Financial stability

MMFs in the EU – new stress-testing requirements

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MMFs play an important role in the EU money market by connecting investors investing in short-term liquid products with governments and institutions that are in need of short-term funding. The new EU MMFR aims at increasing the resilience of the sector by addressing the issues identified, such as the "first-mover advantage". The Regulation introduces new stress-testing requirements, as part of fund risk management and regulatory disclosure. ESMA will design common parameters and scenarios to coherently capture the risks of the sector. Stress test results will be reported to ESMA and the National Competent Authorities (NCAs).

Introduction

MMFs are investment funds that invest essentially in money market instruments issued by banks, governments or corporates. Money market instruments traditionally include public debt, commercial paper or certificates of deposit. Unlike other investment funds, some MMFs offer a redemption at par called Constant Net Asset Value (CNAV). By contrast MMFs valuing share prices at market value are called Variable Net Asset Value (VNAV) MMFs. CNAV MMFs are necessarily short-term (their residual maturity shall not exceed 397 days) while VNAV MMFs be either short-term or standard (residual maturity up to 2 years).

Due to their important role in the money market, and especially in bank funding, any disruption affecting the MMF market can be destabilising and can have systemic consequences. The financial crisis rightly highlighted some vulnerabilities, especially MMFs' difficulty to maintain liquidity and stability in face of investors "runs", thus posing a risk of contagion. Eventually the FSB classified MMFs as shadow banking entities involved in credit intermediation, maturity and liquidity transformation.

The MMFR[109], which was implemented in July 2018, aims at addressing MMF vulnerabilities and preventing the risk of contagion. One of the tools to assess the resilience of funds is stress testing: Article 28 of the Regulation also requires ESMA to develop guidelines on stress testing and to update them annually[110]. The objective of this article is to present the upcoming guidelines following the 2018 consultation.

Financial stability risks posed by MMFs

MMF vulnerabilities

The financial crisis highlighted the vulnerability of MMFs and the risk of contagion to other financial institutions and to banks in particular. Certain features of MMFs make them particularly susceptible to "first-mover advantage" such as the daily liquidity and the stable share value. This is particularly the case for CNAV MMFs which offer a redemption at par (and to a lesser extent for VNAV MMFs). Therefore, when a fund incurs a loss, redeeming investors are still expecting to receive the par value even though it is above the current share market value. If investors expect this loss to be durable or to increase, for example in a stressed market environment, they are incentivised to be the first to redeem. Indeed, if the market value drops significantly below the fixed price per share the MMF may eventually have to discount the share price. This, in turn, can prompt more redemptions and pulls the NAV down.

This is even more likely because a significant part of MMF investors are risk-averse institutional investors that use MMFs as a substitute for bank deposits. Since MMFs play the role of short-term funding suppliers to banks, any disruption affecting MMFs can spread quickly to the money

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109 Regulation (EU) 2017/1131 of the European Parliament and of the Council of 14 June 2017 on money market funds http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32017R1131

110 A consultation paper on these Guidelines has been published on 13 November: https://www.esma.europa.eu/sites/default/files/library/esma34-49-144novbos_cpon_mmfguidelinesreporting.pdf

market, thus becoming a risk of contagion to banking institutions.

Sponsors also play a role in the way MMFs can affect financial stability. Some parent banks gave support to troubled MMFs during the crisis, by buying assets from them, issuing guarantees or providing capital[111]. Moreover, since sponsorship is generally implicit, the support is expected but not guaranteed: this uncertainty may amplify the incentive to withdraw.

Evidence from the financial crisis

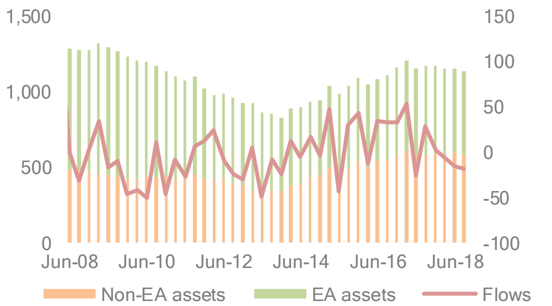
Some of those risks materialised in the EU in 2007 and 2008. In the wake of the subprime crisis, MMF-like bond funds that invested in ABS were particularly affected by the depreciation and sudden lack of liquidity of those assets. In 3Q07, they experienced significant redemption pressure which triggered the suspension of redemption for several funds and/or the call for support from the parent bank: 4 funds closed definitely.

Similarly, EU MMFs experienced significant redemption requests in 4Q08, in the aftermath of the Lehman Brothers failure. Moreover, due to the freeze of the money market, there was a significant shift of MMF assets into overnight assets which aggravated the situation in the money market itself. In addition, during the 2011 EU sovereign debt crisis, US MMFs withdrew funding to European banks thus exacerbating the pressure on EU banks short-term funding.

EU MMF landscape at the time of the reform

In 1H18, EA MMFs were managing nearly EUR 1.2tn assets (V.1). Although the sector has been growing steadily since end-2013, this is still 13% lower than in 1Q08 when the EA MMF industry represented more than EUR 1.3tn.

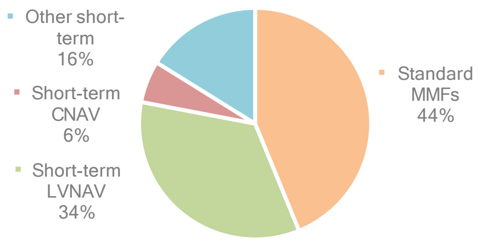
V.1
EA MMF assets



Note: EA MMF flows (rhs) and AuM of EA MMFs by origin of the assets (lhs), EUR bn.
Sources: ECB, ESMA.

Short-term MMFs, including CNAV funds, represent more than half of the EU sector (V.2). Moreover, 52% of assets are invested in non-euro denominated assets (mainly US and GBP).

V.2
EU MMF categories



Note: NAV of EUR MMF, EUR bn. The figures take into account the reclassification of CNAV funds into LVNAV since 2018. Other short-term funds include VNAV funds and short-term MMFs whose classification is unknown.
Sources: Thomson Reuters Lipper, ESMA.

The EU MMF industry is concentrated in France, Ireland and Luxembourg, which hold 98% of EA MMF assets. However, there are significant national differences: French MMFs are mostly EUR-denominated VNAV funds while CNAV funds are predominantly domiciled in Ireland and Luxembourg, with a significant part (68%) not denominated in EUR.

Overview of the MMFR

The new MMFR entered into force in July 2018 with a transition period until January 2019 for existing funds, with the objective of preventing "run" risk and contagion. It introduces tighter rules on portfolio diversification, liquidity and transparency (V.3). Sponsor support is explicitly prohibited. Moreover, it redefines MMF categories:

— short-term and standard VNAV funds are similar to pre-reform categories;

[111] As a background for its Recommendation on money market funds, the ESRB reports that over 60 funds benefited from support between 2007 and 2009 (Moody's data). https://www.esrb.europa.eu/pub/pdf/recommendations/ESRB_2012_1_annex.en.pdf?7fcb74273989dece83c6d6e18780841d

- CNAV is restricted to funds investing at least 99,5% of their assets in public debt;
- LVNAV funds are allowed to keep a constant NAV if it doesn't deviate from the mark-to-market NAV per share by more than 20 bps.

The MMFR also introduces new risk management requirements which impose stress testing and internal processes to determine credit quality for money market instruments, and "Know Your Customer" policies and procedures.

V.3
MMF categories
Summary of the main requirements

	Short-term MMFs			Standard MMFs
	Public debt CNAV	LVNAV	VNAV	
Eligible assets	– 99.5% public debt, cash or reverse repo backed by government assets.	– Money market instruments, securitizations and ABCPs; – Deposits; – Cash from reverse repo; – OTC derivatives – MMF shares.		
Valuation method	– Amortized cost	– Amortized cost (maturity <75D) – Or Mark-to-market	– Mark-to-market	– Mark-to-market
Residual maturity	<397D	<397D	397D	<2 years (max 397D to IR reset)
Weighted average maturity (WAM)	<60D	<60D	<60D	<6M
Weighted average maturity (WAL)	<120D	<120D	120D	<12M
Daily maturing assets	>10%	>10%	>7.5%	>7.5%
Weekly maturing assets	>30%	>30%	>15%	>15%
Diversification	– Public debt: Max 100% of assets, across at least 6 issues, max 30% per issue. – Money market instruments, securitizations and ABCPs; deposits; cash from reverse repo: <15% per issuer with sub-limits by instrument. – MMFs: <10% per MMF and max 17.5% in aggregate.			
Liquidity fees, redemption gates, suspension of redemption.	– Possible: If weekly liquid assets <30% and the daily redemptions >10% of total assets. – Mandatory: If weekly liquid assets <10% and the daily redemptions>10% of total assets. – Conversion to VNAV if a redemption suspension is 15D or more within a 90D period.		– UCITS (or AIFMD) rules.	

Note: Please refer to the legal text for the comprehensive and detailed requirements.
Sources: MMF Regulation, ESMA.

ESMA stress test guidelines

The MMFR requires managers of MMFs to conduct regular stress tests as part of their risk management and regulatory disclosure. Funds must put in place sound stress testing processes, including identifying stress events, or future changes in economic conditions, and assess the impacts that these different scenarios may have on (the NAV and/or liquidity of) the MMF.

In addition, Article 28 of the MMFR provides that ESMA shall develop guidelines to be included in the stress tests that managers of MMFs are required to conduct. The guidelines must include common reference parameters considering the following hypothetical risk factors:

- liquidity changes of the assets held in the portfolio of the MMF;
- credit risk, including credit events and rating events;
- changes in interest and exchange rates;
- redemptions;
- spread changes of indexes to which interest rates of portfolio securities are tied; and
- macro-economic shocks.

Liquidity risk

In times of market stress, a liquidity risk of portfolio assets can materialise, thereby having an impact on the value of a security. One measure of liquidity is the difference between the bid and the ask prices i.e. the price at which a seller is ready to sell a certain quantity and the price at which a buyer is ready to buy a certain quantity. When the spread between bid and ask widens, the cost of trading increases, indicating that the asset has become less liquid.

In the context of the guidelines, the impact of market liquidity will be simulated as a widening of bid-ask spread by type of security and by maturity. The discount factors will be calibrated using commercial data and based on past stress episodes with the indicative level of detail:

- For each relevant security (i.e. corporate and government bonds), the discount factors should be applied to the bid prices used for the valuation of the fund observed in an active market at the time of reporting, according to their type and maturity, to derive an adjusted bid price.
- The manager of the MMF should estimate the impact of the potential losses by valuing the investment portfolio at the derived adjusted bid price, to determine the stressed NAV and report the impact as a percentage of the reporting NAV.

Credit risk

MMFs invest in debt instruments and are subject to credit risk, including credit events and rating events. For the first update of the guidelines ESMA, in cooperation with the European Systemic Risk Board (ESRB) and the ECB, will publish changes in credit spreads to be used by fund managers, similarly to the European Banking Authority (EBA) stress test.

— The change in spread would affect the value of the securities according to their duration.

— An MMF manager would have to reprice all securities and measure the impact on NAV.

In addition to the credit stress, the guidelines will require the managers of MMFs to simulate the default of their two main exposures (including deposits, repos and derivatives) considered at the group level (all entities from the group being in default). The purpose of this additional stress is to capture concentration and counterparty risk, particularly for exposures that are not affected by the credit spread shock. The resulting impact on NAV would then be reported separately from the credit risk scenario based on credit spread.

Interest rate and exchange rate risks

Similarly, debt instruments in MMF portfolios are subject to interest-rate and exchange-rate risks. Regarding interest rates, the guidelines differentiate between risks related to hypothetical movements of interest rates and the widening or narrowing of indices to which interest rates of securities are tied. Regarding exchange rates, risks depend on the denomination of the fund, i.e. EUR or non-EUR. Therefore 2 different scenarios (EUR appreciation and EIR depreciation) will be proposed

Similar to the 2018 EBA and European Insurance and Occupational Pensions Authority (EIOPA) stress tests, ESMA is developing risk parameters in close cooperation with the ESRB and the ECB to assess the three scenarios. Results of the three scenarios would be reported separately.

Redemption

MMFs may face redemption pressures challenging their ability to redeem holdings at the request of investors in a short period of time. Such pressures take the form of stressed outflows over a certain time horizon; for example, one week. The stressed outflows will be calibrated by ESMA based on commercial data from the period 2007-2013 on the worst percentile of the period. In addition, the assumption is made that retail investors are more stable and thus a smaller shock can be applied to them. ESMA suggests measuring the impact in two ways:

— Reverse liquidity stress test: Assuming that the manager of the MMF wants to keep its strategy unchanged to ensure fair treatment of all investors, it will be required to produce a self-assessment on the maximum size of outflows the fund can face in one week without distorting portfolio allocation (especially asset class, geographical allocation and sectoral allocation). This assessment should also consider the capacity to comply with the weekly liquid assets requirements specified in Article 24(1) of the MMFR;

— Weekly liquidity stress test: Weekly outflows will be compared with available weekly liquid assets, considered as the sum of highly liquid assets and weekly maturing assets.

In addition, MMFs will have to simulate a final scenario assessing the redemption of its two main investors. The impact of the stress test will be assessed according to the reverse liquidity stress test and the weekly liquidity stress test methodologies.

Macro-systemic shock

Macro-systemic shock simulates adverse macro-economic developments or uses as a basis a major systemic event that affected the economy as a whole in the past, such as the Lehman Brothers bankruptcy event.

In future versions of the guidelines, ESMA intends to develop an ad hoc multi-variate scenario, with stressed parameters different from the individual scenarios. This would include a narrative, i.e. would simulate the impact of a particular or historical stress event.

However, ESMA proposes that the methodology be kept simple for the 2018 guidelines and asks MMF managers to report the combined impact of the different risk scenarios, including the redemption shock. In other words, MMF managers would be asked to use the same parameters they used for the different scenarios, but in a combined fashion.

In concrete terms, the scenario supposes a “run” of some investors followed by a macro systemic shock. MMF managers would thus have to measure the combined effect of all risk factors at the same time. In most cases the results from the macro systemic shock should differ from the simple aggregation of the individual shocks, for example due to the non-linearity of the impacts.

Conclusion

Similar to the AIFMD, the MMFR is part of the regulatory response to the crisis. Its primary objective is to increase the resilience of the MMF sector, due to its prominent role in the money market but also due to the vulnerabilities identified during the crisis. MMFR will also contribute significantly to the supervision of the fund sector through the implementation of a regular reporting, including stress test results. The NCAs and ESMA will be able to conduct a fund-by-fund comparison, but also an overall assessment of the risks of the sector.

The draft ESMA stress-test guidelines will now be revised to consider the comments received during the consultation and the calibration of the common reference stress test scenarios to be used by fund managers. It will be published in a sufficiently timely manner so that managers of MMFs receive the appropriate information on these fields to complete in the reporting template defined in the technical advice and implementing technical standards on the establishment of a reporting template and the timing of implementation of the corresponding database.

References

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European Systemic Risk Board (2013), ‘Recommendation of the European Systemic Risk Board of 20 December 2012 on money market funds (ESRB/2012/1) and related annex‘, ESRB/2012/1, https://www.esrb.europa.eu/pub/pdf/recommendations/ESRB_2012_1.en.pdf?8e57aeb9f953421e526109380cec78bc