decisions clear;
g) the capacity exists to keep investors and relevant authorities well informed promptly of developments and, if needed in that jurisdiction, all necessary information should be provided at short notice to seek consent from relevant authorities for the use of such tools.

Through such a procedure, responsible entities will establish a reasonable level of internal assurance regarding the policies and procedures in place for triggering and applying such additional liquidity management tools."

Question 16

- Does the recommendation add up to an effective testing procedure which will lead to the

smooth triggering of applicable liquidity management tools when appropriate?

Question 17

- Other than those examples listed above, are there any additional scope and/or aspect that you consider necessary and appropriate to be included as part of the contingency plan for an effective implementation of liquidity management tools by CIS/responsible entities?

"Recommendation 17

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

Additional liquidity risk management tools, provided that such tools are permitted in the relevant jurisdiction and contained within the CIS constitutional document, can provide valuable assistance in the management of stressed market conditions. There are a number of considerations, related to the specific market conditions and the characteristics of the fund and its investors, to be taken into account when assessing whether to use these tools.

In-kind redemptions and in-specie redemptions facilitate the exit of investors from the CIS without the responsible entity having to liquidate the assets or to deplete cash held by the CIS in order to fulfil their redemptions. A key issue when assessing the use of these tools is the nature of the investors in the CIS e.g. whether the investors are retail or institutional. The use of in-kind redemptions and in-specie redemptions may not be practical or appropriate for retail investors, especially if the assets are considered relatively illiquid (e.g. real estate, infrastructure).

Anti-dilution levies and swing pricing also aim to ensure that investors remaining in the CIS do not incur the costs of redeeming investors. These tools may be considered particularly appropriate where the fund invests in assets where investors may perceive an advantage in redeeming first. By ensuring that costs of transactions required to meet redemption requests are borne by the redeeming investors, these tools provide assurance to remaining investors and remove a potential incentive for investors to redeem. There are a number of factors which the responsible entity should be mindful in relation to these tools: what the disclosure should be to investors of the conditions which would trigger the use of such tools; the complexities in producing a calculation mechanism; the difficulties in accurately providing for anti-dilution levies to reflect the market impact of the redemption in the redemption price.

Several additional liquidity management tools have the effect of slowing down the rate at which requests for redemption are paid and providing flexibility for responsible entities to complete portfolio sales required to meet these requests. Assessment of which additional tools are suitable and effective entails consideration of the specific scenario that has led to stressed market conditions, the degree of visibility the responsible entity has on the time required to liquidate assets and whether use of the tool is permitted by local law and regulation. Where the responsible entity is confident that required asset sales can be completed within a set timeframe, the implementation of extended notice/settlement periods and variable notice periods could be considered. Redemption gates and limits on withdrawals have a similar effect of slowing down the rate of redemptions, while retaining a commitment to meet redemption requests within a certain timeframe. In cases where stressed markets have resulted in illiquidity and valuation

concerns in specific portfolio assets (e.g. a specific asset class), side-pockets[43] could be implemented to transfer those assets from the CIS portfolio. Suspension of redemptions is a tool that provides for a delay in paying out redemptions and limits a run on the CIS. Suspension can be particularly useful in cases where the responsible entity requires an extended period to liquidate assets or has limited visibility on the timing of asset sales or is reluctant to accept a significant discount to normal market prices.[44] Redemption gates and limits on withdrawals can also be considered for use in these cases."

Question 18

- How do existing CIS envision transitioning to Recommendation 17?

43 See Footnote [34].

44 The IOSCO 2012 Principles on Suspension of Redemptions outline that "The fact of suspension in one CIS, or a small group of CIS, increases concerns about further suspensions and may thus lead to disinvestments/withdrawals in other CIS possibly causing further CIS suspensions…. The suspension may not only directly impact the investor but, depending upon the scale of the CIS, also may have indirect macroeconomic or market-wide implications".

Appendices

Appendix A.

IOSCO Proposed 2017 Liquidity Recommendations

The text below presents the proposed IOSCO 2017 Liquidity Recommendations, with additions to the 2013 Liquidity Report outlined in italics.

The CIS Design Process Recommendations

Recommendation 1
The responsible entity should draw up an effective liquidity risk management process, compliant with local jurisdictional liquidity requirements

The liquidity risk management process, and its operation, is the fundamental basis of liquidity control within the CIS. The remainder of this section expands on some of the factors that must be taken into account as part of this process. The liquidity risk management process forms one part of the broader total risk management process. Risk management generally relies on strong and effective governance.

Some jurisdictions have an explicit definition of liquidity and set requirements on the "amount" of liquidity certain types of, or all, CIS must have at all times (for example, by a hard requirement on the percentage of the CIS that must be held in liquid instruments; or in the case of certain money market CIS, indirectly through detailed rules on what type of instrument and the proportions that can be held by the CIS).

When considering creating a new CIS, the responsible entity must be able to (demonstrate that they can) comply with the relevant explicit or principle-based local liquidity requirements that will apply to the CIS.[45]

The liquidity risk management process, while proportionate, needs to be able to be effective in varied market conditions. 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. Examples of CIS in this category include, but are not limited to, those with a high proportion of illiquid assets and/or a narrow investor base.

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,[46] 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.

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[45] The remainder of the recommendations in this document should be interpreted in that context. For example, in the case where a certain percentage of the CIS's assets must be kept in certain types of liquid instruments, the responsible entity's systems should be appropriate to ensure that percentage is adhered to at all times.

[46] Consideration at the level of the asset class may not be sufficiently granular - for example, some equities can be liquid and some illiquid.

A responsible entity does not need to construct a new process for each new CIS if it already operates a CIS with similar characteristics. However, it must ensure the process remains appropriate and relevant and sufficiently bespoke for any other CIS it is used for.

Recommendation 2
The responsible entity should set appropriate liquidity thresholds which are proportionate to the redemption obligations and liabilities of the CIS

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).

For example, a daily dealing CIS would be expected to have stricter liquidity requirements than a CIS sold on the basis that investors would not be expected to redeem before a set period expired; or a CIS that invested predominantly in real estate but promised frequent redemption rights to its investors might consider it appropriate to hold a relatively large stock of more liquid assets (which could be related to real estate) as well, because of the expected length of time it would take to dispose of physical properties in order to meet redemption requests.

A responsible entity could place stricter internal thresholds on liquidity than its local regulatory requirements.

It should be remembered that investor redemptions are not the only source of liquidity demand on a CIS (for example, margin calls from derivative counterparties).

Recommendation 3
The responsible entity should carefully determine a suitable dealing frequency for units in the CIS

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 for its investment objectives and approach, taking account of its liquidity risk management process, and allowing redemptions to be processed effectively.

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 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.

The ability to gain certain tax treatment for a CIS, or to access a wider market for distribution,

should not lead responsible entities to set a more frequent dealing frequency for units in the CIS than is appropriate.

Recommendation 4
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

The initial design of a CIS presents an opportunity to put arrangements in place to underpin effective liquidity risk management. CIS should be designed so as to facilitate redemption objectives and other commitments being met and, if that cannot be done in a particular situation, the situation being managed in a prudent and orderly fashion which is in the best interest of investors.

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.[47] This should include consideration as to the quality of information about the investor base which is made available by different distribution channels for the CIS.

Given the importance of design decisions, the assessment should be subject to an internal approval process at a senior management and/or board level within the responsible entity where it can be reviewed and updated on an ongoing basis from both portfolio management and risk management perspectives.

Liquidity Risk Management Practices - Liabilities

There should be due regard in the design process, based on market knowledge and other information reasonably available to the responsible entities, to the likely risk appetite of target investors. As such, responsible entities should seek to engage with constituent elements of the distribution chain to take reasonable steps to improve their understanding of the underlying type of investors and the behavioural characteristics associated with such relevant types of investors.

Liquidity Risk Management Practices - Assets

In carrying out the design phase process, there should be due regard to the current and historical liquidity of the assets and instruments to be invested in, and where applicable, to the impact of limits which could be set, including limits on illiquid assets, concentration of assets, individual counterparty risk, CIS size, trading, limits on time allowed to correct unintended limit breaches and any other limits which could be imposed.

Liquidity Risk Redemption-constraining 'Additional Liquidity Management Tools'

Having completed the design phase analysis of liquidity of the proposed assets, the

[47] 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. For further details, please see boxes 1 and 3 of the IOSCO 2017 'Open-ended Fund Liquidity and Risk Management – Good Practices and Issues for Consideration'.

characteristics of target investors and the features of every-day liquidity management practices, the responsible entity should consider in the design of the CIS an appropriate range of additional liquidity management tools for managing redemptions to assist in the management of stressed market conditions, subject to applicable law and regulation and any regulatory requirements and provided it is in the best interest of unit-holders within the CIS.

The responsible entity should consider the appropriateness of tools and additional measures for their CIS, taking into account the nature of assets held by the CIS and its investor base.

Tools and additional measures should only be used where fair treatment of investors is not compromised, and where permitted by the law and regulation applicable to the CIS.

Examples of tools which may be permissible in certain jurisdictions would include: exit charges, limited redemption restrictions, gates, dilution levies, in specie transfers,[48] lock-up periods, side letters which limit redemption rights or notice periods. Some of these tools (e.g. notice periods) may be built-in to the CIS's dealing policy, but others may be contingent (e.g. a limit to redemptions met the same day only if redemption requests exceed a certain percentage of the NAV).

Additional measures include side pockets[49] or suspensions. CIS's should not be managed in such a way that the investment strategy relies on the availability of these measures, should liquidity problems be experienced.

Recommendation 5
The responsible entity should consider liquidity aspects related to its proposed distribution channels

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.

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).

Recommendation 6
The responsible entity should ensure that it will have access to, or can effectively estimate, relevant information for liquidity management

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48 Retail investors should generally not be required to accept *in specie* transfers when they wish to redeem part or all of their investments.

49 In some jurisdictions, side pockets may be considered to be 'normal tools' rather than 'additional measures' for certain types of CIS. Their creation and use in this manner is generally not suitable for CIS offered to retail investors because illiquid or hard to value assets are not normally suitable for retail investors.

The responsible entity should consider its information needs in order to effectively manage liquidity risk in the CIS, and whether it will be able to access that information during the life of the CIS. 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.

Recommendation 7
The responsible entity should ensure that liquidity risk and its liquidity risk management process are effectively disclosed to investors and prospective investors

As part of the disclosures in a CIS's offering documents[50] about the risks involved in investing in the CIS, there should be a proportionate and appropriate explanation of liquidity risk. This should include an explanation of why and in what circumstances it might crystallize; its significance and potential impact on the CIS and its unit-holders, and a summary of the process by which the responsible entity aims to mitigate the risk. For example, disclosure of what actions the responsible entity would take in the event of a liquidity problem would be useful information. The explanation should set out clearly how the investor could be affected. In some jurisdictions large unit-holder concentration risk may have to be disclosed.

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 explanation should include what the tool or measure is, what effect its use will have on CIS liquidity/investor redemption rights and examples of when the tool or measure might be applied (if it is of a contingent nature). A responsible entity must take care to ensure that these descriptions are clear and comprehensible to investors.

The responsible entity must not consider disclosure of liquidity risk, and information about its liquidity risk management process, to be a substitute for the actual operation of an effective policy.

The relevant disclosures concerning liquidity of the CIS should be properly designed taking into account the nature of the assets the CIS intends to invest in and the degree of sophistication of the investor profile.

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. *Disclosures concerning liquidity have the potential to provide investors with information to determine whether their liquidity risk appetite matches the liquidity risk profile of the CIS. In particular, such disclosure is most likely to be beneficial where the CIS is invested in assets or instruments which have a record of significantly varying liquidity across the financial cycle or where there is insufficient historical evidence[51] to assess whether liquidity will vary significantly across the financial cycle.*

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50 The term 'offering documents' here refers to documents that are freely available to investors.

51 For example, where a particular asset has only come into existence in recent times, and therefore does not provide a sufficient period of historical evidence. A further example includes where an asset is primarily traded off market, and thus does not provide sufficient historical evidence of performance.

Additional disclosure requirements to investors may include one or more of the following:

- *A clear 'liquidity risk' assessment in the initial offering documentation for the CIS setting out an assessment of the likely liquidity risk positioning of the CIS, including for example, the liquidity risks associated with the relevant market(s), sector(s), and/or asset class(es) invested in by the CIS;*
- *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.*

The disclosure of the liquidity of assets to investors may be transparently done by profiling the projected or actual asset portfolio/asset class(es) which the CIS is currently or expected to invest in. 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. Thereafter it can be disclosed or reported based on the actual investment strategy and/or assets and instruments held by the CIS. While disclosure regarding liquidity should be balanced against maintaining confidentiality where this is in the interests of investors, sufficient detail should be disclosed to make investors aware of material liquidity risks.

Where additional liquidity management tools (see Recommendation 17) are included in the design of a CIS, the details of how such liquidity management tools would operate, which groups and/or committees with designated responsibility would exercise their activation (and how) and what the activation of such tools would mean for investors should be set out for potential investors in the initial offering documentation. Furthermore, the CIS should explain why it considers these additional liquidity management tools to be appropriate in the relevant circumstances, and how the mechanisms of such tools have been designed to be fair to all investors. The liquidity management process and the liquidity management tools that may be employed by the CIS should be appropriately disclosed in the CIS's offering documents.

Day-to-day Liquidity Management Recommendations

Recommendation 8
The responsible entity's liquidity risk management process must be supported by strong and effective governance

Governance is of paramount importance for an effective liquidity risk management process, as even the most sophisticated liquidity modeling and perfectly predicted cash flows can be made redundant by the lack of effective oversight or controls to deal with the information produced.

While governance structures for CIS differ across jurisdictions and, to an extent, with the size of the responsible entity, appropriate escalation procedures should be in place if problems are envisaged or identified.

Governance arrangements should also ensure that risks to the CIS are considered and managed

as a whole (for example, as noted earlier, the inter-relationship between valuation and liquidity).

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.[52]

Recommendation 9
The responsible entity should effectively perform and maintain its liquidity risk management process

After a liquidity risk-management process is established pre-launch, it must be effectively performed and maintained during the life of the CIS. The remainder of the recommendations in this section set out some of the relevant considerations relating to such performance and maintenance.

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).

The liquidity risk management process could be performed as part of the wider risk-management arrangements adopted by the responsible entity, involving resource from its risk management and/or compliance functions (where relevant). 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 utilize a wide range of information and different perspectives and those which incorporate varied scenario analysis in their performance.

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. An additional review and possible updates may also be necessitated by the occurrence of certain events. For example, if the CIS is to invest in a new type of asset or if the investor profile has changed materially (from that anticipated) – for example, if a CIS originally expected to have a large number of retail investors but in fact only attracts a small number of institutional investors each owning a significant share of the CIS – the policy should be reviewed and updated, if deemed appropriate.

Recommendation 10
The responsible entity should regularly assess the liquidity of the assets held in the portfolio

The liquidity risk management process should enable the responsible entity to regularly measure, monitor and manage the CIS's liquidity. The responsible entity should take into

[52] This does not mean the responsible entity necessarily has to involve an external party in the review.

account the interconnection of liquidity risk with other risk factors such as market risk or reputational risk.[53]

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.

The liquidity assessment of the CIS's assets should consider obligations to creditors, counterparties and other third parties. 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.

Recommendation 11
The responsible entity should integrate liquidity management in 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,[54] as well as liquidity effects of the investment techniques/strategies it uses, before transacting;[55] 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.

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 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.

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). With respect to derivative transactions, the responsible entity should ensure that the quantity of liquid assets is sufficient to meet settlement of margin calls.

The responsible entity should take exceptional care if utilizing tools such as temporary borrowing to manage liquidity. Not only will the CIS incur a financial cost for this, but if the temporary borrowing does not solve the problem then the CIS may need to suspend or wind-up and it will at this point be leveraged, potentially with exacerbated problems. Investors in

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53 It is accepted that some risk factors are difficult or impossible to specify quantitatively.

54 For some derivatives the settlement asset could be less liquid than the derivative, so this should also be considered.

55 Some investment strategies would preclude detailed analysis before every individual transaction, but application of the liquidity risk management process should provide reasonable assurance that the investment decisions are consistent with the CIS's overall liquidity profile.

the CIS that benefit from the borrowing (by being able to redeem) may not be the ones paying the costs of it (remaining unit-holders). However, there may be some cases where inflows can be predicted with some certainty (e.g., if there are substantial regular monthly contributions into the CIS), which mitigate the risks involved with temporary borrowing.

Where a CIS is winding-up, the responsible entity should consider liquidity issues, along with any legal requirements or relevant conditions set out in the CIS's constituting documents, and balance the early return of proceeds to investors with the need to secure a fair price for the CIS's assets.

Recommendation 12

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 crystallize, thus enabling it to take appropriate action respecting the principle of fair treatment of investors. *During stressed market conditions, the responsible entity should ensure that the interests of investors are safeguarded and CIS investors are being treated fairly.*[56] *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 ensuring that remaining investors are not left with a disproportionate share of potentially illiquid assets. One such step could involve the monitoring and management of large redemptions by investors to the extent reasonably practicable.*

Retail investors, in particular, will have a general expectation that, in normal circumstances, the CIS will be able to meet redemption requests on the standard terms set out in its offering documents. While the use of additional measures may enable a liquidity issue to be "managed", by restricting investor redemption rights, it is preferable to avoid this if possible. Where a responsible entity has a choice as to whether to apply an additional measure – or a tool - that could affect redemption rights at all, or which of several tools or measures to apply, it must make this decision in the best interests of unit-holders (see Recommendation 17).

Responsible entities should make best efforts to manage future cash flows so as to assist with liquidity management (for example, it may be possible to negotiate a pre-notice period with brokers before changes in margin call formulas become effective, or to negotiate longer periods for repo agreements).

Recommendation 13

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

In performing the liquidity risk management process, the responsible entity should consider

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56 Of relevance is the 'IOSCO Principles for the Valuation of Collective Investment Schemes', May 2013, available at: http://www.iosco.org/library/pubdocs/pdf/IOSCOPD413.pdf

quantitative and qualitative factors to seek to ensure that in all but exceptional circumstances the CIS can meet its liabilities as they fall due.

Key information should be taken into account which, where known or available or subject to sensible estimate, could improve the capability to predict liquidity risk. Consistent and verifiable statistical methods can be used to generate data and scenarios where appropriate – scenarios can relate to the behavior of investors and/or the CIS assets.[57]

One of the key challenges in liquidity management is taking appropriate account of the uncertainty in future investor behavior both in normal market conditions and, in particular, in stressed markets. The more that a responsible entity knows about its investor base, the better able it will be to anticipate future behavior and to plan accordingly for this. While acknowledging that there are operational hurdles[58] 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 analyzing the historical redemption patterns of different types of investors.

As large and unexpected redemptions are a key source of liquidity risk, in combination with other data, for example historical fund flows, this investor information would allow estimates of the pattern(s) of subscriptions and redemptions and identification of realistic stress scenarios when performing the liquidity assessment by the responsible entity, such as a sudden withdrawal by investors (especially institutional investors) holding a significant portion of the funds to meet their own liquidity requirements, or a pattern of withdrawal by a category/type of investors to be identified.

This investor base knowledge could include investor profiles of the various types of investors which may allow the responsible entity to understand why investors are investing in the CIS, their risk appetite and in what circumstances they may wish to redeem. The responsible entity should conduct assessments of the characteristics of the investor base in a CIS, analyse the potential impact that these characteristics have on the level of redemptions under different scenarios and take this into account in liquidity management for the CIS.

Data on liabilities such as collateral needs and potential margin calls, should be assessed alongside potential redemption demands.

Where possible, responsible entities should interact with relevant intermediaries to secure pre-notification about removal from a "best-buy" list or similar.

While ensuring the fair treatment of all investors, and no preferential disclosure to select investors,[59] a responsible entity could keep up-to-date with investors who have a large unit-holding in the CIS regarding whether they intend to make significant redemptions. However, this should be done in a way that avoids any conflicts of interest between the responsible entity and

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57 For example, the responsible entity may consider whether publicity about the relatively poor performance of a CIS compared to its peer group might lead to an increase in redemption requests and/or a decrease in new subscriptions.

58 Examples of operational hurdles include third party distribution channels (e.g. use of platforms) and the use of nominee structures.

59 Certain jurisdictions may permit investment funds to enter into different contractual arrangements with different investors.

such investors - that cannot be properly managed - from arising.

Recommendation 14
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 can assess how the liquidity profile of, or redemption levels of, a CIS can change when faced with various stressed events and market situations. It is an important component of a responsible entity's liquidity risk management process. Stress testing should support and strengthen the ability of the responsible entities in managing liquidity risk appropriately in the best interests of investors. Specifically, stress testing can be used by responsible entities to assess the liquidity characteristics of the CIS's assets relative to the CIS's anticipated redemption flows under stressed market conditions and to tailor the CIS's asset composition, liquidity risk management, and contingency planning accordingly. Stress testing can enable responsible entities to pre-empt and respond promptly to the threat of a liquidity or redemption shock.

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.[60] For instance, fund level stress tests may not be required where this would be disproportionate taking into account the size, investment strategy, nature of the underlying assets and investor profile of the CIS.

Stress testing should be supported by strong and effective governance. In particular, the performance and oversight of stress testing should be sufficiently independent from the portfolio management function. Responsible entities should maintain appropriate documentation of stress testing and should be able to provide the relevant information to authorities upon request.

Appropriate stress testing should be carried out based on normal and stressed scenarios (for example, atypical redemption requests). Scenarios should include backward-looking historical scenarios and forward looking hypothetical scenarios, and could be based on parameters calculated using statistical techniques or concrete stress events.

Stress testing should be based on reliable and up-to-date information. Stress testing scenarios should be appropriate to the CIS. For example, the responsible entity could analyze the number of days that it would take to sell assets and meet liabilities in the stressed scenarios simulated, taking into account where practical and appropriate the expected behavior of other market participants (e.g. the behavior of other CIS managed by the same responsible entity) in the same conditions, any known inter-fund relationships such as inter-fund lending arrangements, and any actions the responsible entity would take (e.g. imposition of contingent liquidity management tools). In respect of collateral, stress testing could be used to demonstrate that the quantity of liquid assets is sufficient to meet settlement of margin calls on derivatives positions.

Responsible entities could also conduct stress testing related to other market risks and factors. For example, it may be appropriate to assess the impact of a credit rating downgrade of a security held by the CIS as one factor, as such a downgrade can affect the security's liquidity and that of the CIS. Reputational risk from a problem with another aspect of the responsible entity's business, or problems experienced in a similar CIS run by another entity, could also

60 For example, stress testing would be more important and relevant to CIS with less liquid underlying assets and open-ended CIS with daily dealing arrangements.

cause unexpected redemption requests.

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. This approach has the potential to improve the understanding of the circumstances in which the CIS may need to resort to additional measures, but it may not be appropriate for all CIS.

Feedback from any real situations experienced ("back-testing") should be used to improve the quality of output from future stress testing.

Stress testing results have the potential to contribute, as appropriate, into all stages of the CIS's product life cycle, including in the product design stage when determining the dealing and distribution arrangements and asset composition, and in performing investment and liquidity risk management (e.g. in calibrating holdings of liquid assets and other investments, and the use of different liquidity risk management tools and contingency planning) on an ongoing basis.

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.

Recommendation 15

The responsible entity should ensure appropriate records are kept, and relevant disclosures made, relating to the performance of its liquidity risk management process

As part of performing their liquidity risk management process, responsible entities should be able to demonstrate (to their regulator, for example) that robust liquidity arrangements are in place and that they work effectively.

In order to support the successful implementation of and adherence to the process it should be effectively documented and communicated across the responsible entity's business. Such documentation should be reviewed as needed, and at least annually in any event. Regular reporting requirements may require risk disclosures, for example in the CIS's annual report, and in some cases it may be appropriate to detail liquidity risks or issues in this context.

Where there has been a material change to liquidity risk either in level (that is, in the markets relevant to the CIS's portfolio), the responsible entity's approach or, for example, if the responsible entity is planning to introduce a new tool or additional measure (see Recommendation 4) that could affect redemption rights or change the CIS's dealing policy, the responsible entity should inform investors appropriately. In some jurisdictions this may require (prior) approval by the regulator and/or existing investors.

Where an additional measure is applied (e.g., the imposition of a side pocket), existing and potential investors must be informed in an appropriate manner, and kept informed over time (for example, by material on the responsible entity's website). In some jurisdictions, regulators must also be informed and/or must approve the application of any such measures (in advance).

Contingency Planning Recommendations

Recommendation 16

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 testing of operational capacity should be such that to the extent possible and on a reasonable basis, the CIS can use all liquidity management tools, including in stressed market conditions, that will allow for the continued orderly management of the CIS and maintain investor confidence in the management of the CIS.

Having included the appropriate mechanisms in the design of the CIS, the responsible entities should engage in sufficient contingency planning to ensure that any additional liquidity management tool that the CIS can use under applicable law and regulation can be exercised in a prompt and orderly manner. To this end, the responsible entities should plan for such events having regard to whether:

a) the operational capacity exists to implement and unwind any such tools in a transparent, fair and orderly manner to the best interest of investors;
b) in those jurisdictions where relevant, the operational capacity continues to exist to exercise such tools at short notice if required by a relevant authority to do so;
c) the legal basis for the exercise of every tool disclosed in the CIS documentation continues to be assured by the responsible entity to the satisfaction of the relevant decision makers;
d) the escalation process for the implementation of any such tools can be conducted in a prompt and orderly manner;
e) there continues to be procedural clarity as to who is responsible for initiating consideration of and deciding on the exercise any such tools;
f) there are policies in place as to when the tools will be actively considered and that these policies are documented, clear, accessible to relevant decision makers, continue to be aligned with the nature of the CIS and to be understood clearly by relevant decision makers. These policies should take into account applicable law and regulation and be sufficiently detailed to make the governance of and responsibility for the relevant decisions clear;
g) the capacity exists to keep investors and relevant authorities well informed promptly of developments and, if needed in that jurisdiction, all necessary information should be provided at short notice to seek consent from relevant authorities for the use of such tools.

Through such a procedure, responsible entities will establish a reasonable level of internal assurance regarding the policies and procedures in place for triggering and applying such additional liquidity management tools.

Recommendation 17
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

Additional liquidity risk management tools, provided that such tools are permitted in the relevant jurisdiction and contained within the CIS constitutional document, can provide valuable assistance in the management of stressed market conditions. There are a number of considerations, related to the specific market conditions and the characteristics of the fund and its investors, to be taken into account when assessing whether to use these tools.

In-kind redemptions and in-specie redemptions facilitate the exit of investors from the CIS without the responsible entity having to liquidate the assets or to deplete cash held by the CIS in

order to fulfil their redemptions. A key issue when assessing the use of these tools is the nature of the investors in the CIS e.g. whether the investors are retail or institutional. The use of in-kind redemptions and in-specie redemptions may not be practical or appropriate for retail investors, especially if the assets are considered relatively illiquid (e.g. real estate, infrastructure).

Anti-dilution levies and swing pricing also aim to ensure that investors remaining in the CIS do not incur the costs of redeeming investors. These tools may be considered particularly appropriate where the fund invests in assets where investors may perceive an advantage in redeeming first. By ensuring that costs of transactions required to meet redemption requests are borne by the redeeming investors, these tools provide assurance to remaining investors and remove a potential incentive for investors to redeem. There are a number of factors which the responsible entity should be mindful in relation to these tools: what the disclosure should be to investors of the conditions which would trigger the use of such tools; the complexities in producing a calculation mechanism; the difficulties in accurately providing for anti-dilution levies to reflect the market impact of the redemption in the redemption price.

Several additional liquidity management tools have the effect of slowing down the rate at which requests for redemption are paid and providing flexibility for responsible entities to complete portfolio sales required to meet these requests. Assessment of which additional tools are suitable and effective entails consideration of the specific scenario that has led to stressed market conditions, the degree of visibility the responsible entity has on the time required to liquidate assets and whether use of the tool is permitted by local law and regulation. Where the responsible entity is confident that required asset sales can be completed within a set timeframe, the implementation of extended notice/settlement periods and variable notice periods could be considered. Redemption gates and limits on withdrawals have a similar effect of slowing down the rate of redemptions, while retaining a commitment to meet redemption requests within a certain timeframe. In cases where stressed markets have resulted in illiquidity and valuation concerns in specific portfolio assets (e.g. a specific asset class), side-pockets[61] could be implemented to transfer those assets from the CIS portfolio. Suspension of redemptions is a tool that provides for a delay in paying out redemptions and limits a run on the CIS. Suspension can be particularly useful in cases where the responsible entity requires an extended period to liquidate assets or has limited visibility on the timing of asset sales or is reluctant to accept a significant discount to normal market prices.[62] Redemption gates and limits on withdrawals can also be considered for use in these cases.

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61 See Footnote [49].

62 The IOSCO 2012 Principles on Suspension of Redemptions outline that "The fact of suspension in one CIS, or a small group of CIS, increases concerns about further suspensions and may thus lead to disinvestments/withdrawals in other CIS possibly causing further CIS suspensions…. The suspension may not only directly impact the investor but, depending upon the scale of the CIS, also may have indirect macroeconomic or market-wide implications".