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BVI's[1] response to ESMA's consultation paper regarding guidelines on liquidity stress testing in UCITS and AIFs

The European framework established under the AIFMD and the UCITS Directive already set a high standard in the area of liquidity risk management. These requirements are sufficient, suitable and reasonable. They are incorporated in liquidity based stress tests and represent an integral part of the internal risk management system. However, following the FSB's recommendations[2] and IOSCO's principles of liquidity risk management for CIS[3], authorities should provide guidance on stress testing at the level of individual funds to support liquidity risk management to mitigate financial stability risk. We therefore support ESMA's initiative to establish guidelines on liquidity stress tests (LST) to achieve a common understanding of the legal framework in the European Market.

In this context, it is of utmost importance that guidelines on LST consider that managing liquidity risks needs to be observed in the overall context of the individual fund's portfolio including the investment objective, the investment instrument and redemption terms. All of these issues have a different effect on the liquidity. In particular, investment funds can compensate outflows with inflows and vice versa. In the absence of investment funds the underlying investors would have to access the markets directly. If regulators impose too detailed and restrictive rules on LST for investment funds, asset managers would be forced to operate on the markets in a similar way during a possible liquidity crisis. This could lead to an amplification of the crisis rather than mitigation. We therefore welcome the proposed general principle-based approach of the draft guidelines.

In this context, we see the need to clarify the relationship between the guidelines and the explanatory considerations. In particular, it appears that some of the explanatory considerations given are also requirements which should be taken into account by each management company. We therefore propose to clarify that the explanatory considerations are only examples how the guidelines could be implemented and which specificities could be taken into consideration.

In any case, we see the need for improvements on certain proposals in clarifying that the design of a LST depends on the individual business model and investment strategy of the investment fund. This applies in particular to the proposals on reverse stress tests, aggregated stress tests and frequency of LST. These and certain other explanation considerations are defined in such a way that they should apply to all asset managers. This makes it more difficult for managers to concentrate on the specific needs of the individual fund and its investors. Therefore we request ESMA to review these requirements in avoiding a too granular approach.

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[1] BVI represents the interests of the German fund industry at national and international level. The association promotes sensible regulation of the fund business as well as fair competition vis-à-vis policy makers and regulators. Fund companies act as trustees in the sole interest of the investor and are subject to strict regulation. Funds match funding investors and the capital demands of companies and governments, thus fulfilling an important macro-economic function. BVI's more than 100 members manage assets of some 3 trillion euros for private investors, insurance companies, pension and retirement schemes, banks, churches and foundations. With a share of 22% in the EU Germany represents the largest fund market as well as the second fastest growing market in the EU. BVI's ID number in the EU Transparency Register is 96816064173-47. For more information, please visit www.bvi.de/en.

[2] FSB, Policy Recommendations, January 12, 2017, available at: http://www.fsb.org/wp-content/uploads/FSB-Policy-Recommendations-on-Asset-Management-Structural-Vulnerabilities.pdf.

[3] IOSCO, Recommendations for Liquidity Risk Management for Collective Investment Schemes, Final Report, FR01/2018, February 2018.

BVI
Bundesverband Investment und Asset Management e.V.

Contact
Phone +49 69 15 40 90 0
www.bvi.de

BVI Berlin
Unter den Linden 42
10117 Berlin

BVI Brussels
Rue du Trône 14–16
1000 Bruxelles

BVI Frankfurt
Bockenheimer Anlage 15
60322 Frankfurt am Main

Executive Board
Thomas Richter CEO
Rudolf Siebel MD

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.

In principle, we agree with the assumption of ESMA that a great majority of managers already undertake LST. In Germany, in particular, LST is a standard tool within the risk management process of open-ended AIFs and UCITS and leveraged closed-end AIFs. Moreover, BaFin has already established a report with guidelines for asset management companies on LST.[4]

Considering the wide range of options depending on the final version of ESMA's guidelines and explanatory considerations, at this stage it is extremely difficult for us to provide all the potential quantitative data on costs and benefits in comparison to the existent standards in Germany. However, it seems to be clear that the effort (i.e. costs) is significant as long as the proposed guidelines remain unchanged and differ at certain points from the legal requirements of the AIFMD and UCITS Directive and current supervisory standards and principles. Considering this, we disagree with the assumption of ESMA that the drafted guidelines would not incur significant 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?

In principle, we agree with the scope of the proposed guidelines that shall apply to LST of UCITS and AIFs, in particular also for ETFs, MMFs and leveraged closed ended AIFs.

However, we see overlap between the proposed new guidelines on LST and the already published ESMA's guidelines on stress tests scenarios under Article 28 of the MMF Regulation[5]. This applies in particular to the requirements of reverse and aggregate stress tests. Therefore, it is of utmost importance to align the new proposals with the MMF guidelines on stress test scenarios at these points.

Moreover, a liquidity risk management process for leveraged closed-ended investment funds is also required under the European Directive 2011/61/EU (AIFMD). The focus here is on liquidity management at portfolio level while being exempt from specific redemption-related liquidity management requirements. A potential mismatch between the liquidity of the fund investments and redemption terms can not materialise in closed-end investment funds. Therefore, it should be clarified that the guidelines apply to managers of leveraged closed-ended only on portfolio level.

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?

We very much welcome the clarification that these guidelines should be adapted to the nature, scale and complexity of the fund. However, we do not see the merit that the proportionality principle should be subject to the condition "*where relevant*". It must be a clear understanding that LSTs are appropriate and based on the proportionality principle.

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[4] https://www.bafin.de/SharedDocs/Veroeffentlichungen/EN/Meldung/2017/meldung_171208_liquiditaetsstresstests_en.html.
[5] https://www.esma.europa.eu/sites/default/files/library/esma34-49-115_mmf_guidelines_on_stress_tests.pdf.

In Germany, in principle, UCITS are required by law to undertake LST under normal and exceptional circumstances, even if Article 40(3) of the UCITS Level 2 Directive requires management companies to conduct stress tests under exceptional circumstances only in the case where it is appropriate. However, following the BaFin guidelines and the European legal approach, the proportionality principle applies in any case.

In practice, there are circumstances in which it would be inappropriate to undertake LST, but not limited to UCITS. This could apply to all investment funds where the investor base is well known by the investment management company or the market developments show that the liquidity risk of the portfolio's assets is not increased. These examples show that management companies needs the flexibility to react on a case by case study that implies a principle-based approach in general.

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?

The timeline for implementing the guidelines will depend on the content of the final version of such guidelines and explanatory considerations. The implementation of rules takes more time the more granular they are. In any case, an appropriate transitional period (such as 18 months as a minimum) should be granted considering any implications of potentially changing or amending the already established processes.

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?

We agree to set out a list of guidelines that shall apply to all funds, i.e. UCITS and AIFs, and to complete the guidelines with explanatory considerations.

However, we do not see merit in including some of the explanatory considerations in the final guidelines. Hence, we see the need to clarify the relationship between the guidelines and the explanatory considerations. In particular, it appears that some of the explanatory considerations given in the consultation paper are also requirements which should be taken into account by each management company. We therefore propose to clarify that the explanatory considerations are only examples how the guidelines could be implemented and which specificities could be taken into consideration in reflecting the range of different kinds of investment funds, strategies and investor base. There is no place for a-one-size-fits-all approach.

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

We do not agree with all of the proposed guidelines. In particular, we request for amendments for the following guidelines:

Guideline 2: We disagree with the assumption that LST should be documented twice: within a (separated) LST policy and within the UCITS or AIF risk management policy. Liquidity management is part of the general risk management process. It must be sufficient to document LST in the general risk management policy. We therefore propose to amend guideline 2 as follows:

> "LST should be documented ~~***in an LST Policy***~~ ***as part of the UCITS RMP or AIF RMP***, which should require the manager to periodically review and adapt (if necessary) its LST programme and models as appropriate. ~~***It should also be documented within the UCITS RMP and the AIF RMP.***~~"

Guideline 4: Following the principle-based approach of the proposed guidelines, it must be clarified that the given frequencies for a more frequent programme of LST are only examples. We propose the following amendment:

> "LST should be conducted at least annually and employed at all stages in a fund's lifecycle, where appropriate. It is recommended that a more frequent programme of LST be employed, ***such as*** quarterly or even more frequently if required by the characteristics of the fund. Flexibility is allowed for on this issue dependent on the nature, scale and complexity of the fund and its liquidity profile."

Guideline 7: We disagree with the proposal that assumptions regarding investor behaviour should be made on a gross and net redemption basis. We understand gross redemptions as any type of redemption, irrespective of whether there are also inflows through new unit issues in the same period. We cannot identify any benefit in taking gross redemptions into account. We consider net values as relevant and, therefore, propose to amend guideline 7 as follows:

> "[…] b. Assumptions regarding investor behaviour ~~***(gross and net redemptions)***~~ and asset liquidation. […]"

Guideline 8: We **strongly disagree** with guideline 8 and the explanations under **paragraph 28 and paragraph 50** of the draft Guidelines that LST should employ reverse stress testing. These kinds of stress tests are neither required under the UCITS Directive nor the AIFMD. In this context, we note that under paragraph 18 of ESMA's 'Guidelines on stress tests scenarios under Article 28 of the MMF Regulation' of 21 March 2018, reverse stress testing is seen as a non-mandatory tool ("*may also be of benefit*"). Because MMFs are also in scope of these general liquidity stress test guidelines, there must be an alignment with the MMF stress test guidelines.

Moreover, we see extremely limited value in reverse stress tests whereas the effort in doing these is large. This means that reverse stress tests may be helpful and worth the effort in specific cases. But this should be at the manager's discretion. In particular, reverse stress tests should not be mandatory because of the following practical reasons:

- Appropriately defined standard scenarios already permit the identification of the funds that could be vulnerable. Reverse stress tests can be redundant with these standard scenarios or lead to implausible results. In standard scenarios, the severe scenarios defined to test a fund's survival are meant to be plausible. For funds not passing these tests (typically funds with high liability concentration and low asset liquidity), reverse stress tests would add no value, and for those passing the scenarios, reverse stress tests would mostly lead to implausible results as the scenarios that would bring the funds to their point of failure are unrealistic because too extreme.

- As it is bespoke per fund, it can require lots of effort of conceptualisation and implementation. In standard scenarios, scenarios are selected to predict their potential impact on the fund while reverse stress tests consist in finding the scenarios that cause the fund to fail. As reverse stress test is done at individual fund level, this would result in a huge amount of work, looking for all possible scenarios leading to each fund's collapse, then filtering out the ones plausible. Doing reverse stress tests for all funds could become costly for low benefit. Therefore, we see a close relation to Q1.

- A natural outcome of reverse stress tests would be the definition of a contingency plan, i.e. a plan to manage critical liquidity events, using available liquidity management tools to find solutions. But standard scenarios are already a mean to help define a contingency plan. Reverse stress tests would again add no real value here.

Furthermore, it should be clarified that hypothetical and historical scenarios in combination are not relevant for all investment funds. In particular, we raise the question on the added value of hypothetical scenarios. Therefore, guideline 8 must be amended as follows:

> "LST should employ hypothetical and***/or*** historical scenarios***, as applicable*** ~~***and reverse stress testing***~~. In doing so it should not overly rely on historical data, particularly as future stresses may differ from previous ones."

Guideline 10: Regarding guideline 10 we would prefer alternative (manager and/or fund specific) approaches different to time/cost to liquidate. We also refer to our answer to question 7.

Guideline 14: It must be clarified that the aggregation of stress tests is simply an option for managers, and not required by ESMA. The current wording implies that aggregated stress tests are required in any case where it is appropriate. Moreover, as long as these guidelines shall also apply to managers of MMFs, there must be an alignment with the MMF guidelines. We therefore request ESMA to amend guideline 14 and paragraph 56 (as proposed under question 19) as follows:

> "~~***Aggregate LST should be undertaken by managers where appropriate.***~~ ***In certain circumstances, where appropriate, managers may use aggregate LST on a range of investment funds with similar strategies or exposures.***"

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

In our view, the proposed explanatory considerations regarding LST of fund assets under **paragraphs 24-25** are too strict and lack flexibility. In particular, we understand the explanations in such a way that only two principal approaches should be conducted by managers to simulate the liquidity of portfolio assets: liquidation cost and time to liquidity. This applies all the more as other approaches only may be adopted as appropriate to the fund. We would prefer alternative approaches (manager and/or fund specific approaches) different to time/cost to liquidate. In particular, with regard to the assessment of fund assets, it is important to state that liquidity management depends on the types of assets, investors, investment strategies, markets, and possible national legal or contractual restrictions under the investment funds' rules for changing investment strategies.

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

We strongly disagree with **guideline 8 of paragraph 18 and the explanation under paragraph 28 of the drafted Guidelines** that LST should employ reverse stress testing. For further explanations, we refer to our answer to question 6. Therefore, we request ESMA to amend Guideline 8 as proposed under question 6 and paragraph 28 of the draft as follows:

> '28. Scenarios. Managers should employ historical~~,~~ ***and/or*** hypothetical scenarios***, as applicable***~~***as well as reverse stress testing***~~. Scenarios should be appropriately chosen to achieve the effect of deteriorating liquidity on the assets of the portfolio, be it in terms of cost of liquidation, time to liquidation or other method. ***In addition to the stress test scenarios, the inclusion of reverse stress testing may also be of benefit, where appropriate.'***

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?

We agree with ESMA's general assumption under **paragraph 20** that data relevant to liquidity of many assets can be difficult to access. We therefore very much appreciate the given approach without a classification of certain assets as liquid or illiquid. In particular, we see no need for such an abstract classification of the liquidity of certain assets or asset categories as it is proposed by the ESRB for example. It should be avoided that there are too strict and binding requirements on liquidity analysis of assets. Otherwise we see the danger that the management company might not be able to react to changes in the market and they could make decisions with some of evidence of "herd behaviour" with further potential impact on the financial stability. Such requirements would also pose administrative burdens for the management companies. Therefore, it is important that liquidity analysis of assets should be based on a case by case assessment for each fund.

In particular, it must be the manager's discretion how to cope with scarce data depending on the types of assets, investment strategies, markets, investors, and possible national legal or contractual restrictions under the investment fund's rules for changing investment strategies. If there is no meaningful market data available, a qualitative approach would seem to be more expedient than a quantitative one.

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?

We agree with the proposed general approach to state which criteria a method of liquidating assets should always have and that the LST models should reflect how a manger would and does liquidate assets during normal and stressed conditions. There is no uniform method to liquidate the fund. Liquidation depends on the fund's specificities and its investors' interests. Therefore it is very ambitious to simulate in an automated way how a manager would liquidate the fund while staying compliant with all rules and limits.

However, based on the explanations given, it would be very complex to implement compliance checks. In practice, there would be a need to implement manual post-processes for such checks. It is obvious that an automated compliance check for many stress scenarios would be not feasible. Moreover we want to emphasise the potential impact on costs. In particular, with regard to **paragraph 30**, it must be clarified that the last sentence is only an example for investment funds which invest in traded assets on a daily basis. Another approach could be to explain that for each of the individual assets held in the fund, a liquidity status is assigned for one day or other time horizons given that redemptions are possible within a single trading day or within the other time horizons.

Q11: Do you agree with ESMA's wording regarding 'second round effects'? What is your current practice regarding modelling 'second round effects'?

We disagree with highlighting in the explanation contributions the so called '***second round effect'*** introduced only in a IMF working paper[6] as a theory that fire sales by funds could have an impact on other agents by triggering price spirals in the market the funds invest in. This paper only describes the view of one author and does not represent the views of the IMF. Moreover, the FSB itself does not use the term '*second round effect*' in is recommendations. Hence, the FSB explains that there is some evidence that phenomena such as investor herding and momentum trading can contribute to the amplification effects. As an outcome of this, the FSB highlights that it is important to address these vulnerabilities before they manifest themselves as realised threats to financial stability. That is precisely the reason why the FSB recommends a wide range of policy measures (such as liquidity stress tests) and tools to reduce such risks and to help to mitigate financial stability risk in certain circumstances. Therefore, requirements in managing liquidity risks of investment funds such as guidelines on liquidity stress tests and in using liquidity management tools (as a general rule) are much more important. This was, at the end, also the conclusion of IOSCO in its recommendations[7] for liquidity risk management for collective investment schemes of February 2018. Moreover, also BaFin explains in its introductions to its recommendations that a sound risk management and stress tests at fund level is the first line of defence against the threat of contagion in the financial system.

Therefore, the impact of '*second round effects*' would be only relevant within the macro-prudential discussion of the establishment of a mechanism on the supervisory side to address, or contribute to addressing, crisis situations consistent with legal and regulatory framework. But these questions must be excluded of the scope of these guidelines that only address the micro-prudential level for each fund as a fist line of defence. ESMA itself highlights in **paragraph 37** that the guidelines do not engage in this debate. **Therefore, we request ESMA to delete these explanations regarding '*sound round effects*' in paragraphs 36 and 37 altogether.**

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?

[6] IMF Working paper: Liquidity Stress Tests for Investment Funds: A Practical Guide, October 2017, available under: https://www.imf.org/en/Publications/WP/Issues/2017/10/31/Liquidity-Stress-Tests-for-Investment-Funds-A-Practical-Guide-45332.
[7] Available under: https://www.iosco.org/library/pubdocs/pdf/IOSCOPD590.pdf.

We refer to the summary of the German practice outlined in BaFin's report and guidelines on liquidity stress testing in German asset management companies.[8]

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?

In our view, there is no need for additional explanations related to funds which hold inherently less liquid assets. The AIFMD and the Delegated Regulation (EU) No 231/2013 already require a strict and efficient liquidity management process. Hence, common requirements in managing liquidity risks of investment funds and in using liquidity management tools (as a general rule) are much more important.

As an example, the German legislator has responded to the crisis by implementing new legal liquidity management tools for open-ended property investment funds. We also see no need for an abstract classification of the liquidity of inherently less liquid assets or asset categories. In particular, ESMA should avoid setting too strict binding requirements on liquidity analysis of less liquid assets. Such requirements would also pose administrative burdens for the management companies. Therefore, it is important that liquidity management should be based on a case by case assessment.

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

As stated in our response to **question 5**, we see the need to clarify the relationship between the guidelines and the explanatory considerations. This applies, in particular, to the proposed items on the liability side. It appears that some of these explanatory considerations given are also requirements which must be taken into account by each management company and which are much stricter than the guidelines themselves. We therefore propose to clarify that the explanatory considerations are only examples how the guidelines could be implemented and which specificities could be taken into consideration in reflecting the range of different kinds of investment funds, strategies and investor base. There is no place for a-one-size-fits-all approach.

Irrespective of this clarification, we agree with the general assumption that LST on the liabilities side should be conducted. However, we are struggling with the wording '***liabilities side of the balance sheet***'. In general, investment funds do not have an own balance sheet. As we understand the requirements of the AIFMD and the UCITS Directive, a manager of open-ended funds is mainly required to compare the liquidity profile of the fund's portfolio (that includes an assessment of the material impact on liquidity of each asset, material liabilities on fund level and commitments) with the underlying obligation resulting from redemption requests of investors. This involves an assessment whether the liquidity profile of the fund (fund level) is appropriate for the individual redemption requirements (investor level). Therefore, material payment obligations on the fund level resulting from investment decisions such as interest payments based on leverage methods are part of the

[8] Cf. pages 17-20, available under the following link:
https://www.bafin.de/SharedDocs/Downloads/EN/Merkblatt/WA/dl_merkbl_report_guidelines_liquiditystresstesting_en.html.

assessment of the liquidity profile of the fund's portfolio. However, for leveraged closed-ended funds, there is only a legal requirement to assess whether there is enough liquidity to fulfil the payment obligations resulting from leverage methods or commitments. In practice, this also involves other payment obligations resulting from investment decisions taken, where relevant. In this context, we request ESMA clarifying this approach and avoiding the wording of '*liabilities side of the balance sheet*'.

Moreover, with regard to other payment obligations on the fund level, we miss a general statement that only material liabilities should be part of LST. This would be in line with the requirements of Article 47(1)(b) of the Delegated Regulation (EU) No 231/2013.

With regard to the certain items proposed on the liabilities side, we refer to the questions 15 to 18. **In any case, we disagree with the considerations regarding LST on certain other types of liabilities such as securities financing transactions, the proposed incorporation of investor behavioural analysis and reverse stress tests.**

In particular, as already mentioned under questions 6 and 8, we request ESMA to amend Guideline 8 as proposed under question 6 and **paragraph 50** of the draft as follows:

> '50. All relevant items on a fund's liability side ~~***of the balance sheet***~~, including ***material*** items which are not redemptions, should be subject to LST using historical and***/or*** hypothetical scenarios, ***as applicable*** ~~***as well as reverse stress testing***~~. ***In addition to the stress test scenarios, the inclusion of reverse stress testing may also be of benefit, where appropriate.'***

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?*

We have the following remarks to the proposed considerations specifying the LST of certain types of liabilities:

- **Redemptions**: In general, we agree with the assumption that LST should be conducted for redemption requests for open-ended investment funds. However, it is difficult or impossible to identify an emerging liquidity shortage before it occurs by anticipating the potential behaviour of the investors. One of the core responsibilities of the asset manager is the design and the offer of tailor-made funds in terms of specific investment strategies and investor groups/categories. Most of retail investment funds are distributed by intermediaries. It is the core responsibility of the intermediaries and the distribution channels to assure that a fund is sold to the 'proper' and corresponding investors. It is the responsibility of the intermediaries that the design and the investment strategy of the fund 'fits' to the target market. In this context, we disagree with the proposed guidance regarding the **knowledge of the investor base because the given examples such as investor origin or investor strategy** are too far reaching. For more details, we refer to our answers to question 17.

- **Derivatives**: According to Box 28 of CESR's Guidelines on risk measurement and the calculation of global exposure and counterparty risk for UCITS, a UCITS should, at any given time, be capable of meeting all its payment and delivery obligations incurred by transactions involving financial derivative instruments. In Germany, this applies also to AIFs using derivatives. CESR only requires

that there is a monitoring process in place to ensure that financial derivative transactions are adequately covered. IOSCO also recommends that data on liabilities, such as potential margin calls, should be assessed alongside potential redemption demands without a recommendation to conduct, in addition, LST under normal and stressed conditions. **We therefore request ESMA to clarify that there is only a need to monitor, but not a requirement to conduct LST for these liabilities in any case.**

- **Committed capital:** We agree with the proposed example of factors which may affect liquidity risk with regard to commitments and that a simulation of unexpected event causing new/higher outlay of capital to a real estate investment could be helpful. However, with regard to **paragraph 50**, it must be clarified that historical and hypothetical scenarios as well as reverse stress tests make no sense for these commitments.

- **Securities Financing Transactions (SFT)/Efficient Portfolio Management:** We disagree to take SFT into account of LST. First of all, the described default risks are part of credit risks and not of liquidity risk. In practice, liquidating of collateral of defaulted counterparts is different from regular LST. Moreover, risk arising from efficient portfolio management techniques such as securities lending has been already properly addressed by regulatory initiatives at the global/EU level. The existing FSB policy recommendations for securities lending transactions and minimum haircuts applicable to collateral ensure that the risk from securities lending is mitigated and re-hypothecation is appropriately reduced. In Europe, these recommendations have already been implemented in the EU Regulation on Securities Financing Transactions (SFTR) which became effective as of January 2016. This Regulation also encompasses extensive reporting obligations on SFT to the competent authorities. In parallel, strict standards on SFT and collateral on corresponding positions apply to UCITS under the ESMA Guidelines on ETFs and other UCITS issues from 1. August 2014[9]. Under these guidelines, cash collateral received from securities lending can be placed on deposits, invested in high-quality government bonds, used for reverse repo transactions with regulated credit institutions or invested in short-term MMFs. Furthermore, due to the requirement for non-cash collateral not to be sold, re-invested or pledged and to be held by the UCITS depositary in case of title transfer, re-hypothecation of assets received as collateral is generally excluded. The ESMA guidelines also mitigate the risk of improper valuation of collateral by providing for valuation on at least a daily basis and making the acceptance of collateral displaying high price volatility more difficult. In Germany, these requirements also apply to AIFs using derivatives. Therefore, we do not see the need to conduct LST for collateral in addition to these strict requirements.

  Moreover, we are aware of the discussion raised by the ESRB that there could be liquidity demands arising from the use of collateralised transactions with an impact on the financial stability. However, this discussion is focussed on the macro-prudential level from a financial stability perspective and not to establish (new) requirements on the micro-level. In particular, the new SFTR reporting requirements will help supervisory authorities to get an overview of any potential risks arising from SFT. Therefore, this discussion should not be part of the ESMA guidelines of LST.

- **Interest/credit payments:** According to our understanding, the mentioned factors can only become relevant with derivatives or alternative investment financing such as real estate. Derivatives have already been enumerated. And for alternative investments (cf. real estate) it should be clarified that

[9] Available under: https://www.esma.europa.eu/sites/default/files/library/2015/11/esma-2014-0011-01-00_en_0.pdf.

only changes in interest rates are meant and not credit risks. Moreover, an additional type of factor should be taken into account, which is borrowing (in case of a loss on a liquidity line of a bank).

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

We disagree with the requirement to reverse stress test items on the liabilities side. As already mentioned under questions 6 and 8, we request ESMA to amend **Guideline 8 and paragraph 50** of the draft as follows:

> "Guideline 8: LST should employ hypothetical and***/or*** historical scenarios***, as applicable***~~***, and reverse stress testing***~~. In doing so it should not overly rely on historical data, particularly as future stresses may differ from previous ones."

> "50. All relevant items on a fund's liability side ~~***of the balance sheet***~~, including ***material*** items which are not redemptions, should be subject to LST using historical and***/or*** hypothetical scenarios, ***as applicable*** ~~***as well as reverse stress testing***~~. ***In addition to the stress test scenarios, the inclusion of reverse stress testing may also be of benefit, where appropriate."***

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?

As already described under question 15, it is difficult or impossible to identify an emerging liquidity shortage before it occurs by anticipating the potential behaviour of the investors. Therefore, we disagree with the proposed guidance regarding the **knowledge of the investor base** because the given examples such as **investor origin or investor strategy** are too far reaching. Such a detailed knowledge on the investor base is only required under Article 27 of the European Money Market Regulation (MMFR) on the so-called 'know your customer' policy. We disagree to extend these requirements, which are designed for money market funds with special liquidity risk profiles, to all open-ended investment funds. According to the Delegated Regulation (EU) No 231/2013, the manager shall only take into account the profile of the investor base, including the type of investors, the relative size of investments and the redemption terms to which these investments are subject. Therefore, management companies should have some degree of knowledge of the funds' investor base, and **where possible** should interact with relevant intermediaries to secure pre-notification about the investor base (please see Recommendation 13 of IOSCO's recommendations for liquidity risk management for collective investment schemes[10]).

It must be noted that also the FSB states under its Recommendation 3 that authorities should have requirements or guidance stating that funds' assets and investment strategies should be consistent with the terms and conditions governing fund unit redemptions both at fund inception and on an ongoing basis (for new and existing funds), taking into account the expected liquidity of the assets and investor behaviour during normal and stressed market conditions. The FSB does not recommend analysing the investor base in such a detail. If there is a need to give guidance on the assessment of investor

[10] Available under: https://www.iosco.org/library/pubdocs/pdf/IOSCOPD590.pdf.

behaviour, analyses of the outflows based on historical (statistical) data for the relevant fund's category (such as described under the Box in the Annex) could be helpful.

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

As mentioned under question 14, we would like to ask to change the wording of '*liabilities side of the balance sheet*' because, in general, investment funds do not have an own balance sheet. However, we have the following remarks to the proposed considerations on combined asset and liability LST:

- **Combining both sides:** According to understanding of the requirements of the AIFMD and the UCITS Directive, there is a need for open-ended investment funds to assess a liquidity profile of the fund level (for example through determining a liquidity ratio based on an assessment of the material impact on liquidity of each asset and material liabilities on fund level) on the one hand and to asses changes of outflows through redemption requests of investors (for example through determining a ratio of outflows) on the other hand. This approach with internal thresholds as an early warning system based on BVI redemption analysis of German open-ended retail funds is established for years and already current practice of many of our members (cf. further explanations in the Box of the Annex). Other members use similar approaches.

  In this context, we would like to request ESMA to avoid the proposed wording of '*redemption coverage ratio (RCR)*' because this term is not used in the asset management practice.

  Moreover, it could be clarified for leveraged closed-ended funds that there is only a need to assess on fund level whether there is enough liquidity to fulfil the payment obligations resulting from leverage methods or commitments.

- **Comparing LST results from more than one fund:** We disagree with the proposal of ESMA under **paragraph 53** in comparing asset and liability LST results of different investment funds through metric or score systems and the requirement under **paragraph 55** that managers ***should*** incorporate such risk scoring into their LST programmes. In particular, there must be a misunderstanding of BaFin guidelines and recommendations on liquidity stress testing in German asset management companies as mentioned under footnote 28 of the consultation paper. BaFin only highlights an example of a **stress test report** for different securities funds as an overview but without the requirement to compare the LST results from more than one fund. Such reports are helpful in practice to get an overview of the outcome of the LST results over the whole managed universe of funds. However, as long as the design of a LST depends on the individual investment strategy of the investment fund and on different investor compositions, the outcome of such a comparison makes no sense.

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

We refer to our answer to question 6 and Guideline 14. **It must be clarified that the aggregation of stress tests are simply an option for managers, and not required by ESMA.** The current wording of

the explanatory considerations requires that managers **should** aggregate LST where their assessment is that such an activity would be appropriate to the fund(s) under management. This implies that aggregated stress tests are required in any case, where it is appropriate. We disagree with this assumption because we believe there is no benefit to gain from aggregating testing as long as the outcome of LST results depends on the individual investment strategy of the investment funds and on different investor compositions. This applies all the more as the liquidity ratio of one fund could be enough to fulfil the underling payment obligation of that fund, but for another fund the same liquidity ratio would be not enough because of a different investor structure or other additional payment obligations resulting of different investment strategies.

In practice, the beneficiary of aggregated stress tests could be only seen for certain asset classes where the liquidity risk could be an aggregated risk across several funds which invest in the same asset classes. Creating aggregated LST scenarios for these asset classes may be helpful to get an overview of how certain scenarios could affect a range of funds. However, such an approach should not be implemented as a must. Hence, it must be the decision of each manager whether and to what extent such aggregated scenarios across several funds are useful.

Following also the MMF stress test guidelines, we therefore request ESMA to amend **paragraph 56** as follows:

> '56. ~~***Managers should aggregate LST where their assessment is that such an activity would be appropriate to the fund(s) under management.***~~ ***In certain circumstances, where appropriate, managers could use aggregate LST on a range of investment funds with similar strategies or exposures.***"

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

We got no feedback from our members on experiences of performing aggregated LST. However, we refer to our answer to question 19, where the beneficiary of aggregated stress tests could be only seen for certain asset classes where the liquidity risk could be an aggregated risk across several funds which invest in the same asset classes.

Moreover, conducting a debate on aggregated stress is also a question of identifying risks with an impact on the financial stability on a macro-prudential level. We therefore propose as a first step analysing the results of data reports such as the AIFMD reporting or the reports for the national central banks whether there is a potential structural vulnerability that may pose risks to financial stability at all before setting up requirements on aggregated stress tests as a must on micro-level. In particular, it must be the task of the supervisory authorities in setting such macro-prudential tools for identifying such vulnerabilities resulting from less liquidity in the market.

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

In principle, we agree that LST should be conducted during a fund's lifecycle. However, we not agree with the explanatory considerations with regard to the fund launch and the proposed requirement under **paragraphs 58 to 60** that a manager should undertake LST on the asset side as well as on the liability

side at product development stage. These requirements are too far reaching and not in line with recommendation 4 of IOSCO's recommendations for liquidity risk management for collective investment schemes.

Although managers consider the expected asset liquidity and investor base of a fund in the product design phase qualitatively, in practice, they do not apply a stress test programme on those (not yet existing) funds. The reason for this is that it is completely different to stress an existing fund with existing instruments and existing data feeds and processes compared to a 'new' (not existing) fund without data of specific individual instruments and without data feed at all (drawing board condition). Moreover, as ESMA itself mentioned in its consultation paper, LSTs must be risk-adequate. According to the German practices, this means that the effort for conduction LST must be in relation to the relevant risk situation. This could also involve a decision not performing LST as long as it is not appropriate.

However, only in cases where the manager launches a fund similar to an existing one, there could be possibilities in using values of the already existing fund. But this would be an exercise of very limited use because the outcome would never generate 'surprising' information. In cases, where no similar fund is available, there will be no sufficient production data for running a regular stress test programme. This will result in qualitative estimations which could differ from the quantitative results the manager will produce after the launch of the product. Therefore, it is essential to make a qualitative judgement of liquidity risks of the fund under normal and stressed conditions before launch. In this context, it is of utmost importance to clarify that a general principle-based approach applies during product development.

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

We refer to our answer to question 21.

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

In our view, there is no need to add any other issues on LST. All the relevant key uses of LST are already addressed.

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?

Following the legal requirements of the AIFMD, there is only a need to conduct LST on a yearly basis as a minimum. However, in practice, we see a wide range of frequencies such as weekly, quarterly, semi-annually or yearly depending on the type of the fund, its strategy, its investments and the investor base. Therefore, it must be clarified that the given frequencies for a more frequent programme of LST

are only examples. In any case, the frequency should be at the discretion of the manager. This approach would be in line with the principle based approach of the proposed guidelines.

In particular, we request ESMA to delete from the table under **paragraph 67** the reference to a quarterly frequency of LST because this approach is not in line with the explanations above which highlight that in all cases LST should be undertaken at least annually.

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

No. We refer to our remarks to question 24.

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

In general, we agree with the recommendation in the table of paragraph 67 that 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.

However, in our view, the question raised by ESMA with the wording '*where justified by an emerging/imminent risk to fund liquidity*' is confusing. In particular, we do not see a direct connection between imminent risks and ad-hoc LST as long as stress tests are only one possible measure to get a better picture about the liquidity situation of the fund. Therefore, it should be at the discretion of the manager to choose the measures which would be appropriate in a stressed situation taking into account the interests of investors and the action needs and not to act by completing regulatory checklists and processing regulatory programmes.

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

As mentioned under question 6 (guideline 2), we disagree with the assumption that LST should be documented twice: within a (separated) LST policy and within the UCITS or AIF risk management policy. Liquidity management is part of the general risk management process. It must be sufficient to document LST in the general risk management policy. In particular, we do not see any merit for a separate documentation that, in addition, will raise costs and administrative effort that is not needed.

Moreover, we propose to delete the word 'back-testing' in the heading of **paragraph 71** because there is no reference to back tests in the explanation considerations. As stated in BaFin's guidelines on liquidity stress tests, some of the German management companies also carry out back testing, e.g. if a VaR model is used for the fund outflows. However, the availability of historical data relating to liquidity risk is overall poor in comparison with that for market risk, which means that the use of such data plays a much smaller role for liquidity risk, and back tests therefore cannot always be used as a validation tool. Therefore, the explanation in paragraph 71 of the consultation paper would be sufficient that LST models and assumptions should be periodically reviewed and validated, the results documented, and models amended as appropriate.

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

No. The content of the risk management principles are already required for AIFs in Article 40 of the Delegated Regulation (EU) 231/2013 and for UCITS in Article 38 of the Delegated Directive 2010/43/EU. Therefore, we kindly ask ESMA to ensure that there is an alignment with these minimum requirements.

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?

In general, in the case of delegation of fund portfolio management, the management company delegating this task keeps the responsibility of conducting LST. Therefore, the portfolio manager managing the fund on a delegated basis must provide all the relevant information to ensure that the management company is able to fulfil its duty of carrying out LST.

In practice, the delegation agreements provide strict requirements that the portfolio manager complies with the investment objectives, investment limits and risk limits (including liquidity risk limits) communicated to it by the management company. Moreover, in ensuring a permanent risk management process provided by the management company, a data exchange between the portfolio manager and the management company is agreed. Investment decisions which have a material impact on the risk profile of the fund may only be carried out by the portfolio manager with the agreement of the management company. A material impact on the risk profile is given if the investment decision by the portfolio manager lies outside the risk limits of the fund given by the management company, which the company has determined in order to limit the significant risks of the fund. The framework of risk limits set by the management company within which the portfolio manager may make investment decisions is therefore to be understood by the term risk profile. The portfolio manager is therefore held to make investment decisions not only within the investment limits drawn by the management company, but also within the risk limits set. Therefore, the manager is permitted to implement investment decisions which are outside the risk limits set by the management company only with the approval of the latter. This includes when the investment decision is within the investment objectives of the fund.

In this context, we disagree with the reference to investment adviser's own LST under paragraph 73. It is of utmost importance to clarify that investment advice is completely different from the service of portfolio management because an advisor only gives a recommendation to its clients, in this case the investment fund or its management company as the client. The final decision whether or to which extent to invest in a financial instrument will be taken by the manager of the fund. This applies all the more to conducting LST.

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

Depositaries are not part of our membership. Therefore, we are not able to comment on their behalf. However, we are aware of the general control requirements established for depositaries under the AIFMD and UCITS Directive. We therefore question if these guidelines are the right place to establish also guidelines for the task and responsibilities of depositaries limited to LST.

In any case, the clarification provided in **paragraph 78** is very helpful that depositaries are not required to replicate the LST undertaken by a manager. In our understanding, the role of the depositaries is limited to ensuring that a LST policy is in place and part of the documented risk management policy.

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

As part of its initial due diligence set up and/or ex post controls of management companies, depositaries generally monitor that risk management policies for UCITS and/or AIFs are in place. This is an outcome it their general duties required in Article 92(1) of the Delegated Regulation (EU) 231/2013.

However, it is not a common practice for depositaries to review these policies. In practice, depositaries rather rely on the data or documents provided by management companies to conduct spot checks or plausibility checks with the objective to monitor the fund's compliance with investment restrictions and leverage limits set in the fund's offering documents. This is an outcome of the control requirements of Article 95 of the Delegated Regulation (EU) 231/2013 and Article 3(2) of the Delegated Regulation (EU) 2016/438. In particular, these control requirements of depositaries also referred to by ESMA in footnote 32 of the consultation paper are limited to carrying out the instructions of the management company and to ensure that a common fund's income is applied in accordance with the applicable national law and the fund rules. These processes, especially, involve monitoring of significant cash flows, overdrafts, suspensions, investment restrictions or leverage limits such as the global exposure limit relating to derivative instruments referred in Article 51(3) of the UCITS Directive.

As already mentioned under question 30, we contest if these guidelines are the right place to establish also guidelines for the task and responsibilities of depositaries limited to LST. In any case, according to the European requirements, there is no special duty of a depositary to 'challenge' the LST undertaken by the management company. Such a process would be associated with a lot of effort and expense because, according to the general practice, depositaries do not have access to the data and information about LSTs conducted by the management companies. Moreover, it is questionable if such a process would be in line with the fiduciary role of the management company which is originally responsible for liquidity management (including conduction of LST) as part of its overall risk management task. Therefore, the role of the depositaries can only be limited to ensuring that a LST policy is in place and part of the documented risk management policy.

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?

No, we do not see merit in publishing further guidance on the reporting of results of liquidity stress tests. Such reports are only required under the AIFMD. There are already good practices in place. In any case, as a first step, there is a need to analyse the outcome of the current reporting results before

thinking about new guidance for management companies. Moreover, from a legal point of view, we do not see any legal requirement that ESMA itself is entitled to establish own requirements about reports of stress test results.

Moreover, bearing in mind the latest consultation paper of ESMA for reports of stress test results of MMFs, we are concerned that new specific requirements on how to calibrate and measure the impact of certain LST will be imposed on management companies only for reporting reasons. Therefore, it is of utmost importance to maintain the already implemented principle-based approach in ESMA's guidelines for the question how to conduct LST and, where applicable, how to report the results of LSTs. In particular, the content of the result of the LSTs must be seen in relation to the proportionality principle that applies to conducting LST depending on the liquidity profile, investment strategy and investor base of each fund. Also for these cases, there is no one-size-fits-all approach.

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Annex

Box : Internal liquidity thresholds as an early warning system based on BVI redemption analysis of German open-ended retail funds

Analysis of the German open-ended retail investment fund market shows that investment management companies for the most part are able to manage liquidity risks in order to fulfil daily redemptions of fund units. In 2010, BVI assessed the issue of liquidity management for different kinds of securities funds such as equity, bond or mixed funds. In 2015/2016, BVI broadened the approach to open-ended property funds. In a nutshell, evidence showed that a liquidity ratio of 20 % can be considered as a robust prerequisite to fulfil redemption requests based on historical data. These results (cf. overview of BVI redemption analysis, **Annex**) were obtained on the basis of the following process:

The management company compares the liquidity ratio of the fund with determined changes of outflows based on historical BVI statistical data for the relevant fund's category. If the liquidity ratio of the fund is higher than the ratio of short term outflows, in principle, the fund is safe from liquidity shortfalls. However, if the liquidity ratio is lower than the ratio of short term outflows, the management company should assess further aspects which imply further possibilities for action (such as analyses of the historical short term outflows of the specific fund, analyses of the current unit holder structure, assessment of the expected future short term outflows, special borrowing facilities etc.).

Determination of the liquidity ratio of the fund: As a first step, the management company assesses whether the assets in which the investment fund is invested are liquid or not, resp. evaluates the degree of liquidity. Then it determines the liquidity ratio of the fund as the ratio between the value of the liquid assets and the net asset value of the fund (NAV). This process is also in line with the current requirements of the AIFMD according to which the manager is obliged to maintain a level of liquidity in the investment fund appropriate to its underlying obligations, based on an assessment of the relative liquidity of the investment fund's assets in the market, taking account of the time required for liquidation and the price or value at which those assets can be liquidated, and their sensitivity to other market risks or factors.

In this context, it is important to highlight that there is no need for a global and common guidance related to open-ended funds' investment in illiquid assets such as whether certain asset classes and investment strategies may not be suitable for an open-ended fund structure as well as an abstract classification of the liquidity of asset categories (for example as proposed by the SEC). In particular, supervisory authorities should avoid setting too strict binding requirements on liquidity analysis of assets. Otherwise we see the danger that the management company might not be able to react to changes in the market and they could make decisions with some of evidence of "herd behaviour" with further impact to new (systemic) risk. Such requirements would also pose administrative burdens for the management companies. Therefore, it is important that liquidity management should be based on a case by case assessment.

Outflows of the fund resulting from redemptions of units: The assessed liquidity ratio of the fund then should be compared to the average redemption situation of the relevant fund category ascertained on a historical basis. For this purpose, BVI has conducted statistical evaluations based on the BVI investment fund statistics between 2003 and 2015 (based on over 7,100 retail funds and monthly cumulative changes of the funds' outflows).

As a result, significant redemptions of more than 20 percent of the NAV occurred in 2 to 4 percent of all samples on a monthly basis, depending on fund categories such as equity funds, bond funds and mixed funds. Many of these cases can be explained by exceptional market conditions or movements (e.g. times of crisis, collection of profits etc.). After the financial crisis of 2008, management companies funded nearly all outflows without the use of additional liquidity management tools.

BVI subjected the biggest outflows identified for different fund types to analysis of another random sample in order to gather insights regarding the liquidity needed on a daily basis. The significant outflows focus on very few days within a month (3.7 days on average) and occur selectively. They relate to occurrences which were known beforehand (e.g. money market funds which are used for liquidity management by the management company itself: foreseeable need of liquidity etc.). The liquidity needed on a daily basis in case of significant outflows amounted to 18 percent on average within the new random sample. These results support those gathered from the data collected on a monthly basis only.

In summary, when looking back to the post-crisis scenario after 2008, significant outflows first increased and later decreased slightly, but not to the pre-crisis level. However, the average levels of significant net outflows did not change over time.

Deutscher Fondsverband

BVI

INVESTMENT FUNDS
LIQUIDITY MANAGEMENT

August 2017

LIQUIDITY MANAGEMENT
Definition of liquidity risk

General definition of „liquidity risk“ of an open-ended investment fund:

“The risk that a position in the fund’s portfolio cannot be sold, liquidated or closed at limited cost in an adequately short time frame and that the ability of the fund to repurchase or redeem its units at the request of an investor at any time is thereby compromised.”

(cf. Article 3 No 8 of the Directive 2010/43/EU of 1 July 2010 implementing the UCITS Directive).

- **How liquid are the assets of the fund‘s portfolio?**
- **Is there enough liquidity to fulfil any payment obligations on behalf of the fund?**
- **Is there enough liquidity to fulfil any requests of investors to repurchase or redeem its units?**

➢ **Obligation to implement a liquidity management process**

(According to the AIFMD and the UCITS Directive, the management company is already obliged to implement such a process)

LIQUIDITY MANAGEMENT
BVI Guidelines on liquidity management in retail funds

Main Principles

- **Guidelines for determining the liquidity ratio (fund‘s level)**
  - Valuation of the liquidity of certain asset categories
- **Guidelines for determining the gross cash flows of the investment fund** (Returns from unit redemptions regardless of inflows in the same period)
  - Benchmark: Extreme values based on BVI‘s statistic within 2003 - 2015
- **Comparison of the liquidity ratio with the benchmark of cash flows**
  - Exceeding of the benchmark: in principal, there is enough liquidity
  - Dropping below the benchmark: case-by-case assessment
- **Measurements in the case of low liquidity ratio**
- **Annex: Liquidity stress tests**

LIQUIDITY MANAGEMENT
Redemption analysis of BVI retail funds

Redemption analysis in the following categories of retail funds:

- Equity funds
- Bond funds
- Balanced funds
- Money market funds
- Property funds

- **Filter for gross & net redemption analysis**
  - Years 2003 – 2015 separately vs. cumulated periods 2003-2006; 2007-2009; 2010-2015
  - Institutional funds included
    - Funds with minimum investment amount of 20 Mln. Euro
    - Funds with minimum asset value of 1 Mln. Euro
    - Funds with attribute “institutional”
  - Last month redemptions (capital payouts) before liquidation excluded

LIQUIDITY MANAGEMENT
Comparison of analysis results

Gross redemption frequencies* **exceeding** 20% of total net assets:

Fund Type	Period 2003 – 2006 Frequency	Period 2007 – 2009 Frequency	Period 2010 – 2015 Frequency
Equity funds	2,82%	4,97%	4,96%
Bond funds	3,13%	6,14%	5,34%
Balanced funds	1,03 %	2,26%	2,21%
Money market funds	8,89%	11,05%	7,74%
Money market funds**	2,13%	2,81%	1,96%
Property funds	0,51%	1,45%	2,00%

* based on monthly data
** threshold by 40% of total net assets

LIQUIDITY MANAGEMENT
Survey based on daily gross redemptions

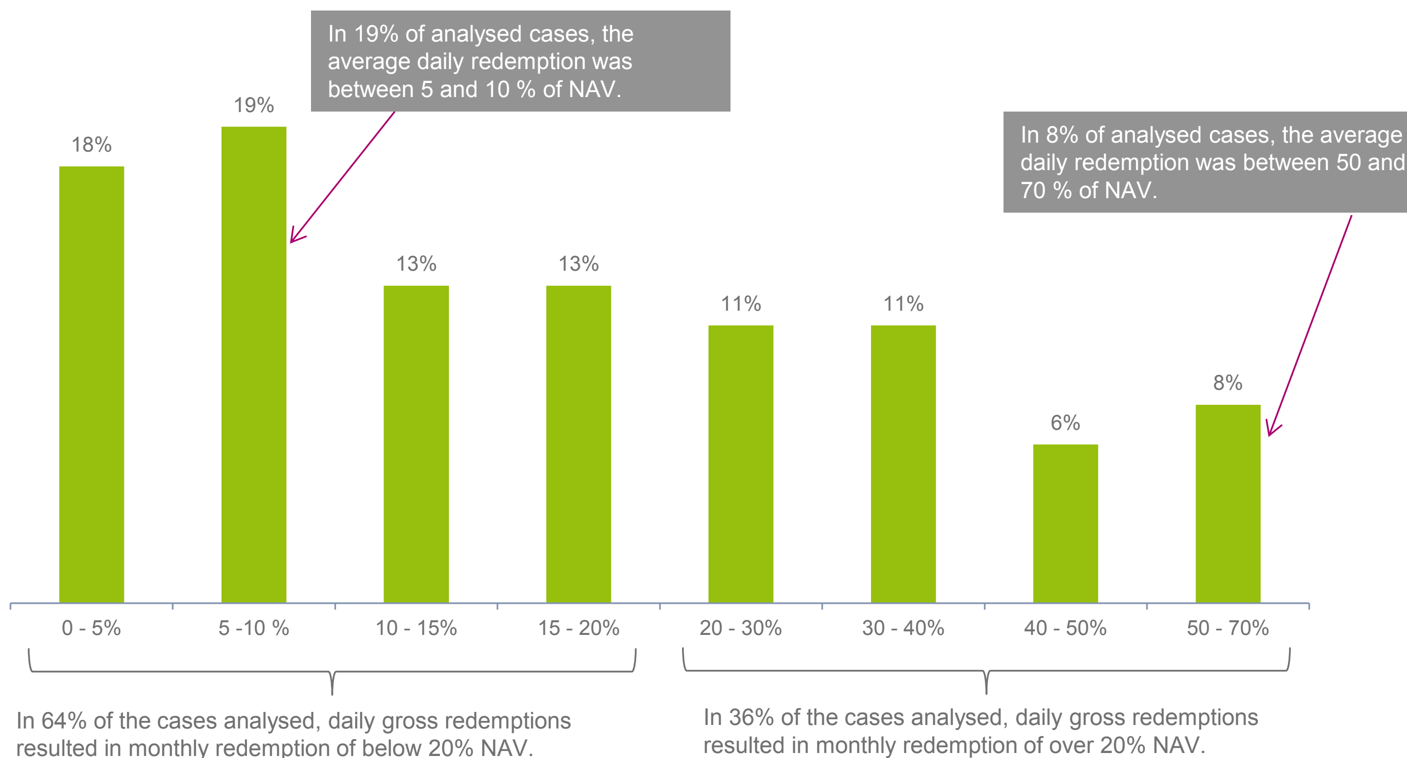
BVI members were asked for an additional survey based on day-to-day data (random samples to gather insights regarding the liquidity needed on a daily basis):

- On average, we found daily gross redemptions amounting 18% of net assets. In a nutshell, there are no significant constraints by using monthly data.
- In 64% of the cases analysed, the average daily gross redemption resulted in monthly redemption of below 20% NAV, mostly covering an interval of up to 3 days within critical months. In other words, the pattern was for example 1 day of gross sales of 20%, or 3 days of gross sales of about 7%.
- In 36% of the cases analysed, the average daily gross redemption resulted in monthly redemption of over 20% NAV.
  - Reasons: This was part of an coordinated process, e.g. in institutional funds with a few known investors, funds of funds, MMF used for the purpose of liquidity management within a company, or scheduled, planned liquidations.

LIQUIDITY MANAGEMENT
Survey based on daily gross redemptions

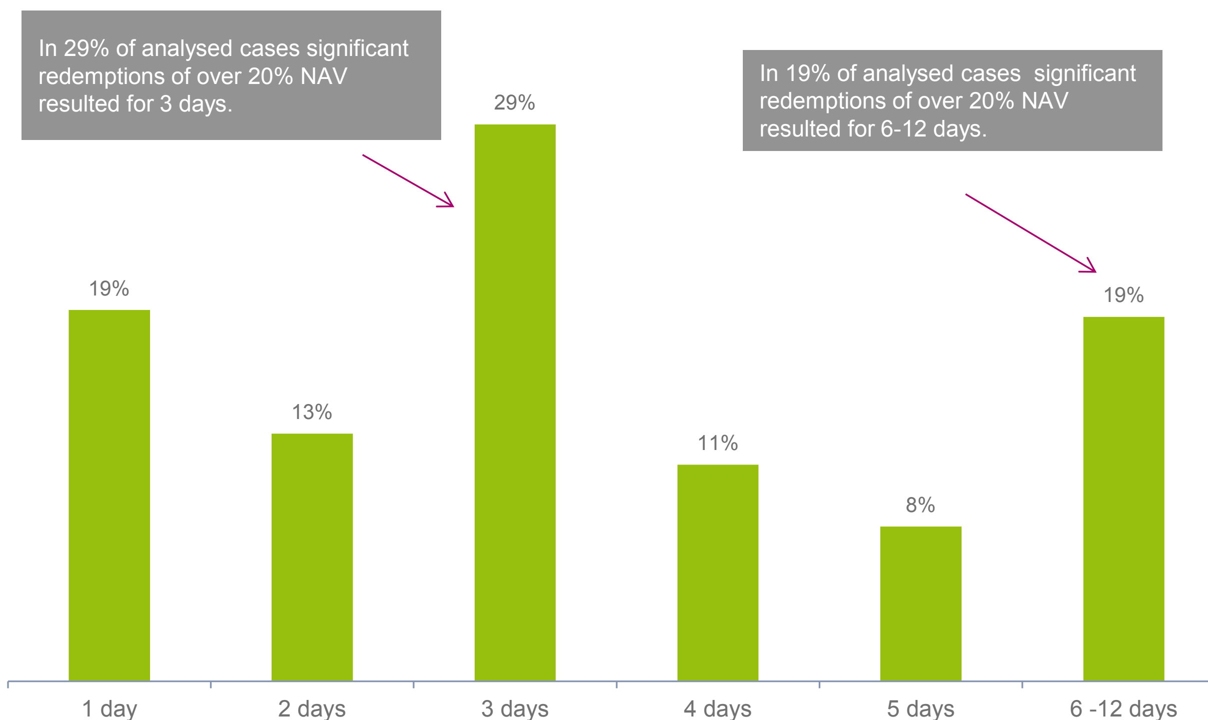
.BVI

What was the average daily gross redemption that resulted in monthly redemption of over 20% NAV?



LIQUIDITY MANAGEMENT
Survey based on daily gross redemptions

How many days gross redemptions were observed that resulted in monthly redemptions of over 20% NAV?



REDEMPTION ANALYSIS OF BVI RETAIL FUNDS

Gross redemptions frequencies exceeding 20% of net assets in equity funds vs. MSCI World Index

Lehman

Fukushima

DAX Slump

Huge Profit-Taking

2.000 1.800 1.600 1.400 1.200 1.000 800 600 400 200 0

10% 9% 8% 7% 6% 5% 4% 3% 2% 1% 0%

Jan-03 Apr-03 Jul-03 Oct-03 Jan-04 Apr-04 Jul-04 Oct-04 Jan-05 Apr-05 Jul-05 Oct-05 Jan-06 Apr-06 Jul-06 Oct-06 Jan-07 Apr-07 Jul-07 Oct-07 Jan-08 Apr-08 Jul-08 Oct-08 Jan-09 Apr-09 Jul-09 Oct-09 Jan-10 Apr-10 Jul-10 Oct-10 Jan-11 Apr-11 Jul-11 Oct-11 Jan-12 Apr-12 Jul-12 Oct-12 Jan-13 Apr-13 Jul-13 Oct-13 Jan-14 Apr-14 Jul-14 Oct-14 Jan-15 Apr-15 Jul-15 Oct-15

MSCI World Index

gross redemption frequencies

REDEMPTION ANALYSIS OF BVI RETAIL FUNDS

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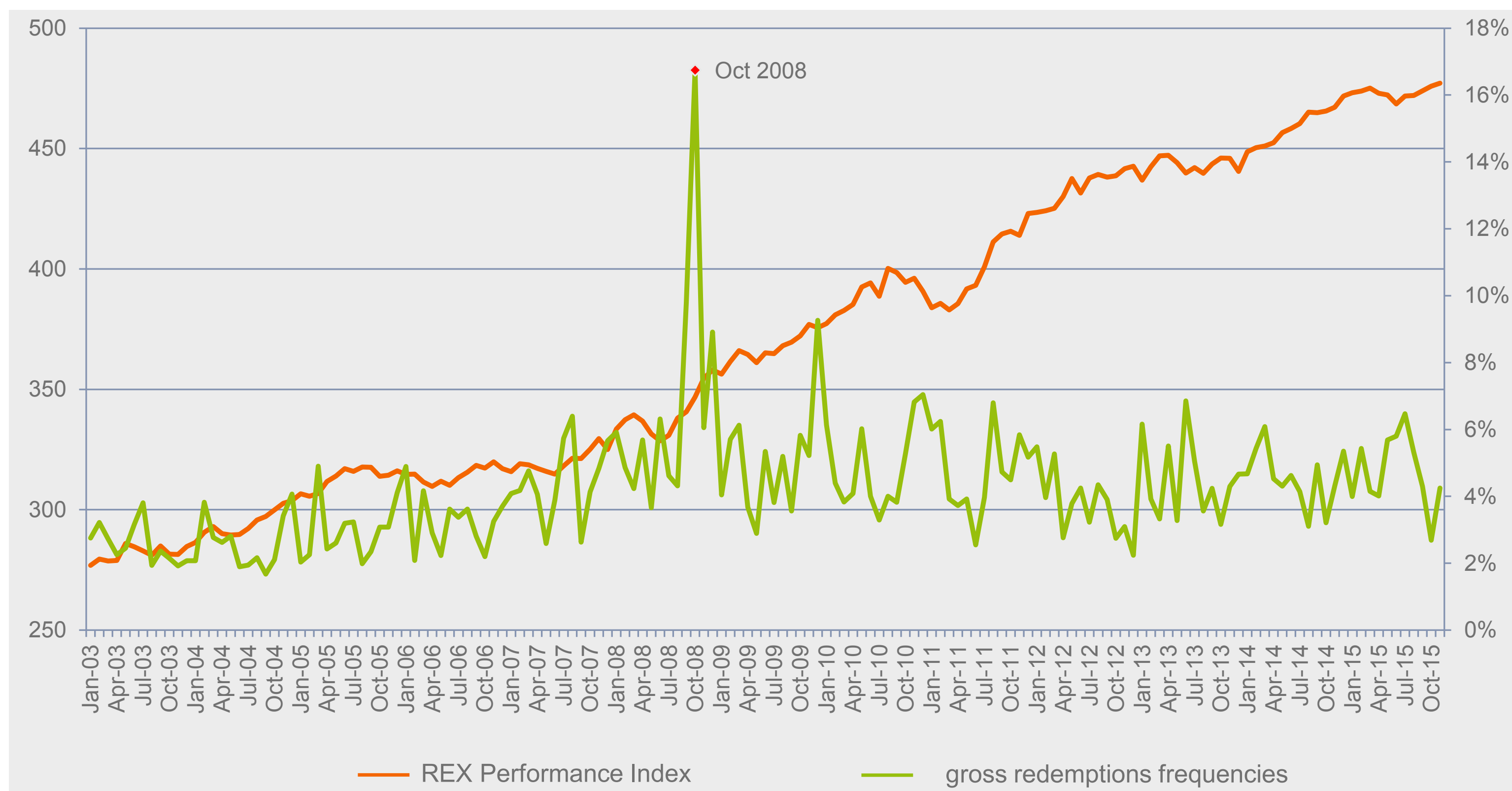
Gross redemption distribution in bond funds vs. REX Performance Index



REDEMPTION ANALYSIS OF BVI RETAIL FUNDS

Comparison of gross redemption distribution exceeding 20% of net assets in bond and equity funds

18%
16%
14%
12%
10%
8%
6%
4%
2%
0%

Jan-03 May-03 Sep-03 Jan-04 May-04 Sep-04 Jan-05 May-05 Sep-05 Jan-06 May-06 Sep-06 Jan-07 May-07 Sep-07 Jan-08 May-08 Sep-08 Jan-09 May-09 Sep-09 Jan-10 May-10 Sep-10 Jan-11 May-11 Sep-11 Jan-12 May-12 Sep-12 Jan-13 May-13 Sep-13 Jan-14 May-14 Sep-14 Jan-15 May-15 Sep-15

Frequencies in bond funds
Frequencies in equity funds

Dr. Magdalena Kuper

Vice President / Legal

Fon +49 69 15 40 90 263
magdalena.kuper@bvi.de
www.bvi.de

Rudolf Siebel

Managing Director

Fon +49 69 15 40 90 255
rudolf.siebel@bvi.de
www.bvi.de

Peggy Steffen

Vice President / Legal

Fon +49 69 15 40 90 257
peggy.steffen@bvi.de
www.bvi.de