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Non-bank financial sector: systemic regulation needed

Foreword by Agustín Carstens

Non-bank financial intermediaries (NBFIs) have massively increased their footprint since the Great Financial Crisis (GFC). In part, this represents a long-term structural trend; it has also been a response to retrenchment by banks.

NBFIs offer a broad range of investment and funding opportunities; as such, they are a healthy source of diversity in external financing. They cover areas that banks do not, they enhance innovation and economic growth, and they can help make the financial system more resilient to credit risk.

Given their heft, NBFIs have attracted increasing policy attention. While their activities have obvious implications for investor protection, their impact is more far-reaching. When things go wrong, NBFIs can trigger or amplify market stress. And they affect how monetary policy is transmitted to the economy, how it is implemented on a day-to-day basis, and even how it is calibrated and communicated. Recent ructions in government bond markets, covered by this Quarterly Review, are the latest illustration of how NBFIs can have a material effect even on the US government yield curve – a primary focus of policy and the benchmark for asset pricing worldwide.

Crucially, NBFIs have risen to prominence in policy discussions because they can be, and have been, a source of financial instability. In March 2020 and in previous episodes of similar market turmoil, the NBFI sector amplified stress through inherent structural vulnerabilities, notably liquidity mismatches and hidden leverage. With system-wide stability under threat, massive central bank support was necessary to restore the calm. Such repeated occurrences suggest that the status quo is unacceptable. Fundamental adjustments to the regulatory framework for NBFIs are called for, to make it fully fit for purpose.

This issue of the BIS Quarterly Review delves into selected aspects of the NBFI ecosystem, with the aim of shedding light on the challenges involved. Its special features focus on factors that could undermine financial stability, including in fast-growing areas such as sustainable finance and the crypto universe. The purpose is to inform policy discussions on how to design NBFI regulation from a system-wide perspective.

Key takeaways

- Non-bank financial intermediaries (NBFIs) can make the financial system more efficient but also more unstable, as seen again in the March 2020 turmoil. Recent ructions in sovereign bond markets show that NBFIs can also influence the conduct of monetary policy.
- When ensuring financial stability, it is essential to reduce the need for emergency central bank support. A systemic approach to regulating NBFIs is the key to better addressing their structural vulnerabilities, notably liquidity mismatches and hidden leverage, and building adequate shock-absorbing capacity.
- This issue of the BIS Quarterly Review analyses non-bank financial intermediation, including mechanisms that could undermine financial stability. It focuses on decentralised finance, open-ended bond funds, NBFIs in emerging Asia, private markets and sustainable investing.

NBFIs and financial stability: cyclical and structural issues

The March 2020 events were another reminder that financial stability is best viewed by zooming out of the trees to consider the forest. The overall system may be unstable even if individual institutions, considered on a standalone basis, may appear stable. In other words, actions that seem prudent from the viewpoint of individual institutions may destabilise the system. This is known as the "fallacy of composition".

Like banks, NBFIs can be procyclical as a sector: they are vulnerable to fluctuations in leverage and liquidity runs that have system-wide consequences (Aramonte, Schrimpf and Shin) (2021)). In March 2020, as NBFIs retreated en masse, liquidity evaporated and markets froze amid deleveraging and feedback loops. These dynamics triggered or amplified global disruptions that not only threatened financial stability but strongly hampered the transmission of monetary policy to the broader economy.

The mechanisms underlying this instability are quite familiar from previous episodes of financial stress. At their core is the interaction between liquidity mismatches and leverage, on the one hand, and risk management practices, influenced in part by regulation, on the other. That said, the specific balance sheet composition and business models of NBFIs – together with market structures – determine how these factors will manifest themselves and how intensely.

Liquidity mismatches are quite common among NBFIs, in particular for prime money market and open-ended funds (OEFs) that promise on-demand convertibility of illiquid investments into cash. This generates a first-mover advantage, ie incentives for investors to move money out before others do, akin to bank depositors' incentives to run. Arguably, these incentives are smaller at exchange-traded funds (ETFs) that meet redemptions with securities in the investment pool (Todorov (2021)). Facing actual withdrawals or the threat thereof if redemption gates or fees become likely, prime fund and OEF managers tend to hoard liquidity and/or liquidate assets. But what is prudent from their viewpoint has potentially negative repercussions for the system ("externalities"): protecting the viability of individual funds exacerbates the system-wide liquidity shortage.

These mechanisms were at play in March 2020. Prime funds hoarded liquidity – eg by shortening the maturities of their commercial paper investments – rather than drawing down their buffers (Eren et al (2020)). Similarly, the discretionary asset sales by bond OEFs exceeded the amounts needed to cover redemptions, thus adding to the funds' cash positions, as documented in a special feature in this Review (Claessens and Lewrick (2021)). The upshot was a deterioration of system-wide funding liquidity conditions. In particular, market segments in which OEFs operate saw liquidity evaporate more quickly and to a greater extent.

As in previous episodes, the strains spilled over to US dollar funding markets outside the United States. Such strains are particularly severe for financial institutions that have US dollar assets but liabilities in local currencies and which can hedge most of the attendant foreign exchange risk only with short-term off-balance sheet instruments, largely FX swaps. The resultant rollover risk materialises during US dollar liquidity shortages. While this practice is common for advanced economy financial institutions, McGuire et al (2021) document it in this Review also for NBFIs in some Asian emerging market economies (EMEs), which have become significant creditors in global markets rather than just borrowers. When US dollar funding dried up in March 2020, these NBFIs ultimately had to obtain relief, directly or indirectly, from central bank swap lines. These disruptions also indicate how opaque such liquidity needs can be: FX swaps are a major form of "hidden debt" in the global financial system (Borio et al (2017)).

Concerns also arise in the growing crypto universe of decentralised finance – or DeFi, ie finance activity based on automated smart contracts on distributed ledger technologies, involving mainly permissionless mechanisms and anonymous transactions. As examined in an article in this Review (Aramonte, Huang and Schrimpf (2021)), DeFi supporters stress its potential efficiency gains. Being a new system of payments and transactions, it promises to overcome some of the disadvantages of traditional finance, such as high costs and slow speed. For now, these gains are difficult to detect: DeFi appears to be operating largely within its own ecosystem, with little in the way of financial intermediation services being provided to the real economy.

At the same time, besides giving rise to first-order money laundering and investor protection concerns, DeFi displays substantial financial vulnerabilities. These parallel but exceed those in more traditional forms of finance. For instance, stablecoins – the grease between DeFi wheels – are subject to classic runs: the backing of liquid claims with less liquid reserve assets can touch off downward price spirals akin to those stemming from redemptions in the investment fund industry. In the crypto ecosystem, risks have so far surfaced mainly in frequent and sizeable price crashes. Whether such fragilities are limited to this ecosystem or can spill over to the traditional one is still unclear. But the potential for spillovers should not be underestimated, especially since the stablecoin arrangements themselves can create important links. As history confirms, anything that grows exponentially is unlikely to remain self-contained and thus merits the closest attention.

Leverage at NBFIs can also result in destabilising dynamics due to perverse feedback loops. The archetypal example is the use of leverage by hedge funds and asset managers, notably for the purchase of securities with borrowed funds (eg repos). More recently, leverage has become high and pervasive in the DeFi world too. In such a context, price drops and increases in measured risks may make the lender call in the loan or charge a higher haircut, inducing forced selling.

One special feature in this issue documents that leverage is also pervasive in the rather opaque private markets, both on the part of investors – such as hedge funds – and the private-market funds themselves (Aramonte and Avalos (2021)). As banks have been retrenching post-GFC, these markets have gained ground. They tend to provide equity and debt funding to small firms, whose riskiness is difficult to assess. Private markets involve little liquidity transformation and feature long-horizon investments, which should make funding more resilient. However, just as in the larger public markets, risk-taking in private markets is procyclical, with investments increasing when stock markets do well and liquidity is ample. Such risk-taking has contributed to the recent accumulation of debt in the system at large and may have broader financial stability implications, not least because banks fund private market operations and investors.

Risk management strategies subject to the fallacy of composition often have perverse system-wide repercussions at times of high volatility, thus amplifying initial shocks. One example is the procyclical increase in margins to address heightened counterparty risks during volatility spikes (CGFS (2010)). In March 2020, concerns about counterparty credit risk were indeed allayed by such practices, helping to limit the erosion of confidence. But by triggering a need to come up with cash to meet margin calls at short notice, they gave rise to liquidity pressures elsewhere in the system (CPMI-IOSCO-BCBS (2021)). Another example is OEFs' reliance on liquidity management tools that do not take systemic considerations into account (Claessens and Lewrick (2021)). These private sector "best practices" have also found their way into current regulation.

Resilient **market structures** are key for absorbing spikes in the demand for funding liquidity. Ideally, private players would provide the "elastic nodes" in such structures ("first line of defence"). Banks are best placed to do this: through their lending activity, they can create their own liabilities, which are a means of payment; and they have direct access to the central bank. In March 2020, banks behaved as elastic nodes, supplying deposits to clients, including to NBFIs. But banks are subject to private incentives as any other market player and did not channel sufficient or timely liquidity to the NBFIs most in need. Thus, central banks– once again – had to step in (as the "ultimate line of defence").

Approaches to closing policy gaps

As the various analyses in this Review indicate, recent developments expose gaps in regulatory frameworks for NBFIs from a financial stability perspective. Two decades ago, the long-standing recognition of system-wide issues in the banking sector gave rise to the macroprudential approach to regulation and supervision (Crockett (2000)). In part drawing on that approach, post GFC-reforms have strengthened banks and reduced their systemic impact. Given the increasing role that the NBFI sector plays in the market ecosystem, it is now important to apply a macroprudential approach to it as well. The ultimate objective is to build individual NBFIs' war chests in good times in order to mitigate collective retrenchment in times of stress, thereby addressing the fallacy of composition.

Central bank liquidity assistance should not be the only means of filling these gaps. The expectation of such assistance creates moral hazard and distorts prices, leading to resource misallocation. In addition, it comes with implementation challenges and side effects, and is difficult to wind down. Liquidity assistance may also conflict with other policy objectives. For example, turmoil may arise precisely when a flareup in inflation calls for monetary policy to be tightened.

More effective prevention should be the main answer to regulatory gaps in the NBFI sector. Reducing the likelihood and intensity of financial stress in the first place would also reduce the need for emergency central bank assistance. Since this objective refers to the system as a whole, it calls for a macroprudential approach to regulation.

As always, one element of the multi-pronged policy response should be better information. This element is necessary even if not sufficient to combat the above-mentioned incentive distortions that are at the core of financial vulnerabilities. For authorities, this would come in the form of enhanced reporting as a basis for stronger monitoring. For markets, it would take the shape of enhanced disclosure.

The importance of reliable information comes to the fore in the context of climate change and green financing. This is emphasised in a special feature in this Review (Scatigna et al (2021)), which examines how investors seek to address environmental, social and governance (ESG) issues, largely through NBFIs. It finds that investors do respond to data on firm-level carbon emissions and to social bond designations, even if funding costs have seen little effect so far. But markets are grappling with unreliable taxonomies and inputs into these taxonomies, resulting in "greenwashing" or "ESG-washing", which stand in the way of the desired transition.

Another, essential, element in the policy response is to ensure that NBFIs have sufficient shock-absorbing capacity. This capacity will have to be tailored to the nature of the NBFI's vulnerabilities, and hence the inherent leverage and liquidity mismatches. When leverage is an issue, less stress-sensitive ("through-the-cycle") margining practices and, above all, higher and usable capital buffers will help. In turn, the options for mitigating liquidity mismatches include higher usable liquidity buffers, well designed limits to convertibility into cash and, more generally, less reliance on redemption methods that presume liquid markets (not in-cash but in-kind). Of course, the shock-absorbing capacity would also need to take into account the interaction between leverage and illiquidity.

Other pre-emptive steps include taking a less fragmented and more consolidated supervisory perspective. Gaps in supervision left NBFIs in Asian EMEs with excessive exposure to rollover risks while banks had limited capacity to mitigate these risks (McGuire et al (2021)). Regulatory challenges may appear insurmountable in the case of DeFi, which is designed to avoid central oversight and rulemaking. However, Aramonte, Huang and Schrimpf (2021) show that DeFi's decentralisation is an illusion: pivotal entities (typically, application developers) are ultimately in control. With appropriate adjustments to legal systems, these entities, as well as DeFi's links with the traditional system, could become the natural entry points for the regulation that is needed to address money laundering and other abuses as well as to achieve financial stability goals. Given DeFi's characteristics, these efforts will require international coordination. And any final coherent and inclusive framework may also have to include prohibitions for some DeFi activities.

The policy challenges are daunting. Addressing them is urgent and, indeed, many efforts are under way, nationally and internationally. How best to address them requires further thought. Further discussions will be needed between authorities to reach a common understanding of the pressing issues. Along the way, it is important to keep in mind that the task does not have a clear beginning and a clear end. This will be a continuing endeavour. People inevitably want higher returns and higher liquidity. The financial system will try to deliver, in part by adapting to regulation as it evolves. All this inevitably raises system-wide risks. The challenge for the authorities is to manage those risks effectively while allowing the financial system to perform its basic functions in the interest of society. Policymakers cannot afford to fall behind the curve.

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