the financial markets, such as movements in interest rates, recessions or geopolitical events.

Redemption risk reflects the potential for an unusual amount of redemptions to occur in a limited period of time.

While not an exhaustive list, a fund may also choose to incorporate one or more of the following events or risks in their stress testing, which may affect the fund or underlying portfolio assets held by the fund:

- general market stress or disruption[11]
- market stress affecting a class or subclass of assets
- interest rate risk
- credit risk
- reputational risk
- redemption risk
- geopolitical risk
- other sources of liquidity risk

Stress tests that anticipate reasonably foreseeable stressed market conditions and include relevant risk factors to which the fund could be exposed, may be most useful. Effective stress testing would also be proportionate to the liquidity risk profile of the fund.

Scenario Analysis

Stress tests can cover a range of scenarios that reflect a spectrum of events and severity levels. The complexity can range from a simple sensitivity test (using a single factor) to complex stress tests (using multiple factors), which aim to assess the impact of severe events. While stress test scenarios can take on a variety of forms, it is important that they are diverse and reflect material risks relevant to the fund. IFMs should incorporate reliable and up-to-date market information and may take into account the behavior of other market participants, whose actions may separately or collectively have an effect on the liquidity of the fund and/or its underlying portfolio assets.

When conducting a scenario analysis, IFMs may consider a number of factors including:

- downgrade of credit rating of an underlying portfolio asset or of the issuer of the underlying portfolio asset,
- changes in interest rates,
- widening of bid-ask spreads, and
- economic shocks.

For example, the following factors may result in a change in liquidity:

- a significant decrease in trading volumes and the widening of the bid-ask spreads can result in a decrease in the liquidity of the underlying portfolio assets,
- an unexpected downgrade of a fixed income security may lead to market uncertainty about the credit quality of an underlying portfolio asset which would then decrease the liquidity of the underlying portfolio asset,

[11] For example, with the recent COVID-19 pandemic, we experienced reduced market trading, significant market volatility and other market disruptions.

- a sharp increase in interest rates for fixed income funds will result in a potential reduction in the valuation of the underlying fixed income portfolio, which in turn may lead investors to redeem units due to portfolio losses, and
- disruptive and volatile markets may impact the valuation and time that may be needed to dispose of underlying portfolio assets, which may decrease liquidity of the fund portfolio.

Staff acknowledge the ability to accurately forecast the number of days to liquidate asset positions and to reliably forecast investor redemption requests has limitations. Stress testing can help IFMs exercise their professional judgement to make decisions that are in the best interest of investors, but it is not a substitute for this responsibility.

There are typically two forms of stress testing used: historical and hypothetical scenarios.

Historical stress testing is backward looking and is based on the use of historical statistical events to assess risk, with the objective of quantifying the impact of an event (i.e., the dot-com crash in 2000 or the global financial crisis of 2008-2010) on the liquidity of a fund.

Further factors to consider for historical stress testing scenario analysis may include:

- comparison of historical cash flows with industry-wide cash flows for funds of similar size and strategy,
- redemption activity of the largest investor or group of investors,
- redemption activity during stress conditions (with varying percentages of redemption requests), and
- historical redemption patterns.

Hypothetical stress testing is forward looking and measures the potential impact of an event which has not yet occurred.

Further factors to consider for hypothetical stress testing scenario analysis may include:

- individual or a combination of factors, such as interest rate changes, increased redemption requests, and decrease in sales,
- changing investors, markets, or investment portfolio composition, and
- the potential for counterparty default (i.e., if collateral holdings are a significant percentage of a fund's assets and the counterparty either fails to meet payment obligations or terminates derivative contracts earlier than expected).

Frequency of stress testing

The frequency of stress testing will also need to be determined and may depend on the specific attributes of a fund, such as:

- size of the fund,

- nature of the underlying portfolio assets,
- redemption frequency,
- investment strategy,
- investor base, and
- market conditions.

Stress Testing Results

Stress testing results may be documented, analyzed, communicated and shared with relevant personnel to illustrate and quantify the vulnerabilities of a fund.

Stress testing results may:

- help ensure the fund is sufficiently liquid,
- strengthen the manager's ability to manage fund liquidity in the best interests of investors,
- include planning for periods of heightened liquidity risk,
- help identify potential liquidity weaknesses, and
- assist risk management monitoring and decision-making.

The committee overseeing liquidity risk matters should be informed of the stress testing results and any related actions taken, such as underlying portfolio asset changes.

4. Disclosure of Liquidity Risks

Prospectus Disclosure

Funds must provide full, true and plain disclosure of material risks associated with an investment in the fund in the prospectus.[12] This includes material liquidity risks.

The fund's prospectus requires disclosure of specific information concerning any material risks associated with an investment in a mutual fund.[13] Staff is of the view that liquidity risk may be a material risk of a fund. Investors may find disclosure around the actions to be taken by a fund in the event of a liquidity problem to be useful and informative. The fund's prospectus also requires disclosure that under extraordinary circumstances, the rights of investors to redeem securities may be suspended by the mutual fund, and a description of the circumstances when the suspension of redemption rights could occur.[14]

If a fund has a small number of large investors, consider the need for large redemption risk disclosure, which would include disclosing what the fund intends to do if faced with large redemptions.

[12] Or other documents for funds that are not in continuous distribution.
[13] Item 9, Part B of Form 81-101F1 *Contents of Simplified Prospectus* (**Form 81-101F1**); see also Item 12.1 of Form 41-101F2 *Information required in an Investment Fund Prospectus* (**Form 41-101F2**).
[14] Item 6(2), Part A of Form 81-101F1.

Example – Large Redemptions Risk Disclosure
ABC Fund may have one or more investors who hold a significant number of units. For example, two financial institutions may have a significant principal investment. If a financial institution makes a large redemption request, ABC Fund may be required to sell underlying portfolio assets so that it can meet the redemption obligations. This sale may impact the market value of those portfolio investments and it may potentially impact remaining investors of ABC Fund. Large redemption requests for institutional investors could force ABC Fund to terminate. The fund may agree with the large institutional investor to make part of the redemptions in-kind, by transferring assets of an equal value to the large redeeming investor, if assets of the fund cannot be sold at advantageous prices without a significant impact to the value of the asset.

Annual Information Form

A fund's annual information form (**AIF**) requires detailed information concerning the governance of the mutual fund. This may include, among other items, information concerning: (i) the group responsible for fund governance, including disclosure of whether any members of this group are independent of the portfolio management function and (ii) policies and procedures of the fund or its manager relating to risk management controls, and if a fund manager does not have written policies and procedures around LRM, then this should be disclosed to investors.[15]

Example – AIF Disclosure
Fund X has an LRM committee that is responsible for the oversight of policies and procedures related to LRM. This committee is comprised of at least one member who is independent of portfolio management, in addition to representatives from the fund manager, the portfolio manager, compliance, and product development, each of whom has relevant subject matter expertise. LRM is part of the fund's broader risk management process which includes documented internal policies pertaining to the measurement, monitoring, mitigation and reporting of liquidity risks within the fund.

Continuous Disclosure

Disclosure of liquidity risks and events enhances an investor's understanding of the performance of the LRM process. A fund's management report of fund performance requires a discussion of how changes to the fund over the financial year affected the overall risk of investing in the investment fund.[16]

Funds should consider disclosing any significant liquidity challenges faced over the relevant period, how those challenges affected the fund and how they were addressed. A narrative discussion of the changes in the risk level of a fund over a financial reporting period due to changes in market conditions, significant redemptions, or liquidity of the underlying portfolio assets may be informative for investors. Such disclosure may be meaningful to

[15] Item 12 of Form 81-101F2 *Contents of Annual Information Form*.
[16] Item 2.2, Part B of Form 81-106F1 *Contents of Annual and Interim Management Report of Fund Performance*.

investors because it enables investors to understand the operation and effectiveness of the fund's LRM practices and the overall framework. All funds are reminded of their timely reporting obligations, which may include the disclosure of material liquidity events or risks affecting the fund.

5. LRM Tools

IFMs have various tools and techniques that can be employed to manage liquidity during stressed market conditions. While certain of these are specifically provided for under securities legislation (for example, suspension of redemptions under section 10.6 of NI 81-102), other liquidity tools that are not specifically provided for in securities legislation may require exemptive relief from NI 81-102 in order to use them.

Although not frequent, there are circumstances where a confluence of market forces may cause a fund to use LRM tools to aid in the ongoing liquidity management of the fund. In such scenarios, the activation of such tools should be subject to the consideration of certain overarching principles:[17]

Exceptional circumstances – the use of a mechanism that affects redemption rights is only justified in open-ended funds in exceptional circumstances. Generally, they should be used sparingly and be temporary in nature. Moreover, exceptional circumstances are rare, such as where a fair and robust valuation of the assets (e.g. lack of liquidity in the market place which could include certain forced asset sale scenarios), in which the fund is invested is difficult or impossible to carry out, or where redemption demands are so large/exceptional that liquidity cannot be raised in the timeframe required to meet the demands.

Best interest of investors – the use of such extraordinary tools must be in the best interest of the fund investors collectively. The fund should only use such tools when it is in the interest of investors and when the fair and equal treatment of incoming, ongoing and outgoing investors is maintained. Firms should always consider what is best for investors (new and old) when making the decision to implement such tools.

CSA Staff will consider whether to permit the use of liquidity tools that do not comply with NI 81-102 on a case by case basis. We encourage IFMs to contact their principal regulator on a timely and proactive basis and apply for exemptive relief as needed.

D. Conclusion

Effective LRM is an essential element of the management of an investment fund. If a fund does not manage its liquidity risk properly, there could be adverse outcomes for the fund and its investors. For this reason, taking a proactive and preventative approach to LRM is critical to ensuring that this risk is appropriately managed and dealt with in a timely

[17] IOSCO "*Open-ended Fund Liquidity and Risk Management – Good Practices and Issues for Consideration*" https://www.iosco.org/library/pubdocs/pdf/IOSCOPD591.pdf.

manner, as it is very challenging to address material liquidity problems after they occur.

The CSA expects each IFM to establish and maintain an effective LRM framework that is consistent with its compliance with the IFM Statutory Conduct Standard and its obligations under NI 31-103, as well as ensuring that the investment funds it manages comply with their obligations under NI 81-102. The incorporation of an effective LRM framework into the IFM's broader risk management systems will help promote the interests of the fund's securityholders by reducing the risk of material liquidity mismatches and thereby mitigate the risk of the fund being unable to satisfy redemption requests.

The CSA will continue to monitor LRM of funds as part of our ongoing continuous disclosure review program and consider future policy initiatives as needed. We also encourage IFMs experiencing liquidity concerns to proactively approach their principal regulator.

Questions

Please refer your questions to any of the following:

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