This note is prepared in view of a regular public hearing with the Chair of the Supervisory Board of the European Central Bank (ECB), Andrea Enria, which will take place on 1 July 2021.

The briefing addresses (i) the ECB’s TRIM Project Report, (ii) data on significant banks’ holdings of sovereign debt, (iii) the ECB’s publication on banks’ recovery plans, (iv) the ECB’s Supervisory banking statistics for the fourth quarter of 2020, (v) the ECB consultation on revised “fit & proper” guidance, (vi) the EBA 2020 Report on the convergence of supervisory practices, (vii) statistics regarding the gender-balance on the boards of significant banks, (viii) the EBA pilot on climate risk, (ix) the EBA thematic note on provisioning in the EU vs the US, and (x) summaries of external papers commissioned on the request of ECON.

Targeted Review of Internal Models Project Report

In April 2021, five years after the initial launch of the exercise in 2016, the ECB Banking Supervisor published a report of its review of internal models (TRIM), as mentioned in a previous briefing. The exercise aimed to ensure that internal models used by banks to calculate their capital needs complied with the rules; to that end, the ECB conducted over 200 on-site investigations in 65 significant institutions. Upon its release, Andrea Enria stated that “This large-scale exercise, the ECB’s biggest project ever, contributes to a level playing field in European banking by ensuring internal models are reliable and their outcomes are comparable”.

The ECB concludes that “TRIM confirmed that the internal models of [systemic institutions] can continue to be used for the calculation of own funds requirements, subject to supervisory measures to ensure an appropriate level of own funds requirements at all times”.

The supervisory measures to be implemented by the banks are based on what is termed “findings” – items requiring immediate supervisory attention – with the ECB identifying over 5,800 findings across all risk types, of which approximately 30% were considered as having high or very high severity. The report provides a detailed overview of findings across general topics; credit risk; market risk; and counterparty credit risk. To address these findings, the ECB Banking Supervisor is able to issue binding supervisory decisions containing obligations, or remedial action needed to achieve compliance with a legal requirement. Given that 75% of all obligations have an implementation period of over 12 months, some limitations (which restrict or modifies the permitted use of a model) may be required in cases where non-compliance led to an underestimation of capital requirements. Overall, 253 supervisory decisions have
been, or are in the process of being, issued. Of these, 74% contain at least one limitation and 30% contain an approval of a material model change.

Overall, the ECB finds that the TRIM project has “fully achieved” its main objectives of reducing non-risk based risk-weighted assets (RWA) variability and supporting future supervision of internal models within the Single Supervisory Mechanism (SSM). Regarding the former, it is estimated that the aforementioned supervisory decisions will “lead to a 12% increase in the aggregated RWA covered by the models assessed in the respective TRIM investigations. This corresponds to an overall absolute RWA increase of about €275 billion as a consequence of TRIM and to a median impact of -51 basis points and an average impact of -71 basis points on the CET1 ratios of the in-scope institutions.” At the aggregate SSM level\(^1\), the increase in RWA reduced the CET1 capital ratio by an average of 60 basis points (bps), which can primarily be attributed to the credit risk impacts (-56 bps). It is moreover found that at the institution level, the TRIM decisions’ impact was “rather heterogeneous”.

The ECB assessed the impact of the TRIM exercise on the variability of estimated losses by comparing estimates that have been calculated after the exercise with those that have previously been reported to the European Banking Authority (EBA) as part of a benchmark study on internal models for credit risk. That comparison showed that the TRIM led to a considerable reduction in the dispersion of loss estimates, as well as a considerable increase of the median of loss estimates, in particular for portfolios of unsecured loans (see, for example, figure 1, for loans to large corporations). The need to take supervisory action was also indicated by the results of the EBA benchmarking study on internal models for market risk (Breuer 2016, in a briefing paper commissioned for ECON: “If the results of the EBA benchmarking study are correct, and as far as test portfolio instruments are representative, the internal market risk models currently used by European banks strongly violate the Level Playing Field Principle”).

**Figure 1:** Variability of loss given default for large corporates portfolios (percentages)

Source: ECB (The boxplots show the median (central line), the upper (Q3) and lower (Q1) quartiles (top and bottom of the box) and the 90th and 10th percentiles (upper and lower whiskers).

---

\(^1\) At the aggregate level for all institutions included in the review, not for all Significant Institutions under the SSM remit.
Banks’ holdings of sovereign debt

The ECB writes in its Financial Stability Review of November 2020 that rising sovereign debt in the wake of the pandemic has renewed concerns about the euro area sovereign-bank nexus. According to the ECB, the euro area banks increased their exposures to domestic sovereign debt securities in 2020 by almost 19%, the largest increase since the financial crisis.

Banks are not required to disclose the amount and composition of sovereign bonds they hold. The regular EU-wide transparency exercises, which the EBA started in 2013 under its former Chairman Andrea Enria to enhance transparency and contribute to market discipline, are still the most comprehensive and systematic source to track the sovereign holdings of large European banks.

The most recent version of such survey was published in December 2020 (2020 EU-wide transparency exercise), containing data on sovereign holdings as at June 2020. The EBA sample refers to 129 banks across EEA and EU countries, 102 out of those are categorised as significant banks that are directly supervised by the ECB. The EBA offers tools that allow for a breakdown of the data by country of bank, sovereign issuer, maturity, and accounting treatment, and it provides the information at entity level.

We have regrouped the data by categories that reflect the governance and ownership of significant banks. That categorisation shows that directly supervised banks in public ownership hold significantly higher amounts of sovereign bonds than all other types of banks, and that banks in public ownership have invested an even larger proportion specifically into domestic sovereign bonds (“home sovereigns”), as shown in figure 2.

Figure 2: Holdings of sovereign debt of significant banks, by governance/ownership type (% of total assets)

Source: EGOV (forthcoming), based on EBA data. Holdings of sovereign bonds are reported as at 30 June 2020, broken down by domestic debt (Home Sov.), euro area (EA Sov.) and non-euro area (Non-EA Sov.) sovereign debt versus total assets (TA).

---

2 In December 2017, the Basel Committee on Banking Supervision (BCBS) published a discussion paper on the fundamental question of the regulatory treatment of sovereign exposures, yet did not reach a consensus on any changes. In February 2020, the BCBS consulted stakeholders to sound out whether at least disclosure requirements could be improved, suggesting a voluntary disclosure by jurisdiction, currency, and accounting classification. The treatment of sovereign exposures is part of the ongoing Eurogroup and Council work on completing the Banking Union. For further details see specific EGOV briefing.

3 The categorisation follows the approach taken by N. Véron (2017): “The governance and ownership of significant euro-area banks”. Essentially, “dispersed governance” means banks that are publicly listed, “minority influence” banks in which one shareholder has at least a 10% equity stake, “private control” banking groups in which one private-sector shareholder owns more than 50% of the equity, “cooperative governance” banks whose capital is technically owned by their customers, “nationalised governance” banks that were rescued during the financial crisis, and “public sector governance” banks whose capital is held by local or national governments.
Banks’ Recovery Plans

According to the BRRD (Directive 2014/59/EU), banks are obliged to draw up recovery plans that set out measures they would take should their financial situation significantly deteriorate.

The ECB highlighted in its Supervision Newsletter of February 2021 that the COVID-19 pandemic exposed weaknesses in banks’ recovery plans. That warning is based on the findings from the ECB’s 2020 benchmarking exercise (carried out on recovery plans submitted in 2019), which show that banks need to improve their recovery plans to adequately address the financial impact of extraordinary system-wide crises such as the COVID-19 pandemic. It should be noted that the ECB reached a similar conclusion in its July 2018 report assessing recovery plans and that achieving a “more realistic view on institutions overall recovery capacity i.e. their resilience in crisis situations” was amongst the ECB key focus points for 2020.

The ECB writes that if an individual bank is in a crisis, raising new share capital or selling subsidiaries can be effective recovery options. However, in a system-wide crisis capital markets could suddenly close, leaving banks unable to raise capital or sell subsidiary at a fair price.

Strikingly, a considerable number of banks rely on a very limited number of recovery options, a finding that urges the ECB to caution that too many banks rely on even just one single top option. Figure 3 shows how much the overall recovery capacity (ORC) aiming to counter a capital depletion is explained by the single most impactful option. In its 2018 assessment referred to above, the ECB noted that its “experience has shown that banks tend to overstate their ORC”.

Figure 3: Relevance of the single top option for banks’ overall Capital recovery capacity

Source: ECB

---

4 In the said report the ECB notes “One of the key conclusions of the benchmarking analyses was that recovery plans are not always operational during a stress situation and, thus, their usability could be improved”.

5 In its 2018 report the ECB recommended “In any case, banks should not limit themselves to one option or only a few types of option, and they should not limit the selection of options to those that are easily implementable ones but also include options that are extraordinary in nature”. Notwithstanding, when reporting on the 2018/2019 cycle, the ECB signalled that “Banks react to feedback and ECB report. On average, 5% more options compared to last year”.
One may note in this context that Article 6(5) of the BRRD stipulates that where a recovery plan has material deficiencies, the competent authority shall ask for a revised plan, and may direct the bank to make specific changes to the plan.

**Box 1: ECB contribution to the Commission’s targeted consultation on the review of the crisis management framework**

On 6 May, the ECB published its contribution to the Commission’s review of the crisis management framework. The ECB argues that improvements to the framework should cover all the stages of a bank’s crisis. With regard to the measures available before a bank’s failure, the ECB notes that firstly, the early intervention framework should be clarified to make practical implementation easier. Secondly, it cautions against automatic triggers for determining early intervention measures (or determining Failing of Likely to Fail (FOLT)). Thirdly, precautionary recapitalisation should be maintained insofar as it provides an element of flexibility. Lastly, deposit guarantee scheme (DGS) preventative measures (Art. 11(3) DGSD) have proven useful and should be kept and extended across the EU in a harmonised way.

Regarding FOLT, the ECB does not see a need to address its framework, but argues that the risk of limbo situations, whereby a bank is declared as FOLT but is not subject to resolution, should be addressed. It states that such an institution “should enter a procedure involving the realisation of its assets, eventually leading to its exit from the banking market. The introduction of a harmonised administrative liquidation framework would allow this issue to be addressed... The definition of “winding up” in the BRRD should be clarified accordingly”. Moreover, competent authorities should always be able to withdraw the banking licence of these banks.

The ECB also argues that “Broader application of the resolution framework would enhance the level playing field and access to best-practice resolution tools, but this does not remove the need to revisit the liquidation framework”. In cases where there is no public interest in resolution, the ECB advocated for a European administrative liquidation framework supported by a European Deposit Insurance Scheme (EDIS), to further harmonise the framework, and describes how such a framework could operate in the transition to a fully fledged EDIS.

Regarding the sources of funding for managing bank failures, the ECB suggests that “Work should be done to investigate whether conditions for accessing resolution funds and liquidation aid need to be revised, while still maintaining current options for addressing financial stability risks”, and advocates for the broader use of (DGS) resources in liquidation and resolution, as well as for further harmonisation of national credit hierarchies.

The ECB stresses the need to finalise EDIS (with further harmonisation to DGSs during the transition) and to make further progress on facilitating cross-border banking within the EU.

**Supervisory banking statistics**

In April 2021, the ECB published the Supervisory Banking Statistics for the fourth quarter 2020, covering - as usual - the significant banks’ balance sheet composition and profitability, capital adequacy and leverage, asset quality, funding, and liquidity aspects; in view of the current situation, the annex contains additional information and statistics related to COVID-19 measures.

Overall, two aspects are particularly worth mentioning from a high-level perspective. First, the amount of total assets held by significant banks has considerably increased by nearly 10% in 2020, when compared to the long-term average for the past five years. Second, the indicator for the banks’ average profitability, the Return on Equity (RoE; by nature more volatile), has seen a significant drop in 2020, lingering at a level way lower than the long-term average for the past five years (see the comparison in figure 4).
Figure 4: Long-term trend for Total Assets held by Significant Institutions (upper graph) and their Return on Equity (lower graph)

Source: ECB

The significant drop in profitability (a year-on-year comparison shows that the RoE dropped from 5.2% in the fourth quarter 2019 to a mere 1.5% a year later) can mainly been attributed to the significant increase of provisions for loan losses the level of which has nearly doubled when compared to the previous year (see breakdown of components in table 1; in December 2020, the ECB sent a letter to banks that sets out its expectations about adequate loan loss provisioning).

Table 1: Profit and loss figures by reference period (EUR millions; percentages)

Source: ECB

ECB consultation on revised “fit & proper” guidance

On 15 June, the ECB launched a public consultation on its draft revised Fit and Proper Guide and Fit and Proper Questionnaire (ending 2 August, with a public hearing scheduled for 15 July). As noted in an
accompanying blog post by ECB Supervisory Board Members Franck Elderson and Elizabeth McCaul, “The revised Guide has two main objectives. The first is to explain in greater detail the existing policies applied by the ECB when assessing the suitability of members of the management bodies of significant banks. The second is to introduce and explain the enhanced supervisory expectations regarding the collective suitability of boards, the individual accountability of board members and the new criteria that will be used to reassess them”.

Regarding the collective suitability of boards, one of the five criteria for fit and proper assessment, the draft Guide introduces two new elements. Firstly, the importance of diversity for effective governance is further emphasised. As noted in an earlier speech by ECB Supervisory Board Member Fernandez-Bollo, “Collective leadership means that every decision should be based on a wide range of information and available data. This is difficult to achieve if all members of the management body have a similar background and similar expertise … Diversity within a management body is therefore crucial … This means diversity of experiences and backgrounds in addition to gender diversity.” (on gender, see the following section). Consequently, the ECB has stated that it will “make a recommendation or impose an obligation in the [fit and proper assessments] to respect gender targets in current or upcoming appointments”, where national legislation allows for such an approach. Moreover, the ECB will ask banks whether they have any targets for diversity as part of the new questionnaire. Should those not be met, recommendations may be issued, and in the case of manifest breaches, obligations imposed for the banks to comply. The ECB will also provide greater clarity regarding expectation on diversity, and develop other supervisory measures in cooperation with national competent authorities aimed at fostering diversity within boards.

The second element introduced are the supervisory expectations as regards climate-related and environmental risks in the context of fit and proper management: “The management body of a credit institution is best placed to ensure that climate-related and environmental risks are taken into account when developing the institution’s overall business strategy, business objectives and risk-management framework and to exercise effective oversight of climate-related and environmental risks … An adequate understanding of climate-related and environmental risks by the management body in its supervisory function supports effective oversight”.

Another issue raised is the lack of harmonisation regarding the timing of fit and proper assessments in existing national frameworks. In some Member States, these are mandated to take place prior to the appointment of board members, and in others, ex post. The draft Guide considers that “harmonisation would ensure a higher level of consistency within the SSM, which would in turn contribute to strengthening the predictability of supervisory outcomes, thereby avoiding possible reputational risks for appointees and for credit institutions.” The ECB therefore encourages early engagement prior to the appointment of board members.

The draft Guide goes into greater detail on the issue of “new facts” that may trigger a reassessment of a board member (defined as any facts not known by the competent authorities at the time of the initial assessment). The Guide details general guidelines for when new facts may trigger a reassessment, as well as the ECB’s approach to such reassessments. Most notably, “new facts related to AML that may affect the suitability of a member of the management body or key function holder will always be the subject of a Step 1 reassessment.” Moreover, the new Guide explicitly mentions that the supervision history of the relevant bank (i.e. finding related to the SREP or deep dives, previous fines or administrative measures etc.) is relevant information that could be considered as part of the reassessment process. This broader approach, which does not require a direct link between board member and supervisory finding, reflects the collective decision-making involved in managing a bank.

For further background, see previous EGOV briefing here and ECON Commissioned papers by Resti (2020) and Bertay and Huizinga (2020).

EBA 2020 Report on the convergence of supervisory practices

According to the EBA founding regulation and the Capital Requirement Directive (CRD), the EBA “shall contribute to enhancing supervisory convergence across the internal market and it shall play an active role in
building common supervisory culture and consistent supervisory practices through the Union”. The above mentioned legislation also obliges the EBA to report annually to the European Parliament on the degree of convergence of supervisory practices.

Five priorities were selected for the 2020 EBA Report on the convergence of supervisory practices: “i) information and communication technology (ICT) risk and operational resilience; ii) loan origination standards; iii) profitability; iv) capital and liability management and v) money-laundering and terrorist financing risk (ML/TF) and other conduct risk for prudential supervisors”.

The Report concludes that “the areas where considerable progress was achieved in 2020 are business model analysis (BMA), the monitoring of the key risk indicators and link between the [supervisory review and evaluation process], early intervention and the determination of failing or likely to fail (FOLTIF). In these areas, all recommendations have now been implemented in supervisory practices. The recommendations that remain outstanding are linked to the capital adequacy assessment and the setting of Pillar 2 requirements (P2R).” Nevertheless, the Report also notes that implementation of the convergence plan in supervisory practices was impacted by COVID-19, which resulted in reprioritisation of supervisory activities to the most critical ones, namely, “assessment of profitability and the business model closely linked to asset quality, as well as selected areas of ICT risk and operational resilience”.

First, the EBA convergence assessment discovered “some divergent supervisory reaction to how ICT risk is dealt with in the risk appetite framework (RAF) and the internal capital adequacy assessment process (ICAAP) of small and medium sized credit institutions” (own emphasis). Second, some differences remain in prudential supervisory practices in the context of ML/TF. Third, the Report highlighted that certain notable differences in supervisory approaches and methodologies remain among the practices in setting the P2R and the Pillar 2 Guidance (P2G). It should be noted that it remains unclear from the Report whether the observed divergences were caused by lack of guidance; due to unawareness, ignorance or misunderstanding of the competent authorities; or due to the diverging views on the matter between competent authorities and the EBA, which would lead to a conclusion that convergence might not take place. The Report fails to provide details whether, in the instances where divergent practices prevail, there is an active commitment from competent authorities, a clear convergence plan and a set timeline to correct the non-harmonised practices.

Gender balance on the boards of significant banks

EGOV analysed publicly available information on the corporate governance structures to determine the gender balance on the boards of the banks in the euro area supervised by the ECB (“significant institutions”), comparing the situation in 2014 with that in 2020 (see previous briefing for detailed information, published in May).

The general observation is that, overall, the share of female executive directors has risen in significant banks from 15.3% to 27.4% and the share of female supervisory directors has increased from 22.3% to 31.7%; these levels are still quite distant from an equal gender distribution. Large differences in the share of female directors persist, though, if the data is grouped at country level (see figure 5).

6 “Which are expected to diminish after the EBA Opinion on how competent authorities should take ML/TF risks into account in the SREP and with integration of this aspect into the SREP Guidelines, which is currently under way”, according to the EBA.

7 Based on the information provided in the Report, competent authorities are planning to revisit their methodologies in 2021, and also align them with the requirements of CRD V.

8 The EBA signals that “in some instances, the legally binding nature of P2R and the communication of the total SREP capital requirement (TSCR) to all institutions as a legally binding requirement have still to be addressed.” or “40% of CAs did not start a gap assessment, mainly because more urgent supervisory activities had to prevail, or, alternatively, some CAs are still in the process of implementing their own guidelines. Nevertheless, most of these CAs, as well as those that did not indicate whether a formal gap analysis had been performed, stated their good understanding of the overall preparedness of institutions under their supervision.”
Climate risk

On March 2021, the EBA published the results of its EU-wide pilot exercise on climate risk. The objective of this exercise was to “explore data and methodological challenges to categorise exposures, on the basis of selected climate risk factors, rather than to quantify the impact on banks’ risk profiles ... Furthermore, the exercise aims at testing banks’ readiness to apply the criteria set by the EU taxonomy and provides an estimate of the current levels of taxonomy aligned exposures”.

The EBA goes on to explain that this preliminary work is relevant for future work related to climate stress testing, which currently lacks a consolidated set of consistent and comparable indicators. As a first step then, the EBA conducted a data classification exercise based on two different approaches, finding that “more than half of banks’ exposures (58% of total non-SME corporate exposures to EU obligors) are allocated to sectors that might be sensitive to transition risk, and are concentrated in some specific sectors. A parallel analysis, based on greenhouse gas emissions (GHG), reveals that 35% of the total non-SME corporate exposures submitted in the exercise are to EU obligors with GHG emissions above the median of the distribution.” The EBA notes that both approaches represent a static analysis, with data gaps that limit comparability across banks.

In a second step, the EBA assesses the sensitivity of climate-related exposures to shocks arising from a transition to a low-carbon economy in the medium- to long-run, using the ECB top-down climate risk tool. This tool tracks the impact of both transition and physical risk, with the result of the simulations indicating that under the hot house scenario (whereby no new policies are implemented), default probabilities would...
always increase more, regardless of an orderly or disorderly transition. The EBA estimates that “At EU level, the additional expected loss in the two adverse scenarios, disorderly and hot house world, is 160 and 175 bps respectively. The distribution across banks ranges from 58 bps to 321 bps in the disorderly scenario and from 65 bps to 343 bps in the hot house scenario.” However, the EBA does stress the limitations to the analysis presented.

The EBA then turns to quantifying the green share of banks’ exposures in line with the EU taxonomy criteria, employing two methods, a bank estimation model15 and a top down tool16. Regarding the former method, banks indicated three major challenges in its application: “i) the lack of client/counterparty data to run the classification of the EU taxonomy; ii) considerable resources are required for its application; and iii) interpretation issues with the criteria specified by the taxonomy.” Banks further indicated that they would benefit from common industry-wide methodologies, data services, and the provision of implementation data tools.

Overall, the EBA found that the efforts of banks to estimate greenness was diverse, depending on the capability of banks.17 The average ratio of total exposures that could be estimated using the bank estimate method was 40% as opposed to 37% with the taxonomy alignment coefficient (TAC) method. However, it is noted that the large share of exposures outside the EU taxonomy means that their sustainability rating remains unknown. Overall, 25% of the total submitted notional exposures in NACE sections covered by the taxonomy are classified as green.

The EBA lastly goes on to calculate the Green Asset Ratio (GAR)18 for each bank - by dividing the green amount available for a subset of exposures by the total original exposure - as a means to improve data comparability. The EBA estimates that for counterparties whose main activity is within the scope of the taxonomy, the average GAR is 7.1% for the bank estimate, and 7.9% for the TAC estimate (with only the latter being considered consistent and comparable) (see Figure 6). Bank estimates also tend to widely dispersed, reflecting differences in underlying approaches and techniques. The EBA concludes that: “This first estimation of GAR reveals that much more work is required. Creating a common level playing field and employing common data definition and methodology appear to be essential. Banks should already start to prepare themselves for the disclosure requirements of Pillar 3 and to disclose the GAR when it becomes a binding obligation”.

---

14 A disorderly transition scenario was defined as one “associated with relatively high costs from a delayed and/or ineffective implementation of climate policies. This scenario also assumes that climate policies are relatively effective in limiting global warming in the long run and are thus accompanied by limited physical risk.”

15 From the EBA (2021): “The ‘bank estimation’ is based on a best effort basis by banks to classify the exposures according to the EU taxonomy. Banks were encouraged to apply the EU taxonomy directly, however, as the taxonomy is activity based, they needed to adapt and approximate it to a counterparty/obligor level in line with the information submitted in the exercise.”

16 From the EBA (2021): “The tool was developed by Alessi et al. (2019) and includes the taxonomy alignment coefficient (TAC). Alessi et al. (2019) provide a list of TACs, i.e. sector-specific standardised coefficients, for all NACE sections that are covered by the EU taxonomy as of 2020. The TAC for any specific sector approximates the sectoral alignment based on the features of the relevant technical screening criteria and relevant characteristics of the sector as a whole.”

17 The EBA (2021) notes that: “One third of the banks was able to classify nearly all of the submitted exposure to this exercise, whereas another third was able to classify less than 10% of the submitted exposure. This seems to be driven by either internal methodologies or different business models across banks.”

18 See also EBA (2021) consultation on draft technical standards on Pillar 3 disclosures of ESG risks.
The findings of the EBA echo those of the ECB Banking Supervisor, who has noted that: “The ECB also assessed the climate-related and environmental risk disclosures of every institution under its direct supervision. The report finds that only 3% of the institutions would meet a minimum level of expected disclosures. Furthermore, disclosure statements are substantiated only sparsely with relevant quantitative and qualitative information and most institutions do not yet comprehensively disclose their risk profile. Similarly, assessments of banks’ risk management processes have shown that few banks incorporate climate risk comprehensively into their risk management frameworks”.

The ECB has indicated that it will ask banks to conduct a self-assessment in line of its Guide on climate-related and environmental risks, and to draw up an action plan on that basis in early 2021. The EBC will then benchmark these, and refer to them as part of the supervisory dialogue, with a full supervisory review of bank’s practice set to take place in 2022. In a 15 June speech, ECB Banking Supervision Vice-Chair Frank Elderson shared some initial findings from the self-assessment: “90% of reported practices are deemed by the banks themselves only partially or not at all aligned with the ECB’s supervisory expectations ... More than half have no approach for assessing the impact of climate risks ... On top of this, only around 40% of banks have assigned explicit responsibility for managing climate risks to the management body – and of those, three in four do not report on climate risks to management.” More positively, he notes that “roughly half” of banks have started to integrate climate risks into their client due diligence, and also into their lending policies.

EBA thematic note on provisioning in the EU vs the US

At the end of May, the EBA published a thematic note comparing provisioning practices in the US and the EU during the peak of the COVID-19 pandemic. It examines different factors that might explain why the reported cost of risk (in short: CoR; the CoR ratio is the sum of allowances and provisions for loan-losses, expressed as a percentage of total loans on the balance sheet loans) of US banks was materially higher than that of EU banks in the first half of 2020, falling at a faster pace afterwards.

A time lag between an economic shock and the subsequent formation of new non-performing loans (NPLs) is very common; however, in the context of the COVID-19 pandemic and the ensuing containment
measures, which have caused an immense economic contraction globally, the support measures implemented in the EU might further delay a potential asset quality deterioration.

Over the year 2020, the NPL ratio of banks in the EU continued to decrease (also see section above on banking statistics). On the other hand, early indicators for asset quality deterioration show a different trend: The EBA note points out that the volume of forbore loans, the share of “stage 2 loans” (i.e. loans where credit risk has increased significantly since initial recognition) and the CoR increased materially in 2020.

The EBA note finds, referring to data for the past 13 years, that loan loss provisions of EU banks generally tend to be less volatile than those of US banks.

The EBA note then sets out that, more specifically in the context of provisioning for the fall out of the COVID-19 pandemic, macroeconomic variables explain some of the observed differences: The US suffered a higher increase in unemployment in the early stages of the pandemic but also saw a faster economic recovery in the second half of 2020. Moreover, the loan portfolio composition of US banks is more strongly geared to industries that were particularly hit hard by the pandemic, such as commercial real estate. Finally, different accounting rules also lead to differences in the CoR: In short, in the US banks immediately recognise lifetime expected credit losses (ECL) for all financial assets since their origination, while in the EU, the lifetime horizon for calculated ECL only kicks in for loans that experienced a significant increase in the credit risk since their origination.

In its conclusion, the EBA finds that one should continue closely monitoring and analysing the evolution of the CoR in the US and the EU, given that the current economic situation represents the first real test for ECL provisioning models.

Summaries of external papers commissioned on the request of ECON

Topic: Regulatory divergence and differences in supervisory practice of large banks in the UK and the euro area

Alexander Lehmann draws attention to the fact that the UK, while still within the EU, interpreted many EU rules on banks’ prudential treatment more stringently than was the case elsewhere in the EU. Such “gold-plating” of common EU rules was justified by the more complex and comparatively large banking sector (financial sector assets stood at well over ten times of UK GDP at end-2020). The UK practice of ring-fencing banks’ retail units, for instance, has not been replicated elsewhere in the EU.

Lehmann examines three areas of supervision (credit risk management, climate risks, and bank recovery and resolution planning) in more detail and finds a similar stringent approach, despite the complex set of mandates and policy goals of the supervisor (notably, the supervisory mandate of the UK’s Prudential Regulation Authority differs from that of the ECB, as it entails the competition aspect as a secondary objective).

Though the UK enters the post-Brexit period with a regulatory framework that is closely aligned with that of the UK, there are concerns that the UK’s new regulatory independence could “tilt the level playing field” to the benefit of UK institutions. Lehmann considers those concerns as largely misplaced because, first, there are no reasons to believe that the UK would fall short of the Basel agreements - the “real peg” for standards in bank prudential regulation - and second, those complementary factors that have underpinned the UK’s position in international banking markets (human capital, the related ecosystem of professional services, deep local funding markets and the use of English law) will continue to do so.

Nevertheless, Lehmann also assumes that smaller institutions, which do not compete in international markets, are set to be exempted from some Basel rules, in line with practice in many other jurisdictions, and indeed with the requirements of the Basel Agreement.
**Topic: Digital transformation - why do some significant banks fall behind**

**Ata Can Bertay and Harry Huizinga** perform an empirical analysis to shed more light on the issue why and which banks fall behind in the digital transformation, as highlighted by the ECB in its presentation of the Supervisory Review and Evaluation Process (SREP) results for 2020.

Bertay and Huizinga argue that the digital transformation poses two main risks to the banking sector. First, banks that transform too slowly may be unable to compete effectively with more digitalised competitors, which implies that their business models are ultimately unsustainable. Second, a heavy reliance on IT introduces the risk of IT malfunctions, which can occur accidentally or as a result of malicious intent.

Their analysis examines banks’ ownership of computer software assets, which are recorded as an intangible asset on banks’ balance sheets. Computer software assets include purchased software and internally developed software, and thus measure a bank’s digital technology adoption. Their sample consists of 75 significant institutions directly supervised by the ECB. Average computer software over assets increased from around 0.08% at the time of the Global Financial Crisis to a much higher level of around 0.2% during 2018-2020.

Empirically, Bertay and Huizinga find that larger banks and better capitalised banks invest more in computer software, after controlling for variation in bank business models and bank specialisation indices.

Considering that smaller and less capitalised banks will have to make substantial software investments to maintain sustainable businesses, that situation may increase the pressure to merge with larger and better capitalised capitalised rivals.

Bertay and Huizinga moreover point out that the Guidelines on ICT security and risk management, issued by the EBA in 2019, which establish requirements regarding the management of IT security risks, are pertinent to individual banks, and thus micro-prudential rather than macro-prudential supervision. They hence suggest, as other authors before, that the ECB could or should develop a macro-prudential policy to deal with certain IT related risks at significant institutions, given that similar cyber risks at individual banks (e.g. the use of common software) can jointly create systemic risk.

**Jakob De Haan** also performs an empirical analysis, collecting data on IT spending as reported by banks directly supervised by the ECB. He finds it quite remarkable that slightly less than 50% of those banks do not report their IT spending.

Analysing the data of those banks that do report IT expenditure, he finds that the distribution of IT expenses as share of operating income, operating expenses or total assets is uneven. The group of banks that score low on one or more of those ratios, however, turns out to be very diverse. From a performance point of view, De Haan would not consider banks with relatively low IT spending to be automatically in the danger zone, arguing that how IT expenses are used may be more important than the level of IT spending as such.
Box 2: The importance of technology in banking

In March 2021, the ESRB published a working paper on *The importance of technology in banking during a crisis*, which studies the implications of information technology (IT) adoption in banking for financial stability. The paper uses data on US banks’ IT equipment and the tech-background of their executives to study the previously ambiguous relationship between the degree of IT adoption and the amount of non-performing loans (NPLs) in relation to assets (as a proxy for financial stability) among traditional (non-fintech) commercial banks in the US.

The paper’s main finding is that “US commercial banks which were leaders in IT adoption before the GFC [Great Financial Crisis] were significantly more resilient” during that same crisis. Although both low- and high-IT banks had the same level of NPLs over assets before the GFC, increases in NPL levels were significantly higher in low-IT adoption banks as compared to high-IT adoption banks. Moreover, it is shown that high- and low-IT banks had the same share of loans on their portfolios before the crisis; however, the tightening in lending standards in low-IT banks during the GFC was significantly stronger than in high-IT banks. In banks led by more tech-oriented executives, IT was adopted more intensely, and those banks were found to be more resilient during the crisis, despite differences in pre-crisis NPLs levels being not statistically significant between the two types of banks. The paper also provides evidence for their argument that in the context of an increase in NPLs during the GFC, “it is "tech-orientation" that matters and not the managerial talent or risk-taking incentives.,” at least partially due to the more thorough screening of borrowers at the origination of a loan.

These findings have several important implications for financial stability. By showing that high-IT banks’ loans experienced lower delinquency rates even when they were securitised and sold to government-sponsored enterprises, the results indicate that IT-adopters either had additional available information or used given variables for screening more effectively. Furthermore, banks with low pre-crisis levels of IT adoption (as well as those with higher NPL levels) experienced significantly weaker loan growth in the crisis, limiting credit support to the economy. Hence, the evidence shows that technology adoption in lending can enhance financial stability and resilience through better monitoring and screening. Most importantly, the paper suggests that the recent rise in FinTech is likely to be beneficial for financial stability through better screening abilities, despite non-negligible differences in technologies adopted by commercial banks before the GFC and those adopted by FinTech today.