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I

(Resolutions, recommendations and opinions)

RECOMMENDATIONS

EUROPEAN SYSTEMIC RISK BOARD

RECOMMENDATION OF THE EUROPEAN SYSTEMIC RISK BOARD

of 20 December 2012

on money market funds

(ESRB/2012/1)

(2013/C 146/01)

THE GENERAL BOARD OF THE EUROPEAN SYSTEMIC RISK BOARD,

Having regard to Regulation (EU) No 1092/2010 of the European Parliament and of the Council of 24 November 2010 on European Union macro-prudential oversight of the financial system and establishing a European Systemic Risk Board ⁽¹⁾, and in particular Article 3(2)(b), (d) and (f) and Articles 16 to 18 thereof,

Having regard to Decision ESRB/2011/1 of the European Systemic Risk Board of 20 January 2011 adopting the Rules of Procedure of the European Systemic Risk Board ⁽²⁾, and in particular Article 15(3)(e) and Articles 18 to 20 thereof,

Whereas:

- (1) Money market funds (MMFs), while being subject to securities markets regulation, are a key component of the shadow banking system, particularly as they perform maturity and liquidity transformation, and may therefore pose systemic risk.
- (2) Investors may perceive MMFs, in particular constant net asset value funds that seek to maintain an unchanging face value, as safe alternatives to bank deposits. However, MMFs do not have direct access to a public safety net, such as central bank financing and deposit insurance. There is therefore a risk of confusion with bank deposits benefiting from such a safety net.
- (3) As a rule, MMFs do not benefit from explicit and firm support arrangements by their sponsor companies, often

banks, although there have been instances where sponsor companies have *ex post* actively supported ailing MMFs on a discretionary basis.

- (4) Economic research provides evidence that the conduct and nature of MMFs make them vulnerable to destabilising investor runs, which can spread quickly among funds, impairing liquidity and the availability of short-term credit, in particular for banks. The risk of an investor run may be higher for constant net asset value funds in cases where there is a perception that they would fail to live up to investor expectations of redemption at par.
- (5) Although MMFs did not cause the financial crisis of 2007 to 2008, their performance during the financial turmoil highlighted their potential to spread, or even amplify, a crisis. The experience from the 2007 to 2008 crisis has shown that MMFs may be susceptible to investor runs and may need the support of sponsor companies, in particular to maintain their constant net asset value.
- (6) Potential systemic risks stemming from MMFs therefore relate to the first-mover advantage of investors, specifically relevant for constant net asset value funds, the implicit and discretionary nature of support by sponsor companies, and the high interconnectedness of MMFs with the rest of the financial system, in particular banks and money markets.
- (7) Following an assessment of the causes of the recent financial crisis, several national regulators and international organisations have signalled the need for

⁽¹⁾ OJ L 331, 15.12.2010, p. 1.

⁽²⁾ OJ C 58, 24.2.2011, p. 4.

structural MMF reforms. On 27 October 2011, the Financial Stability Board (FSB) published a set of initial recommendations to strengthen the oversight and regulation of the shadow banking system. In particular, the FSB identified as crucial issues to be addressed a mandatory shift to variable net asset valuation, capital and liquidity requirements for constant net asset value funds, and other possible regulatory approaches.

- (8) Following a request by the FSB, the International Organization of Securities Commissions (IOSCO) issued on 9 October 2012 policy recommendations aimed at mitigating the susceptibility of MMFs to investor runs. While a substantial part of these IOSCO recommendations is already addressed at European Union level, there are some remaining gaps.
- (9) US regulators have worked on revising the framework for MMFs. In particular the Securities and Exchange Commission (SEC) has revised its Rule 2a-7. In addition, on 13 November 2012, the Financial Stability Oversight Council released Proposed Recommendations Regarding Money Market Mutual Fund Reform for public consultation.
- (10) In May 2010, the Committee of European Securities Regulators published Guidelines on a common definition of European 'MMFs' in order to establish new common standards addressing the failures identified during the financial crisis. In particular, the guidelines impose strict standards in terms of portfolio quality and maturity, risk management and disclosure. These non-binding guidelines are addressed to both UCITS and non-UCITS MMFs and have been implemented by Member States at national level.
- (11) The European Commission has indicated its intention to develop new Union-wide legislative measures on UCITS, surveying in particular the need for more detailed and harmonised regulation on MMFs ⁽¹⁾.
- (12) In line with Regulation (EU) No 1092/2010, the European Systemic Risk Board (ESRB) may address to the Commission recommendations also in respect of the relevant Union legislation. These recommendations aim at providing guidance in this respect to the Commission, as well as to ESMA in its advisory and regulatory role.
- (13) While investor runs can occur with all types of funds that have maturity or liquidity mismatches, constant net asset value funds have characteristics that suggest that an

investor might seek first-mover advantage in periods of financial market stress. A conversion to variable net asset value funds might reduce the shareholder's incentive to run when the fund has experienced a modest loss and might further increase price transparency. It may also help to address the systemic risks associated with the interconnectedness of MMFs with sponsor companies and reduce the need for and importance of sponsor support.

- (14) A general use by MMFs of fair value accounting and, in limited circumstances only, the use of amortised cost accounting, will provide price transparency to investors, improve investors' understanding of the risks inherent to these MMFs, and make the difference between MMFs and bank deposits clearer.
- (15) Liquid assets help MMFs pay redeeming shareholders and prevent fire sale of assets at a loss, also preventing contagion effects for other funds that hold similar securities. Accordingly, explicit minimum amounts of daily and weekly liquid assets will ensure that MMFs are able to meet potentially large redemption requests from investors and weather periods of market volatility. Effective tools to deal with liquidity constraints, such as temporary suspensions of redemptions, will assist MMFs in dealing with periods of stress.
- (16) Additional public disclosure by MMFs on important features such as the absence of capital guarantee, support by sponsor companies and valuation practices will ensure that investors are clearly aware of existing risks.
- (17) More detailed reporting by MMFs will allow supervisory authorities to better understand developments in the MMF industry and to identify sources of risk. Therefore, regular reporting by MMFs should be further enhanced, in particular as regards the composition of their assets and liabilities, the use of amortised cost accounting and sponsor support. Relevant information should be shared by the competent national supervisory authority with other relevant national and European authorities.
- (18) In accordance with recital 29 of Regulation (EU) No 1092/2010, the observations of the relevant private sector stakeholders have been taken into consideration for the preparation of this Recommendation.
- (19) This Recommendation is without prejudice to the monetary policy mandates of the central banks in the Union.

⁽¹⁾ Consultation on Product Rules, Liquidity Management, Depositary, Money Market Funds, Long-term Investments, 26 July 2012.

- (20) ESRB recommendations are published after informing the Council of the European Union of the General Board's intention to do so and providing the Council with an opportunity to react,

as well as to provide appropriate information to investors regarding applicable redemption procedures in times of stress.

HAS ADOPTED THIS RECOMMENDATION:

SECTION 1

RECOMMENDATIONS

Recommendation A — Mandatory move to variable net asset value

The Commission is recommended to ensure that the relevant Union legislation:

- (1) requires money market funds (MMFs) to have a fluctuating net asset value;
- (2) requires MMFs to make general use of fair valuation and to restrict the use of amortised cost accounting to a limited number of predefined circumstances.

Recommendation B — Liquidity requirements

The Commission is recommended to ensure that the relevant Union legislation:

- (1) complements the existing liquidity requirements for MMFs by imposing explicit minimum amounts of daily and weekly liquid assets that MMFs must hold;
- (2) strengthens the responsibility of the funds' managers regarding the monitoring of liquidity risk;
- (3) ensures that national supervisory authorities and funds' managers have in place effective tools, for example temporary suspensions of redemptions, to deal with liquidity constraints in times of stress resulting from both fund-specific and market-wide developments.

Recommendation C — Public disclosure

The Commission is recommended to ensure that the relevant Union legislation:

- (1) requires specific disclosure by MMFs, also in their marketing material, that draws the attention of investors to the absence of a capital guarantee and the possibility of principal loss;
- (2) requires that MMFs refer in their public disclosure to possible sponsor support, capacity for support or protection only if such support or protection is a firm commitment by the sponsor, in which case it must be recognised in that sponsor's accounts and prudential requirements;
- (3) requires MMFs to disclose their valuation practices, particularly regarding the use of amortised cost accounting,

Recommendation D — Reporting and information sharing

1. The Commission is recommended to ensure that the relevant Union legislation:

- (a) requires that any instances of sponsor support that may have an impact on the price of the MMF are reported by the MMF or its manager, and the sponsor, to the competent national supervisory authority, together with a full description of the nature and size of such support;
- (b) enhances regular reporting by MMFs;
- (c) ensures that competent national supervisory authorities, where relevant, share the information referred to in points (a) and (b) with other national supervisory authorities within the same Member State, or from other Member States, the European Supervisory Authorities, the members of the European System of Central Banks and the ESRB.

2. The Commission is recommended to promote the development of harmonised reporting and a harmonised data set as mentioned in paragraph 1(b), and the organisation of information sharing mentioned in paragraph 1(c).

SECTION 2

IMPLEMENTATION

1. Interpretation

1. For the purposes of this Recommendation, the following definitions apply:

- (a) 'credit institution' means credit institution as defined in Article 4(1) of Directive 2006/48/EC of the European Parliament and of the Council of 14 June 2006 relating to the taking up and pursuit of the business of credit institutions⁽¹⁾;
- (b) 'national supervisory authority' means a competent or supervisory authority as specified in Article 1(3)(f) of Regulation (EU) No 1092/2010;
- (c) 'money market funds' means regulated and supervised Union collective investment undertakings whose primary objective is to maintain the principal of the fund, while providing a return in line with money market rates, by investing in money market instruments or deposits with credit institutions;

⁽¹⁾ OJ L 177, 30.6.2006, p. 1.

(d) 'variable net asset value fund' means a money market fund that does not seek to maintain an unchanging face value and whose net asset value therefore fluctuates. Its assets are generally valued on a fair value basis;

(e) 'constant net asset value fund' means a money market fund that seeks to maintain an unchanging face value. Its assets are generally valued on an amortised cost basis;

(f) 'amortised cost accounting' means an accounting approach which considers the acquisition cost of the security and adjusts this value for amortisation of premiums or discounts until maturity.

2. The Annex forms an integral part of this Recommendation. In the case of conflict between the main text and the Annex, the main text prevails.

2. Criteria for implementation

1. The following criteria apply to the implementation of this Recommendation:

(a) this Recommendation covers all MMFs as defined;

(b) regulatory arbitrage should be avoided;

(c) due regard will be paid to the principle of proportionality in the implementation, taking into account the objective and the content of each recommendation;

(d) specific criteria for the implementation of this Recommendation are set out in the Annex.

2. The Commission is requested to communicate to the ESRB and to the Council actions undertaken in response to this Recommendation, or adequately justify inaction. The report should as a minimum contain:

(a) information on the substance and timeline of the undertaken actions, including any actions undertaken vis-à-vis the European Supervisory Authorities;

(b) an assessment of the functioning of the undertaken actions from the perspective of the objectives of this Recommendation;

(c) detailed justification of any inaction or departure from this Recommendation, including any delays.

3. Timeline for the follow-up

1. The Commission is requested to report to the ESRB and the Council on the actions taken in response to these recommendations, or adequately justify inaction, in compliance with the timelines set out below:

(a) by 30 June 2013, the Commission is requested to deliver to the ESRB an interim report containing a first assessment of the implementation of these recommendations;

(b) by 30 June 2014, the Commission is requested to deliver to the ESRB and the Council a final report on the implementation of these recommendations.

2. The General Board may extend the deadline under paragraph 1 where legislative initiatives are necessary to comply with one or more of the recommendations.

4. Monitoring and assessment

1. The ESRB Secretariat:

(a) assists the Commission, including by providing relevant templates and detailing where necessary the modalities and the timeline for the follow-up;

(b) verifies the follow-up by the Commission, including by assisting it upon its request, and reports on the follow-up to the General Board via the Steering Committee.

2. The General Board assesses the actions and the justifications reported by the Commission and, where appropriate, decides whether this Recommendation has not been followed and if the addressee has failed to adequately justify its inaction.

Done in Frankfurt am Main, 20 December 2012.

The Chair of the ESRB
Mario DRAGHI

ANNEX TO THE ESRB RECOMMENDATION ON MONEY MARKET FUNDS

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LIST OF ABBREVIATIONS

ABS:	asset-backed securities
AIF:	alternative investment fund
AIFM:	alternative investment fund manager
AuM:	assets under management
Bn:	billion
Bps:	basis points
BSI:	balance sheet item
CESR:	Committee of European Securities Regulators
CIU:	collective investment undertaking
CNAV:	constant net asset value
CRA:	credit rating agency
EA:	euro area
ECB:	European Central Bank
ESA:	European Supervisory Authority
ESCB:	European System of Central Banks
ESMA:	European Securities and Markets Authority
ESRB:	European Systemic Risk Board
EU:	European Union
EUR:	euro
FSB:	Financial Stability Board
FSOC:	Financial Stability Oversight Council
GBP:	British pound
HH:	households
ICI:	Investment Company Institute
ICPF:	Insurance corporations and pension funds
IMMFA:	Institutional Money Market Funds Association
IOSCO:	International Organization of Securities Commissions
MFI:	monetary financial institution
MMF:	money market fund
Mn:	million
NAV:	net asset value
NFC:	non-financial corporation
OFI:	other financial institution
O/w:	of which
RoW:	rest of the world
SEC:	Securities and Exchange Commission
ST-MMF:	short-term money market fund
UCITS:	undertakings for collective investments in transferable securities
USD:	United States dollar
VNAV:	variable net asset value
WAL:	weighted average life
WAM:	weighted average maturity

EXECUTIVE SUMMARY

This annex provides background material for the ESRB Recommendations that aim to support and assess the implementation in Europe of the FSB shadow banking reforms in relation to MMFs. MMFs are a key component of the shadow banking sector. Similarly to banks, they perform maturity and liquidity transformation and may be viewed by investors as a safe alternative to bank deposits (especially in the case of CNAV funds, which seek to maintain an unchanging face value). However, MMFs, while subject to securities regulation, are not subject to banking regulatory requirements and may, in some cases, be particularly vulnerable to destabilising investor runs. MMFs may therefore be a source of significant systemic risk. Another risk associated with MMFs is the implicit and discretionary sponsor support; the likelihood of support may be greater for CNAV funds.

Various international and European regulatory initiatives (such as the October 2012 IOSCO Recommendations and the May 2010 CESR/ESMA guidelines) have already been taken to address risks associated with MMFs. In addition, the FSB is expected to issue its final recommendations on all shadow banking work streams in September 2013. In the US, the MMF regulatory framework might further evolve following the release of the FSOC's proposed recommendations for public consultation in November 2012. In Europe, the European Commission is expected to release its legislative proposal reforming the framework for UCITS and MMFs during the first quarter of 2013. The ESRB Recommendations and accompanying annex are expected to inform the Commission's work in this important area.

Characteristics of the European MMF industry

In order to assess the possible impact of the ESRB Recommendations, a detailed profile of the European MMF industry was made, drawing, *inter alia*, on an ad-hoc data collection. In Europe, MMFs manage approximately EUR 1 trillion in assets, with three countries (France, Ireland and Luxembourg) representing an aggregate share of 95 % of total MMF assets. Investors in French MMF are essentially domestic ones, while the investors in Irish and Luxembourgish funds are to a very large extent non-residents. Most MMFs in Europe are authorised to operate under the UCITS regulatory framework. The top five groups that manage MMFs in Europe account for 40 % of the total industry and four out of those five are related to banks.

MMFs play an important role in money markets and are estimated to hold approximately 25 % of all short-term debt securities issued in the euro area. Around 75 % of their exposures are to MFIs, which in the case of Ireland are mainly non-EU institutions. Irish and Luxembourgish funds hold a major share of their assets in foreign currencies, mainly USD and GBP.

On an aggregate basis, European MMFs serve mostly institutional investors, although in some individual countries they are typically a retail product. MFIs are themselves important MMF investors, accounting for more than 30 % of the total investor base, and exhibit a preference for CNAV funds. There is an important non-EU investor base for European MMFs, particularly for Irish CNAV funds. The interconnectedness of MMFs with the rest of the financial system is further increased via the relationship with their sponsors, often banks.

Somewhat more than 40 % of the industry's assets under management are invested by CNAV funds. European CNAV funds are two-thirds based in Ireland and one-third in Luxembourg. As a rule, such funds are much larger, have a more conservative risk profile, shorter maturity, higher liquidity levels and a bigger non-EU investor base than VNAV funds. In that respect, it should be noted that the 2010 CESR/ESMA guidelines imposed standards on MMFs in terms of eligible assets, as well as their quality and maturity. According to the results of the ESRB data collection, around 27 % of CNAV funds in the survey experienced deviations between their par value and the market value of their assets of more than 10 bps in a recent five-year period; in no case did the responding fund report evidence of sponsor support.

The ESRB Recommendations

The ESRB Recommendations are similar to the IOSCO Recommendations published in October 2012. In the context of addressing systemic risk, the key objective of the IOSCO work is to reduce the susceptibility of MMFs to the risk of investor runs. Drawing, *inter alia*, on the results of a dedicated data collection exercise, the ESRB Recommendations are complemented by a quantitative and qualitative analysis in order to understand whether a change in business models following the reforms would imply a severe contraction of MMFs, particularly at a time when they are already negatively affected by the low interest rate environment. The recommendations cover the following four specific areas.

Mandatory move to VNAV: MMFs should be required to have a fluctuating net asset value. In this way, their investment features will be strengthened and their bank deposit-like features reduced. This requirement will reduce the incentive of investors to run, increase price transparency and reduce interconnectedness in the financial system. MMFs are further requested to make general use of fair valuation, while the use of amortised cost accounting should be limited to a number of pre-defined circumstances.

Liquidity requirements: Existing liquidity requirements should be enhanced by imposing explicit minimum amounts of daily and weekly liquid assets that MMFs must hold. The responsibility of fund managers to monitor the liquidity risk should be strengthened. Finally, effective tools should be in place, for example through temporary suspensions of redemptions, to deal with liquidity constraints in times of stress resulting from both fund-specific and market-wide developments.

Public disclosure: The marketing material of MMFs should draw the attention of investors to the absence of a capital guarantee and the possibility of principal loss. Any public information that would give the impression of sponsor support or capacity for such support should be prohibited unless this support is a firm commitment, in which case it must be recognised in the sponsor's accounts and prudential requirements. Finally, it should include a description of the valuation practices, in particular as regards the use of amortised cost accounting, and the possibility of suspending subscriptions and redemptions, also in times of stress.

Reporting and information sharing: Any instances of sponsor support should be reported to the responsible national supervisory authorities, which should share this information with other relevant national and European authorities. The regular reporting of MMFs should be further enhanced and harmonised. Where relevant, competent national supervisory authorities should share information with other relevant authorities (domestic, foreign or European).

INTRODUCTION

The aim of the ESRB Recommendations and the supporting analysis is to assess from a financial stability perspective the October 2012 IOSCO Recommendations on money market funds (MMFs) with regard to their potential impact on the EU MMF industry. To provide support and recommendations for EU policy makers, this annex focuses on the implementation issues that are most relevant for financial stability.

Both the quantitative and qualitative analyses in this annex draw on various information sources, including academic research, prior work conducted by the ESRB on MMFs, ECB statistical data and a dedicated ad-hoc data survey initiated by the ESRB in order to collect more detailed information beyond that contained in publicly available sources. The ESRB further organised a round table with market participants to solicit the views of the industry.

Section I of the annex reviews the recent international and European regulatory initiatives related to MMFs, thereby providing the broader policy background to the ESRB Recommendations. **Section II** gives a brief overview of the sources of systemic risk stemming from MMFs which the Recommendations aim to address. To analytically support the Recommendations, **Section III** reviews the market structure of the MMF industry in Europe, focusing on those elements of the market that are particularly relevant for systemic risk. **Section IV** discusses the specific ESRB Recommendations individually, in each case providing an economic rationale and an assessment as well as compliance criteria.

I. RECENT REGULATORY INITIATIVES

I.1 International initiatives

Following an assessment of the causes of the recent financial crisis, several national regulators and international organisations expressed the need for structural MMF reforms. At the November 2010 Seoul Summit the G20 leaders requested the **Financial Stability Board** (FSB) to develop recommendations to strengthen the oversight and regulation of the shadow banking system. On 27 October 2011, the FSB published a set of initial recommendations which were endorsed by the G20 at the Cannes Summit. In particular, the FSB recommended that the regulatory framework of MMFs should be further enhanced. The FSB identified constant net asset value (CNAV) MMFs, which seek to maintain an unchanging face value, as a crucial source of potential risk to be addressed through encouraging/requiring a shift to variable net asset value (VNAV) funds, imposing capital and liquidity requirements for CNAV MMFs, and/or other possible approaches. The FSB further mandated the International Organization of Securities Commissions (IOSCO) to undertake a review of potential regulatory reforms that would mitigate the susceptibility of MMFs to investor runs and other systemic risks, and develop policy recommendations.

Following this request, **IOSCO** issued Policy Recommendations for reforming MMFs on 9 October 2012. Further to these Recommendations, IOSCO noted in a press release that, although a majority of the Securities and Exchange Commission (SEC) Commissioners did not support the publication of IOSCO's Recommendations, there were no other objections, and IOSCO's board approved the report.

On 18 November 2012, the FSB published a number of consultative documents, one of which was an integrated overview of the policy recommendations regarding shadow banking. In this report, the FSB endorsed the IOSCO Recommendations as an effective framework for strengthening the resilience of MMFs to risks in a comprehensive manner. The FSB also endorsed the Recommendation that stable NAV MMFs should be converted into floating (or variable) NAV MMFs where workable. The FSB further indicated that the safeguards required to be introduced to reinforce stable NAV MMFs' resilience to runs where such conversion is not workable should be functionally equivalent in effect to the capital, liquidity, and other prudential requirements on banks that protect against runs on their deposits.

The FSB announced that it will prepare its final recommendations on shadow banking, including detailed recommendations from each of its five work streams (of which MMFs is one) by September 2013. Although the work stream on MMFs has now been largely concluded, some of the others, in particular the ones on banks' interactions with shadow banking entities as well as securities lending and repos, may also have implications for MMF reforms.

In the **United States**, certain MMF reforms were adopted in 2010. At the time, the SEC noted that these reforms served as a first step. In October 2010 the President's Working Group released a report outlining a set of additional policy options, as the 2010 reforms alone could not be expected to prevent a run. Accordingly, the SEC was engaged in the development of additional structural reforms. However, on 22 August 2012, SEC Chairman Mary Schapiro announced that the majority of the SEC Commissioners would not support the SEC's staff proposal to reform the structure of MMFs.

As a result, on 27 September 2012, US Treasury Secretary Timothy Geithner, requested the Financial Stability Oversight Council (FSOC) to take action in the absence of the SEC doing so. On 13 November 2012, the FSOC published its proposed recommendations regarding MMF reform for public consultation. These recommendations set out three alternatives which are not necessarily mutually exclusive: (i) floating NAV, (ii) stable NAV with NAV buffer and 'minimum balance at risk', and (iii) stable NAV with NAV buffer and other measures. At the date of this report, the outcome of the public consultation is unknown; it is also unclear whether the SEC will act in accordance with the FSOC recommendations, especially in light of the difficulties encountered by the SEC in their initial attempts as referred to above.

I.2 European initiatives

In May 2010, the **Committee of European Securities Regulators** (CESR, the predecessor of the European Securities and Markets Authority, or ESMA) published guidelines to create a harmonised definition of the term 'MMF' in Europe and to establish new common standards addressing the failures identified during the financial crisis. The guidelines established a classification creating two types of MMFs: 'short-term money market funds' (ST-MMFs) and 'money market funds' (MMFs) and imposed strict standards in terms of portfolio quality and maturity, risk management and disclosure. The CESR/ESMA guidelines came into force in July 2011, with a six-month transitional period for existing funds, and apply to both UCITS and non-UCITS funds.

The guidelines already address the majority of the IOSCO Recommendations. For example, as recommended by IOSCO (Recommendations 1 to 3), the guidelines provide for an explicit definition of MMFs, for strict rules on the type of instruments in which MMFs may invest (including the prohibition of exposure to equity), limits on the residual maturity of the instruments, as well as limits on the weighted average maturity (WAM) and the weighted average life (WAL) of the portfolio. In the period following the guidelines' entry into force, i.e. in the last months of 2011, a considerable number of funds initially marketed as MMFs were renamed and moved to other categories of funds.

With regard to the IOSCO Recommendations on liquidity management (Recommendations 6 to 8), the existing European legal framework is already strong. Regular liquidity stress tests must be conducted according to Directive 2010/43/EU for Undertakings for Collective Investments in Transferable Securities (UCITS) and Directive 2011/61/EU on Alternative Investment Fund Managers.

Finally, it should be noted that the UCITS framework already addresses issues of risk diversification, risk limitation and eligibility of assets.

However, the CESR/ESMA guidelines neither address all IOSCO Recommendations nor all the problems identified by IOSCO as being inherent in MMFs. Notably, ST-MMFs are still allowed to use CNAV. Moreover, MMFs may use amortised cost accounting to value instruments with a residual maturity limit fixed at 397 days, which may also create risks and reduce price transparency. In addition, as sponsor support is not currently governed by regulation or subject to a reporting requirement, no information about it is available to regulators.

To complement the European regulatory framework, **the fund industry** has developed a set of best practices as reflected in the Code of Practice of the Institutional Money Market Funds Association (IMMFA). According to this code, CNAV MMFs must at least weekly monitor the difference between their published prices and mark-to-market valuations (known as the shadow price). Escalation procedures, mainly through internal reporting, should exist for deviations above 10 basis points (bps), 20 bps and 30 bps. In cases where the market value is 50 bps lower than par, the fund is deemed to have suffered a 'permanent loss of value'. Any such instances of 'breaking the buck' must be reported to the IMMFA.

Finally, the **Commission** is considering the need for further reforms to the regulation of MMFs. In its Green Paper on shadow banking (2012), the Commission highlights the role of MMFs in the shadow banking system. Furthermore, the Commission published a consultation paper on a future framework for investment funds (2012). One section of the paper addresses the issue of CNAV versus VNAV MMFs, their valuation, the role of MMFs with respect to systemic risk and reliance on credit ratings. A legislative proposal on MMFs by the Commission is likely in the first quarter of 2013. And in October 2012, the **European Parliament** passed a motion on shadow banking in committee, supporting the IOSCO Recommendations and calling for CNAV funds to hold a limited-purpose banking licence.

As demonstrated below, the MMF industry in Europe has a large international component. One challenge in the various ongoing international and European initiatives is therefore to manage the potential risk that may result from any divergence in the regulatory initiatives for addressing the systemic risks resulting from MMFs.

II. MMFS AND FINANCIAL STABILITY

MMFs are a key component of the shadow banking system (FSB, 2011). They are investment products subject to securities regulation, but similar to banks in that they perform maturity and liquidity transformation and that investors may perceive them, in particular CNAV funds, as a safe alternative to bank deposits. However, MMFs may hold less liquid assets that may mature much later than investor redemptions and also embed investment risks. In contrast to banks, MMFs do not have access to the public safety net; as a rule they do not have explicit support from their sponsor companies, although there have been several instances where sponsors have actively supported ailing funds *ex post*.

A broad set of economic research, especially with respect to the US market, provides evidence that the conduct and nature of MMFs make them vulnerable to destabilising runs, which can spread quickly among funds. This can further impair liquidity and the availability of short-term credit, not least for banks for which MMFs are an important funding source ⁽¹⁾. The risk of investor runs is mainly due to the first-mover advantage and the uncertainty regarding tacit and discretionary sponsor support.

II.1 First-mover advantage

The first-mover advantage, while a feature for all investment funds, is considered by many to be mainly relevant for **CNAV MMFs** as they offer immediate redemptions at a rounded constant price (e.g. EUR 1 or USD 1 per share) ⁽²⁾. Hence, there is a risk that the share price may not reflect the 'true value' of the fund's underlying portfolio in times of market stress or concerns over underlying asset quality. A feature of this advantage is that early redemption requests are

⁽¹⁾ See also FSOC (2012) pp. 17-28, which provides for a systemic risk analysis and an overview of further academic research, e.g., Baba et al. (2009); Duygan-Bump et al. (forthcoming); Gordon and Gandia (2012); Gorton and Metrick (2010), pp. 261-297; Kacperczyk and Schnabl (2012); McCabe (2010); McCabe et al. (2012); Rosengren (2012); Scharfstein (2012); Squam Lake Group (2011).

⁽²⁾ See ESRB Occasional Paper (2012); FSB (2011); FSOC (2012); IOSCO (2012); Baba et al. (2009); Gorton and Metrick (2010); McCabe (2010).

paid at par, even when actual asset values are potentially lower. This induces a transfer of losses to remaining shareholders, as investors who redeem later bear disproportionate losses. This first-mover advantage can contribute to destabilising runs. Uncertainty regarding the quality of the portfolio assets may provide incentives for a run even if the market value actually does not differ from par. The risk of investor runs is especially relevant for institutional investors since they are very risk-averse and tend to react more quickly and massively than retail investors. More generally, the CNAV feature may raise the risk of instability by giving some investors the expectation of redemption at par on the belief that MMF shares are a risk-free cash equivalent; it may accordingly increase the risk of a run when a fund fails to live up to those expectations, i.e. when it 'breaks the buck'.

Although the first-mover advantage predominantly concerns CNAV funds, experiences from the financial crisis show that investors in VNAV MMFs may also have an incentive to divest⁽¹⁾. As MMFs do not have 100 % daily liquidity, there are indeed cases where investor redemptions cannot be met. Hence, investors may still have an incentive to redeem quickly (as for any investment fund) because subsequent redemptions may force the fund to sell less liquid assets and potentially incur losses. The incentive to run can be increased because of accounting uncertainties, which can be present in VNAV funds as well.

II.2 Sponsor support

Several studies demonstrate that third-party support has been provided throughout the history of MMFs⁽²⁾. For the period 1980-2009, Moody's identified over 200 CNAV MMFs in the US and Europe that benefited from sponsor support. The support peaked between 2007 and 2009 when over 60 funds (36 US funds, 26 European ones) were in need of assistance, predominantly due to credit deteriorations/defaults and liquidity issues. According to Moody's, at least 20 firms managing prime funds in the US and Europe incurred expenditures of about USD 12 billion in order to preserve the value of their CNAV funds. In addition, at least two fund management firms relied on the balance sheet of their parent companies and access to the Federal Reserve window to meet redemptions, while two firms consolidated MMF assets onto their balance sheets (see also ESRB Occasional Paper, 2012).

The failure of the Reserve Primary Fund in the US illustrates the key flaw of relying on tacit and discretionary sponsor support. The fund 'broke the buck', i.e. it was unable to keep its net asset value at USD 1 in the wake of the collapse of Lehman Brothers (the Lehman exposure represented 1,2 % of its NAV). This loss immediately induced a run on the fund that triggered a wider run on US MMFs, with very large withdrawals over the course of just a few days. The sponsor of the Reserve Primary Fund ultimately failed to support the fund, which may have created uncertainty about sponsor support in general and accelerated the run on the MMF industry. Overall, the events created disruptions in the commercial paper market and forced the US authorities to step in by, among other things, creating two liquidity facilities and extending the deposit guarantee coverage.

This evidence suggests the importance of historical sponsor support but at the same time illustrates a potential flaw. Accordingly, uncertainty about the availability of support during the recent crisis may have contributed to runs. McCabe (2011) and Gordon and Gandia (2012) show that sponsor capacity is an important factor in investor behaviour. Gordon and Gandia (2012) provide evidence that CNAV funds managed or sponsored by potentially fragile firms faced significantly higher outflows and greater risk of an investor run. Also, analysts and CRAs may take into account the balance sheet and financial strength of the institutions that offer MMFs. Hence, the implicit nature of sponsor support and

⁽¹⁾ See Scott (2012) who quotes ICI figures that French VNAV funds lost around 40 % of their assets over a three month time span from July 2007 to September 2007. However, these funds were not MMFs under French legislation but were marketed as 'enhanced MMFs'.

⁽²⁾ See Brady (2012) and Moody's (2010). IOSCO's Consultation Report (April 2012) also details the SEC's findings in relation to sponsor support: during the period from August 2007 to December 31 2008, US SEC staff estimated that almost 20 % of all MMFs received some support from their money managers or their affiliates.

its dependence on the capacity of the sponsor may create uncertainty among market participants, which may result in MMFs being more vulnerable to runs. Generally, a regime that depends on implicit and discretionary guarantees from third parties can be considered unstable, as the guarantor does not internalise the cost of the implicit arrangement (McCabe, 2011).

II.3 Current economic environment

The current low interest rate environment raises questions about the ability of MMFs to maintain their CNAV. After the interest rate cut by the ECB in July 2012, those short-term debt instruments in which European MMFs invest heavily faced rapid decreases in returns, which even entered negative territory. As the CNAV structure cannot accommodate losses, the situation forced CNAV fund managers to suspend subscriptions, while some funds decided to float the NAV, at least indirectly. In some cases, rather than reducing the share price, the number of shares owned by investors is reduced, amounting to actual losses borne by investors. As one example, in October 2012 JPMorgan Chase announced this way of addressing the losses to investors in its two large European MMFs (the Euro Liquid Fund with EUR 4 billion in assets under management (AuM) and the Government Liquidity Fund with EUR 13 billion). A new 'flex' share class was added to such funds, which will maintain the investors' holdings at a stable EUR 1 share but will deduct shares from the overall account to cover operational costs and negative returns.

III. STRUCTURE OF THE EUROPEAN MMF INDUSTRY

In order to assess the financial stability implications of MMFs (discussed at a more conceptual level in the previous Section) and the possible impact of the ESRB Recommendations presented in Section IV, this Section gives a detailed profile of the European MMF industry on the basis of a quantitative analysis.

According to ECB statistics, the AuM of European MMFs accounted for approximately EUR 1 trillion as at June 2012, down from the 2008 peak of EUR 1,4 trillion and close to the level of 2011. The number of funds also declined from more than 1 300 in 2011 to 1 171 funds at June 2012. Part of the recent decline occurred in the form of a consolidation of the sector following the implementation of the CESR/ESMA guidelines mentioned in Section I.2.

Around 95 % of the European MMF industry is concentrated in three countries: France (39 % market share in AuM), Luxembourg (31 %) and Ireland (25 %). In relation to the euro area's aggregate investment fund industry, MMFs accounted for around 15 % of total AuM as at June 2012. The highest share is recorded in France with around 38 %. In Ireland, MMF assets account for about 32 % and in Luxembourg for 11 % of the total investment funds market. However, AuM by EU MMFs represent only 2,5 % of total assets of the euro area MFI sector (excluding central banks).

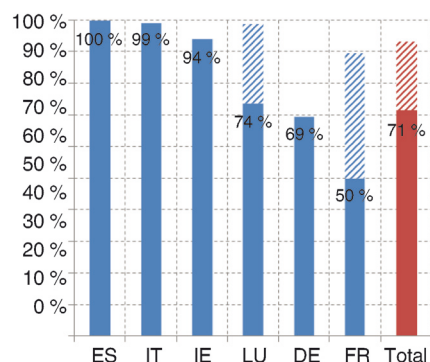
III.1 Scope of the ESRB ad-hoc survey

In order to gather more granular information than available through the ECB statistics, the ESRB conducted an ad-hoc survey on MMFs using also individual fund data. The data were collected on a 'best-effort' basis by six countries (France, Germany, Ireland, Italy, Luxembourg and Spain) and refer to the situation as at end-June 2012. The data provide information on the balance sheet breakdown by type of fund, i.e. CNAV, short-term VNAV and other VNAV funds, a breakdown which is not available in the ECB statistics. The survey also includes information for CNAV funds on the shadow price for the period from June 2007 to June 2012.

The ESRB survey covers 71 % of the industry's AuM in the six reporting countries as measured by the ECB statistics ⁽¹⁾. Further — aggregated — information was collected for an additional 22 % of the industry in these countries; this additional data only captures the breakdown by type of fund, fund manager and fund size in terms of AuM (see **Figure 1**). Taken together, the data in the survey cover 93 % of the MMF industry in the six countries (or 89 % of the EU MMF sector).

⁽¹⁾ The coverage is slightly lower for the liabilities due to the absence of data on the investor base for MMFs based in Germany.

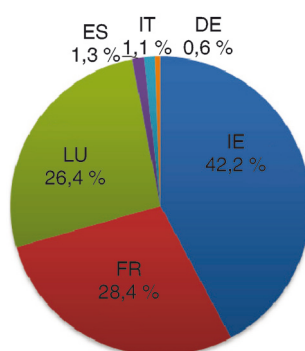
Figure 1

ESRB survey: coverage by country (%)

Source: ESRB survey and ECB.

Notes: Intended coverage with respect to the total AuM by resident MMFs in each country was about 75 %. Striped areas refer to the partial reporting (i.e. type of funds only). Coverage is actually higher when taking into account some double-counting (e.g. coverage reaches 60 % in the case of France when excluding funds of funds and master-feeder funds).

Figure 2

Sample composition (by AuM, %)

Source: ESRB survey.

Notes: Share of complete reporting only.

The survey shows that CNAV funds represent around 43 % (or EUR 433 billion) of total AuM of European MMFs. Of these funds, around two-thirds are based in Ireland (EUR 272 billion) and one-third in Luxembourg (EUR 161 billion). MMFs based in France are split between short-term VNAV (ST-VNAV) and other VNAV funds (i.e. VNAV funds excluding ST-VNAV), 47 % and 36 % respectively. In Germany, Italy and Spain, MMFs are almost exclusively of the VNAV type. With regard to the CNAV/VNAV distinction, it should be noted that these figures are based on a self-classification by the surveyed funds, since there is no clear legal or statistical definition of CNAV/VNAV; some funds have both CNAV and VNAV share classes.

With regard to the number of funds, the survey includes 123 CNAV funds operating in Luxembourg and Ireland, which represent 13 % of the number of funds in the six countries covered by the survey but 45 % of their AuM (see **Table 1**). It also covers 330 VNAV funds (of which 124 ST-VNAV) from the six countries.

Table 1

Breakdown of AuM and number of funds by type and by country (EUR million)

	France		Ireland		Luxembourg		Spain		Italy		Germany		Total sample	
	No. of funds	AuM	No. of funds	AuM	No. of funds	AuM	No. of funds	AuM	No. of funds	AuM	No. of funds	AuM	No. of funds	AuM
CNAV	0	0	65	272,992	58	160,976	0	0	0	0	0	0	123	433,968
	0,0 %	0,0 %	66,3 %	88,2 %	19,5 %	64,2 %	0,0 %	0,0 %	0,0 %	0,0 %	0,0 %	0,0 %	12,8 %	44,4 %
ST-VNAV	111	185,800	3	11,701	6	23,409	4	208	0	0	0	0	124	221,118
	25,5 %	47,0 %	3,1 %	3,8 %	2,0 %	9,3 %	5,6 %	2,3 %	0,0 %	0,0 %	0,0 %	0,0 %	12,9 %	22,6 %
VNAV	95	141,840	6	8,707	7	19,375	67	8,774	13	7,855	18	4,213	206	190,763
	21,8 %	35,9 %	6,1 %	2,8 %	2,3 %	7,7 %	94,4 %	97,5 %	92,9 %	99,0 %	37,5 %	69,3 %	21,4 %	19,5 %
Other VNAV	229	67,703	24	16,089	228	46,849	0	18	1	79	30	1,864	512	132,603
	52,6 %	17,1 %	24,5 %	5,2 %	76,5 %	18,7 %	0,0 %	0,2 %	7,1 %	1,0 %	62,5 %	30,7 %	53,1 %	13,6 %
UCITS	150	264,000	73	290,696	20	173,908	71	8,981	13	7,855	8	2,864	335	748,303
	34,5 %	66,8 %	74,5 %	93,9 %	6,7 %	69,4 %	100,0 %	99,8 %	92,9 %	99,0 %	16,7 %	47,1 %	34,8 %	76,5 %
Non-UCITS	56	66,443	1	2,705	4	10,577	0	0	0	0	10	1,349	71	81,074
	12,9 %	16,8 %	1,0 %	0,9 %	1,3 %	4,2 %	0,0 %	0,0 %	0,0 %	0,0 %	20,8 %	22,2 %	7,4 %	8,3 %
n/a	229	64,900	24	16,070	274	66,125	0	18	1	79	30	1,864	558	149,056
	52,6 %	16,4 %	24,5 %	5,2 %	91,9 %	26,4 %	0,0 %	0,2 %	7,1 %	1,0 %	62,5 %	30,7 %	57,9 %	15,2 %
Total	435	395,343	98	309,471	298	250,610	71	8,999	14	7,934	48	6,077	964	978,434

Source: ESRB survey and ECB.

Notes: The category 'Total' refers to ECB statistics on MMF balance sheet items (BSI) and the register of MFIs. The category 'Other VNAV' refers to funds not covered by the survey. The category 'not available (n/a)' for French funds refers to employee schemes, feeder funds, funds of funds and funds restricted to one or a limited number of investors ('fonds dédiés') which can be both UCITS or non-UCITS.

III.2 Overview of MMF assets

In relation to **economic sectors**, ECB statistics on MMFs show that the funds primarily invest in the MFI sector. The ESRB survey confirms this and shows on average an exposure of 75 % to MFIs. As a rule, exposures do not differ across the types of funds (see **Table 2** and **Figure 4**). Exposures to the corporate sector are relatively small (10 %). The ECB statistics also show the declining relevance of debt securities from the non-financial corporation (NFC) sector in the assets portfolio of MMFs (see **Figure 3**) over the last years. With regard to issuers, the CESR/ESMA guidelines restrict funds in terms of credit quality. The asset allocation of European MMFs is therefore concentrated on a relatively small number of high quality banking and non-banking issues (see FitchRatings, 2012).

Table 2

Allocation of investments by type of fund and sector (as % of total assets)

	MFIs	Non-financ. Corp.	Government	Other Financ. Intermediaries
1-CNAV	73,9 %	9,7 %	13,7 %	2,7 %
2- Short term VNAV	79,7 %	11,2 %	8,4 %	0,7 %

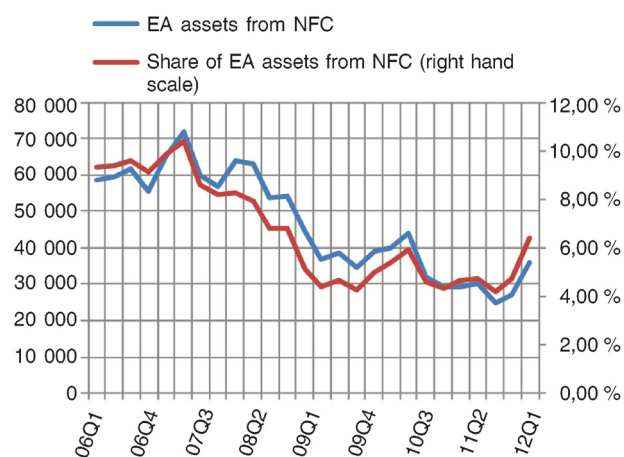
	MFIs	Non-financ. Corp.	Government	Other Financ. Intermediaries
3-VNAV (excl. ST-VNAV)	74,7 %	7,9 %	16,0 %	1,4 %
1- UCITS	75,4 %	9,3 %	13,2 %	2,1 %
2-Non-UCITS	73,7 %	12,6 %	12,5 %	1,2 %
Total survey	75,2 %	9,6 %	13,1 %	2,1 %
Total from ECB data	75,5 %	6,6 %	11,1 %	6,9 %

Source: ESRB survey and ECB.

Notes: ECB totals refers only to counterparts in the euro area.

Figure 3

MMFs exposure to NFC in the euro area (EUR million and %)



Source: ECB.

Notes: 'Share of EA assets from NFC' refers to the ratio of MMF assets issued by euro area non-financial corporations to MMF assets issued by all euro area residents.

Given the breakdown in Table 2, MMFs represent an important funding source for banks in comparison to other sectors. ECB statistics on securities issues provide evidence on the relevance of MMFs with respect to the short-term funding (i.e. with maturities of less than one year) of euro area MFIs. As shown in Table 3, in the euro area they hold approximately 40 % of short-term debt issued by banks.

Table 3

Share of total euro area MFI short-term debt held by euro area MMFs (EUR million and %)

Period	MMF assets	Securities Issues	Ratio
2010Q2	320 802	734 187	43,7 %
2010Q3	314 738	743 246	42,3 %
2010Q4	299 593	572 050	52,4 %
2011Q1	289 694	617 695	46,9 %
2011Q2	245 488	582 244	42,2 %
2011Q3	238 795	613 012	39,0 %

Period	MMF assets	Securities Issues	Ratio
2011Q4	228 310	702 274	32,5 %
2012Q1	258 594	710 553	36,4 %
2012Q2	254 974	677 840	37,6 %

Source: ECB.

Moreover, while VNAV funds based in France have a substantial exposure to the domestic MFI sector (banks and other MMFs), CNAV funds in Ireland have a substantial exposure to non-EU MFIs (see **Table 4** and **Figure 4**). Funds based in Luxembourg, on the other hand, invest more in EU-based MFIs outside Luxembourg. Finally, in relative terms, MMFs in Germany, Italy and Spain invest more in the domestic government sector.

Table 4

Selected breakdowns of MMFs' investments by region/type of fund and sector (EUR million)

	CNAV funds based in Ireland				
	MFI	NFC	Gov.	OFI	Total
Domestic	12 661	1 531	57	2	14 251
Other EU	75 205	4 644	6 997	808	87 654
RoW	127 647	18 440	19 188	6 213	171 488
Total	215 513	24 615	26 242	7 023	273 393

	CNAV funds based in Luxembourg				
	MFI	NFC	Gov.	OFI	Total
Domestic	965	0	446	0	1 411
Other EU	57 262	9 463	6 237	3 631	76 593
RoW	32 954	6 101	23 906	735	63 696
Total	91 181	15 564	30 589	4 367	141 700

	VNAV funds based in France				
	MFI	NFC	Gov.	OFI	Total
Domestic	109 905	12 087	4 709	555	127 256
Other EU	53 949	11 218	1 732	50	66 949
RoW	3 100	678	0	0	3 778
Total	166 954	23 983	6 441	605	197 982

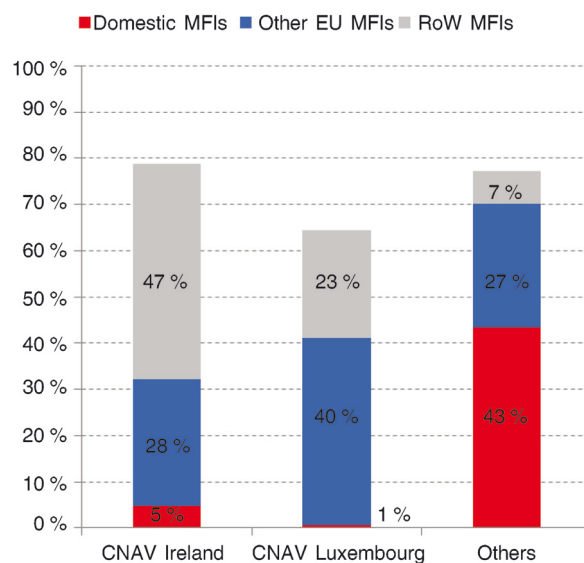
	Funds based in Germany, Italy and Spain				
	MFI	NFC	Gov.	OFI	Total
Domestic	6 390	213	10 093	101	16 797
Other EU	1 887	338	1 345	136	3 706
RoW	284	54	237	8	583
Total	8 561	604	11 675	245	21 086

Source: ESRB survey.

Notes: Total coverage is 65 % of AuM by MMFs based in the six reporting countries.

Figure 4

Share of investments in MFI by geographical origin (%)



Source: ESRB survey.

Notes: 'Others' includes funds from France, Italy, Spain and Germany plus VNAV funds from Ireland and Luxembourg. Coverage is 100 % of ESRB survey and approximately 70 % of total EU MMFs' AuM.

As regards **type of assets**, the survey shows that money market instruments (e.g. commercial paper, certificates of deposit) are the most important asset class in MMF portfolios (see **Table 5**). Reverse repos, used by MMFs to provide liquidity in exchange for collateral, account for just 9 % of total AuM, and are almost entirely with other MFI entities. Asset-backed securities (ABS) represent only a small fraction. The percentage of 'cash' (i.e. deposits with no or indeterminate maturity) is 6,6 % of assets in the sample; however, it is higher for CNAV funds based in Ireland (11 %) than for other funds (e.g. 2 % for CNAV based in Luxembourg and 2,5 % for ST-VNAV based in France).

Table 5

Allocation of investments by type of fund and asset instruments (%)

	Cash	Money market instruments		Reverse repo		ABS	Government debt	Other instruments/ not allocated
			o/w to MFIs		o/w to MFIs			
1-CNAV	7,9 %	58,1 %	48,9 %	11,4 %	11,3 %	1,1 %	13,7 %	7,9 %
2- Short term VNAV	4,0 %	77,5 %	67,3 %	5,8 %	5,8 %	0,1 %	8,4 %	4,5 %
3- VNAV (excl. ST-VNAV)	5,3 %	66,5 %	59,1 %	5,3 %	5,2 %	0,0 %	16,1 %	7,0 %
1- UCITS	6,4 %	62,9 %	54,1 %	9,7 %	9,6 %	0,7 %	13,2 %	7,3 %
2-Non-UCITS	8,9 %	73,6 %	61,1 %	1,2 %	1,2 %	0,1 %	12,6 %	4,1 %
Total	6,6 %	63,7 %	54,7 %	9,0 %	9,0 %	0,7 %	13,1 %	7,0 %

Source: ESRB survey.

Notes: Share as percentage of total AuM covered in the survey. The category 'cash' includes unrestricted bank deposits. Deposits with a fixed maturity are included in the 'other instruments' category.

The survey also includes data on the **maturity** of MMFs' assets; it appears that CNAV funds have a more conservative liquidity profile since they operate with shorter maturities than other funds. For example, around 39 % (EUR 133 billion) of CNAV AuM mature within one week compared with 22 % for short-term VNAV MMFs (mostly in France) and 16 % for other VNAV MMFs (see **Table 6**)⁽¹⁾.

Table 6

Breakdown of assets by type of fund and by maturity bucket of assets (%)

	1 day or less/ over-night	> 1 day; ≤ 1 week	> 1 week; ≤ 1 month	> 1 month; ≤ 3 months	> 3 months; ≤ 6 months	> 6 months; ≤ 1 year	> 1 year; ≤ 397 days	> 397 days (for MMFs other than ST-MMFs)	Coverage
1-CNAV	26,3 %	12,7 %	16,9 %	26,1 %	11,5 %	6,1 %	0,3 %	0,0 %	82 %
2- Short term VNAV	16,9 %	4,8 %	18,3 %	41,0 %	13,0 %	5,9 %	0,0 %	0,0 %	100 %
3- VNAV (excl. ST-VNAV)	12,4 %	3,3 %	13,5 %	32,7 %	20,4 %	16,3 %	1,5 %	2,4 %	99 %
1- UCITS	21,9 %	8,8 %	16,7 %	30,5 %	13,4 %	8,2 %	0,5 %	0,6 %	87 %
2-Non-UCITS	14,5 %	2,7 %	15,3 %	36,5 %	19,7 %	10,8 %	0,4 %	0,3 %	100 %
Total	21,1 %	8,8 %	16,5 %	30,9 %	13,8 %	8,4 %	0,5 %	0,5 %	89 %

Source: ESRB survey.

Notes: Coverage refers to the share of total AuM (as identified in the survey) and for which data on maturity breakdown is available. The category '1 day or less' also includes deposits with no or unconstrained maturity.

Finally, ECB statistics also provide an overview of fund assets by currency. The figures in Table 7 show that the largest share of assets held by Irish MMFs is denominated in GBP, while the largest share held by MMFs based in Luxembourg is denominated in USD. Assets denominated in currencies other than the euro are a negligible part of total AuM by funds in France, Germany, Italy and Spain. Anecdotal evidence suggests that MMFs are not running significant currency mismatches.

Table 7

Currency breakdown of assets for MMFs based in Ireland, Luxembourg and France (EUR million and %)

	Currency of denomination of assets	Domestic MFI debt securities	Other EA MFI debt securities	Domestic non-MFI debt securities	Other EA non-MFI debt securities	Extra EA debt securities	Extra EA deposits	Other assets	Totals by currency	% by currency
Ireland	EUR	180	14 359	1 246	7 470	18 839	10 929		53 023	17,13
	USD	176	9 157	5	542	66 759	18 737		95 376	30,82
	GBP	108	25 300	285	2 596	86 313	32 525		147 127	47,54
	CHF	0	0	0	0	0	0		0	0,00
	JPY	0	0	0	0	0	0		0	0,00
	Not available ⁽¹⁾							13 945	13 945	4,51
	Totals by item	464	48 816	1 536	10 608	171 911	62 191	13 945	309 471	100,00

⁽¹⁾ Percentages refer to total AuM of funds covered by the ESRB survey and for which a maturity breakdown is available (e.g. 81 % of total AuM for CNAV funds and 100 % for other fund categories). These percentages may therefore change should the coverage be extended to all funds.

	Currency of denomination of assets	Domestic MFI debt securities	Other EA MFI debt securities	Domestic non-MFI debt securities	Other EA non-MFI debt securities	Extra EA debt securities	Extra EA deposits	Other assets	Totals by currency	% by currency
Luxembourg	EUR	712	20 257	1 277	30 303	18 660	6 631		77 840	31,06
	USD	838	8 848	111	5 700	61 630	35 607		112 734	44,98
	GBP	211	3 642	19	2 803	9 034	3 825		19 534	7,79
	CHF	167	2 026	0	655	1 894	301		5 043	2,01
	JPY	0	0	0	75	362	0		437	0,17
	Not available ⁽¹⁾							35 022	35 022	13,97
	Totals by item	1 928	34 773	1 407	39 536	91 580	46 364	35 022	250 610	100,00
France	EUR	155 494	45 834	31 748	31 076	38 989	860		304 001	76,90
	USD	271	124	58	132	263	4		852	0,22
	GBP	0	0	0	0	45	0		45	0,01
	CHF	0	320	27	0	341	0		688	0,17
	JPY	0	0	0	0	0	0		0	0,00
	Not available ⁽¹⁾							89 757	89 757	22,70
	Totals by item	155 765	46 278	31 833	31 208	39 638	864	89 757	395 343	100,00

Source: ECB.

⁽¹⁾ The category 'Not available' refers to MMFs' holding of (i) share and other equity (generally negligible), (ii) other MMFs' share, and (iii) remaining assets. In the case of France the component (ii) is significant, around EUR 50 billion, most likely denominated in euro.

III.3 Overview of MMF investors

ECB statistics on MMFs offer only a broad view of the MMF investor composition, particularly for the euro area. Data from the ESRB survey complement the ECB statistics with additional information on the sectoral breakdown of the investor base, in particular for investors outside the euro area. Table 8 summarises the geographical breakdown of MMFs' investors by region and type of fund from the two sources available.

As regards **geographical breakdown**, funds based in France, Italy and Spain clearly have a domestic investor basis, while funds based in Ireland and Luxembourg rely much more on foreign demand. There are, however, some discrepancies between the two data sources in the geographical composition of investors, in particular the split of euro area/EU versus rest of the world (RoW) investors in the case of funds based in Ireland and Luxembourg (see **Table 8**). These might be due to different coverage and the objective difficulties of fund managers in classifying the region and sector of origin of their investors. According to the survey data, non-EU investors account for a sizeable part of the MMF investor base (41 %), which is much higher in the case of Ireland (70 %). Accordingly, 90 % non-EU investors in EU MMFs chose to invest in CNAV funds. Finally, the investor base of German MMFs is available only in the ECB statistics, which reveal a predominance of domestic investors.

Table 8

Comparison of the geographical breakdown of investors in European MMFs from ECB statistics and the ESRB survey (EUR millions and %)

		DOMESTIC	EURO AREA (excl. domestic)	EU (excl. domestic)	RoW ⁽¹⁾	Residual	Total (EUR Mn)	DOMESTIC	EURO AREA (excl. domestic)	EU (excl. domestic)	RoW
France	ECB data	368 496	16 718	n/a	2 676	7 453	395 343	93 %	4 %	n/a	1 %
	Survey	193 645	n/a	2 475	67	n/a	196 187	99 %	n/a	1 %	0 %
Ireland	ECB data	15 789	36 487	n/a	252 693	4 502	309 471	5 %	12 %	n/a	82 %
	Survey	17 018	n/a	71 563	202 364	n/a	290 945	6 %	n/a	25 %	70 %

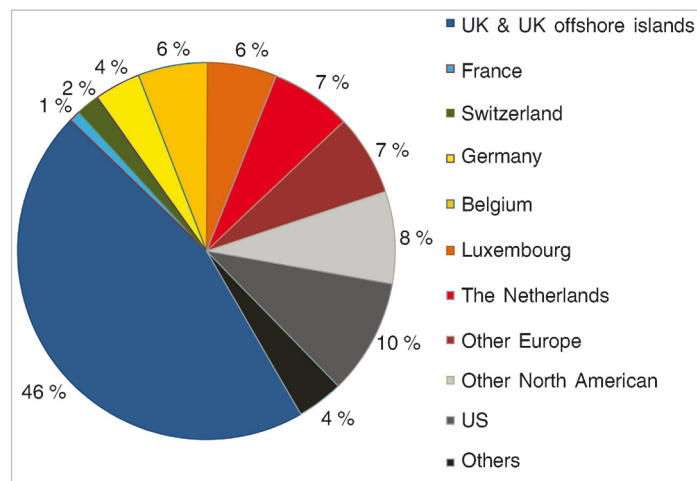
		DOMESTIC	EURO AREA (excl. domestic)	EU (excl. domestic)	RoW ⁽¹⁾	Residual	Total (EUR Mn)	DOMESTIC	EURO AREA (excl. domestic)	EU (excl. domestic)	RoW
Luxembourg	ECB data	10 172	81 766	n/a	152 159	6 513	250 610	4 %	33 %	n/a	61 %
	Survey	12 493	n/a	92 651	79 340	n/a	184 485	7 %	n/a	50 %	43 %
Italy	ECB data	7 820	12	n/a	22	80	7 934	99 %	0 %	n/a	0 %
	Survey	7 820	n/a	15	20	n/a	7 854	100 %	n/a	0 %	0 %
Spain	ECB data	8 860	72	n/a	28	39	8 999	98 %	1 %	n/a	0 %
	Survey	8 881	n/a	100	0	n/a	8 981	99 %	n/a	1 %	0 %
Germany	ECB data	4 120	1 547	n/a	384	26	6 077	68 %	25 %	n/a	6 %
	Survey	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total	ECB data	435 941	137 229	n/a	408 653	18 736	1 000 559	44 %	14 %	n/a	41 %
	Survey	239 857	n/a	166 804	281 791		688 452	35 %	n/a	24 %	41 %

Source: ESRB survey and ECB.

⁽¹⁾ Equivalent to non-EU residents for the ESRB survey and non-euro area residents for the ECB dataset.

The uncertainty regarding the data relating to the investor base is further illustrated by IMMFA data, which indicate a much smaller share of non-EU based investors for EU CNAV funds (see **Figure 5**).

Figure 5
Investors of IMMFA MMFs by country (December 2010)



Source: IMMFA (mentioned in ESRB Occasional Paper, 2012).

Looking at the **sectoral breakdown** of the EU MMF investor base (see **Table 9**), the survey shows the importance of the MFI sector as investor (32 % of the investor base); the corporate sector comes second with a share of 21 %, followed by the insurance corporations and pension funds sector (ICPF), with 13 %, and other financial institutions (OFIs; e.g. other investment funds, hedge funds) with 12 %. MMFs are therefore not only an important funding source for banks, but banks themselves are also important investors in MMFs.

Table 9

Investor base for selected categories of funds (EUR millions and %)

Funds type	Reporting countries	TOTAL (EUR Mn)	MFI	NFC	OFI	ICPF	HH	Others or n/a	Coverage ⁽¹⁾	Adjusted coverage
1-CNAV	Ireland	272 962	37,8 %	10,7 %	22,0 %	3,2 %	0,1 %	26,3 %	100,0 %	73,7 %
	Luxembourg	141 700	48,8 %	32,5 %	1,5 %	3,1 %	13,5 %	0,6 %	88,0 %	87,5 %
2- Short-term VNAV	France	103 389	14,7 %	22,4 %	1,1 %	50,7 %	5,1 %	6,0 %	55,6 %	49,7 %
	Other countries	35 598	21,5 %	11,2 %	31,9 %	24,7 %	1,1 %	9,5 %	100,0 %	90,5 %
3- VNAV (excl. ST-VNAV)	France	92 798	25,5 %	44,0 %	5,7 %	10,0 %	5,7 %	9,1 %	65,4 %	56,3 %
	Other countries	44 710	8,7 %	3,0 %	5,5 %	10,2 %	55,0 %	17,5 %	100,0 %	82,5 %
1- UCITS	All countries	636 383	34,4 %	20,2 %	12,7 %	10,6 %	7,1 %	15,0 %	99,4 %	84,4 %
2-Non-UCITS	All countries	54 774	7,4 %	29,1 %	2,3 %	37,8 %	17,6 %	5,8 %	97,6 %	91,8 %
Total	All countries	691 157	32,2 %	20,9 %	11,9 %	12,7 %	7,9 %	14,3 %	70,6 %	56,4 %

Source: ESRB survey.

⁽¹⁾ Coverage by funds type calculated with reference to the sums of complete and partial reporting. Coverage for totals is calculated with respect to the total fund population of the six reporting countries according to ECB data. Adjusted coverage is the netted coverage of the category 'Other or n/a'. **Cells marked in bold refer to more than EUR 20 billion.**

Looking at some **national specificities**, the data show the dominance of MFI investors for CNAV funds based in Luxembourg and Ireland; Irish CNAV funds are also very relevant for OFI investors from outside the EU (22 %). Insurance companies and pension funds are the main investors in ST-VNAV funds based in France. The largest concentration of NFC investments in MMFs is observed for Luxembourg-based CNAV funds (EUR 46 billion), French-based VNAV excluding ST (EUR 41 billion) and Irish CNAV funds (EUR 29 billion). Finally, the vast majority of MMF investors in Spain and Italy belong to the household sector. The total figure for EU household investments in MMFs for the six reporting countries is EUR 32 billion. A sizeable share of non-EU household investors goes to CNAV funds in Luxembourg (EUR 16 billion).

III.4 Industry concentration

The European MMF industry is fairly concentrated, particularly for CNAV funds. According to the survey, the top ten CNAV funds in Europe — out of a total of 123 — have a market share of around 55 %, representing EUR 226 billion (see **Table 10**). This compares with 33 % for the top ten VNAV funds, all but one of which is based in France. In the case of non-UCITS funds, the top ten funds account for 74 % of the market share ⁽¹⁾.

Table 10

Concentration of top 3, 5, 10 and 20 funds for selected categories of funds (%)

Funds	CNAV, Ireland	CNAV, Luxembourg	France	All CNAV	All VNAV	UCITS	Non-UCITS	All funds
First 3	26,10 %	65,40 %	16,70 %	27,60 %	15,10 %	16,50 %	46,10 %	12,30 %
First 5	38,40 %	77,30 %	23,10 %	36,50 %	21,10 %	22,70 %	55,70 %	17,60 %
First 10	64,00 %	86,80 %	35,90 %	55,50 %	32,80 %	34,40 %	73,70 %	26,80 %

⁽¹⁾ Mostly due to a large VNAV fund based in France which represents 35 % of the non-UCITS funds in the survey.

Funds	CNAV, Ireland	CNAV, Luxembourg	France	All CNAV	All VNAV	UCITS	Non-UCITS	All funds
First 20	84,30 %	N/A	50,50 %	77,60 %	48,10 %	52,20 %	88,80 %	40,60 %

Source: ESRB survey

Notes: Shares for the categories 'France' and 'All funds' are calculated against total AuM as reported in the ECB statistics for the reporting countries; for all other categories, shares refer to total AuM of funds for which the corresponding information (CNAV or VNAV, UCITS or non-UCITS) is available, respectively 89 % and 82 % of the total.

An analysis of concentration by management group reveals that the top five groups managing MMFs in Europe account for 40 % of the total EU MMF industry, and the top ten for 54 %. The CNAV fund industry is even more concentrated, with the top five groups accounting for 87 % of the business in Luxembourg and 59 % in Ireland. With respect to non-UCITS funds, the top three operators in Europe manage around 67 % of the sector. Of the top ten groups in Europe, seven are connected to banks (including four of the top five), two are independent asset managers and one belongs to an insurance group.

Table 11

Concentration of MMF industry by fund management group (%)

Sponsors	CNAV, Ireland	CNAV, Luxembourg	France	All CNAV	All VNAV	UCITS	Non-UCITS	All funds
First 3	43,90 %	84,10 %	46,20 %	51,10 %	43,90 %	37,90 %	67,00 %	30,00 %
First 5	59,30 %	86,80 %	58,60 %	61,10 %	55,70 %	47,10 %	77,00 %	40,50 %
First 10	73,80 %	N/A	71,10 %	81,60 %	70,20 %	62,30 %	91,90 %	53,60 %

Source: ESRB survey

Notes: Shares for the categories 'France' and 'All funds' are calculated against total AuM as reported in the ECB statistics for the reporting countries; for all other categories, shares refer to total AuM of funds for which the corresponding information (CNAV or VNAV, UCITS or non-UCITS) is available, respectively 89 % and 82 % of the total.

III.5 CNAV funds deviation from parity

In the past European MMFs showed deviations between their shadow price and their constant price (i.e. they suffered unrealised mark-to-market losses). According to the ESRB survey, out of a sample of 76 funds (with AuM of EUR 414 billion), 18 CNAV funds faced deviations of up to 10 bps and 15 CNAV funds experienced deviations of more than 10 bps during the period from June 2007 to June 2012 (see **Table 12**). Moreover, 13 of the 15 CNAV funds that faced deviations of more than 10 bps account for about EUR 72 billion of AuM⁽¹⁾; those include three of the ten largest funds in the sample. For some funds, however, the deviations were limited to the credit event following the Lehman collapse in 2008. It should be noted that these data cover both the periods before and after the MMF regulatory reform by CESR/ESMA, and that deviations occurring during these periods cannot be distinguished from the survey data.

Table 12

CNAV fund deviations from parity in the period June 2007 to June 2012 (EUR million and %)

Deviation	Total	with available data on size			
	Number of funds	Number of funds	Total NAV	Share	NAV first 3
Up to 10 bps	18	13	77,872	28,00 %	45,935
11 bps or more	15	12	72,253	26,50 %	45,935

Source: ESRB survey.

Notes: Number of deviations from parity in the period from June 2007 to June 2012; coverage: 78 CNAV (data on fund size was available for 65 funds only)

⁽¹⁾ Data for the other two CNAV funds are not available.

IV. ESRB RECOMMENDATIONS

IV.1 Scope of the Recommendations

The **policy objective** guiding the ESRB Recommendations is to mitigate the risks posed by EU-based MMFs to financial stability resulting from their bank-like features and their susceptibility to an investor run (in particular for CNAV funds). The Recommendations also aim at a proper and consistent implementation in Europe of the relevant IOSCO Recommendations.

The Commission indicated its intention to develop Union-wide legislative measures related to UCITS and MMFs. Consistent with the aim of a harmonised Union-wide implementation, the Commission is the sole **addressee** of the ESRB Recommendations. The Commission may seek advice from the European Supervisory Authorities (ESAs) — especially the ESMA — in relation to the implementation of the ESRB Recommendations and, in order to ensure a harmonised application of the Recommendations, may request them to develop the necessary technical standards, guidelines and recommendations (including reporting and disclosure templates). The establishment of technical standards related to MMF regulation is beyond the scope of this annex.

As regards the implementation period for the Recommendations, and in line with the envisaged timeline of the reform of the UCITS framework, the Commission is invited to report back to the ESRB by end-June 2013 and end-June 2014 on the progress of the implementation of the Recommendations. For Recommendation A, transitional arrangements are additionally proposed.

In terms of **funds coverage**, in line with the IOSCO Recommendations, the ESRB Recommendations target collective investment undertakings (CIUs) based in the EU that are offered/sold to investors as seeking to maintain the principal, provide daily liquidity and target returns in line with money market rates. They especially address funds which are labelled or sold as an MMF or as having the characteristics of an MMF (i.e. seeking maintenance of capital value, daily redemptions and money market rates) or funds sold in a way that gives that impression (e.g., sold as cash funds, liquid or liquidity funds, or funds with short maturity). If no explicit reference is made to the type of fund (e.g. CNAV, VNAV, short-term MMF, UCITS, non-UCITS), the ESRB Recommendations are intended to cover all types of European MMFs as defined above, irrespective of their name or applicable regulatory framework.

Each Recommendation is discussed in detail below, and its economic rationale and an assessment are set out, including possible advantages and disadvantages and, where possible, the potential market impact. For the assessment, extensive use is made of research papers, the results of a dedicated data collection and discussions with market participants.

IV.2 Recommendation A — Mandatory move to variable net asset value

The Commission is recommended to ensure that the relevant Union legislation:

- 1. requires MMFs to have a fluctuating net asset value;*
- 2. requires MMFs to make general use of fair valuation and to restrict the use of amortised cost accounting to a limited number of predefined circumstances.*

IV.2.1 Economic rationale

a) Policy options

A major systemic risk consideration regarding MMFs is that they are shadow banking entities that perform an economic function similar to banks. While subject to market supervision, they are without the equivalent legal form and the regulatory framework applicable to banks (see Section II).

The IOSCO Recommendations (October 2012), as endorsed by the FSB, aim to address this issue. The FSB's consultative document (November 2012) in relation to shadow banking reform endorses the work of IOSCO. This document states that the risks can be addressed in two ways: (i) by removing the features of MMFs that increase their susceptibility to investor runs, i.e. remove the deposit-like characteristics that they share with banks, (ii) by allowing MMFs to retain their deposit-like characteristics, but to implement risk-mitigating measures in the same manner as prudential banking regulation.

The first possibility would require reforms to the valuation of MMF shares to remove the deposit-like features. Consequently, the valuation of the shares would need to better reflect the value of the MMF's underlying assets. This implies that MMFs will have to use the VNAV model and make general use of fair valuation; any continued use of amortised cost accounting should not allow the value of the assets to vary significantly from the fair value. Alternatively,

one could allow MMFs to continue using the CNAV model, but under the condition of increased alignment with banking regulation. In particular, they would need to function with requirements equivalent to the capital, liquidity and other prudential requirements that apply to banks and protect them against depositor runs.

This is reflected in Recommendation 10 of IOSCO: *'MMFs that offer a stable NAV should be subject to measures designed to reduce the specific risks associated with their stable NAV feature and to internalize the costs arising from these risks. Regulators should require, where workable, a conversion to floating/variable NAV. Alternatively, safeguards should be introduced to reinforce stable NAV MMFs' resilience and ability to face significant redemptions.'* The FSB further adds in its November 2012 consultative document referred to above that where such conversion is not workable, the safeguards required *'should be functionally equivalent in effect to the capital, liquidity, and other prudential requirements on banks that protect against runs on their deposits'*. Recommendation 4 of IOSCO further states that *'MMFs should comply with the general principle of fair value when valuing the securities held in their portfolio. Amortized cost method should only be used in limited circumstances.'*

In considering a move from CNAV to VNAV, careful consideration should be given to the ongoing international developments (see Section I.1). The FSB is scheduled to finalise its package of shadow banking recommendations in September 2013 (FSB, November 2012). Given the interconnectedness of markets and the strong adaptive capacity of the shadow banking system, it may be argued that proposals in relation to shadow banking, of which MMFs are part, should be comprehensive and that a piecemeal or incomplete approach would be quickly arbitrated. The FSB stated that, once its final recommendations are prepared, it will work on the procedures to ensure that the various shadow banking policy recommendations are implemented appropriately. However, it is not considering further work on the recommendations on MMFs themselves.

In line with the fundamental nature of the MMF product, the preferred policy option is to strengthen MMFs' investment features and to reduce their bank/deposit-like features through the compulsory conversion of CNAV funds into VNAV funds. The underlying rationale for going further than IOSCO's Recommendation 10 is the reduced incentive for investors to run, increased price transparency and reduced interconnectedness, as discussed in greater detail below.

b) Reduction of risks

While investor runs can occur with all types of funds that provide maturity or liquidity mismatch, CNAV funds have characteristics that suggest that an investor may be more likely to seek a 'first-mover advantage' in periods of market stress (see Section II.1). A conversion to VNAV will reduce the specific risks associated with CNAV funds and the effects of a credit event. The VNAV model may **reduce the shareholder's incentive to run** when a fund has experienced a modest loss. As outlined in Section II, even small losses may cause a run on an MMF which could spill over to other MMFs. The first-mover advantage created by using amortised cost accounting and NAV rounding may be reduced by forcing shareholders to redeem at an NAV that reflects current losses, thus reducing the transfer of losses to the remaining shareholders.

The move away from amortised cost accounting and rounding may also provide **price transparency** to investors, as it allows fluctuations in share prices as is the case for any other CIU, and may improve investors' understanding of the risks inherent to these funds and their difference to deposits. It may therefore lower investor expectations that MMFs may not be vulnerable to losses, and reduce the potential for the risk of a run when a fund fails to live up to those expectations. Regular fluctuations are more likely to be expected, and therefore accepted, by investors, as is the case for other investment products, because declines in market prices will then not necessarily signal an imminent default of portfolio securities⁽¹⁾. The VNAV may reduce the uncertainty on the quality of portfolio assets, as this will be reflected in the NAV.

⁽¹⁾ During the summer of 2011, for example, fluctuations occurred in the value of European VNAV MMFs reflecting changing market conditions and increased volatility. Despite these fluctuations, there was little impact on redemptions, which suggests that investors accept temporary variations (including negative ones) in the NAV of their funds.

MMFs that invest in very short maturities with less credit and interest rate risk will presumably show this lower risk via a less fluctuating NAV. As investors will be able to compare day-to-day fluctuations in value in different market conditions, the information will help investors to make decisions that better match their risk-return preferences.

Even if the abovementioned first-mover advantage may be reduced, the incentive to redeem before others may remain, although to a lesser extent. An MMF does not have 100 % daily liquidity, so that there may be extreme cases where investor redemptions cannot be met. Hence, in case of very high redemptions, investors still may have an incentive to redeem (as is the case for any investment fund), because subsequent redemptions may force the fund to sell less liquid assets and potentially incur losses. Accounting uncertainties which are also present in VNAV funds may also contribute to the risk of runs.

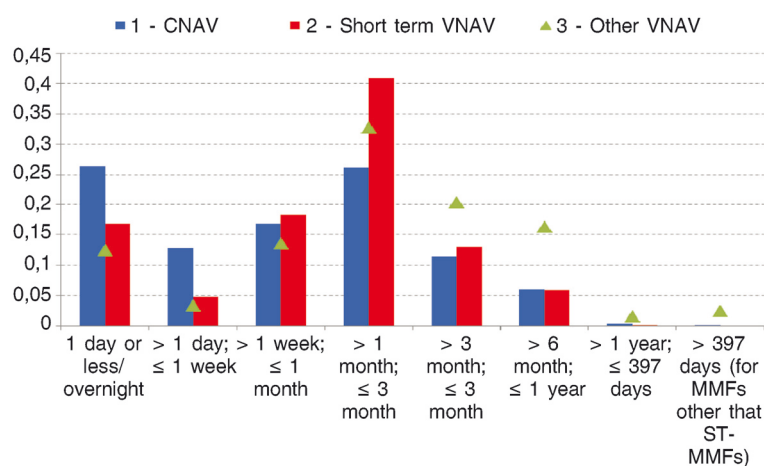
To further limit such risks, also with regard to VNAV funds, the Recommendation addresses the valuation of single instruments. Generally, MMFs should ensure that the assets are valued according to current market prices, provided that those prices are available, reliable and up-to-date. Where market prices are not available or reliable, funds should generally value the securities held in their portfolios using valuation models based on the current yield curve and issuer spread.

The Recommendation does not imply a full prohibition of amortised cost accounting. However, if amortised cost accounting is continued to be allowed, strong safeguards must apply to minimize the risk of mispricing. Consistent with the IOSCO recommendation, amortised cost accounting should only be used where it is deemed to allow for an appropriate approximation of the price of the instrument.

Restrictions for the use of amortised cost accounting with regard to the residual maturity of the instrument should be implemented as that would considerably reduce the risks of discrepancy between the CNAV price and the actual price of an MMF. While IOSCO recommends a maximum of 90 days, instruments with an even lower residual maturity can give rise to sensitivities to interest and credit risk. In that respect, it should be noted that European MMFs (particularly CNAV funds) hold a high proportion of assets with residual maturity of less than 90 days (see **Figure 6**). In the US, the SEC (1977) allows the valuation at amortised cost in mutual funds only in case of a remaining maturity of 60 days or less together with additional safeguards⁽¹⁾. Even though all limitations are applied cumulatively, there would therefore be a risk of extensive use of amortised cost accounting if a maximum of 90 days was considered. For a CNAV fund, mispricing of even 0,5 % of its assets can lead to incentives to run, as investors may try to redeem at par before the fund 'breaks the buck'.

Figure 6

Maturity profile of assets according to fund type (%)



Source: ESRB survey.

Notes: The category '1 day or less' also includes deposits with no or unconstrained maturity. Coverage of CNAV funds is 82 % of AuM.

⁽¹⁾ Currently, Rule 2a-7 allows for a deviation of this general rule for MMFs, which are permitted to use amortised cost accounting and rounding without that limitation. According to FSOC (2012), a conversion to VNAV would require the removal of this exemption and MMFs would hence be required to value their portfolios in the same way as all other mutual funds, including using amortised cost valuation only in case of a remaining maturity of 60 days or less and other additional conditions.

Recommendation B on liquidity requirements will also address VNAV funds and should further reduce the risk of runs. It should be acknowledged, though, that even if risks are likely to be reduced, the risk of runs cannot be completely eliminated as MMFs provide maturity transformation.

Finally, Recommendation A may help to address the systemic risk associated with the **interconnectedness** of MMFs' sponsors, since any fluctuations of the VNAV might reduce the reliance of investors on implicit and discretionary sponsor support. This is because sponsors of VNAV funds have fewer incentives to step in to stabilise the share price.

IV.2.2 Assessment

a) Possible impact

Any policy options in relation to MMFs should be thoroughly assessed as regards their potential impact on financial stability and market functioning. The policy option now most discussed internationally is the mandatory move from CNAV to VNAV MMFs. Given the international linkages created by MMFs, a global alignment of regulatory intervention would be the optimal solution. However, at the date of this report, it is unknown whether further regulatory reforms will take place in the US (the biggest MMF market worldwide) in the foreseeable future. At the same time, legislative initiatives regarding the UCITS framework are ongoing in Europe, which may provide a window of opportunity to introduce measures that further reduce the systemic risks resulting from MMFs (see Section I).

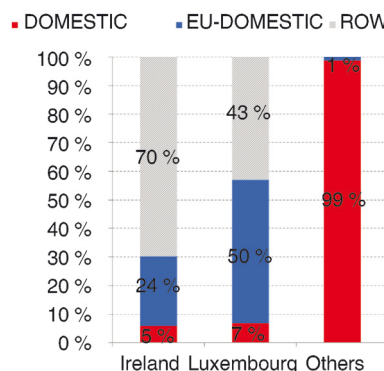
On the one hand, the consequences of a (unilateral) mandatory move to VNAV for European MMFs could be insignificant for the European MMF fund industry, on the assumption that investors in CNAV MMFs are not sensitive to the actual classification of a fund and are more concerned with its underlying assets. On the other hand, there could be a sudden outflow from European CNAV funds to other jurisdictions or alternative products. This could have a serious impact on the pricing and availability of short-term funding for European borrowers, in particular banks.

At the round table organised by the ESRB with private sector stakeholders, a number of industry participants argued that a reduction of investor demand might be unlikely for EU investors, but that it would be greater for non-EU investors, particularly for US investors who are especially attracted by the CNAV feature. A reduction in US investor demand could potentially be sizeable, if no similar regulatory reform is undertaken or expected in the US for the foreseeable future. Although it is very hard to gauge the impact of a possible unilateral move to VNAV in Europe, not least because of the uncertainties regarding investor behaviour, Section II provides a number of useful data that can at least give an indication.

CNAV funds have a substantial exposure to non-EU MFIs (EUR 161 billion overall) compared to EU MFIs' exposure (EUR 146 billion), mostly driven by Irish funds (EUR 128 billion, 47 % of total AuM). The cross-border exposure of Irish CNAV funds to MFIs within the EU is also large (EUR 75 billion). For Luxembourg, the exposure to EU MFIs is higher (EUR 58 billion) than the non-EU exposure (EUR 33 billion), although in this case the coverage is lower and these figures might underestimate the true exposure. Funding to European MFIs amounting to EUR 146 billion could therefore potentially be affected by a mandatory move to VNAV, although it is likely that some of this funding would remain invested in European MFIs, e.g. through direct holdings of securities issued by European banks or through bank deposits.

There is considerable uncertainty regarding the geographical breakdown of MMF investors, as illustrated by the differences between the ECB statistics and the figures from the ad-hoc survey conducted by the ESRB (see **Table 9** in Section III.3). CNAV funds are mainly based in Ireland and Luxembourg and Table 9 in Section III.3 provides information on the geographical and sectoral breakdown of their investor base (see also **Figure 7** and **Figure 8** below).

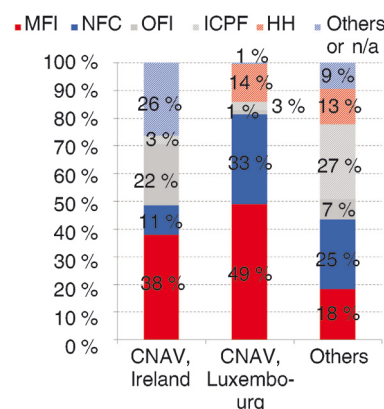
Figure 7

Geographical breakdown of MMF investors (%)

Source: ESRB survey.

Notes: 'Others' includes funds from France, Germany, Italy and Spain. Coverage is 100 % of ESRB survey and approximately 70 % of total EU MMFs' AuM.

Figure 8

Sectoral breakdown of MMF investors (%)

Source: ESRB survey.

Notes: 'Others' includes funds from France, Germany, Italy and Spain plus VNAV funds from Ireland and Luxembourg. Coverage is 100 % of ESRB survey and approximately 70 % of total EU MMFs' AuM.

According to the results of the ESRB survey, the share of non-EU investors in Irish MMFs is 70 % (or EUR 202 billion) of the total (see **Figure 7**). However, according to the ECB statistics covering the whole population of MMFs, investors from outside the euro area account for 82 % (or EUR 253 billion). It is not plausible, however, that investors from the United Kingdom and other EU Member States outside the euro area account for only EUR 51 billion (the difference between the two figures) while GBP denominated funds in Ireland account for some EUR 134 billion. Although a precise figure is not available, one could consider the figure from the ESRB survey (EUR 202 billion) as an upper bound of an interval; the lower bound could be derived from the ECB statistics as the total RoW sector minus the total value of GBP denominated funds (i.e. EUR 119 billion, or EUR 253 billion minus EUR 134 billion). All in all, the share of RoW investors in Ireland could therefore be anywhere between EUR 119 billion and EUR 202 billion. According to the survey, these investors invest primarily in CNAV funds (84 %).

Regarding Luxembourg, data from the survey aimed only for a partial coverage of the MMF investor base, around 74 % of the total money invested. According to these data, the RoW sector (i.e. outside the EU) accounts for some EUR 79 billion, or 43 % of the total investor base. The equivalent figure from the ECB statistics, which however includes investors from the United Kingdom, is EUR 152 billion or 61 % of the total investor base. On deducting GBP denominated funds based in Luxembourg (equivalent to around EUR 20 billion), the range between the two figures remains quite large (from EUR 79 billion to EUR 132 billion).

As concerns CNAV funds, only data from the ESRB survey are available. According to this source, investors from outside the EU account for EUR 257 billion or 62 % of the total investment base. However this number is likely to be overestimated given the uncertainty on the origin of investors.

Overall, according to the results of the ESRB survey, there is therefore a potential of EUR 257 billion of investor demand from outside the EU (or 25 % of the total), which could be specifically attracted by the CNAV feature; unfortunately, the geographical breakdown of the investor base does not permit identification of the class of US investors. Should a move to VNAV trigger the departure of these investors, potentially a quarter of the European MMFs' AUM could therefore be affected. This may have an impact on the funding of MFIs as well. However, as CNAV funds invest largely outside the EU (see **Table 4** in Section III.2), the impact on European MFIs may be more limited. Moreover, it is likely that the share of non-EU investors is heavily overstated in the survey. According to IMMFA data, 10 % or about EUR 40 billion can be attributed to US investors; a direct impact by the departure of those investors would hence be rather small.

b) Transitional arrangements

Transitional arrangements for a compulsory move to VNAV would be needed for several reasons. First, the conversion from CNAV to VNAV could be operationally challenging for managers and investors alike as IT and back office systems would possibly need to be restructured. Second, there may be large redemptions by investors seeking to avoid potential losses in case the prevailing CNAV differs from the 'true' VNAV. It is therefore recommended to have a sufficiently long transition period for existing MMFs, during which the CNAV can be maintained to allow for the necessary adjustments. The transitional period for existing CNAV funds could be at least two years after the final publication of the applicable rules. Moreover, MMFs should announce the shift to VNAV and explain its effects carefully well before the change is implemented. This should be sufficient time, too, for investors to take into account any reforms that may be implemented for MMFs in the US, helping to mitigate concerns about front-running.

c) Capital requirements as possible alternative

Rationale

If a conversion to VNAV is not workable, the FSB (November 2012) proposes the alternative of the implementation of requirements that will have the same effect as prudential banking regulation. Should there be no European legislation requiring the mandatory conversion of all CNAV MMFs to VNAV, strict safeguards, including capital requirements, would be applied in alignment with banking regulation.

Below, the focus is on capital requirements. The underlying rationale for formal capital requirements is that, conceptually, there are parallels between CNAV funds and bank deposits (which are protected via bank capital requirements). The aim of capital requirements for CNAV funds is to increase their capacity to bear losses that can arise from asset defaults or from asset sales to meet redemption requests that threaten the stable value per share. This may mitigate the systemic risk associated with such funds, as it would reduce the first-mover advantage and the motivation for investors to redeem in periods of stress, as long as they expect losses to be less than the size of the capital buffer ⁽¹⁾.

In addition to capital requirements, CNAV MMFs could be required to apply for a limited-purpose banking licence (see European Parliament, 2012). This would ensure that CNAV funds are subject to bank-like prudential regulation — especially regarding capital. It would further allow such entities to benefit from deposit insurance and central bank liquidity, just as banks do.

Possible models

Two possible designs for capital requirements are under discussion at the international level: (i) an NAV buffer funded by investors, and (ii) capital requirements for the manager. Both models are discussed in greater detail below.

i) NAV buffer funded by the market

The first alternative would be an NAV buffer, where the MMF would create a fund-level capital reserve by retaining a portion of its income as a potential backstop against losses. A minimum NAV buffer could be set by legislation, and the fund could stop retaining income once this minimum buffer is reached. However, the concept has several disadvantages (see IOSCO, October 2012).

⁽¹⁾ See for example Gordon and Gandia (2012); Squam Lake Group (2011); FSOC (2012).

A sufficiently large reserve would take time to accumulate, and the build-up of the buffer over an extended period would be of limited use for the transitional period. A smaller buffer may accrue more quickly but would be of limited use; it could even give the incorrect impression that investor losses have greater protection than they actually do, which may increase systemic risk. In the present low interest rate environment, the build-up of a substantial buffer would also be very difficult to achieve.

The build-up of the buffer may further create a transfer of benefits from existing shareholders, who contribute to the establishment of the buffer, and future shareholders, who may later benefit from it.

As the buffer will directly reduce the yield the fund can offer, investments in the MMF may become less attractive and investor demand may wane. Funds might exit the market to avoid the buffer, reducing the size of the industry and the availability of an important short-term funding source for MFLs.

Finally, since the buffers would be provided by the funds' shareholders, managers/sponsors would not have a financial share in them, possibly reducing their incentive for prudent risk management.

ii) Capital requirements for the sponsor/explicit sponsor guarantee

The second alternative would require MMF managers/sponsors to provide an explicit commitment for financial support that is often implicitly assumed. Such an explicit commitment would make the (currently discretionary) support that MMFs have often relied on in the past obligatory and force the sponsor/manager to internalise the related cost. Such an explicit commitment is reasonable because, as discussed in Section II.2, one source of systemic risk related to MMFs is the discretionary nature of sponsor support.

MMF managers, or more generally the sponsors, could be required to establish and finance an escrow that absorbs the losses of the MMF. The capital would be held outside the MMF and would be equity owned by the sponsor/guarantor, and not a liability of the MMF. Investors would contribute indirectly, e.g., by increased costs/fees, which may reduce investor demand. Alternatively, the manager/sponsor could also provide an explicit guarantee under the condition that the manager/sponsor is a regulated entity that is subject to prudential capital requirements.

Size

A capital buffer/requirement should be high enough to offer substantial protection against losses and so effectively reduce the risk of investor runs. Otherwise, there would be similar incentives to run for shareholders in a fund that is perceived to be at risk of losses that exceed its capital buffer, or in a fund where uncertainty has arisen about the guarantor's ability to provide for support. The capital requirement for the explicit guarantee provided by sponsors, specifically in case the CNAV model were to be maintained, would need to be consistent with the respective regulatory capital requirements for banks.

The **Squam Lake Group** (2011) suggests considering the amounts that sponsors have contributed in the past to prevent CNAV funds from breaking the buck when setting the size of the required buffer. E.g., a buffer of at least USD 0.03 per share would have been necessary in the two-day period following Lehman's bankruptcy, where the Reserve Primary Fund reported a minimum share price of 97 cents.

The **FSOC** (2012) proposes a buffer tailored to the riskiness of the fund's assets, with: (i) no buffer requirement for cash, Treasury securities, and Treasury repos (repos collateralised solely by cash and Treasury securities); (ii) a 0.75 % buffer requirement for other daily liquid assets (or for weekly liquid assets, in the case of tax-exempt funds); and (iii) a 1.00 % buffer requirement for all other assets. The NAV buffer is held in excess of the assets needed to stabilise the share price of the CNAV fund. The FSOC further mentions that although as a rule MMFs invest in lower-risk securities, experience has shown that funds can experience losses exceeding the NAV buffer level of 1 % mentioned above. The FSOC therefore provides another alternative, with a buffer of up to 3 % (again depending on the asset composition). Moreover, the FSOC proposals also include the idea of a 'minimum balance at risk', which represents a portion of the account value that would be available for redemptions with delay.

IOSCO uses as example a minimum of 50 bps for the NAV buffer designed to cover the differences between the market-to-market value and the par value. However, a buffer of this size would not be functionally equivalent in effect to the capital requirements for banks as requested by the **FSB** (November 2012). Under the **Basel III capital framework**, banks are required to hold sufficient equity to meet two constraints: a risk-based capital requirement and a leverage requirement. The latter requires that equity must be at least 3 % of the bank's assets, (see Basel Committee on Banking Supervision 2010, Paragraph 153). Hence, a consolidation of MMF assets into the balance sheet of the guaranteeing bank implies a

capital requirement of 3 % of the MMFs' NAV. Therefore, to be in line with prudential banking regulation, a capital buffer of 3 % should generally be considered. This should apply irrespective of whether the capital commitment is provided by banks, or, if allowed, by the manager or third-party. It should be noted, though, that the proposed leverage ratio of 3 % by the Basel Committee is subject to a parallel run for the period from January 2013 to January 2017, and may result in further calibrations of the ratio.

Risks

There are several risks associated with the alternative of imposing capital requirements. First, the requirement could have **significant capital implications** for manager/sponsors. Taking the Basel III capital framework as reference point, at least 3 % of MMFs' NAV could be required as mentioned above. According to estimations provided by some ESRB members, for some European banks, providing a 3 % capital buffer on all assets of CNAV MMFs that are managed within the banks group may cost as much as half a percentage point of their common equity (assuming that this capital buffer would be an accounting asset for the sponsoring bank and would be fully deducted from its own capital).

Additionally, requiring an explicit commitment could **increase the interconnectedness** in the financial system (especially with the banking system), particularly if more systemically important sponsors are better able to finance the capital. On the other hand, the counterargument would be that, rather than increasing interconnectedness, capital requirements would only make transparent connections that already exist as a result of implicit support relations. This would help investors in both banks and MMFs to better understand the risks that they bear. However, the CNAV MMF industry in Europe is already significantly **concentrated** (see Section III.4). The implementation of capital requirements for CNAV funds or their sponsors is likely to lead to a consolidation in the industry, resulting in a larger risk concentration.

As it is likely that investors would contribute to capital buffers/requirements, at least indirectly through increased costs/fees, a **reduction of investor demand** could also be a consequence. With regard to the potential impact on bank funding, it should be recalled that European CNAV MMFs provide funding to European MFIs for around EUR 146 billion.

Although, for stability and transparency reasons, explicit commitments are to be preferred over implicit ones, the conversion of CNAV to VNAV funds rather than explicit capital requirements seems to be the first best solution. Capital buffers are not in line with the fundamental feature of an investment fund where investors carry the investment risk; moreover, they may potentially **further blur the distinction with banks**.

IV.3 Recommendation B — Liquidity requirements

The Commission is recommended to ensure that the relevant Union legislation:

- 1. complements the existing liquidity requirements for MMFs by imposing explicit minimum amounts of daily and weekly liquid assets that MMFs must hold;*
- 2. strengthens the responsibility of the funds' managers regarding the monitoring of liquidity risk;*
- 3. ensures that national supervisory authorities and funds' managers have in place effective tools, for example temporary suspensions of redemptions, to deal with liquidity constraints in times of stress resulting from both fund-specific and market-wide developments.*

IV.3.1 Economic rationale

a) Improving MMF robustness

Recommendation B follows IOSCO's Recommendations regarding liquidity management. In particular, Recommendation 7 states that 'money market funds should hold a minimum amount of liquid assets to strengthen their ability to face redemptions and prevent fire sales'.

Within the EU context, as explained above (Section I.2), the European legal framework for liquidity risk management is already strong. Among other provisions, a general principle defined in Article 1 of the UCITS Directive provides that a UCITS shall redeem units at the request of holders. In the case of MMFs, the CESR/ESMA guidelines state that MMFs should provide daily liquidity to investors and have to manage their liquidity according to this principle. The CESR/ESMA guidelines for MMFs also define limits in terms of weighted average life (WAL) and weighted average maturity (WAM) which constrain liquidity management and force managers to hold liquid assets.

However, in contrast to existing regulations, notably in the US, there are no explicit ratios defined in the EU regulation in terms of minimum amounts of liquid assets to be held by MMFs. In that respect, it should be noted that the European Parliament (2012) invited the Commission to explore the idea of introducing specific liquidity requirements for MMFs by setting minimum requirements for overnight, weekly and monthly liquidity ⁽¹⁾.

Liquid assets help MMFs to pay redeeming shareholders and prevent fire sales of assets at a loss, also preventing contagion effects for other funds that hold similar securities. Accordingly, it is recommended to introduce explicit minimum amounts of daily and weekly liquid assets in the EU regulatory framework. The main benefits of this addition are the following:

- (a) it will reflect the importance of liquid assets to enable MMFs **to meet potentially large redemption requests** from investors and to weather periods of market volatility: the experience of summer 2011 where US MMFs were able to face significant redemptions illustrates these benefits ⁽²⁾;
- (b) it will provide a **harmonised basis for liquidity practices** of MMFs across Europe and contribute to investor confidence: the IMMFA Code of Practice, as well as CRA methodologies, presently define different thresholds and requirements regarding liquidity management (see **Box 1** below); by contrast, as mentioned above, US regulation defines specific thresholds for daily and weekly liquid assets;
- (c) it will ensure that MMFs **maintain a prudent approach to liquidity management over time**: MMF liquidity has increased following the 2008 financial crisis and a growing risk aversion in the context of the EU sovereign debt crisis and high market volatility. When market conditions stabilise, there is a risk that MMFs will again reduce the amount of liquid assets held in their portfolios and seek higher-yielding, longer duration instruments, possibly undermining their liquidity position;
- (d) the introduction of explicit ratios should be considered as part of prudent liquidity risk management (as defined for instance in Article 51 of the UCITS Directive), the management company remaining fully responsible for managing its liquidity.

Box 1

Different approaches to liquidity buffers

IMMFA: An IMMFA fund must maintain no less than 10 % of net assets in investments which mature the following business day and no less than 20 % of net assets in investments which mature within five business days. For these purposes, members may determine the treatment of any sovereign debt by taking into account the liquidity of each investment rather than its final maturity.

Fitch: Daily liquidity is defined as: cash held with a custodian rated at least 'A' and/or 'F1' or equivalent; overnight repurchase agreements; shares of MMFs rated 'AAAmmf' by Fitch or the equivalent; securities that will mature or are subject to a demand feature from an appropriately rated provider that is exercisable by the note holder and payable within one business day; and direct obligations issued by highly rated sovereign governments benefiting from strong market liquidity, provided such obligations are issued in the portfolio base currency with remaining maturities of 397 days or less. Weekly liquidity is defined as all of the above, plus securities that will mature or are subject to a demand feature from an appropriately rated provider that is exercisable by the note holder and payable to the fund within five business days and securities issued by highly rated supranational or government agencies benefiting from strong market liquidity and with remaining maturities of 95 days or less.

Moody's: Moody's evaluation of liquidity incorporates both the maturity structure and quality of the assets, as well as exposure to the risk of large unplanned redemptions. Moody's evaluates the degree to which a fund is invested in liquid securities, notably Aaa-rated government securities and their maturities, as well as other liquid assets such as securities with a maturity of less than seven days.

SEC: US MMFs are required to hold at least 10 % of their assets in overnight cash and 30 % in assets that mature within one week. Daily liquid assets are defined as cash, US Treasury securities and securities convertible to cash in one

⁽¹⁾ The European Parliament (2012) also invited the Commission to charge liquidity fees upon a trigger, which also leads to a direct information obligation to the competent supervisory authority and ESMA.

⁽²⁾ According to FSOC (2012), in the eight weeks ending on August 3, 2011, institutional prime MMFs experienced net outflows of USD 179 billion (16 % of assets).

business day. Weekly liquid assets are cash, US Treasury securities, agency discount notes with remaining maturities of 60 days or less and securities convertible into cash (whether through a maturity or a put) within five business days.

Note: Extracts only. Refer to applicable regulation and methodologies for more details.

To define the size and composition of the liquid asset buffers, the following elements should be taken into account.

- (a) There is a **trade-off** between the size of the buffers to be imposed and the type of assets to be considered as eligible, as illustrated by the different methodologies currently applied in Europe and the different figures reported by MMFs regarding their holdings of liquid assets. Indeed, the higher the buffer requirement, the more difficult it will be to meet the requirement with high-quality assets.
- (b) Both **daily and weekly liquid assets** should be defined. Daily liquid assets are important as redemption requests may occur very rapidly ⁽¹⁾. Weekly liquid assets also strengthen the fund's robustness and its ability to manage large redemptions, while extending the scope of eligible assets.
- (c) In order to reduce the fund's reliance on secondary market liquidity, the definition of liquid assets (apart from cash) should primarily consider the **residual maturity**. Accordingly, instruments defined as daily and weekly liquid assets should have a residual maturity within respectively one and five business days. The merit of this approach based on residual maturity is to avoid making assumptions on the market liquidity of certain instruments, as liquid assets can turn into non-liquid assets in case of stressed markets. This definition differs from the US definition which includes Treasury and agency securities, reflecting the specificities of the US market and the size of the US government debt market.
- (d) When defining the buffers, the risks associated with **possible optional maturities of assets** should be considered. These options can be based on different parameters, including techniques with counterparty risk exposure such as puttable (e.g. puttable bonds), cancellable (e.g. cancellable options), callable (e.g. recallable repo techniques). Such features can create contagion effects and weaken the overall liquidity position of the funds, particularly in stressed markets.
- (e) **Other interconnection effects**, notably with the banking sector, which may impact the availability of the assets eligible to the liquidity buffers, should also be taken into consideration.

b) Strengthening liquidity risk management

The thresholds to be defined should be considered as minimums. Accordingly, managers should adjust their holdings of liquid assets depending on their profile and investor base (types of investors, redemption patterns, concentration of the investor base, etc.) as well as on market conditions.

As part of a robust and 'best practices' approach to liquidity management, managers should develop regular stress testing, based on multiple adverse scenarios (both fund-specific and market-wide) impacting their liquidity profile, which is consistent with IOSCO's Recommendation 8. MMFs should also have contingency plans in place to cope with such periods of stress.

As indicated in IOSCO's Recommendation 6, one important area to consider relates to the fund's shareholders. This is especially relevant in the EU context where institutional investors, who would generally have a higher probability to run, represent the bulk of the investor base. As detailed above (see Section III.3), the ESRB survey shows that there is relative uncertainty regarding the funds' investor base. Anecdotal evidence also tends to indicate a growing role for platforms in Europe, which makes it more difficult for managers to 'know their shareholders'. The implications of this trend should be assessed. Furthermore, MMFs could be required to obtain information regarding their beneficial owners, as is envisaged in the FSOC's proposed recommendations regarding MMFs in the US ⁽²⁾.

⁽¹⁾ In the case of the Reserve Primary Fund, investors sought to redeem approximately USD 40 billion in two days and a total of 15 % of assets for Prime MMFs was withdrawn in one week.

⁽²⁾ The proposed recommendations published in November 2012 consider the implementation of additional 'know-your-investor' requirements.

c) Liquidity management in times of stress

Even if fund managers have a prudent approach to liquidity risk management, there may be cases where MMFs have to face extremely stressed market conditions and/or high redemption requests resulting from both fund-specific and market-wide developments. Accordingly, IOSCO Recommendation 9 states that *'money market funds should have tools in place to deal with exceptional market conditions and substantial redemption pressures'*. Such tools can ease redemption pressures and thus prevent a run or other herding behaviour among investors of a given fund or groups of funds. IOSCO also notes that *'in order to prevent contagion effects, jurisdictions may also consider providing regulators with the power to require the use of such tools where the exceptional situations encountered by one or several MMF[s] may have implications for the broader financial system'*.

Within the EU regulatory framework, both the UCITS Directive and the AIFM Directive include provisions regarding temporary suspension.

- Article 45(2) of the **UCITS Directive** indicates that Member States may allow the competent authorities to require or to allow the temporary suspension of the subscription, repurchase or redemption of units provided that such suspension is justified for the protection of the unit-holders or of the public. According to Article 84(2), a fund may temporarily suspend the repurchase or redemption of its units in exceptional cases where circumstances so require and where suspension is justified having regard to the interests of the unit holders.
- Article 46(2) of the **AIFM Directive** states that the competent authorities shall have the power to *'require the suspension of the issue, repurchase or redemption of units in the interest of the unit-holders or of the public'*. However, there is no specific provision at the level of the fund. Article 23(1)h further requires the disclosure of the AIF's liquidity risk management, including the redemption rights both in normal and exceptional circumstances.

This framework is different from existing regulation in the US, where the fund must be liquidated after a suspension ⁽¹⁾. A temporary suspension is likely to be the most appropriate answer in the context of exceptional circumstances where funds have to deal with significant redemption pressures. The EU framework should therefore be amended to extend the possibility of temporarily suspending redemption requests to all funds (UCITS and non-UCITS alike), as currently in place in the UCITS Directive ⁽²⁾. As already allowed by EU legislation for both UCITS and non-UCITS funds, temporary suspension of redemption may also be requested by competent authorities in the interest of the unit-holders or of the public, which is consistent with the IOSCO Recommendations.

In addition to temporary suspensions, the introduction of additional extraordinary liquidity management tools for MMFs could be considered. The conditions and circumstances under which these tools might be used should be clearly defined and their benefits for financial stability should be assessed. In particular, as envisaged in the IOSCO Recommendations, the merits of gates (whereby funds constrain the redemption amounts to a specific proportion on any one redemption day) can be further assessed.

In accordance with the IOSCO Recommendations, appropriate investor disclosure should be in place regarding applicable stress procedures. In particular, funds must ensure that their investors are aware of the circumstances under which these procedures (suspensions or other) might occur. However, details of the implementation and conditions should not be disclosed to avoid first-mover advantage and the possibility of pre-emptive runs. The public disclosure of applicable procedures in times of stress is addressed in Recommendation C, Paragraph 3, which is discussed further below.

IV.3.2 Assessment

Regarding the introduction of specific requirements in terms of liquid assets, IOSCO's consultation conducted in spring 2012 showed overall support from respondents for the introduction of liquidity buffers for MMFs. In particular, respondents highlighted the benefits of the new provisions of US Rule 2a-7 to strengthen the robustness of the funds. Within the EU context, EU respondents noted the absence of a harmonised framework for liquidity management in Europe, in contrast with the US, and generally supported an initiative from regulators.

In order to assess the potential impact of introducing new quantitative requirements for liquidity management, the current composition of the funds' portfolios must be considered, as buffers may increase the bias towards shortest funding and require managers to alter their asset allocation. The ESRB survey shows that EU MMFs already hold a significant part of their portfolios in assets maturing within one day and within one week, as detailed in Table 6 in Section III.2 and Figure

⁽¹⁾ According to the new SEC Rule 22e-3 adopted in 2010, the board of directors of an MMF, upon notification to the SEC, is permitted to suspend redemptions and liquidate the fund if it has broken, or it is in danger of breaking, the buck.

⁽²⁾ See European Commission (2012), Section 5, which deals with extraordinary liquidity management tools.

6. The share of these liquid assets is higher for CNAV funds (respectively 26 % and 11 % of their assets as at June 2012), which also hold a relatively higher percentage of their assets in cash (close to 7 % as at June 2012). Other EU MMFs that are not CNAV also already hold a relatively significant share of their assets in daily and weekly liquid assets (approximately 17 % and 5 % for short-term VNAV funds and 12 % and 3 % for other VNAV funds).

There are some limitations to the ESRB data set as the survey does not cover all MMFs and the figures provided are aggregated figures across funds, with possibly some differences among funds. In addition, the survey gives a picture at a point in time when risk aversion was high. However, the results of the survey are consistent with other observations from supervisors and CRAs, as well as feedback from asset managers regarding their liquidity management.

IV.4 Recommendation C — Public disclosure

The Commission is recommended to ensure that the relevant Union legislation:

1. **requires specific disclosure by MMFs, also in their marketing material, that draws the attention of investors to the absence of a capital guarantee and the possibility of principal loss;**
2. **requires that MMFs refer in their public disclosure to possible sponsor support, capacity for support or protection only if such support or protection is a firm commitment by the sponsor, in which case it must be recognised in that sponsor's accounts and prudential requirements;**
3. **requires MMFs to disclose their valuation practices, particularly regarding the use of amortised cost accounting, as well as to provide appropriate information to investors regarding applicable redemption procedures in times of stress.**

IV.4.1 Economic rationale

MMFs are generally perceived as very low-risk 'safe' investments. Such a perception may contribute to the risk of investor runs if the fund fails to live up to those expectations. Additional public disclosure is intended to ensure that investors are clearly aware of the investment product feature of MMFs, thereby reducing this risk. This disclosure requirement is fully in line with IOSCO's Recommendations 13 and 14, although it goes somewhat further by requiring that any public reference to sponsor support, or capacity for such support, should only be allowed if it entails a firm commitment on the part of the sponsor.

As outlined in Section II.2, the assumption of implicit and discretionary sponsor support contributes to the instability of the system. Fund portfolios and redemption policy should therefore be structured in such a way that no sponsor support is intended. Otherwise, the intention to rely on support must be explicit, fully internalised by the support provider and subject to regulatory capital requirements as outlined in the discussion on Recommendation A.

The product documentation should explain to investors the procedures in place regarding the valuation of the instruments, including information on the use of amortised cost accounting, the assumptions underlying this valuation method and the associated risks. Moreover, investors should be aware of procedures which may be used in case of significant market stress or heavy redemption pressures and which may impact investor redemption possibilities (see also Recommendation B, Paragraph 3). This information about the product characteristics should enable investors to take well-informed investment decisions and reduce adverse selection.

IV.4.2 Assessment

Adequate information about the characteristics of MMFs should reduce the risk of adverse selection and an investor run, and therefore reduce systemic risk; from an investor protection viewpoint, it is also essential for well-informed decisions. On an aggregate basis, European MMFs serve mostly institutional investors. These types of investors are most likely already well aware of the risks related to MMFs. Such awareness is probably much lower among retail investors, who form the largest MMF investor base in some individual Member States; they would therefore be the largest beneficiaries of better disclosure. Adequate information would particularly help retail investors to understand that MMFs are not free of risk. As a result of better information, some investors may prefer an alternative cash management tool over an MMF. In the case of retail investors, this alternative is most likely to be a traditional bank deposit and not an investment in another shadow banking entity. Finally, the requirement to refer in public disclosure only to sponsor support that entails a firm commitment on the part of the sponsor will enhance transparency on the interconnectedness in the financial system and reduce the systemic risk related to the reliance on implicit and discretionary sponsor support.

Some of the disclosure required under this Recommendation is already covered by EU legislation (e.g. the UCITS Directive or the 2010 CESR/ESMA guidelines), but some of the disclosure or documentation may have to be revised, which would result in additional compliance costs for MMFs. Significant costs for national supervisory authorities are not expected.

IV.5 Recommendation D — Reporting and information sharing

1. *The Commission is recommended to ensure that the relevant Union legislation:*
 - a) *requires that any instances of sponsor support that may have an impact on the price of the MMF are reported by the MMF or its manager, and the sponsor, to the competent national supervisory authority, together with a full description of the nature and size of such support;*
 - b) *enhances regular reporting by MMFs;*
 - c) *ensures that competent national supervisory authorities, where relevant, share the information referred to in points a) and b) with other national supervisory authorities within the same Member State or from other Member States, the European Supervisory Authorities, the ESCB and the ESRB.*
2. *The Commission is recommended to promote the development of harmonised reporting and a harmonised data set mentioned in paragraph 1, b), and the organisation of information sharing mentioned in paragraph 1, c).*

IV.5.1 Economic rationale

Although VNAV MMFs are not obliged to maintain par value and the pressure for sponsor support is not the same as for CNAV funds, they presumably also faced liquidity constraints and were confronted with market illiquidity during the crisis; as a result, they may also have relied on support by their managers or parent companies. However, concrete information on instances of such support, either for CNAV or for VNAV MMFs is currently not available for Europe, particularly since it can take many forms and therefore does not necessarily clearly appear in the balance sheet and income statement of the providing party. The ESRB survey included a question on sponsor support, but only generic indications were provided by the funds such as 'trading' or 'no measure'. Overall, the requirement to use VNAV, together with the requirement not to rely on implicit support does not rule out such support in extreme market conditions in the future.

In order to enable authorities to monitor the risks associated with such support, any future instances of direct or indirect sponsor support, irrespective of the type (including purchases of distressed portfolio securities), should be reported by the MMF or its manager to the competent national authority. Because such support may increase the interconnectedness in the financial system, and therefore contribute to systemic risks, the information should also be shared with other relevant authorities (domestic, foreign or European).

Drawing on the experience with existing MMF statistics and the dedicated ad-hoc data collection, it is clear that the regular data collected on the European MMF industry could be further improved. The MMF vehicle is very important for the smooth functioning of the money markets in Europe. Both national and European regulatory authorities should therefore have access to detailed data on these funds to identify trends at an early stage. Where national central banks are already collecting information on MMFs, consideration should be given to sharing this information with national supervisory authorities for prudential purposes.

Regular reporting should at least include a sufficiently detailed break-down of the assets and liabilities of the MMF in order to allow the authorities to monitor the fund's liquidity position and the nature and quality of its underlying assets. Moreover, in case amortised cost accounting is still used, regulators should have access to regular information on the extent to which this valuation practice is used and in which cases. In case the CNAV model continues to be used, the regular reporting would also need to include detailed information for the CNAV funds, including information on their shadow price.

More detailed information would allow authorities to better understand developments in the MMF industry and to identify sources of risk. From a macro-prudential viewpoint, this more detailed information would need to be available both at the level of the aggregate MMF sector as well as at the level of individual MMFs.

IV.5.2 Assessment

Close monitoring of the asset and investor composition of MMFs, their liquidity position, valuation practices and any reliance on sponsor support, is needed in order to be able to identify the accumulation of risks and the links of MMFs with other parts of the financial system. It is therefore a prerequisite for taking any preventive measures to address potential systemic risks. The requirement of regularly reporting on shadow prices will increase MMFs managers' awareness that national supervisory authorities are monitoring this issue; this is expected to have a disciplining effect as regards possible deviations in the shadow price in relation to the NAV and reliance on sponsor support.

The disadvantages associated with enhanced reporting are the costs related to the processes which have to be implemented in the management companies and the prudential authorities. Any work on enhanced reporting by MMFs should therefore take into account existing reporting that MMFs are already subject to and duly recognise the principle of

proportionality, which will reduce the associated costs. In particular, the ECB data collection concerning the balance sheet of MFIs (of which MMFs are part) already includes detailed information on the assets and liabilities of MMFs (see Regulation ECB/2008/32). However, since this reporting has been conceived for monetary policy purposes it may not fully cover the data needs for financial stability purposes.

IV.6 Follow-up

IV.6.1 Timing

The Commission is requested to report to the ESRB and the Council of the European Union on the actions taken in response to these Recommendations, or adequately justify any inaction, in compliance with the timelines set out below.

- **By 30 June 2013**, the Commission is requested to deliver to the ESRB an interim report containing a first assessment of the results of the first stage of implementation of these Recommendations.
- **By 30 June 2014**, the Commission is requested to deliver to the ESRB and the Council a final report on the second stage of implementation of these Recommendations.

IV.6.2 Compliance criteria

The following general compliance criteria are defined for **Recommendations A to D**.

- The Recommendations also aim at a proper and consistent implementation in Europe of the relevant IOSCO Recommendations on MMFs.
- The Commission may seek advice from the relevant ESAs — and in particular ESMA — in relation to the implementation of the ESRB Recommendations and, in order to ensure a harmonised application of the Recommendations, may request the ESAs to develop the necessary technical standards, guidelines and recommendations (including reporting and disclosure templates, duly taking into account already existing reporting and disclosure requirements).
- The ESRB Recommendations target collective investment undertakings (CIUs) based in the EU that are offered/sold to investors as seeking to maintain the principal, providing daily liquidity and target returns in line with money market rates. They especially address funds which are labelled or sold as an MMFs or sold as having the characteristics of an MMF (i.e. seeking maintenance of capital value, daily redemptions and money market rates) or funds sold in a way that give rise to that impression (e.g., sold as cash funds or liquid or liquidity funds or funds with short maturity).

For **Recommendation A**, the following compliance criteria are defined.

- MMFs should be required to use only the variable net asset value model. In particular, rounding share prices to the nearest unit should be prohibited. Transitional arrangements for a compulsory move to the variable net asset value model would be needed. It is therefore recommended to have a sufficiently long transition period for existing MMFs, during which the constant net asset value model can still be maintained to allow for the necessary adjustments. The transitional period for existing constant net asset value funds could be at least two years after the final publication of the applicable rules. Moreover, the shift to variable net asset value funds should be carefully announced, well before the requirement is implemented, by disclosure of the MMFs on the effect of the change.
- Recommendation A does not imply a full prohibition of amortised cost accounting. However, amortised cost accounting should only be permitted to be used where it is deemed to allow for an appropriate approximation of the price of the instrument.
- In case the use of amortised cost accounting is continued, restrictions with regard to the residual maturity of the instrument concerned should be implemented, with the aim of reducing the risk of discrepancy between its price and its amortised cost; in setting such restrictions, careful consideration should be given to the maturity profile of the assets of MMFs based in the EU.

For **Recommendation B**, the following compliance criteria are defined.

- To define the size and composition of the minimum buffers of liquid assets, the following elements should be taken into account:
 - (a) the trade-off between the size of the buffers to be imposed and the type of assets to be considered as eligible;
 - (b) both minimum amounts of daily and weekly liquid assets should be defined;
 - (c) in order to reduce the reliance of MMFs on secondary market liquidity, the definition of liquid assets (apart from cash) should primarily consider the residual maturity. Accordingly, instruments defined as daily and weekly liquid assets should have a residual maturity within respectively one and five business days;

- (d) when defining the buffers, the risks associated with possible optional maturities of assets should be considered. These options can be based on different parameters, including techniques with counterparty risk exposure such as puttable (e.g. puttable bonds), cancellable (e.g. cancellable options), callable (e.g. recallable repo techniques);
 - (e) other interconnection effects, notably with the banking sector, which may impact the availability of the assets eligible for the liquidity buffers.
- MMFs should be required to adjust their holdings of minimum buffers of liquid assets depending on their risk profile and investor base.
 - They should perform regular stress tests based on multiple adverse scenarios, both fund-specific and general ones, impacting their liquidity profile.
 - MMFs should have contingency plans in place to cope with such periods of stress.
 - They need to have the necessary tools in place to deal with exceptional redemption requests from investors.

For **Recommendation C**, the following compliance criteria are defined.

- The product information of MMFs should draw the attention of investors to the absence, or limitation, of a capital guarantee and the possibility of principal loss.
- The information should further explain to investors the procedures in place regarding the valuation of the instruments, including information on the use of amortised cost accounting, the assumptions underlying this valuation method, and the associated risks.
- Any references in the information of MMFs to possible sponsor support, capacity for support or protection should only be allowed if such support or protection is a firm commitment on the part of the sponsor, in which case it must be recognised in the accounts and prudential requirements of that sponsor.
- Investors should be made aware of procedures which may be used in case of significant market stress or heavy redemption pressures and which may impact their redemption possibilities.

For **Recommendation D**, the following compliance criteria are defined.

- Any instances of sponsor support for an MMF that may have an impact on the price of the MMF should be reported by the MMF (or its manager) and the sponsor to the responsible national authority, including a description of the nature and size of the support.
- Regular reporting by MMFs to supervisory authorities or central banks should at least include a sufficiently detailed break-down of the assets and liabilities of the MMF in order to allow the authorities to monitor the fund's liquidity position and the nature and quality of its underlying assets.
- In case the MMF continues to use the constant net asset value model, the regular reporting also needs to include separate detailed information for the constant net asset value funds, including information on their shadow price.
- In case amortised cost accounting is still used by MMFs, regulators should have access to regular information on the extent to which this valuation practice is used and in which cases.
- Measures should be taken that promote the development of harmonised reporting and a harmonised data set on MMFs, and which can also be used for macro-prudential purposes, covering the earlier mentioned points; any such measures should take into account the existing reporting requirements MMFs are already subject to, such as the balance sheet reporting of monetary financial institutions (ECB/2008/32).
- To ensure that there are no impediments on the sharing of the earlier-mentioned information between prudential authorities and central banks, be it at the national, cross-border or European level.

IV.6.3 *Communication of the follow-up*

The **interim report due by 30 June 2013** should as a minimum contain:

- (a) information on the legislative initiatives commenced and planned by the Commission in response to the Recommendations;
- (b) information on actions that Commission has taken vis-à-vis the ESAs in response to the Recommendations;
- (c) an indicative timeline for the entry into force of the measures already proposed or planned to be proposed by the Commission in response to the Recommendations;

- (d) an assessment of the cumulative impact of the measures already proposed or planned to be proposed by the Commission in response to these Recommendations;
- (e) a detailed justification of any inaction or departure from these Recommendations.

The **final report due by 30 June 2014** should as a minimum contain:

- (a) information on the state of play of the legislative process following the legislative initiatives commenced by the Commission in response to these Recommendations;
 - (b) information on the state of play of measures that the Commission has taken vis-à-vis the ESAs in response to the Recommendations;
 - (c) an indicative timeline for the entry into force of the measures proposed by the Commission in response to these Recommendations;
 - (d) an assessment of the cumulative impact of the measures proposed by the Commission in response to these Recommendations;
 - (e) a detailed justification of any inaction or departure from these Recommendations.
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