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FSB Consultative Document for Proposed Policy Recommendations to Address Structural Vulnerabilities from Asset Management Activities

BVI¹ gladly takes the opportunity to present its views on the FSB's consultative document for proposed policy recommendations to address structural vulnerabilities from asset management activities. Prior to answering the specific questions, we would like to submit some general remarks.

I. General remarks

In general, we support the efforts of the FSB in getting a common and better understanding of asset managers' business models and identifying potential structural vulnerabilities from their activities that may pose risks to financial stability. In particular, BVI appreciates the FSB's recognition that management of investment funds differs fundamentally from business models of banks or other types of financial entities such as insurance companies. Asset managers act as agents on behalf of their investors and are subject to fiduciary duties to act in the best interest of investors. Furthermore, important for evaluating structural vulnerabilities is the fact that managers also do not have custody over the assets, as these are "safe-kept" by separate depositary institutions. Therefore, we welcome the approach in the consultative document that identifying of any risks to financial stability should be conducted on the basis of an in-depth analysis of potential structural vulnerabilities.

In this context, it is essential to highlight that as a consequence of the financial crisis very strict legal requirements in the asset management sector have already been implemented in the European Union, in particular, in the field of liquidity management and leverage as potential structural vulnerabilities of investment funds. These requirements are intended to enhance the prudential resilience of asset managers and their funds under management, thereby materially excluding or reducing the possibility of any of them posing risks to financial stability, as well as protecting investors of funds. The European legislator has already done his homework. The SEC has only recently started continuing the overhaul of the U.S. regulatory framework established in the 1990s. Therefore, it is of great importance considering the existent experience and knowledge of the European industry in the development of global views.

Moreover, one of the important issues is the need at least to agree on global non-bank data reporting and exchange standards with the industry to enable better regulation and supervision. In particular, removal of regulatory provisions which hinder the efficient functioning of the capital markets should be considered an overarching priority. **Therefore, we propose a single regulatory reporting mechanism which would reduce operational effort and burden for asset managers as well as supervisory authorities, and which would nicely meet the G20 aim of improving data collection and exchange. For this purpose it is necessary that IOSCO defines on a global level which kind of data and in which frequency national competent authorities should collect data about liquidity risks and leverage.** This important task should not be left solely to national authorities. For a common and global understanding of systemic risks and in avoiding burden for cross border activities of asset managers, it is important that all managers of funds report such data in a uniform way and all supervisory

¹ BVI represents the interests of the German investment fund and asset management industry. Its 95 members manage assets of some EUR 2.7 trillion in UCITS, AIFs and discretionary mandates. As such, BVI is committed to promoting a level playing field for all investors. BVI members manage, directly or indirectly, the assets of 50 million private clients in over 21 million households. BVI's ID number in the EU Transparency Register is 96816064173-47. For more information, please visit www.bvi.de/en.



authorities have a uniform understanding. With better data exchange cross border intervention by several regulators needing to act together can be better tailored to individual situations and markets.

II. Specific questions

General questions

(Please provide any evidence supporting your responses, including studies or other documentation as necessary.)

Q1. Does this consultative document adequately identify the structural vulnerabilities associated with asset management activities that may pose risks to financial stability? Are there additional structural vulnerabilities associated with asset management activities that the FSB should address? If there are any, please identify them, as well as any potential recommendations for the FSB's consideration.

In general, the consultative document adequately identifies potential structural vulnerabilities associated with asset management activities. However, it must be noted that not all identified potential vulnerabilities may pose risks to financial stability. In particular, the European legislator has provided an effective framework which is intended to avoid or mitigate such risks in the asset management sector (please see also our answers to question 2). Any new or common thoughts on a global level should be based, in principle, on these European requirements such as in the field of calculation of leverage (please see also our answers to questions 9-14) and liquidity management processes.

Liquidity transformation: 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. Moreover, it is important to state that liquidity management depends on the types of assets, investors, investment strategies, markets, and possible national legal restrictions for using liquidity management tools.

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 protected 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 AIFMD² 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 (please see also our comments to question 6) as well as an abstract classification of the liquidity of asset categories (for example as proposed by the SEC). In particular, FSB and IOSCO 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 behavior" 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.³

BVI subjected the biggest outflows identified for different fund types to analysis of another random sample⁴ 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.

² Cf. Article 47(1)(a) of the Delegated Regulation (EU) No 231/2013.

³ The exceptions apply to 16 open-ended real estate funds (OREF) and 13 securities funds (e.g. funds of OREF, bond funds and former money market funds (MMF) featuring ABS and CDS).

⁴ 67 cases.

Q2. Do the proposed policy recommendations in the document adequately address the structural vulnerabilities identified? Are there alternative or additional approaches to risk mitigation (including existing regulatory or other mitigates) that the FSB should consider to address financial stability risks from structural vulnerabilities associated with asset management activities? If so, please describe them and explain how they address the risks. Are they likely to be adequate in stressed market conditions and, if so, how?

In general, most of the proposed policy recommendations in the document adequately address potential structural vulnerabilities identified. However, we have some concerns with regard to recommendations 1, 2 and 9 (please see our answers to question 4), recommendation 13 (please see our answer to question 15) and recommendation 14 (please see our answer to questions 16 and 17).

In this context, it is important to highlight that the European legislator has already adopted new legal requirements for asset managers which are intended to avoid or mitigate risks in the asset management sector. In particular, following the two reissues of the UCITS Directive since the financial crisis (the so called UCITS IV Directive of 2009 and the UCITS V Directive of 2014) and the adoption of the new AIFMD in 2011, strong legal requirements for asset managers with focus on protection of the interests of investors apply in Europe.

- **Acting in the best interest of investors:** Asset managers manage funds or discretionary mandates (i.e. assets outside investment funds) on behalf of investors and – as a crucial requirement – in the best interest of investors. In their fiduciary role, they are obliged to act in accordance with the investment objectives and guidelines for a given risk/return level. Managers also do not have custody over the assets, as these are held – or more appropriately, “safe-kept” – by separate depository institutions (usually a credit institution, but with a specific license). Here the fund assets are kept segregated and are thus never part of the asset manager’s own balance sheet. Importantly, the investment results – whether positive or negative – belong to the investors. Moreover, while asset managers are obliged to inform their investors about the investment strategies and the risk profile of the investment funds, the decision of the investor to invest in the fund is taken according to his own assessment of risk.
- **Asset managers are subject to strict standards of risk management including stress tests:** In order to minimize the risk of underperformance of the managed funds and to fulfil the general obligation to act in the interest of investors, strict risk management requirements including setting of limits and stress tests to the relevant financial risk of the managed funds apply.⁵
- **Asset managers are subject to strict standards of liquidity management:** Asset managers are already required to perform strict liquidity management including definition of liquidity risk limits and liquidity stress tests for each individual fund.⁶ Moreover, open-ended funds have at their disposal different tools for dealing with liquidity shortages, including the possibility to suspend redemptions.

⁵ Cf. Article 15 of the AIFMD and Article 38-45 of the Delegated Regulation (EU) No 231/2013 with regard to AIFM or Article 51 of the UCITS Directive and Article 38-43 of the Implementing Directive 2010/43/EU with regard to UCITS managers.

⁶ Cf. Article. 48 and 49 of the Delegated Regulation (EU) No 231/2013 with regard to AIFM. In addition, Box 10 of CESR’s Risk management principles for UCITS (CESR/09-178) of February 2009 (available under: https://www.esma.europa.eu/sites/default/files/library/2015/11/09_178.pdf) also requires the UCITS management company to provide a system of risk limits to monitor and control the relevant risks (including liquidity risks) for each managed UCITS, as approved by the Board of Directors and found to be consistent with the risk profile of the fund; Box 7 and the relevant explanations under paragraphs 41-43 require the UCITS management company to perform stress tests. The German legislator requires the same approach of liquidity management for UCITS managers.



- **Asset managers set leverage limits:** According to the AIFMD, alternative investment fund managers are required to set leverage limits for all managed funds, to monitor the leverage and to disclose information regarding the overall level of leverage employed vis-à-vis investors and competent authorities. UCITS are legally restricted in using leverage methods such as use of derivatives and borrowing agreements.
- **Competent authorities facilitate analysis of the risk impact of investment funds in the European Union:** According to the AIFMD, information of the risk profile of funds gathered by competent authorities should be shared with other authorities in the Union, with ESMA and with the European Systemic Risk Board (ESRB) so as to facilitate a collective analysis of the impact of the risk profile (including leverage) of investment funds on the financial system in the Union as well as a common response to potential risks. These measures ensure that competent authorities are able to quickly intervene on a case by case basis in case of identified potential risks to financial stability or to the functioning of financial markets.

According to the UCITS Directive⁷, management companies are required to deliver to the competent authorities, at least on an annual basis, reports containing information which reflects a true and fair view of the types of derivative instruments used for each managed UCITS, the underlying risks, the quantitative limits and the methods which are chosen to estimate the risks associated with the derivative transactions. Moreover, it is ensured that the competent authorities of the management company's home Member State review the regularity and completeness of information and that they have an opportunity to intervene where appropriate.

While risk and liquidity management including stress testing have been included in the requirements for AIFs and UCITS at EU level, recent calls for comparable requirements for asset managers in other jurisdictions around the world have been advocated, most prominently by the International Monetary Fund. Therefore, the US Securities and Exchange Commission (SEC) is currently discussing the following new rules which are in principle comparable with the EU requirements for investment funds:

- As an enhanced data reporting initiative, in particular, amendments to the forms used by open-end and closed-end registered investment companies to report information about fund operations and portfolio holdings
- Adequate stress testing methodologies for large asset managers that are mandated to implement stress tests by US law
- Use of derivatives by registered investment companies and business development companies (including proposals for portfolio limitations and risk management programs for derivative transactions)
- Open-ended fund liquidity risk management programs; swing pricing; re-opening of comment period for investment company reporting modernization release

In addition, FSB also confirms that “*most open-ended funds have been generally resilient*” and that they “*have not created financial stability concerns in recent periods of stress and heightened volatility*”. This is highly supported by IOSCOs recent “IOSCO Securities Markets Risk Outlook 2016”⁸ on page 80:

⁷ Cf. Article 45 of the Commission Directive 2010/43/EU of 1 July 2010 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.

⁸ <http://www.iosco.org/library/pubdocs/pdf/IOSCOPD527.pdf>.



“As to open-end mutual funds, jurisdictions reported very few incidents, over the past decade, of funds having insufficient capacity to meet redemptions. This finding is important if one takes into account that the period of inquiry covers instants of several sharp market corrections.”

“For redemption induced asset sales to be disruptive (i.e., depress market prices beyond what would occur otherwise), the volume of the sales has to be large relative to the overall size of the asset’s market. However, the case studies showed that the typical fund size, regardless of asset strategy, tended to be small, and even the largest funds in a particular segment typically hold a relatively small fraction of market share in a portfolio asset. Nonetheless, larger funds that experience problems with meeting redemption requests do not automatically trigger a systemic event.”

Q3. In your view, are there any practical difficulties or unintended consequences that may be associated with implementing the proposed policy recommendations, either within a jurisdiction or across jurisdictions? If there are any, please identify the recommendation(s) and explain the challenges as well as potential ways to address the challenges and promote implementation within a jurisdiction or across jurisdictions.

In our view, **one of the important issues is the need at least to agree on global non-bank data reporting and exchange standards with the industry** to enable better regulation and supervision. In particular, **removal of regulatory provisions which hinder the efficient functioning of the capital markets should be considered an overarching priority.**

In the aftermath of the financial crisis several new or enhanced reporting requirements have been imposed upon asset managers and the broader financial sector. These pertain to individual transaction data on the one hand and to positions and their inherent risks on the other hand. In this regard, the multiple and inconsistent reporting requirements emerging from different pieces of legislation present a particular nuisance for the industry as the provider of the data as well as the competent authorities as the collector of the data. For example, the applicable and pending requirements for transaction-level reporting under EMIR, MiFID II/MiFIR and SFT Regulation display considerable differences in terms of reporting details, reporting channels, data repositories and applicable IT standards. The same pertains to the regulatory reporting on positions and risks required under AIFMD and UCITS Directive as well as to reporting obligations for institutional investors under Solvency II and CRD IV which require delivery of data and further support services by asset managers. As an example, further improvements are needed in reporting and analyzing data of UCITS because there is a lack of a common European standard such as what kind of data, in which frequency and in which format should be reported, and there is no exchange of these information collected by the national authorities between other authorities in the Union, with ESMA and with the ESRB.

Lessons should be learned from the practical experience with EMIR reporting obligations where the lack of sufficient implementation time combined with legal and operational uncertainty due to undefined ESMA standards have significantly hampered the ability of the market to timely implement the relevant technical specifications.

A reasonably streamlined approach to reporting should entail cost savings for market participants such as fund management companies which may run into millions of Euros. From a provider’s view, there is a need to analyze the existing different regulatory requirements and to define the desired indicators. Each new report requires a new or an adjusted design of the process to produce this report, given that the respective data is stored in different systems and has to be combined via new or enhanced inter-



faces. As a starting point, data standards along the whole value chain should be based generally on ISO 20022. Overall we believe that ISO 20022 offers the best potential for cost-effective and future-proof implementation. It has a strong methodology and model for defining and structuring financial data, and an open governance process that ensures a level playing field for standardizers and users. It also offers expert international scrutiny of submitted content. ISO 20022 is now being implemented in a growing number of markets, which results in increasing opportunities for automation and interoperability.

However, the quantitative basis of the risk supposedly added by investment funds and their managers is not demonstrated. The attempts by the IMF have been rebutted in details by research especially provided by the ICI. In order to have a meaningful discussion the first exercise should be to agree on the necessary data to be collected to support an analysis of an agreed definition of risk. This would require an agreement on applicable data standards not limited to the identification of actors (asset managers and other markets participants) by the G20 approved LEI, instruments (by ISIN) as well as data standards on aggregated portfolio reporting and associated portfolio key performance and risk indicators, including one or more definitions of leverage and exposure to get a workable representation of the asset management market and its interaction with the financial markets. For the challenges of such exercise, see the OFR study on the different layers of players, finance, collateral and assets required to be analyzed to arrive at a meaningful interpretation of the downfall of a US investment bank and the hedge fund it sponsored in 2007.

The EU is right now engaging in a consultation on adjusting its macro-prudential framework and the role of ESRB. More analytical powers at the macro prudential coordinating body within a jurisdiction (like the US OFR) or in a region – the ESRB is not as fully staffed as the OFR – may help to prevent misguided regulation which is based more on central bankers' assumptions than on hard evidence.

Moreover, we should agree on cyber and information security risk as an overall risk to be addressed as well as the lack of interoperability in micro data exchanges between regulators, nationally, regionally (EMIR reporting does not work after five years) and globally. G20 initiatives like the LEI can only be the beginning, not the end. With better data exchange cross border intervention by several regulators needing to act together can be better tailored to individual situations and markets.

A threatening jungle of different data standards and formats presents a huge burden for the industry in both operational and financial terms and impedes efficient supervision concerning in particular systemic risks.

Enhancing consistency of regulatory and statistical reporting is therefore badly needed in order to enable the regulators to use the stored data for the purpose of detecting systemic risk and to keep the administrative burden for market participants at a reasonable level.

Moreover, there is also an urgent need for stronger integration in technological terms. The use of common reporting channels and standardized IT formats would enable regulators to better utilize the loads of submitted information for supervisory purposes, especially for the prompt detection of systemic risk, and might entail cost savings for market participants such as fund management companies which may run into millions of Euros. As addressed in the last FSB status report there is need for enabling regulation to allow for easier data exchange between regulators.

Liquidity transformation by investment funds

Q4. In your view, is the scope of the proposed recommendations on open-ended fund liquidity mismatch appropriate? Should any additional types of funds be covered? Should the proposed recommendations be tailored in any way for ETFs?

In principle, we agree with the proposed recommendations on open-ended fund liquidity transformation which reflect the existing guidance on IOSCO's Principles⁹ of liquidity risk management for collective investment schemes and the current legal requirements under the AIFMD and UCITS Directive in the European Union. However, IOSCO should consider the following issues:

- **Recommendation 1:** We strongly request the FSB to urge IOSCO defining which kind of data and in which frequency national competent authorities should collect data about liquidity risks. Data collection about liquidity risks of investment funds is an important issue to recognize risks on a global level promptly and to react in exceptional circumstances. However, for a common and global understanding of systemic risks, it is important that all managers of funds report data about liquidity risk in a uniform way (please also see our answer to question 3). In particular, IOSCO should consider the current reporting requirements under the AIFMD.
- **Recommendation 2:** There is a need to distinguish between reporting requirements to investors and to competent authorities. Therefore, we strongly disagree with the explanation to recommendation 2 that additional disclosure items to investors may include those that have been highlighted with respect to reporting to authorities (see Recommendation 1). It is important to emphasize that disclosure requirements to investors should only comprise of a summary of the general implemented liquidity process for all funds and the general liquidity risk. Therefore, we refer to the information which should be disclosed to investors required under the AIFMD and which are sufficient and detailed enough to inform investors about the liquidity risks of investment funds.
- **Recommendation 4 and 5:** We strongly welcome recommendations 4 and 5 about increasing the availability of liquidity risk management tools to open-ended funds (please see also our answer to question 5). From a macroeconomic and structural viewpoint regarding vulnerabilities these tools provide a kind of automatic and integrated stabilizers valuable in times of market liquidity stress.¹⁰
- **Recommendation 9:** We request the FSB to clarify the objective of system-wide stress testing. According to the AIFMD, managers of AIF already report results of stress tests (such as liquidity stress test as well as market risk stress tests) of each AIF. Therefore, we propose as a first step analyzing these results whether there is a potential structural vulnerability that may pose risks to financial stability at all before setting up requirements on system-wide stress tests.

With regard to the question on ETF, in our view there is no need to tailor the recommendations of liquidity transformation for ETFs. In Germany, in particular, the strong liquidity management requirements of the AIFMD also apply for ETF in addition to the risk management requirements of the UCITS Directive.

⁹ <https://www.iosco.org/library/pubdocs/pdf/IOSCOPD405.pdf>.

¹⁰ Cf. Speech by Otmar Issing, Member of the Executive Board of the ECB, International Conference "Stability and Economic Growth: The Role of the Central Bank", Mexico City, 14 November 2005, <https://www.ecb.europa.eu/press/key/date/2005/html/sp051114.en.html>



Q5. What liquidity risk management tools should be made available to funds? What tools most effectively promote consistency between investors' redemption behaviours and the liquidity profiles of funds? For example, could redemption fees be used for this purpose separate and apart from any impact they may have on first-mover advantage?

In our view, all liquidity risk management tools set out at the end of 2015 in IOSCO's report¹¹ should be made available to funds. However, in every case, it should be the discretion of the manager of the funds which tool they want to use because of very different fund types and structures.

The report maps the existing liquidity management frameworks in 26 jurisdictions with a particular focus on tools to help dealing with exceptional situations (e.g. significant redemption pressure). This report sets out clearly, for a large number of jurisdictions, the various frameworks and policy tools currently at the disposal of asset managers and the scope of funds to which they apply. According to the media release¹² published by IOSCO, the report highlights the following observations:

- Many different liquidity management tools are available in various jurisdictions, some of which are specifically tailored to the features and nature of the funds considered (e.g., money market funds, real estate funds, hedge funds). In particular, most jurisdictions clearly distinguish open-ended schemes from closed-ended ones;
- The most common tools are: redemptions fees; redemptions gates; redemptions in kind; side pockets; holding periods; notification periods; and suspension of redemptions. Suspension of redemptions is available in all responding jurisdictions, with the power to activate, in exceptional circumstances, in both the hands of the fund/asset manager and regulator;
- Funds are generally required to have appropriate risk management and internal quality controls to ensure that all material risks are properly identified, assessed, monitored and controlled;
- Open-ended funds are generally subject to additional regulatory requirements dealing with fund leverage, asset concentration, investor concentration, restrictions on illiquid asset investment and short-term borrowings; and
- Historically, many of the liquidity management tools outlined in the report have been activated within individual jurisdictions, with the recent financial crisis being a particularly rich source of recent case studies.

These liquidity management tools have in common that they serve as so-called "automatic stabilizers" like those well-known "automatic fiscal stabilizers". These work through the impact of fluctuations on redemption demand from investors and do not require any short-term decisions by policy makers or competent authorities. The usage of these tools is directly linked to the cyclical position of the redemption requests in stressed conditions and adjust in a way that helps stabilizing aggregate demand for liquidation. Automatic stabilizers have a number of desirable features because they respond in a timely and foreseeable manner which helps economic agents to form correct expectations and enhances their confidence. Furthermore they react with an intensity that is adapted to the size of the deviation of economic conditions in periods of liquidity stress. Finally the usage of these liquidity management tools

¹¹ <https://www.iosco.org/library/pubdocs/pdf/IOSCOPD517.pdf>.

¹² Ref. IOSCO/MR/49/2015.



should be harmonized in the different legislations to avoid any possible amplification of local or regional liquidity stress from jurisdictions with few tools available to others with a more wide set of tools available.

Q6. What characteristics or metrics are most appropriate to determine if an asset is illiquid and should be subject to guidance related to open-ended funds' investment in illiquid assets? Please also explain the rationales.

In our view, 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. Hence, common requirements in managing liquidity risks of investment funds and in using liquidity management tools (as a general rule) are much more important.

- **German open-ended property investment funds**

As an example, the German legislator has responded to the crisis by implementing new legal liquidity management tools for open-ended property investment funds. Property assets are illiquid assets and considered as long-term investments, but the open-ended structure of retail property funds enabled investors to redeem fund units at any time and without notice. Therefore, with the beginning of the global financial crisis in 2008, some investors of such open-ended retail property funds used their right of daily redemptions extensively with the effect that some property funds were not able to fulfil requests of redemption to all investors. As a consequence, a very small number of retail open-ended property funds were supported by banks with liquidity to avoid the risk of suspension of redemptions. The majority of property funds which were affected by liquidity shortage used the legal possibility to suspend redemptions of units allowed in unusual circumstances in which a suspension appears necessary to protect the interests of investors.

In response to these circumstances, the German legislator has already adopted a new investment regulation (implemented by the Investor Protection and Capital Markets Improvement Act, AnsFuG, and the Capital Investment Act, KAGB) which is to help German retail open-ended property funds limit excessively high short-term outflows of liquidity and to support the character of open-end funds as long-term investment. Investors of open-ended retail property funds are no longer allowed to redeem their units on short notice. In particular, a minimum holding period of 24 months and a cancellation period of twelve months apply for investors. A *de minimis* redemption threshold without notice period of 30,000 Euro per half-year has been abolished by recent legislation. All in all, we can say that German open-ended retail property funds have left the turbulences of the past behind towards a more stable and transparent framework which is also designed to avoid liquidity transformation.

- **Unequal treatment of market participants regarding clearing obligations under EMIR**

However, there are detriments arising from interactions between the clearing requirements under EMIR and the restrictive approach to repos under the UCITS Directive. Pension funds have been granted a temporary exemption from clearing obligations under EMIR due to their perceived lack of liquidity. This exemption has recently been confirmed and extended by the Commission. UCITS' access to liquidity is also severely constrained due to the ESMA Guidelines on ETFs and other UCITS issues. According to these Guidelines, UCITS are prohibited from reusing cash obtained through repo transactions for the purpose of collateralizing positions arising from OTC derivative trades. Apart from repos, UCITS' ac-



cess to liquidity is severely constrained since UCITS are under the contractual obligation towards investors to invest their monies in accordance with the relevant investment strategy. Nonetheless, UCITS do not benefit from a comparable exemption in relation to the central clearing.

In our view, the use of cash from repos for the purpose of collateralizing centrally cleared derivative transactions does not entail any additional risk for the fund and its investors compared e.g. to deposits with credit institutions which are admitted as reuse of collateral under the ESMA Guidelines. Therefore, UCITS should be allowed to use cash obtained through repo transactions for the purpose of collateralizing other transactions subject to central clearing.

Q7. Should all open-ended funds be expected to adhere to the recommendations and employ the same liquidity risk management tools, or should funds be allowed some discretion as to which ones they use? Please specify which measures and tools should be mandatory and which should be discretionary. Please explain the rationales.

In our view, the use of liquidity risk management tools should be harmonized on a global basis. However, in every case, it should be the discretion of the manager of the funds which tool they want to use because of very different fund types and structures. Furthermore from a macroeconomic and structural viewpoint conf. our answers to Q5 regarding the valuable stabilizing effects of generally and evenly available liquidity management tools across jurisdictions.

Q8. Should authorities be able to direct the use of exceptional liquidity risk management tools in some circumstances? If so, please describe the types of circumstances when this would be appropriate and for which tools.

In general it will be difficult to answer this question in general as it will depend on the concrete situation. There might be scenarios where authorities should make use of their rights (e.g. suspension of redemptions during a very stressed market). But this should be only possible for only a very limited number of scenarios and without a direct impact on the assets of an investment fund. Otherwise, if authorities would for example instruct all asset managers to buy or sell a specific instrument/asset, this would have a massive market impact and could be not in the interest of the investor.

Therefore, from a general point of view, the management company should decide about the usage and the timing of liquidity risk management tools. The investment manager is well informed about the markets in which he has invested the history of it and the relevant economic interdependencies. Therefore he is in a very good position to judge which instrument might be most effective.

Leverage within funds

Q9. In developing leverage measures (Recommendation 10), are the principles listed above for IOSCO's reference appropriate? Are there additional principles that should be considered?

As highlighted by the FSB, different regulatory definitions of leverage exist. **Therefore, we fully support the proposal clarifying a global definition of leverage in funds and its calculation.** In particu-



lar, we see the need for a common understanding among regulators, investors and asset managers. This common understanding is a crucial prerequisite in periods of market stress where timely decisions by national competent authorities (NCAs), supra national authorities and market participants are paramount. This minimizes potential measurement, interpretation and decision lags when timeliness is of utmost importance. In particular, this minimizes the administrative burden of asset managers which operate cross-border and which have actually implemented different kind of leverage calculation methods and monitor processes. Furthermore, a common understanding of the adequate scale of the leverage in the system stabilizes the adaption of the expectations of the investors and agents like the asset managers.

Leverage in the European asset management sector means any method by which the manager increases the exposure of an investment fund it manages, whether through borrowing of cash or securities or leverage embedded in derivative positions or by any other means. Therefore, leverage of investment funds should generally be expressed as the ratio between the exposure of a fund and its net asset value. Additionally sensitivity measures have gained usage in the industry and provide hands-on understanding of leverage. However, the main difference between regulated funds (such as AIF and UCITS) is the opportunity to use methods by which the fund manager could increase the exposure of a fund it manages:

- In principle, the AIF manager can use methods in an unlimited manner such as borrowing of cash or securities, or leverage embedded in derivative positions or by any other means.
- National legal requirements could limit the use of leverage in certain funds such as retail funds or funds for institutional investors (e. g. special limits for borrowing of cash, special limits for using derivatives, and special requirements for borrowing of securities).¹³
- In contrast, the manager of a UCITS is limited in using of such methods, in particular: UCITS are authorized to borrowing of cash only on a temporary basis and with a limit of 10 percent of the value of the fund. In each case, the UCITS manager is obliged to ensure that the UCITS' global exposure does not exceed the total net value of its portfolio (the so called "200 percent threshold", please also see our further remarks to the calculation of the global exposure and leverage under question 13). EU member states may authorize UCITS to employ techniques and instruments relating to transferable securities and money market instruments (such as repo transactions) under strict conditions and within the limits which they lay down provided that such techniques and instruments are used for the purposes of efficient portfolio management. UCITS cannot however act as borrowers of securities.

Even if the use of methods by which the fund manager could increase the fund's exposure differs among investment funds, the calculation of leverage should be based, in principle, on the same method.

We propose a leverage calculation method which should be based on a commitment approach with netting and hedging assumptions. However, we see the need for additional risk-based measures which clarify that cash or cash equivalents (without any limits) and short term cash borrowings with limits (for example up to 10 percent of the assets under management) should not be consid-

¹³ In Germany, all retail AIFs are restricted in using leverage (e.g. by legal investment limits for borrowing of cash or securities or investments in derivatives which are in principle comparable with the restrictions under the UCITS Directive). This also applies for the special funds (AIF) for institutional investors (without hedge funds).



ered. In this context, **we are willing to closely cooperate with FSB, IOSCO and the NCAs to exchange views and interpretations on the various existing leverage definitions and their pros and cons for the different types of investment funds. We remain at your disposal for any questions or further clarification in this regard.**

Moreover, we agree that regulators should collect data about the use of leverage by funds for risk monitoring purposes using a consistent and comparable measure of leverage. This is complicated in light of the existence of multiple definitions of leverage. **Therefore, IOSCO should define which kind of data and in which frequency national competent authorities should collect data about leverage. For a common and global understanding of systemic risks, it is important that all managers of funds report data about leverage in a uniform way** (please also see our remarks to question 13).

Q10. Should simple and consistent measure(s) of leverage in funds be developed before consideration of more risk-based measures, or would it be more appropriate to proceed in a different manner, e.g. should both types of measure be developed simultaneously?

In our view, development of simple and consistent measure(s) of calculation of leverage is closely linked with risk-based and sensitivity-based measures. Therefore, we propose to develop these measures simultaneously.

Q11. Are there any particular simple and consistent measures of leverage or risk-based measures that IOSCO should consider?

IOSCO should consider, in particular, the measures with regard to the commitment approach for calculating leverage and risk-based measures required under the AIFMD. Furthermore, we fully support further consultations and work on suitable definitions of leverage across funds at a global level.

Q12. What are the benefits and challenges associated with methodologies for measuring leverage that are currently in place in one or more jurisdictions?

Measuring, comparing and interpreting leverage poses some challenges to asset managers, competent authorities and even investors. Different legally defined approaches with a broad range of additional national flavors or methodological differences hamper easy understanding of the “real leverage” by the players in the market.

One of the longest established types of leverage definition found in asset management regulation is the commitment approach, which clearly encompasses a broad range of fund types and is intended to cover the implied risk basic investment strategies. Derivative exposures are converted into equivalent positions after netting and hedging. The challenge lies in proving the proper netting characterization of the used derivatives. This may result in difficulties to reach an easy to understand comparison between the funds. It reaches some limitation in covering properly quickly changing risk factors in stressed market conditions. Therefore the regulation followed a more sophisticated approach for complex strategies to better grasp their “riskiness”.



The gross leverage has its advantage by indication of the extent of usage of any kind of derivative but falls short to give a common sense representation of the implied risk in the portfolio.

Therefore some asset managers use types of sensitivity-based approaches of leverage, which follows the basic understanding of risk.

The wide range of calculation methodologies of leverage including further different special limits (such as for borrowing of cash or for using derivatives) make it difficult to give a comparable figure to investors, competent authorities and asset managers alike.

Q13. Do you have any views on how IOSCO's collection of national/regional aggregated data on leverage across its member jurisdictions should be structured (e.g. scope, frequency)?

We propose that IOSCO should define which kind of data and in which frequency national competent authorities should collect data about leverage. Depending on existing data available, IOSCO should analyze possible data gaps and recommend additional reports, where necessary. However, the technical implementation of the current calculation methods and respective reports has been expensive and costly. Therefore we would like to highly recommend taking the existing European legislations into account. In this context, IOSCO should take into account that under the current legislation in the EU data about leverage in funds are already available. In particular, managers of AIF report for each AIF two leverage amounts based on a gross and commitment method on a regular basis.¹⁴ The reporting frequency depends of assets under management (quarterly, half-yearly, and yearly).

However, **there is a lack of calculation and reporting standards with regard to leverage under the UCITS Directive.** In detail:

1. Calculation of leverage of UCITS

According to Article 51 of the UCITS Directive, UCITS shall ensure that its global exposure relating to derivative instruments does not exceed the total net value of its portfolio (the so called 200 percent threshold). However, UCITS management companies are required to calculate the global exposure of a UCITS on the basis of either of the following methods¹⁵:

- **The incremental exposure and leverage** generated by the managed UCITS through the use of financial derivative instruments including embedded derivatives, which may not exceed the total of the UCITS' net asset value. This leverage should be calculated on the basis of the commitment approach.
- **The market risk of the UCITS portfolio** calculated, in principle, on the basis of the value at risk (VaR) approach. VaR means a measure of the maximum expected loss at a given confidence level over a specific time period. UCITS are widely using the VaR approach for a broad scope of funds for which more complex strategies apply. The results can vary by implementation and show to some extent the typical model risk.

¹⁴ Cf. Article 7 and 8 of the Delegated Regulation No 2013/231/EU.

¹⁵ Cf. Article 41 of the Implementing Directive No 2010/43/EU.



In addition, the Committee of European Securities Regulators (CESR) has provided in 2010 some guidelines¹⁶ which accompany these implementing measures of the UCITS Directive in the context of risk measurement and the calculation of global exposure and counterparty risk for UCITS without binding effect. However, we do not have an overview, whether or to what extent each EU member state has implemented these guidelines. According to these guidelines, it is the responsibility of the UCITS to select an appropriate methodology to calculate global exposure relating to derivative instruments. The selection should be based on the self-assessment by the UCITS of its risk profile resulting from its investment policy. Moreover, CESR's guidelines specify the different methods of calculation of the global exposure of the UCITS and some disclosure requirements to investors as follows:

- UCITS using the commitment approach for calculation the global exposure are not required to calculate and disclose an additional leverage because the commitment approach already limits the level of leverage (the global exposure calculated on the basis of the commitment approach should not exceed the total net value of the UCITS' portfolio). Therefore, in these cases, the maximum level of leverage is equal with the maximum 200 percent threshold.
- Only UCITS using VaR approaches for the calculation of the global exposure should be "*required*" to disclose to investors the (expected) level of leverage in the prospectus and the annual report.¹⁷ These disclosure guidelines are based on the assumption that the VaR approach (in contrast to the commitment approach) does not directly limit the level of leverage, so that investors have to be informed about the possibility of higher leverage levels and the expected level of leverage that might be reached. This means that UCITS using VaR approaches have to calculate two figures: the global exposure and an expected level of leverage.
- According to CESR's guidelines, the leverage of UCITS using VaR approaches should be calculated as the "*sum of the notionals of the derivatives used*".¹⁸ In the meantime, ESMA has clarified that this calculation should be conducted on a gross basis.¹⁹ However, there are no further specifications on the method of calculation and disclosure. In this respect, there might be a lack of level-playing field in the European Union.

2. Reporting of leverage of UCITS

According to the UCITS Implementing Directive²⁰, management companies are required to deliver to the competent authorities, at least on an annual basis, reports containing information which reflects a true and fair view of the types of derivative instruments used for each managed UCITS, the underlying risks, the quantitative limits and the methods which are chosen to estimate the risks associated with the derivative transactions. Regardless of the fact that there is no comparable reporting standard with regard to frequency and data size as described under the AIFMD, in particular, there are no further specifications on reporting of leverage of UCITS. However, the competent authority in Germany (BaFin) collects data about leverage of each UCITS on a yearly basis.

¹⁶ CESR's guidelines on risk measurement and the calculation of global exposure and counterparty risks for UCITS, Ref. CESR/10-788, dated on 28 July 2010.

¹⁷ Cf. Boxes 24 and 25 of the CESR guidelines, Ref. CESR/10-788, dated on 28 July 2010.

¹⁸ Cf. Box 25 paragraph 5 of the CESR guidelines, Ref. CESR/10-788, dated on 28 July 2010.

¹⁹ cf. ESMA's Q&A, Risk Measurement and Calculation of Global Exposure and Counterparty Risk for UCITS, Ref. ESMA/2013/1950, question 2.

²⁰ Cf. Article 45 of the Commission Directive 2010/43/EU of 1 July 2010 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.



Q14. Do the proposed policy recommendations on liquidity and leverage adequately address any interactions between leverage and liquidity risk? Should the policy recommendations be modified in any way to address these interactions? If so, in what ways should they be modified and why?

The interaction between liquidity risk and leverage is addressed in an appropriate way.

Operational risk and challenges in transferring investment mandates or client accounts

Q15. The proposed recommendation to address the residual risks associated with operational risk and challenges in transferring investment mandates or client accounts would apply to asset managers that are large, complex, and/or provide critical services. Should the proposed recommendation apply more broadly (e.g. proportionally to all asset managers), or more narrowly as defined in Recommendation 13? If so, please explain the potential scope of application that you believe is appropriate and its rationales.

Operational risk imminent to asset management services has no systemic dimension. The regulatory framework for asset management services provides sufficient safeguards for the orderly transfer of investment mandates or replacement of service providers. Further provisions for large and complex asset managers are neither pertinent nor required from the macroeconomic standpoint.

First of all, it should be acknowledged that fund assets and assets of individual clients are fully shielded against the asset manager's insolvency. Under the EU frameworks for UCITS and AIFs, all fund assets are ring-fenced and booked on accounts held by the appointed third-party depositary. The depositary function involves strict separation of assets throughout the custody chain and oversight of the property rights as regards assets which are not capable of being held in custody. These standards ensure that in the event of a fund manager's insolvency, the assets of all managed funds remain unaffected and are still available to investors. The same pertains to accounts managed for individual investors. Also in this case, investors' assets are separated from the manager's own funds and administered by a third party being usually a credit institution. The asset manager issues instructions for dealing in client assets, but has otherwise no access to the relevant accounts. In the event of the manager's insolvency, the managed accounts remain unaffected and can be either transferred to another entity or further maintained with the administrator. Moreover, the management contract with the asset manager can be terminated by extraordinary notice due to the opening of the insolvency proceedings.

Secondly, as regards derivative contracts concluded on behalf of funds or individual clients, it is important to note that positions resulting from derivative contracts are adequately collateralized and therefore shielded from the risk of a manager's replacement. The strict collateralization standards are in great parts resulting from the work of the FSB and other international organizations such as the BCBS and IOSCO. The impact of work undertaken at the international level is already tangible in practice, especially in relation to centrally cleared OTC derivatives. Under the EMIR framework in Europe, counterparties to OTC derivatives subject to central clearing must provide for initial margin and variation margin covering the relevant risk exposure from derivative contracts. The clearing requirements under EMIR are being incrementally extended to cover a broad range of OTC derivative contracts. Non-



centrally cleared OTC derivatives are or will shortly be affected by comparable margining requirements following the BCBS/IOSCO principles. The phase-in period for collecting and posting initial margin and exchanging variation margin on those trades started on 1 September 2016.²¹ Due to these requirements, positions from OTC derivatives held by funds/in individual accounts are or will in near future be adequately collateralized and therefore can await orderly transition in case of changes in management. Hence, there should be no need to act under time pressure in closing-out and re-establishing derivative contracts even in stressed market conditions.

Thirdly, with respect to the provision of ancillary services, it is more pertinent to think about obligation of service recipients to ensure that the relevant services can be obtained from other parties in emergency situations than to impose business continuity obligations on service providers. Pricing and valuation services, risk modelling services and other back office functions are being offered by asset managers, but more often provided by specialized firms not subject to specific regulation. Therefore, it seems more important from the systemic perspective that business continuity of asset managers and other regulated entities **as recipients** of such services is warranted by appropriate measures. In Europe, fund managers are required to ensure continuity and quality of delegated functions in case of termination of relevant contracts.²² In practice, this means that they need to establish emergency plans for situations in which the appointed delegate fails to provide its services or the quality of services deteriorates below an acceptable level.

On the basis of these considerations, we do not perceive situations in which a replacement of an asset manager could give rise to systemic risk. Therefore, we do not see the need for distinguishing large or complex asset managers to whom additional rules should apply, even less so by decisions of national authorities.

In order to further reduce operational risk relevant to asset management activities, some additional mitigants could be considered by the authorities, even though not from the systemic point of view:

- **Procedures for smooth transition of investment mandates:** Asset managers should be in the position to follow a pre-defined procedure in case investment mandates over funds or managed accounts need to be transferred. IOSCO is currently consulting on good practices for the termination of investment funds with the view of agreeing on international recommendation in this area in the coming months.²³ In accordance with our assessment, the IOSCO initiative is labelled as an effort to increase investor protection, not to combat systemic risk. In our view, standardized procedures should apply in any case in which an asset manager needs to be replaced. In this regard, the German law already provides for clearly defined standards which have to be followed in case of a transfer of the management title. Moreover, there is also a legally defined process for termination of the management contract by the fund manager. This process places the main responsibilities upon the depositary which can either liquidate the fund or confer the management function to another management company. The assignment of a new manager is conditional on approval by BaFin as the competent authority.²⁴

²¹ In Europe, the introduction of the initial margin requirements has been postponed by one year. However, the intention is to implement the standards for variation margin on time, i.e. by 1 March 2017 (cf. draft Commission Delegated Regulation on margin requirements for uncleared derivatives from 28. July 2016, Article 36 (2) for variation margin and (3) for initial margin)

²² Cf. Article 75 g) of the Delegated Regulation (EU) 231/2013 (AIFMD Delegated Regulation).

²³ Cf. IOSCO Consultation Report on Good Practices for the Termination of Investment Funds from 18 August 2016 (<http://www.iosco.org/library/pubdocs/pdf/IOSCOPD542.pdf>).

²⁴ Cf. §§ 99, 100 of the German Capital Investment Code.



- **Emergency solutions for replacing service providers in case of delegation:** In Europe, such emergency plans are already required by law and considered an integral part of proper business organization. Even though not relevant from the systemic perspective, they help to ensure business continuity and high quality of the overall services provided to investors.

As a last point in this context, we clearly contest the observations made at the industry meeting on 6 September 2016 on potential implications of an insolvency event within the group. The intervention on this point seemed to relate to a case in which the depositary function is being provided by the parent company of an asset manager which then goes bust. It should be clear that at least in Europe, insolvency of the appointed fund depositary has no impact on the fund assets which are explicitly flagged as client assets in the depositary's accounts and are thus excluded from the insolvency assets. Moreover, a depositary's insolvency does not affect the financial viability of the fund manager being a separate legal entity subject to stand-alone authorization and capital requirements. The fund manager remains bound by his fiduciary duty; in Europe, he is also under the legal obligation to assert claims against the depositary on behalf of investors.²⁵ Only cash booked on the fund's trading account will be affected by the insolvency proceedings over the depositary's estate. However, in this regard, investment funds will not be treated differently from other clients of the insolvent depositary. In any case, this aspect is by no means specific to the asset management business and thus should not be considered as a structural vulnerability.

Securities lending activities of asset managers and funds

Q16. In your view, what are the relevant information/data items authorities should monitor for financial stability purposes in relation to indemnifications provided by agent lenders/asset managers to clients in relation to their securities lending activities?

Q17. Should the proposed recommendation be modified in any way to address residual risks related to indemnifications? For example, should it be more specific with respect to actions to be taken by authorities (e.g. identifying specific means for covering potential credit losses) or more general (e.g. leaving to authorities to determine the nature of appropriate action rather than specifying coverage of potential credit losses)?

Potential systemic risk arising from 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 appropriately reduced. In Europe, these recommendations have already been implemented in the EU Regulation on Securities Financing Transactions which became effective as of January 2016. This Regulation also encompasses extensive reporting obligations on securities lending transactions to the competent authorities.

In parallel, strict standards on securities lending and collateral on corresponding positions apply to UCITS under the ESMA Guidelines on ETFs and other UCITS issues from 1. August 2014. Under these guidelines, cash collateral received from securities lending can be either placed on deposits, invested in high-quality government bonds, used for reverse repo transactions with regulated credit institutions or invested in short-term MMFs.²⁶ Furthermore, due to the requirement for non-cash collateral not to be

²⁵ Cf. Article 21(15) of the AIFMD Directive, Article 25(5) of Directive 2014/91/EU (UCITS V Directive).

²⁶ Cf. Para 43 j) of the ESMA Guidelines on ETFs and other UCITS issues dated 17 December 2012 (ESMA/2014/937).



sold, re-invested or pledged and to be held by the UCITS depository in case of title transfer²⁷, 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.²⁸

As regards indemnification against potential losses from securities lending, these are provided by very few asset managers. Generally, the concept of indemnification is alien to asset management since it implies taking risk on the asset manager's own books. Therefore, such additional service to investors generally comes with additional safeguards relevant to this business model, i.e. over-collateralization of positions from securities lending. **Should the FSB and the competent authorities need more information about the indemnification activities and potential associated risk, we request that such information be collected specifically from asset managers providing such indemnities and not made a mandatory part of the regular reporting obligations by asset managers.**

²⁷ Para. 43 g) and i) of the ESMA Guidelines on ETFs and other UCITS issues.

²⁸ Para. 43 b) of the ESMA Guidelines on ETFs and other UCITS issues.

Liquidity Management



LIQUIDITY MANAGEMENT



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

Redemption analysis based on monthly data of BVI retail funds

The logo for BVI, consisting of the letters 'BVI' in a bold, sans-serif font, with a small square dot to the left of the 'B'.

Redemption analysis in the following categories of retail funds:

- Equity funds
- Bond funds
- Balanced 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

Redemption analysis: Results in BVI retail funds



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	2,98%	4,97%	4,96%
Bond funds	3,34%	6,14%	5,34%
Balanced funds	1,11%	2,26%	2,21%
Property funds	0,56%	1,45%	2,00%

*based on monthly data

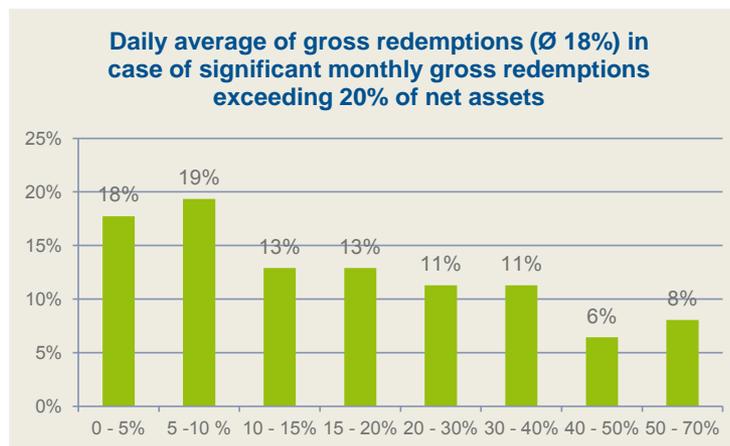
LIQUIDITY MANAGEMENT

Redemption analysis: No significant constraints by using monthly data

BVI

Among significant monthly gross redemptions exceeding 20% of net assets, BVI members were asked for an additional survey based on day-to-day data:

- In 63% of the cases analyzed, daily gross redemptions were below the 20% threshold of net assets, 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%.
- On average, we found daily gross redemptions amounting 18% of net assets.
- Where daily gross redemptions were larger than 20% of net assets, 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.

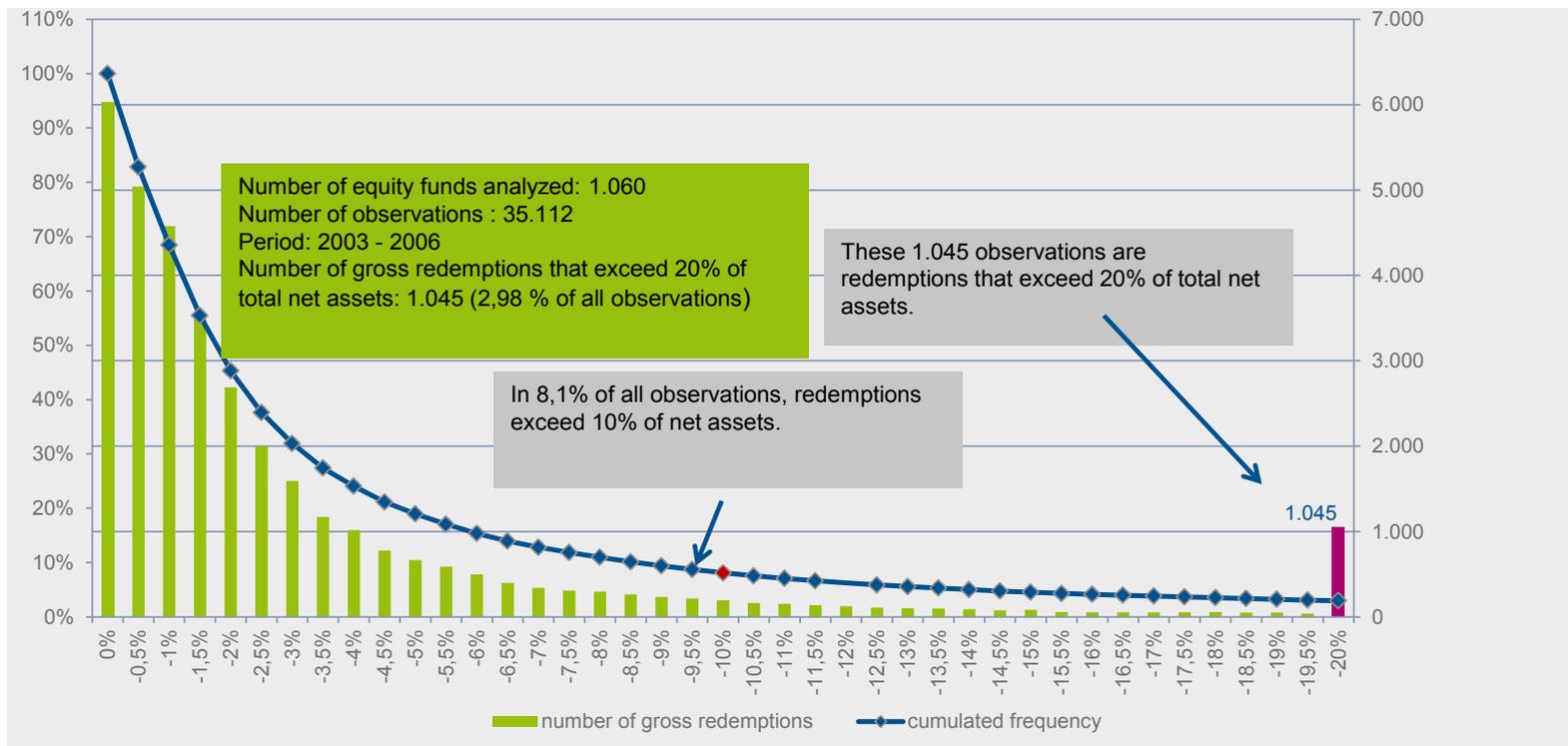


LIQUIDITY MANAGEMENT

Redemption analysis based on monthly data of BVI retail funds

BVI

Gross redemptions frequency distribution in equity funds

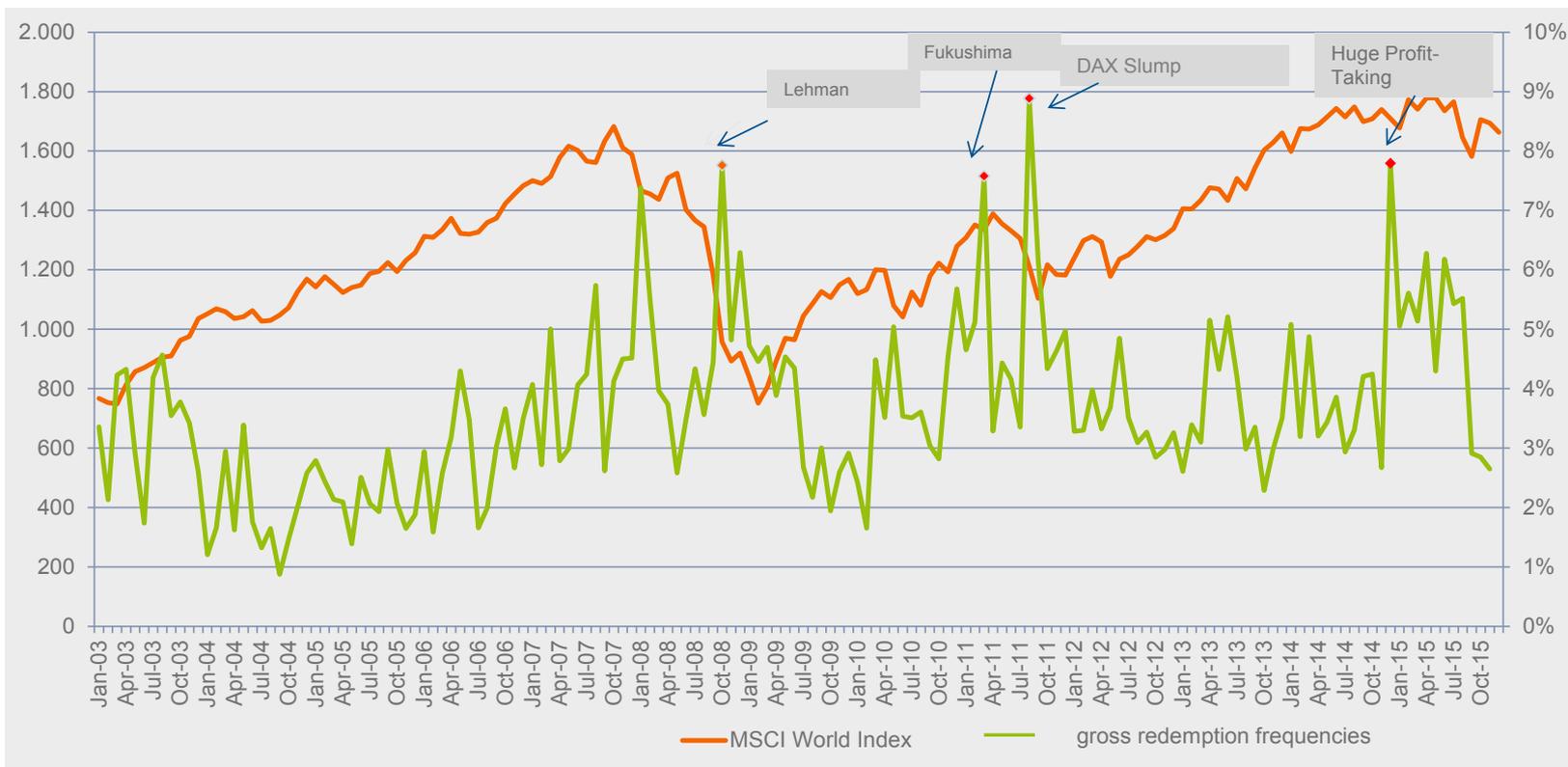


LIQUIDITY MANAGEMENT

Redemption analysis based on monthly data of BVI retail funds



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

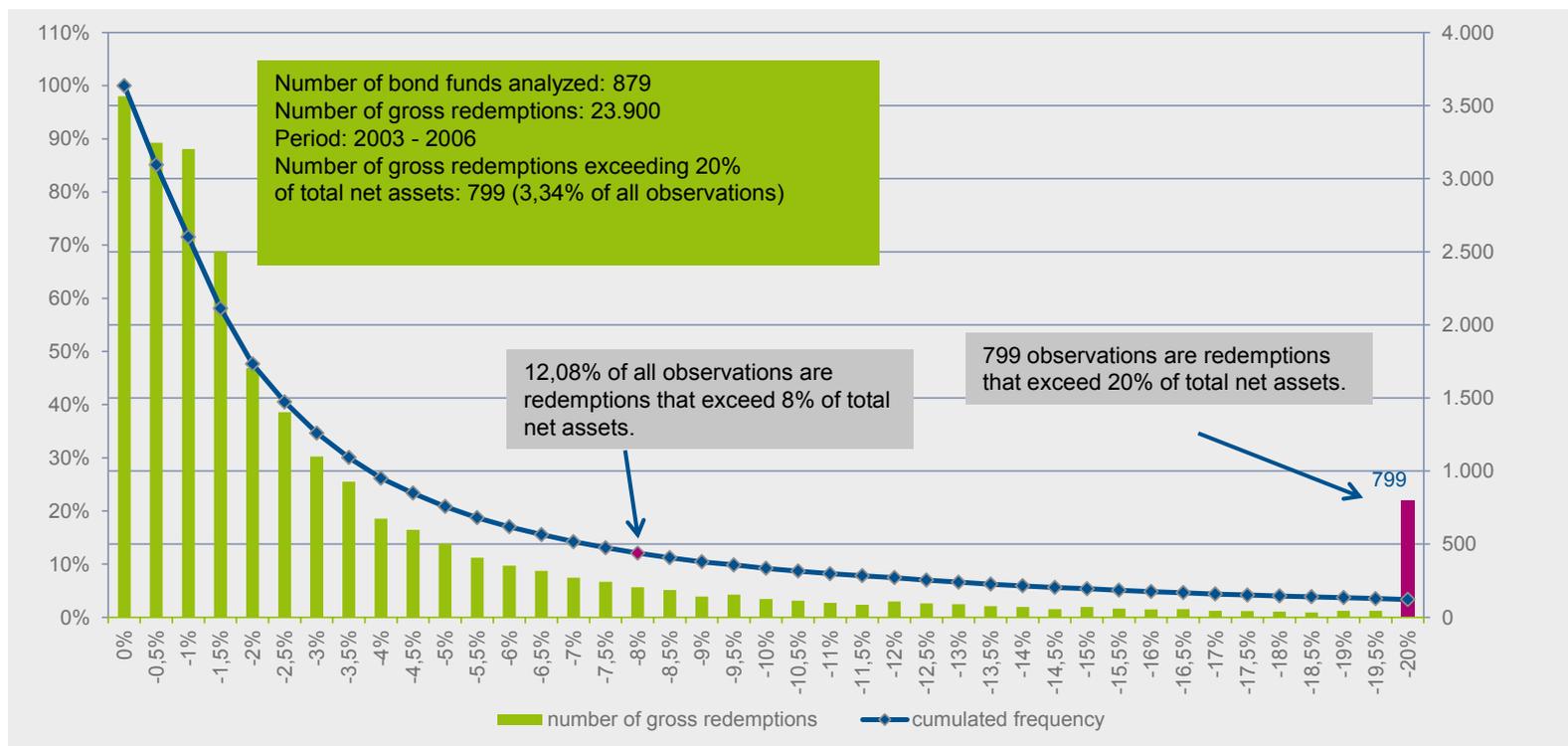


LIQUIDITY MANAGEMENT

Redemption analysis based on monthly data of BVI retail funds

BVI

Gross redemption frequencies distribution in bond funds

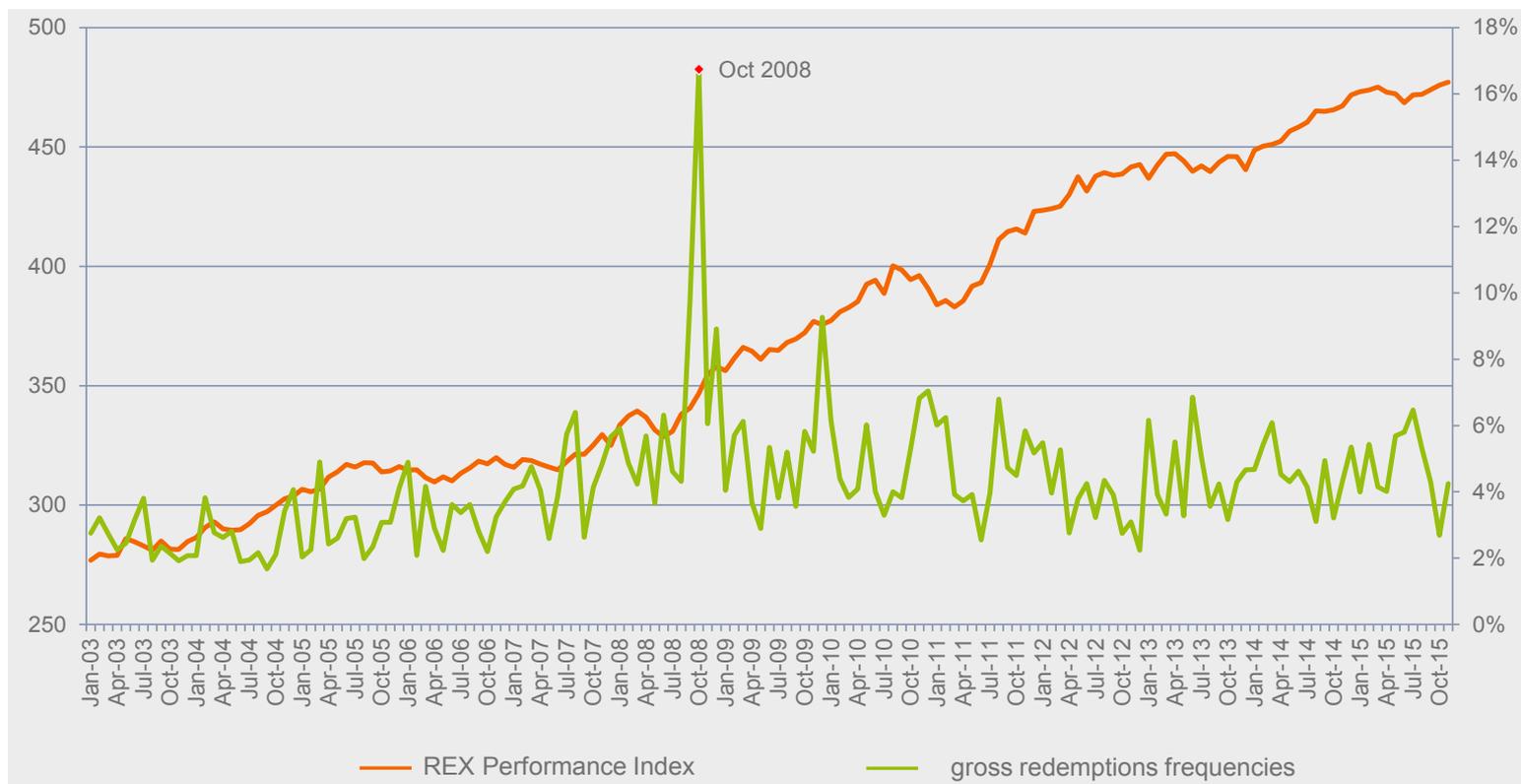


LIQUIDITY MANAGEMENT

Redemption analysis based on monthly data of BVI retail funds

BVI

Gross redemption distribution in bond funds vs. REX Performance Index

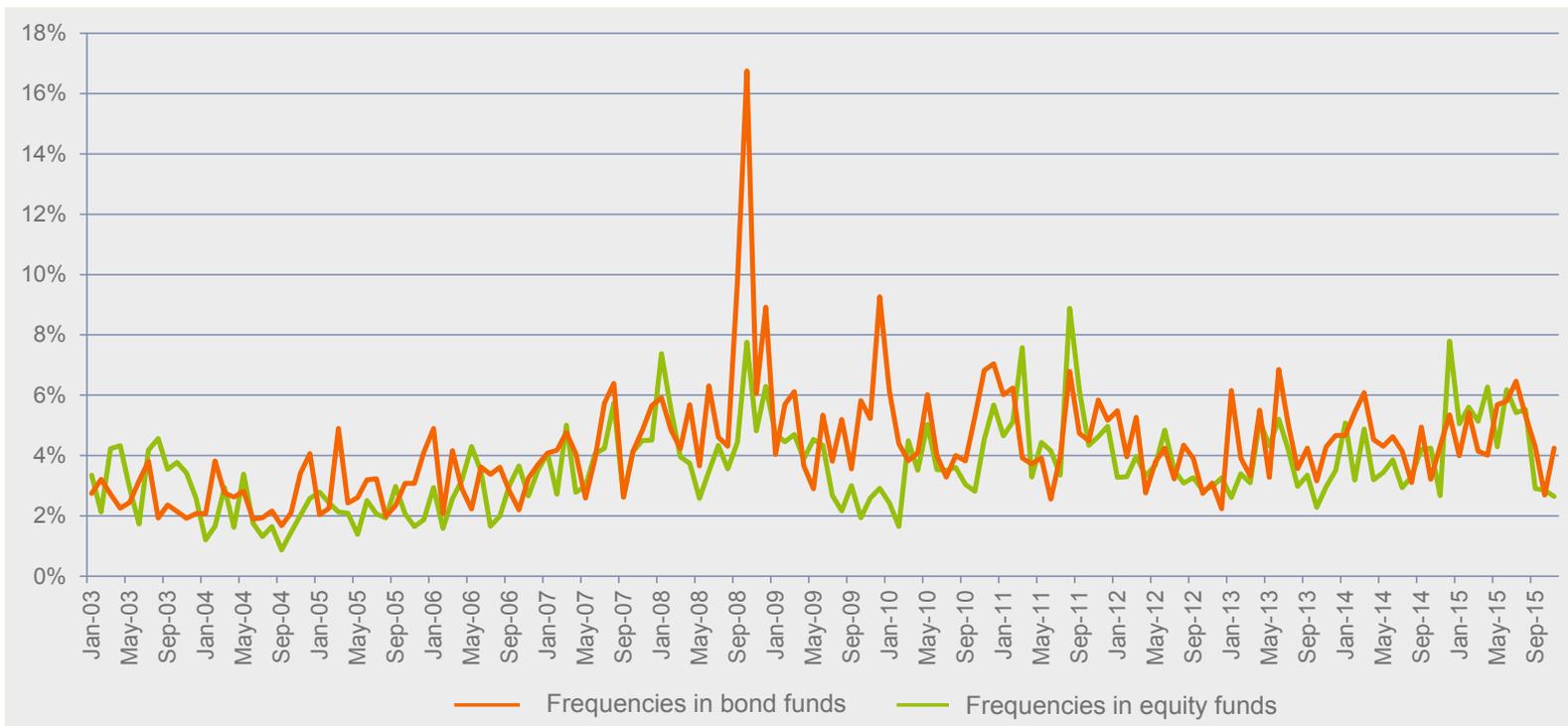


LIQUIDITY MANAGEMENT

Redemption analysis based on monthly data of BVI retail funds

BVI

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

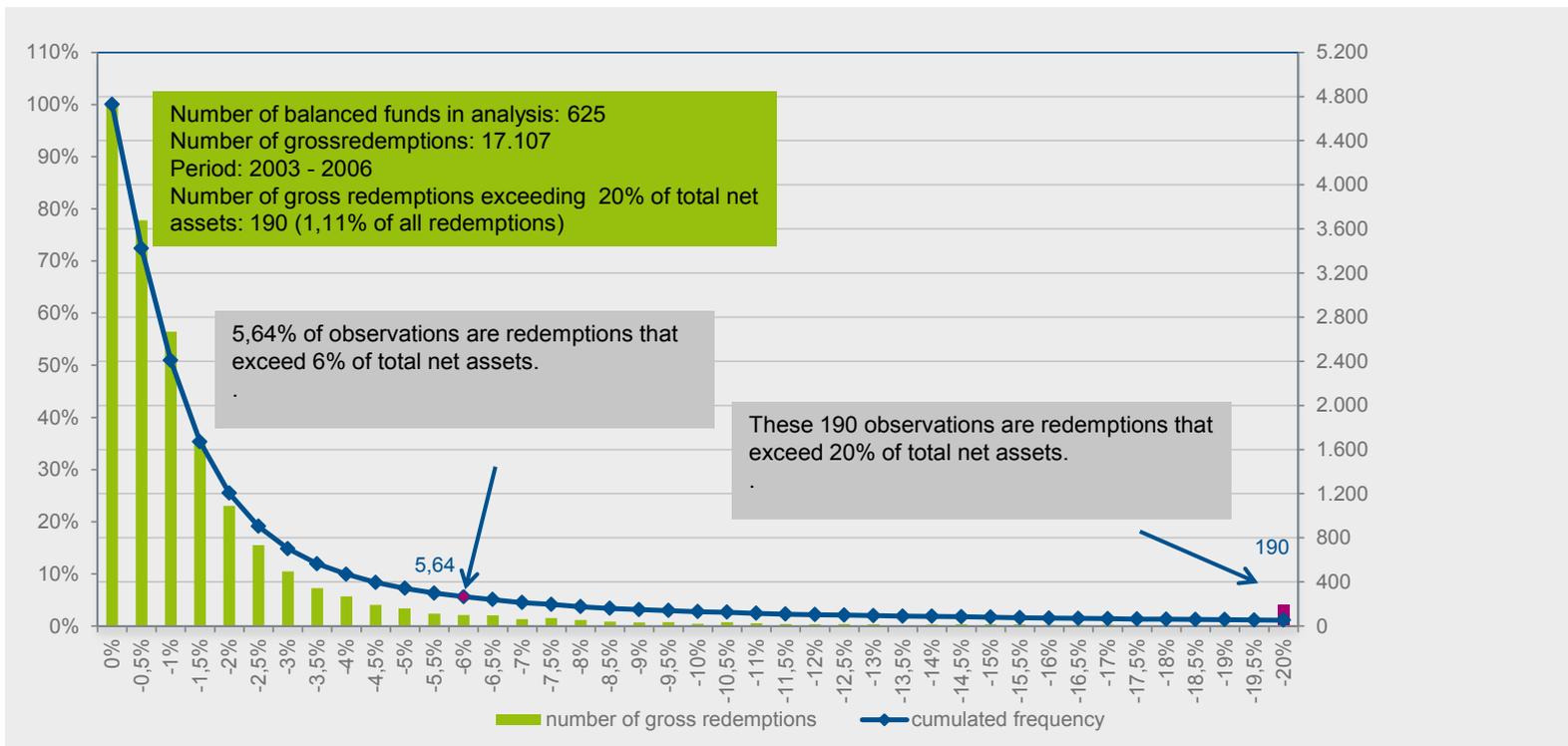


LIQUIDITY MANAGEMENT

Redemption analysis based on monthly data of BVI retail funds



Gross redemption frequency distribution in balanced funds

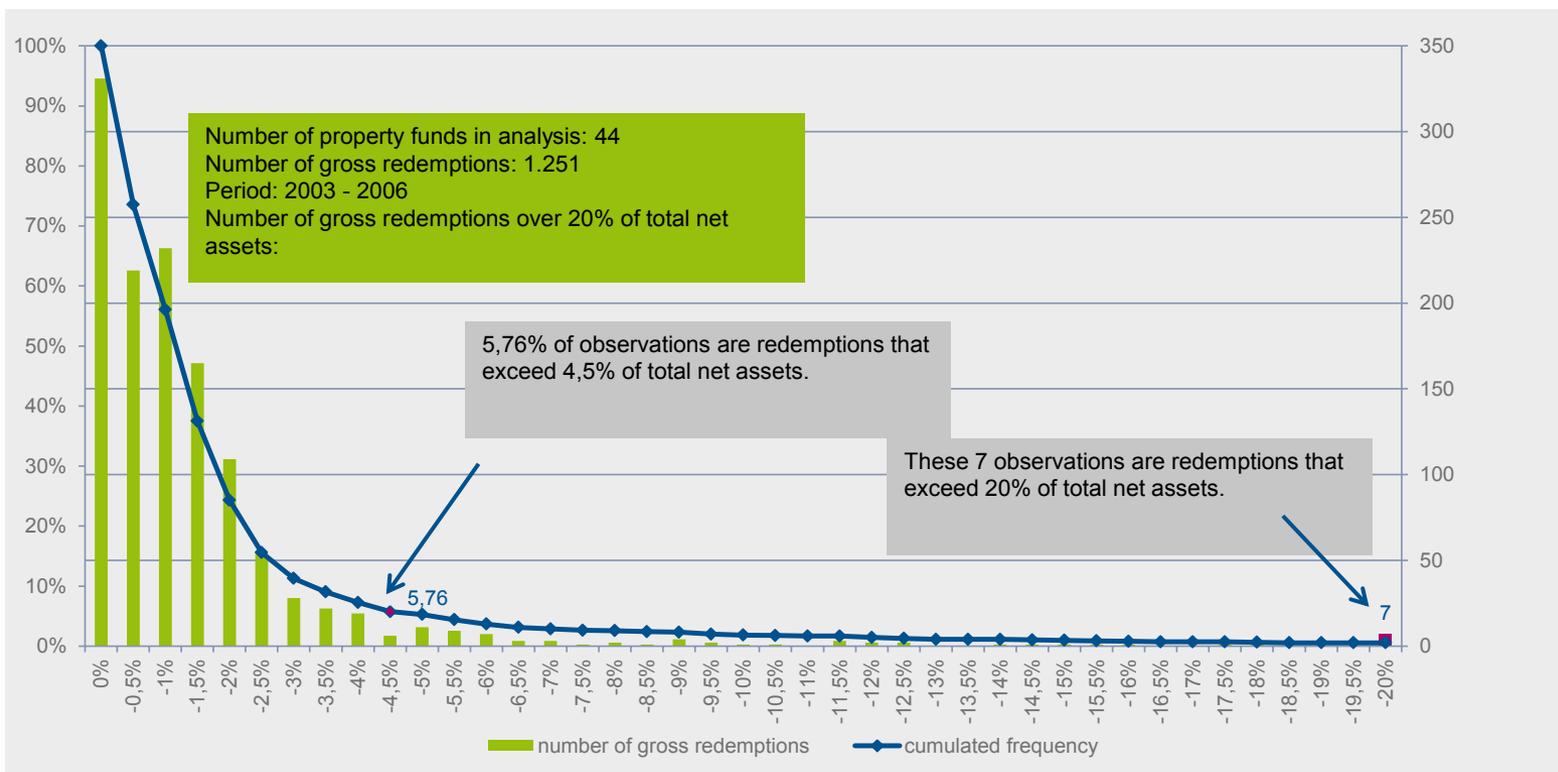


LIQUIDITY MANAGEMENT

Redemption analysis based on monthly data of BVI retail funds



Gross redemption frequencies distribution in property funds



LIQUIDITY MANAGEMENT

Redemption analysis based on monthly data of BVI retail funds



Distribution of gross redemptions in property funds (including funds in liquidation)

