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REPORT FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT AND THE COUNCIL

on the adequacy of Regulation (EU) 2017/1131 of the European Parliament and of the Council on money market funds from a prudential and economic point of view

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ABBREVIATIONS

AIFMD	Alternative Investment Fund Managers Directive
CNAV	Constant net asset value MMF
ECB	European Central bank
ESMA	European Securities and Markets Authority
ESRB	European Systemic Risk Board
EUR	Euro
FSB	Financial Stability Board
GBP	UK sterling
LVNAV	Low volatility net asset value MMF
MMF	Money Market Fund
MMF Regulation	Regulation (EU) 2017/1131 on Money Market Funds
NAV	Net asset value
NCAs	National competent authorities
USD	US dollar
UCITS	Undertakings for the collective investment in transferable securities
VNAV	Variable net asset Value MMF
WMA	Weekly Maturing Assets

1. INTRODUCTION

1.1. Background

Regulation (EU) 2017/1131 on money market funds (the MMF Regulation) was proposed in the aftermath of the global financial crisis, which exposed certain weaknesses of financial markets and their regulatory regimes around the globe. Since entering into application in January 2019, this Regulation has significantly strengthened the regulatory regime for MMFs in the EU, following recommendations by the Financial Stability Board (FSB), the International Organization of Securities Commissions (IOSCO)[1] and the European Systemic Risk Board (ESRB).

The new regulatory framework was put to the test by the market stress related to the COVID-19 pandemic. The impact of this stress on MMFs differed across jurisdictions due to differences in the structures of MMF markets (e.g the predominant types of MMFs, investor profiles, and underlying investments) and residual differences in the regulatory framework for MMFs. Major central banks such as the European Central Bank (ECB) and the US Federal Reserve took various measures to mitigate the effects, including outright purchases of commercial papers[2] on the primary and secondary markets, providing lending for banks to buy assets from MMFs (Federal Reserve), and extending the eligible collateral for refinancing operations to unsecured banks bonds (ECB). These interventions improved liquidity and confidence in short-term debt markets, which also contributed to a reduction in the pace of redemptions from MMFs. Although there were substantial outflows from certain types of MMFs in March 2020 and other market stress periods, no EU MMFs were required to trigger redemption fees or gates[3] or to suspend redemptions.

Following the COVID-19 market stress, global and European prudential authorities started to work on policy proposals to increase the resilience of MMFs. In particular, the FSB,[4] the ESRB[5] and the European Securities Markets Authority (ESMA)[6] proposed various reforms to ensure MMFs do not amplify liquidity shocks in times of stress. One of these proposals is to remove the possibility for Low volatily net asset value MMFs (LVNAVs) to use amortised cost accounting. However, this could reduce the effectiveness of MMFs as liquidity management alternatives to bank deposits, and limit the cash-management options of corporates.[7]

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1 The International Organization of Securities Commissions (IOSCO) conducted a peer review of the implementation of the MMF reforms across different jurisdictions and published a Thematic Review on consistency in implementation of Money Market Funds reforms on 20 November 2020. The report confirms the high degree of compliance of the achieved regulatory objectives with its initial recommendations.

2 Commercial paper: an unsecured promise to pay a certain amount on a stated maturity date, issued in bearer form" (IMF, 2003) Commercial papers are mostly issued by Non-Financial Corporates,

3 Redemption fees as a liquidity management tool imposing usually a flat fee on investors selling shares of a fund (typically within a pre-determined period). Redemption gates are a liquidity management tool to prevent investors in the fund from withdrawing a portion of their capital for a period of time.

4 FSB, 11 October 2021, Policy Proposals to Enhance Money Market Fund Resilience

5 ESRB, 2 December 2021, Recommendation on reform of money market funds

6 ESMA, 14 February 2022, ESMA opinion on the review of the Money Market Fund Regulation

7 Private-debt stable NAV MMFs have deposit-like characteristics, invest in bank-issued liabilities, and are used by non-financial corporates as an instrument to manage liquidity.

1.2. Legal basis for the report

This report is prepared in accordance with Article 46(1) of the MMF Regulation, which requires the Commission to assess the functioning of the MMF Regulation based on an analysis of the current rules from a prudential and economic point of view, and following consultations with ESMA and, where appropriate, the ESRB, and in accordance with Article 6(2) which specifies the conditions this report needs take into consideration. This article also requires the Commission to assess whether changes are to be made to the regime for public debt constant net asset value MMFs (CNAVs) and LVNAVs.

1.3. Methodology and consultation process

This report draws on a number of studies carried out by European and international bodies. Both the FSB report[8] and ESMA opinion[9] benefitted from stakeholder feedback. The latter reports as well as the ESRB recommendations[10] contain extensive sets of data and evidence from supervisory authorities. The ECB has published an assessment of the effectiveness of the EU's regulatory framework from a financial stability perspective, based on the behaviour of MMFs during the COVID-19 crisis.[11] Academic papers have further informed this report.

From 12 April to 20 May 2022, the Commission conducted a stakeholder consultation to collect stakeholders' views about the functioning of the MMF Regulation.[12] A total of 48 respondents submitted a contribution. More than two thirds of respondents indicated that the MMF Regulation has been effective in delivering on its key objectives in terms of ensuring liquidity, increasing investor protection, preventing the risk of contagion, and improving transparency, supervision, and the financial stability of the single market. These respondents consider that the MMF Regulation has contributed to the integration of capital markets and made MMFs more resilient, in particular through its rules on credit quality[13] and asset composition.[14] Feedback received from stakeholders also indicates the importance of ensuring consistency of the rules at EU level and of strengthening supervision. In addition, cross-border investors also appreciate that the MMF Regulation gives them the possibility to conduct cash management globally through a standard process from both an accounting and a risk management point of view.

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8 FSB, 11 October 2021, Policy Proposals to Enhance Money Market Fund Resilience

9 https://www.esma.europa.eu/sites/default/files/library/esma34-49-437_finalreportMMF Regulationeview.pdf

10 https://www.esrb.europa.eu/news/pr/date/2022/html/esrb.pr.220125~32ad91c140.en.html

11 ECB, October 2022, "Is the EU Money Market Fund Regulation fit for purpose? Lessons from the COVID-19 turmoil", Working Paper Series, No 2737

12 https://finance.ec.europa.eu/Regulation-and-supervision/consultations/finance-2022-money-market-funds_en

13 Articles 19 – 23 of Regulation (EU) 2017/1131 (MMF Regulation)

14 Articles 8 – 18 of Regulation (EU) 2017/1131 (MMF Regulation)

2. THE MMF SECTOR TODAY

2.1. Key changes introduced by the MMF Regulation

Before the introduction of the MMF Regulation, the majority of MMFs in the EU operated under the rules of the UCITS Directive,[15] its implementing acts and guidelines, as well as industry codes of conduct. France, Ireland and Luxembourg are the major domiciles of EU MMFs. Luxembourg and Ireland developed a MMF sector with CNAV in foreign currencies targeted at institutional investors from outside the EU.

The MMF Regulation introduced a dedicated and significantly more developed regulatory regime for MMFs in the EU. In particular, it aimed to address credit and liquidity risk challenges experienced by MMFs during the 2008 crisis. By harmonising the essential product features that constituted a MMF, the framework also established a uniform level of investor protection through rules on liquidity and liquidity risk management, including liquidity buffers, assets in which MMFs can invest, diversification, valuation and internal credit quality assessment. It also enhanced transparency towards investors and supervision, including via comprehensive reporting to the National competent authorities (NCAs).

In addition, the MMF Regulation explicitly bans "external support" to avoid the risk of contagion between the MMF sector and the rest of the financial sector. The 'Know-Your-Customer' policy obliges managers of all types of MMFs to anticipate the effect of concurrent redemptions by several investors. All managers have to adjust the actual level of liquidity to the specific cash needs of their customers at any time of their accounting cycles.

The MMF Regulation created a new type of MMF, the LVNAV, to replace CNAVs invested in non-public debt. Similarly to public debt CNAVs, LVNAVs are allowed to use amortised cost accounting to offer a stable redemption price, but only as long as the value of the underlying assets does not deviate by more than 20 basis points from the market value of the fund's net assets.[16] The two values are published daily. If the deviation exceeds 20 basis points, the LVNAV fund has to switch from a constant NAV to a variable NAV.[17]

Compliance with the MMF Regulation generated some legal and operational costs for asset managers, who had to migrate existing funds into the new regime, increase transparency, improve their risk management processes, and closely monitor their investments and the related credit and liquidity risk, all this to ensure compliance with the liquidity requirements. There were also cost implications for third-party distributors, platforms and custodians. Further time and resources were required from MMF investors to build investment policies, controls and oversight around the framework, treasury systems and accounting processes, and to ensure auditors were comfortable with the new MMF fund structures from a cash and cash equivalence perspective. The consultation results however did not point at costs being excessive and did not reveal sizeable simplification potential.

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15 Directive 2009/65/EC of the European Parliament and of the Council of 13 July 2009 on the coordination of laws, Regulations and administrative provisions relating to undertakings for collective investment in transferable securities (UCITS)

16 The distinguishing feature of Public Debt CNAV and LVNAV is NAV rounding to the 2nd decimal, which is however only possible within the 20bp corridor for LVNAVs (vs. the 4th decimal for VNAVs). The rounding means that investors do not need to recognise the very small unrealised capital gains and losses in the portfolio when they redeem shares.

17 The MMF Regulation imposes a number of other portfolio and valuation rules which aim at investor protection and stability of financial market.

In its October 2020 Market Insights study, the European Fund and Asset Management Association noted that the stringent regulatory requirements introduced by the MMF Regulation and the increased cost of regulatory compliance resulted in a 16% decline in the number of UCITS MMFs in the first quarter of 2019, as a number of asset managers chose to close down their MMFs, particularly small MMFs, or converted them into short-term bond funds. In addition, certain funds no longer met the stricter regulatory requirements imposed under the MMF Regulation and hence no longer qualified as MMFs. Despite the decline in the number of MMFs, European MMFs experienced strong net inflows in 2019 and 2020.

Table 1: Key characteristics of and safeguards for EU MMFs

	Short-term MMF			**Standard MMF**
	Stable NAV		**Variable Net Asset Value (VNAV)**	
Name	Public debt constant net asset value (Public Debt CNAV)[18]	Lov-volatility net asset value (LVNAV)[19]	Short-term VNAV[20]	Standard VNAV[21]
Public debt	Min 99.5% in public debt, reverse repo secured with government debt and in cash	Permitted		
Weighted average maturity[22]	Max 60 days			Max 6 months
Weighted average life[23]	Max 120 days			Max 12 Months
Maturity of assets	Max 397 days			Max 2 years with a 397-day reset
Daily maturing assets	Min 10%		Min 7,5%	
Weekly maturing assets	Min 30% (of which public debt limited to 17.5%)		Min 15%	

18 Public Debt Constant Net Asset Value MMF, as per Article 2(11) of MMF Regulation
19 Low Volatility Net Asset Value MMF, as per Article 2(12) of MMF Regulation
20 VNAV MMF managed as Short Term MMF, as per Article 2(14) of MMF Regulation
21 VNAV MMF managed as a Standard MMF, as per Article 2(15) of MMF Regulation
22 As defined in Article 2(19) of the MMF Regulation.
23 As predefined in Article 2(20) of the MMF Regulation.

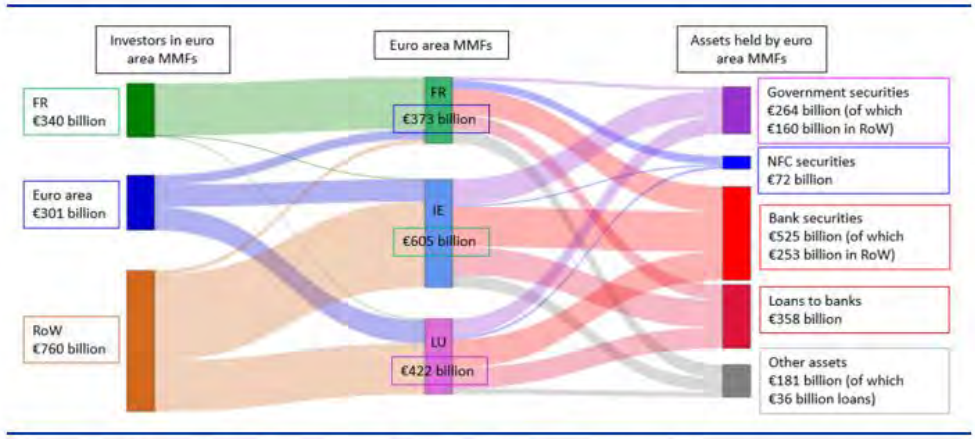
2.2. Market structure today

Article 46(2)(a) of the MMF Regulation requires the Commission to analyse the experience acquired in applying this the Regulation, and the impact on investors, MMFs and the managers of MMFs in the Union.

Euro area MMFs held about EUR 1.5 trillion in total assets at the end of 2021, split between public debt CNAV (11% of total assets under management), LVNAV (46%), short-term VNAV (12%) and standard VNAV (31%). EU MMFs are mainly denominated in EUR (42%), USD (31%) and GBP (22%) and are concentrated in a few countries, principally Ireland, Luxembourg, and France, accounting respectively for 42%, 26% and 25% of total assets under management of EU MMFs.[24]

Public debt CNAVs and LVNAVs are mostly denominated in USD and GBP and domiciled in Ireland and Luxembourg**.** EUR-denominated MMFs are primarily structured as standard VNAVs and are mostly domiciled in France (192 funds as of December 2021).

Figure 1: Who invests in euro area MMFs, and where do those MMFs then invest?
Source: ECB, Macro-prudential Bulletin, April 2021



Sources: ECB securities holdings statistics, BSI and authors' calculations.
Notes: The data are as of Q3 2020. "RoW" means "rest of the world". Loans to banks include both deposits and repos. Debt securities account for around 98% of MMFs' total holdings of securities, and more than two-thirds of those debt securities are short-term debt securities (i.e. securities with an original maturity of one year or less). Values from ECB securities and holdings statistics are rescaled to match aggregates in BSI data.

Corporate and institutional investors hold the majority of euro area MMF shares/units, as shown in Figure 2.[25] Professional investors account for 95% of the NAV for CNAV and 99% for LVNAVs. For VNAVs, the share of retail investors is slightly higher, at 13% and 12% for short-term and standard VNAVs, respectively.[26]

As shown in Figure 3, financial institutions are the main investors in MMFs across types, accounting for 59% of NAV, while non-financial corporates account for 19% of NAV.

24 See also ESMA and ESRB reports.
25 ESMA, 8 February 2023: "EU MMF market 2023"
26 This is to a large extent driven by French-domiciled MMFs, for which the share of retail investors represents 12% of NAV due to the presence of employee saving schemes.

Non-EU investors are dominant in Luxembourg and Ireland, as shown in Figure 4. Non-EU investors account for more than 77% of the NAV of Irish MMFs and close to 63% for Luxembourg. In the case of Irish MMFs, these are primarily UK-based investors (60% of their investors based on amount owned). This reflects the importance of MMFs denominated in non-EU currencies domiciled in these Member States. In contrast, French domestic investors account for close to 76% of NAV in France.

Figure 2: Retail vs professional investors in MMFs (% of total NAV)
Source: ESMA Market Report 2023

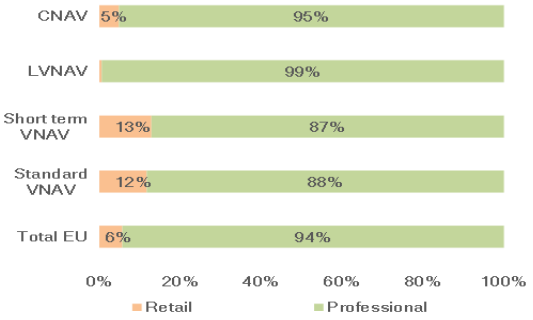


Figure 3: Types of MMF investors by sector (% of total NAV)
Source: MMF Regulation database, ESMA

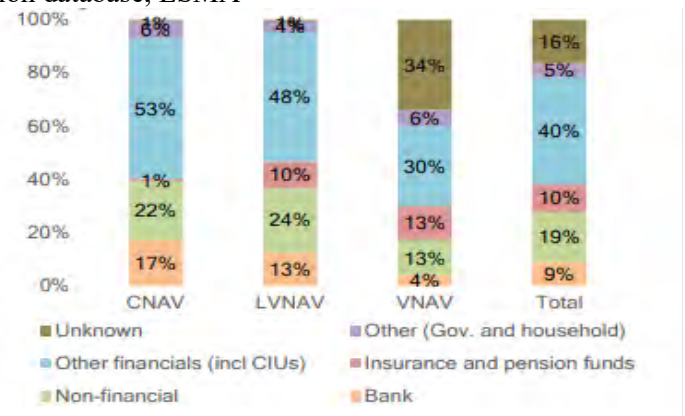
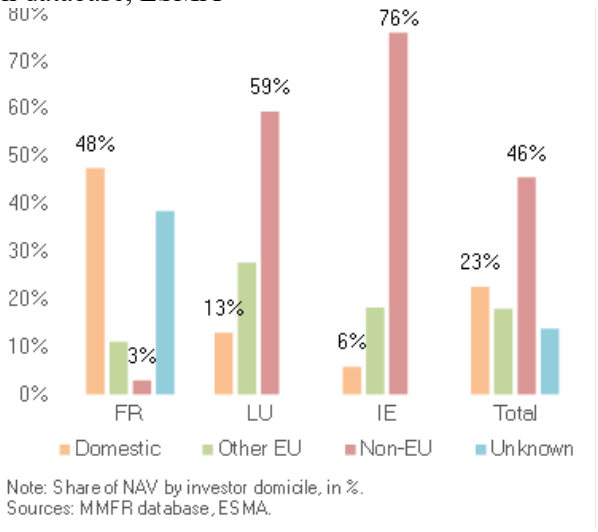


Figure 4: Share of NAV by investor domicile (in %)
Source: MMF Regulation database, ESMA



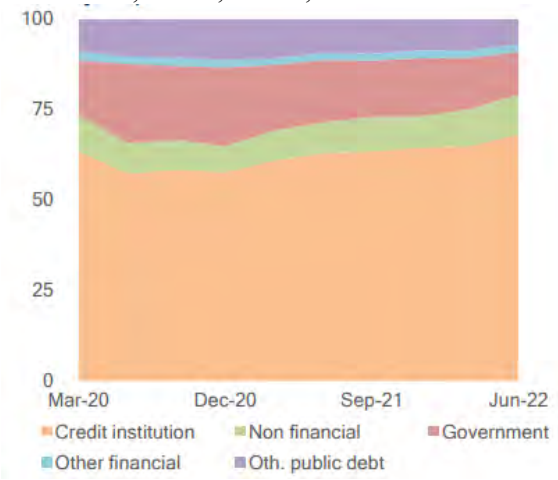
Discussions with MMF investors and responses from the stakeholder consultation highlight that the following criteria are most important in the investment choice of investors: intra-day/daily liquidity, preservation of capital and diversification. Other characteristics of EU MMFs, such as portfolio quality or level of return are also mentioned by investors as important in their investment choice. MMFs are mainly used as a cash management tool.

MMF shares are considered '*cash and cash equivalents*' under the accounting standard IAS7.[27] This applies to CNAV and LVNAV due to their stable value and the possibility of intra-day redemptions. In certain jurisdictions, this accounting treatment also applies to VNAVs. Responses to the Commission's consultation indicate that forcing corporates to invest into other instruments with different characteristics would create uncertainty for the accounting treatment of these products as '*cash or cash equivalent*' and would also limit the cash-management options of corporates, as other instruments may not offer intraday liquidity.

Public debt CNAV must invest 99,5% of their assets in public debt, in reverse repos secured with government debt and in cash. LVNAVs and VNAVs primarily invest in money market instruments (67% of their total assets), complemented by deposits, repo- and reverse repo agreements and other short-term assets.

As shown in Figure 5, EU MMFs are mainly exposed to the financial sector including credit institutions, whose securities amount to more than 60% of total money market instruments held by EU MMFs. Exposures to non-financial corporates remain limited (10% of money market instruments) and are mainly held by VNAVs.[28] In aggregate, EU MMFs hold between 50 and 70% of euro-denominated financial commercial papers and negotiable certificates of deposit[29] (FSB, 2021).

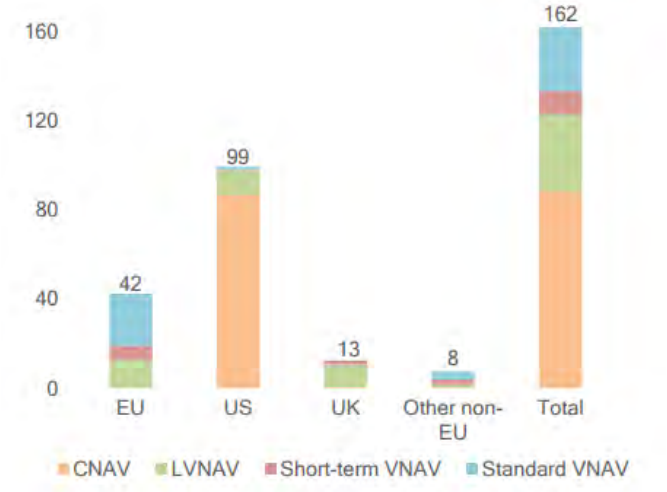
Figure 5: Money market instruments held by MMFs are mainly exposed to the financial sector (% of money market instrument holdings)
Source : MMF Regulation database, Eikon, NCAs, ESMA



[27] Regulation (EU) 1126/2008, International Accounting Standard 7, paragraph 6: "*Cash equivalents are short-term, highly liquid investments that are readily convertible to known amounts of cash and which are subject to an insignificant risk of changes in value.*"
[28] ESMA, 8 February 2023: "EU MMF market 2023"
[29] Certificates of Deposits: "a certificate issued by a bank acknowledging a deposit in that bank for a specified period of time at a specified rate of interest" (IMF, 2003)

As shown in Figure 6, most of the public debt exposure of EU MMFs is towards non-EU sovereigns (74% of sovereign exposure at the end of 2021). Those exposures are mainly held by CNAVs. The latter significantly reduced their government bond holdings from 62% of total assets in June 2021 to 32% in June 2022. Simultaneously, they increased their repo market exposures, driven by the expectation of changing interest rates. The share of government bonds in the portfolios of LVNAVs has increased significantly over 2020, but was readjusted to the pre-COVID-19 composition over 2021 and the first half of 2022. VNAVs normally have a lower share of government debt, on average 7% of their assets.[30]

Figure 6: Exposure to government debt, end of 2021, in EUR bn.
Source: MMF Regulation database, NCAs, ESMA



2.3. Recent market developments and lessons learned

In the recent years, several stress events have taken place that have tested the framework for MMFs. In March 2020, the COVID-19 pandemic led to a sudden increase in demand for safe and liquid assets in both the financial and non-financial sectors. Market liquidity deteriorated considerably across a broad range of markets and prompted unprecedented interventions by central banks. The value of major stock market indices dropped over 30% within several weeks and financial markets experienced a significant increase in volatility during the first months of the pandemic. Due to the general uncertainty, investors were hesitant to invest in financial markets, which led to vast valuation losses.

Corporate bonds and MMFs also experienced significant stress. Corporate bond yields rose significantly during February and March 2020. MMFs exposed to private markets, i.e. LVNAVs and VNAVs in the EU and prime MMFs in the US[31], recorded high outflows. EU-domiciled LVNAVs experienced outflows of EUR 51.4 bn during March 2020[32] and faced challenges to sell their commercial papers and certificates of deposit as banks were unwilling or unable to buy back these papers, including their own papers.[33]

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30 Idem

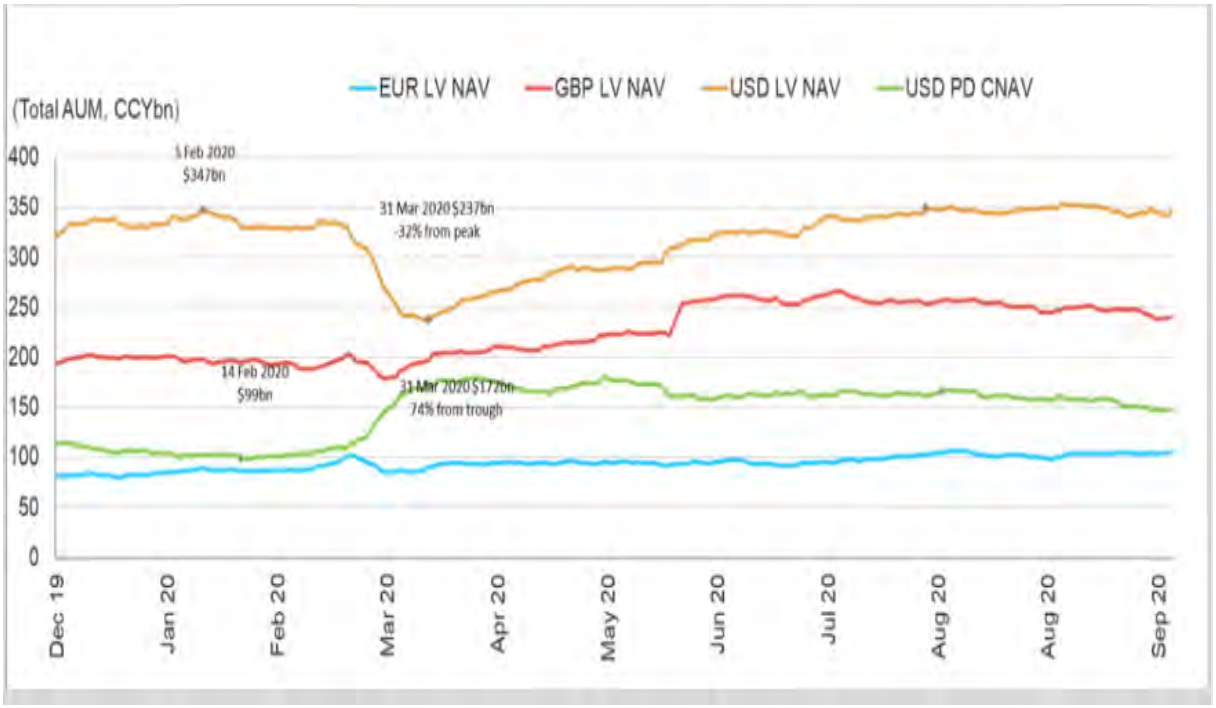
31 A Prime MMF is a type of US money market fund which principally invests in non-government securities.

32 ESMA, September 2021, "Report on Trends, Risks and Vulnerabilities", No. 2, 2021

33 Commercial papers and certificates of deposit are usually held to maturity and even if they have very short maturity, their secondary market is not liquid, even in normal times. Meanwhile, MMFs account for a significant proportion of demand for these instruments.

The stress was particularly acute for USD-denominated LVNAVs, as shown in figure 7 and relevant literature.[34] As their weekly maturing assets (WMA) holdings approached the regulatory minimum of 30%, some investors may have been concerned about the increasing possibility that fund managers would make use of available liquidity management tools (i.e. liquidity fees or redemption gates). Concerns about the use of liquidity management tools were particularly acute in the US market, which may be explained by the fact that EU investors are by and large more comfortable with fees than US investors, due to their familiarity with fees under UCITS. As shown in Figure 7, this resulted in a spill-over effect to EU-domiciled MMFs, with a combination of redemptions in USD LVNAVs and subscriptions in USD Public Debt CNAVs of a similar magnitude, reflecting a potential substitution effect (or flight-to-quality).

Figure 7: Evolution of assets under management of different types of MMFs around March 2020
Source: European Fund and Asset Management Association: data from Fitch Ratings, iMoneyNet



The data[35] shows that MMFs with low WMAs recorded higher outflows than MMFs with high WMAs. This analysis can be interpreted as evidence that institutional investors redeemed from MMFs to avoid being subject to fees and gates. Additionally, studies by Avalos and Xia (2021)[36], Darpeix (2021)[37] and Dunne and Giuliana (2021)[38] show that the liquidity ratios

[34] As discussed in various reports including the FSB's Policy proposals to enhance money market fund resilience from October 2021, ESRB's Issues note on systemic vulnerabilities of and preliminary policy considerations to reform money market funds (MMFs) from July 2021, and ECB's article from April 2021 Macro-prudential bulletin, titled "How effective is the EU Money Market Fund Regulation? Lessons from the COVID-19 turmoil".

[35] ESMA, 2021, "Report on Trends Risks and Vulnerabilities", No. 1 2021

[36] Avalos, F. and Xia, D. (2021), "Investor size, liquidity and prime money market fund stress", BIS Quarterly Review Special Feature, pages 17–29.

[37] Darpeix, P.-E. and Mosson, N. (2021), "Detailed analysis of the portfolios of French money market funds during the COVID-19 crisis in early 2020, AMF.

were key drivers of redemptions in the case of LVNAVs, but not in the case of VNAVs, thus pointing at possible undesirable threshold effects.[39] Given the magnitude of the crisis and the global economic situation triggered by the pandemic, major central banks took a range of actions to support capital markets. Such support took place through:

- outright purchases of domestic-currency denominated certificates of deposit and commercial papers (ECB,[40] Bank of England[41], Federal Reserve) on the primary or on the secondary market,
- extending the eligible collateral to unsecured bonds issued by banks (ECB)
- and lending facilities for banks to buy assets from MMFs (Federal Reserve).[42]

As a result of the intervention of central banks, redemption requests slowed down and liquidity improved in underlying money markets. While these interventions primarily aimed at restoring confidence in the depth and liquidity of short-term funding markets, they also indirectly benefitted EU MMFs.

The market turmoil of March 2020 showed that some financial market segments were unable to absorb significant and sudden increases in selling pressures. This was perhaps also because the liquidity supply by dealers was more constrained and less responsive to sudden increases in demand than before the 2008 financial crisis. Nevertheless, no EU MMF had to introduce redemption fees or gates or to suspend redemptions in March 2020. Moreover, no LVNAV exceeded the thresholds set out in the MMF Regulation to be converted into VNAV (the deviation of the market NAV from the constant NAV came close to the 20 basis point collar for some USD LVNAVs). However, these results should be interpreted cautiously and put into context given the central bank interventions that supported the markets.

Since February 2022, Russia's invasion of Ukraine and the related geopolitical tensions have impacted financial markets, most notably commodity prices and related derivative products. Since EU MMFs invest in highly liquid, short maturity assets with minimal credit risk, they did not experience significant losses or outflows. MMFs have adapted to the situation by readjusting their holdings towards even shorter maturity instruments, which are less exposed to interest rate risk[43] and by increasing their liquidity. There are some signs of indirect impact of investors selling other assets or facing margin calls and tapping EU MMFs to store or access liquidity. However, inflows and outflows seemed rather balanced and no EU MMF had to introduce redemption fees or suspend redemptions in this situation.

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38 Dunne, P. and Raffaele, G. (2021), "Do liquidity limits amplify money market fund redemptions during the COVID crisis?", ESRB Working Paper No. 127.

39 ESMA, 14 February 2022," ESMA opinion on the review of the Money Market Fund Regulation"

40 In March 2020, the ECB announced further support for euro money markets by extending its existing corporate sector purchase program to include euro-denominated non-financial commercial paper with remaining maturities of as few as 28 days (reduced from an earlier 6 months minimum). The ECB's corporate purchase programme thus benefitted local-currency MMFs only indirectly by contributing to restoring confidence in the underlying EUR-denominated markets.

41 Paolo Cavallino and Fiorella De Fiore, 5 June 2020, "Central banks' response to COVID-19 in advanced economies", BIS Bulletin No 21

42 Nevertheless, EU USD LVNAVs were not eligible for the ECB facilities and the Federal Reserve's MMLF and they initially suffered outflows but have rapidly recovered after the central bank announcements.

43 Assets with a lower duration face a smaller change in price following a shock in interest rates. On average, MMFs have significantly reduced their average weighted maturity, down to a 10-year low of 19 days from previous levels close to 50 days in late 2020 and 2021.

In September 2022, the market stress experience in the UK also impacted those EU MMFs with a sizeable exposure to UK assets and/or having UK investors (notably Irish MMFs, which have approximately 60% of their investor base by amount owned from the UK). According to available evidence, there was an indirect impact on GBP-denominated MMFs, linked mainly to investors needing to quickly access liquidity following increased margin calls and forced sales, notably by funds with liability-driven investment strategies.[44] Some GBP-denominated MMFs saw increased outflows (five funds experienced cumulative outflow of more than 10%)[45] shortly after the announcement of the UK "mini budget" on 23 September 2022.

The situation quickly reversed following the intervention of the Bank of England to support the gilt market. In October 2022, GBP-denominated EU MMFs experienced inflows of nearly 30%. Moreover, during the last week of September 2022, GBP-denominated EU MMFs took steps to strengthen their resilience, having increased the proportion of liquid assets in their portfolios, with both daily and weekly liquidity levels rising significantly.[46]

While one LVNAV fund came close to breaching the regulatory limit for NAV deviation, it seems that the sector overall held well and delivered on its role of providing short-term liquidity storage. The liability-driven investment episode highlights the role of MMFs as liquidity management vehicles for institutional investors. It also shows the importance of preserving the resilience of the MMF sector to different types of economic shocks.

In March 2023, no significant impact on EU MMFs was observed following the turmoil in the banking sector. In the US, the collapse of Silicon Valley Bank led some depositors to question the safety of bank deposits, notably those above the regulatory protection limit. This triggered a shift towards US MMFs, which offered higher yields and better flexibility. Moreover, the banking turmoil resulted in increased inflows in the Federal Reserve overnight reverse repo (ON RRP) facility during the last weeks of March 2023. Following the takeover of Credit Suisse by UBS, EU MMFs have also seen sizeable inflows, including EUR 17.7 bn into euro-denominated MMFs during March 2023, which could be seen as an indication that market participants perceive the EU MMF sector as resilient.

3. ADEQUACY OF THE MMF REGULATION FROM A PRUDENTIAL AND ECONOMIC POINT OF VIEW

The following section reviews the adequacy of the MMF Regulation from a prudential and economic point of view, according to the requirements of Article 46(2) of that Regulation.

MMFs are a distinct category of investment funds, closely intertwined on the one hand with firms active in the real economy and the banking sector and on the other with key parts of the financial markets. They have an important dual economic function as a liquidity- and cash management tool and as a short-term funding instrument for financial and non-financial entities. They are not homogeneous, and their structure and risk characteristics differ across jurisdictions.[47]

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44 These strategies have been notably used by defined-benefit pension funds, which have used leverage to be able to match their assets and liabilities in a low interest rate environment.

45 ESMA, February 2023, Report on Trends, Risks and Vulnerabilities, No. 1, 2023

46 ESMA, February 2023, Report on Trends, Risks and Vulnerabilities, No. 1, 2023

47 FSB, 11 October 2021, Policy Proposals to Enhance Money Market Fund Resilience

3.1. MMFs and debt issued or guaranteed by EU Member States.

Article 46(2)(b) and (c) of the MMF Regulation requires the Commission to assess the role that MMFs play in purchasing debt issued or guaranteed by the Member States and to take into account the characteristics of such debt and the role that it plays in financing the Member States.

Because of the comparatively low liquidity and long maturities of debt instruments issued or guaranteed by EU Member States, EU MMFs do not invest significantly in such securities. Instead, most of the government debt exposure of EU MMFs is towards non-EU sovereigns (EUR 119 bn at the end of 2021, 74% of total sovereign exposure). In particular, US government debt accounts almost entirely for the sovereign debt holdings of CNAVs (EUR 88 bn at the end of 2021). For LVNAVs, EU government debt accounted for 36% of their exposure to government bonds at the end of 2021, while UK and US sovereigns accounted for around 60%. In contrast to other MMF types, the majority of government debt holdings of VNAVs are EU instruments, representing more than 75% of their government debt exposure at the end of 2021.[48] However, VNAVs generally have a lower share of government debt compared with other types of MMFs (only 7% of their assets).

Under the MMF Regulation, government debt with a longer residual maturity[49] may still count for up to 17.5 percentage points of the 30% required weekly maturing assets for LVNAV or public debt CNAV. Respondents to the consultation indicate that the cap of 17.5% appears inconsistent with the treatment of sovereign debt in other legislative frameworks (section 3.2). However, the MMF Regulation allows MMFs to invest up to 100% of their assets in sovereign debt and the limitations focus solely on liquidity buffers of LVNAV and public debt CNAVs due to the longer maturity and higher volatility of those assets compared with weekly maturing assets. Respondents to the consultation also indicate that many investors use public debt CNAVs due to an unwillingness or inability to invest in credit portfolios. This is commonly due to specific collateral, capital or regulatory requirements, e.g. requirements that cash positions be collateralised only with government debt, or regulatory requirements like high-quality liquid assets. Other investors indicate that while investments in public debt CNAV are done for diversification purposes, the size of these markets is not big enough to meet the cash management needs of some investors.

3.2. Uniform definitions of high and of extremely high liquidity and credit quality of transferable assets

Article 46(2)(d) of the MMF Regulation requires the Commission to take into account the report referred to in Article 509(3) of Regulation (EU) No 575/2013.

Article 509(3) of Regulation (EU) No 575/2013 tasked the EBA to report to the Commission on appropriate uniform definitions of high and of extremely high liquidity and credit quality of transferable assets. Banks invest in these assets to comply with the regulatory liquidity requirements under rules defined by the Basel Committee on Banking Supervision.

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48 ESMA, 8 February 2023: "EU MMF market 2023"

49 As long as they are highly liquid and can be redeemed and settled within one working day, such assets can be counted towards weekly maturing assets with residual maturity of up to 190 days.

The EBA issued this Report on 20 December 2013,[50] while recommending that its empirical conclusions should be supplemented by a qualitative/expert judgment, also building on supervisory advice. Based on the empirical analysis of a wide range of financial assets traded in the EU, the EBA distinguished between assets of high liquidity and quality and assets of extremely high liquidity and quality. In line with international standards, the EBA recommended to consider all bonds issued or guaranteed by European Economic Area sovereigns and central banks in the domestic currency and also those issued or guaranteed by supranational institutions as transferable assets of extremely high liquidity and credit quality.

Liquidity risk management for asset managers incorporates a range of safeguards: staggered maturities in particular for less liquid assets, daily and weekly liquidity buckets depending on the maturity of the assets in the portfolio, rules on the credit quality of assets, knowledge of the MMF investors base, and rules on the behaviour and liquidity of the assets and their correlation. Since 2017, increased attention has been paid to strengthening the management of liquidity risk, including by working on MMF stress testing, transparency and supervision, the definition of liquid assets, and the eligibility of assets for liquidity requirements.

Under EU asset management rules, the liquidity of an asset cannot be automatically presumed, and an appropriate liquidity test must be performed. For this purpose, asset managers have to put in place an appropriate risk management process, which is systematically reviewed and adapted to their investment strategies and to the type of investors ('know your costumer' policy). The liquidity and credit quality are measured on a case-by-case basis at the level of the financial instruments and of the overall portfolio.

Therefore, while some assets may be considered of high or extremely high liquidity under the EU banking framework, this may not automatically be the case in an MMF context, and a case-by-case analysis would be required to determine the liquidity and credit quality of a fund's assets.

3.3. Impact of the MMF Regulation on short-term financing markets

Article 46(2)(e) of the MMF Regulation requires the Commission to take into account the impact of this Regulation on short-term financing markets.

MMFs are part of the broader ecosystem of short-term finance. The turmoil in March 2020 revealed certain structural vulnerabilities, data gaps, and regulatory uncertainties on European short-term funding markets. While these are beyond the scope of the MMF Regulation, they remain important for the sound functioning of EU MMFs.

The short-term funding market is an over-the-counter dealer intermediated market. There is evidence that this short-term funding market is fragmented and opaque.[51] Relevant information is spread over multiple trading venues, neither of which is able to provide a comprehensive picture of the market due to partial reporting, unclear scope of action, inconsistent terminologies, etc.

[50] Workstream 5 (WS 5): Report on the LCR pursuant to Art 481 (1) CRR (europa.eu).

[51] Darpeix, P., March 2022, "The market of short-term debt securities in Europe: what do we know and what we do not know" , Authorité des Marchés Financiers, Risk and Trend Mappings.

The study also shows that secondary market activity (bid, offer, price, volumes, etc.) is almost entirely opaque. This makes price discovery challenging, creates inefficiencies in these markets, and leads to difficulties for MMFs to appropriately monitor risks in a stress situation. It also prevents regulators from accurately assessing structural market liquidity. Increased transparency could contribute to making short-term funding markets more dynamic and more resilient, thereby also reducing the risk associated with MMFs in case of severe stress.

Most respondents to the consultation, including financial sector respondents and supervisors, pointed to the need to increase transparency and to help price discovery in the short-term securities markets, by requiring more disclosures on what is being traded and on outstanding amounts.

Furthermore, given the lower liquidity and opacity of this market, there is a risk that a market stress can be transmitted to other MMFs in what is called a contagion dynamic. In order to satisfy redemption requests, MMFs need to invest in sufficiently liquid assets. Such liquid instruments include reverse repos (often overnight), Treasury bills, and bank deposits. Other instruments (certificates of deposit, commercial papers) cannot always be sold off quickly (as they are normally held until maturity and secondary markets are not sufficiently deep, heightening the price impact if they are sold), but they have a very short maturity. If a run occurs, MMFs would first use the proceeds of maturing assets or terminate their reverse repo transactions to meet redemption requests. If the run continues, MMFs would sell their liquid assets without further investing in short-term instruments leading to a sudden drying of sources of funding for companies.

In principle, this contagion dynamic would be avoided if MMFs could invest their cash in instruments for which a rapid withdrawal would not lead to market contagion. One instrument that satisfies this requirement would be a deposit at the central bank itself. A case study of such an arrangement can be found in the US, where MMFs may place their excess cash with the US Federal Reserve's overnight reserve repo (ON RRP) facility. In addition to preventing contagion dynamics in situations of liquidity crunch, this facility also puts the US MMF sector at an advantage compared to EU MMFs in terms of flexibility in managing their liquidity inflows.[52] This was exemplified by the banking crisis sparked by the collapse of Silicon Valley Bank which lead to an increase of inflows to US MMFs, resulting in a subsequent growth in the usage of the Federal Reserve's facility during the last weeks of March 2023. By March 2023, MMFs and other eligible participants held more than USD 2.3 trillion in that facility.[53]

3.4. Regulatory developments at international level

Article 46(2)(f) of the MMF Regulation requires the Commission to take into account the regulatory developments at international level.

Pandemic related events triggered a strong push to further strengthen the regulatory framework for MMFs. This has resulted in several proposals by ESMA, the ESRB, and the FSB to reform the regulatory framework for MMFs, to limit systemic risks and to ensure that the MMF sector can withstand a potential future liquidity or market stress. The policy options

[52] The decision about opening such a liquidity facility to MMFs however is beyond the competencies of the European Commission and lies in the ECB remit.

[53] Reverse Repo Operations - FEDERAL RESERVE BANK of NEW YORK (newyorkfed.org)

proposed by the different authorities and institutions can be grouped as follows: (1) reduce the risk of runs (notably by removing the deposit-like features of certain MMFs), (2) strengthen the liquidity of MMFs and their ability to absorb losses, and (3) measures to prepare for future crises. These proposals are listed in Table 2 and further detailed below.

Table 2 – Main policy proposals

Policy objectives	Policy proposals	1) ESMA	2) ESRB	3) FSB
Reduce the risk of runs	Removing the possibility to use amortised cost for LVNAVs	Yes	Yes	Yes
	Decoupling the activation of liquidity management tools from regulatory thresholds for LVNAVs and CNAVs	Yes	Yes	Yes
	Impose on redeeming investors the cost of their redemptions		Yes	Yes
Strengthen liquidity of MMFs and their ability to absolrb losses	Rules on the use of liquidity management tools	Yes	Yes	Yes
	Changes to the daily and weekly liquidity ratio	Yes	Yes	
	Impose minimum ratio of investment in public debt	Voluntary holding	Yes	
	Increase usability of the liquidity holdings in times of stress	Yes	Yes	
	Introduce minimum balance at risk			Yes
	Capital buffer			Yes
Other measures	Enhancement of stress testing framework	Yes	Yes	
	External support (incorporating ESMA statement in the law)	Yes		
	Rules on disclosure of MMFs' ratings	Yes		
	More advanced reporting requirements	Yes	Yes	

- ESMA opinion to reform MMF Regulation, 14 February 2022
- Recommendation of the ESRB on reform of MMF, 25 January 2022
- FSB recommendations to the G20 on MMFs reforms, 11 October 2021 (Policy proposals to enhance money market fund resilience).
- US Securities and Exchange Commission (SEC) draft amendments to MMF rules, 15 December 2021 (MMF Reforms) for public consultations.
- Financial Conduct Authority (FCA) and Bank of England joined discussion paper on MMF, May 2022 (Resilience of Money Market Funds) for consultation until 23 July 2022.

(*) proposal to require a minimum holding in highly liquid assets including public debt and maximum holding of assets with lower liquidity under stressed market (e.g. 40% in private sector certificates of deposit and commercial paper).
(**) The Bank of England and the Financial Conduct Authority are contemplating launching a consultation on the removal of the stable NAV from LVNAVs. LVNAVs would have similar rules as short term VNAVs. They also consider limiting the size of the public debt CNAV market.

3.4.1. Reducing the risk of runs

International organisations and supervisory bodies such as the ESRB and ESMA have recommended that LVNAVs become variable NAV funds, following the example of the US.[54] Such a change would aim at reducing the risk of runs caused by threshold effects by limiting

[54] The US SEC made this move in 2016. The SEC reform required all institutional prime MMFs (that is non-government MMFs used by institutional investors) to convert to variable NAV. The result of this reform is that assets invested in these US MMFs contracted substantially in the years leading up to the implementation of these reforms, to the benefit of US government MMFs (which have a stable NAV feature).

opportunities for investors to redeem from the MMF at constant prices which in periods of market stress do not necessarily reflect current market valuations of underlying assets. To this end, they propose to prohibit the use of amortised cost accounting and the associated 2nd decimal rounding which allows LVNAVs to offer a stable redemption price.

However, this policy option would imply a radical change for the EU MMF market and notably the disappearance of the LVNAV market. The switch from a stable to a variable NAV would remove the deposit-like features of these products, which is one of the main purposes that investors cite for using these MMFs. The majority of the respondents to the consultation were rather critical about removing LVNAVs. Most respondents saw the risk that in this case, some investors would exit the MMF market. The limited availability of economically viabile alternatives and substitutes to LVNAVs could lead investors to turn to less regulated products.

As an alternative, current investors in LVNAVs could invest in public debt CNAV (currently 11% of the market), in floating NAV MMFs (in particular short-term VNAV) or directly in the short-term market. However, responses to the stakeholder consultation indicate that the public debt CNAV segment is too small to accommodate the cash management needs of investors and that it does not meet their liquidity requirements. Moreover, respondents indicate that the elimination of LVNAVs would result in an increase in competition for government assets, which are used by banks as High Quality Liquid Assets, as well as by many other investors for liquidity management purposes.

Some respondents indicate that short-term VNAV could be an alternative, but point to uncertainties about their accounting treatment as 'cash and cash-equivalent' in different jurisdictions. Moreover, such changes would also have tax implications. Most respondents to the consultation indicate that they would use bank deposits as alternative instruments in case LVNAVs were no longer available, even though bank deposits would result in an increase of counterparty credit risk and significantly reduce risk diversification compared with the diversified portfolios provided by MMFs.

Overall, the respondents to the consultation appreciated the utility of LVNAVs and particularly the operational ease of use for investors because of the ability to round the share price within the 20 basis points collar. Should LVNAVs not be available anymore, respondents feared a lack of alternative investment and risk diversification options. The resilience of LVNAVs during the March 2020 turmoil should also be taken into consideration, as no LVNAVs activated liquidity management tools nor did they convert into VNAVs during this period.

3.4.2. Strengthen the liquidity of MMFs and their ability to absorb losses

Prudential and supervisory bodies have put forward a range of policy options aiming at further strengthening the ability of MMFs to face high redemption requests and protect public interest and financial stability.

While the connection between the use of LMTs and liquidity levels is not automatic in the MMF Regulation, a breach of minimum WMA holdings of 30% can potentially trigger the imposition of redemption gates or fees. This seems to have compelled fund managers not to use their WMA holdings to finance increased redemption requests in March 2020, fearing that a breach of the minimum WMA level would induce further redemption requests as investors anticipated the imposition of liquidity management tools. Fully disconnecting the potential use of LMTs from breaches of minimum liquidity holdings could thus increase the ability of

fund managers to finance increased redemptions in stress periods. This proposal finds the largest support so far among stakeholders.

The proposal to relax existing limits on eligible public debt assets as part of liquidity buckets is strongly supported by the ECB, which wants investments in these assets to be made compulsory. Views of stakeholders are split when it comes to the binding character and levels of investments in such assets. This is related to the variable impact of such investments on the profitability of MMFs and the availability of eligible public debt. Stakeholders also express some concerns about shifting liquidity risk to the sovereign market. Although public debt can serve as a crucial tool to manage liquidity for MMFs, the recent UK crisis has shown that it is not immune to episodes of price volatility. In addition, there is a risk that an increase in the existing limits on eligible public debt assets would result in MMF investments becoming overly concentrated in these securities, whereas the diversification of investments in different asset classes is an important safeguard.

More generally, the proposals to increase minimum holdings of liquid assets, while not controversial in substance, are difficult to implement and may have unintended consequences. Indeed, while the rules on liquidity coverage ratio provide for a definition of high quality liquid assets, in the asset management sector it is difficult to define liquid assets (e.g. government bonds may also face stressed market conditions). In addition, MMF managers manage liquidity with a holistic approach including staggered maturities, use of reverse repo transactions and the characteristics of their investor base (including investor concentration). Moreover, additional hard thresholds would introduce rigidity in the implementation of asset managers' liquidity risk management policies, including stress tests, with potential unintended effects.

There are split views among stakeholders, based on the role and function of MMFs, about the actual impact of recommendations to give fund managers the possibility to shift the cost of redemptions to investors (by imposing different kinds of price-based liquidity management tools, also known as swing pricing), as recommended by the FSB and the ESRB and put forward by the US Securities and Exchange Commission. Following the FSB and ESRB recommendations, the proposal to revise the directives on Alternative Investment Fund Managers (AIFMD) and UCITS aims to expand the range of liquidity management tools for funds in the EU and to harmonise the ways they are used. EU MMFs will benefit from the AIFMD/UCITS review, whereby asset managers would be allowed to select the most appropriate liquidity management tools from a dedicated list.

Proposals to increase the loss-absorption capacity of MMFs have been put forward by the FSB, including by imposing constraints on the shares that can be redeemed immediately (this is known as 'minimum balance at risk') and by requiring MMFs to maintain capital buffers, for example outside the MMF in an escrow account financed by fund managers. These types of solutions would reduce the first mover advantage for investors, as they would mitigate the risk of losses being imposed on remaining investors. However, such solutions are either untested and contingent on significant operational adjustments (for 'minimum balance at risk'), or they would make it more expensive to operate MMFs and thus likely lead to closures of some funds (for capital buffers) and lower returns for investors.

3.4.3. Other measures

A number of additional measures, which are not directly linked to the operations of MMFs, have also been put forward by ESMA and the FSB, and merit further assessment. Those are

mainly related to reporting and stress testing. Similarly, other proposals from stakeholders such as strengthening supervision could be further assessed.

3.5. Feasibility of establishing a minimum 80% EU-public debt quota

Article 46(2) of the MMF Regulation requires the Commission to assess the feasibility of establishing an 80 % EU public debt quota.

This report takes account of the availability of short-term EU public debt instruments and assesses whether LVNAVs might be an appropriate alternative to public debt CNAVs targeting instruments in other currencies.

Recital 56 of the MMF Regulation argues that such a quota may be "*justified from a prudential supervisory point of view*", given that "*the issuance of EU short-term public debt instrument is governed by Union law"*. However, there are two main difficulties that render such a quota unfeasible in practice.

The first difficulty is the mismatch between, on the one hand, the public debt CNAVs currently available in the EU (which are mostly denominated in USD or GBP, with only one relatively small EUR-denominated public debt CNAV in existence[55]), and on the other hand, the denomination of public debt in the EU. Data from Darpeix[56] shows that the vast majority (around 90%) of short-term debt securities issued by EU countries (whether or not they belong to the euro area) is labelled in EUR, with only around 5% denominated in USD. The mismatch between the denominations of the funds themselves and the available public debt instruments implies that EU public debt CNAVs mainly invest in US- and UK-issued instruments.[57]

The results of the public consultation indicate that even with the imposition of an EU public debt quota investors in USD and GBP denominated CNAVs would likely not shift to EUR-denominated public debt MMFs, for two main reasons.

- First, because clients mainly take into account sovereign and currency risk aspects together. For instance, clients investing in USD-denominated MMFs want to have exposure to US debt and currency rather than to EU debt and currency. This is also closely related to the economic function of MMFs as a store of liquidity in a given currency.
- And second, because there are risks related to low diversification and relatively low liquidity of EUR-denominated short-term public debt. Feedback from stakeholders indicates that MMFs prefer to invest in assets with maturity lower than 3 months, which is difficult to achieve with the current market for EUR-denominated public debt.

The second difficulty is that such a quota could have negative financial stability implications. Banks need exposure to government debt to comply with the Basel II liquidity requirements.

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55 Based on ESMA data, 8 February 2023: "EU MMF market 2023

56 Darpeix, P., March 2022, "The market of short-term debt securities in Europe: what do we know and what we do not know" , Authorité des Marchés Financiers, Risk and Trend Mappings.

57 For various reasons, MMFs tend not to mix currencies. While they could do so to some extent by hedging currency risk exposures via foreign-exchange derivatives, it would become too costly on a substential basis.

A minimum 80% EU-public debt quota would mean that MMFs would target the same instruments as banks. As a result, there would be a multitude of investors investing in the same asset class, thus increasing risks of contagion and financial instability in crisis situations due to common underlying exposures amplifying a feedback loop between financial and sovereign risk.

In light of the preceding analysis, the merits of establishing a minimum 80% EU-public debt quota for EU MMFs remain questionable. However, even without the imposition of a quota, more EUR-focused public debt CNAVs might appear in the market following the recent increase in interest rates in the euro area, which could help place more short-term sovereign debt in EUR with EU public debt CNAVs.

4. CONCLUSIONS

This report delivers on the legal mandate under Article 46(1) and 46(2) of the MMF Regulation for the Commission to submit a report to the European Parliament and to the Council, reviewing the adequacy of the MMF Regulation from a prudential and economic point of view.

The report shows that the MMF Regulation successfully passed the test of liquidity stress experienced by MMFs during the COVID-19 related market turmoil of March 2020, the recent interest rate increases, and related financial asset re-pricing. No EU-based MMF had to introduce redemption fees or gates or to suspend redemptions during these stress events. Similarly, EU MMFs focused on GBP assets withstood the redemption pressure linked to the September 2022 gilt market stress.

These experiences indicate that the the safeguards in the MMF Regulation have been working as intended. This includes the safeguards that were conceived to allow stable NAV MMFs (CNAVs and LVNAVs) to continue using, under certain conditions, the amortized cost method without creating systemic risks and harming investors.

By introducing a dedicated regime, the MMF Regulation has significantly strengthened the regulatory framework for MMFs in the EU, which had before been subject to different rules. However, after 5 years of application of the MMF Regulation, this report identifies shortcomings which should be further assessed. In particular, the results of the stakeholder consultation and the recent market developments show that there could be scope to further increase the resilience of EU MMFs, notably by decoupling the potential activation of liquidity management tools from regulatory liquidity thresholds. In addition, this report highlights structural problems that are external to MMFs, and therefore also to the MMF Regulation, including those linked to the underlying short-term markets. These structural problems would merit a further assessment, and are also currently the subject of a more in-depth analysis at the level of FSB.

Finally, EU MMFs will benefit from the ongoing review of the AIFM and UCITS Directives[58], which aims to introduce new harmonised rules to increase the availability of LMTs for open-ended funds. This new LMT framework will further strengthen the resilience of EU MMF's liquidity management in cases of stress.

[58] As MMFs operating in the EU have to be established and comply with either AIFMD or UCITSD. The Commission proposal can be seen at: https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/12648-Financial-services-review-of-EU-rules-on-alternative-investment-fund-managers_en.