Liquidity Stress Testing for Investment Funds
Overview and challenges of the ESMA guidelines
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1. Introduction

Investment funds are required to establish consistent, standardized and frequent Liquidity Stress tests, in accordance with their nature, scale and complexity.

- **01** Demonstrate strong understanding of liquidity risks from assets and liabilities
- **02** Ensure liquidity stress testing is suitably integrated into their fund’s risk management framework
- **03** Document liquidity stress testing in a policy within the UCITS and AIF risk management process
- **04** Design and independently validate robust liquidity and liquidity stress testing models
- **06** Perform annual liquidity stress testing; however, more frequent stress testing is recommended

ESMA Guidelines on liquidity stress testing in UCITS and AIFs following Article 16(1) of the ESMA Regulation is effective from 30th September 2020 onwards.
2. ESMA Guidelines on Liquidity Stress Testing (1/5)
The guidelines require investment funds not to prescribe an “one size fits all” solution as this would not be able to take specific fund’s characteristics into account. It sets out the following 16 guidelines applicable to fund managers.

1. The design of the LST Models
When building the LST models the following must be addressed:
- Risk factors that impact the fund’s liquidity;
- Scenario types used and their severity;
- Monitoring of indicators based on LST results;
- Reporting of LST results, outputs and indicators to senior management;
- Demonstrate the usage of LST results by risk management, portfolio management and senior management;
A manager should ensure that LST provides information that enables follow-up action.

2. Understanding Liquidity Risks
A manager should have “a strong understanding of the liquidity risks arising from the assets and liabilities of the fund’s balance sheet, and its overall liquidity profile, in order to employ LST that is appropriate for the fund it manages”.
The manager should also strike a balance by using LST that is focused, specific to the fund and highlights the key liquidity risk factors but, at the same time, uses a range of scenarios sufficiently wide to adequately represent the diversity of the fund’s risks.

3. Governance principles for LST
The manager should ensure that LST is properly integrated within the fund’s risk management framework and is subject to appropriate governance and oversight, including appropriate reporting and escalation procedures.

4. LST Policy
LST should be documented in an LST policy within the UCITS and AIF RMP requiring the manager to periodically review the LST and adapt, if necessary, the LST as appropriate. The Guidelines set out a list of minimum content requirements for an LST policy. These include:
1) A clear definition of the role of senior management in the process;
2) Its internal ownership and which management function(s) is/are responsible for its performance;
3) Its interaction with other liquidity risk management procedures, including the manager's contingency plans and the portfolio management function;
4) A requirement for regular internal reporting of LST results specifying the frequency and recipients of the report;
5) Periodic review;
6) The circumstances requiring escalation;
7) The list of funds subject to LST;
8) Initial validation of the LST models and assumptions underpinning them, which should be performed independently from portfolio management;
9) The types and severity of stress test scenarios used and the reasons for selecting those scenarios;
10) The assumptions used relating to data availability for the scenarios, their rationale and how frequently they are revisited;
11) The frequency at which LST is carried out and the reasons for selecting that frequency; and
12) The methods for liquidating assets, including the limitations and assumptions used.
2. ESMA Guidelines on Liquidity Stress Testing (2/5)

The guidelines require investment funds not to prescribe an “one size fits all” solution as this would not be able to take specific fund’s characteristics into account. It sets out the following 16 guidelines applicable to fund managers.

### 5 Frequency of LST

ST should be carried out [at least annually](#) and, where appropriate, employed at all stages in a fund’s lifecycle. The guidelines recommend quarterly or more frequent, depending on the fund’s characteristics.

When deciding on the appropriate frequency, managers should take into account the following:

1. The liquidity of the fund determined by the manager and any change in the liquidity of assets;
2. The frequency should be adapted to the fund rather than a ‘one-size-fits-all’ approach being taken to all funds operated by the manager; and
3. The nature of the vehicle (closed versus open ended), the redemption policy and LMTs, such as gates or side pockets, may be additional factors to take into consideration when determining the appropriate frequency of LST.

The frequency should be justified in the LST policy. Factors which may increase the frequency of regulation LST, include:

- Higher unit dealing frequency;
- Increased risks emanating from liabilities, such as a concentrated investor base;
- Complex investment strategy (e.g. extensive use of derivatives);
- Less liquid asset base;
- Forthcoming event which could negatively affect fund liquidity. A highly liquid asset base;
- Less frequent dealing in the fund’s unit.

### 6 Use of the LST outcomes

The Guidelines state that LST should help ensure the fund is sufficiently liquid and help identify potential liquidity weaknesses, assist risk management monitoring and decision makings, and strengthen the manager’s ability to manage fund liquidity in the best interests of investors.

The LST should assist a manager in preparing a fund for a crisis, and in its broader contingency planning. This contingency planning may involve a manager’s plans to operationalize applying ex post a-LMT to a fund.

### 7 Adopting the LST to each fund

- LST should be adapted appropriately to each fund, including:
  - The frequency of LST;
  - The types and severity of scenarios;
  - The assumptions regarding investor behaviour and asset liquidation;
  - The complexity of the LST mode;
  - In the case of an ETF, the specificities of ETFs, for example, by taking into account the role of authorised participants, redemption models and replication models.
2. ESMA Guidelines on Liquidity Stress Testing (3/5)

The guidelines require investment funds not to prescribe an “one size fits all” solution as this would not be able to take specific fund’s characteristics into account. It sets out the following 16 guidelines applicable to fund managers.

### 8 LST Scenarios

LST should employ hypothetical and historical scenarios and, where appropriate, Reverse Stress Testing (RST). LST should not overly rely on historical data as future stresses may differ from previous ones.

ESMA suggests historical scenarios for LST could include the global financial crisis 2008-2010 or the European debt crisis 2010-2012. Hypothetical scenarios could include rising interest rates, credit spread widening, or political events.

Managers using Reverse Stress Tests (RST) should simulate assets being liquidated in a way that reflects how the manager would liquidate assets during a period of exceptional market stress. RST should take into account the treatment of remaining, as well as redeeming, unitholders as well as the role of transaction costs and whether or not fire sale prices would be accepted.

### 9 Data

LST should demonstrate a manager is able to overcome limitations related to the availability of data, including by:

- Avoiding optimistic assumptions;
- Justifying reliance on third parties’ LST models, including where the model is developed by a third party portfolio manager; and
- Exercising expert qualitative judgement.

### 10 Product development

During product development, a manager of a fund which requires authorisation from an NCA should:

1. Be able to demonstrate to NCA that key elements of the fund, including its strategy and dealing frequency enable it to remain sufficiently liquid during normal and stressed circumstances; and
2. Where appropriate, undertake LST on the asset side (using a model portfolio) as well as on the liability side, incorporating the expected investor profile both from the early and late stages of the fund’s existence.

### 11 Stress testing fund assets to determine the effect on fund liquidity

LST should enable a manager to assess not only the time and/or cost to liquidate assets in a portfolio, but also whether such an activity would be permissible taking into account:

1. The objectives and investment policy of the fund;
2. The obligation to manage the fund in the interests of investors;
3. Any applicable obligation to liquidate assets at limited cost; and
4. The obligation to maintain the risk profile of the fund following liquidation of a portion of its assets.

Managers should reflect a significant number and variety of market stresses in the estimation of the liquidation cost and time to liquidation under stressed conditions, which are typically characterised by higher volatility, lower liquidity (e.g. higher bid-ask spread) and longer time to liquidate (depending on asset class). In this context, managers should not only refer to historical observations of stressed markets.

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2. ESMA Guidelines on Liquidity Stress Testing (4/5)

The guidelines require investment funds not to prescribe an “one size fits all” solution as this would not be able to take specific fund’s characteristics into account. It sets out the following 16 guidelines applicable to fund managers.

11 Stress testing fund assets to determine the effect on fund liquidity (cont)

A manager should choose the method of liquidating assets in LST taking into account the assets and liabilities, as well as the redemption terms of the fund. The manager should also be aware of the method’s limitations and make conservative adjustments to its broader liquidity risk management to mitigate these limitations.

The method of liquidating assets in an LST should:

1) Reflect how a manager would liquidate assets during normal and stressed conditions in accordance with applicable rules, either legal requirements (according to the UCITS Directive), or limitations specific to the fund that are imposed in the prospectus or fund rules;

2) Ensure the model used for the fund is and stays in compliance with its objectives and investment policy and fund rules;

3) Reflect the fund being managed in the interests of all investors, both those redeeming and remaining;

4) Comply with applicable obligations for the fund to maintain the risk profile envisaged by fund documentation;

5) Be reflected in the LST policy;

6) Take into account, where relevant, the potential negative effects on other investors or on overall market integrity.

12 Stress testing fund liabilities to determine the effect on fund liquidity

LST should incorporate scenarios relating to the liabilities of the fund, including both redemptions and other potential sources of risk to liquidity emanating from the liability side of the fund balance sheet.

LST should incorporate risk factors related to investor type and concentration according to the nature, scale and complexity of the fund. ESMA has provided a table of examples of factors regarding investor behaviour which may be incorporated into the LST model, including:

- **Investor Category** – LST model may simulate funds of funds posing more redemption risk than other types of investors, and simulate their withdrawal from the fund first;

- **Investor Concentration** – The manager may model one or a number of the largest investors redeeming simultaneously from the fund over a given period of time;

- **Investor Location** – The manager may simulate a material proportion of investors located in a specific country redeeming over a given time period first; and

- **Investor Strategy** – The manager may simulate redemptions from investors following similar strategies in stressed and normal market conditions.
The guidelines require investment funds not to prescribe an “one size fits all” solution as this would not be able to take specific fund’s characteristics into account. It sets out the following 16 guidelines applicable to fund managers.

**13 LST on other types of liabilities**

A manager should include other types of liabilities in its LST in normal and stressed conditions, where appropriate. All relevant items on the liability side of the fund’s balance sheet, including items other than redemptions, should be subject to LST.

**Liability examples** and potential factors which may affect liquidity risk include:

1. Derivatives – change in the value of the underlying of the derivative leading to a larger than anticipated margin call.
2. Committed capital – unexpected event causing new/higher outlay of capital to a real estate investment.
4. Interest/credit payments – increased interest rates on the payment obligations of the fund.

**14 Funds Investing in less liquid assets**

Risks arising from less liquid assets and liabilities risks should be reflected in the LST. Low probability, but high impact scenarios, including the potential difficulty of reliably pricing less liquid assets during a period of market stress, will be important in respect of less liquid assets. RST may be a particularly valuable tool in this context, helping to identify scenarios which could lead to significant fund liquidity risk (e.g. identifying scenarios which would lead to the imposition of special arrangements or suspensions). Furthermore, fund of funds which gain indirect exposure to less liquid assets via their target funds should pay due regard to considerations relating to less liquid assets. This is due to the underlying exposure of those target funds which can result in the suspension of the target investment vehicle or other measures.

**15 Combined asset and liability LST**

- After separately stress testing the assets and the liabilities of the fund balance sheet, the manager should combine the results of the LST appropriately to determine the overall effect on fund liquidity.
- The guidelines state that managers should incorporate risk scoring into the LST where it enables an enhanced view of liquidity across the funds they manage, including in contingency planning and the operational preparation for a liquidity crisis.

**16 Aggregating LST across funds**

A manager should aggregate LST across funds under its management where it assesses such an activity to be appropriate for those funds.
3. How Deloitte can help

Deloitte’s risk management team leverages on market intelligence and industry expertise when assisting you implementing a sound Liquidity Stress Test integrated within the Liquidity Risk Framework.

- **Perform a gap analysis** on both the Liquidity Stress Testing Policy and the whole Liquidity Risk framework against the requirements of the new regulation in order to identify potential pain points towards achieving compliance.

- **Define and implement an integrated Liquidity Risk Governance** covering the Liquidity Stress Test Policy, the Contingency Liquidity Plan and the Redemption and Liquidation Strategies.

- **Design** liquidity risk and stress tests methodologies in line with best practice.

- **Review and validate methodology** and stress test scenarios and assumptions underpinning them.

- **Define and implement** reporting and monitoring process and Liquidity Management tools.

- **Provide training** and **continuous support** on stress testing and liquidity risk procedures.
4. Key takeaways
The following items require particular attention by Greek Investment Funds and Asset Managers:

01 Compliance
Greek competent authorities, like all other EU competent authorities, must notify ESMA by 16/09/2020 whether they intend to comply with these Guidelines. It is expected that all EU authorities will chose to comply, thus the Guidelines will be incorporated in the national supervisory frameworks.

02 Preparation is key
In order to comply, Asset Managers have significant work to do in order to put in place a flexible market liquidity risk management framework that is fully able to meet the requirements of the ESMA Liquidity Stress Test guidelines. It is noted that a simplistic checklist approach is unlikely to result in compliance.

03 Regulatory scrutiny is expected
While the ESMA guidelines are non-prescriptive, given their broad scope that extends from fund design to governance principles, the focus for an accurate, market-driven view of a fund’s ability to liquidate assets has received great attention.
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