\\Gimecb01\homedir-eh$\heckler\Layout\ESRB\ESRB logo.emfESRB response

to individual questions in the EU Commission’s Targeted Consultation on macroprudential policy for NBFI

# 3. To what extent could the failure of an NBFI affect the provision of critical functions to the real economy or the financial system that cannot easily be replaced? Please explain in particular to which NBFI sector, part of the financial system and critical function you refer to, and if and how you believe such knock-on effect could be mitigated.

Recovery and resolution regimes are in the process of being rolled out to cope with the systemic consequences of the failure of a CCP or an insurer. Due to their high interconnectedness and critical function in financial markets, the failure of a CCP or an insurer would have severe effects on the financial system and the real economy.[[1]](#footnote-2) Therefore, the ESRB advocated the establishment of recovery plans and resolution regimes for CCPs and for insurers.[[2]](#footnote-3) The ESRB welcomes that legislation is in the process of being implemented. For the other types of NBFIs, an impact of critical functions might not necessarily stem from the failure of these entities. Recent episodes showed that it may stem from the collective actions that NBFIs might take as a reaction to shocks, in light of underlying financial vulnerabilities, such as liquidity mismatch, unsustainable leverage or unpreparedness for margin calls.

NBFIs contribute increasingly to market liquidity. The microstructure of modern financial markets is increasingly complex, not only because financial assets are being traded across many trading venues and time zones, but also due to vertical integration between assets, like equities, futures, and ETFs; or interest rates products such as bonds, futures, repos, and OTC interest rate derivatives. Maintaining price alignment across these markets and providing liquidity accordingly is a very complex task which is however vital for markets to fulfil their function of providing reliable valuations for all financial assets, which ultimately underpins financial stability. Increasingly, these critical functions are being carried out by large, sophisticated, and specialised traders. These non-banks operate on own account, often comparable to market makers, have little warehousing capacity, rely on complex IT algorithms, and have a global reach. The failure of one of these liquidity providers would cause severe disruption in the pricing of assets, and in some cases would leave specific assets or venues without the needed liquidity to function properly. While other market participants could theoretically fill the void, capital constraints and the granularity of the market would still preclude a quick and seamless substitution. If this were to happen during a stress event, the effects would be significantly amplified.

In the government bond cash and repo markets, a disorderly default of a large participant could have severe contagion effects. One example of the contribution of NBFIs to market liquidity is the increasing activity of hedge funds in the EU government bond cash and repo markets, which now accounted for 56% of trading volume for European government bond cash transactions on the electronic trading platform Tradeweb in 2023 (compared to 36% in 2020). The EU government bond markets have so far not experienced a default of a large market participant with centrally and bilaterally cleared government bond cash and repo transactions. However, with the growing activity of hedge funds, it cannot be ruled out that a case comparable to the Archegos or Long Term Capital Management collapse also happens with a highly leveraged NBFI in the government bond markets, including the future segment. Any unwinding of its open transactions and positions in cash, repo and future markets would likely result in cascading effects on multiple other market participants including CCPs, possibly creating a Lehman-like shock moment as no counterparty will have a complete understanding of the substantial market footprint of the defaulter. The credit supply to the real economy including new sovereign debt issuance could be disrupted. Counterparties with a short position will take actions in parallel to cover their exposure, including an uncoordinated liquidation of collateral. The haircuts applied to the collateral in bilateral clearing likely underestimate the aggregate liquidity risk of such an unwinding of several counterparties at the same time. The SEC cites such contagion risks as a reason for their structural reforms in the US government bond markets, because CCPs with open positions from the defaulter are not aware of the bilateral transactions and the aggregate liquidity risk of all open positions.[[3]](#footnote-4)

The failure of an insurer or pension fund could lead to other financial companies also suffering distress, which could amplify the shocks to the rest of the financial system. Insurers and pension funds provide critical functions[[4]](#footnote-5) for the functioning of the economy by taking on risks and mobilising savings. They are also large long-term investors in financial markets, contributing to economic growth and play an important role in financial stability. The links between insurance and other sectors follow from its primary functions of pooling and transferring risk and investing premiums they received by policyholders before a claim occurs. The links between pension funds and other sectors follow from their function to pull in savings from beneficiaries and invest them until their retirement. Because of this central role, any widespread reaction by the sector to market dynamics could create distortion in the financial market and impair their ability to boost the economy. Interconnectedness could potentially exacerbate adverse effects. Further to this, substitutability and concentration of service provision could pose problems for the real economy in stress conditions. The risk-based regulatory framework for insurers (Solvency II) and pension funds (Institutions for Occupational Retirement Provision Directive (IORP II)) reduces the likelihood of failure and the proposed Insurance Recovery and Resolution Directive (IRRD) facilitates and orderly recovery and resolution of insurers.

From a substitutability perspective, the impact of failure of insurers or providers of other financial services could vary according to the service offered. The scale of the negative impact of an insurance companies’ failure depends primarily on the lack of substitutability of individual insurers in certain markets that are considered significant and highly concentrated[[5]](#footnote-6). Life insurers are significant investors in financial markets, and failure of significant life insurers could affect economy. Non-life insurers, in particular offer specialised products (e.g., catastrophe coverage; marine and aviation insurance; and trade credit insurance) that are not easily substituted. The failure of non-life insurance companies could therefore have a significant impact on the real economy and financial stability. The ESRB analysed the macroprudential aspects of trade credit insurance (TCI) and published its findings in an Issues Note[[6]](#footnote-7). It concluded that TCI is a critical function and therefore a systemically relevant line of business. The ESRB’s Issues Note sets out why ad-hoc government interventions are sub-optimal way of maintaining TCI cover and provides avenues for policy work. The ESRB also noted that, certain risks such as natural catastrophes (NatCat) become more global and systemic, and insurer’s capacity to diversify risks becomes compromised and this could amplify social risks[[7]](#footnote-8). Ultimately, higher insurance costs and reduced risk diversification capacity could result in a large increase in uninsured losses, also known as the protection gap. Research also evidences that the lack of insurance affects GDP growth after a disaster[[8]](#footnote-9). In the examples of TCIs, and NatCat, the consequences of not having insurance availability for those lines of business is material to policyholders, either they would assume full cost of losses directly or need to depend on government support to cover some of the losses. Either option is not sustainable, and it may in severe cases generate a knock-on effect on the real economy and financial stability (e.g., increased fiscal pressure from governments to help communities severely affected; creditors facing losses on collateral). It is challenging to foresee the potential impact of a failure of one company or more, whether the impact will be contained to one country or have ripple effects to other countries and/or other sectors. Scenario analysis may help quantify this impact. Substitutability risks can also occur in the area of payment services. For example, some large non-bank groups provide critical services for 50% of significant credit institutions. This concentration could pose a systemic risk if any of these providers were to experience operational risks.

For this reason, continued monitoring and prevention are key in safeguarding financial stability. Adequate monitoring and preventive micro- and macroprudential supervisory measures can reduce the frequency and impact of the financial distress of a market segment, a sector, or a region. Preventive measures would help reducing the knock-on effects on the economy. Such measures need to be designed and considered at each sector as well as including a macroprudential perspective that looks across sectors. This to ensure that the tools available to prevent failures and reduce negative repercussions of any failures will preserve the provision of critical functions. In addition to the measures introduced in the recently adopted regulatory framework for insurers[[9]](#footnote-10): *e.g. liquidity risk management plans, macroprudential considerations in the own risk solvency assessment and prudent person principle, new supervisory powers to temporarily suspend/restrict certain payments to protect policyholders and/or financial stability, new supervisory powers to temporarily suspend redemption rights of life insurance policy holders, recovery and resolution,* it is important to improve liquidity preparedness regarding potential margin calls and set an adequate oversight of leverage by sector and across sectors, with an emphasis on the items noted in the ESRB’s response cited below in this document and other ESRB proposals to enhance the macroprudential perspective for insurers. In context of insurance authorities are also considering how situations where the provision of critical functions to the real economy are being affected, could be addressed. This includes the ladder approach proposed by the ECB and EIOPA to reduce the climate insurance protection gap.

The ESRB would like to point out that the failure of an NBFI for which critical functions are not easily replaced is not a pre-requisite to observe contagion effects in the financial system. Other transmission mechanism and examples of episodes where NBFIs have propagated stress in the financial system are described in the Introduction, of ESRB (2024), “A system-wide approach to macroprudential policy - ESRB response to the European Commission’s consultation on assessing the adequacy of macroprudential policies for Non-bank Financial Intermediation”.

# 5. Where in the NBFI sectors do you see build-up of excessive leverage, and why? Which NBFIs could be most vulnerable? Please provide concrete examples.

The absence of a comparable measure for leverage, as well as leverage-related risks across NBFI sectors impedes effective assessment of vulnerabilities. Excessive leverage is often cited as a root cause of financial crises. While leverage indicates the presence of other risks, such as counterparty credit risk, liquidity risk, and market risk, it should not be conflated with risk itself. Moreover, there is no universal definition of leverage, and its measures vary across NBFI sectors. While prudential oversight often focuses on leverage of different types of entities such as banks or investment funds, the systemic perspective is more concerned with the resilience of the financial system as a whole. Measuring leverage at the system level to inform a macroprudential approach remains challenging. Further efforts to develop measures for leverage-related risks that could be used across different types of entities would enhance comparability and monitoring of vulnerabilities in the financial system.

Risk assessment is hindered by data gaps. While reporting frameworks and data quality are improving, further efforts are needed to enable a more comprehensive evaluation of risks to financial stability, including those related to leverage. These efforts should focus on shedding light on leveraged UCITS funds using the VaR approach, as well as on less transparent forms of asset management such as family offices and discretionary mandates, and other opaque segments of the NBFI space, such as OFIs. Given that high leverage levels are typically associated with hedge funds, a detailed understanding of their strategies, interlinkages, and associated risks is essential. Furthermore, vulnerabilities in the Commercial Real Estate sector could threaten financial stability necessitating scrutiny of leverage in real estate funds, particularly those with a significant market footprint.[[10]](#footnote-11), In addition, given that NBFIs are often multi-layered and intertwined, there is a need for a better understanding of leverage across complex intermediation chains and potential amplification channels, e.g., through broader application of a look-through reporting. Another area where increased transparency is needed is the use of leverage in private finance. Although leverage may be small at the fund level, private finance strategies tend to use a large amount of debt along the financing chain. The structure of the European leveraged loans market confirms high levels of debt, as most of the borrowers are private equity-sponsored. [[11]](#footnote-12) The lack of a look-through approach in the regulation of private equity funds complicates the assessment of leverage associated with private finance.

NBFIs that combine excessive leverage with other vulnerabilities are particularly relevant from a financial stability perspective. The interplay between multiple systemic vulnerabilities can lead to feedback loops, amplify shocks, and undermine financial stability. This includes combination of excessive leverage with liquidity mismatch, high interconnectedness, large footprint in underlying markets, and/or concentration. Certain investment funds, for example, can exhibit such combinations.[[12]](#footnote-13) The European Commission should ensure that, when the use of leverage by various NBFI sectors can cause similar externalities that could endanger financial stability, there are consistent tools in place to address such externalities.

NBFIs increasing presence in the EU government bond markets may create vulnerabilities during periods of stress. Some NBFIs such as hedge funds make use of highly leveraged strategies, and their involvement in leveraged basis trades in the US government bond market may has contributed to disruptions in the repo market. Importantly, their presence in the EU government bond markets is growing rapidly, and they are already now a key player in the cash market, and increasingly also in the repo market. There is also evidence that a key contributing factor to their leverage is the fact that they can borrow in the bilaterally cleared repo market with zero haircuts on their collateral.[[13]](#footnote-14) If combined with inadequate liquidity preparedness to meet margin calls, these NBFIs may amplify market dynamics through procyclical selling behaviour, particularly when they rapidly alter their positioning in response to shifts in market sentiment, thereby exacerbating the risk of dysfunction in financial markets by putting pressure on banks’ intermediation capacity and create trading bottlenecks.

From a financial stability perspective, it is crucial to understand not only the build-up of leverage in NBFI sectors but also their role in providing leverage. When assessing risks related to leverage, it is important to recognise that NBFIs can be important providers of leverage. By providing alternative or complementary financing to companies or investment projects with high financing needs that might not meet the criteria or “risk appetite” for financing from banks, NBFI play an important role in the economy and contribute to CMU goals. But at the same time, it can contribute to over-indebtedness and financial imbalances in the economy. As this financing channel expands, it is crucial to understand and monitor related risks, including interlinkages with and the banking sector.

More detail on these risks, and ESRB proposals to remedy them, are set out in the Introduction, Chapters 1, 3, 4 and 5 and Policy Digest 2 of ESRB (2024), “A system-wide approach to macroprudential policy - ESRB response to the European Commission’s consultation on assessing the adequacy of macroprudential policies for Non-bank Financial Intermediation”.

# 26. What are your views on the preparedness of NBFIs operating in the EU in meeting margin calls, and on the ways to improve preparedness, taking into account existing or recently agreed EU measures aimed at addressing this issue? Please specify the NBFI sector(s) you refer to in your answer?

The ESRB believes that liquidity stress testing is a key tool to test margin preparedness and welcomes that the EU-wide stress tests of the ESAs are considering this aspect. The preparedness in meeting margin calls varies across the different NBFI sectors and across different firms in the same sector. Therefore, the ESRB believes it is important to assess the impact of margin calls as part of liquidity stress tests. For example, while testing the resilience of CCPs is the core of ESMA’s regular stress test of CCPs, ESMA notes that CCPs may impact the resilience of their clearing members, clients, and markets, through abrupt margin calls during times of high prices and market volatility. Reflecting this, ESMA’s fifth CCP stress test included an analysis of the central clearing ecosystem to complement the core components of its CCP stress tests. ESMA used data submitted by CCPs on variation margin (VM) that would need to be exchanged under the market stress scenario to estimate the potential liquidity impact on clearing members and their clients in the EU clearing system. The analysis shows that the net largest liquidity demands from VM calls fall on the largest financial groups. While these groups should have access to liquid resources, ESMA notes that a significant amount of the stressed VM calls may be passed on to clients.[[14]](#footnote-15) In addition, EIOPA’s 2024 insurance stress test exercise includes a liquidity component that also captures margin calls.[[15]](#footnote-16) And the ESRB proposed that ESMA would review its stress testing guideline for investment funds such that they would be required to consider the impact of margin calls on their liquidity.[[16]](#footnote-17) It is important that the European Commission reviews whether NCAs have sufficient powers to address any deficiencies in liquidity risk management, that these stress tests might reveal.

The liquidity risk that can result from margin calls during times of heightened market volatility needs to be managed better. The regular exchange of margin to collateralise transactions has made the financial system safer. A known side effect of the greater use of collateral in financial transactions is that liquidity risk has increased. This is because – when market prices move sharply – market participants with loss-making positions need to meet large margin calls at short notice. This may force them to close out their positions by entering offsetting trades, thereby amplifying price movements. Or it may force them to raise liquidity by selling other assets (potentially at a steep discount in case of assets of low quality and/or that trade in markets that are not liquid), thereby creating contagion effects to other markets. The resulting effects can threaten financial stability. As Box 1 on ‘Episodes of market turmoil and other indicators related to NBFIs’ in the ESRB publication “A system-wide approach to macroprudential policy - ESRB response to the European Commission’s consultation on assessing the adequacy of macroprudential policies for Non-bank Financial Intermediation” highlights, there have been several episodes that demonstrate the lack of preparedness of NBFIs in meeting margin calls. For example, the March 2020 market turmoil, the energy crisis in the EU, and the UK gilt turmoil in 2022 resulted in unprecedented interventions by public authorities that helped maintain the resilience of the clearing ecosystem.

**All market participants that enter transactions that require exchange of margin need to be prepared to meet margin calls during times of stress.** Given their centrality in the clearing ecosystem, it is important that CCPs do not put unnecessary strain on their clearing members and clients. The ESRB has pointed to ways to reduce procyclical behaviour in various reports and a Recommendation. EMIR already requires EU CCPs to include anti-procyclicality measures in their initial margin models, and these provisions would be further strengthened if the European Commission endorses the revised Regulatory Technical Standard that ESMA has proposed. The revised EMIR (EMIR 3) provides further rules designed to reduce procyclical behaviour by CCPs. However, during times of exceptional market volatility, CCPs may not be able to avoid increasing them, as they would otherwise compromise their resilience. Similarly, the ESRB has argued that when clearing members pass on increases in initial margin or haircuts that a CCP requires to their clients, it is important that clearing members would not unnecessarily use add-ons or multipliers that amplify the liquidity demand to reduce procyclicality. Still, there are currently no anti-procyclicality rules preventing initial margin increases in bilaterally cleared transactions. Further, because VM depends on market movements, and the resulting market-to-market gains and losses, some counterparties will always be faced with having to provide cash at short notice and might need to liquidate non-cash liquidity reserves.[[17]](#footnote-18) The BCBS, the CPMI, IOSCO and the FSB are finalising several proposals and recommendations, covering both centrally cleared as well as bilaterally cleared derivatives and securities markets, to ensure that participants in these markets are better prepared to meet margin calls in a timely fashion, including during times of heightened market volatility.[[18]](#footnote-19) It is important that the European Commission reviews whether EU legislation needs to be enhanced to fully reflect these proposals and recommendations and proceeds accordingly. However, even the best preparedness will not be sufficient to mitigate liquidity risk stemming from margin calls under all circumstances, e.g., in tail events with extreme market movements or breakdown of correlations, procyclical feedback loops between margin requirements and market liquidity might take place.

Further details on the risks from margin calls and how to mitigate them (including reference to documents referred to above) can be found in Section 2, Policy Digest 3 of ESRB (2024), “A system-wide approach to macroprudential policy - ESRB response to the European Commission’s consultation on assessing the adequacy of macroprudential policies for Non-bank Financial Intermediation”.

# 53. What are the benefits and costs of a regular EU system-wide stress test across NBFI and banking sectors? Are current reporting and data sharing arrangements sufficient to perform this task? Would it be possible to combine available NBFI data with banking data? If so, how?

Regular EU system-wide top-down stress tests across sectors would be a useful complement to the already established regular sectoral bottom-up stress tests of the ESAs. The results of the regular ESA stress tests, already conducted on an EU-wide basis[[19]](#footnote-20), have been key inputs into policy decisions for the institutions covered and their importance for macroprudential policy is growing. Nevertheless, by focusing on separate sectors, feedback loops and interconnections are missed. Interlinkages between different parts of the financial system can amplify stresses, as demonstrated by the recent financial market turmoil (e.g., the pandemic in March 2020). Moreover, bottom-up exercises that require the participation of individual firms are labour intensive for participants and supervisors. A system-wide top-down stress test would be less labour intensive and could therefore be deployed in a more agile way, allowing authorities to test several scenarios more frequently than is currently the case. Overall, the inclusion of feedback loops and greater agility would help inform discussions on appropriate macroprudential measures in a more comprehensive and timely manner.

System-wide stress tests would also help identify vulnerabilities and amplifying effects that might arise because different types of entities perform the same activities. For instance, to better understand how forced asset sales might impact market liquidity and amplify falls in asset prices, it is important to consider the behaviour of asset managers beyond investment funds. Similarly, to better understand procyclicality in the development of lending activities it is important to capture lenders other than banks and credit market activities in stress tests. Also, new types of hybrid risks are affecting the entire financial system, such as cyber risk (linked to contagion / propagation channels that can spread across sectors and beyond geographical / financial sector borders) and climate risk.

Progress is being made, but system-wide stress tests have not yet reached a mature stage and there is currently little experience both within and outside the EU. Capturing cross-sectoral effects, second-round impacts, and spillover effects that are at the heart of system-wide stress tests is challenging. But progress is being made. Examples are the Bank of England SWEs[[20]](#footnote-21), the ECB Interconnectedness System-Wide stress test analytics (ISA)[[21]](#footnote-22) model employed in the one off “Fit-for-55” climate analysis, and ongoing work on system-wide liquidity stress testing at the ESRB. In particular:

* The ISA[[22]](#footnote-23) developed by the ECB represents a prominent advancement in system-wide stress testing, capturing contagion risk and second-round responses to short-term liquidity shortfalls. The one-off “Fit-for-55” climate scenario analysis[[23]](#footnote-24) used top-down models to assess the impact of the scenarios on the respective sectors, and employed the ISA model to assess the contagion and amplification effects across firms and sectors.
* The ESRB, in collaboration with the ECB, has been making some progress in specific system-wide scenario analysis involving all types of entities. For example, in situations of acute financial stress, the ESRB has been using its access to granular market data (EMIR) to identify vulnerabilities across financial markets. Also, most recently, the ESRB is testing ways to conduct a system-wide liquidity scenario analysis which attempts to provide an understanding of how systemic liquidity risks can spread via cross-sector interconnections and to capture second round cross-sectoral effects, via the price impact of asset sales.
* In certain instances, the ESAs in their sectoral bottom-up stress tests introduced some specific scenario analysis to see the interactions with the rest of the financial system e.g. (i) the latest ESMA 2024 CCP stress test includes an analysis of stress conditions for the broader CCP ecosystem, including banks and NFCs (ii) the EBA banking sector stress test has tried to assess the interaction between banks and the wider financial system.

Important lessons are being learnt from the above exercises that will help the development of methodologies and models. The ESRB systemic liquidity scenario analysis is providing invaluable experience in terms of the challenges to combine different data sources and to reconcile different modelling approaches. It also highlights the benefits of close interaction with national authorities during the design of the stress test methodologies to leverage their experience with specific sectors and to account for local factors. Importantly, it showed that better arrangement for sharing of firm-specific data are needed between all relevant authorities.[[24]](#footnote-25) In relation to this, the ESRB sent a letter to the European co-legislator stressing the need for legislation to facilitate data sharing between authorities.[[25]](#footnote-26) At the technical level an Integrated Reporting Framework for all sectors could facilitate the combination of NBFI and bank data at different levels of aggregation.

Given its broad membership, including the ECB and the ESAs, the ESRB might be in a good position to develop a framework for periodic, top-down system-wide stress tests of the EU financial system. The regular bottom-up ESA stress tests, where the ESRB already develops scenarios in close collaboration with the ECB and the ESAs, could be seen as pillars on which a future top-down system-wide stress test could be developed. Such a top-down system wide stress test would allow the ESRB to monitor and identify how specific shocks would propagate within the EU financial system, across sectors, markets, and counterparties. This would facilitate the holistic assessment of systemic risk by bringing in empirical findings. In the short-term the ESRB should focus on how to integrate and utilise current sectoral stress tests conducted by the ESAs. As methodologies and models will develop gradually results need to be interpreted with care and limitations of the exercises need to be communicated clearly.

More detail on data sharing which is crucial to advance desk-top based stress testing exercise is provided in Chapter 1 of ESRB (2024), “A system-wide approach to macroprudential policy - ESRB response to the European Commission’s consultation on assessing the adequacy of macroprudential policies for Non-bank Financial Intermediation”.

1. See speech by Andrew Bailey (2024), [Michael D. Gill Memorial Society Lecture](https://www.bankofengland.co.uk/speech/2024/october/andrew-bailey-mike-gill-memorial-lecture). [↑](#footnote-ref-2)
2. See ESRB (2017), [Opinion on a central counterparty recovery and resolution framework](https://www.esrb.europa.eu/pub/pdf/other/170725_ESRB_opinion_counterparty_recovery_resolution_framework.en.pdf), and ESRB (2017), [Recovery and resolution for the EU insurance sector](https://www.esrb.europa.eu/pub/pdf/reports/esrb.reports170817_recoveryandresolution.en.pdf). [↑](#footnote-ref-3)
3. See SEC (2023), [SEC Adopts Rules to Improve Risk Management in Clearance and Settlement and Facilitate Additional Central Clearing for the U.S. Treasury Market](https://www.sec.gov/newsroom/press-releases/2023-247). [↑](#footnote-ref-4)
4. The recovery and resolution of insurance and reinsurance directive (IRRD) will be instrumental in ensuring effective resolution of failing insurers, which could have an impact not only on policyholders but also possibly the real economy and financial stability of the markets on which those insurers operate (recital 3). The IRRD recital 4 notes that “*It is therefore crucial that adequate tools be available to prevent failures and, where failures occur, to minimise negative repercussions by preserving the continuity of those critical functions* “. [↑](#footnote-ref-5)
5. According to the International Association of Insurance Supervisors (IAIS), these conditions often apply – for example – in the following markets (IAIS, 2019 [Holistic Framework for Systemic Risk](https://www.iaisweb.org/uploads/2022/01/191114-Holistic-Framework-for-Systemic-Risk.pdf)): catastrophe coverage, marine insurance; aviation insurance; export credit respective trade credit insurance. [↑](#footnote-ref-6)
6. See ESRB (2022), [Issues Note on macroprudential aspects of trade credit insurance](https://www.esrb.europa.eu/pub/pdf/reports/esrb.issuesnoteonmacroprudentialaspectstradecreditinsurance202208~eaa8c9c764.en.pdf). [↑](#footnote-ref-7)
7. See ESRB (2024), [ESRB advice to EIOPA on the prudential treatment of environmental and social risks](https://www.esrb.europa.eu/pub/pdf/other/esrb.letter240423_advice_EIOPA_Sust_Risks~fbc775d700.en.pdf).(page 3) [↑](#footnote-ref-8)
8. See, ECB and EIOPA (2021) [Climate change, catastrophes and the macroeconomic benefits of insurance](https://www.eiopa.europa.eu/system/files/2021-07/thematic-article-climate-change-july-2021.pdf) [↑](#footnote-ref-9)
9. See, [Directive amending Solvency II](https://data.consilium.europa.eu/doc/document/PE-5-2024-INIT/en/pdf) and [Directive on the recovery and resolution of insurance and reinsurance undertakings](https://data.consilium.europa.eu/doc/document/PE-6-2024-INIT/en/pdf) [↑](#footnote-ref-10)
10. See Recommendation of the European Systemic Risk Board of 1 December 2022 on vulnerabilities in the commercial real estate sector in the European Economic Area (ESRB/2022/9) and ESRB (2024) [EU Non-bank Financial Intermediation Risk Monitor 2024](https://www.esrb.europa.eu/pub/pdf/reports/nbfi_monitor/esrb.nbfi202406~2e211b2f80.en.pdf?a9a0bd2000556f5322f99d9afb9a8d37). [↑](#footnote-ref-11)
11. See ESRB (2024) [EU Non-bank Financial Intermediation Risk Monitor 2024](https://www.esrb.europa.eu/pub/pdf/reports/nbfi_monitor/esrb.nbfi202406~2e211b2f80.en.pdf?a9a0bd2000556f5322f99d9afb9a8d37) [↑](#footnote-ref-12)
12. See [Risks from leverage: how did a small corner of the pensions industry threaten financial stability?](https://www.bankofengland.co.uk/speech/2022/november/sarah-breeden-speech-at-isda-aimi-boe-on-nbfi-and-leverage) − speech by Sarah Breeden, 7 November 2022 and CBI (2022) [The Central Bank’s macroprudential policy framework for Irish property funds](https://www.centralbank.ie/docs/default-source/financial-system/financial-stability/macroprudential-policy/nbfi/macroprudential-measures-for-irish-property-funds.pdf). [↑](#footnote-ref-13)
13. See ECB (2023), Financial Stability Review, Box: [Non-banks’ liquidity preparedness and leverage: insights and policy implications from recent stress events](https://www.ecb.europa.eu/press/financial-stability-publications/fsr/focus/2023/html/ecb.fsrbox202305_07~64a379ad82.en.html). [↑](#footnote-ref-14)
14. See Chapter 7 of ESMA (2024), “[Final Report – Fifth ESMA Stress Test Exercise for Central Counterparties](https://www.esma.europa.eu/sites/default/files/2024-07/ESMA91-1505572268-3627_5th_ESMA_CCP_Stress_Test_Report.pdf)” [↑](#footnote-ref-15)
15. See EIOPA, (2021), ‘[Methodological Principles of insurance stress testing – liquidity component](https://www.eiopa.europa.eu/document/download/7167dd5c-8628-4c01-81e6-0158678d72fc_en?filename=Methodological%20principles%20of%20insurance%20stress%20testing%20-%20liquidity%20component)’, and EIOPA (2024), “[Insurance stress test 2024 technical specifications](https://www.eiopa.europa.eu/document/download/919c2f02-923b-45be-8115-7b979b24abf0_en?filename=EIOPA-BoS-24-087_2024%20Stress%20test%20-%20Technical%20specifications_v04.pdf)” [↑](#footnote-ref-16)
16. The ESRB made this proposal in the context of its response to ESMA’s consultation on liquidity management tools for investment funds. See [ESRB response to the ESMA consultation on draft Regulatory Technical Standards and Guidelines on liquidity management tools](https://www.esrb.europa.eu/pub/pdf/other/ESRB.response.240902_ESMA_consultation_LMTs~738ff47fe8.en.pdf?30b3f3f06f99917b749c121e4d606c54). [↑](#footnote-ref-17)
17. See CPMI-IOSCO (2024) for [examples of effective practices to streamline variation margin in centrally cleared markets](https://www.bis.org/cpmi/publ/d221.pdf). [↑](#footnote-ref-18)
18. The ESRB responded to the draft proposals for consultation by the BCBS-CPMI-IOSCO for centrally cleared markets that aim to help clearing members and their clients to anticipate and prepare for margin calls and expressed its support. See ESRB (2024), “[ESRB response to the consultative report by the BCBS, CPMI and IOSCO on transparency and responsiveness of initial margin in centrally cleared markets](https://www.esrb.europa.eu/pub/pdf/other/esrb.letter240417_response_iosco_consultation~a5c98d897b.en.pdf?f8b9fcf1e4cba54aa39782dbdc16d9ba)” [↑](#footnote-ref-19)
19. For the banking sector by EBA, for the insurance sector and the IORPs sector by EIOPA, for MMFs and CCPs by ESMA. [↑](#footnote-ref-20)
20. <https://www.bankofengland.co.uk/financial-stability/boe-system-wide-exploratory-scenario-exercise> [↑](#footnote-ref-21)
21. For more information on the ISA model <https://www.ecb.europa.eu/pub/pdf/scpops/ecb.op348~6b72fbe3cf.en.pdf> [↑](#footnote-ref-22)
22. The tool proved to be flexible in handling complex data structures, combining supervisory reporting and commercial sources to reproduce the network of linkages characterising the financial system, and managed to combine first-round assessments from the ESAs to extract meaningful estimates of second-round effects. [↑](#footnote-ref-23)
23. As a further reference, the ESRB had coordinated a prototype SWST in the context of the climate assessments, via the ISA model (see [ESRB (2021)](https://www.esrb.europa.eu/pub/pdf/reports/esrb.climateriskfinancialstability202107~79c10eba1a.en.pdf?d70cbb0890e4af7debf5ed9950976cc2) and [ESRB (2022)](https://www.esrb.europa.eu/pub/pdf/reports/esrb.ecb.climate_report202207~622b791878.en.pdf?e0b611d79c3a324077d7515df273f56c)). This exercise, run by the ESAs and the ECB based on scenarios developed by the ESRB, has promoted a fruitful collaboration among EU financial authorities and institutions, providing a tangible opportunity to assess climate risk from a joint perspective that aligns methodologies and analytical tools while leveraging on sector-specific expertise. [↑](#footnote-ref-24)
24. The revised AIFMD and UCITS Directive address data deficiencies in the investment fund sector and will allow for more comprehensive risk monitoring and analysis, see answer to question 10. [↑](#footnote-ref-25)
25. See ESRB (2024), [letter to the European Parliament - Data sharing between the European Supervisory Authorities and the ESRB](https://www.esrb.europa.eu/pub/pdf/other/esrb.letter240819_data_sharing_parliament~19250ab48e.en.pdf). [↑](#footnote-ref-26)