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Our path to the future of EU-wide stress testing



Thank you for the kind invitation to deliver keynote remarks on the EU-wide stress test, a key product for the EBA. The latest market developments and the turmoil around banks make this discussion on the stress test timely. The stress test has been an essential tool for supervisors and a key element of our toolbox for enhancing the resilience of the EU banking sector. The stress test has an important role to play going ahead.

During my time today, I would like to explain where we are on the 2023 EU-wide stress which is currently on-going, including some of the main changes we have introduced, which also considers the higher level of uncertainty in the economic environment and geopolitical events since our last stress test in 2021. Then, I would explain how we can improve the stress test in the future. Finally, I would not like to finish my session today without dedicating some minutes to climate stress test as it is becoming an important area of focus for the EBA.

1. Where we stand

The EBA EU-wide stress test has been with us for the past 12 years and it is currently at its 6th iteration. The past fifteen years have been particularly challenging for the European economy and the European banking sector. The Global Financial Crisis was followed by the sovereign crisis and then a period of low interest rates and low growth. Over these years, sweeping new banking regulations were adopted in Europe that aimed at strengthening the banking sector and avoiding the repetition of the events following the Global Financial Crisis. Three years ago, the COVID-19

pandemic erupted and at that time, the banking sector was prepared to support the real economy. We think that the stress test has contributed to building this resilience.

The EU-wide stress test was an outcome of the regulatory reforms following the Global Financial Crisis to help strengthen the EU banking system by assessing banks' resilience to adverse economic and financial developments. It is a bottom-up exercise with banks having an active role by providing both starting points and own projections using a common methodology and a common adverse scenario. Thus, the exercise also fosters bank stress-testing and risk management capabilities – including models, data quality and risk management practices contributing.

The stress test results support the supervisory decisions about capital demands and further equip regulators to challenge bank capital positions and dividend plans. Moreover, the results and banks' projections, are published, which strengthens market discipline by enhancing transparency and comparability across banks.

Currently, we are running our 6th EU-wide stress test. The 2023 exercise is conducted under a very different operating environment for banks than our previous one in 2021 and this is reflected on our adverse macroeconomic scenarios. The scenario of the 2021 stress test exercise was developed as a "low for long" whereas the 2023 exercise adverse scenario is a stagflation scenario. The 2023 scenario features high and persistent inflation, coupled with tight financial conditions and low growth, as well as sharp correction of asset, debt, and real estate prices.

Besides the scenario, the 2023 EU-wide stress test exercise incorporates some changes which mark our first steps of a journey towards an enhanced EU-wide stress test framework. These changes follow up on the lessons learnt from the past stress test exercises and our discussions with the industry and the supervisory community about the long-term changes to the EU-wide stress test.

The updates to the stress test aim at improving realism and increasing the efficiency of the exercise while maintaining a consistent and comparable approach. Among others, for which I will elaborate, the exercise will be conducted with an expanded sample, and it will provide information on the performance of banks at the level of economic sectors. Moreover, while the exercise remains inherently bottom-up, it introduces top-down projections for net fees and commissions income. This is a first step of our on-going work to move to a "hybrid" framework in which top-down and bottom-up methods, applied to different risk areas, coexist.

At the same time, risks to the EU banking system are evolving. The EBA is looking at broadening the risk coverage of the EU-wide stress test by including relatively new risks, which might pose additional threats to the financial stability of the banking sector, such as climate related risks. The supervisory and regulatory community, but also markets, investors, and consumers are increasingly focusing on the impact of these risks on the financial system and its ability to support the real economy on its path to a greener future. In this regard, climate related risks have high priority and implications for our work on stress testing. Other risks, such as these emerging from the cyber space, are under the radar, too.

2. 2023 EU-wide stress test: a first step for the future

Over successive stress test iterations, the framework is getting revised with the objective to improve both the realism and the efficiency of the exercise. At the same time, it is also crucial to maintain the transparency and comparability of results. As part of this journey, the EBA has introduced targeted changes to the 2023 EU-wide stress.

The coverage of the 2023 EU-wide stress test is a major change. The criteria for including a bank in the EU-wide stress test sample have remained stable for the past three stress test exercises, resulting in a relatively constant number of banks included in the sample. However, we found important to enlarge the sample of the EU-wide stress test. This would allow to identify potential risk pockets in mid-sized banks. In addition, the increased coverage would provide a better transparency to the market and improve banks' risk management tools and practices across a broader spectrum of sizes.

As a result, the 2023 EU-wide stress test includes 70 banks in the EU, covering 75% of total assets of the banking system in the EU and Norway. This is a substantial improvement of the coverage of the exercise from 50 banks in 2021 that represented 70% of the EU assets. At the same time, some proportionality elements and simplified procedures were introduced for smaller banks of the sample. This constitutes a significant progress towards a more comprehensive assessment of the resilience of the EU banking system with a stronger attention to mid-sized banks.

Another key evolution is the inclusion of sectoral information. For the first time, banks will need to provide a detailed breakdown of their credit risk exposure to firms and impairment projections by sector of economic activity. To this end, the 2023 stress test exercise scenario includes for the first time information on the growth of Gross Value Added (GVA) for 16 sectors of economic activity. There are several reasons to ask banks to provide more information on their exposures to economic sectors. Following the pandemic, there has been more frequent supply chain disruptions and a higher vulnerability of energy-intensive sectors. These events have shown that the impact across economic sectors can vary significantly. Therefore, this information will provide a more realistic view of banks' exposures, increasing the credibility of the stress test. The inclusion of the sectoral dimension is also driven by a desire for increased supervisory scrutiny of banks' exposures to certain economic sectors. This extension is performed against the background of more frequent supply chain disruptions following the pandemic and the higher vulnerability of energy-intensive sectors over the past months. These events have shown that the impact across economic sectors can vary significantly.

Now, let me talk more about another major change: the introduction of top-down elements for NFCI projections.

There are two main approaches to carry out a stress test: a top-down approach and a bottom-up approach. The former implies that supervisors compute some projections or some parameters using "top-down models" and data available in-house. This can be more efficient, requiring less effort in quality assurance and less involvement from banks. It also ensures a level playing field for

comparability of results as the same models are applied to all banks covered by the exercise. On the other hand, the bottom-up approach, which relies on banks' own computation of projections, provides a broader and more granular coverage of risk areas and helps improve banks' risk management practices. However, this approach must come with strict methodology constraints and a strong quality assurance process to ensure sufficient conservativeness of results and comparability across banks.

But these two approaches are not mutually exclusive and finding the right approach to achieve these goals is essential. That is why the EBA is exploring the possibility of a “hybrid” framework where top-down and bottom-up methods would be applied to different risk areas. Such framework would still rely on banks' own projections for some areas, while certain parameters would be prescribed by the EBA relying on some top-down modelling. The gradual inclusion of some top-down elements would allow to relax some methodological constraints and allow the quality assurance efforts to focus on the remaining bottom-up areas. The introduction of more top-down elements in the stress test should also increase the efficiency of the exercise and reduce the reporting burden for banks.

It is also noteworthy that the 2023 EU-wide stress test is not the first exercise where top-down elements are introduced. In fact, during the 2021 exercise, some top-down modelled elements were already computed by the EBA and the ECB and prescribed to participating banks. This was notably the case for stressed credit risk parameters to compute losses for sovereign exposures and stressed risk weights for securitisation exposures. These are still part of the 2023 methodology.

The Introduction of a top-down approach on net fees and commission income (NFCI) was preceded by significant preparatory work ahead of the 2023 EU-wide stress test. The ECB's models for NFCI, initially developed for quality assurance purposes, were considered as suitable candidates among existing supervisory models. A validation process was set up, involving experts from the EBA, the ECB and national competent authorities, to assess the robustness of these candidate models and their suitability for the purpose of an EU-wide stress test.

The NFCI model, after additional work to address the main validation findings, was approved by the EBA Board of Supervisors and integrated in the methodology of the 2023 EU-wide stress test. It is an econometric dynamic panel data model that links NFCI to its past values and relevant macroeconomic drivers. Ultimately, the model delivers at bank-level a path over the 3-year horizon for the total NFCI amount for the two scenarios.

Using the model introduces a different philosophy for completing the stress test submissions. During the 2021 EU-wide stress test, banks had to use their internal models to project the amounts over the 3-year horizon for both the baseline and the adverse macroeconomic scenarios subject to a minimum and maximum haircut. The 2023 methodology departs from this approach as the NFCI top-down model is used to communicate projections to participating banks. As already said, this reduces bank's reporting and computational burden during the exercise, minimises the quality assurance for this area and ensures level-playing field across banks.

But this is not the end of the journey for the introduction of top-down models. As mentioned, more efforts should be made to implement additional elements for the 2025 EU-wide stress test and expand further the top-down approach to some other risk areas, such as net interest income or credit risk, will be considered beyond this exercise.

3. Climate related and other new risks

Looking ahead, the EBA is also exploring broadening the risk coverage of the EU-wide stress test by including relatively new risks, which might pose additional threats to the financial stability of the banking sector in the future. In this regard, climate related risks have high priority.

The intensification of climate-related risks poses new challenges for stress testers due to their unique characteristics, the high uncertainty around them, and the absence of an established analytical framework. In this context, the banking sector should not only stand ready to adequately manage climate related risks but, by moving resources efficiently across sectors but it should also act as a catalyst to accelerate and optimise the green transition.

The EBA has dedicated mandates on climate risk stress test. According to our founding regulation the EBA should develop common methodologies for assessing the effect of risks stemming from adverse environmental developments on banks' financial positions. This requirement has been strengthened in the Renewed Sustainable Finance Strategy published by the European Commission in July 2021, which introduces additional mandates for the EBA, ESAs (EBA, ESMA and EIOPA), and the ECB on climate risk stress test. According to these mandates, the EBA should not only perform regular climate change stress tests but also develop guidelines for banks and supervisors to assess the impact of ESG risks under adverse conditions. Furthermore, ESAs (EBA, ESMA and EIOPA) with the support of the ECB and ESRB are invited by the European Commission to cooperate on an one-off system-wide climate risk stress test to assess the resilience of the financial sector in line with the Commission's Fit-for-55 package. We have received a specific request¹ from the European Commission on this deliverable just a couple of weeks ago and I will give you more insights about it shortly.

Based on these new developments, we at the EBA are currently shaping our strategy on ESG risk stress testing, starting with climate related ones. As a first step, several supervisors performed learning exercises that aimed at exploring tools and data for the assessment and management of climate risks.

In May 2021, the EBA published the results of its pilot exercise on climate risks, the first EU wide assessment on climate related risks. This was not a stress test, but it provided insights on the level of sustainability of banks exposures, on scenario analysis tools and data classification approaches for assessing climate related risks.

¹ Please see [here](#) the request sent by the European Commission to ESAs on the 8 March 2023 and the related mandate.

Beyond the quantitative evidence, a key finding of all these pilot initiatives was that there are clear data availability challenges and data gaps as well as methodological limitations that supervisors and the banking sector need to address to move forward. Limited data availability significantly affects the comparability of the results. Therefore, better disclosure by banks should over time allow for more robust risk assessments and so a better assessment of the implications of adverse climate scenarios.

A substantial amount of work remains to be done, especially on retrieving client-specific information at the activity level and on incorporating forward-looking components (such as transition strategies) into climate risk assessment tools. In this context, banks are expected to gradually close data gaps, while supervisors should support and steer the banking industry towards more efficient risk management approaches.

Let me now elaborate on the challenges to address when looking ahead.

A key lesson learnt from this exploratory phase is that the current stress testing framework needs to be re-designed to cope with their characteristics of these new, longer-term risks.

In this regard, at the beginning of February, the EBA held a 2-day workshop on climate risk stress testing, with almost 1000 participants attending (among academics, banks, central bankers, and regulators). The aim was to discuss possible practical solutions for adapting or changing the current stress testing framework to accurately assess the effects of climate related risks on the banking sector.

The first question we should try to address when designing a climate risk stress test framework is: which should be the objectives of such an exercise? There are two perspectives that we might want to explore here: on the one hand we have the standard viewpoint of assessing banks resilience to climate shock. This requires to appropriately incorporate and reflect climate-related risk drivers (physical, transition, business model adaptation etc.) into a stress testing framework. The second perspective is to assess the banking system efficacy in supporting the broader policy aim of transitioning to a low-carbon economy. The challenge of the latter approach is how to use stress testing tools and techniques to assess the capacity of the banking sector to support a certain transition target.

A second key cornerstone of climate stress testing are scenarios. A tremendous work has been done by the NGFS over the last years by increasing the level of details and embedding the latest trends in technologies for key sectors. At this juncture, a fair question would be to what extent should climate-related risks and macro-financial risks be combined in a scenario and how?

Finally, we should reflect on the mismatch between the time horizons considered for climate and standard risks. The challenge here would be to incorporate the effect of slow-moving processes of climate change and transition risks in the typical horizon of a stress testing exercise. Relaxing the static balance sheet assumptions could be a way forward but at which cost and how?

Regarding forthcoming EBA deliverables, we will try to address these questions to deliver on our climate risk stress test mandates.

The first EBA deliverable will be a one-off scenario analysis exercise, as announced by the European Commission in mid-March. The added value of this exercise consists in its cross-sectoral and system-wide approach, as opposed to standard solvency stress tests which focus on specific sectors only. It will be an unprecedented exercise which will require collaboration and coordination between ESAs, ECB, and the ESRB.

The primary focus of the one-off analysis will be to assess the resilience of the financial sector in line with the Fit-for-55 package. However, we will try to also gain any insights into the capacity of the financial system to support the transition to a lower carbon economy under conditions of stress. In this context, we will examine for instance how asset price corrections triggered by a sudden reassessment of transition or physical risks, propagate through the financial system, and how financial institutions' reactions might amplify stress in the system. This will allow to focus on possible near-term implications that may affect the implementation of the Fit-for-55 package.

The results of this exercise, which will be published at the latest by Q1 2025, are not expected to directly feed into the setting of micro-prudential capital requirements. Instead, the results may serve as context or background information for any future considerations on micro and macro prudential policy.

In parallel, at the EBA we are also reflecting more broadly on our strategy for climate risk stress testing.

Regarding the regulatory work on stress testing, the EBA is planning to review its Guidelines on institutions stress testing to provide guidance for institutions on how to test their resilience to climate change, but also to long-term negative impacts of environmental, social and governance factors. This work will be carried out in accordance with the mandate proposed by the European Commission in its CRD revisions (draft Article 87a(5)(d)). The work is expected to be carried out in 2023. Nevertheless, the timeline for the publication of the Consultation Paper and Final Guidelines will depend on the outcome of the legislative process.

Furthermore, according to proposed changes to the CRD (draft Article 100(4)), the EBA and the other ESAs are to develop joint guidelines for supervisory ESG stress testing, starting with climate risk. The guidelines are to ensure consistency, long-term considerations, and common standards for assessment methodologies. The timeline for this work will depend on the outcome of the legislative process and the agreement between the ESAs.

Apart from ESG risk, other risks which are emerging over the last years are on our radar as part of our mandate to assess the resilience of financial institutions. Cyber risk is unquestionably one of them. The Covid-19 crisis and the prevalence of remote working and greater digitisation of economic activity have accelerated the relevance of cyber risks and institutions' preparedness to

ensure business continuation. Furthermore, relevance of cyber risks has risen in light of geopolitical tensions and the recent events that have unfolded.

To this extent, Cyber Stress Testing exercises could provide the EBA and the other ESAs with experience and lessons learned for the tasks to be carried out under Article 49 of DORA. These include the establishment of mechanisms to identify common cyber vulnerabilities and risk across sectors and the development of contingency exercises to facilitate communication and coordination in case of major cross border ICT related incidents or cyber threats at Union level.

4. Closing remarks

To conclude, the EU-wide stress test has been a key contributor to enhancing the resilience of the EU banking sector following the Great Financial Crisis. The stress test has been a key input for the supervision of the EU banking system and has contributed to market discipline via its transparency component.

The stress test has not been static.

The stress test has been constantly improving following learnt gathered over its various iterations. We strive to enhance further the framework to continue providing reliable, realistic, transparent, and comparable results for EU banks. At the same time, we are continuing our efforts to increase the efficiency of the framework. To this end, our work on incorporating top-down elements is important.

Apart from improving, the stress test has evolved along with the developments in the operating environment of EU banks and the changes to the risk spectrum. The work on climate related risks, shows how our stress testing capabilities can be used to tackle newly emerging risks. However, a tremendous amount of work related to data, methodologies, and scenarios lies ahead of us to develop a robust climate risk stress test framework.

For all these reasons, we are committed to further enhance the stress test framework to better serve our mandate.

Thank you very much for your attention.

References

- EBA 2021 EU-wide stress test: final results published in July 2021,
https://www.eba.europa.eu/sites/default/documents/files/document_library/Risk%20Analysis%20and%20Data/EU-wide%20Stress%20Testing/2021/ST%20results/1017864/2021-EU-wide-stress-test-Results.pdf

- EBA launches 2023 EU-wide stress test,

<https://www.eba.europa.eu/eba-launches-2023-eu-wide-stress-test-0>

- EBA 2020: Discussion paper on the future changes to the EU-wide stress test,
https://www.eba.europa.eu/sites/default/documents/files/document_library/Calendar/EBA%20Official%20Meetings/2020/Discussion%20Paper%20on%20the%20future%20changes%20to%20the%20EU-wide%20stress%20test/Discussion%20Paper%20on%20the%20future%20changes%20to%20the%20EU-wide%20stress%20test-%20FINAL%20-.pdf

- EBA EU-wide pilot exercise on climate risk, final report “Mapping climate risk: Main findings from the EU-wide pilot exercise”, published in May 2021

<https://www.eba.europa.eu/eba-publishes-results-eu-wide-pilot-exercise-climate-risk>