

LESSONS FROM COVID ON NON-BANK FINANCIAL INTERMEDIATION

1. Opportunities and challenges associated with the growth of the investment fund sector

A regulator stated that funds are an essential part of capital markets. They provide an efficient vehicle through which to pool investment capital to the real economy and diversify risk, via a wide universe of fund types and investment strategies. That diversity is a strength and must be supported. Funds also undertake important roles in the functioning of the financial system itself, so it is critical that they should be able to operate appropriately in periods of stress and not become sources of systemic risk.

An industry representative explained that Money Market Funds (MMFs) for example play an important role in the financial ecosystem by providing low-cost funding for the economy and high-quality, diversified options for liquidity management.

The Chair noted that since the 2008 financial crisis and the tightening of the banking regulatory framework, non-bank financial intermediation has grown rapidly, especially the fund industry. In Europe, the net assets of investment funds amounted to €8.6 trillion at the end of 2010. After 10 years, this amount has grown by €10 trillion, half by valuation effect and half by investment flows, while the total assets of the banking system are broadly stagnant. This rapid development came with an increase in stability risks - some from a liquidity mismatch between assets and liability, others from highly leveraged funds - exacerbated by very low interest rates.

An official added that instability is inherent in financial markets and can never entirely be removed, but it is important to avoid unnecessary instability. The fast growth and the concentration of the asset management industry can be viewed as an inherent problem for the stability of the financial system, but on the other hand having a growing role of capital markets and of asset management in particular, is positive for Europe as a source of diversification of its financing. That however does not mean ignoring potential risks, but identifying and addressing them.

2. Lessons from the Covid crisis regarding Money Market Funds (MMFs)

2.1 Outflows experienced by different MMF structures in March-April 2020

An industry representative noted that stability in markets results from adequate regulation and confidence in the system. In March and April 2020, investors' worlds turned upside down and no one knew what to expect. Investors wanted cash in order to be prepared for the unknown, thus equity and bond assets were sold, money market investments were redeemed, and companies drew down their lines of credit.

The experience of European MMFs in the Covid crisis showed no discrimination based on fund structures and outflows were similar from all types. Shareholders

of variable net asset value (VNAV), public debt constant net asset value (CNAV) and low volatility net asset value (LVNAV) MMFs all sought to obtain liquidity due to similar fears of the unknown. If central banks had established a methodology to ensure liquidity when announcing the closing of economies that would have limited the increase of financial stability risks. As soon as they announced facilities for supporting investor confidence in the markets, liquidity returned, and the pressures disappeared. These measures were not put in place to help MMFs specifically, but to stabilise the financial system, so MMFs should not be blamed for this market stress.

The Chair observed that the connection between EU supervisors and the central bank of issue needs taking into account. For EU MMFs denominated in dollars or sterling the connection is weaker in Europe than for euro-MMFs. In addition, while the stress and liquidity strain was the same for the different types of MMFs, there were also inflows in public debt CNAVs coming from outflows of LVNAV and VNAV.

The industry representative explained that this move between LVNAVs and public debt CNAVs, is mainly relevant for US dollar MMFs, as there is no significant market in public debt CNAV in the EU in euros or sterling. Investors in EU MMFs in US dollars are mostly owned or controlled by US companies and treat the European market in a similar way to the US. The US government market is not subject to fees and gates, whereas the institutional prime market is, and so there was a move out of the prime MMF market in order to ensure liquidity for clients who wanted to build up cash into the government market, although it was lower than anticipated.

Another industry representative stressed that, when considering market data, the March 2020 events differed not by fund structure but by currency and were influenced by the macroprudential approach taken to certain types of funds. Dollar funds saw bigger outflows than other currency funds, the greatest being from US VNAVs from which there was a flight to safety, but with a spill-over to LVNAV funds. Of the 29% of assets that flowed out over the month, 60% in Europe went into government liquidity CNAV funds. Flows out of euro and sterling funds were more modest and similar across structures. Banque de France and Central Bank of Ireland data show outflows from LVNAV funds of 16%, and 15% from standard VNAV MMFs. Outflows from sterling were lower still at 11%.

The industry representative added that Europe differed from the US as outflows were mostly justified by operational working capital needs from pension funds and insurance companies for meeting margin calls, rather than the threat of gates and liquidity fees. But EU asset managers were incentivised not to break the liquidity buffer, and pension funds also used MMFs to invest in equities, as their valuation was attractive at the time.

Responding to a question from the Chair about the extent of outflows from MMFs seen in Ireland, an official confirmed these were significant, with large outflows observed across the different structure types. A question for the ongoing international discussions is the tension that exists in the MMF offering between the cash and liquidity management services offered by MMFs, and MMFs being used as a short-term financing source. This means that maturity transformation is being carried out with MMFs, which provides important benefits, but also raises financial stability questions. There is a question of the extent to which these benefits can be retained and if so, how.

2.2 The role of liquidity buffers and liquidity management measures

An industry representative observed that MMFs entered the crisis with significant levels of liquidity thanks to the new EU regulations requiring MMFs to hold high liquidity levels. However, investors redeemed, fearing that investments might be gated, which was an unfortunate side-effect of the MMF reforms. This real-life stress test applied to the MMF reform shows that decoupling fees and gates from liquidity rules is critical¹.

Another industry representative noted, concerning threshold pricing, that the furthest move to market pricing in March 2020 was on the dollar funds: +9 basis points on the upside, -6 basis points on the downside. Sterling and euro fund NAV moves showed low single digits, far away from the 20-basis-point threshold. These should have been easily absorbed, given high cash buffers. The key difference was that VNAV MMFs could use their cash buffers but LVNAVs could not, due to requirements linking the breach of the 30% cash buffer with the imposition of gates and fees. That showed the negative unintended consequences of cash buffer rules. The industry speaker also observed that LVNAV funds are operationally VNAV funds that are priced three times a day and may be requested to move to total VNAV pricing if the 20% deviation threshold is reached.

An official agreed that liquidity buffers and gating requirements are aspects of the regulatory framework to be re-considered. Liquidity buffers combined with gating requirements had a cliff-type effect in the minds of investors. The NAV collar² may have acted on LVNAVs in a similar way.

The Chair, referring to the debate in the context of the AIFMD review about expanding the use of swing pricing for open-ended funds, asked whether this could be an option for MMFs, especially if there is intraday liquidity as is the case in the US.

An industry representative advised that Europe also has intraday liquidity. Companies need intraday liquidity,

but it is also needed for posting cash collateral with central counterparty clearing houses (CCPs). Swing pricing is redundant for MMFs, for which tools such as pricing at bid and liquidity fees exist. Making the 30% buffer operational so that it does not become a floor and can be used in an effective way should be sufficient.

Regulations as a whole increase the importance of cash collateral, and that is intraday, the industry speaker added.

2.3 The liquidity of underlying short-term money markets

An industry representative observed that the key problem concerning MMFs is structural and relates to the underlying short-term money markets. In times of stress, the system must provide investors with liquidity. In March 2020, MMFs were caught in the same storm as all securities holders attempting to raise cash when the liquidity of even the highest-quality short-term assets had dried up. The normal buyers of short-term paper, such as banks and brokers also needed liquidity to meet cash needs. With no official intervention at the start of the crisis, these markets became very illiquid.

The Chair stressed that if liquidity pressure concerned the whole securities market, it was particularly acute in some parts of the short-term paper market where there is less liquidity. The industry representative stated that when raising liquidity it makes sense to go to the easiest places, which is normally the shorter paper. Longer-dated bond funds came under pressure to raise liquidity and found it difficult to sell longer-dated, lesser-rated paper. They also utilised their shorter-term, higher-quality paper, trying to raise cash in the easiest way possible. Since MMFs only invest in the high-quality short end of the market they tend to hold the highest percentage of that high-quality debt.

Another industry representative noted that the freezing of the whole short-term market was an aggravating factor, and that markets remained stressed longer in Europe than in the US. Limited amounts of securities were sold to meet redemptions, as banks, given balance sheet constraints, did not buy back their own commercial paper (CP). Redemptions were also met by retaining maturing paper, so banks could not issue as much new CP and the ecosystem froze. The situation was different in the US where the buying back of their own CP was made balance sheet neutral for banks, which instantly restored liquidity. European Central Bank (ECB) actions were more indirect, so stress was relieved more slowly.

The industry speaker suggested that while MMF reform is needed, it is necessary to consider holistically the functioning of short-term markets. Dealer-driven liquidity in short-term markets failed in the last two crises, so this must be reviewed together with the

1. According to the EU MMFR, if the level of weekly liquid assets falls below 30% and net redemptions from the fund exceed 10% in one day, the MMF board may enact one of the following options: apply a liquidity fee to redeeming investors, equal to the cost of liquidity, restrict ("gate") redemptions to 10% per day for up to 15 days, suspend redemptions for up to 15 days (or do nothing). In US regulation, the imposition of gates or liquidity fees is mandatory should a fund's weekly liquidity fall below 30%.

2. The MMFR sets a threshold for LVNAV funds in the form of a NAV collar. LVNAV MMF can maintain a constant dealing NAV provided the mark-to-market NAV does not deviate from the dealing NAV by more than 20 bps. In the event that an LVNAV breaches the collar (i.e. its marked-to-market NAV deviates by more than 20 basis points from the constant NAV), the MMFR requires the fund to value its assets using variable pricing and the pricing convention to move to 4 decimal places for the next redemption or subscription.

structure of the CP markets, which is the same as in the 60's, whereas other fixed-income and equity markets have evolved. Without that, regardless of further policy action on MMFs, the next crisis will likely bring another seizing up of those markets.

3. Lessons from the Covid crisis regarding Open-Ended Funds

3.1 Outflows observed in March-April 2020 and liquidity mismatch issues

Regarding open-ended funds, an industry representative noted comments by the European Securities and Markets Agency (ESMA) and the Financial Stability Board (FSB) that the majority of the sector performed as expected in early 2020. There were issues, but suspensions were limited to 0.2% and were due to valuation issues rather than liquidity. Some categories of open-ended funds saw huge outflows larger than 2008 but this was true in absolute terms. In relative terms volumes were less significant: outflows were between 1% and 4% in the worst week of the crisis, with high-yield bonds suffering most. The percentage of assets under management by asset class also shows some asset classes with inflows. This confirms that the situation was challenging, but navigable. There were some outliers and suspensions, but most of them happened in jurisdictions where swing pricing was not available.

An official considered that the March-April 2020 period provides useful insights on the possible systemic risks associated with the mode of operation of the open-ended fund sector, the potential risk around first-mover dynamic and whether that dynamic exists due to the liquidity profile of the sector. Looking at less-liquid funds, even though the reduction in asset prices was less than on equity funds, the outflows were more significant in proportional terms. There is therefore consistency between concerns around the first-mover dynamic and what occurred. The insight from that period is that it is a systemic weakness as it gives rise to a risk of fire sales.

Further analysis from regulators and central banks of last March's events is needed, the official suggested, in order to better understand the stability benefits and costs of different policy approaches on the liability and asset sides and how they may fit together, to be followed by engagement in discussions at international and EU level.

A regulator stated that in 2019 the Financial Policy Committee of the Bank of England established three key principles of fund design, relating to the consistency between fund redemption terms and the liquidity of underlying assets. These three principles are pricing adjustments, notice periods and liquidity classification. An FCA and Bank of England survey explored the application of these principles, capturing data during normal market conditions and the Covid period of market stress, with two key findings relating to the use of pricing adjustments by funds, such as swing pricing and fund managers' approaches to assessing the liquidity of fund assets.

Regarding fund managers' approaches to assessing the liquidity of fund assets, the survey found that managers of corporate bond funds predominantly classified

assets as liquid, or less liquid with high valuation certainty. This begs the question of whether managers are overestimating the liquidity profile of their funds, as many corporate bonds do not trade regularly, even in normal times. Whilst liquidity assessments are challenging, there is clearly room for better metrics, and working towards consistency of assessment across funds.

3.2 Potential benefits and challenges of swing pricing and other liquidity management tools (LMTs)

An industry representative stated that the biggest lesson from the March-April events concerning open-ended funds is the need for a far broader adoption and operationalisation of swing pricing. The speaker's institution – a major asset manager – increased the use of swing prices from 200 a month to over 1,000 in March and April, mostly for redemptions in March and inflows in April, and increased the size of swing factors. This had an impact on end investors and redemptions were spread out over time, as they did not want a hit of up to 7% on redemptions.

A regulator noted that many UK funds use pricing adjustments to protect investors from liquidity risk during large net outflows and considered that swing pricing is an effective liquidity management tool. Almost two thirds of funds in the FCA/Bank of England survey applied swing pricing in early 2020. Fund managers also adapted governance processes quickly and flexibly, while identifying areas to consider further. There were however differences in how swing pricing was applied across managers. Funds overseen by the same manager applied the same calculation methods, without considering differences in strategies and asset profiles. Some managers also reported challenges in calculating swing factors in the absence of reliable market and pricing information. This cannot be guaranteed in times of stress, so enhancing this tool for those periods is required.

An official agreed that swing pricing is a useful tool to consider, even if it is not a silver bullet. An important question concerning swing pricing is the extent to which it can cause early-mover or early redeeming investors to internalise transaction costs. If this can be achieved that would allow the neutralising of first-mover advantages, but this issue needs to be further assessed. First, there is work to do on how to deploy liquidity management tools such as swing pricing in an effective way. At present it is the decision of each individual fund with no consideration for the collective effect. Then comes the important question of how to calibrate these tools so that they can be effective in mitigating market stress, rather than just being used as an anti-dilution levy.

Another official agreed that swing pricing is a smart and smooth way to make investors internalise the liquidity externalities of withdrawing money from a fund. Some issues need tackling in terms of implementation such as clarifying the respective roles of fund managers and macro-prudential authorities in the decisions made, harmonising the implementation across asset managers and improving the coordination between the different stakeholders concerned. Finding the right balance is not easy and requires further thought.

3.3 Way forward for addressing the stability issues associated with asset management activities

An official stated that asset managers, pension funds and insurance companies should be considered as holders of possibly highly correlated risks, particularly when market movement comes from developments which cannot be diversified. They continue to be exposed to major external threats such as the possible evolutions of interest rates and also geopolitical and cyber risks. At present the tools do not exist to address these system-wide risks, for example there are no system-wide stress tests yet.

Progress is nevertheless being made in the EU on tackling the vulnerabilities from asset management activities. ESMA has endorsed the recommendations made by the ESRB in this regard. The awareness of the authorities about risks relating to liquidity mismatches and the exposure of open-ended funds to real estate and corporate debt is increasing. The impacts of low interest rates on the industry are also being considered, with more still to be assessed. A review of the Alternative Investment Fund Managers Directive (AIFMD) is also underway and a review of the MMF regulation has been launched, with substantial changes needed particularly in the case of MMFR.

Another official noted that the robustness of the non-bank financial intermediation system is a priority of the Italian G20 Presidency, which has asked the FSB to provide an interim report on possible policy options for MMFs by July with a final report due in the Autumn 2021, following the report published on the turmoil in March and April 2020. The FSB has also been asked to work on the issues raised by other open-ended funds beyond MMFs, bearing in mind the specificities of these products compared to banking activities in particular. The areas to work on include the mismatch between the liquidity of assets and the liabilities of funds, first-mover advantages when there is a non-linear threshold or cliff effect, and ensuring that sufficient liquidity buffers are in place to withstand outflows.

A regulator stated that two clear themes emerged from the assessments conducted by the FCA and the UK's Financial Policy Committee. First, it is vital to continue refining and improving swing pricing as a liquidity management tool. Second, consistent liquidity classification must be developed across the fund sector. These steps will protect investors and ensure efficient market operation, particularly during periods of stress.

A third official noted the need for a macroprudential framework for the non-bank sector, as set out in an article by Central Bank of Ireland Governor Makhoulouf included in the recent Banque de France financial stability review. Several issues need addressing including liquidity mismatches, the balance between time-varying and structural interventions, international coordination, and the ways of weighing the costs and benefits of different measures.

Answering a question from the Chair about the responsibility of Central Banks in case of market turmoil, especially when triggered by external factors,

and how to avoid moral hazard, an official emphasized that Central Banks will undoubtedly take on such responsibilities when there is a need to intervene, but there should be appropriate regulations in place that avoid frequent and excessive market stresses and all the related costs and challenges to the extent possible. For achieving that, the fund industry needs a strong enough architecture to minimize instability risks.

4. Financial stability risks posed by the broader non-financial sector

4.1 Interconnectedness between the banking and non-banking sector

The Chair noted that the financial stability implications of the interconnections that exist in the financial sector are regularly pointed out. For example in March-April 2020 unexpectedly high margin calls from CCPs have in some cases triggered liquidity squeezes. The issue of the interconnectedness between the banking and non-banking sectors was addressed in a recent paper published by Andrew Metrick and Daniel Tarullo on 'Congruent financial regulation'³ which proposes better coordinating the regulation of economically similar financial activities, inside or outside the banking system.

An industry representative considered that while banks were well prepared for the crisis, there are some questions around the degree of preparation of non-bank financial intermediaries in the US. Two issues were raised by the Metrick & Tarullo paper in this regard. These are not new and are not post-Covid observations. The first is the interconnections between banks and non-banks that continue to grow and become more critical, and the other is around stress for non-banks coming from a different source than the banks. Central bank support may not come at the right time for a non-bank for example.

The paper highlights that while banks proved to be a source of stability in 2020 thanks to the standards enacted after the financial crisis, financial markets and less-regulated non-bank institutions (such as hedge funds, MMFs, or brokerage firms) remained vulnerable in the patchwork of US regulation, so that the Fed had to use emergency powers to create a range of market-supporting measures. The paper also points out that while non-bank financial institutions and associated funding markets have grown to constitute a large part of the global financial system, regulation has not kept up with this development. The congruency concept developed in the paper, whereby if market participants perform similar activities, the regulatory approach should be coordinated, if not identical is interesting in this regard. For example, concerning the procyclicality and transparency issues raised by the US Treasury market, an interesting proposal on mandated margin levels was made. Another item is about whether 'the orange is worth the squeeze'. While it is possible to regulate the largest entities in a certain way – the biggest and juiciest oranges – these firms tend to be the best prepared for such events. The challenge with congruency is deciding on the right approach for the

3. Congruent Financial Regulation by Andrew Metrick and Daniel K. Tarullo - Brookings Papers – March 25, 2021

whole market, as there are no standard-setting bodies across different economically similar activities.

Congruency is therefore a very interesting approach for addressing the risks posed by non-banks, but there are challenges, and they take time to resolve, the industry representative stated. When thinking of non-bank intermediaries in particular, there are often issues of liquidity mismatch or maturity transformation, which are challenging to address. Another concern is the time that is needed for developing standards across similar activities and the degree of compromise that is required, so the question for regulators and market participants is how to manage risks in an effective way rather than waiting for standards to be developed.

Regarding liquidity mismatch and leverage issues, one application of the congruency approach is increasing transparency. More transparency can be achieved by enhancing information. Clearing can also play a role. The more that is brought into a cleared environment, the more market participants will get an understanding of the risks, the related margin requirements and the benefits of netting. That also contributes to levelling the playing field across the market and fostering harmonisation, until appropriate standards can be developed.

4.2 Potential stability risks associated with direct investments

Answering a question from the Chair about the stability risks posed by investment funds compared to direct investment by institutional investors, an official explained that direct investments can also be a source of instability.

There are three recent episodes that demonstrate this. First, in September 2018, a person operating in the energy market defaulted at the Swedish Nasdaq, having made a wrong bet on relative energy prices in Sweden and Germany and went bankrupt due to unsustainable margin calls. That one person almost destroyed the Stockholm Nasdaq. The second case is GameStop, where people - no one knows if they were traders or people gamifying trade - were trading against professional hedge funds and brought them to their knees. The third episode is Bill Hwang with Archegos, a family office that was so leveraged that a number of financial system giants went into severe problems. These stress tests were small enough to avoid the collapse of the financial system, but big enough to raise concerns, and to show that direct investment can also raise stability issues.