European MMFs in the Covid-19 market turmoil: Evidence, experience and tentative considerations around eventual future reforms

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EUROPEAN MMFS IN THE COVID-19 MARKET TURMOIL: EVIDENCE, EXPERIENCE AND TENTATIVE CONSIDERATIONS AROUND EVENTUAL FUTURE REFORMS

EXECUTIVE SUMMARY

The Covid-19 pandemic and the consequent market reactions of March 2020 induced by the economic lock-down measures taken across Europe and elsewhere have recast money market funds (MMFs) in the regulatory spotlight. Following the extensive post-Global Financial Crisis regulatory reforms - as implemented in the EU with the Money Market Fund Regulation (MMFR) of 2017 - the pandemic-induced market events have marked the first true “stress test” for European MMFs.

This report intends to inform the global policy-making community, as well as the broader public, on the experience of European MMF managers during and after the March turmoil by drawing evidence from a number of key indicators, as well as from managers’ direct experience, all in light of the MMFR’s robust overarching regulatory framework. Throughout the document, we highlight the following key aspects:

- Whereas liquidity management proved challenging for all market participants, European MMFs - whether short-term or standard and irrespective of their base currency denominations – have continued to meet redemptions throughout the initial months of the pandemic and until the time of writing (November 2020). Moreover, they have continued to provide a high-quality, well-diversified and liquid investment option at a time when markets underwent considerable stress, while offering both investors and regulators complete transparency around funds’ portfolio holdings and liquidity levels;

- Provisions in the MMFR mandating high levels of daily and weekly liquidity for each type of EU MMF, prudently supplemented in practice with even higher amounts of liquidity based on investor profiling and in light of gradually deteriorating market conditions at the start of 2020, ensured that European managers entered the pandemic with fund liquidity levels well above their regulatory minima;

- For EU Low Volatility NAV (LVNAV) and Public Debt Constant NAV (PDCNAV) MMFs, the MMFR includes a critically important “two-part test”, before fund boards are notified to assess any required actions. This mechanism effectively ensures that the MMF, in the event of a significant weekly liquid asset drawdown, is not automatically compelled to notify its board, thereby avoiding the market’s perception that further emergency measures may be forthcoming; and

- In relation to central bank interventions as from mid-March, notably that of the U.S. Federal Reserve and that of the ECB, these were effective at calming investors and restoring liquidity to underlying money markets. However, in Europe at least, the impact of the ECB’s Pandemic Emergency Purchase Programme (PEPP) has been limited, given its eligibility limits that excluded financial commercial paper and instruments denominated in non-Euro currencies. Calls from parts of the European and global financial policy-making community suggesting that the ECB’s intervention would have allegedly “bailed-out” segments of the MMF industry is in our view unfounded.

In light of the “lessons learnt”, but cognisant of the likelihood for further market stresses as the uncertainty effects of the pandemic endures, we formulate a series of recommendations for policy-markets and global

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1 See for instance the Opening Statement of the ESMA Chair, Steven Maijor, before the European parliament’s ECON Committee on 12 October 2020.
standard setters to prudently consider. Besides the need to convene a dedicated forum for the ECB to consult with industry representatives active in European money markets, as well as improving the coordination between central banks and transparency around future intervention programmes, we consider additional options aimed at improving and increasing the resilience of underlying money market conditions during episodes of stress.

I. **Money Market Funds: Matching issuers’ with investors’ financial needs**

MMFs are open-end, collective investment schemes, investing in short-term debt instruments issued by financial and non-financial corporate entities, sovereign governments and related agencies, as well as supranational bodies, among others. The investment in such instruments by MMFs constitutes an essential source of financing for these entities and one that often complements traditional bank financing through loans, especially for non-financial companies. Typically, money market instruments include commercial paper (CP), certificates of deposit (CDs), short term bonds, as well as bank deposits and repurchase agreements (repo and reverse repo). The short-term nature of these instruments offers issuers – mainly banks, but also non-financial corporates, public sector bodies, et al. - clear advantages in terms of funding their operational needs in line with seasonal fluctuations and cycles. Consistent with the objectives of returns in line with money market rates and of principal preservation, MMFs typically hold these assets until maturity and represent a significant portion of the “buy-side” market in short-term, high quality securities.

In terms of portfolio composition – as the following sections will highlight – the bulk of European MMF investments are in financial corporate debt instruments, followed by sovereign government and related agency issued ones. Due to the smaller size of their market compared to financial corporates, non-financial corporate exposures represent only a minority holding across MMF portfolios – where at all – and typically take the form of investments into asset-backed commercial paper (ABCP), as further guaranteed by banks from a credit and liquidity risk perspective.

From an investors’ perspective, MMFs are a valued short-term investment and cash management tool, especially for corporates with large cash balances, enabling the diversification of credit risk away from traditional bank deposits and into diversified pools of holdings managed by investment professionals. An MMF’s investor base includes a wide range of market participants, including non-financial corporates, charities and foundations (non-profits), general government and related agencies, monetary financial institutions (MFIs), pension funds and insurance companies, investment funds, other financial institutions (OFIs) and private households, *inter alia*. As for issuers, MMFs have traditionally been an important source of short-term funding in European markets.

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2 Under the EU MMFR regime, please refer to Article 9, listing several categories of MMF eligible assets.
To further highlight the important role played by MMFs in meeting issuers’ and investors’ respective financing and investment needs, let us consider the range of sub-optimal alternatives available in the absence of MMFs. For issuers, it would imply less diversification of funding sources away from banks, with increased reliance on comparatively more expensive bank credit. Europe already stands out in this regard compared to other regions of the globe, justifying the European Commission’s drive to develop an EU Capital Markets Union in the future. For investors, the burden of having to select and manage their investments directly would be removed by commingling their funds in an already well-diversified pool of high quality securities managed by a professional asset management company. Moreover, both from a financial stability and market transparency perspective, regulatory disclosures and reporting requirements to supervisors prove MMFs are the better alternative, compared to having investors instead manage their own cash balances or rely on segregated accounts with professional asset managers for this same purpose. For the latter options, there would be far less transparency over fund flows, fund holdings and investor profiles for market supervisors to consider when monitoring the build-up of vulnerabilities.

Before describing the main types of European MMF structures and the applicable regulation, it is important to recognise the specific role of dealer banks in short-term money markets. These entities play an important role both in terms of pricing and liquidity of money market instruments. In relation to CP, for instance - totalling approximately 31% of European short-term MMF holdings at the end of 2019 - dealer banks participate in issuance programmes by bidding for CP and acting as an intermediary until a client buyer is found, thus supporting the CP’s secondary market liquidity. Such participation is entirely discretionary for the dealer bank, which in turn needs to confront high trading volumes in what has become a relatively low-margin and capital intensive segment of its operations.

Bearing these realities in mind, any credible analysis of the recent stresses experienced by MMFs must begin by focussing on the conditions prevailing in the underlying short-term money markets at a given point in time and on how these came about. Attempts to single out MMFs as a potential area for further regulatory reform in the aftermath of the market turbulence experienced during March 2020 would be misguided⁵. Instead, while recognising that MMFs allow investors’ to realise returns in line with money market rates and preserve the value of their investment, the following sections argue that recent market pressures were essentially driven by the absence of liquidity in the underlying (money) markets, and in no case by intrinsic flaws with MMF structures per se.

⁵ See for instance the Bank of England’s Financial Stability Report of August 2020, and in particular Box 8 thereof, entitled “Vulnerabilities in money market funds”.
European MMF structures and market size

The EU Money Market Fund Regulation (MMFR)\(^4\) was adopted in 2016 and came into full effect by January 2019. The regulation introduced a specific authorisation procedure for all MMFs that are managed or marketed in the EU, along with prescriptive rules in relation to eligible assets, portfolio diversification, the credit quality of fund holdings, risk management obligations, stress-testing, asset valuation and NAV calculation rules. In addition, the MMFR sought to improve transparency, by specifying disclosure obligations to investors and reporting obligations to national competent authorities (NCAs). It is also worth noting that the MMFR has introduced an explicit prohibition of “external support” that is intended to guarantee the liquidity of the MMF, or sustain its NAV\(^5\). This is a key difference between the regulatory reforms introduced in the EU relative to those introduced in the U.S. following the 2008 global financial crisis.

A first distinction under the MMFR is between three main MMF structures:

- Public Debt Constant Net Asset Value (PDCNAV) MMFs,
- Low Volatility Net Asset Value (LVNAV) MMFs, and
- Variable Net Asset Value (VNAV) MMFs.

The MMFR further categorises funds as Short-term MMFs or Standard MMFs\(^6\). PDCNAVs and LVNAVs are Short-term MMFs, while VNAV funds can take either form. Short-term MMFs accounted for 71% of the European market at the end of 2019, while Standard MMFs accounting for the remaining 29%. When combined, all types of European MMFs managed approximately EUR 1.325 trillion of money market instruments at the end of 2019 (see Chart III below).

Both the PDCNAV and LVNAV MMFs are permitted, provided certain conditions are met, to use amortised cost accounting (in addition to mark-to-market or mark-to-model) to value their assets and thus maintain a NAV per share, or value of a unit of the fund, at EUR 1/USD 1/GBP 1\(^7\). However, the MMFR also contains specific provisions pertaining to each. For example, a PDCNAV MMFs must invest a minimum of 99.5% of their assets in public debt and cash. Similarly, units in a LVNAV MMF can be purchased or redeemed at a constant price, provided the value of the assets in the fund (calculated using amortised cost accounting) does not deviate by more than 0.2% from the NAV calculated using mark-to-market pricing (i.e. the “indicative NAV”\(^8\)). PDCNAV and LVNAV MMFs accounted for 8% and 44% respectively of the UCITS\(^9\) MMF market at the end of 2019. Regarding VNAV MMFs, these only use mark-to-market

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\(^4\) Please refer to the official text of Regulation (EU) 2017/1131 on money market funds, as published in the EU Official Journal on 30 June 2017.

\(^5\) Please refer to Article 35 of the MMFR.

\(^6\) By definition, according to the MMFR, short-term MMFs are those with a weighted average life (WAL) of up to 120 days and the ability to purchase securities with residual maturities of up to 397 days, whereas standard MMFs are those with a WAL up to one year and the ability to purchase securities with residual maturities of up to two years.

\(^7\) For more details on valuation rules for European MMFs, please refer to Article 29 of the MMFR.

\(^8\) When the deviation is more than 20 basis points, any following redemption or subscription shall be undertaken at variable pricing, rounded to the nearest basis point. In such scenario, the fund remains an LVNAV, with all the relevant regulation requirements unchanged, albeit with temporary variable pricing.

\(^9\) UCITS (Undertakings for the Collective Investment in Transferable Securities) represents the EU’s oldest and most comprehensive regulatory regime for open-end funds, as enshrined in the consolidate Directive 2009/65/EC and accompanying implementing measures.
or mark-to-model accounting to value their assets, with the NAV of these funds thus varying with the valuation of the underlying assets. At the end of 2019, VNAV MMFs represented 48% of total MMFs.

A summary of key regulatory requirements for European MMF structures is provided in the chart below.

**Chart II - Summary of key regulatory requirements for European MMF structures**

<table>
<thead>
<tr>
<th>Features</th>
<th>Public Debt Constant NAV (CNAV)</th>
<th>Low Volatility NAV (LVNAV)</th>
<th>Short-Term Variable NAV</th>
<th>Standard Variable NAV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dealing</td>
<td>Constant NAV</td>
<td>Constant NAV</td>
<td>Variable NAV</td>
<td>Variable NAV</td>
</tr>
<tr>
<td>Liquidity fees &amp; gates</td>
<td>Yes</td>
<td>Yes</td>
<td>UCITS rules</td>
<td>UCITS rules</td>
</tr>
<tr>
<td>WAM/WAL limits</td>
<td>60 / 120 days</td>
<td>60 / 120 days</td>
<td>60 / 120 days</td>
<td>180 / 365 days</td>
</tr>
<tr>
<td>Max. maturity</td>
<td>397 days</td>
<td>397 days</td>
<td>397 days</td>
<td>2 years</td>
</tr>
<tr>
<td>Min. daily/weekly liquidity</td>
<td>10%/30%¹⁰</td>
<td>10%/30%</td>
<td>7.5%/15%</td>
<td>7.5%/15%</td>
</tr>
</tbody>
</table>

Another relevant distinction between European MMFs is by their base currency. Three main base currencies accounted for 99.5% of UCITS MMF net assets at the end of 2019, with EUR-denominated funds accounting for some 38.8% of net assets, followed by USD-denominated (36.6%) and GBP-denominated ones (24.2%). VNAV MMFs accounted for the vast majority (85%) of EUR-denominated MMFs (of which 63% were Standard MMFs). Together LVNAVs and PDCNAVs recorded the lion’s share (80%) of all USD-denominated funds, with 96% of AuM invested in short-term MMFs. Finally, as to GBP-denominated MMFs, these were primarily (71%) of the LVNAV type, with 90% of AuM managed under a short-term MMF type¹¹.

**Chart III – Structure, and currency of European (UCITS) MMFs**

10 According to Article 34 of the MMFR, a breach of the 30% weekly liquidity threshold, if combined with daily net redemptions of 10% of total assets, requires the fund board to review the circumstances and in the interest of the investors pursue one or more measures, including one of taking no immediate action (see infra).

11 Calculations for these further breakdowns are based on data from Broadridge at end 2019.
II. **How have European MMFs fared during the Covid-19 crisis?**

The market downturn induced by the Covid-19 global pandemic in the course of March 2020 has had an undeniable impact on the European MMF industry. Unlike the previous global financial crisis of 2008, MMFs were subject to a series of exogenous shocks of a non-financial nature across multiple jurisdictions. As a result of the numerous government-imposed lock-down measures intended to limit contagion, numerous economic activities had to be curtailed or blocked entirely, particularly in Europe. As measures were announced and began to be implemented by European governments in the latter half of February and early March 2020, these precipitated an unprecedented demand for cash from European MMF investors to deal with contingencies, as well as for the uncertainties ahead. MMFs – across all three of the MMFR-defined structures – experienced significant withdrawals in amounts greater than those normally expected to meet quarter-end needs.

With the market suddenly rotating into a “risk-off” mode and investors’ need for cash increasing significantly, bank corporate clients soon began drawing funds from their revolving credit facilities to meet short-term liabilities and other contingent funding needs. This exacerbated the extraordinary cash demands being imposed on all banks. As traditional large buyers of financial corporate paper (CP), European MMFs met rising redemptions by paring back their purchases of longer-dated CP, with a knock-on of complicating funding for banks. As liquidity conditions in the underlying money markets worsened, some large institutional investors, such as insurers and pension funds, also needed to liquidate some of their MMF holdings in order to raise cash to meet increasing margin calls from their derivative counterparties. On their part, dealer banks’ ability and willingness to act as market-makers - often by buying back CP and CDs from MMFs - began to dwindle in the face of rising balance sheet constraints, reflecting their own regulatory requirements.

Overall, withdrawals from UCITS MMFs amounted to net outflows of EUR 45 billion in March, the highest net monthly outflows ever, and differed by currency (see further details below). This resulted from a sharp increase in gross redemptions, which nearly doubled from EUR 545 billion in February to over EUR 1 trillion in March 2020. These outflows were however partially offset at the same time, with MMFs recording a sharp increase in gross sales (inflows), from EUR 542 billion to EUR 961 billion over the same period, confirming investors’ preferences for MMFs as a high-quality, short-term investment vehicle.
Net assets of European MMFs dropped by only 4% in March, to recover again in the space of few weeks and reach EUR 1.44 trillion at the end of June, compared to EUR 1.32 trillion at the end of March and EUR 1.38 trillion at the end of 2019. Judging from the size of the total net outflows experienced in March and their consequent rebound in the second quarter of 2020, one concludes that MMF flows did not have the seismic effect some commentators have suggested.

**A closer look at short-term MMF flows**

The chart below further depicts daily flow data (expressed in USD thousands) between January and June 2020 for each of the three European short-term MMF structures, including a currency break-down.
Of the three categories of short-term MMFs, offshore USD-denominated LVNAV MMFs experienced the largest outflows over a more protracted period compared to other fund categories and currency denominations. Evidence suggests that over the first two weeks of March, net outflows across USD-denominated LVNAV funds reached some 29% of total AuM, with about 60% of these outflows finding their way into USD-denominated PDCNAV funds and the remainder in cash to meet margin calls *inter alia*. Although more nuanced, such flow patterns mirrored the concomitant response from U.S.-based investors, shifting their funds from Prime MMFs\(^{12}\) into the perceived safety of Government MMFs\(^{13}\), ahead of the U.S. Federal Reserve’s announcement of the Money Market Mutual Fund Liquidity Facility (MMLF) on 18 March 2020. The chart below illustrates these flows more specifically, with USD LVNAVs represented by the orange line and USD PDCNAVs by the green line. Considerable outflows and inflows were respectively recorded between early/mid-February and the end of March. Following the announcement and initial implementation of the MMLF, outflows and inflows respectively peaked, before the direction of flows for both types of USD-denominated funds reversed, as investors gradually returned to USD LVNAVs, while the pace of inflows in USD PDCNAVs stabilised and then levelled-off\(^{14}\).

\(^{12}\) U.S. Prime MMFs invest in floating-rate debt and commercial paper of non-Treasury assets, like those issued by corporations, U.S. government agencies, and government-sponsored enterprises (GSEs).

\(^{13}\) U.S. Government MMFs invest at least 99.5% of its total assets in cash, government securities, and repurchase agreements that are fully collateralized by cash or government securities.

\(^{14}\) According to weekly reports published by iMoneyNet, AuM for USD LVNAVs was USD314.9 billion on 31 December 2019, dropping from USD337.0 billion on 6 March to 240.1 billion on 31 March. By 1 May, Aum had risen back to USD287.9 billion, reaching USD356.1 billion on 4 September. Meanwhile, USD PDCNAVs managed USD113.6 billion on 31 December 2019, increasing from USD100.6 billion on 21 February to USD178.8 billion by 10 April. Flows gradually then levelled-off and weakened, from USD166.7 billion on 24 April, to USD168.4 billion on 1 May and further to USD 158.4 billion by 4 September.
As for USD-denominated VNAV funds, an analogous pattern can be observed, although the size of the flows remained far more modest. All European offshore USD-denominated funds – accounting for approximately 37% of all UCITS MMFs assets at end-2019 - bore the effects of shrinking liquidity in U.S. short-term markets, with flows only reversing after the U.S. Federal Reserve’s decisive intervention. As the following section will describe, for large players in the European market and for which USD-denominated MMFs (domiciled in Euro area countries) account for a considerable portion of their AuM, the benefits of the ECB’s intervention were far less evident.

In relation to EUR-denominated MMF, total AuM for short-term LVNAV funds increased by 17% on the back of inflows between the end of February and their peak on 12 March. A sudden reversal occurred as a result of the ECB decision to maintain rates unchanged, which forced market participants to reappraise many of their derivative positions and sparked a rise in margin calls. This triggered a 7-day period of outflows across EUR LVNAV funds (see blue line in the chart above), amounting to a 16% drop in AuM, before being partially offset by inflows from corporate investors looking to consolidate their liquidity provision. As for EUR-denominated VNAV funds, strong outflows – compounded also by seasonal, quarter-end factors - were recorded on the back of non-financial corporate investor redemptions in the second half of March, whereas those of other client segments remained more stable. Outflows still occurred in April, albeit at a much slower pace compared to March, before stabilising and turning to inflows in the second-half of May 2020.

Finally, concerning GBP-denominated MMFs, these are predominantly structured as LVNAVs (97%), with the remainder being PDCNAVs and short-term VNAVs. Flow patterns were analogous to those of EUR-denominated MMFs, with outflows reaching 11% of total AuM over the same consecutive 7-day period beginning on 12 March, before rebounding decisively thereafter (see red line in the chart above).

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15 According to weekly data reports published by iMoneyNet, EUR LVNAV AuM was EUR79.9 billion on 31 December 2019, dropping from EUR101.0 billion on 13 March to EUR85.6 billion on 27 March. On 24 April, AuM had returned to EUR94.0 billion, reaching EUR103.7 on 11 September. EUR PD meanwhile was EUR0.1 billion on 31 December 2019, and has stayed around that figure since then.

16 According to weekly data reports published by iMoneyNet, GBP LVNAVs accounted for GBP192.1 billion on 31 December 2019, dropping from GBP195.8 billion to GBP179.9 billion between 13-20 March, only to rise back to GBP212.7 billion on 1 May, reaching GBP249.1 billion on 4 September. GBP PDCNAV AuM meanwhile was GBP2.2 billion on 31 December 2019, increasing to GBP2.3 billion by 21 February, but remaining stable throughout March (GBP2.3 billion on 13 March), before increasing to GBP3.7 billion on 10 April and continuing a slow growth trajectory ever since (e.g. GBP4.1 billion on 4 September).
Regarding GBP-denominated VNAVs, their very modest flow variations mirrored those of their USD- and EUR-denominated counterparts.

**Considerations around MMFR liquidity buffers (for LVNAV and PDCNAV funds)**

While taking stock of the difficulties experienced by MMFs at the time of the Global Financial Crisis in 2008, the EU legislator agreed to design the MMFR with specific liquidity buffers (Article 34) for the purpose of avoiding automatic trigger events incentivising investors to redeem all at once. For LVNAV and PDCNAV MMFs, these consist in a non-public minimum daily redemption threshold, combined with a public weekly maturing asset one. When breached together, the fund’s board of directors is notified and required to prioritise corrective actions.

More specifically, where weekly maturing assets fall below a public 30% minimum threshold and net daily redemptions on that same day exceed 10% of the fund’s total assets, the board must be notified and may decide on one or more measures, keeping the interests in mind of investors and documenting the reasons for its decision. Among these measures, the MMFR foresees liquidity fees, redemption gates and suspensions for up to 15 business days\(^\text{17}\). The board may also decide that no further action is required, in which case, the fund will remain open and continue to operate as normal. Unlike for U.S. Prime MMFs, relevant is that this “two-part test” creates an effective buffer between an (LVNAV or PDCNAV) MMF breaching the above 30% threshold and any decision by the MMF’s board to take any of the aforementioned actions. As reaching the 10% daily redemption limit will be known only internally to the fund, the MMFR provision effectively protects the (LVNAV or PDCNAV) MMF from “cliff effects” and cascading redemptions.

In addition, LVNAV funds are also characterised by the requirement to calculate their NAV using mark-to-market or mark-to-model (i.e. the same way as VNAV MMFs). Their use of the constant price is allowed, provided this does not deviate from the variable NAV by more than 20 basis-points (i.e. effectively applying a 20 basis-points “collar” on either side of the constant price). Should a larger deviation occur from the constant NAV, the LVNAV must temporarily convert to a variable NAV for any consequent subscription or redemption\(^\text{18}\).

At the start of 2020, investors closely monitored liquidity buffers, creating a general unease among managers that one or more LVNAV funds would need to convene their respective boards. While there is no quantitative data which indicates that investors’ focus on liquidity exacerbated fund outflows, such focus may have influenced managers’ efforts to raise the liquidity profiles of the funds. Most LVNAV MMFs actually sought to increase their liquidity positions to levels of 40% or even 50% of their portfolio in weekly liquid assets, i.e. well above the regulatory minimum threshold of 30%, to ensure their ability to meet redemptions. In parallel, funds had to also sell some securities at a discount to the extent they could find buyers, as dealer banks were also less keen to take on more balance sheet risks in view of their own capital and risk constraints.

Yet, despite the severity of the market correction, no forced NAV conversion to mark-to-market occurred for LVNAV funds, nor did fund boards convene to consider corrective measures\(^\text{19}\). In this regard, as Section III of this report will illustrate, the intervention of global central banks - notably that of the U.S. Federal Reserve, the ECB and to a lesser extent the Bank of England - from mid-March onwards managed

\(^{17}\) If within a 90-day period the total number of days the LVNAV MMF is suspended exceeds 15 days, the MMF automatically ceases to be a LVNAV MMF, and permanently converts to being a VNAV MMF, i.e. it can no longer offer a constant price. The same rules would apply to PDCNAV funds. Please refer to Articles 24 and 34 of the MMFR, defining portfolio rules for short-term MMFs.

\(^{18}\) Please refer to Article 33 of the MMFR.

\(^{19}\) On the possible implications of MMFs breaching the 20 basis point “collar”, please refer to a Special Report “Longer-Dated Exposures and Floating-Rate Securities Influenced European MMF NAV Deviations” by Fitch Ratings, published on 22 July 2020.
to substantially ease liquidity constraints in the underlying markets (though not directly for EU domiciled MMFs), while supporting banks and dealers through various types of liquidity facilities. The fundamental improvement in money market conditions and the consequent reversal of outflows across all types of MMFs experienced in March offer tangible proof that the recorded outflows – unlike at the time of the Global Financial Crisis of 2008 - reflected liquidity shortages, rather than credit quality concerns or structural issues with the MMF product *per se*.

**The evolution of MMFs’ asset holdings & maturity structure**

Investor reactions to the Covid-19 volatility led to some changes in European MMF portfolio holdings, as illustrated in the charts below.

**Chart VII – Evolution of European MMF portfolio holdings during 1st half of 2020**

It can be observed in particular that the proportion of CP and time deposits/CDs, in both short-term MMFs and standard MMFs, were lower at the end of March 2020 compared to the end of 2019. Following the ECB's interventions, allocations in the second quarter of 2020 have shifted mostly in favour of government debt (particularly for non-EUR-denominated, short-term MMFs) and repurchase agreements (for standard MMFs). The fact that the shares of CP and time deposits/CDs have not returned to their end-2019 levels can be explained by the hesitation of banks to buy-back these short-term assets, save those with residual maturities of less than 3-6 months. This is consistent with the adjustments of European MMFs’ portfolio composition, where asset holdings have shifted into instruments with shorter maturities, as the chart below depicts.

**Chart IX – Evolution of European MMF asset maturity breakdowns in 1st half of 2020**

Source: Morningstar
The maturity share of 6-12 months debt dropped from 54% at the end of 2019 to 39% at the end of March 2020, whereas the share of 3-6 months debt rose from 31% to 45%. By end of June 2020, the maturity composition had tilted even more in favour of short-term instruments, with the share of 3-6 months debt increasing further to 56% and the percentage of 6-12 months debt dropping to 26%. MMF managers have noted how the intervention of central banks in Europe has mostly manifest itself in the shorter-term section of the maturity curve (i.e. below 3 months), as corporates have gradually found alternative sources of funding, away from the need to raise cash either from banks or MMFs.

By favouring the shorter-end of the maturity spectrum, MMF managers across all three main European short-term MMF categories have nevertheless remained risk averse, expecting - among other events - a possible resurgence of the Covid-19 virus, further rate interventions by central banks, or an uncertain outcome from the U.S. presidential elections in November 2020.

III. THE LIMITED IMPACT OF CENTRAL BANKS’ INTERVENTIONS IN EUROPE

As market conditions worsened between mid-February and early March 2020, central banks across the globe opted to intervene swiftly, in an attempt to mitigate the negative impact of the pandemic on the real economy and prevent potential financial contagion. Concentrated in the third week of March, central bank interventions were varied, both in size and by type, with the latter including monetary easing through lower interest rates, large-scale asset purchase programmes, more permissive collateral rules for dealers, and expanded refinancing operations for banks. Overall, these actions have been effective in restoring calm to the money markets, easing liquidity strains, lowering borrowing costs, all while supporting the provision of credit. Their direct impact on European MMFs, however, has remained limited.

In Europe, the ECB and the Bank of England both introduced significant asset purchase programmes, mostly favouring government and non-financial corporate issuers. As illustrated above, considering the bulk of financial debt, particularly CP and CDs held in European MMF portfolios, the central banks’ support had a limited effect on the market for these types of instruments. Moreover, the share of eligible corporate debt under such programmes within MMF portfolios remained negligible due to the fact that most corporate issuers are rated below the credit quality that most MMFs are required to hold. This outcome was compounded also by the fact that such programmes were not currency-neutral, as the ECB and the Bank of England kept the eligibility of their support programmes respectively limited to Euro- and Pound/Sterling-denominated assets.

Both interventions were milder in comparison to the more robust array of measures adopted by the U.S. Treasury as from 17 March, followed by the U.S. Federal Reserve’s own Money Market Mutual Fund Liquidity Facility (MMLF) announced the very next day. The latter made loans available to eligible financial institutions that had to be secured by high quality assets which the financial institution purchased from MMFs. Although the operation did not qualify as a direct purchase of money market instruments, it did allow banks to pledge these assets as collateral to the Federal Reserve. Most importantly, risk-weighted capital or leverage capital charges for participating banks from their purchases of money market instruments were waived for the duration of the programme, i.e. until 30 September 2020. Such waivers of the regulatory constraints on bank dealers’ intermediation capacities, accompanied by the relaxation of capital standards for banks participating in the MMLF, were the decisive factors that contributed to stabilise short-term markets, while offering substantial (though indirect) relief to MMFs. It should also be noted that the U.S. measures, including the MMLF, were not eligible to USD-denominated MMFs domiciled in the EU.

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20 We refer in this regard to the Primary Dealer Credit Facility (PDCF) and the Commercial Paper Funding Facility (CPFF).

21 Please refer to the details of the MMLF available from the U.S. Federal Reserve’s dedicated release, accompanied by related FAQs.
Between the announcement of the MMLF and its effective implementation via the Federal Reserve Bank of Boston (FRBB) on 23 March, filings to the U.S. Securities and Exchange Commission (SEC) did however notify two instances where U.S.-domiciled Prime MMFs benefited from affiliated group transactions, where assets were purchased at market value by an affiliated entity. These transactions are deemed “sponsor support” and are reportable transactions under U.S. Rule 2a-7, as amended in 2014. It is worth noting that the same type of transaction with an EU-domiciled MMF would not constitute “external support”, as also clarified by ESMA in July 2019.

The ECB’s response: The Pandemic Emergency Purchase Programme (PEPP)

Announced on 18 March, the PEPP foresaw a sizeable envelope of €750 billion in asset purchases to be conducted at least until the end of 2020. It accompanied a €120 billion top-up of the ECB’s existing Asset Purchase Programme (APP) communicated a week earlier. Via the PEPP, the ECB for the first time expanded the scope of eligible securities under its existing Corporate Sector Purchase Programmes (CSPP) to include non-financial CP as a mean to support corporate financing and address dysfunctions in the CP market. However, the exclusion of financial CP, as well as that of instruments denominated in non-Euro currencies ruled out a substantial part of USD- and GBP-denominated CP included in European MMF portfolios. Worthy of notice is also that non-bank financial institutions and asset managers have been expressly excluded under the PEPP for directly offering assets for purchase as eligible counterparties to the ECB’s operations. As a result, MMF managers remained dependent on dealer banks, which in turn were direct beneficiaries of the PEPP.

Besides the PEPP, further measures to support those banks linked to household and non-financial corporate lending came in the form of targeted longer-term refinancing operations (TLTRO III), followed by series of non-targeted pandemic emergency longer-term refinancing operations (PELTROs) as from 30 April 2020. Euro-area banks also benefitted from the announcement of additional temporary capital and operational relief measures on 12 March, followed by those from the European Banking Authority (EBA) via guidance to avoid triggering non-performing loan (NPL) criteria. By easing these restraints, dealer banks were progressively able to resume their role as liquidity providers in short-term secondary markets, while banks resumed bidding in the CP market, also by buying back their own.

Interesting perspectives came from an exchange EFAMA had with the ECB staff in May 2020 to discuss the scope of the PEPP. The ECB underscored the need for the six central banks responsible for executing the CSPP (as part of the PEPP) to maintain a harmonised approach by not buying too many assets independently of one another, while prioritising the real economy of the Euro area. At the same time, the ECB Governing Council - despite the strong liquidity support offered in March/early April – remained wary

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22 We refer in particular to the obligation for the MMF manager to disclose sponsor support on its website, as well as through regulatory filings with the U.S. SEC.

23 Please refer to the ESMA Public Statement of 9 July 2020, offering guidance on the conditions for EU MMFs to enter into transactions with third-parties, including affiliated ones, as per Article 35 of the MMFR.

24 For further details, please refer to the relevant ECB press release, the dedicated webpage, and Q&A.

25 For further details, please refer to the relevant ECB webpage.

26 The latter envisaged liquidity support to the Euro area money markets by providing an effective backstop following the expiry of the longer-term refinancing operations (LTROs). Eligible counterparties participating in PELTROs would be able to benefit from the collateral easing measures until the end of September 2021. These included an increase from 2.5% to 10% in the maximum share of unsecured debt instruments issued by any single banking group in a bank’s collateral pool, as announced previously already by the ECB Governing Council on 7 April. For further details, please refer to the relevant ECB press release.

27 These allowed banks to operate temporarily below the level of capital defined by the Pillar 2 Guidance (P2G), their capital conservation buffer (CCB) and their liquidity coverage ratio (LCR). Supporting these measures, banks’ countercyclical capital buffers (CCyB) were also relaxed by the national macroprudential authorities. In addition, banks were permitted to waive Common Equity Tier 1 (CET1) capital conditions in view of meeting their Pillar 2 requirements. For further details, please refer to the relevant ECB webpage.
of further actions to include financial CP, possibly also in non-Euro denominations, out of concerns these risked crowding-out market investors and affect exchange rates. The ECB, encouraged by improving developments, chose to pause from further interventions, also to avoid the Eurosystem becoming the prevailing buyer of short-term instruments.

The discussion confirmed the ECB’s primary focus, i.e. to alleviate stresses on the Euro area banking sector by allowing it to resume lending to the real economy and restore liquidity in short-term money markets. The role of private actors – including MMFs – was well acknowledged, clarifying how the PEPP was not intended to replace these as a funding channel for banks and other financial corporates. Considerations were also made around the U.S. Federal Reserve’s more decisive “backstop” through the MMLF, while mindful of the notable differences in terms of MMF regulation and explicit ban on external support in Europe. Suggestions were made to the ECB in terms of providing greater transparency on the operational details of its asset purchase programmes, as well as of greater coordination between the national central banks during their practical implementation (e.g. in relation to eligible assets).


The breadth of the joint Bank of England/HM Treasury’s Covid-19 Corporate Financing Facility (CCFF) was in many ways similar to that of the ECB. Announced on 17 March, the facility was intended to provide financing for non-financial corporates only. Bank CP, as an important asset class for MMFs, as well as CP issued by other financial entities, remained therefore ineligible. With non-financial corporate exposure in GBP-denominated MMFs being very low (around 2%), the CCFF has been of very limited benefit for GBP-denominated MMFs altogether. The Bank of England’s accompanying Contingent Term Repo Facility (CTRF), activated on 24 March, provided support for longer term financing. As short-term instruments typically held by MMFs were not the target of this programme, banks were still impaired from purchasing shorter-term assets from MMFs.

While both programmes proved very supportive for the eligible non-financial firms, their impact on the broader money markets was limited, especially in light of the proportion of non-financial CP to financial CP issued across Pound/Sterling markets.

**IV. COVID-19 AS THE MMFR’S FIRST “STRESS-TEST”**

The global pandemic and its consequent economic and financial effects felt through March 2020 has proven to be the first true “stress test” of the EU MMFR regime. While liquidity management proved challenging for all money market participants, the MMFR’s requirements across all three types of structures (LVNAV, PDCNAV and VNAV) allowed managers to continue meeting their unitholders’ redemption demands throughout the initial months of the pandemic, while in some instances accommodating investors’ “flight to safety” inflows at a time of severe market stress.

Already before March, adherence to the MMFR’s levels of daily and weekly liquidity for European LVNAV and PDCNAV MMFs were supplemented with additional amounts of liquidity (up to 40%-50% of weekly maturing assets in some instances) as precautionary measures in anticipation of outflows and precipitating market conditions. Their degree of preparedness was moreover helped by the clear “know your customer” requirements under the MMFR. LVNAV and PDCNAV MMFs were thus able to meet all redemptions in March without triggering the required board notification foreseen under the Regulation. More specifically, as explained above, a fund’s board intervention is subject to a critical “two-part test”,

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28 Please refer to the relevant CCFF Q&A for more details.
involving both a reduction in weekly liquid assets below 30% and a concomitant daily redemption of 10% or more of the fund’s total assets.

Moreover, in relation to an LVNAV fund’s 20 basis-point “collar”, where investors and supervisors have full transparency of daily (or even intraday) mark-to-market movements of the NAV around its constant value, there was the perception that the fund could convert to a variable NAV upon breaching the “collar” on the downside. As a result, it was believed that outflows could precipitate and even place a rated fund on negative watch by a credit rating agency. However, despite very difficult market circumstances, no LVNAV fund breached its “collar”. As explained above, the regulatory thresholds were however perceived as potential trigger events for the broader market and, while acting as an incentive for MMF managers to build up larger buffers than required, they may have inadvertently inhibited managers from buying financial CP and other money instruments precisely at a time when banks faced dire funding constraints.

The experience of European VNAV funds, both of the short-term and standard types, has been analogous, revealing that the daily and weekly liquidity requirements of MMFR – respectively 7.5% and 15% of their net assets - were not breached, despite sustained outflows from their corporate clients struggling to meet their quarter-end funding commitments and to raise cash. Moreover, similar to LVNAV and PDCNAV MMFs, VNAV MMF managers prudently raised the proportion of weekly maturing assets up to 35% for certain short-term VNAV, and up to 25% for standard VNAVs from the start of April.

That short-term European MMFs entered March with weekly liquidity levels well above their regulatory minima is demonstrated also by the following charts, showing average liquidity levels (measured every two weeks) for a sample of funds rated by Fitch Ratings across the three main currencies. A salient point to note is that the average liquidity levels for the whole first half of 2020 remained at around 50%.

**Chart X – Average weekly liquidity for European short-term MMFs across currencies**
In sum, the daily publication of the mark-to-market NAV for LVNAV and PDCNAV funds, combined with their weekly liquidity figures, have proven that greater transparency is beneficial to enhance financial stability in the sense largely foreseen a decade ago by global and regional supervisors.

The March 2020 market upheaval also demonstrated the extent to which MMF managers anticipated investor redemptions through a better knowledge of their funds’ investor base. In this regard, the MMFR-specific provision (Article 27) for managers of all types of MMFs to adopt and implement a “know your customer” policy has proven valuable in aiding them to correctly calibrate the size of their fund’s liquidity buffers on the needs and nature of their underlying investor profiles. Such transparency only supplemented the information already available to investors and supervisors regarding an MMF’s portfolio holdings and liquidity levels.

In light of these important lessons and conscious of the critical role played by central banks, at times jointly with Finance Ministries, at easing restrictions for banks and secondary market intermediaries, the EU regulatory requirements put in place with the MMFR have proven robust. The following sub-section discusses tentative proposals that in EFAMA’s opinion would merit some consideration by the global and European policy-making community, while mindful of the key differences between the March 2020 Covid-19 pandemic and the Global Financial Crisis of 2008.

V. CONSIDERATIONS ON POSSIBLE IMPROVEMENTS IN THE FUNCTIONING OF MONEY MARKETS

As the Covid-19 pandemic is still unfolding at the time of writing (November 2020) with the threat of triggering further lock-downs to peoples’ livelihoods and economic activity, we invite global and regional policy-makers to begin considering any regulatory reform option with prudence. We would therefore recommend proceeding in a step-wise manner, beginning with a thorough diagnosis of the recent money market frictions witnessed in March 2020, before considering any changes which may require a review of existing requirements, each with their own processes and timelines. The following are only a few preliminary considerations.

i. Improved coordination, transparency and a standing advisory group

In the experience of European MMF managers, conditions for asset eligibility under the ECB’s PEPP were not sufficiently defined, nor adequately disclosed by some of the six participating Eurosystem central banks. In addition, MMF managers noted that some national central banks’ market operations were...
uncoordinated and proved uneven, especially in terms of not standardising the eligibility of various money market instruments. In this regard, better coordination between central banks – both between the ECB and the Eurosystem national central banks, as well as between the ECB and its non-Eurozone peers - and a greater degree of transparency around the operational details of future purchase programmes vis-à-vis market players is desirable. In parallel, we believe the creation of a standing advisory group, comprising issuers, dealer banks, as well as different types of investors (including inter alia buy-side participants), would help advise national central banks and other public authorities. Such group, responsible for short-term debt/money markets, would for instance be akin to the ECB’s existing Bond Market Contact Group for longer-dated fixed income markets, entrusted to help bridge important information gaps between market participants and public authorities especially at times of market turmoil.

ii. MMF eligibility to meet margin requirements

As described in the first section of this report, an important driver behind European MMF outflows experienced in March was the need for institutional investors to meet a spike in margin requirements vis-à-vis their clearing counterparties and CCPs. Sizeable redemptions in order to raise cash to later post as eligible collateral confirmed to be procyclical, as greater demands for margin collateral in turn provoked more investor redemptions out of MMFs. An option worth considering would be to allow such investors to directly pledge MMF units to meet their margin requirements vis-à-vis CCPs at least for central clearing purposes.

iii. Definition of weekly maturing assets

The events of March have highlighted the importance of liquid assets for MMFs. However, clauses in the MMFR provide artificial constraints on holding highly liquid assets. As an example, for LVNAV and PDCNAV funds, these constraints include (i) restrictions on the use of high quality government securities for purposes of satisfying their weekly liquid asset requirements; and (ii) in relation to repo/reverse-repo agreements, the relevant provisions (Articles 14 and 15) require that, in order to be eligible, the MMF must be able to terminate a repo or reverse-repo agreement upon giving prior notice of no more than two working days. Differently, accepted global standards for termination notice periods for fixed-term repos/reverse repos (i.e. excluding overnight and open-end repos/reverse repos) are five working days. In practical terms, such diverging rules affect the ability of European MMFs to manage their liquidity compared to non-European MMFs.

iv. Relax Basel III standards at times of stress

A starting point could be for prudential supervisors to temporarily relax the treatment of short-term money market instruments for the purposes of meeting bank capital requirements during times of stress. We advocate in particular that the relevant Basel III standards be temporarily waived, particularly the definitions of the Liquidity Coverage Ratio (LCR) and the Net Stable Funding Ratio (NSFR), as these are material to banks’ exposures to short-term money markets in view of their corresponding balance sheet costs and with important knock-on effects – as observed in March 2020 – on money market liquidity at times of stress. For instance, under the Basel III framework, banks are required to hold a certain amount of High Quality Liquid Assets (HQLA) to meet their Liquidity Coverage Ratio (LCR). HQLA have the general characteristics of being low risk, easily valued, listed on an exchange, benefitting from an active and sizeable market, and exhibiting low volatility. In Europe, the relevant implementation of the LCR Basel III standard via the Capital Requirements Regulation (CRR) – Regulation (EU) No 575/2013 and accompanying delegated acts and relevant (EBA) Guidelines - defines three categories of HQLA: level 1,
level 2A, and level 2B liquid assets. Level 1 are the most liquid, as cash or highly rated sovereign debt issued in own currency. Some types of CP are already considered to be level 2A and others are level 2B. Yet, we believe that authorities could temporarily relax these definitions to be able to classify more of the most highly rated CP and CD instruments as HQLA (level 2A), thus proving beneficial to overcome banks’ reluctance to buy such assets, especially in times when liquidity is in strong demand. In turn, this would offer central banks and public authorities a ready tool, reducing the need for these to have to intervene on an ad hoc basis as soon as secondary market liquidity begins to evaporate.

v. Considerations around liquidity buffers (for LVNAV and PDCNAV funds)

The inclusion by regulation of daily and weekly liquidity buffers for EU MMFs has undoubtedly contributed to their resilience in the face of the significant redemption demands experienced in March 2020. This was supported also by the increased transparency around funds’ liquidity levels, as well as by the greater knowledge by portfolio managers of their investor base. Despite this positive record, considerations can be made around whether “tying” the potential breach of a public weekly liquidity threshold to a required fund board notification and possible ensuing action is the best outcome from an investor protection and financial stability perspective.

Although the relevant MMF minimum liquidity requirements in the EU, as in the U.S., do not imply the automatic imposition of redemption fees or suspensions when these are breached, some investors have (wrongly) perceived these actions to be imminent following visible drawdowns in weekly maturing assets. From the experience of European managers described above, such perceptions were successfully preempted by increasing the amount of weekly maturing assets well above their regulatory MMFR thresholds. In parallel, the non-public thresholds related to the percentage of daily redemptions versus total assets (i.e. the second part of the “two-part test” required under MMFR), introduced an additional buffer to further remove any perceived automatic connection between diminishing weekly liquidity buffers and potential fund board measures (i.e. redemption fees or suspensions).

Compared to the regulatory alternative of completely de-coupling weekly liquidity limits from fund board notifications (with possible consequent actions) – to the detriment of the degree of transparency that has been achieved under the MMFR for all market participants – EFAMA views the existing “two-part test” requirement as a well-balanced and effective solution for global standard setters to consider in their discussions over post-Covid-19 financial reforms.

CONCLUSION

The Covid-19 March 2020 market shock was fundamentally different from the 2008 Global Financial Crisis in that the former has been a liquidity-driven event during an unprecedented public health crisis and not a solvency-driven one as in 2008. It has been amplified by combination of factors, including, investors’ exceptional need for cash, increased risk aversion, higher funding costs for banks due to widening bid-ask spreads, difficulties for financial issuers to find buyers for their CP, as well as an elevated demand for bank dealer intermediation in the context of already constrained capital and risk limits. With these conditions prevailing in European money markets, MMF redemption pressures only rose, as managers struggled to meet both contingent financing needs from corporate clients and financial counterparties’ confronting increased margin calls.

Yet, in such context, the regulatory reforms introduced under EU MMFR regime in 2017 have proven their value in the ways described in this report. The result of the MMFR’s combined liquidity requirements and “know your customer” provisions explains why the combined net outflows experienced in March where,

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31 As one European asset manager noted, it remains paradoxical that a bond issued by a given entity will be granted an HQLA status under the Basel standards, but not CP issued by the same entity.
although sharp, manageable. No individual MMF was obliged to introduce redemption fees or suspend redemptions, and there were no instances of LVNAV funds converting temporarily to variable pricing for their units upon breaching the bounds of their 20 basis point “collar”.

Such conclusion is only reinforced when considering the intentionally limited scope of the ECB’s PEPP. While it certainly contributed to relieve banks’ funding pressures together with other accompanying measures targeted at these (i.e. targeted refinancing operations and temporary capital and operational risk relief measures), it had a limited impact on European MMFs\textsuperscript{32}. Cautious of any anecdotal evidence suggesting the contrary, we would invite the policy-making community to forego policy conclusions before ascertaining the facts behind the March 2020 money market turmoil across European markets.

In light of these key “lessons learnt” from the initial outbreak of the Covid-19 pandemic and at a time when its effects are still apparent, EFAMA believes European policy-makers and global standard-setters could prudently consider a range of policy options, beginning with those affecting the functioning of money markets more intimately, i.e. improving the resilience of bank intermediation, along with broadening the present definitions of eligible liquid assets. As the economic and financial challenges from this pandemic endure, a shorter-term priority, for the European industry would be to guarantee better coordination between the ECB and other central banks, as well as greater transparency around the details of their operations. This should be coupled with the creation of a dedicated forum where the ECB can consult a diverse representation of money market participants with the aim to improve information and the efficiency of any future emergency asset purchase programme.

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\[\textsuperscript{32} \text{Such fact has for instance not been sufficiently recognised by the European Systemic Risk Board (ESRB) in its recent } \textit{EU Non-bank Financial Intermediation Risk Monitor of October 2020} (see in particular Sections 1.1 and 2.1.2 thereof).\]
About EFAMA

EFAMA, the voice of the European investment management industry, represents 28 Member Associations, 60 Corporate Members and 24 Associate Members. At end Q2 2020, total net assets of European investment funds reached EUR 17.1 trillion. These assets were managed by more than 34,200 UCITS (Undertakings for Collective Investments in Transferable Securities) and 29,100 AIFs (Alternative Investment Funds). Including discretionary mandates, third-party regulated asset managers managed EUR 24.9 trillion in Europe at end Q2 2020.

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