



European Securities and  
Markets Authority

# Final Report

**Guidelines on liquidity stress testing in UCITS and AIFs**





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# 1 Executive Summary

## Reasons for publication

In April 2018, the European Systemic Risk Board (ESRB) published a set of recommendations to address liquidity and leverage risk in investment funds (the ESRB recommendations<sup>1</sup>). The ESRB's 'Recommendation C' requests that ESMA, in order to promote supervisory convergence, "develop guidance on the practice to be followed by managers for the stress testing of liquidity risk for individual AIFs and UCITS".

On 5 February 2019, ESMA published a Consultation Paper (CP)<sup>2</sup> on the draft Guidelines on Liquidity Stress Testing in UCITS and AIFs in order to fulfil the ESRB recommendations and gather input from stakeholders.

The consultation closed on 1 April 2019.

This Final Report provides an overview of the feedback received through the responses to the CP and explains how ESMA took this feedback into account. It also contains the final set of Guidelines on Liquidity Stress Testing in UCITS and AIFs.

## Contents

Section 2 sets out an Overview of the document. Annex I provides the Feedback Statement and Annex II includes the cost-benefit analysis which details the expected impact of the Guidelines.

The Guidelines are set out in Annex III.

## Next Steps

The Guidelines in Annex III of this report will be translated into the official EU languages and published on the ESMA website. The publication of the translations will trigger a two-month period during which NCAs must notify ESMA whether they comply or intend to comply with the guidelines. The Guidelines will apply from 30 September 2020.

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<sup>1</sup> [Recommendation of The European Systemic Risk Board on liquidity and leverage risks in investment funds. \(ESRB/2017/6\)](#)

<sup>2</sup> [ESMA Consultation Paper on Guidelines on stress testing in UCITS and AIFs ESMA34-39-784](#)



## 2 Overview

### Background

1. In April 2018, the European Systemic Risk Board (ESRB) published recommendations on action to address systemic risks related to liquidity mismatches and the use of leverage in investment funds<sup>3</sup>. Amongst other measures, the ESRB recommended that ESMA develop guidance on how asset managers carry out liquidity stress tests<sup>4</sup>, with a target delivery date of 30 June 2019.
2. The ESRB requested that the Guidelines should be “*based on the stress testing requirements set out in Directive 2011/61/EU*” setting out how managers should carry out stress testing. It was also recommended that the guidance include, but not be limited to:
  - the design of liquidity stress testing scenarios<sup>5</sup>;
  - the liquidity stress test policy<sup>6</sup>, including internal use of liquidity stress test results<sup>7</sup>;
  - considerations for the asset<sup>8</sup> and liability<sup>9</sup> sides of investment fund balance sheets; and
  - the timing and frequency for individual funds to conduct the liquidity stress tests<sup>10</sup>.

### Public consultation

3. On 5 February 2019, ESMA published a CP on the draft Guidelines on liquidity stress testing in UCITS and AIFs.
4. The consultation closed on 1 April 2019.
5. ESMA received 30 responses, 2 of which were confidential, mainly from asset management industry associations and financial firms. Representatives from depositaries also commented on the questions addressed to them. ESMA consulted the Securities and Markets Stakeholders Group (SMSG), but the SMSG chose not to opine on these guidelines.
6. In general, respondents agreed with ESMA’s approach of introducing minimum standards for liquidity stress testing in AIFs and UCITS funds in Europe.
7. Many respondents stressed the need for a long implementation period due to the need to bring in new IT systems to cope with changed stress testing methodologies.
8. Most respondents said that the scope should exclude money market funds as they are already subject to specific stress testing guidelines.
9. There were numerous requests for clarifications to the Guidelines and Explanatory Considerations. The detailed content of the responses and ESMA feedback is outlined below in the Feedback Statement.

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<sup>3</sup> ESRB/2017/6

<sup>4</sup> ESRB/2017/6 Recommendation C – Stress testing read as follows: “In order to promote supervisory convergence ESMA is recommended to develop guidance on the practice to be followed by managers for the stress testing of liquidity risk for individual AIFs and UCITS”.

<sup>5</sup> Covered in Section V.1.8 of Annex III of this Final Report

<sup>6</sup> Covered in Section V.1.4 of Annex III of this Final Report

<sup>7</sup> Covered in Section V.1.6 of Annex III of this Final Report

<sup>8</sup> Covered in Section V.1.11 of Annex III of this Final Report

<sup>9</sup> Covered in Sections V.1.12 and V.1.13 of Annex III of this Final Report

<sup>10</sup> Covered in Section v.1.5 of Annex III of this Final Report



### **Cost-benefit analysis**

10. A cost-benefit analysis of the draft guidelines is included in Annex II of this Final Report. It has been updated to reflect respondents' feedback, particularly on initial and on-going costs for managers.

### **Contents**

11. This Final Report includes the Guidelines that ESMA intends to publish in Annex III. They have been updated to reflect feedback from the public consultation.

### **Next steps**

12. ESMA expects the Guidelines to be applied by 30 September 2020.



### 3 Annexes

#### Annex I: Feedback Statement

1. The responses to the public consultation included some general comments that are summarised below.
2. There was a general agreement among respondents that Liquidity Stress Testing (LST) is an important management tool for fund managers. It allows firms to assess the impact of market stresses, to anticipate activity in stressed market conditions and to identify potential vulnerabilities. In this context, respondents supported almost unanimously ESMA's proposed Guidelines that aim at achieving a common understanding of LST.
3. All respondents also agreed with ESMA's principles-based approach allowing flexibility for fund managers. Given the heterogeneity of fund structures, respondents stressed that there is no "one-size-fits-all" solution.
4. Several respondents also stressed that regulators should provide managers a wide array of appropriate tools to deal with potential liquidity crises when they arise. They invited ESMA to assist with the wider availability of Liquidity Management Tools (LMT) across the EU.
5. Numerous concerns were raised regarding the difficulty of obtaining relevant and high-quality data. Data scarcity remains a major obstacle to robust economic modelling.

**ESMA response:** ESMA notes the support from stakeholders for the creation of Guidelines on LST and the proposed approach ESMA has adopted.

ESMA notes the support for a proportionate application of the Guidelines, requiring firms to take into account the nature, scale and complexity of the fund, which has been retained in the Scope of the final Guidelines.

ESMA takes note of the general comment to widen the availability of LMT, but this would be beyond the scope of the current exercise to create Guidelines on LST.

Finally, ESMA is aware of the challenges regarding availability of data, which was already reflected in Guideline 9 in the CP. The wording of Guideline 9 has been retained in the final Guidelines (Section V.1.9 of Annex III of this Final Report).

**Q1 What additional costs and benefits would compliance with the proposed Guidelines bring to the stakeholder(s) you represent? Please provide quantitative figures, where available.**

6. Many respondents noted that it was difficult to provide precise costs and benefits estimates at this stage. They highlighted that the costs would be highly dependent on the prescriptiveness of the final requirements. Among these respondents, many supported a principles-based approach giving more flexibility to market participants and underlined that



a “one-size-fits-all” solution would not be able to take specific fund’s characteristics into account.

7. Nonetheless, a majority of respondents specified that a few provisions would entail significant costs. Reverse stress testing was singled out, as it is not performed regularly but rather on an ad-hoc basis and based on qualitative assessments. Concerns were also expressed by respondents regarding the stress testing of “other liabilities” and historical stress testing.
8. Many respondents noted that the proposed Guidelines will require fund managers to design additional systems and to develop and implement IT solutions. They also pointed out that given the scarcity of market data, in particular for some asset classes, the sourcing of good quality data might represent a substantial cost increase. Several respondents also indicated that a change in LST frequency and the obligation of validation of all estimates by an independent expert would entail additional costs.
9. Most respondents were of the view that it is not possible to quantify the benefits of the Guidelines.

**ESMA response:** ESMA takes note of the comments by stakeholders regarding the potential cost of implementing new aspects of LST. In this regard, ESMA notes that LST already have to be performed under the applicable legislation, which will reduce the cost impact of these Guidelines. Furthermore, ESMA believes that a consistent application of LSTs will enhance financial stability and investor protection in the asset management sector, justifying the implementation cost.

**Q2 Do you agree with the scope of these Guidelines? Should certain types of funds be explicitly excluded from these Guidelines? Should MMFs remain in-scope of these Guidelines?**

10. A significant majority of respondents agreed with ESMA’s approach and saw merit in having a broad scope to ensure that funds presenting a potential liquidity risk are covered by the provisions.
11. Nonetheless, diverging comments were raised regarding which types of funds should be included in the scope of the Guidelines.
12. Respondents were almost unanimously of the view that Money Market Funds (MMFs) should be excluded from the Guidelines. They explained that MMFs already fall under the MMF Regulation which includes more stringent provisions adjusted to their specificities in terms of liquidity. Furthermore, they saw little rationale in applying two sets of rules to MMFs considering that it could create the risk of conflicting regulation and operational issues for firms.
13. There was also support for the inclusion of Exchange-Traded Funds (ETFs) in the scope of the Guidelines, with respondents noting that most ETFs are UCITS funds. Several respondents underlined the importance of adopting a flexible approach to allow asset



managers to take account of the specificities of ETF structures, such as Authorised Participants (APs), Other Liquidity Providers (OLPs) and redemption mechanisms.

14. Only one asset manager explicitly supported the exclusion of ETFs from the scope of the Guidelines because of substantial differences between ETFs and mutual funds.
15. Different views were expressed by respondents regarding the inclusion of closed-ended funds in the scope of the Guidelines. Numerous respondents supported the exclusion of all closed-ended funds, both leveraged and unleveraged. They argued that for unleveraged funds there is no liquidity mismatch between investors' expectations and underlying assets if the fund does not allow for any redemption. For leveraged closed-ended funds, respondents agreed that liquidity risk exists, but the long investment horizon negates the need for LST.
16. Nonetheless, many other respondents believed that leveraged closed-ended funds should be in the scope. They pointed out that in case of leverage, it is key to assess the fund's ability to meet margin calls or provide collateral.

**ESMA response:** In order to reduce the potential for conflict, ESMA has decided to narrow the scope of applicable provisions to MMFs, focusing on those parts of the Guidelines not already covered in the MMFR rules. ESMA has also kept the provision that in case of conflict, the Money Market Funds Regulation (MMFR) rules apply. Regarding ETFs, ESMA has clarified that these Guidelines apply in addition to requirements in the ESMA ETF Guidelines. Leveraged closed ended alternative investment funds (AIFs) have also been retained in the scope of the Guidelines.

**Q3 Is additional clarity required regarding the scope of these Guidelines? Is additional clarity required regarding the meaning of 'nature, scale and complexity' of a fund? Are there circumstances in which it would, in your view, be inappropriate for a UCITS to undertake LST?**

17. The majority of respondents welcomed the application of the proportionality principle, arguing that the fund sector is very heterogeneous. They said it is important to tailor LST to the funds' investors and assets. The LST should also consider the fund's specific investment strategy, additional LMT and the investors' redemption processes.

**ESMA response:** ESMA takes note of the many contributions from stakeholders regarding applying proportionality. ESMA believes the Guidelines already made sufficient reference to proportionality, noting the decision to keep a general reference in the scope section to adapting the application of LST to the nature, scale and complexity of the fund.

**Q4 What are your views on when the Guidelines should become applicable? How much time would managers require to operationalise the requirements of these Guidelines?**

18. Respondents highlighted the difficulty in providing a precise estimate at this stage as provisions might be modified in the final version of the Guidelines. Nonetheless, there was a broad agreement in favour of a long implementation period in order to adapt the current processes, develop new IT systems and improve data quality.





19. A significant majority of respondents suggested an implementation period ranging from 18 to 24 months.

20. A minority of respondents were of the view that a shorter implementation would be appropriate.

**ESMA response:** ESMA believes that requiring the application of the Guidelines from 30 September 2020 grants a sufficient implementation period, bearing in mind the importance of ensuring convergence on how LSTs are performed by the asset management industry. ESMA reminds stakeholders that, in any case, the requirements enshrined in AIFMD and the UCITS Directive on, *inter alia*, liquidity stress testing are already applicable and continue to apply.

**Q5 Do you agree with the proposed approach of setting out a list of Guidelines all funds should follow, and the provision of explanatory considerations to help managers comply with those overarching Guidelines? Do you see merit in including some of the explanatory considerations in the final Guidelines?**

21. In general, most respondents agreed with ESMA's approach that the Guidelines follow a principles-based approach.

22. Some respondents were of the view that explanatory considerations should be presented next to the Guideline they best fit. They said separating explanatory considerations from the Guidelines reduce their relevance and their effectiveness and might even be source of confusion.

23. Nevertheless, most respondents did not see any merit in including any explanatory considerations in the final Guidelines as this would be too prescriptive.

24. Several respondents said it would be useful to include the explanatory considerations in the final Guidelines. However, among those respondents a few expressed concerns regarding the wording of the explanatory considerations and recommended ESMA clarify that the explanatory considerations remain illustrative, rather than prescriptive, in order to better recognise the heterogeneity of strategies and investors.

**ESMA response:** ESMA acknowledges broad support for the CP approach. To illustrate the intent behind the Guidelines, ESMA has decided to include some of the explanatory considerations next to the Guideline they best fit, also in line with the feedback provided by some respondents. In order to further differentiate the Guidelines from the explanation on how the expected outcome outlined in the Guidelines should be achieved, the Guidelines were formatted in bold.

Furthermore, the final Guidelines have been changed to be in numbered paragraphs in distinct sections with sub-headings as a presentational adaptation. To facilitate comparison between the CP and the final Guidelines, a correlation table showing the paragraph numbers of the CP Guidelines is provided below.

Guideline number in the CP	New paragraph in the final Guidelines
1	20
2	24
3	18
4	25
5	28
6	29
7	30
8	31
9	37
10	42
11	49
12	50
13	67
14	72
15	74

**Q6 Do you agree with the proposed Guidelines? What amendments, if any, should ESMA make to its proposed Guidelines?**

25. Respondents were generally supportive of the proposed Guidelines, arguing that they were in line with the existing industry practices and standard methodologies.
26. However, most respondents suggested a significant number of amendments to the Guidelines. In most cases, respondents specified that some elements of the proposed Guidelines were too burdensome, detailed and prescriptive.
27. **Guideline 2:** Industry respondents disagreed that LST should be documented twice. They stressed that liquidity management is part of the general risk management process and should be documented once.



**ESMA response:** The CP recommended that LST should be documented both in the LST policy and within the UCITS Risk Management Process (RMP) and AIFM's Documented Risk Management Policy (AIF RMP). The final Guidelines recommend that LST should be documented in an LST policy *within* the UCITS and AIF RMP.

28. **Guideline 4:** While respondents agreed that LST should be conducted annually since it is required by existing legislation, several respondents were of the view that recommending a more specific frequency would not be in line with a principles-based approach.

**ESMA response:** ESMA notes that the minimum legal requirement to perform LST is annual under the AIFMD. However, ESMA recommends a quarterly frequency for LST and recognises that there are situations where a higher or lower frequency is necessary.

29. **Guideline 5:** On point d) which obliges funds to set liquidity limits, numerous respondents noted that firms should be free to set limits if they believe it appropriate for their funds, having regard to the redemption commitments of the fund and the requirements of investors, but should not be compelled to do so.

**ESMA response:** ESMA has clarified the language to highlight that the intention was that the manager should set internal limits as an additional risk management tool.

30. **Guideline 7:** The comments focused on points b) (the types of scenarios) and c) (investor behaviour assumption) of the Guideline. Several respondents questioned the added value of taking into account gross redemptions since they were of the view that net figures are sufficient. Concerns were also expressed regarding the availability of sufficiently granular investor behaviour data.

**ESMA response:** ESMA disagrees that gross redemptions may not be useful and has retained the reference in the final Guidelines. The reference to the investment strategy has been complemented by a reference to portfolio composition. Furthermore, an additional point in the liabilities section has been added to reflect ETF specificities.

31. **Guideline 8:** Many respondents opposed the inclusion of reverse stress testing (RST) on a mandatory basis for all funds. These respondents stressed that RST is not required in the UCITS Directive or AIFMD. The respondents were of the view that there is little value in RST, while being very burdensome.

**ESMA response:** ESMA considers it beneficial to recommend the use of RST as this could be an important tool to assess the potential sources of liquidity risks to which the fund is exposed, enabling the assessment on the actions to be taken in order to ensure that the fund is adequately liquid.

32. **Guideline 10:** Several respondents were of the view that a manager or fund-specific approach to asset liquidation scenarios would be more appropriate than the proposed time and/or cost-related scenarios.



**ESMA response:** ESMA remains of the view that time and/or cost-related asset liquidation methods are commonly used tools in LST. ESMA has added text from the explanatory considerations to complement the Guidelines.

33. **Guideline 11:** Three respondents invited ESMA to add some flexibility by using “where appropriate”, instead of “where applicable”.

**ESMA response:** ESMA is of the view that funds have sufficiently diverse liabilities to warrant retaining the original language of “where applicable”.

34. **Guideline 14:** The majority of respondents agreed that it should be up to the asset manager to assess whether aggregate LST would be appropriate.

**ESMA response:** ESMA has clarified that a manager should aggregate LST across funds where such an activity is appropriate for the fund. To specify that the Guideline is intended to cover scenarios of aggregate LST across funds, the words “across funds” have been added after “Aggregate LST”.

**Q7 Do you agree with the proposed explanatory considerations regarding LST of fund assets?**

35. Respondents generally supported the proposed explanatory considerations regarding LST of fund assets, considering them useful to improve LST standards across jurisdictions and managers.

36. However, many respondents highlighted the need to find the right balance between standardisation and flexibility, to ensure that LST remains a useful risk management tool. They expressed concern that some considerations are too prescriptive.

37. Moreover, several industry associations and firms suggested adding references to the equal treatment of investors and the preservation of market integrity as factors to consider.

38. Several respondents warned ESMA about the risks associated with data availability. Indeed, they noted that the relevant Guidelines and explanatory considerations require asset managers to ensure that any assumptions are adequately validated, documented and justified, which would entail significant costs.

39. Finally, a few respondents suggested changing “prospectus” to “prospectus or fund rules” since a prospectus is not the sole document that governs the contractual relationship between fund and investors.

**ESMA response:** In line with the presentational adjustment, ESMA has incorporated explanatory considerations on asset stress testing into the Guidelines on the basis that they provide additional guidance.

The explanatory consideration in paragraph 32 of the CP (Section V.1.11 of Annex III of this Final Report) has been complemented by a bullet point noting that the manager should also take into account the impact on other investors in the market and on market integrity when considering liquidating assets.



The reference to “prospectus” has been amended to “prospectus or fund rules”.

**Q8 What are your views on the requirement to undertake reverse stress testing, and the use of this tool?**

40. Respondents agreed that RST could be a useful tool in some cases but only one respondent supported ESMA’s proposal to make it mandatory. Both financial industry associations and asset management firms said mandatory RST would be burdensome for managers while the benefits seem low and questionable. Respondents were also of the view that adding RST to historical and hypothetical stress testing would be redundant and unnecessary.

41. In this context, a clear majority of respondents invited ESMA to apply the principle of proportionality. These respondents stressed that it should be left to the asset manager’s discretion to decide whether RST would add value. Most suggested adding “where appropriate” or “where applicable” to Guideline 8.

**ESMA response:** ESMA considers it beneficial to recommend the use of RST as this could be an important tool to assess the potential sources of liquidity risks to which the fund is exposed, enabling the assessment on the actions to be taken in order to ensure that the fund is adequately liquid. While not making the RST mandatory, the current text of the LST Guidelines recognises the benefits of using RST, particularly for funds engaging in investment strategies exposing them to low-probability risks with a potentially high impact. ESMA will keep the issue of RSTs under review.

**Q9 Do you see merit in providing further considerations for managers on the use of data relevant to asset liquidity, particularly in circumstances when data is scarce?**

42. Most respondents welcomed ESMA’s wording regarding the use of data relevant to asset liquidity. However, the majority of respondents did not see merit in providing further considerations in this area. They urged ESMA to maintain a principles-based approach that offers more flexibility for fund managers to assess the existing available data and to adapt LST to circumstances.

43. Moreover, a significant number of concerns were raised regarding the requirement to have an independent validation of assumptions. Stakeholders’ feedback expressed concerns on the potential costs deriving from a potential validation to be performed by an entity external to the management company (although no explicit requirement to have such an external validation was proposed in the consultation paper). According to these respondents, such a requirement would entail substantial additional costs for managers. They invited ESMA to take proportionality into consideration especially if the expert is independent from the portfolio manager and no conflicts of interests are identified.

**ESMA response:** The CP did not provide any specific requirement on validation of LST models and assumptions underpinning them, as this was only included in the explanatory considerations which foresaw that LST models and assumptions underpinning them should be periodically reviewed and validated, the results documented, and models amended as appropriate. The final position adopted by the LST Guidelines expressly requires that the LST policy should include the initial validation of LST models and assumptions underpinning them,



to be performed independently from portfolio management, though not necessarily by an entity/person external to the manager. Moreover, the Guidelines include an explicit requirement for any assumptions used in the LST models to be adequately reviewed.

**Q10 Do you agree with ESMA’s wording regarding the asset liquidation method used in the LST model? How would you describe the asset liquidation method used by you or the managers you represent?**

44. Despite a few supportive responses, ESMA’s approach raised a significant number of concerns about over-prescription. Many respondents argued that it is not always possible to predict, or model with a sufficient degree of accuracy, how a manager would liquidate the fund in stressed conditions and under various stressed market scenarios.

45. Several respondents suggested amendments, including the deletion of “always accurately”, and by replacing “would liquidate” with “could liquidate”.

**ESMA response:** ESMA believes that time and cost-related asset liquidation methods are useful tools in LST.

**Q11 Do you agree with ESMA’s wording regarding ‘second round effects’? What is your current practice regarding modelling ‘second round effects’?**

46. Respondents were generally supportive of ESMA’s approach and of the description of “second round effects” (SRE). A few respondents explicitly welcomed the acknowledgement that SRE require a more detailed understanding of how asset owners will react to market liquidity events.

47. Most respondents focused on the practical consequences of SRE. Several respondents pointed out that there is no or little evidence that fire sales by funds could have an impact on other agents by triggering price spirals in the market where funds invest.

48. Nonetheless, the most common concern expressed by financial industry respondents was the complexity to model SRE, especially in light of data scarcity.

49. Most respondents advised ESMA not to engage in the debate regarding second round effect, which is not without contention and implies the use of difficult risk modelling techniques. Other respondents opted for a more balanced solution, inviting ESMA to soften the wording to consider practical difficulties with SRE.

**ESMA response:** The CP did not include any specific recommendation on “second round effects”, which were mentioned in the explanatory considerations among the “difficult-to-model parameters”. The Guidelines do not include any specific recommendation regarding the modelling of these effects either. However, they focus on the incorporation of these effects into managers’ LST simulation, recommending that the method of liquidating assets in an LST should reflect how a manager would liquidate assets during normal and stressed conditions in accordance with applicable rules. The recommendation to reflect how the manager would liquidate assets during a period of exceptional market stress is also included in the context of the use of RSTs.



**Q12 What are your views on the considerations on difficult to model parameters, such as price uncertainty? What is your current practice concerning this issue?**

50. Many respondents agreed that price uncertainty is a key factor for LST (e.g. transaction costs, liquidation period) that needs to be taken into consideration by fund managers when managing liquidity risk. Most respondents also shared ESMA's view regarding the difficulty of modelling price uncertainty.
51. On the one hand, several respondents, including trade associations and market participants, recommended that price uncertainty should be included as one of the parameters in the liquidity modelling. They suggested considering it in the manager's contingency planning and when deciding to use a-LMT such as swing pricing.
52. On the other hand, a few respondents noted that the complexity of modelling price uncertainty makes it useless. They were of the view that this highlights the need for asset managers to have access to a well-diversified toolkit for liquidity management

**ESMA response:** The CP did not provide any specific recommendation on the need to take into consideration price uncertainty when performing LST, as this was only included in the explanatory considerations among the "difficult-to-model parameters". However, the Guidelines cover price uncertainty considerations in the section on funds investing in less liquid assets (Section V.1.14 of Annex III of this Final Report).

**Q13 Do you agree with ESMA's considerations on LST in funds investing in less liquid assets? What amendments should be made to the proposed wording? Do you think that ESMA should outline additional and/or specific Guidelines to be made in any other fund or asset types, such as ETFs?**

53. A significant number of respondents broadly agreed with ESMA's considerations on LST in funds investing in less liquid assets and recognised their usefulness.
54. A few respondents explicitly stated their opposition to ESMA's considerations related to funds holding less liquid assets.
55. Regarding the second part of the question, a large majority of respondents were of the view that ETFs should be included in the scope of the Guidelines, as ETFs fall in the scope of the UCITS Directive. However, many respondents underlined that ETF structures' specificities should be fully acknowledged, e.g. the role of APs and other liquidity providers. Some of the respondents pointed out that the Guidelines should recognise the role of the secondary market for ETFs.
56. Only two respondents were of the view that ETFs should receive no specific considerations.

**ESMA response:** ESMA considered that the specificities of ETFs should be more explicitly recognised in the Guidelines. Therefore, additional wording was added in order to take into account ETFs' specificities, including the role of AP, redemption models and replication models (Section V.1.7 of Annex III of this Final Report).





**Q14 Do you agree with the considerations regarding LST on items on the liabilities side of a fund's balance sheet?**

57. A significant majority of respondents broadly agreed with ESMA's proposed considerations regarding LST on items on the liability side of a fund's balance sheet.
58. However, several respondents raised concern about the low availability of data on underlying investors, noting that this is a key challenge for conducting LST on redemptions.
59. Some respondents suggested that ESMA should explore ways to encourage intermediaries or platforms to provide look-through data on underlying investors to investment funds, to enable firms to perform better LST.
60. Several respondents suggested that the "other liabilities" should only be considered if they have a "material" or "significant" impact on a fund.
61. Some respondents stated wider concerns with ESMA's approach regarding the status of the explanatory considerations, noting that it would be helpful to specify that the explanatory considerations should be considered illustrative and not individually binding.

**ESMA response:** ESMA acknowledges the comments regarding availability of data on underlying investors, however, ESMA is not empowered to enforce such data availability from intermediaries or platforms. The Guidelines recognise the difficulties regarding data availability.

**Q15 Do you agree with the considerations specifying the LST of redemptions and other types of liabilities may need to be considered distinctly, given a fund could potentially limit redemptions but not other sources of liquidity drain?**

62. The majority of respondents supported the distinct consideration of LST for redemptions as opposed to other types of liabilities.
63. However, many respondents also stressed that the application of LST to other types of liabilities should not be mandatory, calling for managers to be given flexibility.

**ESMA response:** ESMA recommends that the manager should include other types of liabilities in its LST in normal and stressed conditions, where appropriate. Furthermore, all relevant items on the liability side of the fund's balance sheet, including items other than redemptions, should be subject to LST.

Regarding the treatment of borrowing, ESMA intended this to be captured under "interest / credit payments" (Section V.1.13 of Annex III of this Final Report).

**Q16 Do you agree with the requirement to reverse stress test items on the liabilities side of the fund balance sheet?**

64. A significant majority of respondents disagree with the requirement to RST liabilities, in line with similar views on the earlier broader RST question (Question 8). A few respondents noted the high costs involved for firms from introducing mandatory RST requirements.





65. While many respondents rejected the RST requirement outright, some respondents said that there may be merit in RST liabilities for some funds, but the requirement should be optional.

**ESMA response:** ESMA considers RST should take into account the treatment of remaining, as well as redeeming, unitholders. Therefore, use of RST could be beneficial also for liabilities as this could be an important tool to assess the potential sources of liquidity risks to which the fund is exposed.

**Q17 Do you agree with the requirement to incorporate investor behaviour considerations into the LST model ‘where appropriate’? Are there cases which you believe it would not be appropriate, and should these be detailed in these Guidelines?**

66. A significant majority of respondents agreed with the proportional approach ESMA has suggested on incorporating investor behaviour considerations.

67. Several respondents suggested that ESMA should explore ways to encourage intermediaries or platforms to provide look-through data on underlying investors to investment funds, to enable firms to perform better LST.

68. A few respondents said that due to the difficulty of obtaining the underlying data on investors, the language in the explanatory considerations should be amended to say not only “where appropriate” but also “where available”.

**ESMA response:** ESMA acknowledges the concern regarding availability of data on underlying investors, however, ESMA is not empowered to enforce such data availability from intermediaries or platforms. The language on data in Guideline 9 of the CP was designed to require managers to demonstrate how they overcome data shortcomings for LST (Section V.1.9 of Annex III of this Final Report).

**Q18 What do you think about ESMA’s Guideline stating that managers should combine LST results on both sides of the balance sheet?**

69. A significant majority of respondents agree with the ESMA Guideline recommending combining the two sides of the balance sheet.

70. Several financial industry associations and asset management firms stressed, however, that ESMA should not be over-prescriptive or specify a single methodology, such as the Redemption Coverage Ratio (RCR).

71. Several respondents noted that while combining asset and liability stress tests is meaningful, comparing results from different funds is only useful where the funds are pursuing similar strategies or managed by the same portfolio manager.

**ESMA response:** The Guideline has been amended to “after separately testing the asset and liabilities of the fund balance sheet, managers should combine appropriately the results of the LST to determine an overall effect on fund liquidity” (Section V.1.15 of Annex III of this Final Report).



**Q19 What are your views on ESMA's Guideline that aggregated LST should be undertaken where deemed appropriate by the manager?**

72. Most respondents said there is little added value in aggregated LST across funds, as assets and liabilities are managed at individual fund level. An exception would be for funds pursuing a similar strategy, exposed to similar assets and managed by the same portfolio manager or portfolio management team.
73. Some respondents disagreed, noting that aggregated LST can be useful in all cases.
74. Many of the negative responses suggested that explanatory consideration in paragraph 56 of the CP be amended to apply to a “range of investment funds with similar strategies or exposures” which is already stated in paragraph 57 of the CP.

**ESMA response:** ESMA has clarified the language of Guideline 14 to stress that aggregate LST should be undertaken “across funds” (Section V.1.16 of Annex III of this Final Report). Furthermore, the explanatory consideration from paragraph 57 of the CP has been added in the Guidelines.

**Q20 What is your experience of performing aggregated LST and how useful are the results?**

75. Only a few respondents said they had experience of aggregated LST, and then only in the case of funds with similar strategies or managed by the same portfolio manager or portfolio management team.
76. In those cases, aggregated LST were found to be useful, including as a tool to inform risk management in funds sharing the same investment strategy.
77. A clear majority of correspondents expressed a strong preference that aggregated LST across funds should remain optional.

**ESMA response:** ESMA believes that clarified and additional language introduced in Guideline 14 in the CP, as explained in the ESMA response to Question 19, should ensure implementation of aggregate LST (Section V.1.16 of Annex III of this Final Report).

**Q21 What are your views on ESMA's considerations concerning the use of LST during a fund's lifecycle?**

78. A clear majority of respondents agreed with ESMA's considerations on the use of LST during a fund's lifecycle, noting, however, that the use should be optional and proportional to the risk involved at each stage.
79. Many respondents pointed out that, at the product development stage, LST, while important, would be mostly qualitative and theoretical, limiting the potential insight this would give the firm.
80. Some respondents also stressed that where a fund is launched with very similar characteristics to an existing fund, data from the existing fund could be used to inform the LST of the new fund.



81. Several respondents also said that LST would have limited use immediately before the closing of a fund. These respondents noted that as the fund has ceased trading, the fund's manager may make use of the available liquidity management tools, if necessary and appropriate, for the fair treatment of the remaining investors, without the need for LST.

**ESMA response:** ESMA believes that LST should be employed at all stages in the fund's lifecycle, where appropriate.

**Q22 What is your experience of the use of LST in determining appropriate investments of a fund?**

82. A clear majority of respondents said LST does not play a significant role in determining the appropriate investments of a fund. Some respondents said that, *inter alia*, investment policy, risk appetite and investment restrictions are more important than the result of an LST in the investment process. Many respondents did concede that LST plays an important part of the product development phase, but not necessarily a central role in determining the appropriate investments of the fund.

83. However, two respondents argued that LST does play an important role.

**ESMA response:** ESMA believes that LST can be useful in determining the investments in order to maintain the appropriate liquidity level given the liability structure and investment strategy of the fund.

**Q23 In your view, has ESMA omitted any key uses of LST?**

84. A clear majority of respondents said ESMA has not omitted any key uses of LST in the draft guidelines.

**ESMA response:** ESMA takes note of the feedback on this issue and has not further amended the Guidelines.

**Q24 Do you agree with ESMA's Guideline that LST should be undertaken in all cases annually, but that it is recommended to undertake it at least quarterly, unless a different frequency can be justified? What is the range of frequency of LST applied on funds managed by stakeholder(s) you represent?**

85. A significant majority of respondents agreed that LST should be undertaken at least annually, but most respondents disagreed with the recommendation that LST be undertaken quarterly.

86. Many said that while it may be necessary to conduct LST more frequently than once a year, depending on the nature, scale and complexity of the fund, this should be left to the discretion of the manager.

87. A financial industry association and an asset manager said that LST performed quarterly should be the starting point, and one asset manager suggested monthly or even weekly.



88. Regarding factors requiring an increase in the frequency of LST, two financial industry associations said that the use of derivatives does not necessarily increase the level of risk in the fund and would not require more frequent LST.

89. Two respondents also suggested that a diversified asset base or investor base could be a factor decreasing the frequency of regular LST.

**ESMA response:** ESMA notes that the minimum legal requirement to perform LST is annual under AIFMD. However, ESMA recommends a quarterly frequency for LST and recognises that there are situations where a higher or lower frequency is necessary.

**Q25 Should ESMA provide more prescriptive Guidelines on the circumstances which can justify a more/less frequent employment of LST?**

90. Almost all respondents said ESMA should not provide more prescriptive Guidelines on the circumstances justifying more/less frequent LST.

91. Several respondents stressed, in line with previous responses that fund managers should be given greater discretion on the frequency of conducting LST, taking into account the nature, scale and complexity of the fund.

92. One respondent did suggest that ESMA could include more scenarios in the explanatory considerations when higher frequency of LST may be appropriate.

**ESMA response:** As ESMA noted in response to comments regarding Guideline 4 of the CP in Question 6, ESMA notes that the minimum legal requirement to perform LST is annual in the AIFMD. However, ESMA recommends a quarterly frequency for LST and recognises that there are situations where a higher or lower frequency is necessary.

**Q26 Do you agree that LST should be employed outside its scheduled frequency (ad-hoc) where justified by an emerging/imminent risk to fund liquidity?**

93. A significant majority of respondents agree that LST should be employed outside the scheduled frequency if justified by an emerging/imminent risk to fund liquidity.

94. However, several asset managers and trade associations disagreed with the prescriptive nature of the wording “emerging/imminent risk to fund liquidity” and expressed a preference for something more flexible such as “where required”. These respondents said that it should be up to the manager to decide the timing of more frequent LST where justified by circumstances.

95. Several respondents said that in the case of “imminent” liquidity risks, the use of LST should be optional only, since an LST would not be very useful any more at that stage.

**ESMA response:** ESMA has included the explanatory considerations regarding factors to take into account when determining the frequency of LST.

**Q27 What are your views on the governance requirements regarding LST?**



96. A majority of respondents agreed with ESMA's proposed governance requirements for LST. However, many financial industry respondents suggested paragraph 71 of the CP on validation and back-testing is too prescriptive, suggesting the need for external validation either be deleted, be made optional, or at least be made more proportional in how it is required to be applied by the firm.

97. Two respondents suggested that ESMA more clearly state that the risk management function of the fund should be in charge of LST.

**ESMA response:** The CP did not provide any specific requirement on validation of LST models and assumptions underpinning them, as this was only included in the explanatory considerations which foresaw that LST models and assumptions underpinning them should be periodically reviewed and validated, the results documented, and models amended as appropriate. The final position adopted by the LST Guidelines expressly requires that the LST policy should include the initial validation of LST models and assumptions underpinning them, to be performed independently from portfolio management, though not necessarily by an entity/person external to the manager. Moreover, the Guidelines include an explicit requirement for any assumptions used in the LST models to be adequately reviewed.

**Q28 Should more information be included in the UCITS RMP and AIF RMP?**

98. A clear majority of respondents did not think any more information should be included in the UCITS and AIF RMPs.

99. One financial industry association noted that the AIFMD and UCITS implementing legislation already contain a prescriptive list of items to be included in the RMPs, so no further specification was necessary.

**ESMA response:** ESMA believes that the information required by the Guidelines in Section V.1.4 of Annex III of this Final Report is sufficient for implementing a robust documentation of the LST policy.

**Q29 Do you have any views on how managers which delegate portfolio management can undertake robust LST, independently of the portfolio manager, particularly when the manager does not face the market?**

100. Views were split on how managers who delegate portfolio management can undertake robust LST. Most respondents said that the delegating entity should be able to conduct effective LST, provided that the delegated portfolio manager collaborates sufficiently in terms of providing enough information. They pointed out in several responses that LST should be independent of portfolio management in any case, so delegating portfolio management should not unduly impact the LST.

**ESMA response:** ESMA believes that the Guidelines already recommend that LST should be performed robustly also in the case of delegation.

**Q30 Do you agree with the proposed Guideline for depositaries on carrying out their duties regarding LST?**



101. A majority of respondents agreed with ESMA's proposed Guideline and explanatory considerations for depositaries.
102. A small minority of respondents disagreed that a Guideline was necessary at all, given the existing requirements in the UCITS Directive and AIFMD. One asset manager said this Guideline would increase depositary costs unnecessarily, which would be borne by underlying investors eventually.
103. Most fund management companies and industry association responses stressed that the explanatory considerations should more explicitly limit the role of the depositary to merely ensuring that an LST is in place and that an LST has been performed.
104. Many respondents stressed that the explanatory considerations should state in paragraph 78 of the CP that in addition to not re-performing or repeating an LST, it should not be the role of the depositary to challenge an LST either.

**ESMA response:** ESMA takes note of the feedback with regard to depositaries, in particular with regard to the variety of practices across Member States.

ESMA has incorporated the explanatory considerations and simplified the language.

ESMA also acknowledges that it is not the intention of Guideline 15 of the CP or the explanatory considerations (Section V.2 of Annex III of this Final Report) to require depositaries to review or challenge the LST.

**Q31 In your experience do depositaries review the UCITS RMP and AIF RMP as a matter of course?**

105. Views were split on current practices regarding depositaries' review of RMPs. Half the respondents said depositaries do not regularly review RMPs while a minority of respondents said depositaries do regularly review RMPs.
106. However, some respondents said depositaries do review and challenge some aspects of the RMP.

**ESMA response:** The Guidelines recommend that a depositary should verify that the manager of a fund conducts LST. One way of verifying that LST is in place and carried out is to confirm that the UCITS RMP or AIF RMP provides for the manager to carry out LST on the fund.

**Q32 Do you see merit in ESMA publishing further guidance on the reporting of results of liquidity stress tests? If so, in your view how should ESMA require that results be reported?**

107. A clear majority of respondents did not see merit in ESMA providing further guidance on the reporting of results of liquidity stress tests.
108. A few respondents requested the deletion of explanatory considerations for interactions with NCAs completely.



109. Most respondents urged ESMA to retain a principles-based approach and not to prescribe a more detailed reporting framework.
110. Some respondents pointed out that the MMF stress test reporting has been a burdensome exercise and suggested ESMA refrain from such a detailed approach for LST reporting.
111. A small minority of respondents agreed that ESMA should provide more guidance on reporting to ensure comparability across EU Member States.

**ESMA response:** ESMA takes note of the feedback. Given the incorporation of a number of explanatory considerations into the Guidelines, ESMA has also incorporated some of the language on interaction with NCAs (Section V.3 of Annex III of this Final Report). Furthermore, to address liquidity risk in the asset management sector, ESMA has strengthened the provision regarding the interaction with NCAs by introducing a requirement for managers to notify NCAs of material risks and actions taken to address them.





## Annex II: Cost-benefit analysis

The following table summarises the potential costs and benefits resulting from the implementation of these guidelines.

<b>Policy objective</b>	To achieve a set of minimum standards by which all managers across Member States conduct LST in funds.
<b>Technical proposal</b>	To provide Guidelines on how managers can improve their LST procedures, including by determining the appropriate use of haircuts, frequency and scenario design, and use of historical data.
<b>Benefits</b>	<p>ESMA expects that these guidelines will benefit managers, depositaries and NCAs by providing clarity and guidance on expected practices.</p> <p>The FSB and ESRB recommendations stem from the objective of improving liquidity management in funds more generally, with LST being a key component of this.</p> <p>There is evidence that improved LST standards and the improved liquidity management that could flow from it would be beneficial to managers. For example, a stakeholder has stated that the FSB recommendations were ‘positive’ for managers, due to the lower reputation risk and increased earnings stability that may result from managers’ improved practices<sup>11</sup>. The ESRB stated that LST should reduce liquidity risk at the investment fund level, this should lead to a lower risk of measures such as fund suspensions, which can be a source of reputational risk for managers.</p> <p>ESMA also expects that the proposed Guidelines will benefit a broader set of stakeholders. The ESRB explained in its recommendation that ESMA should produce these Guidelines in order to help:</p> <ul style="list-style-type: none"> <li>• “Lower liquidity risk at the financial system level”. By reducing liquidity risk at the level of the investment fund, it may reduce the likelihood of funds disposing of assets at significant discounts in order to service redemptions (‘fire sales’). Fire sales by a material proportion of funds would be likely to move asset prices, potentially affecting financial stability.</li> <li>• “Strengthen the ability of entities to manage liquidity in the best interests of investors”. Investors in funds have</li> </ul>

<sup>11</sup>IPE: [“FSB proposals ‘positive’ for asset manager, investors, says Moody’s”](#)



	<p>reasonable expectations that funds will be able to honour redemption requests, as set out in fund documents such as the prospectus. Improved liquidity management standards (via LST) could therefore reduce the likelihood that investors' redemptions will be restricted. Further, it may also reduce the likelihood that funds will sell assets at fire-sale prices, which may not be in investors' interests.</p>
<p><b>Costs for managers</b></p>	<p>The great majority of managers, 93% as measured by one survey<sup>12</sup>, already undertake LST and as such these Guidelines may not add significant additional costs related to undertaking LST for the first time. Given that LST is already required annually on in-scope AIFs, ESMA anticipates that these Guidelines would lead to limited costs for managers, focused on those UCITS managers which do not already undertake LST.</p>
<p><b>Initial costs for managers</b></p>	<p>Within the group of managers already operating a programme of LST (93%), ESMA anticipates that those managers which already incorporate minimum standards would not incur significant initial, ongoing or ad-hoc costs. Costs related to reading and responding to this Consultation, and ensuring standards meet those specified in the Guidelines are expected to be incurred.</p> <p>For those managers who do not implement these minimum standards, managers are likely to incur initial costs related to the adaptation of their LST practices. Those costs will mainly correspond to the development and the implementation of the relevant IT tools.</p>
<p><b>Ongoing costs for managers</b></p>	<p>The ESRB recognised in its recommendation that the minimum standards set out in these Guidelines could result in 'extra' stress testing, and therefore higher costs<sup>13</sup>. Such higher costs may arise from higher standards related to actions taken as result of complying with minimum standards in this Guidelines. For example, the incorporation of reverse stress testing into managers' practices may require additional risk management resources. According to the estimates provided by CP respondents, between 1 and 2 extra risk management resources would be needed.</p> <p>However, as outlined above, this cost should be balanced by the reputational and other benefits which arise from improved liquidity management when minimum LST standards are met.</p>

<sup>12</sup> ESRB/2017/6 page 32

<sup>13</sup> ESRB/2017/6 page 34

	<p>It is worth mentioning that given the current market data scarcity, the sourcing of good quality data might entail additional costs, particularly for some asset classes.</p> <p>Based on the requirements set up in the Guidelines, managers might be compelled to hire additional staff. Finally, the obligation of validation of all estimates and assumptions by an independent expert might also be a source of potential new costs for managers.</p>
<p><b>Ad-hoc costs for managers</b></p>	<p>Ad-hoc costs may decrease, as the need for corrections and enforcement by NCAs should be reduced, since clear standards are set out in the Guidelines.</p>
<p><b>Costs for depositaries</b></p>	<p>Depositaries may incur costs through complying with the Guideline to verify managers have LST procedures in place. To mitigate this, the draft Guidelines draw on existing wording in UCITS and AIFMD to highlight depositaries' obligations in this area. Further, ESMA believes that the proposed Guidelines are proportionate and limited, particularly as documents such as the UCITS and AIF RMP are already reviewed by many depositaries.</p>
<p><b>Costs to investors</b></p>	<p>Investors could conceivably incur costs from the implementation of these Guidelines. For example, if LST highlights that it may be prudent to ensure additional liquid assets in a fund ahead of an event which may materially impact fund liquidity, this can create costs for investors in the fund. These costs could include costs from liquidating positions in less liquid assets (such as transactions costs). In both cases investors would hypothetically 'pay' those costs via lower fund performance. This however should be balanced by the following: (a) UCITS are required to be able to meet redemption demands at all times, as a result LST could be one factor in enabling that outcome, however the overriding requirement is set by the UCITS Directive, not these Guidelines (b) investors in AIFs may not be subject to the same increased costs, as they may not be subject to the same obligation to provide liquidity on-demand to investors.</p>
<p><b>Costs to ESMA &amp; national competent authorities (NCAs)</b></p>	<p>The Guidelines are not anticipated to add significant additional costs to ESMA and NCAs. The Guidelines could in fact lead to lower resource requirements from NCAs, due to potential for a reduced need to expend resource on requiring improvements in standards of LST.</p>



## **Annex III: Guidelines on Liquidity Stress Testing in UCITS and AIFs**

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# I Scope

## Who?

1. These Guidelines apply to managers, depositaries and NCAs.

## What?

2. These Guidelines relate to liquidity stress testing in UCITS and AIFs.
3. In particular, in respect of managers they apply primarily in relation to Article 16(1) of the AIFMD, Articles 47 and 48 of the AIFMD Level 2 Regulation, Article 51 of the UCITS Directive, Article 40(3) of the UCITS Level 2 Directive and Article 28 of the MMFR.
4. In respect of depositaries, these guidelines apply primarily in relation to Article 21 of the AIFMD, Articles 92 of the AIFMD Level 2 Regulation, Article 22(3) of the UCITS Directive and Article 3 of the UCITS Level 2 Regulation.
5. These Guidelines apply in respect of UCITS and AIFs, including:
  - a) ETFs, whether they operate as UCITS or AIFs<sup>14</sup>;
  - b) Leveraged closed ended AIFs.
6. The Guidelines in Sections V.1.1 (The design of LST models), V.1.2 (Understanding liquidity risk), V.1.3 (Governance principles for LST), V.1.4 (The LST policy), V.2 (Guidelines applicable to depositaries), and paragraphs 79 and 81 of Section V.3 (Interaction with National Competent Authorities) apply to MMFs, without prejudice to the MMFR and ESMA Guidelines exclusively applying to MMFs<sup>15</sup>, which prevail in the event of any conflict.
7. These Guidelines should be adapted to the nature, scale and complexity of the fund. Furthermore, the topic of LST naturally overlaps with other aspects of liquidity management in funds, such as managing liquid and less liquid assets, diversification and implementing measures such as ex post a-LMT. These Guidelines are not intended to provide comprehensive guidance regarding liquidity management issues outside the scope of LST.

## When?

8. These Guidelines apply from 30 September 2020.

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<sup>14</sup> For clarity, the existing guidelines on UCITS receiving collateral under the [“ESMA ETF Guidelines of ETFs and other UCITS issues” \(ESMA 2014/937\)](#) apply. Paragraph 45 of the “ESMA ETF Guidelines on ETFs and other UCITS issues” provides that “A UCITS receiving collateral for at least 30% of its assets should have an appropriate stress testing policy in place to ensure regular stress tests are carried out under normal and exceptional liquidity conditions to enable the UCITS to assess the liquidity risk attached to the collateral”. This measure is specific to the circumstances involved for such UCITS whereas the LST Guidelines are intended to provide guidance on the application of liquidity stress testing for investment funds generally and should be taken into account by all UCITS.

<sup>15</sup> Such as those ESMA Guidelines establishing common reference parameters of the stress test scenarios to be included in MMF managers’ stress tests (currently referred to as [‘ESMA34-49-115’](#))



## II Legislative references, abbreviations and definitions

### Legislative references

<i>UCITS Directive</i>	Directive 2009/65/EC on the coordination of laws, regulations and administrative provisions relating to undertakings for collective investment in transferable securities (UCITS) <sup>16</sup> .
UCITS Level 2 Directive	Commission Directive 2010/43/EU implementing Directive 2009/65/EC of the European Parliament and of the Council as regards organisational requirements, conflicts of interest, conduct of business, risk management and content of the agreement between a depositary and a management company. <sup>17</sup>
<i>AIFMD</i>	Directive 2011/61/EU on Alternative Investment Fund managers and amending Directives 2003/41/EC and 2009/65/EC and Regulations (EC) No 1060/2009 and (EU) No 1095/2010 <sup>18</sup> .
<i>AIFMD Level 2 Regulation</i>	Commission Delegated Regulation (EU) No 231/2013 supplementing Directive 2011/61/EU of the European Parliament and of the Council with regard to exemptions, general operating conditions, depositaries, leverage, transparency and supervision.
<i>CDR (EU) 2016/438</i>	Commission Delegated Regulation (EU) 2016/438 supplementing Directive 2009/65/EC of the European Parliament and of the Council with regard to obligations of depositaries <sup>19</sup> .
<i>MMFR</i>	Regulation (EU) 2017/1131 on money market funds <sup>20</sup> .
<i>ESMA Regulation</i>	Regulation (EU) No 1095/2010 of the European Parliament and of the Council of 24 November 2010 establishing a European Supervisory Authority (European Securities and Markets Authority), amending Decision No 716/2009/EC and repealing Commission Decision 2009/77/EC <sup>21</sup> .

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<sup>16</sup> OJ L 302, 17.11.2009, p. 32–96

<sup>17</sup> OJ L 176, 10.7.2010, p. 42–61

<sup>18</sup> OJ L 174, 1.7.2011, p.1

<sup>19</sup> OJ L 78, 24.3.2016, p. 11–30

<sup>20</sup> OJ L 169, 30.6.2017, p. 46–127

<sup>21</sup> OJ L 331, 15.12.2010, p. 84.



## Abbreviations

<i>AIF</i>	Alternative Investment Fund
<i>AIF RMP</i>	AIFM's Risk Management Policy
<i>AIFM</i>	Alternative Investment Fund Manager
<i>a-LMT</i>	Additional Liquidity Management Tool
<i>ETF</i>	Exchange Traded Fund
<i>ESMA</i>	European Securities and Markets Authority
<i>ESRB</i>	European Systemic Risk Board
<i>EU</i>	European Union
<i>FoF</i>	Fund of Funds
<i>FSB</i>	Financial Stability Board
<i>FX</i>	Foreign Exchange
<i>LST</i>	Liquidity Stress Testing
<i>MMF</i>	Money Market Fund
<i>NCA</i>	National Competent Authority
<i>RCR</i>	Redemption Coverage Ratio
<i>RST</i>	Reverse Stress Testing
<i>UCITS</i>	Undertaking for Collective Investments in Transferable Securities
<i>UCITS RMP</i>	UCITS Risk Management Process



## Definitions

<i>closed ended AIF</i>	an AIF other than an open ended AIF, which is an AIF meeting the criteria of Article 1 (2) of Commission Delegated Regulation (EU) No 694/2014 <sup>22</sup>
<i>depository</i>	depository of a UCITS or an AIF
<i>ex post a-LMT</i>	tools/measures applied by managers in exceptional circumstances to control or limit dealing in fund units/shares in the interests of investors, including but not limited to suspension of dealing in units, deferral of dealing and side-pocketing
<i>fire sale price</i>	liquidation of an asset at a material discount to its fair value
<i>fund</i>	a UCITS or an AIF
<i>liquidation cost</i>	the cost paid by the seller of an asset for the execution of a given transaction in a timely manner for liquidity purposes
<i>liquidity risk</i>	the risk that a position in the fund cannot be sold, liquidated or closed at limited cost to comply at any time with obligations to redeem units/shares
<i>liquidity stress testing</i>	a risk management tool within the overall liquidity risk management framework of a manager which simulates a range of conditions, including: normal and stressed (i.e. extreme, unlikely or unfavourable) plausible conditions, to assess their potential impact on the funding (liability), assets, overall liquidity of a fund and, the necessary follow-up action
<i>manager</i>	(a) in relation to a UCITS, the UCITS management company or, in the case of a self-managed UCITS, the UCITS investment company;  (b) in relation to an AIF, the AIFM or an internally-managed AIF;  (c) in relation to an MMF, the manager of an MMF.

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<sup>22</sup> OJ L 183, 24.06.2014, p. 18.



<i>redemption coverage ratio</i>	a measurement of the ability of a fund's assets to meet funding obligations arising from the liabilities side of the balance sheet, such as a redemption shock
<i>reverse stress testing</i>	a fund-level stress test which starts from the identification of the pre-defined outcome with regards to fund liquidity (e.g. the point at which the fund would no longer be liquid enough to honour requests to redeem units) and then explores scenarios and circumstances that might cause this to occur
<i>special arrangements</i>	specific types of ex-post a-LMT measures available to some AIFs and which impact investors' redemption rights, such as side pockets or gates
<i>time to liquidity</i>	an approach, whereby the manager can estimate the amount of assets which could be liquidated at an acceptable cost, for a given time horizon

### III Purpose

9. These Guidelines are based on Article 16(1) of the ESMA Regulation. The purpose of these Guidelines is to establish consistent, efficient and effective supervisory practices within the European System of Financial Supervision and to ensure the common, uniform and consistent application of Union law. In particular, their purpose is to increase the standard, consistency and, in some cases, frequency of LST already undertaken and promote convergent supervision of LST by NCAs.

### IV Compliance and reporting obligations

#### Status of these Guidelines

10. In accordance with Article 16(3) of the ESMA Regulation, NCAs and financial market participants must make every effort to comply with these Guidelines.
11. Competent authorities to which these Guidelines apply should comply by incorporating them into their national legal and/or supervisory frameworks as appropriate, including where particular Guidelines are directed primarily at financial market participants. In this case, competent authorities should ensure through their supervision that financial market participants comply with the Guidelines.

#### Reporting requirements

12. Within two months of the date of publication of the Guidelines on ESMA's website in all EU official languages, competent authorities to which these Guidelines apply must notify ESMA whether they (i) comply, (ii) do not comply, but intend to comply, or (iii) do not comply and do not intend to comply with the Guidelines.





13. In case of non-compliance, competent authorities must also notify ESMA within two months of the date of publication of the Guidelines on ESMA's website in all EU official languages of their reasons for not complying with the Guidelines.
14. A template for notifications is available on ESMA's website. Once the template has been filled in, it shall be transmitted to ESMA.
15. Financial market participants are not required to report whether they comply with these Guidelines.



## **V Guidelines on Liquidity Stress Testing in UCITS and AIFs**

### **V.1 Guidelines applicable to managers**

#### **V.1.1 The design of the LST models**

**16. In building LST models managers should determine:**

- a. the risk factors that may impact the fund's liquidity;**
- b. the types of scenarios to use and their severity;**
- c. different outputs and indicators to be monitored based on the results of the LST;**
- d. the reporting of LST results, outputs and indicators to management; and**
- e. how the results of the LST are used by risk management, portfolio management and by senior management.**

**17. A manager should ensure that LST provides information that enables follow-up action.**

#### **V.1.2 Understanding liquidity risks**

**18. 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.**

**19. A manager should strike a balance by employing LST that:**

- a. is adequately focused, specific to the fund and highlights the key liquidity risk factors; and**
- b. uses a wide enough range of scenarios to adequately represent the diversity of the fund's risks.**

#### **V.1.3 Governance principles for LST**

**20. LST should be properly integrated and embedded into the fund's risk management framework supporting liquidity management. It should be subject to appropriate governance and oversight, including appropriate reporting and escalation procedures.**

**21. LST should be performed under similar conditions to other risk management operations that are subject to regulatory requirements on independence, including the requirement for risk management staff to act independently from other functions such as portfolio**



management. Nevertheless, the governance structure should consider how the outcome of LST is taken into consideration by the portfolio management function while managing the fund.

22. Where the manager delegates portfolio management tasks to a third party, particular attention should be paid to the independence requirement, in order to avoid reliance on or influence by the third party's own LST.
23. Organisational requirements include the requirement to effectively manage conflicts of interest arising from operationalising LST. These conflicts of interest include:
  - a. allowing other parties, such as portfolio management staff (including portfolio managers from separate legal entities), to exercise undue influence over the execution of LST, including reliance on judgements relating to asset liquidity; and
  - b. management of information regarding results of stress tests. If information is shared with a client, it should be ensured that this would not be inconsistent with the manager's obligation to treat all investors fairly in the way it discloses information regarding the fund.

#### **V.1.4 The LST policy**

24. **LST should be documented in an LST policy within the UCITS and AIF RMP, which should require the manager to periodically review and adapt, if necessary, the LST as appropriate. The LST policy should at least include the following:**
  - a. **a clear definition of the role of senior management in the process, including the governing body (e.g. Board of Directors or Trustees);**
  - b. **its internal ownership and which management function(s) is/are responsible for its performance;**
  - c. **its interaction with other liquidity risk management procedures, including the manager's contingency plans and the portfolio management function;**
  - d. **a requirement for regular internal reporting of LST results specifying the frequency and recipients of the report;**
  - e. **periodic review, documentation of the results and a procedure for amending the policy where required by the review;**
  - f. **the circumstances requiring escalation, including when liquidity limits/thresholds are breached;**
  - g. **the funds subject to LST;**
  - h. **initial validation of the LST models and assumptions underpinning them, which should be performed independently from portfolio management, though not necessarily by an entity/person external to the manager;**

- i. the types and severity of stress test scenarios used and the reasons for selecting those scenarios;
- j. the assumptions used relating to data availability for the scenarios, their rationale and how frequently they are revisited;
- k. the frequency at which LST is carried out and the reasons for selecting that frequency; and
- l. the methods for liquidating assets, including the limitations and assumptions used.

### V.1.5 Frequency of LST

25. LST should be carried out at least annually and, where appropriate, employed at all stages in a fund’s lifecycle. It is recommended to employ quarterly or more frequent LST. The determination of a higher or lower frequency should be based on the fund’s characteristics and the reasons for such a determination should be recorded in the LST policy. Flexibility is allowed for on this issue depending on the fund’s nature, scale and complexity and liquidity profile.

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

- a. the liquidity of the fund determined by the manager and any change in the liquidity of assets;
- b. 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
- c. 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.

27. Managers should take into account the factors described in the table below when determining the appropriate frequency of LST:

<b>Recommended frequency of LST</b>	<ul style="list-style-type: none"> <li>• <b>Quarterly</b>, unless a higher or lower frequency is justified by the characteristics of the fund. The justification should be recorded in the LST policy.</li> </ul>
<b>Factors which may <u>increase</u> the frequency of regular LST</b>	<ul style="list-style-type: none"> <li>• Higher unit dealing frequency.</li> <li>• Increased risks emanating from liabilities, such as a concentrated investor base.</li> <li>• Complex investment strategy (e.g. extensive use of derivatives).</li> <li>• Less liquid asset base.</li> <li>• Forthcoming event which could negatively affect fund liquidity.</li> </ul>

<b>Factors which may <u>decrease</u> the frequency of regular LST</b>	<ul style="list-style-type: none"> <li>A highly liquid asset base.</li> <li>Less frequent dealing in the fund's units.</li> </ul>
<b>Recommended employment of ad-hoc LST</b>	<ul style="list-style-type: none"> <li>Ad-hoc LST should be undertaken as soon as practicable if a material risk to fund liquidity is identified by the manager and requires being addressed in a timely manner.</li> </ul>

## V.1.6 The use of LST outcomes

### 28. LST should provide outcomes which:

- a. help ensure the fund is sufficiently liquid, as required by applicable rules and redemption terms stipulated in fund documentation;
- b. strengthen the manager's ability to manage fund liquidity in the best interests of investors, including in planning for periods of heightened liquidity risk;
- c. help identify potential liquidity weaknesses of an investment strategy and assist in investment decision-making; and
- d. assist risk management monitoring and decision-making, including setting relevant internal limits by the manager regarding fund liquidity as an additional risk management tool. This may include ensuring the results of LST can be measured through a comparable metric, such as a key risk indicator.

29. 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 operationalise applying ex post a-LMT to a fund.

## V.1.7 Adapting the LST to each fund

### 30. LST should be adapted appropriately to each fund, including by adapting:

- a. the frequency of LST;
- b. the types and severity of scenarios to employ to create stressed conditions, which should always be sufficiently severe but plausible and should be based on the liquidity risks arising from the assets and liabilities of the fund's balance sheet as well as its overall liquidity profile;
- c. the assumptions regarding investor behaviour (gross and net redemptions) and asset liquidation;



- d. **the complexity of the LST model, which should account for the complexity of the fund's investment strategy, portfolio composition, LMT and use of efficient portfolio management techniques; and**
- e. **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.**

### **V.1.8 LST scenarios**

- 31. LST should employ hypothetical and historical scenarios and, where appropriate, RST. LST should not overly rely on historical data, particularly as future stresses may differ from previous ones.**
- 32. 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.
- 33. Managers using 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.
- 34. Funds that engage in investment strategies exposing them to low-probability risks with a potentially high impact should pay particular regard to the use of RST to assess the consequences of an extreme market event for their liquidity profile.
- 35. RST can be used to establish whether action needs to be taken to ensure the fund is adequately liquid or whether such a circumstance would be exceptional enough to enable suspension to be imposed in compliance with applicable rules. In the case of UCITS, the 'exceptional circumstances' are those within the meaning of Article 84(2) of the UCITS Directive, applicable national rules and the fund's prospectus or fund rules.
- 36. An AIF may also use RST to simulate the level of assets that may be liquidated before implementing 'special arrangements' allowed by its redemption policy and national rules.<sup>23</sup>

### **V.1.9 Data availability**

- 37. LST should demonstrate a manager is able to overcome limitations related to the availability of data, including by:**
  - a. **avoiding optimistic assumptions;**

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<sup>23</sup> Recital 59 of AIFMD Level 2 Regulation (EU) No 231/2013.



- b. justifying reliance on third parties' LST models, including where the model is developed by a third party portfolio manager; and**
- c. exercising expert qualitative judgement.**

38. In particular, managers should adapt their approach where data is limited and any assumptions used should be adequately reviewed.

39. Appropriate reductions in asset liquidity should be simulated in times of both normal and stressed market conditions, particularly where historical data does not provide sufficiently severe examples of stressed conditions. It should not be assumed that the portfolio can be liquidated at the full average daily traded volume of an asset unless such an assumption can be justified based on empirical evidence.

### **V.1.10 Product development**

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

- a. 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**
- b. 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.**

41. LST can also be used at fund launch to help identify factors material to the future risk management of the fund. For example: quantifying the sensitivity of the fund's liquidity risk; identifying factors impacting liquidity risk; identifying metrics/key risk indicators to monitor liquidity risk going forward; the frequency of risk management; and assessment of any potential ex post a-LMT or special arrangements to be included in the prospectus or fund rules.

### **V.1.11 Stress testing fund assets to determine the effect on fund liquidity**

42. 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:

- a. the objectives and investment policy of the fund;**
- b. the obligation to manage the fund in the interests of investors;**
- c. any applicable obligation to liquidate assets at limited cost; and**

**d. the obligation to maintain the risk profile of the fund following liquidation of a portion of its assets.**

43. Liquidation cost and time to liquidity are the two principal approaches typically employed by managers to simulate asset liquidity under normal and stressed conditions. Managers should apply the appropriate method for the individual fund. Other approaches may be adopted to the fund.
44. Liquidation cost depends on asset type, liquidation horizon and the size of the trade/order. Managers should consider these three factors when assessing liquidation cost of their assets under normal and stressed conditions.
45. 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.
46. 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.
47. The method of liquidating assets in an LST should:
  - a. 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;
  - b. ensure the model used for the fund is and stays in compliance with its objectives and investment policy and fund rules;
  - c. reflect the fund being managed in the interests of all investors, both those redeeming and remaining;
  - d. comply with applicable obligations for the fund to maintain the risk profile envisaged by fund documentation;
  - e. be reflected in the LST policy;
  - f. take into account, where relevant, the potential negative effects on other investors or on overall market integrity.
48. Managers should pay particular regard to low probability, high impact scenarios, including the potential difficulty of reliably pricing less liquid assets during a period of market stress.



## V.1.12 Stress testing fund liabilities to determine the effect on fund liquidity

- 49. 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.**
- 50. LST should incorporate risk factors related to investor type and concentration according to the nature, scale and complexity of the fund.**
51. Redemption requests are the most common and typically most important source of liquidity risk for investment funds. Additionally, different types of liabilities on a fund's balance sheet and their potential impact on fund liquidity varies according to the fund. Special arrangements or a-LMTs could also be considered when managing liability risk.
52. For normal conditions, managers could monitor the historical outflows (average and trends over time), average redemptions of peer funds and information from any distribution network regarding forecast redemptions. Managers should ensure that the time series is long enough to fairly reflect 'normal' conditions.
53. For stressed conditions, example scenarios are historical trends, historical events, contemporary trends in peer funds, hypothetical/event-driven scenarios and reverse stress testing.
54. Depending on the availability of granular historical data covering redemptions for each investor type and other information relative to a fund's specific distribution, managers could also simulate redemption requests for different types of investors.
55. The manager should take into account the extent to which variables arising from additional factors such as investor behaviour can or should be incorporated into their scenarios in the LST model. The decision on the granularity, depth of analysis and use of data is subject to necessity and proportionality. Managers should understand the potential risks associated with the fund's investor base and be able to demonstrate that those risks play a material factor in the ongoing liquidity risk management of a fund.
56. The table below provides examples of factors regarding investor behaviour which may be incorporated into the LST model:

Factor	Examples of potential liquidity risk	Examples of potential incorporation into LST
<b>Investor category</b>	Redemption risk may vary by type of investor. For example, the likelihood of redeeming during stressed conditions could be categorised according to whether investors are wealth managers,	Based on the manager's knowledge and experience of their clients, the LST model may simulate, for example, funds of funds posing more redemption risk than other

	pension schemes, direct retail investors, or other UCITS or AIFs.	types of investors, and simulate their withdrawal from the fund first
<b>Investor concentration</b>	One or more investors may own a materially larger proportion of the fund than others, leading to a particular risk to fund liquidity from the investor(s) redeeming.	The manager may model one or a number of the largest investors redeeming simultaneously from the fund over a given period of time <sup>24</sup> .
<b>Investor location</b>	Investors located in different regions or countries may pose distinct redemption risk due to idiosyncratic factors linked to the political, economic or other factors relating to their location. For example, investors in a region subject to different monetary policy may pose distinct redemption risks during periods of changes in FX and/or interest rates. Political and/or economic risks may also lead investors in other regions or countries to redeem.	The manager may simulate a material proportion of investors located in a specific country redeeming over a given time period first.
<b>Investor strategy</b>	Whilst many investors' strategies are long-term and, in any case, challenging to unpick, some investors follow formulaic or pre-defined strategies that may pose particular redemption risk in changing market conditions. For example, some funds explicitly seek to target a level of risk, as measured by volatility, and are identifiable as such via their fund names and stated investment objectives. Such funds often seek to de-risk during volatile periods and may pose heightened redemption risk during periods of volatility in given asset classes. Where funds with formulaic or pre-defined strategies are investors, the manager may need to pay due regard to the liquidity risk such funds	The manager may simulate redemptions from investors following similar strategies in stressed and normal market conditions.

<sup>24</sup> This exercise may have limited utility where the fund has only one institutional investor that cooperates with the manager concerning intentions to subscribe and redeem units.

	pose during stressed and normal market conditions.	
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### V.1.13 LST on other types of liabilities

**57. 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.**

58. Net redemptions may not be the only relevant risk to liquidity coming from the liability side of a fund's balance sheet and which therefore should be subject to LST. In some cases, LST should determine the circumstances in which liquidity risk cannot be mitigated, for example a level of margin calls the fund would not be able to fund. Contingency planning should adequately reflect this and help to mitigate the liquidity risk in such circumstances.

59. The table below provides examples of factors which may affect liquidity risk:

Liability type	Examples of factors which may affect liquidity risk	Potential events which may be simulated
Derivatives	Changes in the value of the underlying may lead to derivative margin calls, affecting the available liquidity of the fund	Simulation of a change in the value of the underlying of the derivative leading to a larger than anticipated margin call
Committed capital	Funds investing in real or immovable assets are often required to commit capital to service the investment, such as maintenance or refurbishment costs	Simulation of unexpected event causing new/higher outlay of capital to a real estate investment
Securities Financing Transactions / Efficient Portfolio Management	Funds lending out assets are exposed to the counterparty risk of the borrower and the associated liquidity risk arising from potential default. Whilst this can be mitigated by the collateral posted, liquidity risk is not eliminated (bearing in mind the liquidity of the collateral).	Simulation of default of the counterparty to a securities lending operation. Simulation of cash collateral reinvestment risk

Interest/credit payments	Funds which incorporate leverage into their investment strategy are subject to liquidity risk arising from factors such as interest rate sensitivity	Simulation of increased interest rates on the payment obligations of the fund
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### V.1.14 Funds investing in less liquid assets

**60. Risks arising from less liquid assets and liabilities risks should be reflected in the LST.**

- 61. Many funds invested in less liquid assets have distinct risks emanating from both assets and liabilities, compared to funds investing in more liquid securities. For example, many AIFs investing in real estate have less frequent dealing periods and notice periods which reduce liabilities risk from redemptions. However, such funds are also exposed to distinct liabilities risk arising from servicing and maintaining real estate assets (including hard to simulate risks such as legal risks).
- 62. Furthermore, funds investing in less liquid assets have inherently less flexibility to improve overall liquidity by selling assets at a limited discount during periods of stressed market conditions. Therefore, the outputs from LST by managers of less liquid assets may have some distinctive features.
- 63. 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. Those assets may be particularly vulnerable to an absence of liquidity in times of market stress, affecting time to liquidity, liquidation cost, and also whether or not assets would be liquidated at all when taking investors' best interests into consideration. 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).
- 64. The nature of a less liquid asset base can place even more emphasis on the importance of managers ensuring that investors are treated impartially during stressed market conditions. LST could therefore help a manager to establish a governance framework seeking to support fair outcomes for all investors, by helping to model a fair method of liquidating assets.
- 65. One way in which a manager could consider the liquidity of the fund is to prioritise undertaking ad-hoc LST on funds investing in less liquid assets where a forthcoming event has been identified which could negatively impact fund liquidity. Thus, managers should pay particular regard to the appropriateness of the frequency of LST in funds investing in less liquid assets.
- 66. FoFs 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 because the

underlying exposure of those target funds may lead to the suspension of the target investment vehicle or other measures. This may have an impact on the FoFs so its LST model should take this risk into account.

### **V.1.15 Combined asset and liability LST**

- 67. 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.**
68. Combined asset and liability LST can assist in the assessment of which funds present the largest liquidity risk at a given moment, considering liquidity risk on both the assets and liabilities sides. This can have a material role in a manager's contingency planning for a crisis, such as in the planning for the impact of crystallised liquidity risk in one or more funds at firm-level.<sup>25</sup>
69. 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.
70. An outcome of combined asset and liability LST may be a comparable metric or score, for example based on the RCR. The manager's chosen approach should be explained and documented in the LST policy, particularly if it does not require the assessment of the time and/or cost to liquidate assets in a portfolio as outlined in paragraph 42. Where one fund operated by the manager can be compared to another using such a metric, it can be a meaningful risk indicator for senior management.<sup>26</sup>
71. In cases where fund scores/metrics change materially in a given timeframe, combined asset and liability LST can assist in the set-up of an alert system to assess whether action on a fund's liquidity is required.

### **V.1.16 Aggregating LST across funds**

- 72. A manager should aggregate LST across funds under its management where it assesses such an activity to be appropriate for those funds.**
73. Aggregating LST across funds involves utilising the same liquidity stress test on more than one fund with similar strategies or exposures. It may be useful when considering the ability of a less liquid market to absorb asset sales were they to occur concurrently in funds operated by the manager. This may be particularly pertinent when funds operated by the manager own a material level of assets in a given market. Aggregation of LST may allow the manager to better ascertain the liquidation cost or time to liquidity

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<sup>25</sup> ESRB/2017/6 page 31

<sup>26</sup> For more information, see [Guide to the use of stress tests as part of risk management within asset management companies](#), AMF, page 18 and [Liquidity stress testing in German asset management companies](#), BaFin, pages 29-31.



of each security, by considering the trade size, stressed market conditions and counterparty risk.

## V.2 Guidelines applicable to depositaries

**74. A depositary should set up appropriate verification procedures to check that the manager of a fund has in place documented procedures for its LST programme.**

75. The verification does not require the depositary to assess the adequacy of the LST. For example, one way of verifying that LST is in place and carried out is to confirm that the UCITS RMP or AIF RMP provides for the manager to carry out LST on the fund.

76. Under both the UCITS Directive and the AIFMD, depositaries are required to implement procedures to verify that the fund is acting in compliance with obligations under those Directives.<sup>27</sup>

77. Where the depositary is not satisfied that LST is in place, it should take action as per any other evidence of a potential breach of rules by a manager. Depending on the national regime, this may require a depositary to inform (or require a manager to inform) the applicable NCA of the manager's failure to comply with applicable rules.

78. The depositary does not need to replicate or challenge the LST undertaken by a manager.

## V.3 Interaction with National Competent Authorities

79. NCAs may at their discretion request submission of a manager's LST to help demonstrate that a fund will be likely to comply with applicable rules, including regarding the ability of the fund to meet redemption requests in normal and stressed conditions.

80. Furthermore, managers should notify NCAs of material risks and actions taken to address them.

81. NCAs may at their discretion request managers to notify them of other information relating to the LST, including liquidity stress test models and their results. This may be particularly the case during a period of large redemptions across the market.

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<sup>27</sup> In the case of UCITS, under Article 3(2) of Commission Delegated Regulation (EU) 2016/438. In the case of AIFMD, under Article 95 of Commission Delegated Regulation (EU) 231/2013