

# Towards a fundamental re-design of Banks' Stress Tests in the EU?

On 26 September 2019, Andrea Enria, Chair of the European Central Bank's Supervisory Board, gave a speech on the future of stress testing ("[The future of stress testing – realism, relevance and resources](#)") in which he outlined a proposal on how to achieve meaningful progress with a view to make the tests both more realistic and more relevant, with fewer resources required. Andrea Enria's proposals involve a decisive re-design of the stress test exercise. Stress tests are currently carried out using a "constrained bottom-up approach" whereby supervisory authorities ensure a quality check of models run by banks. It is suggested to split stress tests into a supervisory view ("top-down" approach along the lines of stress tests under Dodd-Frank in the US) and a "banks' view" (bottom-up approach).

This briefing (i) summarises the proposal, (ii) provide background information on some of the shortcomings of existing stress tests, including those identified in a recently published report of the European Court of Auditors, and (iii) highlights some issues that may still require attention in future stress tests, in particular in terms of transparency and communication. The proposal leaves open the question as to whether those new stress tests would be Banking Union specific and how they would interfere, where applicable, with stress tests carried out by the European Banking Authority (EBA) or by the ECB for macro-prudential purposes.

## A radical re-design of EU stress tests for banks?

The proposals by A. Enria, the Chair of the European Central Bank's Banking Supervisory Board (SSM), for future stress tests (meaning those after 2020, as the upcoming stress test follows the current approach) essentially boil down to the following:

- (i) splitting the micro-prudential stress test into two approaches "bank view" and a "supervisory view";
- (ii) the prudent "static balance sheet view" could make way for a more realistic dynamic view; and
- (iii) the transparency of the exercise could be improved by showing how stress the test results translate into supervisory capital requirements.

### (I) "Banks' view" versus "Supervisory view"

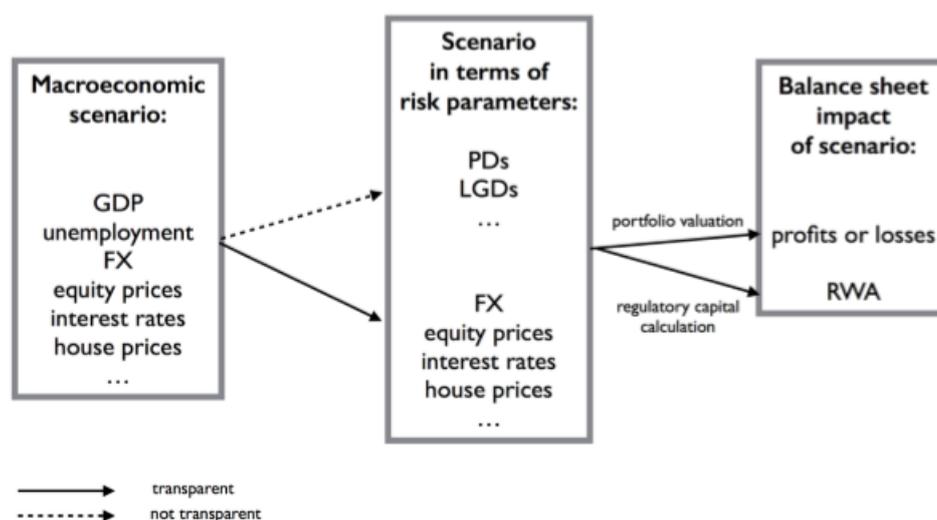
A proposal, as outlined by A. Enria, Chair of the ECB banking supervision, in his speech of 26 September 2019, to complement the approach traditionally used in EU-wide micro-prudential stress tests, i.e. the "constrained" bottom-up approach, with a top-down-approach is probably the most decisive element in any re-design of current EU stress test design.



Under the bottom-up approach, banks use their own models to calculate the effects of pre-defined macro-financial scenarios and to generate the stress test projections (in the EU, a so-called “base-line” scenario and “stress scenario” are used; for a basic description of stress test purposes and corresponding scenarios, please see the Annex of this briefing).

A core problem of the bottom-up approach, however, is that the “translation” of the macro-economic parameters into risk parameters (with regard to credit risk, in particular the probabilities-of-default (PDs), and the losses-given default (LGDs); see figure 1) is model dependent, and not transparent to the public.

**Figure 1: Calculating the balance sheet impact of the macro-economic scenarios in a bottom-up approach**



Source: [Thomas Breuer \(2014\): Robustness, Validity and Significance of the ECB's Asset Quality Review and Stress Test Exercise](#)

In order to overcome that weakness, A. Enria suggests to conduct complementary top-down stress tests, as used in the United States. The ECB would run the exercise with its own models and hence fully control the consistency of the results. The idea to split the whole exercise by allowing banks to pursue a bottom-up approach, and to contrast those results with a supervisory top-down approach, is a novelty that could help the public to form an opinion: “The bank view and the supervisory view would then be published next to each other so that markets could form their own view” (Enria 2019). Nevertheless, the data disclosed needs to be comprehensive and clear to avoid creating an overly confused communication.

In the US, the [Federal Reserve's](#) stress testing program<sup>1</sup> consists of two components: (a) The Dodd-Frank Act stress test (DFAST) is a forward-looking quantitative evaluation of bank capital that demonstrates how a hypothetical set of stressful economic conditions developed by the Federal Reserve would affect the capital ratios of large firms; and (b) The Comprehensive Capital Analysis and Review (CCAR) includes a quantitative assessment for all firms subject to the supervisory stress test and a qualitative assessment of certain firms' capital planning practices. The CCAR quantitative assessment uses the same supervisory stress test results as DFAST and incorporates firms' planned capital actions, such as dividend payments and common stock repurchases. The difference between DFAST and CCAR is that the Dodd-Frank test uses a standard capital management plan, while CCAR runs its models based on the bank's actual capital management plan.

However, in the US both the DFAST and the CCAR use supervisory models to calculate the impact of the scenarios, not – as in the EU – the banks' internal models. Another difference between the US and the EU

<sup>1</sup> For more details, see for example the Federal Reserve System's [Stress Testing Policy Statement](#), and the [Amendments to Policy Statement on the Scenario Design Framework for Stress Testing](#)

approach is that in the US, a minimum of three different scenarios is used (including baseline, adverse, and severely adverse conditions), while the stress test in the EU is restricted to two scenarios.

## (II) “Static balance sheet view” versus “Dynamic balance sheet view”

The static balance sheet assumption, a key component of the EU-wide stress tests, basically means that the balance sheets of participating banks are assumed to remain constant over the stress test horizon in terms of total volume, maturity and product mix (“no policy change”).

In other words, the static balance sheet assumption does not allow banks to factor in certain actions banks may take to counter the situation in case the hypothetical stress scenario materialised. That assumption is obviously unrealistic: if the stress scenario became reality, banks would have to react, for example by selling certain portfolios or parts of the business, by adapting their business model, by reducing their work force or branch network size, by making additional provisions and by looking for alternative sources of funding. The virtue of the static balance sheet assumption, on the other hand, is that supervisors don’t have to make a judgement about how realistic the assumptions are that these mitigating actions would actually be available when push comes to shove. The static balance sheet approach facilitates the exercise by reducing complexity, to the detriment of realism.

In the context of the EU wide stress tests, the different approach – the dynamic balance sheet assumption – was only applied in those cases where banks had previously been bailed-out of financial troubles with public money and have subsequently become subject to a restructuring plan approved in a State Aid decision by the European Commission.

Allowing banks to use a dynamic balance sheet assumption in their own calculation of the stress scenario gives each bank room to account for its individual circumstances, and gives each bank an added incentive to invest in risk management, as pointed out by A. Enria. In order to address the problem that banks are reluctant to publish final results which do not reflect their own views on risks, selectively relaxing the constraint of the static balance sheet assumption could allow to better account for bank-specific factors and management actions, make the results potentially more realistic.

In keeping with the logic of having two potentially different views (one that stems from the supervisory top-down-approach and one stemming from the banks’ bottom-up approach), those banks that in the dynamic approach limit the impact of the stress scenario to a large extent by relying on the effectiveness of far-reaching mitigating actions would have, according to A. Enria, to explain and defend the plausibility of their assumptions to convince market participants of their view.

## (II) Transparency of stress test results and resulting supervisory capital requirements

In his speech, A. Enria has also given a very clear justification for the third element in the proposed re-design, enhanced transparency, which largely speaks for itself:

*“I believe that the European stress test is one of the most transparent in the world. We publish a huge amount of data bank by bank and based on common definitions.*

*But there is one thing that markets cannot see: the link between stress test results and supervisory action. While we are very transparent on the results, we remain quite opaque on how they translate into capital add-ons. I am very much aware that both banks and supervisors have concerns when it comes to enhancing transparency in this area. They are worried, for instance, that if stressed capital guidance as defined by supervisors was to be disclosed, it might be misunderstood. It might be seen as a rigid minimum requirement and not as a buffer to be used under stress.*

*But to be honest, I still think that we need to seriously consider disclosing Pillar 2 guidance at some point. This is particularly true in a bail-in world, where private investors and not taxpayers are supposed to be first in line when it*

*comes to picking up the bill following a crisis. More transparency on the supervisory outcome of stress tests would sustain their relevance for banks and markets alike. Stress tests must have clear consequences."*

At the time as EBA Chair, A. Enria already pointed to shortcomings of the EU stress test approach, highlighting in a [speech](#) held at the National Bank of Romania on 15 November 2018 that: "*The decoupling of stress test results and supervisory actions and the inconsistency between the transparency of the former and the opaqueness of the latter are, in my view, the main shortcoming of the EU approach compared to the US. Regardless of the amount of data we publish, this aspect alone makes the informative value of the results limited and creates uncertainty on future dividend policies.*"

Looking at possible ways forward, A. Enria argued that the understandability of supervisory decisions could benefit from a clearer, more transparent and better aligned process of integrating stress test results, and pointed to the merits of full transparency.

If applied within the Banking Union, where appropriate, those policy recommendations would lead to a new supervisory framework whereby outcomes of the supervisory review and evaluation process based on stress tests would be communicated. This would mean disclosing not only Pillar 2 requirements but also Pillar 2 guidance (See below - Issues that would merit further attention).

A. Enria also points to a positive effect of his proposals: a more effective use of available resources. In fact, he mentions that "*the impression seems to be that the amount of resources deployed is quite high when set against the value of the information that is generated*". The ECB has been questioned in the past for its use of external (expensive and eventually conflicted) expertise in previous stress test exercises<sup>2</sup>. Simpler, clearer and more lenient procedures would ease these concerns.

## Weaknesses of the stress test's current design

### EU experience in conducting stress tests

EU-wide stress tests are conducted on a regular basis since 2009; those carried out in 2009 and 2010 were designed and coordinated by the predecessor of the European Banking Authority (EBA), the Committee of European Banking Supervisors (CEBS), those in 2011, 2014, 2016 and 2018 were designed and coordinated by EBA. The basic concepts of those stress tests – in particular the use of the bottom-up approach – remained very much the same, while the severity of the macro-economic stress scenario changed over time.

In 2011, EBA was criticised for having used a too mild stress tests that did not factor in a default of Greek sovereign debt, and that "cleared" the Belgian-French bank Dexia in the stress test, while the bank collapsed soon thereafter<sup>3</sup>. Criticism often focusses on the severity of the chosen stress scenario. The stress test scenario, however, is since 2014 developed by the European Systemic Risk Board (ESRB).

Only the largest banks directly supervised by the ECB are part of the EBA stress test sample. Those banks that are directly supervised by the ECB but that are not part of the EBA sample are subject to the ECB's own stress test, which is based on the same methodology and input parameters; the main difference between those two stress test exercises is that only EBA published detailed stress test results for all participating banks at entity level, while the ECB has so far not published individual results.

<sup>2</sup> See in this context for example the [ECB's response](#) to questions asked by the Member of the European Parliament, M. Zanni and M. Valli.

<sup>3</sup> For a related discussion of the Dexia failure and the strengths and weaknesses of EBA's stress test design at that time see for example Willem Pieter [De Groen](#) (2011): "A closer look at Dexia: The case of the misleading capital ratios" as well as [Marco Onado and Andrea Resti](#) (2011): "European Banking Authority and the capital of European banks: Don't shoot the messenger".

## Limits of existing stress tests

Criticism is not only directed at the degree of (non-)severity of the stress scenario. Some authors more fundamentally address the overall design of the exercise rather than the choice of the input parameters. [T. Breuer](#), for example, pointed to three major problems:

*“First, the restriction of attention to one adverse scenario might foster an **illusion of safety**. Banks faring well in this one scenario are not necessarily safe in other scenarios. Analysing at least a handful of scenarios would yield more information on the stability of banks under different circumstances. [...]*

*Second, the stress tests are designed from a microprudential point of view on individual financial institutions, thus choosing to neglect the macroprudential view on systemic risks. The static balance sheet assumption together with the specification of a fixed scenario independent of the reaction of banks amounts to **neglecting second round effects**. These second round effects include chain reactions triggered by defaults or value adjustments of interbank assets and liabilities, as well as market effects of fire sales. [...]*

*Third, banks are allowed and encouraged to make heavy use of their internal models in working out the balance sheet implications of the macroeconomic scenarios. Although the internal models are to be checked by the supervisors, there remains substantial leeway in the choice of models. The reliance on internal models might be problematic because **internal modellers could misrepresent risks inadvertently or on purpose** – a danger, which cannot be not fully eliminated in the quality assurance process.” (T. Breuer 2014; our emphasis).*

In light of those shortcomings as well as the influence of flawed risk weights, other researchers suggested, for example, to use market-based stress tests instead to evaluate actual asset risk.<sup>4</sup>

## Risks of gaming

Interestingly, one of the potential risks to which T. Breuer pointed in 2014, namely that the banks’ internal modellers could try to rig the system and misrepresent risks on purpose, has recently also been referred to by the ECB. Luis de Guindos, Vice-President of the ECB, explained in a [speech](#) held in September 2019 on the evolution of stress-testing in Europe that *“the [bottom-up] approach also provides banks with substantial leeway to materially underestimate their vulnerability to adverse circumstances, to “game” the exercise, in other words.”* De Guindos corroborates that statement with the results of several empirical studies<sup>5</sup>.

A. Enria delivered a strong message in the same vein, also suggesting that attempts to rig the system have already taken place: *“**We also see banks conspiring to game stress tests**, often with the help of external advisers. Data are collected from banks ahead of their submission to supervisors, and each bank is informed of its position vis-à-vis its peers. This helps them to align before and during the exercise in order to collectively adjust the results and minimise the impact of the stress scenario. **We see this, we don’t like it, and we will not tolerate it.**”* (our emphasis).

<sup>4</sup> See, for example, [Sascha Steffen](#) (2014): *“Robustness, Validity and Significance of the ECB’s Asset Quality Review and Stress Test Exercise”*.

<sup>5</sup> De Guindos suggests to see for empirical evidence of the “gaming” behaviour of banks participating in the stress test: Philippon, T., Pessarossi, P. and Camara, B. (2017), *“Backtesting European Stress Tests”*, Working Paper Series, No 23083, National Bureau of Economic Research; Niepmann, F. and Stebunovs, V. (2018), *“Modeling Your Stress Away”*, International Finance Discussion Papers, No 1232, Board of Governors of the Federal Reserve System; Quagliariello, M. (2019), *“Are stress tests beauty contests? (And what we can do about it)”*, Staff Paper Series, No 4, European Banking Authority; and Kok, C., Müller, C. and Pancaro, C. (2019a), *“The disciplinary effect of supervisory scrutiny on bank risk taking: evidence from the EU-wide stress test”*, Macprudential Bulletin, No 9, European Central Bank, forthcoming.

## The Special Report of the European Court of Auditor

Turning to another source that unveils weaknesses in the stress test's current design, one should note that the European Court of Auditors (ECA) has very recently published a Special Report<sup>6</sup> that looks into the EU-wide stress test run by the EBA in 2018, assessing whether the stress test was fit for purpose, whether the EBA had sufficient assurance about the robustness of the figures calculated by the individual banks, and whether the publication of the results allowed stakeholders to conclude whether the system was resilient. As a result of its audit, the ECA found inter alia that important systemic risks were subject to a low level of stress, that EBA relied on national authorities to verify that banks complied with the prescribed methodology, and – although EBA achieved an unprecedented level of transparency by publishing a large amount of data at bank entity level – the most critical information was missing in EBA's reports, namely the capital requirements for each bank and how many banks would have breached them under stress.

In light of its findings, the ECA particularly recommended that the EBA should develop a top-down approach for stress tests to complement the current bottom-up approach. In a way, that recommendation has now somewhat been picked up by the ECB.

## Issues that would merit further attention

A. Enria's proposals to split the stress test exercise into a "bank view" and a "supervisory view", to allow banks to incorporate individual circumstances and realistic mitigating actions in a dynamic balance sheet approach, and to better explain how stress test results translate into supervisory capital requirements will undoubtedly improve the robustness and relevance of the stress test exercise. Some issues, however, seem not yet solved or are not yet explicitly addressed in A. Enria's proposal and would therefore merit further attention.

### Transparency of pillar 2 guidance

As explained by A. Enria, "*the stress tests results are used as a starting point when setting the Pillar 2 guidance*"<sup>7</sup>. Insights gained from stress tests can also inform other supervisory actions.

A. Enria, then Chair of EBA, took the view that disclosure should include not only pillar 2 requirements but also Pillar 2 guidance: "*The shift from bail-out to bail-in and the "maximum distributable amount" (MDA) – the notion that banks unable to meet the capital requirements and macroprudential buffers are confronted with restrictions to the payments of dividends and coupons on capital instruments – have important implications for market dynamics since the decisions of the supervisory authorities directly affect the payoff of several banks' stakeholders. However, disclosure of supervisory measures – mainly of Pillar 2 requirements and guidance – is still debated and there is no common EU approach. I am aware that the publication of Pillar 2 requirements (P2R) and guidance (P2G) is still a controversial matter and there are different views on its merits, but I do not think that the approach of providing only partial information to the markets is tenable in a post MDA and post bail-in world* (Source: [speech](#) from Enria at the National Bank of Romania, November 2018).

As Chair of the SSM, A. Enria [reiterated](#) the view that the SSM should listen to "calls for more clarity and predictability with regard to our [Pillar 2 - SREP] assessment". Nevertheless, at the September 2019 [Hearing](#), A. Enria noted "some reluctance" of the SSM supervisory board to further Pillar 2 disclosure as making a P2

<sup>6</sup> [European Court of Auditors Special Report](#) (2019): "EU-wide stress tests for banks: unparalleled amount of information on banks provided but greater coordination and focus on risks needed"

<sup>7</sup> Pillar 2 relates to supervisory requirements and expectations for capital, liquidity or NPL that apply on a bank-by-bank basis on top of the minimum requirements (Pillar 1) laid down in legislation. European legislation (CRD) makes a distinction between Pillar 2 requirements (P2R) and Pillar 2 guidance (P2G). While the former is a "hard limit" that may impact the distribution of dividend, the latter features supervisory expectations. The CRD does not require the disclosure of P2G

guidance public could result in a “hard” requirement while P2 guidance has been conceived as a buffer to be possibly used. Absent a disclosure of Pillar 2 guidance that is still being debated at the SSM, it would be difficult for market participants to assess how stress tests translate into supervisory capital requirements.

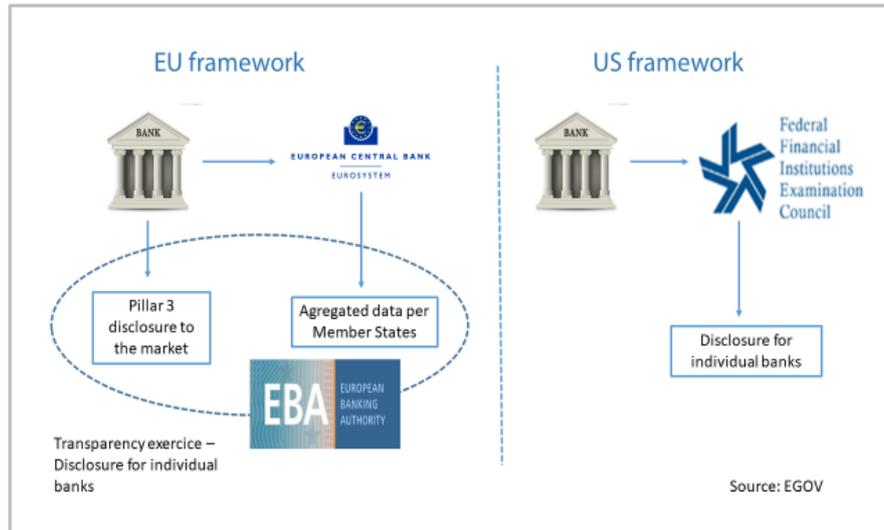
### Additional supervisory disclosure at the ECB

As noted above, the SSM does not disclose stress tests results for banks that are not part of the EBA sample. To ensure a level playing field for all banks under its supervision, there would be merit in disclosing the stress test results at entity level for all, not just those in the EBA sample.

In terms of disclosure, supervisory data published by the ECB ([‘supervisory banking statistics’](#)) are currently in aggregated form (by country and by classification) and are limited to 16 key indicators published on a quarterly basis (banking balance sheet composition, performance, capital and leverage, asset quality, funding and liquidity). As part of those statistics, the ECB also publishes Pillar 3 data<sup>8</sup> of individual banks but only for some key risk indicators. The level of information disclosed by the ECB is much less comprehensive than the EBA transparency exercise<sup>9</sup> or supervisory disclosure in the US.

In terms of supervisory data, A. Enria proposed - as chair of EBA - the creation of a central repository where supervisory and banks’ data (pillar 3) would be available along the lines of the US reporting and disclosure framework<sup>10</sup>. The EU and US disclosure framework are summarised in chart 1. As explained in another [speech](#) by A. Enria, EBA’s ultimate objective was *“to have Pillar 3 requirements as aligned as possible with supervisory reporting definitions and templates so as to achieve greater integration of different data sources and reduce the burden for banks and data-users”*. *“We should envisage a central repository available on the EBA website where all EU banks’ pillar 3 data would be collected in an editable format and disclosed”*.

**Chart 1: EU and US disclosure framework**



<sup>8</sup> Pillar 3 data are data that banks have to publish as required by the Capital Requirements Regulation. The CRR does not require a particular format or medium.

<sup>9</sup> [EBA](#) has carried out 5 transparency exercises. The December 2018 exercise discloses over 900000 data points on about 130 EU banks, including capital positions, risk exposure amounts, sovereign exposures and asset quality.

<sup>10</sup> In the US, banks file a Consolidated Report of Condition and Income or ‘call report’ every quarter with their supervisor. Critically. These reports include a wide range of items such as earnings, asset quality, liquidity, and capital. The reports include information on NPLs. The Federal Financial Institutions Council (FFIEC) releases the data on its web page after the relevant supervisor has approved its release, which is generally within a day of the data arriving from a given bank. The dataset is available in a number of file formats to facilitate its easy use.

If implemented in the Banking Union, those policy recommendations would mean that the ECB (as the US' Federal Financial Institutions Examination Council) would disclose supervisory data (like Banks' Pillar 3 requirements) using uniform definition for individual banks.

### Communication to the market

The fact that there will be two sets of results - from the banks themselves and from the ECB - would need to be properly explained to all relevant stakeholders. Different perspectives would have to be well explained and handled to avoid an unintended negative impact on the credibility of the tests and banks' balance sheets.

Communication to the market would prove to be particularly challenging where SSM stress tests co-exist with similar exercises, including EU-wide EBA stress tests that need to be carried out in accordance with the EBA Regulation and, where appropriate macro-prudential stress tests. In a [speech](#) delivered in September 2019, the Vice-President of the ECB suggested complementing micro-prudential supervisory stress tests by macro-prudential stress testing that *"aims to capture a comprehensive view of systemic risks affecting the banking sector and beyond"*.

### Range of stress test scenarios

The communication around stress test results should be wary of the "illusion of safety" that can be caused by a single adverse scenario. Banks faring well in this one scenario are not necessarily safe in other scenarios. US stress tests use a two adverse scenarios, one more severe than the other. An even more telling approach would be to construct alternative scenarios that not only change the level of severity but that look at different events, for example a default of sovereigns.

### Country-by-country stress test despite common set of indicators

The EBA's and ECB's use of "a common methodology" is predicated on the fact that all banks are treated equally. However, one should not mix up the fact that there is only one common set of indicators with the fact that within that common set of indicators (for example: GDP development), the values chosen for each country are very different. The ECA found in its 2019 Special Report that *"[a]ll in all, countries were subject to very different shock levels and thus banks were exposed to very different shock levels depending on their geographical exposure."* The same concern has already been pointed by [Haselmann and Wahrenburg](#) in 2018, who at that time wrote: *"Given the extremely heterogeneous macroeconomic scenario among EU-countries, the EU-wide stress test is, to a large extent, a "country-by-country" stress test (i.e. effects from the idiosyncratic risk profile of individual banks are likely to be dominated by country effects)"*. In that respect, a more homogeneous deviation from baseline assumptions may be needed to ensure a level playing field.

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**Annex: Basic description of stress test purposes and corresponding scenarios**

The general purpose of bank stress testing is to see whether a bank would be able to deal with a hypothetical severe (but still plausible) scenario. Stress tests can be run by banks themselves at their own initiative; in such cases, the scenarios tested can be very specific and apply only to certain portfolios or activities and not to the entire balance sheet. Large banks are required by EU regulation to run internal stress tests regularly, in particular on their trading book. Stress tests can, however, also be initiated and monitored by supervisors ('supervisory stress test'). In that case, they cover several banks, and the objective is to test the resilience of the whole (or a subset of the) banking sector. Bank supervisors have increasingly used the results of stress tests to set prudential requirements, for example to set minimum capital requirements or capital buffers.

According to Article 32(2) of the European Banking Authority (EBA) Regulation, the EBA "shall, in cooperation with the ESRB, initiate and coordinate Union-wide assessments of the resilience of financial institutions to adverse market developments. To that end, it shall develop the following, for application by the competent authorities: (a) common methodologies for assessing the effect of economic scenarios on an institution's financial position; (b) common approaches to communication on the outcomes of these assessments of the resilience of financial institutions; (c) common methodologies for assessing the effect of particular products or distribution processes on an institution's financial position and on depositors, investors and customer information.

Defining a meaningful crisis scenario is the first crucial step for a stress test. The crisis scenario is typically presented in form of a general storyline, complemented by tables indicating which specific macroeconomic parameters would be affected to what extent if that scenario materialized (specifying, for example, assumed decreases of Gross Domestic Products and currency exchange rates, assumed falls in house prices, and assumed increases in unemployment figures etc.). A crisis scenario that is optimally tailored to address a bank's individual risk profile and business exposures can be used for stress tests that are autonomously run by an individual bank as a pure in-house exercise - such a stress test has a high informative value, but its results cannot easily be compared.

A specific stress test might focus, for example, on freight rate developments on shipping markets, which is only relevant for banks holding shipping loans. Coordinated stress tests that are run by several banks at the same time, like those initiated by EBA or the ECB in its supervisory capacity, are therefore based on common macroeconomic crisis scenarios and common methodologies.

A common scenario facilitates a comparison, but one has to have in mind that the chosen scenario may not have the same relevance in all participating banks. The banks in the sample are not necessarily vulnerable to the same risks. It is therefore impossible to impose the same intensity of stress to all banks under one single scenario. Such limitation has to be kept in mind when assessing the results of any supervisory stress test.

Stress tests often use more than one scenario: There is typically a "base case" and an "adverse case" scenario, the latter being less probable (but still plausible), but more severe. In the case of the EBA stress test, the baseline is the European Commission's official forecast for the development of economic parameters. The "Dodd-Frank Act Stress Tests", initiated by the U.S. Federal Reserve, for example even use three scenarios (baseline, adverse, and severely adverse; for more details, see last section of this briefing).

A stress test hence only delivers meaningful results if the assumptions are plausible as regards what can go wrong and how likely that is to happen. The design - the assumed crisis scenario - therefore warrants receiving as much attention in a public debate as the outcome of a stress test. Nonetheless what really matters is the translation of the macro-economic shocks into risk parameters that directly impact banks' balance sheet. The reliance on banks' internal models to calculate probability of defaults and loss-given defaults parameters introduces an element of discretion which may undermine the credibility of the stress test results if not properly framed.