# THE EU BANKING SECTOR: FIRST INSIGHTS INTO THE COVID-19 IMPACTS

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# Executive summary

**The global economy is facing unprecedented challenges.** The outbreak of COVID-19, which has hit Europe particularly hard, has resulted not only in a huge health crisis, but also in enormous economic challenges. Gross domestic product (GDP) is expected to contract significantly in EU economies and worldwide. The magnitude of the contraction in each country will depend on how successful that country is in limiting contagion and preventing second or further waves of the virus, the duration of the measures implemented to limit social contact, and the effectiveness of the actions taken to support the economy. The remaining uncertainty on the severity of the crisis, the length of the recession and the speed of the recovery also make it difficult to assess the potential impact of the crisis on the EU banking sector.

**Banks entered the COVID-19 crisis in better shape than they did in previous crises.** Compared with the Global Financial Crisis (GFC) in 2008-2009, banks now hold larger capital and liquidity buffers. The Common Equity Tier 1 (CET1) ratio rose from 9% in 2009 to nearly 15% in Q4 2019, well above the regulatory requirements. Similarly, prior to the pandemic outbreak, banks' liquidity coverage ratios (LCRs) were significantly above the regulatory minimum. The overall LCR was close to 150% in Q1 2020. Since the GFC, the share of household and non-financial corporation (NFC) deposits in the overall funding mix has increased. Banks also made strong use of favourable conditions in wholesale funding markets until February 2020, enabling them to frontload part of their issuances before primary markets came to a temporary halt.

**However, vulnerabilities persist in several areas.** Since Q4 2019, profitability levels have remained subdued amidst low interest margins and the challenges for banks to reduce their operating expenses. Many banks do not earn their cost of equity. Irrespective of the crisis, current weaknesses, such as low interest margins, might be exacerbated by the low interest rate environment, which will now persist for even longer. Not least among the challenges faced by banks might be an amplification of the need to consolidate and to address overcapacity in the sector. Despite continuous improvements in asset quality over the past few years, the non-performing loan (NPL) ratio in several countries and banks is still well above pre-GFC levels.

**COVID-19 puts a strain on banks' operational capacities.** Following the outbreak of the pandemic, banks activated their contingency plans, which included the set-up of ad-hoc crisis and remote units and the extension of teleworking. Owing to the widespread availability of remote working in the banking sector, banks' core functions continued to operate largely unaffected. An increasing number of branches were or remain temporarily closed and the use of digital channels has grown. The handling of large volumes of applications for debt moratoria and guaranteed loans, and the preparation of some offshore units to work remotely, temporarily increased the pressure on banks' operational capacities.

**The EBA provided operational relief to banks**. In order to mitigate the operational challenges derived from the COVID-19 outbreak, the EBA postponed its 2020 stress test and provided some leeway to

banks concerning the submission of supervisory reporting data. It also provided guidance on flexibility on a range of supervisory topics, including the Supervisory Review and Evaluation Process (SREP), recovery planning, digital operational resilience, and information and communication technology (ICT) risk.

**The impact of the crisis on asset quality is a key concern.** In the past few years, banks have on EU average increased their exposures towards potentially riskier portfolios, such as small and medium-sized enterprises (SMEs) or consumer financing. Banks are likely to face growing NPL volumes and rising cost of risk amid the prospective macroeconomic deterioration. The decline in asset quality might be accompanied by rising risk-weighted assets (RWA). Higher volatility on financial markets is also a concern and could further increase RWA.

**The EBA recommended that supervisors make use of the flexibility embedded in the regulatory framework to free up capital and mitigate the impact of the virus on the EU banking sector.** The measures implemented by supervisors include, among others, the release of the countercyclical buffer and the option to meet a proportion of the Pillar 2 Requirement (P2R) with non-CET1 instruments. In addition, banks have been asked to refrain from making dividend payments. The impact of these measures, assuming that no bank distributes year-end 2019 dividends, can be quantified as nearly EUR 100bn CET1. Some competent authorities have also allowed banks to temporarily operate below Pillar 2 Guidance (P2G), potentially freeing up an additional EUR 79bn. All these measures come in addition to the already strong capital reserves base and should help to cover losses as well as to support new lending.

**A sensitivity analysis around the 2018 EBA stress test scenario indicates that the impact of credit risk losses on CET1 ratios ranges between around 230 basis points (bps) and 380 bps, without considering the potential beneficial effect of loan payment moratoria and guarantees**. Thanks to the existing capital buffers and the measures adopted by regulators and supervisors, banks would hold, on average, a management buffer of about 1.1 percentage points (p.p.) above the overall capital requirement (OCR) after absorbing those losses. This aggregate analysis, based on currently available information, confirms that the EU banking sector is overall resilient. However, there could be weaker banks, including those that entered the crisis with existing idiosyncratic problems or those heavily exposed to the sectors more affected by the crisis, and whose capital ratios might not suffice to weather the upcoming challenges. Furthermore, this analysis does not consider the impact from other risks, like from market or revenue related risks.

**Funding conditions have significantly deteriorated.** Since February 2020, spreads have widened substantially and new unsecured debt issuances have come almost to a halt until mid-April. About 20% of securities issued by banks will mature in the next 6 months, and an additional 10% will mature within 1 year. Tensions have also appeared in interbank and US dollar (USD) funding markets. Under these circumstances, banks have increased significantly their reliance on central bank funding, including swap lines in foreign currencies. It is expected that banks will also make some use of their ample liquidity buffers in the months to come.

**This note is mainly based on supervisory reporting data submitted by EU banks.**[1] It focuses on Q4 2019 data in most parts. Liquidity data provide an exception, as data for Q1 2020 have already been submitted and can thus be considered in the analysis. The cut-off date for all data was the end of April.[2] Data shown in the report are weighted averages if not otherwise indicated.

The analysis of this note looks at the banking sector as a whole and is not intended to provide any bank-by-bank or country assessment. Country-by-country data are included only in selected cases. The transparency exercises in 2020 will provide bank-by-bank information on exposures and the EU-wide stress test in 2021 will provide a full assessment of banks' resilience.[3]

Given the uncertainty of the impact from the crisis on the economy and some of the assumptions made, the estimates in this note are preliminary and should be interpreted with caution.

[1] UK banks are excluded from the sample throughout the report. The full sample includes 161 banks, of which 31 are subsidiaries. The sensitivities are calculated based on a reduced sample of 117 banks at the highest level of consolidation, which report both COREP and FINREP.

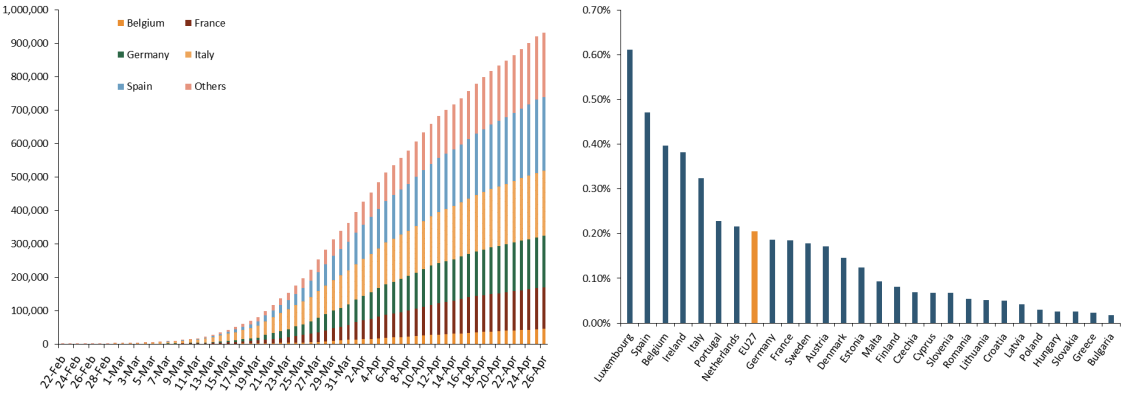
[2] The cut-off date for financial market and similar data, such as stock price indices and the iTraxx indices, was mid-May.

[3] On the transparency exercises in general see the dedicated EBA website and, on the exercise in June 2020, see the related press release.

# 1. External environment

The COVID-19 outbreak spread rapidly across the world. Total confirmed cases in the EU reached nearly one million by the end of April. Among EU Member States, the highest absolute numbers of cases were registered in France, Germany, Italy and Spain (Figure 1).[4]

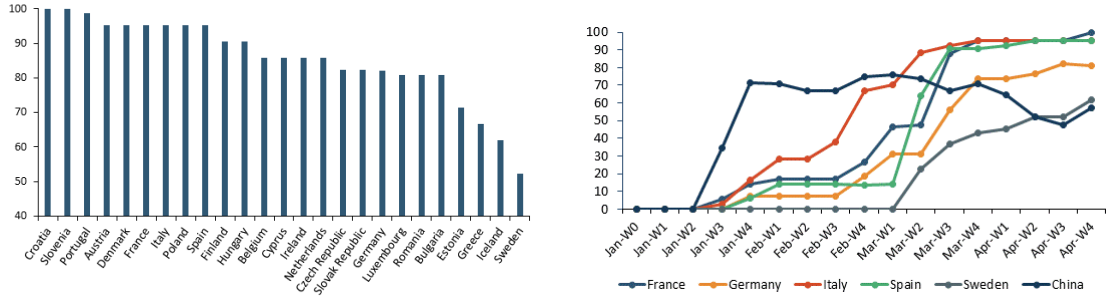
Figure 1: Total confirmed cases in the EU in absolute terms (left) and as a share of population (right) as at end of April




*Sources: European Centre for Disease Prevention and Control (ECDC) and EBA calculations*

As a response to the fast-paced spread of the pandemic, governments across Europe imposed containment measures to limit social interactions. The first country to impose strict measures was Italy, at the end of February, closely followed by Spain, France and many more EU countries. Some countries, such as Sweden, imposed only loose containment measures (Figure 2).

Figure 2: Stringency of the containment measures as at the fourth week of April 2020 (left) and evolution over time for selected countries (right); measures range from 0 (none) to 100 (strictest response)




*Sources: Oxford COVID-19 Government Response Tracker (OxCGRT)[5] and EBA calculations*

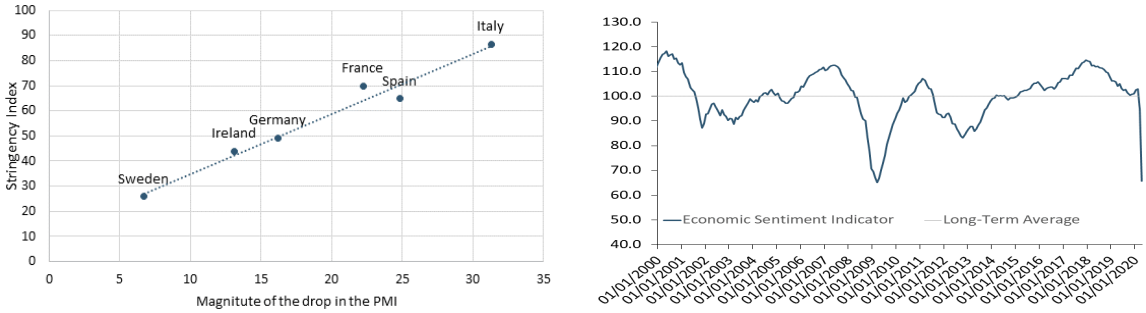
[4] Countries have different testing capacities, which might affect such figures.

[5] The Oxford COVID-19 Government Response Tracker scores the strictness of policy responses and ranges from 0 to 100. It considers information on containment measures and closures, economic and health system policies.

The stringency of the measures applied might be considered an indication of the extent to which a country is affected by the pandemic economically. There are indications that the magnitude of the decline in economic activity is correlated not only with the strictness of containment measures but also with the pace at which normal business conditions are restored (Figure 3, left).[6]

Economic stress is reflected in indicators such as the Economic Sentiment Indicator from the European Commission (EC), which recorded its largest monthly contractions in recent months (–27.2 points in the euro area, –28.8 points in the EU; latest data as at April 2020) since its initiation in 1985 (Figure 3, right).

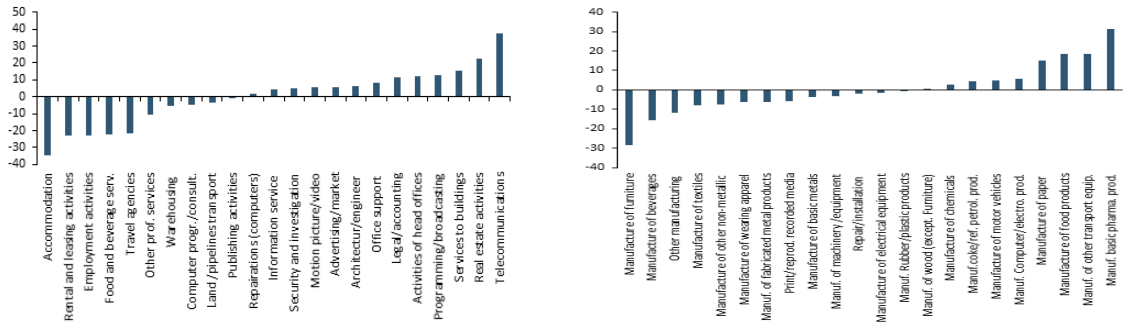
Figure 3: Oxford Stringency Index and drop in the purchasing managers' index (PMI; left) and Economic Sentiment Indicator (100 points corresponds to the long-term average, data as at April 2020; right)




*Sources: Bloomberg and OxCGRT and EBA calculations (left); European Commission (EC) business surveys and EBA calculations (right)*

Although economic sentiment has fallen in all business sectors, the largest falls are observed in services (–32.7 points in the euro area and –33.6 points in the EU) and in retail trade (–19.7 in the euro area and –21.3 in the EU, as at April 2020).

Figure 4: Economic sentiment by sector as at April 2020 – change in confidence in services (left) and industry (manufacturing) subsectors (right), relative to the change in services and industry (manufacturing) sectors overall



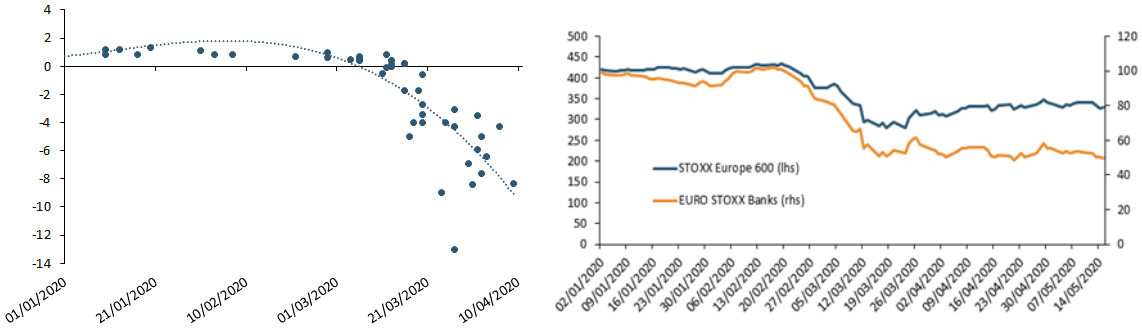

*Sources: EC business surveys and EBA calculations for both*

[6] Based on the above analysis, in particular considering 2020 GDP forecasts, reported COVID-19 cases as a proportion of the population and the Oxford Stringency Index, the following countries are considered to be the worst affected: Austria, Belgium, Spain, France, Ireland, Italy, Luxembourg, the Netherlands and Portugal.

The most affected services subsectors are those related to tourism, such as travel agencies and accommodation, as well as employment services and food and beverage services, whereas telecommunication and IT services are the least affected subsectors. In the industry (manufacturing) sector (which shows an overall change of –19.2 points in the euro area and –19.9 points in the EU), furniture, beverages and textile/wearing apparel are the subsectors most affected by declining economic sentiment, whereas basic pharmaceutical products and food products are among the least affected subsectors (Figure 4).[7]

Overall, analysts continue to revise their forecasts for 2020 (Figure 5, left). In April the International Monetary Fund (IMF) reported an expected 2020 growth rate of –7.5% for the euro area. Analysts are also reviewing their expectations for the recovery in 2021, with the IMF expecting 4.7% GDP growth in the euro area in 2021. The European Central Bank (ECB) provided in its *Economic Bulletin Focus* related to the COVID-19 pandemic mild, medium and severe scenarios for the euro area, forecasting for 2020 a contraction in GDP of around 5%, 8% and 12%, respectively, followed by GDP growth of around 6%, 5% and 4%, respectively, in the following year. The EC's spring 2020 forecast for the euro area is for a 7.7% contraction in 2020, roughly in line with the IMF and ECB, but a faster recovery, with GDP growth of 6.3% in the following year.[8] The remaining uncertainty on the severity of the crisis, the length of the recession and the speed of the recovery also makes it difficult to assess the potential impact of the crisis on the EU banking sector.

Figure 5: Evolution of analysts' GDP forecasts for the euro area for 2020 (left) and Euro Stoxx benchmark and banking indexes (right)




*Sources: Bloomberg and EBA calculations for both*

The contraction of economic activity is expected to have a significant impact on the job market. The IMF forecasts that euro area unemployment will increase to 10.4% in 2020 (up from 7.6% in 2019), before decreasing to 8.9% in 2021. The EC's Employment Expectations Indicator in March also

[7] Other sectors affected, but not included separately in the Economic Sentiment Indicator, include transport as well as electricity providers, which will presumably be significantly adversely affected by the confinement measures and contractions in other sectors. On the fall in electricity consumption, see the Bruegel electricity tracker of COVID-19 lockdown effects. Following the above analysis, and considering long-term trends in asset quality, the following NACE sectors are assumed to be most affected: manufacturing; electricity, gas, steam and air conditioning supply; construction; wholesale and retail trade; transport and storage; accommodation and food service activities; administrative and support service activities; arts, entertainment and recreation.

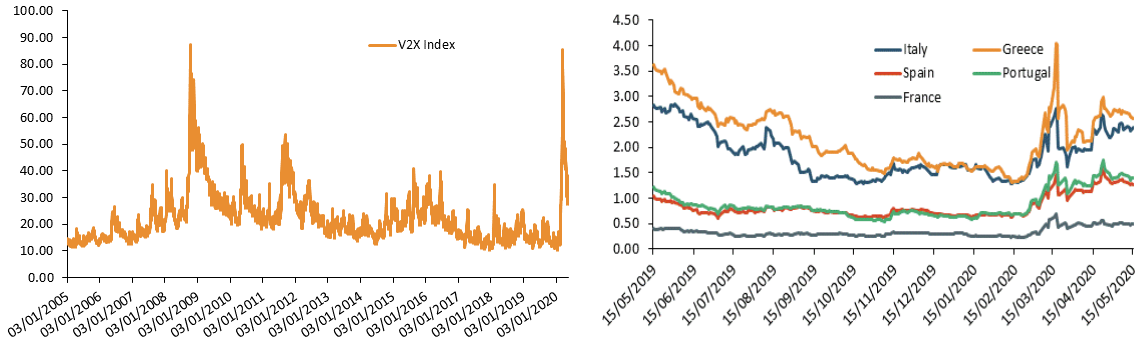
[8] See the IMF's World Economic Outlook (6 April 2020), the ECB's alternative scenarios for the impact of the COVID-19 pandemic on economic activity in the euro area (May 2020) and the European Economic Forecast Spring 2020 (also included in the ECB *Economic Bulletin Issue* 3/2020 from 14 May 2020).

dropped by 10.9 points in the euro area, and by 9.7 points in the EU.[9] The EC's spring 2020 forecast assumes unemployment rates of 9.6% and 8.6% in the euro area in 2020 and 2021, respectively, and of 9.0% and 7.9%, respectively, in the EU.[10]

The slowdown in economic activity is strongly affecting financial markets, with the Euro Stoxx 600 index having dropped by 23% and the Euro Stoxx Banks index having decreased by 49% since the COVID-19 outbreak in Italy in late February (Figure 5, right, as at mid-May 2020). Overall volatility spiked to levels last observed during the GFC (Figure 6, left).

Some particular tension was observed on government bond markets, as fiscal measures intended to support economies against the pandemic are expected to have a significant impact on public balances (Figure 6, right). Although the measures adopted by the European Central Bank (ECB) have contained the initial sovereign debt spread widening, the still open discussions on the terms of a European recovery fund and weak prospects on any kind of debt mutualisation maintain tensions in EU sovereign spreads.

Figure 6: European volatility index (left) and selected government spreads vs. Bund (10 years; right)




*Sources: Bloomberg and EBA calculations (left), S&P and EBA calculations (right)*

So far, many measures have been implemented at regional, national and EU levels to support economies. At EU level, the Council ratified the Eurogroup's EUR 540bn support package.[11] The package includes additional European Investment Bank (EIB) guarantees, EU financing to support national short-time work mechanisms and the option for Member States to borrow from the European Stability Mechanism (ESM) precautionary credit lines. Supporting measures at regional and national levels include grants for business, loan guarantee schemes and initiatives for loan moratoria. The last are widely based on either legislative or industry-wide initiatives.[12]

Concerning monetary policy, central banks in the EU have greatly eased banks' access to lending facilities, have resumed or increased the magnitude and scope of their asset purchase programmes

[9] See the EC website on the latest business and consumer surveys.

[10] See the European Economic Forecast Spring 2020.

[11] See the Report on the comprehensive economic policy response to the COVID-19 pandemic from the European Council/Council of the European Union.

[12] There are many sources providing overviews on measures taken, such as the European Commission, including an overview of national measures, the European Systemic Risk Board (ESRB), the European Committee of the Regions, and the OECD, which provides both a general overview and a detailed analysis.

and, in some jurisdictions, have lowered policy rates. For instance, the ECB, after an initially small response, set up its Pandemic Emergency Purchase Programme (PEPP) to purchase EUR 750bn of assets. In relation to its lending facilities, the ECB has improved the conditions of the third targeted longer-term refinancing operations (TLTRO-3). In addition, the ECB has introduced weekly longer-term refinancing operations (LTROs), implemented pandemic emergency longer-term refinancing operations (PELTROs) and relaxed collateral requirements.[13]

Moreover, in cooperation with the US Federal Reserve (Fed), the ECB and other European monetary authorities have increased the frequency and maturity of USD swap lines to mitigate tensions in USD funding markets.

On the regulatory and supervisory side, competent authorities have adopted measures to support banks' fully operational capabilities, to ensure that their capacity to finance the real economy is not impaired. The EBA has supported and coordinated these efforts at an EU level through several measures (for more details, see Box 1).

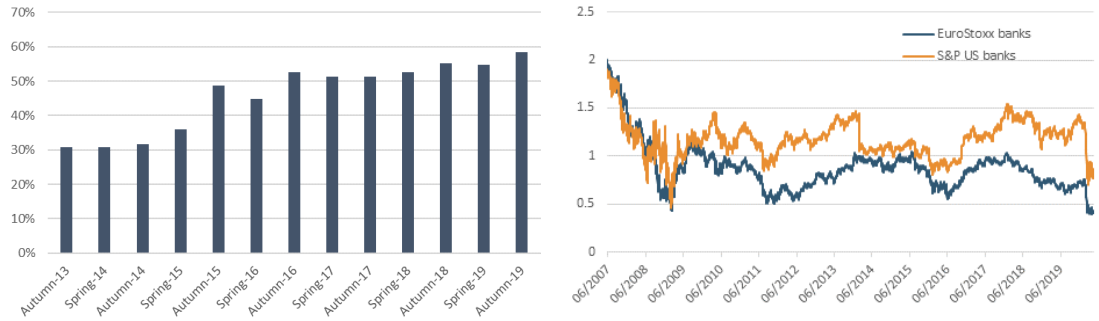
[13] See the ECB COVID-19 related measures and on the USD swap line and the Federal Reserve of the United States. See also press releases as at 30 April, including on the PELTROs and on TLTRO-3 conditions.

# 2. The EU banking sector before the crisis

Following the GFC, EU banks improved their risk profile. The CET1 ratio rose from 9% in 2009 to nearly 15% as at Q4 2019. Asset quality also improved. The NPL ratio contracted to 3.1%,[14] after having peaked at 7.1% in 2014. Banks face the COVID-19 crisis in a better liquidity position not least thanks to the implementation of the liquidity coverage ratio (LCR). In Q1 2020, the LCR reached nearly 150%, having risen consistently in previous years. In the current crisis, liquidity buffers will be important not only to enable banks to weather the storm, but also to support households and companies through the pandemic and to kick-start the economy as soon as the virus is effectively contained.

Profitability has remained a key challenge throughout the years, with almost half of banks still failing to cover their cost of equity (Figure 7, left). In the aftermath of the previous crisis, weak profitability could still be attributed to the slow recovery process and banks' efforts to deleverage and de-risk their exposures. However, subdued performance has continued even in recent years, despite the economic recovery and the increase in lending.[15]

Figure 7: Share of banks whose earnings are covering their cost of equity (left) and EU vs. US banks price to book ratios (right)




*Sources: EBA Risk Assessment Questionnaire (left), Bloomberg and EBA calculations (right)*

Poor profitability prospects have also driven down EU banks' valuation. On 19 February 2020, when stock markets reached their year to date (YtD) peak, price to book (PtB) ratios were at just 0.74 for EU banks. Valuations for their US peers were significantly higher, reaching 1.33. In June 2007, this ratio had been close to 2 for EU banks, but if fell significantly during the GFC. Amidst the sharp correction of stock indices following the COVID-19 outbreak, the PtB of EU banks, by mid-May, had faltered to 0.40. US banks also suffered; however, their ratio is almost double that of European banks, at 0.78. These developments will not help banks that need to raise new capital, as doing so would result in a further dilution for existing shareholders (Figure 7, right).

[14] The ratios are partially based on the EBA's Risk Dashboard data. The samples of banks on which the ratios are based has changed over time. In 2009, the CET1 ratio was defined as "Tier 1 ratio (excluding hybrid instruments)".

[15] On banks' deleverage and de-risking, as well as recent balance sheet expansion, see the EBA's Risk Assessment Reports.

**Box 1: Regulatory and supervisory measures for mitigating the impact of the crisis**

The outbreak of COVID-19 prompted a quick response among regulators as well as competent and resolution authorities to mitigate the impact of the virus outbreak on the banking sector. The measures taken and proposed aim to provide relief in three main areas: operational capacities, capital and liquidity, and asset quality.

***Operational capacities***

In relation to the first block of measures, the EBA decided to postpone the EU-wide stress test exercise to 2021. At the same time, it called on competent authorities to postpone non-essential supervisory activities and to offer some leeway to banks concerning the remittance of supervisory reporting data.[16] In particular, the EBA suggested that reporting dates between March and the end of May 2020 be postponed by 1 month. Nonetheless, the EBA has made clear that this flexibility should not compromise access to essential information on banks' capital, risk and liquidity positions.[17]

The EBA also recognised the need for a pragmatic approach in the 2020 SREP assessments, and recommended that competent authorities focus on the most material risks and vulnerabilities driven by the crisis. For those elements not directly affected by the crisis, or for which no new relevant information is available, the EBA suggested that the previously assigned supervisory assessment should be maintained.[18] Similarly, in relation to recovery plans, the EBA considers that, in 2020, banks need to submit only key elements of their recovery plans. Parts of these plans that are more stable or less relevant in the context of the current situation, such as business-as-usual governance, description of the entities covered by a group recovery plan or the communication plan, could wait until the following assessment cycle.[19]

In the light of the critical importance of digital operational resilience in the crisis, with the need to ensure business continuity, adequate ICT capacity and security risk management, the EBA has highlighted the importance of complying with the EBA Guidelines on ICT and security risk management applicable from 30 June 2020. These Guidelines set priority areas in ICT risk, which are particularly relevant for credit institutions and supervisors in the current period of heightened operational risks. In particular, the EBA has called on competent authorities to apply reasonable supervisory flexibility when assessing the implementation of the Guidelines and to focus on information security, ICT operations and business continuity management.[20]

***Capital and liquidity***

Regulators and supervisors are encouraged to make use of the flexibility embedded in the existing regulatory framework to allow banks to use their capital and liquidity buffers to absorb losses, thus

[16] See the EBA further actions to support banks' focus on key operations.

[17] See the EBA statement on supervisory reporting and Pillar 3 disclosures in light of COVID-19.

[18] See the EBA statement on additional supervisory measures in the COVID-19 pandemic.

[19] See the EBA statement on additional supervisory measures in the COVID-19 pandemic.

[20] See the EBA statement on additional supervisory measures in the COVID-19 pandemic.

ensuring continued lending to the economy.[21] Following the EBA's recommendations, several authorities released the countercyclical buffers (CCyB) and allowed flexibility for banks to operate below their P2G.[22] The ECB Banking Supervision also opted to allow banks to meet part of P2R with non-CET1 capital instruments, thus following the same approach already applied in other EU jurisdictions. As regards the LCR, the EBA considers that it is designed to be used by banks, and has recommended that supervisors avoid any measures that may lead to the fragmentation of funding markets.[23]

Furthermore, the EC has presented a legislative proposal that envisages several measures to provide further capital relief.[24] In relation to the leverage ratio, the EC has proposed delaying the application of the leverage ratio buffer for global systemically important institutions (G-SIIs) envisaged in the Capital Requirements Regulation (CRR) by 1 year to 1 January 2023. Moreover, the proposal envisages that, in case of application of the temporary exclusion of central bank exposures, the recalibration of the leverage ratio will happen only on the first day of application of the exclusion and not periodically during the whole period of exemption.

The EC proposal also plans to frontload some of the preferential prudential treatments foreseen in the CRR, such as a revised SME supporting factor and a new infrastructure supporting factor, or the preferential treatment of loans to pensioners or employees with a permanent contract that are backed by the borrower's pension or salary. Similarly, the EC proposes to start applying the non-deduction of prudently valued software assets as soon as the corresponding regulatory technical standard is approved.

The EBA has also published supervisory measures aiming to soften the potential impact of market turmoil on market RWA by addressing four areas: prudent valuation, fundamental review of the trading book (FRTB) standardised approach reporting requirements, implementation of phases V and VI of the Joint European supervisory authorities' (ESAs) regulatory technical standard (RTS) on non-cleared over-the-counter (OTC) derivatives, and back-testing breaches on internal model approach (IMA) models.[25] Similarly, the ECB Banking Supervision announced a temporary reduction in capital requirements for market risk.[26]

The EBA has emphasised that the capital relief resulting from the measures adopted by competent authorities should be used to finance the corporate and household sectors and not to increase the distribution of dividends. Indeed, the EBA has urged banks to follow prudent dividend and other distribution policies, including variable remuneration, and to use capital to ensure continuous financing to the economy.[27]

[21] See the EBA statement on actions to mitigate the impact of COVID-19 on the EU banking sector.

[22] See the EBA statement on actions to mitigate the impact of COVID-19 on the EU banking sector.

[23] See the EBA statement on the application of the prudential framework regarding Default, Forbearance and IFRS9 in light of COVID19 measures. On the EBA's statement and publications in general, see the EBA's dedicated coronavirus website.

[24] See EC Proposal for a Regulation amending Regulations (EU) No 575/2013 and (EU) No 2019/876 as regards adjustments in response to the COVID-19 pandemic.

[25] See the EBA Statement on the application of the prudential framework on targeted aspects in the area of market risk in the COVID-19 outbreak and further documents published the same day.

[26] See the ECB press release: ECB-Banking Supervision provides temporary relief for capital requirements for market risk.

[27] See the EBA statement on dividends distribution, share buybacks and variable remuneration.

***Asset quality***

Regulators and supervisors have adopted measures that back national actions to mitigate the impact of the pandemic on the real economy. The EBA and the EC clarified that there is no strict automatism in the application of International Financial Reporting Standard (IFRS) 9. Thus, the temporary inability of a borrower to repay debt because of the pandemic should not trigger an automatic increase in expected credit loss (ECL) provisions. Similarly, the assessment of a significant increase in credit risk (SICR) should be based on the remaining lifetime of the loan and not on sudden increases in the probability of default due to COVID-19 or on the application of a private or statutory moratoria.[28] The EBA Guidelines on loan moratoria clarify that generalised payment delays due to public or industry-wide moratoria do not lead to an automatic classification of exposures as defaulted, forborne or unlikely to pay.[29] Given the particularities of securitisation, the EBA issued a clarification of the application of legislative and non-legislative moratoria on securitisation transactions, and on the implicit support in the event of a payment moratorium.[30]

Also in relation to IFRS 9, the EC proposed an amendment of the CRR to extend the current transitional arrangements by 2 years, in line with the agreement of the Basel Committee.[31] This would allow banks to add back to their regulatory capital any increase in new ECL provisions recognised in 2020 and 2021 for exposures that have not defaulted.

Concerning public guarantees, for the purposes of the NPL prudential backstops, the EC legislative proposal envisages a preferential treatment for NPLs guaranteed by the public sector, similar to those guaranteed by export credit agencies (see on such measures Chapter 1, including footnote 12). The EBA also called for a close dialogue between supervisors and banks to make use of the flexibility on the application of the EBA Guidelines on management of non-performing and forborne exposures.

***Other* areas**

As consumer protection remains a priority in the crisis, the EBA reiterated the importance of financial institutions ensuring full disclosure and acting in the interest of customers, with no hidden charges or automatic impact on consumers' credit ratings.[32] The use of contactless payments, which do not require users to enter pin codes at the point of sale, was also encouraged by calling on payment service providers across the EU to increase the national thresholds for contactless payments up to the maximum of EUR 50 allowed under the RTS for strong customer authentication and common and secure open standards of communication.[33] A quick survey of national authorities across the EU

[28] See the EBA statement on the application of the prudential framework regarding Default, Forbearance and IFRS9 in light of COVID19 measures and the European Commission's communication on the banking package to facilitate lending to households and businesses in the EU.

[29] See the EBA Guidelines on legislative and non-legislative moratoria on loan repayments applied in the light of the COVID-19 crisis

[30] See the EBA statement on additional supervisory measures in the COVID-19 pandemic.

[31] See EC Proposal for a Regulation amending Regulations (EU) No 575/2013 and (EU) 2019/876 as regards adjustments in response to the COVID-19 pandemic.

[32] See the EBA statement on consumer and payment issues in light of COVID19.

[33] See article 11 of Commission Delegated Regulation (EU) No 2018/389, of 27 November 2017, supplementing Directive (EU) 2015/2366 of the European Parliament and of the Council with regard to regulatory technical standards for strong customer authentication and common and secure open standards of communication.

6 weeks after the publication of the EBA's statement indicated that the payment industries in all but one Member State had increased the thresholds, or were about to do so.

In the current times of heightened operational challenges, the EBA also called on further actions to mitigate financial crime risks, and reminded financial institutions of the importance of continuing to put in place and maintain effective systems and controls to ensure that the EU's financial system is not abused for money laundering or terrorist financing (ML/TF) purposes.[34]

[34] See the EBA statement on actions to mitigate financial crime risks in the COVID-19 pandemic.

# 3. Operational resilience and contingency measures

With the outbreak of the COVID-19 pandemic in Europe and unprecedented containment measures introduced across Europe in March, the most urgent concern was to ensure that banks could operate unimpeded and provide their essential services.

### Banks reacted quickly to enact contingency plans

Banks across Europe have enacted their contingency plans to limit the impact of the crisis on business continuity, including the set-up of ad-hoc crisis units. A key element of most contingency plans was the introduction of extended remote working for staff. Other measures included splitting up teams, in particular in critical functions units, and dispersing them among different locations or siting them in remote locations; resorting to increased outsourcing of functions and services to third-party providers; and encouraging customers to use digital and remote business channels, including contactless payment services. At the beginning of the crisis most branches stayed open; however, as the crisis progressed an increasing number of branches were temporarily closed and customer services were centralised, which also helped to accommodate scarce resources at banks (e.g. due to higher staff absences rates). Some branches also operated with limited opening times, or on appointment only basis.

### ICT and other operational risks remain elevated

So far, banks have broadly managed to contain the impact of the crisis on their operations. Although operations and business continuity have been put under strain, critical functions have continued to operate largely unaffected, as enacted elements of business continuity plans mostly proved their effectiveness. No major incident of business disruption attributable to the crisis has been reported. Advanced digitalisation, increased automation and the use of ICT solutions have contributed considerably to alleviation of the pressure and the impact of the crisis on banks' operations. These solutions have displayed their resilience amidst large increases in their usage at most banks.

Operational strains in the crisis have also rendered banks more vulnerable to cyber-attacks and ICT-related risks. A few incidences of cyber-attacks attempts and disruptions have been reported, but these were mostly targeted directly at customers or ICT infrastructure providers rather than at banks. No major disruptions, outages or ICT security-related incidents clearly linked to the COVID-19 crisis have been reported, and only a small number of smaller incidents.

### Some specific challenges were related to a temporarily huge workload in selected areas and offshore activities

Operational risks remain elevated, and the crisis has exposed some challenges at banks as volumes of some transactions have increased while resources have been temporarily strained. For example, banks often administer debt moratoria and process or participate in applications for government-supported guaranteed crisis loan schemes. Application volumes are often very high in these areas.

Some banks reported shortages in call centre capacity or some operational backlogs in services such as transaction processing. The outsourcing of support functions to offshore facilities such as call centres and support centres in, for example, India, which some large banks have undertaken in past years, exposed these banks to operational risks. Many such offshore facilities were less prepared to address the COVID-19 operational challenges owing to a lack of opportunities for remote working or reduced availability of staff. However, the business continuity plans that the affected banks activated were largely able to address these challenges. Some banks also faced the challenge of swiftly providing the infrastructure required to enable large numbers of staff to work remotely, for instance if the number of laptops initially available was insufficient.

### Supervisors reacted quickly amid the outbreak of the crisis

Immediate supervisory responses were aimed to support banks' focus on key operations, and to alleviate operational challenges banks face in the crisis. Financial institutions should have sufficient resources available to swiftly address any possible operational challenges they may face. Supervisors have introduced a number of measures to mitigate the operational challenges derived from the COVID-19 outbreak (for more details, see Box 1).

Supervisors also stepped up monitoring of banks' orderly operations, and called on institutions to review their business continuity plans in the context of COVID-19. The EBA gathered information from competent authorities on measures they introduced to monitor the appropriateness of banks' contingency measures and business continuity plans, in order to ensure that banks are indeed well prepared to manage the current situation. Supervisory crisis monitoring has a special focus on banks' operational capacity and ICT infrastructure. The EBA has highlighted the relevance of digital operational resilience, and the need to ensure both business continuity and the security of services, especially while customers rely on the availability and smooth functioning of these services in the current crisis.

# 4. Assets' composition and asset quality

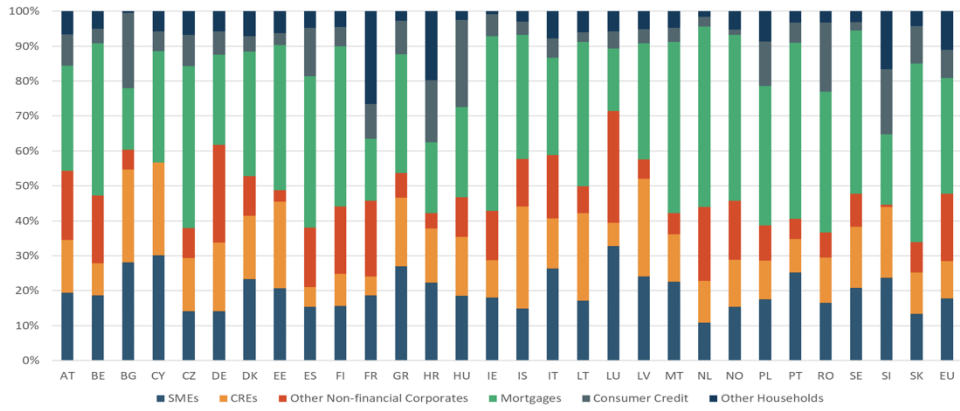
In Q4 2019, EU banks reported EUR 23.7tn of total assets (+7% compared with Q4 2018). The two largest components of total assets were loans and advances (66%) and debt securities (13%). In 2019, banks continued increasing their exposures towards NFCs (+4%) and households (+5%), both of which grew significantly more than in previous years.

### Unsecured exposures might face particular stress in the COVID-19 crisis

In recent years, banks have significantly increased their exposures towards riskier segments, such as SMEs (+8% in 2019 alone) and consumer credit (+9% in 2019 alone).[35] The rise in lending in these areas was driven not only by banks' search for yield in the low interest rate environment, but also by growing loan demand amid benign macroeconomic conditions, declining unemployment rates and strengthened consumer confidence.[36] These trends came to a sudden halt in Q1 2020 with the start of economic deterioration (see Chapter 1).

The composition of loans and advances differs widely across countries. Mortgage lending represents the biggest share of total loans and advances (33%), ranging from 18% to 50% across countries. As regards consumer lending, its share is particularly high for Central and Eastern European (CEE) banks, whereas SME lending is important for banks in southern Europe (Figure 8). Even though the composition of portfolios is not expected to change materially in the short term, a change in loan demand might affect banks, for example through lower mortgage and higher NFC lending.[37]

Figure 8: Distribution of loans and advances by segment and by country, as at Q4 2019




*Source: EBA supervisory reporting data*

Uncollateralised portfolios presumably bear higher risk and might suffer a faster asset quality deterioration, but it remains to be seen how the COVID-19 crisis will affect the value of the collateral

[35] See the EBA's thematic note on consumer lending in the EU banking sector – March 2020.

[36] See the EBA's Risk Assessment Reports.

[37] On latest loan demand in the euro area see the ECB's Q1 2020 lending survey. ECB data on MFI loans vis-a-vis other euro area residents (page updated 29 April 2020) show an increase in NFC lending in March and very slightly contracting mortgage loan volumes in the same period (MFI – monetary financial institutions as defined by the ECB).

underlying collateralised exposures, such as real estate prices. However, rising unemployment and business insolvencies can be expected to have a material impact on real estate prices. In addition, leveraged loans might face particularly high pressure from deterioration of asset quality.

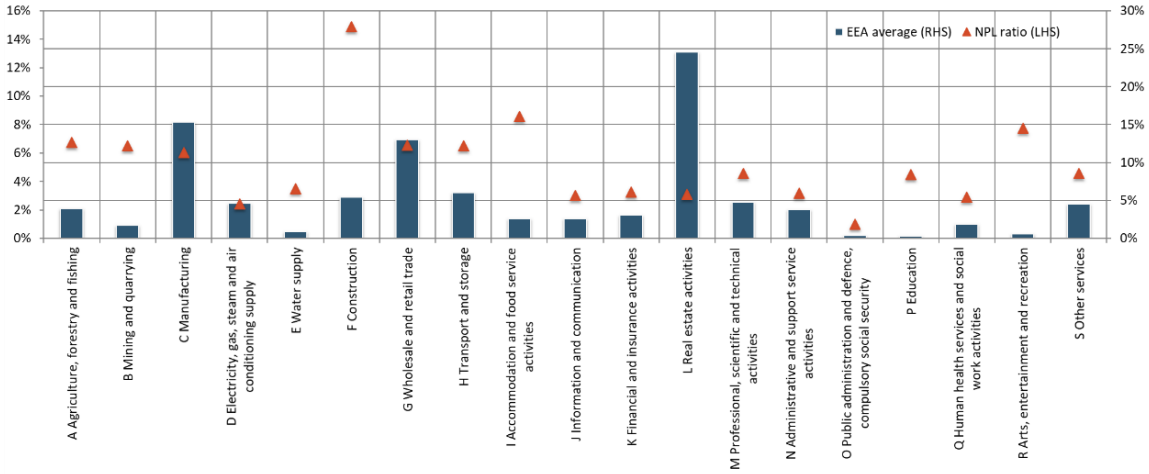
The commercial real estate (CRE) segment might also be greatly affected. High street shops, hotels or office space might suffer significantly, due to slowing demand, as tenants and buyers adapt to new conditions, such as enhanced teleworking and social distancing at work. Other types of retail space, such as warehouse space for online dealers, might experience rising demand.

Increasing financing needs will also result in again higher levels of indebtedness of households, corporates and sovereigns in the years to come. This reverses the contraction of indebtedness levels seen in recent years.[38]

### The riskiness of banks' exposures also depends on the sectors of their counterparties

The COVID-19 crisis is expected to hit some sectors harder than others, and predictions on the intensity of its effect on different sectors are difficult (see Chapter 1). Total NFC exposures account for around 36% of the total loan portfolio of EU banks. A breakdown of NFC exposures shows that around 25% of total loans and advances are towards real estate activities, followed by manufacturing (15%), and retail and wholesale trade (13%).[39] As at Q4 2019 the weight of all other sectors was below 6% of total loans and advances to NFCs (Figure 9).

Figure 9: Breakdown of loans and advances to NFCs and NPL ratios by NACE codes as at Q4 2019(%)




*Source: EBA supervisory reporting data*[40]

On average, around 57% of banks' NFCs loans and advances (18% of total loans and advances) are towards the most affected sectors, including accommodation and food services, manufacturing, electricity and transport and storage (for more on affected sectors, see Chapter 1). Banks in CEE and periphery countries report increased exposures to these vulnerable sectors, which is not least driven by their high share of SME lending (on the latter, see Figure 8). In particular, the shares of exposures

[38] On trends in recent years on indebtedness, see, for instance, previous EBA Risk Assessment Reports.

[39] The analysis is based on reported NFC exposures, excluding trading exposures, as at December 2019, as reported in FINREP table 6. The sector analysis is based on the first level of Eurostat's NACE codes.

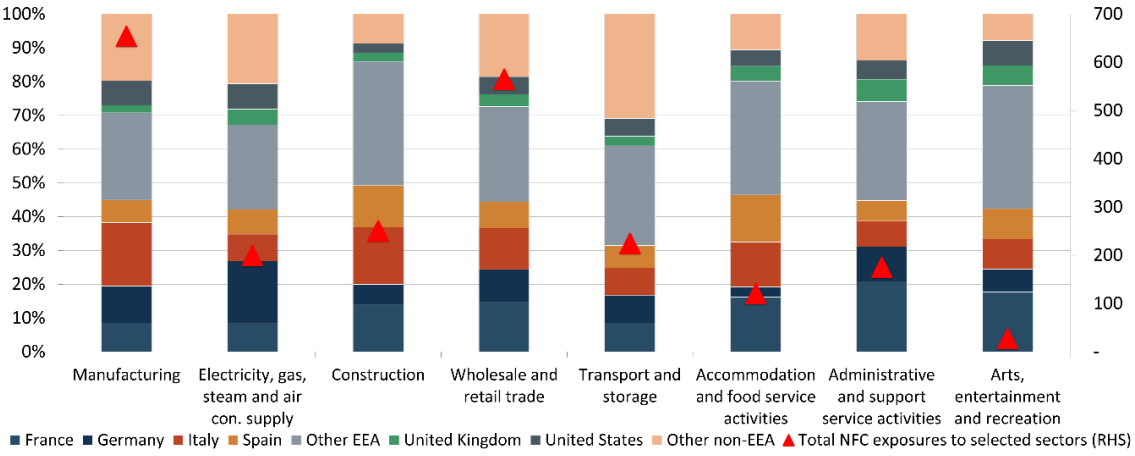
[40] The data exclude exposures that are held for trading (see footnote 39).

towards manufacturing, retail and wholesale trade sectors are higher in these countries than in other jurisdictions. Driven by the importance of the tourism sector in their countries, Cypriot, Croatian and Greek banks report more than 10% of their NFC loans towards the accommodation and food service sectors, one of the sectors most affected by the pandemic.

Around 52% of EU banks' NFC loans were towards domestic borrowers. Combining the analysis of country and sector of exposures, supervisory reporting data show that, with the exception of transport, the exposures to the most affected sectors have a majority of counterparties residing in the European Economic Area (EEA; Figure 10). The share of EEA counterparts is particularly high for construction and accommodation and food service activities. For these exposures, asset quality will greatly depend on how the crisis unfolds in the European continent.

In contrast, exposures to transport might be more affected by trends at the EU and global levels. Banks' geographical diversification proved helpful during previous crises, and it might be of help again as the magnitude of the economic hit of the pandemic varies across countries. Nonetheless, given the global character of COVID-19, the benefits of geographical diversification might be much more limited this time.

Figure 10: EU banks' total exposure to the sectors most affected by the crisis, and distribution according to the country of counterparty, as at Q4 2019 (%, EUR bn)



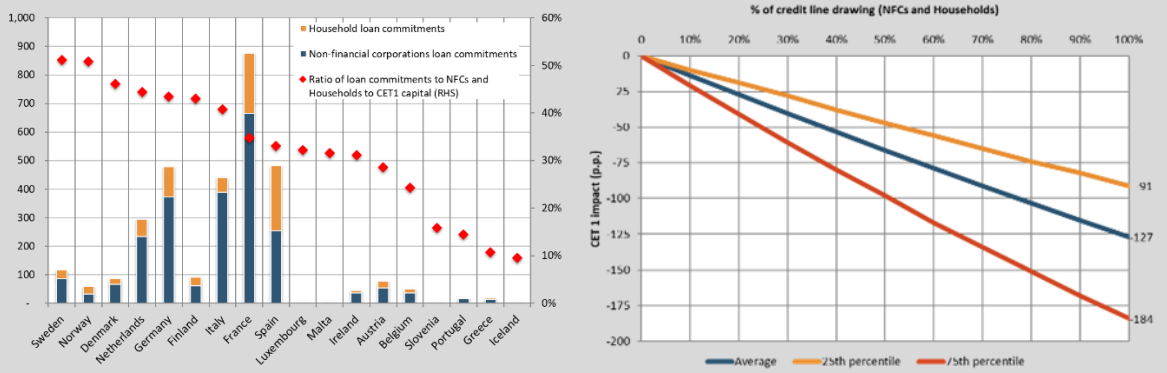

*Source: EBA supervisory reporting data*

**Box 2: Capital impact of undrawn credit commitments**

Anecdotal evidence suggests that banks' clients are increasingly drawing existing credit lines to serve their unprecedented liquidity needs. This might potentially affect capital ratios. Total performing loan commitments reported by EU banks, as at Q4 2019, amounted to around EUR 2.3tn to NFCs and EUR 0.8tn to households. These volumes represent, on average 37%, of total CET1 capital (Figure 11, left).[41]

[41] This loan commitment analysis is based on data reported in FINREP.

Figure 11: Off-balance sheet loan commitments to NFCs and households in EUR bn and as a proportion of CET1 capital, by country, as at Q4 2019 (left), and sensitivity analysis of CET1 capital impact (bps) on EU banks due to loan commitments drawings (NFCs and households) (right)




*Source: EBA supervisory reporting data*[42]

A sensitivity analysis of loan commitments indicates that, if 10% of NFC credit lines were drawn, the CET1 ratio would fall by 12 bps.[43] The equivalent impact of drawing loan commitments to households is around 2 bps. For the calculation of RWA, loan commitments are considered after applying credit conversion factors (CCFs), which depend on the level of risk and the possibility of withdrawals of the relevant off-balance sheet item. If the CCF is lower than 100%, and assuming that all other parameters of the risk weighting remain unchanged, the drawing of the credit line increases the capital requirement for that exposure.[44]

The right panel in Figure 11 shows the estimated CET1 impact as loan commitments are progressively drawn. The analysis also suggests that, in the extreme case in which all performing loan commitments would be drawn, RWA might increase by around 9.44% on average. This corresponds, on average, to a decrease in CET1 capital of 127 bps. The interquartile range is estimated to be between 91 bps and 184 bps of CET1.

It should be noted that the drawing of credit lines will also depend on the availability of other means of financing for banks' clients such as newly set-up guaranteed loan schemes (on such measures, see Chapter 1).[45]

### Sovereign exposures might suffer from valuation effects

As at Q4 2019, the gross carrying amount of general government exposures of EU banks stood at EUR 3.08tn. The largest share of sovereign exposures was measured at amortised cost (54%), followed by fair value through other comprehensive income (FVtOCI, 26 %) and fair value through profit and loss (FVtP&L, 14%, including held for trading). Since variations in the market value of the

[42] On loan commitments considered here, see footnote 41.

[43] On further details of the sensitivity analysis, see the Annex.

[44] No increase in the probability of default is assumed for the drawn amounts.

[45] For the calculation of this sensitivity analyses, no increase in risk weights due to a potential deterioration in asset quality was considered.

exposures under the last two categories are immediately reflected in equity, banks' capital levels might be significantly affected in periods of elevated spread volatility. Such impact might be amplified by the fact that around 45% of sovereign exposures have a maturity of 5 years or more, which are more vulnerable to interest rate moves than shorter-term exposures.[46]

**Box 3: Potential impacts on capital requirements from NFC bond rating downgrades**

In recent years, characterised by a low interest rate environment, the ongoing trend for financial disintermediation and the promotion of the Capital Markets Union, the volume of debt securities issued by NFCs has increased significantly, amounting to around EUR 1.4tn (outstanding volume) as at Q4 2019 for the euro area alone. This is almost twice as much as 10 years ago.[47]

The deterioration in the macroeconomic environment is expected to affect the asset quality of outstanding debt securities (on the macroeconomic developments, see Chapter 1). This will be reflected in the credit ratings of both issuers and issuances, which are an important element in the pricing of corporate bonds and their risk assessment by investors. A key challenge posed by the unfolding crisis are rating downgrades of some assets in this class to sub-investment status, resulting in so-called fallen angels.

EU banks hold only a limited amount of NFC bonds (on the share of loans vs. debt securities in total assets see text above). As at Q4 2019, debt securities issued by NFCs represented less than 1% of EU banks' total assets. Rating downgrades can affect both capital and liquidity requirements. However, a high-level analysis indicates that so-called fallen angels will not have a direct impact on regulatory capital, and the impact on liquidity is also likely to be limited.[48]

Under the standardised approach, the risk weights remain unchanged when a debt security (held until maturity) moves from investment grade to sub-investment grade. Under the internal ratings-based (IRB) approach, the risk weights are calculated based on the exposure's risk parameters and are therefore not directly affected by external ratings downgrades. As regards the LCR, although only corporate bonds with an investment grade status can be recognised as liquid assets, the volume of such bonds is not significant, as they account for only 0.6% of liquid assets, limiting the impact of an external downgrade (on the composition of liquid assets, see also section 5.2).

### Asset quality for banks will be affected in a material manner from this unprecedented shock

Banks have significantly improved their asset quality in recent years. Since their peak in Q4 2014 (7.1%), the volume of NPLs has more than halved.[49] The progress achieved across all countries should have helped banks to enter the COVID-19 crisis in a better state than would have been the case some time ago. Nonetheless, the NPL ratio in Q4 2019 stood at 3.1% with a total NPL volume of EUR 529bn,

[46] On further breakdowns and data related to sovereign exposures, see the EBA Risk Assessment Reports and EBA Risk Dashboards.

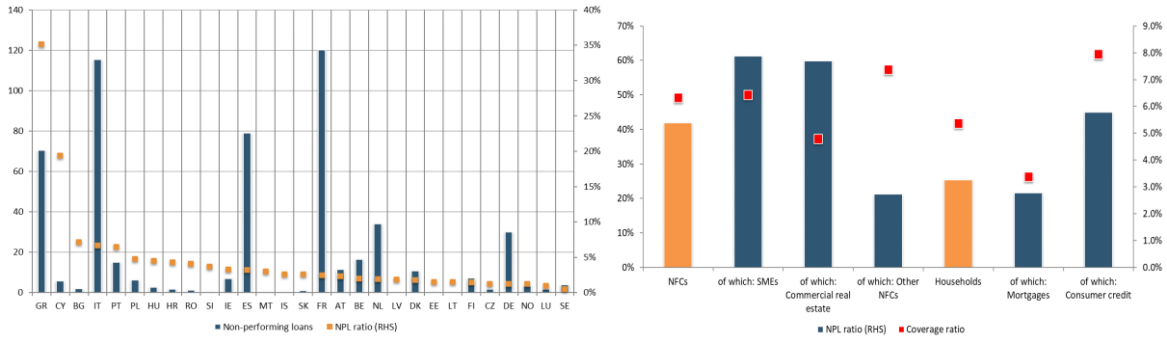
[47] See the ECB's data on debt securities issued.

[48] Furthermore, the ECB announced an easing of its collateral framework in April.

[49] For more detail on NPLs and asset quality, see also the EBA's report on NPLs: Progress made and challenges ahead.

a higher level than prior to the GFC. The average coverage ratio of NPLs reached 45.8% and is expected to increase in the near term future (Figure 12, left).

Figure 12: Volume of NPLs (EUR bn) and NPL ratio (%), by country (left), and EU NPL and coverage ratios by subsegment (right), as at Q4 2019




*Sources: EBA supervisory reporting data and EBA calculations*

Asset quality is heterogeneous across portfolios. Exposures to households have lower NPL ratios (3.3%) than exposures to NFCs (5.4%). Looking at subsegments, NPL ratios for SMEs, CREs and consumer credit are considerably higher than for large corporates and mortgage loans. Provisioning policies vary widely across subsegments, and coverage ratios are particularly high for exactly those segments that face elevated NPL ratios (Figure 12, right).

On NACE code level, the construction industry reported the highest NPL ratio (15%) in Q4 2019. Sectors more directly affected by the COVID-19 outbreak, such as accommodation and food services, and arts, entertainment and recreation, also have relatively high NPL ratios (9% and 8%, respectively). In addition, manufacturing, wholesale and retail trade, and transport and storage have an NPL ratio of around 7%, which is above the overall EU NPL ratio (Figure 9).[50]

Based on public disclosure of interim financial statements, banks' Q1 results show the first signs of deterioration in asset quality. Accompanying guidance that banks have provided for the remainder of the year points to a further material deterioration. It is clear that only a part of the expected impact on banks' loan loss provisioning has so far been incurred, with a bigger part still to come. Asset quality will be one of the key challenges for banks in the quarters – and potentially also years – to come. Box 4 provides an analysis of potential sensitivities of banks' credit risk.

**Box 4: Sensitivity on credit risk of loan portfolios**

EU banks will most likely suffer material losses as a result of the COVID-19 outbreak and the confinement measures. Although the macroeconomic forecasts for the EU anticipate an extraordinary downturn, it is still very difficult to predict the pace of the economic recovery and too early to conclude on the mitigating impact of government support measures. Any quantification of losses is therefore surrounded by significant uncertainty.

[50] For more detail on NPLs and asset quality, see also the EBA's report on NPLs: Progress made and challenges ahead.

As a point of reference, potential losses can be estimated based on the 2018 EU-wide stress test. In this analysis, the sensitivity to the 2018 stress test adverse scenario is applied to the Q4 2019 loan portfolios of NFCs and households and is calculated bank by bank. Three different sensitivities are considered, with stressed IFRS 9 transition rates derived primarily from cumulative flows of exposure to stage 2 and stage 3 during the modelled 3-year crisis of the 2018 stress test.[51] Thus, a hypothetical instantaneous shock is assumed to be of similar magnitude to the cumulative adverse shock arising from the 2018 stress test.

For all sensitivities, the differences between stressed transition rates projected in the 2018 stress test and the starting point are calculated. For the purpose of this analysis, these differences are denominated as 'stressed add-ons'.[52] To ensure that the current starting points of banks are taken into account, the stressed add-ons are linked to the actual transition rates reported as at Q4 2019.[53]

In sensitivity 1, the stressed add-ons are based on the adverse scenario of the 2018 stress test. Sensitivity 2 builds on those stressed add-ons, but applies a further amplification of shocks to sectors that are presumed to be most affected by social distancing and confinement measures, as well as to household exposures other than residential mortgages (e.g. consumer loans). Consumer loans and similar exposures commonly suffer significant asset quality deterioration in economic downturns (see above on the NPL ratios by segment, Figure 12, right).[54] Sensitivity 3 builds on sensitivity 2 but further extends the shock to combinations of the most affected sectors and countries in order to capture vulnerable sectors from countries particularly affected by the COVID-19 crisis.[55] This amplification of shocks leads to a larger amount of exposures moving to stages 2 and 3.

The impact on ECL is derived from the application of the banks' 2019 average coverage ratios by stage to the stressed exposure flows. The impact on RWA is also derived in line with the 2018 EU-wide stress test and considers increased shocks in sensitivities 2 and 3. For IRB banks, a stressed regulatory probability of default (PD) is calculated similarly to the stressed IFRS 9 transition rates and subsequently used in the IRB regulatory formula to derive new average risk weights. For standardised approach banks, a multiple of RWA increase during the stress test horizon is calculated and applied to the starting point RWA.[56]

[51] See the EBA EU wide 2018 stress test. Transitions to stages 2 and 3 include the following flows of exposure: from stage 1 to stage 2, from stage 1 to stage 3, and from stage 2 to stage 3.

[52] These add-ons are extrapolated to banks that are not in the EU-wide stress test sample based, whenever possible, on country averages.

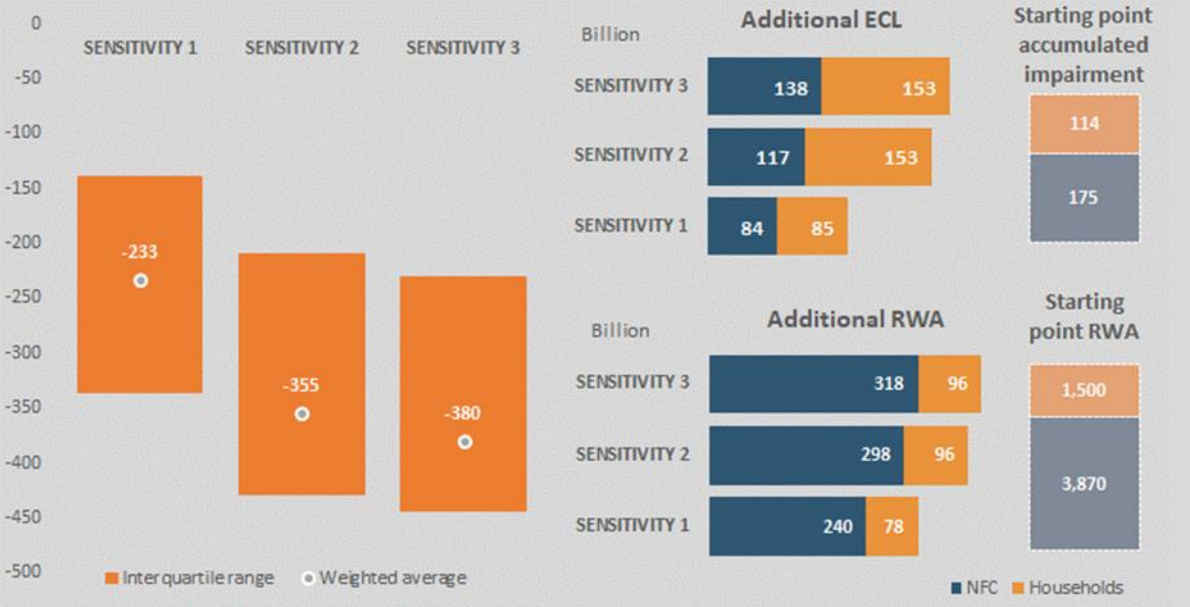
[53] The actual transition rates are derived from the banks' supervisory reporting of annual flows of exposure between IFRS 9 stages in FINREP.

[54] In sensitivity 2, the exposure towards these subportfolios is subject to stressed add-ons, which are increased by one standard deviation. The standard deviation is calculated based on the distribution of banks in the stress test sample and leads to an increase in the average transition rates from sensitivity 1 by multiples of around 1.5. These subportfolios represent 44% of total stage 1 and stage 2 exposures and include household exposures other than residential mortgages as well as the most affected sectors as identified in Chapter 1.

[55] In sensitivity 3, the exposure towards these subportfolios is subject to stressed add-ons which are increased by two standard deviations. This leads to an increase in the average transition rates from sensitivity 1 by multiples of around 2.1. This subportfolio represents 13% of the total stage 1 and stage 2 exposures and includes the same sectors from sensitivity 2 in the most affected countries as described in Chapter 1.

[56] For details on the methodology and assumptions, see the Annex.

Figure 13: Credit risk sensitivity analysis – weighted average (in bps) and interquartile range of impact on CET1 ratio (left) and starting point and additional total ECL and RWA for NFCs and households (EUR bn, right)




*Sources: EBA supervisory reporting and stress test data, EBA calculations*

Despite the better starting point with transition rates as at Q4 2019 lower than in the case of the 2018 stress test, they remain highly sensitive to a deterioration in asset quality, and significant losses might need to be recognised. Figure 13 shows the impact on the average CET1 ratio in the event that the additional expected credit loss (ECL) and RWA materialise, and according to each sensitivity. The disaggregation between additional ECL and additional RWA is also presented above.[57] The weighted average impact on the CET1 ratio of EU banks ranges between around –230 bps in sensitivity 1 to around –380 bps in sensitivity 3.

The heterogeneity of sensitivities to adverse events across banks is evident given the interquartile range of around –200 bps for all sensitivities. The impact on the CET1 ratio is mainly driven by the additional ECL (around 85% of the total impact), with a similar distribution between NFCs and households in sensitivity 1. The additional ECL estimated compares with losses of approximately EUR 46bn booked in 2019. With regard to the impact on RWA, the main increase is related to NFCs because the projected increase in regulatory PDs is higher (70 bps, compared with 40 bps for households) and a higher starting point for loss given default (LGD).

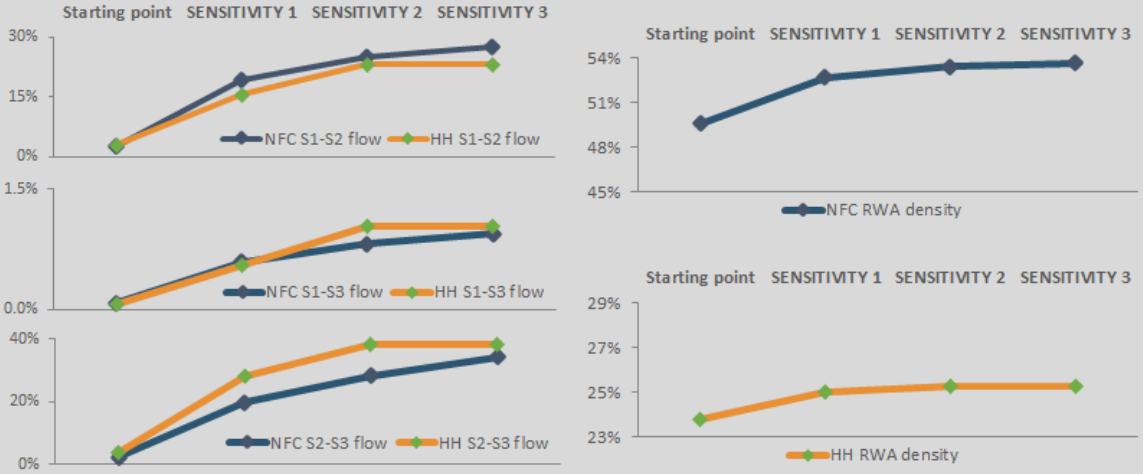
In sensitivity 2, the CET1 ratio impact increases by around 120 bps, which suggests that banks are highly sensitive to a further deterioration in household exposures and in exposures to particular economic sectors identified as more susceptible to worsening economic sentiment. This impact is, however, largely driven by the additional shock to households other than mortgages which, despite the lower exposure, exhibit higher stressed transitions to stage 3 than exposures towards the most

[57] No transitional arrangements are considered in the additional ECL amount. This also means that the proposal from the European Commission to change the IFRS 9 transitional arrangements is not part of this analysis (for further details on this measure, please refer to the European Commission's communication on the banking package to facilitate lending to households and businesses in the EU).

affected sectors.[58] Sensitivity 3, which amplifies the shock to the combination of exposures towards affected sectors and countries, leads to a further decrease in the CET1 ratio of 25 bps.

The cost of risk, based on the additional ECL from the sensitivities, would reach approximately 116 bps in sensitivity 1, 186 bps in sensitivity 2 and 200 bps in sensitivity 3.

Figure 14: Credit risk sensitivity analysis – effect on transitions to riskier IFRS 9 stages (left) and RWA density (right) for NFCs and households




*Sources: EBA supervisory reporting and stress test data, EBA calculations*

As shown in Figure 14, the starting point transition rates in Q4 2019 are low for both NFCs and households. This leads to a generally less severe projection, and only in sensitivity 3 do the transition rates come close to those from the 2018 stress test. When compared with the adverse cumulative credit losses from the 2018 stress test, the additional ECL represents, on average, 50% in sensitivity 1, 79% in sensitivity 2 and 83% in sensitivity 3. The increase in RWA density is generally moderate but more pronounced for NFCs.

Figure 15: Credit risk sensitivity analysis – share of stage 3 loans

| | End-2019 | Sensitivity 1 | Sensitivity 2 | Sensitivity 3 |
|---|---|---|---|---|
| **NFC** | 5.3% | 7.5% | 8.4% | 9.0% |
| **HH** | 3.2% | 5.5% | 6.6% | 6.6% |
| **Total** | **4.2%** | **6.4%** | **7.5%** | **7.7%** |

*Sources: EBA supervisory reporting and stress test data, EBA calculations*

Figure 15 shows the impact of the shocks on the share of stage 3 loans, which would significantly increase from 4.2% in Q4 2019 to 6.4% in sensitivity 1, 7.5% in sensitivity 2 and 7.7% in sensitivity 3.

[58] The share of performing exposures to households other than mortgages is 5 p.p. lower than the share of the most affected sectors (19% vs. 24%), but its stressed transition rate from stage 2 to stage 3 is, on average, around 15 p.p. higher.

Given the uncertainties surrounding the duration and impact of the COVID-19 crisis, the aim of this analysis is not to estimate the magnitude of losses, but rather to assess the sensitivity of banks to events that might materially increase PDs.

Putting this analysis in perspective, the underlying adverse scenario considered to derive stressed transition rates (i.e. the one from the 2018 stress test) implies a cumulative GDP decline of 2.4% for the euro area and a rising unemployment rate up to 3.0 p.p. above the baseline. As a reference, this underlying severity is not very far from the medium-term IMF and ECB expectations for the euro area, which forecast a cumulative 2-year decline in GDP of 2.8% and 3.0%, respectively.[59] However, the shape of GDP contraction and recovery differs between COVID-19-related forecasts and the underlying assumption of the 2018 EU-wide stress test.

Caution should be exercised in drawing conclusions from the results of this sensitivity analysis, as it is based on a potential deterioration of PDs of similar severity to the 2018 stress test, while other relevant parameters are kept constant. For example, LGDs and exposures at default (EADs) are not stressed in order to restrict the changes to the PD parameters, but nor does this analysis explicitly consider the effect of moratoria, government guarantees and other policy measures to mitigate the impact of COVID-19, all of which might significantly affect asset quality in general (see Chapter 1 for further details on these measures).[60]

[59] The ECB forecast mentioned here is the medium scenario as per the ECB's Alternative scenarios for the impact of the COVID-19 pandemic on economic activity in the euro area. Please refer to Chapter 1 for further details.

[60] See the EBA statements on the actions to mitigate the impact of COVID-19, including on the application of the prudential framework regarding default, forbearance and IFRS 9.

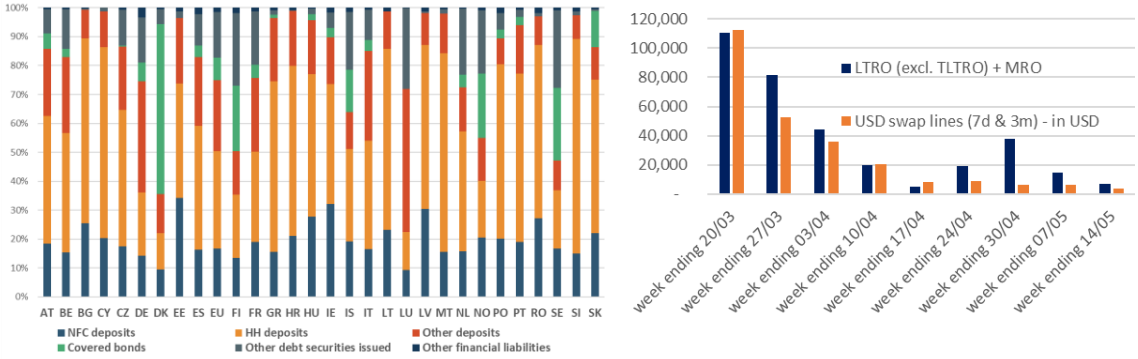
# 5. Funding and liquidity

## 5.1 Funding: growing relevance of central bank funding

Banks entered the COVID-19 crisis with a continued strong focus on deposits in their liability structure. The share of customer deposits in banks' financial liabilities has continuously increased in the past years despite no or little remuneration for depositors and wider usage of negative rates.[61] In Q4 2019, the share of customer deposits reached 50.4%. Since the outbreak of the crisis, deposits have been stable and volumes have been largely unaffected.[62] Competent authorities have not reported any unusual outflows of household or NFC deposits since March, although in some cases a temporary spike in cash demand was observed.

Debt securities issued, including covered bonds, make for the second largest share of liabilities in EU banks' liabilities composition (Figure 16, left). After banks issued high volumes of unsecured and secured debt securities in the first weeks of 2020, issuance activity of EU banks came to a halt on 24 February 2020. No major listed unsecured debt security of an EU bank was issued until mid-April 2020, while market volatility spiked to unprecedented heights and spreads on European debt capital markets, including for bank debt instruments, sharply increased. Itraxx senior and subordinated spreads temporarily widened from near-record lows to levels not seen since the GFC (Figure 17, left). Spreads have decreased since mid-March, but remain substantially higher and much more volatile than they were in February.

Figure 16: EU banks' composition of financial liabilities, as at Q4 2019 (left) and allotments of ECB open market operations since mid-March (right)




*Sources: EBA supervisory reporting data (left), ECB and EBA calculations (right)*[63]

[61] See EBA Risk Assessment Reports and EBA Risk Dashboards on trends in banks' deposits and funding composition in more general. The sample of banks covered in those publication differs from that used in this report.

[62] The ECB's sectoral breakdown of MFI deposits vis-a-vis other euro area residents shows a slight increase of household deposits in March for the Euro area, but differing trends for some countries (page updated 29 April 2020; on the definition of MFI, see footnote 37).

[63] The allotments include main refinancing operations (MROs), longer term refinancing operations (LTROs) and USD tender operations; see History of all ECB open market operations.

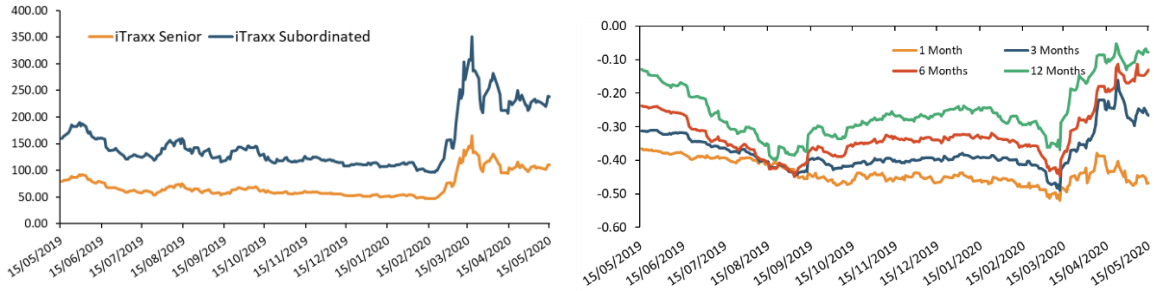
Issuance activity of unsecured bank debt instruments cautiously increased again in May, and includes the first issuances of subordinated instruments since the crisis started. One driver of issuances of subordinated debt is not least the increased flexibility with which P2R can be covered, i.e. whether or not banks can cover it with capital instruments other than CET1 (see section 0 for more detail on this). Pricing levels are markedly higher than they were until February, and covered bond issuance volumes remain very low.

### No immediate funding pressure for banks . . .

Reduced issuance volumes of bank debt instruments and their increased pricing are not as yet posing a material supervisory concern. Amid benign market conditions and significant primary market activity during the first weeks of the year, banks seized the opportunity to pre-fund some of their funding plans for 2020 at very low pricing. This has led to reduced market funding and roll-over needs to date. Market information suggests that financial institutions issued higher volumes of unsecured debt instruments in January and February this year than in the same time period in 2019.

Ample central bank funding, including the ECB's additional LTROs and PELTROs, introduced on 12 March and 30 April, respectively, provide credible alternative sources of funding, including in the event of the need to roll over some maturing market funding.[64] High weekly LTRO take-up volumes, amounting to a total of EUR 336bn (excluding TLTRO), demonstrate the attractiveness of this programme. This high take-up not only reflects funding needs, but is also opportunity driven by the low price for funding this ECB facility offers (Figure 16, right). In the long term banks will need to replace central bank funding with market-based instruments or deposits.

Figure 17: iTraxx for financials' senior unsecured and subordinated debt spreads (left) and Euribor by tenor (right), trends over time




*Sources: Bloomberg and EBA calculations (right)*

Since the beginning of the COVID-19 crisis, euro area banks have also made use of much higher volumes of the USD liquidity swap programmes that the ECB has entered into with the US Fed. This may be attributable to some challenges banks have faced to attain USD at reasonable costs, but also to a strong increase in USD repo rates and a corresponding increase in the attractiveness of the swap programmes (Figure 16, right). Central banks beyond the euro area have also provided additional

[64] See the ECB's announcement of measures to support bank liquidity conditions and money market activity. Allotment started on 17 March according to the announced calendar.

liquidity and funding facilities in response to the crisis, such as swap lines to provide euro or USD liquidity.

Strong price increases in market funding since the onset of the COVID-19 crisis also extend to short-term market funding. Euribor short-term interbank interest rates of different tenures have increased since mid-March, and tenures of 6 and 12 months have neared positive interest rate territory (Figure 17, right).

### . . . however, future wholesale funding will be more challenging

Many banks have substantial market funding needs and need to roll over debt redemptions for the remainder of 2020, in spite of ample central bank funding avenues. Market funding needs are driven not least by requirements to further build loss-absorbing capacity of minimum requirement for own funds and eligible liabilities (MREL) eligible instruments. This might pose some challenges and incur substantially higher costs for banks concerned, should pricings for eligible instruments remain at current heightened levels for much longer.[65]

Based on liquidity reporting data, ca. 20% of securities issued by banks in the sample will mature in the next 6 months, and an additional 10% will mature in 1 year. This might point to some near-term pricing and profitability challenges of banks, e.g. the need to roll over wholesale funding.

Issuance volumes of secured funding have also been markedly reduced since the beginning of the COVID-19 crisis, not least since central bank funding programmes offer attractive alternatives to secured funding. Possibly large needs for secured funding, including the need to roll over redeemed covered bonds, might pose some challenges and impact profitability as pricing for secured funding has also increased. The ratio of encumbered assets of EU banks decreased to 25.1% in Q4 2019, from 26.1% in Q4 2018. The decrease is driven by the denominator, as the volume of total assets and collateral grew more than the volume of encumbered assets and collateral (numerator). This might indicate that availability of collateral, e.g. for covered bond issuing and further central bank funding, might not be an issue of major concern in the near term.

## 5.2 Liquidity positions remained stable also in Q1 2020

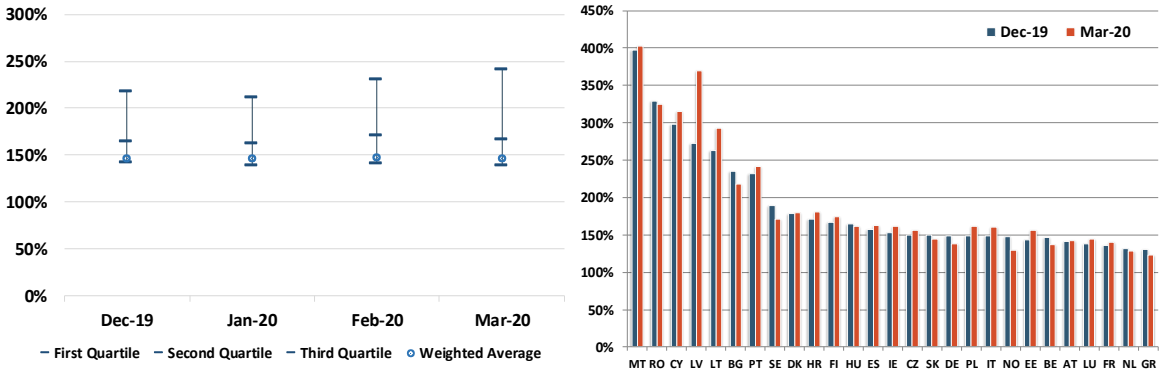
Liquidity coverage requirements are intended to ensure banks' short-term resilience to potential liquidity disruptions. Banks are required to hold a liquidity buffer to cover net liquidity outflows over a stress period of 30 calendar days and should maintain an LCR of at least 100%.[66] The monitoring of EU banks' LCR shows a solid short-term liquidity position. The LCR is well above the minimum level of 100% (Figure 18). In Q1 2020, EU banks' LCR remained high. As the LCR is also designed to be used by banks under stress, this ratio might decline in the upcoming quarters. The provision of liquidity to

[65] For the euro area, the Single Resolution Board (SRB) announced in April that it would assess the potential impact of market conditions on transition periods needed to build up MREL. Other resolution authorities, such as the Swedish National Debt Office, reacted similarly.

[66] For more details on liquidity requirements, see the dedicated EBA website.

the banking sector through central banks is part of the liquidity buffer in the LCR if invested in liquid assets. It will include their associated repos only when their remaining maturity is below 30 days.

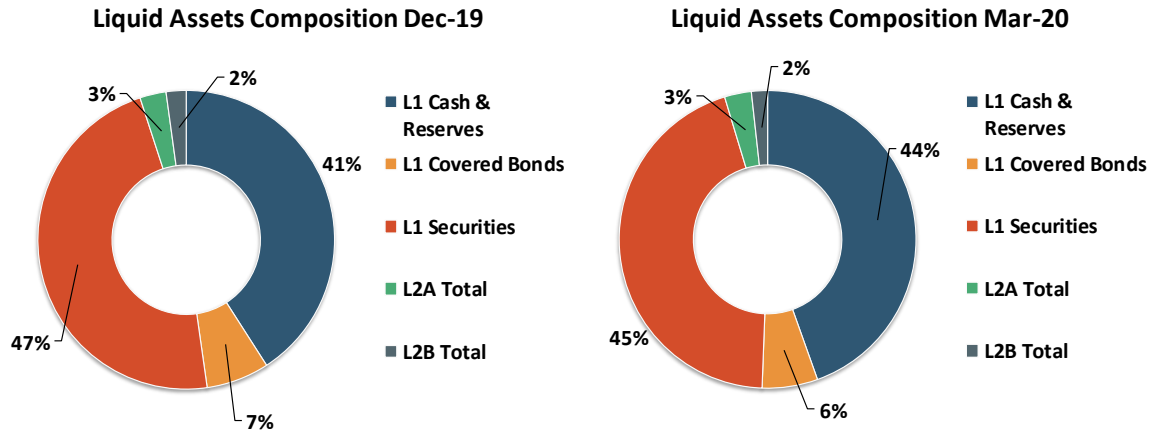
Figure 18: Liquidity coverage, EU level, over time (left) and by country (right)




*Source: EBA supervisory reporting data*

With regards to the composition of the liquid assets (after the application of the weights and pre cap), the largest part of LCR liquidity buffers relies on level 1 (L1) assets, which include, for instance, central banks' reserves and marketable securities assets representing claims on or guaranteed by sovereigns or central banks. During Q1, the increase in L1 cash and reserves was mainly due to growing exposures to central banks. Level 2 (L2A and L2B) assets mainly comprise corporate bonds, and asset-backed securities (ABS), but also sovereign government bonds not eligible as L1 assets. In Q1 2020 the overall composition was largely unchanged from Q4 2019 (Figure 19).

Figure 19: Liquid assets composition (after weights and pre cap), EU level, as at Q4 2019 and Q1 2020

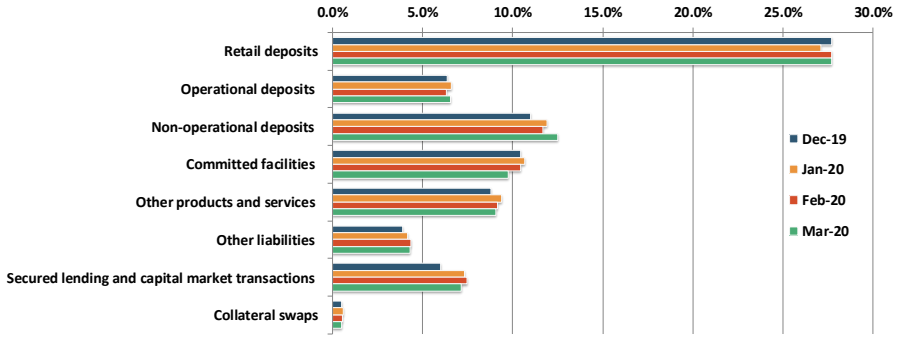



*Source: EBA supervisory reporting data*

On the composition of the outflow (pre-application of weights), as a share of total assets, short-term funding mostly relies on low volatile instruments such as retail deposits. Undrawn committed facilities represent, on average, 10% of total assets. They declined slightly in the March 2020 composition of liquid assets. This might imply, for instance, that banks' customers started using their committed lines (on this subject, see also the sensitivity on drawings of loan commitments in

Chapter 4; see also Figure 20). There may be other reasons for the decline in committed facilities, for example failure to renew committed facilities that have expired.

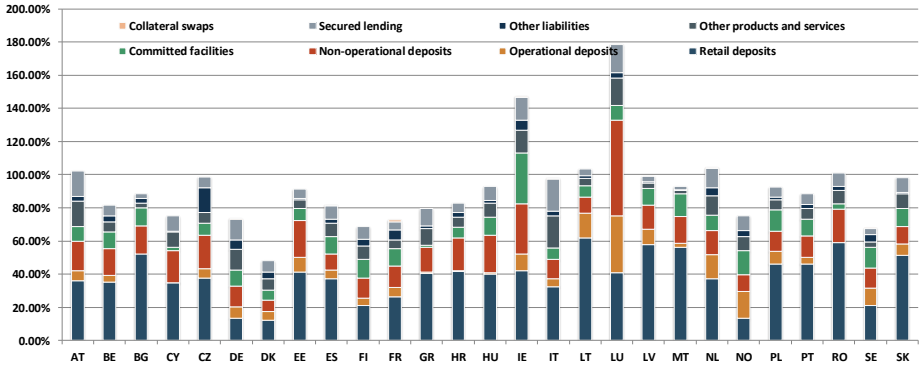
Figure 20: Outflows (pre weights) as a share of total assets, EU level, over time




*Source: EBA supervisory reporting data*

In any case, the evolution of committed facilities shows a small drop in Q1 2020 (–0.7% absolute difference), which implies that customers can still benefit from a high level of liquidity granted by banks through their committed facilities. These facilities are in any case in addition to guaranteed loans, as provided by many governments (see, on COVID-19 related measures, Chapter 1). In the short-term, banks' possibility to fulfil these obligations seems to be comfortable due to the high level of their liquidity buffer they can use to fulfil their short-term obligations, as well as potential additional funding from central banks (see section 5.1, above).

Figure 21: Outflows (pre weights) as a share of total assets, by country, Q1 2020




*Source: EBA supervisory reporting data*

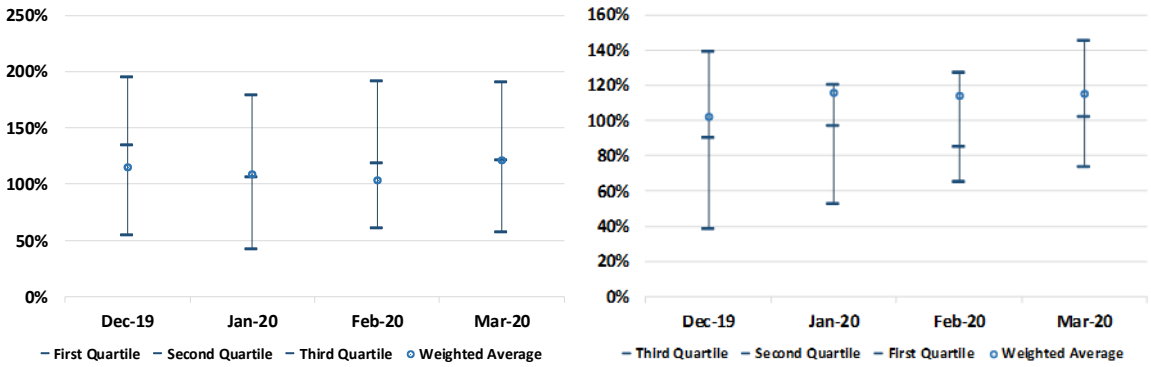
With regard to currency-specific figures, LCRs are on average close to 100% for USD and GBP. The latest trend in Q1 2020 shows a slight increase in the LCRs of both USD and GBP (Figure 22). However, interquartile ranges are wide, with the lower bounds being significantly below 100%.

Nonetheless, the USD liquidity buffers represent less than 20% of the overall liquidity buffers of banks reporting USD as a significant currency in Q1 2020. The percentage is almost the same with regards to the net liquidity position. The overall gap that banks might need to fund amounts to 0.3% of the total assets of banks that report USD as a significant currency. This figure remained constant throughout Q1 2020. It also needs to be added that, amid the unfolding crisis, central banks

introduced measures aimed at addressing any potential stress in the USD funding market, such as USD swap lines (see section 5.1).

Liquidity buffers in GBP represent less than 10% of the overall liquidity buffers of banks reporting GBP as a significant currency in Q1 2020, and the overall gap that banks might need to fund represents 0.3% of the total asset of banks that report GBP as a significant currency. The percentage fell slightly in Q1 2020 (to 0.2% of the total assets in March).

Figure 22: LCR by currency, for USD (left) and GBP (right), EU, over time




*Source: EBA supervisory reporting data*

# 6. Profitability

Banks entered the COVID-19 crisis with very low profitability levels. Low margins and operating cost pressures have driven the average return on equity (RoE) of EU banks to 5.9% as at Q4 2019, well below the 9.5% of their US peers.[67] The economic downturn might further hit banks' profits (see Chapter 1 for further details on GDP expectations). The magnitude of the impact will depend not only on the severity of the contraction, but also on the scope and depth of the policy measures adopted in each relevant jurisdiction.

### Banks' revenues will come under pressure

As regards lending, which is the main source of banks' revenues, the indications are that new mortgage lending has come to a temporary halt.[68] In contrast, NFC lending is rising, driven also by the drawing of committed credit lines and new lending under public guarantee schemes (see also Chapter 4). However, the positive impact of loan growth on interest income could be curtailed by contracting margins amid the low interest rate environment. In addition, banks in jurisdictions where loan moratoria measures entail the suspension of interest accrual might suffer an additional hit.

If an overall increase in lending volumes takes place, banks might need additional funding, the cheapest source of which might be central banks. Even though the availability of eligible collateral is not a major concern, measures such as the recent ECB collateral easing are helpful (see, on the collateral easing, Chapter 1 and, on the asset encumbrance ratio, section 5.1). Other sources of funding might, in contrast, become more expensive. Given the deterioration in debt financial markets, wholesale funding might come at higher cost, with consequent effects on banks' margins (see also section 5.1 on banks' funding). In addition, under the current circumstances, banks might need to postpone their previous plans to charge negative interest rates to NFC and household depositors to avoid reputational issues.

COVID-19 will have multiple and diverse effects not only on net interest income (NII), but also on net fee and commission income (NFCI). For example, increases in fees related to, new lending might benefit banks in the NFC sector, but banks whose portfolios experience greatly reduced loan origination volumes might suffer. Likewise, the overall performance of investment banking fees will be difficult to assess. For example, fees related to clients' trading might experience a temporary rise while those related to merger and acquisition (M&A) might slump. Historical data suggest that financial market turmoil – as seen since late February – might result in a fall in the volumes of banks' assets under management, leading to a decline in asset management fees. For instance, historical market data indicate a 20% drop in assets managed in Europe in 2008.[69] However, trends might also be different during this crisis. As regards payment service fees, NFCs operations, especially

[67] On EU banks' profitability, see the EBA's Risk Dashboard and the EBA's Risk Assessment Report. For the US data, see the Quarterly Trends for Consolidated U.S. Banking Organizations.

[68] For the euro area, ECB data on MFI loans vis-a-vis other euro area residents show a slight contraction in mortgage lending in March. See also footnote 37.

[69] See European Fund and Asset Management Association, Asset management in Europe: an overview of the asset management industry.

international payments, might contract sharply. In contrast, in the retail business, some fees might increase as a result of lower use of cash to prevent spread of the virus.

Market turmoil also affects net trading income (NTI). Some investment banks sometimes report increases in income, for instance in their fixed income, currency and commodities (FICC) divisions, in the early days of a recession. However, these might only be one-off effects. In contrast to the FICC segment, Equity & Derivatives business lines seem to suffer from a large fall in equity markets, combined with high volatilities.

**Box 5: Potential impact of a decrease in banks' revenues**

With NII potentially coming under pressure, a sensitivity analysis for this part of the revenues was conducted.[70] The analysis indicates that every 10% decrease in interest income from NFC and household loans results in an average RoE decrease for EU banks of 100 bps and 119 bps, respectively.[71] Other things being equal, this would imply that the CET1 ratio uplift would be 19 bps and 22 bps lower, respectively. The results are widely dispersed, largely because of wide variations in banks' business models. In the case of household loans, for instance, the average impact is skewed by some big institutions for which this segment is particularly important. The impact for a median bank would be a fall in RoE of around 60 bps RoE and in CET1 accretion of around 16 bps.

Likewise, COVID-19 might also have an impact on fee income. Every 10% fall in this component translates into a 122-bps drop in RoE and a 23-bps drop in CET1 accumulation (98 bps and 18 bps for the median). Market turmoil might also take its toll on NTI. A sensitivity analysis shows that, on average, every 10% fall in NTI results in a decrease of 28 bps in RoE and of 5 bps in CET1 accretion. However, the impact for a median bank would be a decrease in RoE of only 6 bps and in the CET1 ratio of only 1 bp (Figure 23).

Figure 23: Summary of banks' revenues sensitivities (negtaive impact on RoE and corresponding lower CET1 accretion)

| Sensitivity of RoE (in bps) to a: | 10% decrease of interest income from NFC loans | 10% decrease of interest income from household loans | 10% decrease of fee income | 10% decrease of NTI |
|---|---|---|---|---|
| **Average** | 100 | 119 | 122 | 28 |
| **Median** | 90 | 91 | 98 | 6 |
| **1st quartile** | 56 | 61 | 56 | 1 |
| **3rd quartile** | 122 | 124 | 135 | 17 |

| Sensitivity of the CET1 ratio (in bps) to a: | 10% decrease of interest income from NFC loans | 10% decrease of interest income from household loans | 10% decrease of fee income | 10% decrease of NTI |
|---|---|---|---|---|
| **Average** | 19 | 22 | 23 | 5 |
| **Median** | 16 | 16 | 18 | 1 |
| **1st quartile** | 11 | 12 | 11 | 0 |
| **3rd quartile** | 22 | 26 | 26 | 4 |

*Sources: EBA supervisory reporting data and EBA calculations*

[70] However, there might also be supporting factors, such as cheap central bank funding.

[71] Tax effects are not considered.

Beyond the impact on revenues, the COVID-19 outbreak and the containment measures are expected to significantly increase defaults (for further detail on the outbreak and economic outlook see Chapter 1, and for more on asset quality see Chapter 4) and pose additional challenges for banks that want to dispose of their existing non-performing loans (NPLs). Nonetheless, moratoria and other government support measures applied in many countries might help to prevent a quick build-up of non-performing exposures and allow banks to manage them once the economy is in a better state. In this regard, the recent EBA Guidelines on loan moratoria set requirements that, if fulfilled, will temporarily help avoid the classification of exposures as forborne or as defaulted under distressed restructuring.[72]

Banks might delay the implementation of their pre-COVID plans to streamline operating costs. Given the massive impact of the crisis on labour markets in many countries, staff reductions and branch closures could give rise to reputational concerns going forward. Although consolidation in the sector might help to address the challenges in respect of profitability, strategies aimed at using synergies or economies of scale such as through M&A might imply elevated operational risks in times of other significant strains. Therefore, any attempt to reduce operating costs might be particularly challenging in the short term.

Confinement and other social distancing measures increased pressure on clients to make greater use of digital banking channels. Once the pandemic is over, customers might find that they do not need to visit their bank branch, or do so less often. Similarly, banks that were less inclined to reduce their physical presence and to foster online banking might now be strongly pushed to embark on a comprehensive digital transformation. Investments in this area might also be fostered by the recent EC proposal to prepone the non-deduction of prudently valued software assets (see Box 1).

Finally, it is noteworthy that, whereas in previous crises the reputation of banks was severely damaged, the support they can provide to the real economy during the pandemic could result in an improvement in their public image.

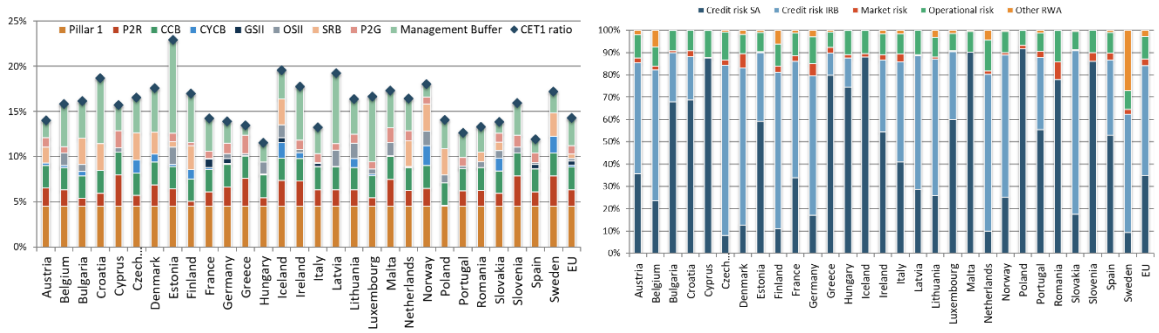
[72] See the EBA's Guidelines on legislative and non-legislative moratoria on loan repayments applied in the light of the COVID-19 crisis.

# 7. Capital

## 7.1 Capital and RWA composition

In recent years, banks have strengthened their capital position, driven mainly by regulatory requirements (e.g. SREP process, macroprudential capital buffers). In Q4 2019, EU banks' average CET1 ratio reached 14.9% (14.7% on a fully loaded basis), which is well above regulatory capital requirements. On top of the OCR and P2G, banks hold additional capital according to internal capital targets and risk appetite. This management buffer amounted to EUR 270bn (equivalent to very roughly 3% of RWA; Figure 24, left).[73] Banks' leverage ratio stood at 5.7% (5.5% on a fully loaded basis) as at Q4 2019.

Figure 24: CET1 ratio – capital stack (left) and RWA composition (right), by country, as at Q4 2019




*Source: EBA supervisory reporting data*

Banks' RWA have decreased since the last financial crisis, reflecting banks' deleveraging strategies and efforts to focus their business activities on core markets and portfolios. As at Q4 2019, credit risk represented 84% of total RWA, followed by operational risk (10%). Market and other RWA were less significant, each with a share of around 3% of total RWA. In terms of credit risk, both approaches defined by the CRR to calculate risk weights are material, with exposures treated under the IRB approach representing 58% and exposures under the standardised approach 42% of total credit RWA (Figure 24, right).

**Box 6: Preliminary impact estimates from the EC's banking package: SME supporting factor and leverage ratio**

One of the changes proposed by the EC in its banking package was the frontloading of the revised SME supporting factor, with the aim of encouraging banks to continue lending to SMEs (for more

[73] Management buffer after additional tier 1 (AT1) and T2 shortfalls in total capital requirements.

details, see Box 1). Supervisory data as at Q4 2019 show that around 60% of SME exposures were not subject to the SME supporting factor applicable at that time (around EUR 763bn).[74]

An assessment of the proposed measure, assuming that the revised supporting factor is extended to all SME exposures, and assuming that all loans are below the EUR 2.5m EU eligibility criterion, shows that EU banks may benefit earlier from a reduction in RWA of up to EUR 182bn. While this is an overestimate of the actual impact, it corresponds to an increase in the average CET1 ratio of up to 30 bps, with the interquartile range between 15 bps and 65 bps.[75]

Other changes proposed by the EC in its banking package are the date of application of the leverage ratio buffer as well as an amendment of the provision regarding central bank exposures in the calculation of the leverage ratio (see also Box 1). Regarding the latter, the EC proposed a revision to the offsetting mechanism, applicable under the discretion to exempt central bank exposures from the exposure calculation that competent authorities may trigger, under certain conditions, from 28 June 2021. An impact assessment of the exemption is provided below (see also further description in the Annex). It builds on the hypothetical condition that the revised CRR (CRR2) was applicable at the reference date used for this assessment (end-December 2019) and that the exemption was triggered on that same date. Therefore, the calculation does not differentiate between the impact under CRR2 and the proposed amendment.[76]

Figure 25 shows that the eight largest banks in the sample (banks with a leverage ratio exposure (LRE) > EUR 1 000bn) would, on average, decrease their leverage ratio exposure measure by 7.73% for the December 2019 reference date, assuming that all banks choose to apply the exemption and exclude central bank exposures from the calculation. This would lead to an increase in the average leverage ratio from 4.85% to 5.26%. This implies, that, assuming December 2019 as the public announcement date, the 3% minimum would, on average, be increased to 3.25%. In the case of medium-sized banks the impact is slightly lower. The decrease is more evident in banks with a leverage ratio exposure below EUR 100bn. The estimated exposure decrease in this case would be 9.75%, leading to an increase in the average leverage ratio from 7.87% to 8.71% for this group, assuming that all banks choose to apply the exemption. Assuming that December 2019 was the public announcement date, the 3% minimum would, on average, be increased to 3.32%.

[74] SME exposures are limited to those eligible for the application of the supporting factor. Defaulted exposures are included in the analysis owing to data limitations.

[75] Around 10% of banks considered in the calculation are not expected to obtain any benefit from this measure, of which the majority do not report any SME exposures.

[76] This is because at the public announcement date, also under the proposed amendments of the Commission to CRR2, all exempted central bank exposures are taken into account in the offset mechanism. It is only after the public announcement date of the competent authority that the Commission amendment could result in an impact on the leverage ratio minimum that is different from the unchanged CRR2 text. This would depend on the development in the amount of exempted central bank exposures after this date.

Figure 25: Impact of the exemption of central bank exposures by subsample (Q4 2019)

| | Largest banks (>EUR 1,000bn) | Medium Banks (<EUR 1,000bn and > EUR 100bn) | Small sized banks(<EUR 100bn) |
|---|---|---|---|
| Average decrease $EM_{LR}$ | 7.73% | 7.48% | 9.75% |
| Average normal LR (without CB exemption) | 4.85% | 5.52% | 7.87% |
| Average LR with CB exposure exemption | 5.26% | 5.96% | 8.71% |
| Average raised LR minimum to offset increase in LR on announcement date (assumed on Dec 2019) | 3.25% | 3.24% | 3.32% |

*Sources: EBA supervisory reporting data and EBA calculations*[77]

Regarding the latest trends, banks' Q1 financial statements largely show contracting CET1 ratios, at least according to publicly disclosed interim financial statements. Given that capital is increasing, supported by banks' profits, this contraction is mainly due to an increase in RWA. It is particularly driven by credit RWA, including those due to drawings of existing loan commitments, but also by rising market RWA. Looking forward, RWA are expected to rise even more as a result of a deterioration in asset quality, potentially further drawings of loan commitments and market risk. Regulatory measures might partially compensate for this effect (for more details, see Box 1, and on the impact estimates from the EC measures, see Box 6).

**Box 7: Impact from market risk**

In Q1 2020, the financial markets were exposed to extraordinary adverse market conditions, with extreme spikes in volatility and market stress. These conditions were accordingly reflected in banks' Q1 results, in particular through losses from trading and fair value positions, according to publicly disclosed interim financial statements. However, selected investment banks also benefited from these market conditions, in particular in their FICC segments.

In response to the elevated market stress and volatility, the EBA issued, on 22 April, a statement clarifying selected aspects of the regulatory framework in the area of market risk.[78] Among these, the EBA provided some clarifications on the computation of the value at risk (VaR) multiplier and the choice of the stressed value at risk (SVaR) observation period, which apply to banks using an IMA for market risk. [79] Furthermore, the EBA decided to amend the RTS on prudent valuation, introducing additional capital relief for banks.[80]

An estimate of the impact that the elevated volatility observed in Q1 2020 could have on the computation of RWA in Q1 2020 is provided in the next section. The analysis focuses only on banks

[77] Abbreviations used in this table: LR, leverage ratio; EM, exposure measure; CB, central bank; Dec, December.

[78] See the EBA's statement on the application of the prudential framework on targeted aspects in the area of market risk in the COVID-19 outbreak.

[79] See Article 366(4) of the CRR. The clarifications on the VaR multiplier complement the recent temporary measures on the qualitative VaR multiplier add-on announced by the ECB.

[80] See Delegated Regulation (EU) No 101/2016.

with an IMA, 36 in total in the reporting sample (as described in the text box immediately after the Executive summary), as the announced measures do not affect the computation of capital requirements under the standardised approach. In addition, an assessment of the measures taken by the EBA regarding the RTS on prudential valuation (on additional valuation adjustments, AVA) is provided in the final section of this textbox.

**IMA RWA and market volatility**

In Q4 2019, the total market RWA of banks using the IMA accounted for only 3.5% of total RWA, of which 2.7% were under the IMA and 0.8% under the standardised approach (see Figure 24). To assess the impact of market volatility on IMA RWA, IMA own funds requirements for Q1 2020 for each bank are first projected (based on the assumptions described in the Annex).[81] In the next step, two sensitivities on the quantitative VaR multiplier add-on are run on the projected Q1 2020 IMA RWA.[82]

Figure 26 shows the CET1 ratio impact from the estimated increase in IMA RWA for Q1 2020 for the two sensitivities. In the severely adverse sensitivity, which represents the upper bound for the increase in the VaR quantitative add-on, the impact of IMA RWA on the CET1 ratio would be around 25 bps at EU aggregate level. Some dispersion is observed across the sample, with the impact on some banks being up to 87 bps (95th percentile). In the adverse sensitivity, the impact at aggregate EU level is 4 bps less than in the severely adverse sensitivity (Figure 26). The CET1 ratio impact in the top 10 banks in terms of market risk IMA RWA is almost the same as the total EU average (1 bp more in both the adverse and the severely adverse sensitivities).

Figure 26: CET1 impact (bps) from the estimated increase in market risk IMA RWA in Q1 2020 for different sensitivities of the VaR quantitative multiplier add-on and dispersion

| | Q4-2019 | Q1-2020 | Q1-2020 | Q1-2020 |
|---|---|---|---|---|
| *Sensitivity for the VaR and sVaR quantitative add-on (overshootings)* → | | **No shock** *(Multipliers as of 2019 Q4)* | ***Adverse*** *(Max of the historical value)* | ***Severly adverse*** *(Add-on =1 assigned to all)* |
| **EU total IMA RWA (EUR mln)** | **182,092** | **277,422** | **284,670** | **303,546** |
| **EU total IMA RWA 2020 vs 2019 : Average (bps)** | | **20** | **21** | **25** |
| IMA RWA 2020 vs 2019 : 1st quartile (bps) | | *12* | *13* | *17* |
| IMA RWA 2020 vs 2019 : Median (bps) | | *22* | *23* | *34* |
| IMA RWA 2020 vs 2019 : 3rd quartile (bps) | | *36* | *39* | *45* |

*Sources: EBA supervisory reporting and stress test data, EBA calculations*

[81] The projected IMA RWA incorporate the recently announced ECB measures affecting the qualitative VaR multiplier add-on.

[82] The sensitivities already take into account the recently announced ECB measures on the qualitative VaR add-on.

**Impact on the AVA reserves**

To mitigate the excessive impact on AVAs due to the increase in bid-offer spreads in financial instruments observed in the first quarter of 2020, the EBA has decided to amend the RTS on prudent valuation by increasing the aggregation coefficient applicable to the core approach from 50% to 66% until 31 December 2020.[83] This applies only to AVA on market price uncertainty (MPU), close-out costs (CoCo) and model risk (MoR), and allows banks to further reduce the overall amount of AVA for these risks. As at Q4 2019, total AVA reserves in the EU banking sector accounted for less than 0.2% of total RWA while the AVA related to MPU, CoCo and MoR accounted for around 65% of total AVA at EU level.[84]

In order to assess the capital relief attributable to the increase in the aggregation coefficient, a similar approach is followed as in the previous sensitivity calculations. AVA reserves for Q1 2020 are projected[85] in a first step. In the second step, both the old aggregation coefficient (equal to 50%) and the new one (which is set to 66%) are applied. As shown in Figure 27, the capital relief arising from the increase in the aggregation coefficient would be at aggregate level almost 10 bps in terms of CET1 ratio. Regarding the dispersion, the amount of deductions saved by banks becomes more material in some extreme cases (46 bps for the 95th percentile).

Figure 27: Difference in CET1 ratio (bps) between projected Q1 2020 AVA with 50% aggregation coeffcient and projected Q1 2020 AVA with 66% aggregation coeffcient (only AVA related to MPU, CoCo and MoR)

| | Difference in AVA (bps) |
|---|---|
| Average | -9 |
| 1st quartile | -9 |
| Median | -4 |
| 3rd quartile | -2 |

*Sources: EBA supervisory reporting and stress test data, EBA calculations*

[83] See the EBA amending the RTS on prudent valuation.

[84] The RWA considered here are the total RWA of the banks reporting AVA.

[85] The AVA projection is based on the increases observed in the 2018 stress test data.

## 7.2 Capital-related measures

As a response to the stress situation in the financial sector caused by the COVID-19 outbreak, regulators and other authorities announced a series of capital-related measures with the aims of increasing the loss absorption capacity of the EU banking sector and of sustaining lending to the economy during the crisis period (see Box 1). This is the first application of the buffer framework that was introduced as a response to the last financial crisis. This framework foresees that banks do in fact make use of capital buffers in periods of economic or financial hardship.

Authorities accordingly confirmed that this means that banks can breach the combined buffer requirements, even if this would trigger the application of rules on the maximum distributable amount (MDA). The CET1 capital held by banks above combined buffer requirements has increased thanks to several measures that either increase available capital or decrease the combined buffer requirement. The combined impact of these measures in terms of CET1 capital amounts to nearly EUR 100bn (equivalent to around 1% of RWA on average in the EU). The measures include the following:

1) In line with the EBA recommendation on the use of the flexibility embedded in existing regulation, the Single Supervisory Mechanism (SSM) announced that it would allow banks to cover P2R with capital instruments other than CET1.[86] In particular, banks are allowed to reduce the share of CET1 coverage to as low as 56.25% of P2R, provided they have sufficient tier 2 (T2) and additional tier 1 (AT1) capital available.[87] This measure could free up to EUR 27bn of CET1 capital for the banks under the ECB Banking Supervision in the sample (equivalent to 0.3% of RWA on average in the EU).[88]

2) The release or reduction of CCyB announced by a number of authorities provides capital relief so that banks can also maintain the supply of credit to the real economy.[89] Given the projected deterioration in the economy, it is possible that other authorities will follow suit and release or lower buffers further in their jurisdictions. The actual releases of the CCyB by several authorities so far provide a CET1 capital relief of EUR 16bn (equivalent to 0.2% of RWA on average in the EU).

3) Some authorities reduced the systemic risk buffer (SyRB) and the other systemically important institutions (O-SII) buffer. The actual impact of those measures amounts to a CET1 capital relief

[86] See the EBA's statement on actions to mitigate the impact of COVID-19 on the EU banking sector.

[87] After adjusting for existing AT1/T2 shortfalls.

[88] This was only calculated for banks under the ECB Banking Supervision following the ECB/SSM decision to allow banks to cover Pillar 2 requirements with capital instruments other than CET1.

[89] See, for instance, the ESRB's overview of countercyclical buffers and the ESRB's overview of measures applied in response to the COVID-19 pandemic.

of EUR 10bn for the SyRB and EUR 2bn for the O-SII buffer (combined, the impact represents 0.1% of RWA on average in the EU).

4) A number of supervisors – also following an EBA's recommendation – have recommended that banks refrain from paying dividends for the year 2019, as these would directly boost banks' retained earnings and, therefore, strengthen the capital base.[90] Assuming that no bank distributes year-end 2019 dividends, the boost to CET1 capital would amount to EUR 42bn (equivalent to 0.5% of RWA on average in the EU).

In addition to those measures, banks under the supervision of the ECB are also temporarily allowed to operate below their P2G levels. Banks hold additional capital above their OCR, in accordance with the P2G set by competent authorities. Operating below P2G capital levels, albeit on a temporary basis, helps banks to provide even more financial support to their customers and/or to withstand additional losses on existing exposures. A full use of P2G capital across all banks in the EU would provide CET1 capital of EUR 79bn (equivalent to around 0.9% of RWA on average in the EU).

**Box 8: Capital buffers and new lending sensitivities**

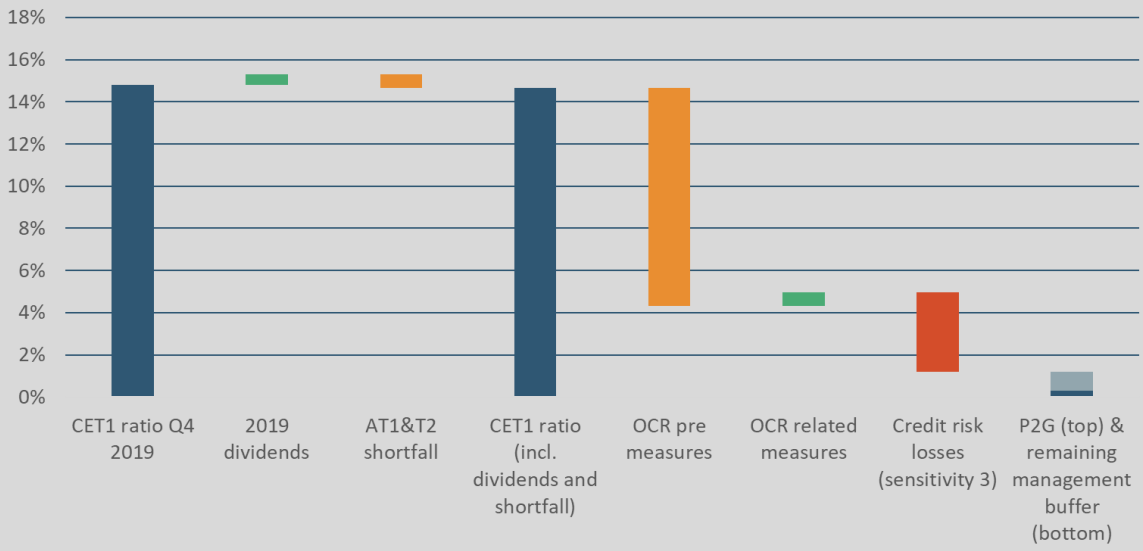
The above measures both increase the available CET1 capital (withholding dividend payments) and lower the CET1 capital requirements (capital buffer releases and P2R composition) for European banks.

Applying the former measures would increase the average CET1 ratio as at Q4 2019 in a first step to around 15.3% owing to the retention of dividends (see Figure 28 on the different steps as described in the following). In a next step, AT1 and T2 shortfalls in total capital requirements would need to be covered by CET1 (negative impact of 62 bps). The remaining CET1 ratio of around 14.7% results in a management buffer above OCR of around 4 p.p.

The OCR-related measures (as described in points 1, 2 and 3 above) increase this management buffer by 64 bps to nearly 5 p.p. Figure 28 also shows the impact of sensitivity 3 of the credit risk of loan portfolios, which assumes an impact of around –380 bps on the CET1 ratio. After this impact is taken into account, the remaining management buffer above OCR is on average 1.1 p.p., of which 0.9 p.p. is related to the P2G as set by competent authorities. This analysis does not yet consider any of the other measures introduced by regulators and supervisors, like the SME supporting factor and others (see Box 1 and Box 6).

[90] See the EBA's statement on dividends distribution, share buybacks and variable remuneration.

Figure 28: From the CET1 ratio to the remaining free buffer after measures (dividends, OCR-related measures, P2G) and credit risk sensitivity 3, EU averages




*Sources: EBA supervisory reporting, EBA calculations*[91]

Following the above calculations, the potential amount of capital available for new lending coming from banks that have a positive management buffer would be around EUR 41bn, assuming that they would still want to keep some capital aside (at least 50% of the original management buffer above OCR as at Q4 2019). This amount could result in potential lending of roughly between EUR 0.6tn and EUR 1.3tn (equivalent to 5% and 11% of total loans to households and NFCs).[92] The range depends very much on the distribution of new lending between the corporate and household segment and respective underlying risk weights. This implies that this data should be considered as purely indicative.

Even though this calculation already considers a negative impact from credit risk of the loan portfolio, as this is considered to be one of the most material risks, there are other parameters that banks need to consider in their determination of new lending volumes. These are, for instance, further impacts on their profit and loss accounts (e.g. trading losses) or on RWA, like from market RWA, as well as the need to maintain strong credit underwriting standards. Expectations of increasing capital requirements in the future might also affect decisions regarding the amount of new lending that banks would be able and willing to provide is likely to be lower. On the other hand, this calculation does not consider public support measures, such as state guarantees, which would increase the

[91] Green indicates a positive impact from measures and orange the capital requirements and deductions. The impact of credit risk losses from sensitivity 3 (see Box 4), shown in red, is negative. CET1 ratios and the (remaining) management buffer are shown in blue (with the part stemming from P2G is in light blue).

[92] These calculations take into account higher risk weights from sensitivity 3. It is also assumed that it is new lending, not resulting from the drawing of existing loan commitments (on which see Box 2). The Annex describes the approach and further assumptions used in these calculations. See also a recent publication by the BIS on the same topic, which estimates the impact that public guarantees can have on lending volumes. The potential limiting impact from the leverage ratio would be marginal in this calculation.

potential amount of new lending by decreasing the average risk weights. Nor does it consider the retention of any future revenues related to the current year.

# 8. Conclusions

**Banks have built material capital and liquidity buffers, not least driven by post-GFC regulation.** Although profitability remains subdued and NPLs are still high in some countries, regulatory reforms applied over the past few years have allowed banks to enter this crisis with ample capital and liquidity cushions and a healthier funding mix. High LCRs and central bank support have allowed banks to weather the first months of the COVID-19 crisis without major liquidity concerns. Nonetheless, once banks restart the process to build up their MREL, they might face higher costs than in the pre-COVID-19 days, which will further increase pressure on banks' profitability.

**Banks have successfully managed to move most of their staff from physical offices to remote working locations.** As employees progressively return to their physical offices and banks adapt to a more normal operating environment, pressure on banks' operational capacities is likely to ease somewhat. However, COVID-19 might be the catalyst for many clients to become digital customers. Hence, even after the full reopening of the economy, banks will need to progress further to adapt their systems to a challenging technological environment, which could also increase operational risks. The evolving new operational environment might also amplify clients' preparedness to switch to FinTech competitors. Banks and their employees will also need to be prepared to deal with a different operational environment and the constant threat from a resurgence of COVID-19.

**Many countries have already started on the road back to normality.** After unprecedented confinement measures, the spread of the COVID-19 pandemic appears to have slowed, relieving the strain on national healthcare systems. However, in the absence of an effective vaccine, public authorities are lifting social distancing restrictions at a very gradual pace. Under such conditions, GDP might take much longer than initially expected to return to its pre-COVID level, especially if there are second or further waves of the virus.

**In the medium term, asset quality is expected to deteriorate significantly.** The cost of risk has already started to rise, and NPLs are likely to surge by the end of the year. Banks have already started to book higher provisions in their Q1 financial statements. A sensitivity analysis considering transition rates from the 2018 EU stress test shows that the increase in credit risk could have an average impact of around –380 bps in CET1.[93] The EBA Guidelines on loan moratoria set criteria aimed to avoid the automatic reclassification of affected loans as forborne or defaulted. In any case, banks will still need to carefully track asset quality, in particular of loans exiting the moratoria status. They should also identify any need for forbearance measures as quickly as possible and prevent unnecessary moves of performing exposures to non-performing status. State guarantees for loans, introduced in many jurisdictions, might soften the impact on balance sheets of asset quality deterioration.

**Capital levels should help banks withstand the impact of COVID-19.** Although banks could face significant losses, capital buffers built prior to the pandemic and the relief provided by regulators and

[93] According to the results of sensitivity 3 in Box 1.

supervisors allow banks to provide relevant coverage for the rise in cost of risk, and to maintain their important financing to the real economy. Even if 380 bps of CET1 is depleted by credit risk-related losses, banks would, on average, retain a management buffer of around 1.1 p.p. above OCR. Once this crisis is over, banks will have to rebuild capital buffers. Given their low market valuations, doing so inorganically might result in a high dilution for existing shareholders. The extent to which banks will be affected by the crisis is expected to differ widely, depending on, for instance, starting capital levels and operational efficiency, as well as levels of exposure to the sectors more affected by the crisis. Competent authorities should address quickly any idiosyncratic weaknesses that could be exacerbated by the current crisis.

**Profitability might remain subdued for an even longer period.** Lending margins are likely to remain low as a result of central banks' monetary stimulus. The expected credit quality deterioration will result in an increase in impairments. In addition, as many clients are now getting much more used to online banking, branch overcapacity might increase, pushing banks to embark on even more ambitious digitalisation strategies. These can also be favoured by the recent EC proposal to frontload the non-deduction of prudently valued software assets. Further pressure on profitability and faster digitalisation might also stress the need to address overcapacity and for consolidation in the sector, at national or EU level.

# Annex

## Sensitivity on credit risk in the loan portfolio: key assumptions and approach

Stressed parameters are estimated and applied to four different portfolios of loans and advances[94] depending on the sensitivity analysis: NFCs of affected sectors/countries, other NFCs, residential mortgages, and households other than residential mortgages.

The calculation of the CET1 ratio impact includes the following steps:

1) Cumulative flows to riskier IFRS 9 stages over the 3-year horizon of the 2018 EU-wide stress test are extracted to get the respective stressed transition rates (i.e. exposure flows of S1-S2, S1-S3 and S2-S3).

2) Stressed add-ons to transitions are obtained from the comparison between the stress test projected transitions rates in the adverse scenario and the respective starting point transition rates.

3) Banks in the 2018 EU-wide stress test sample are subject to the bank-specific stressed add-ons implicit in that exercise. As the stress test covers around 70% of the banking system, some assumptions are needed in order to extrapolate the add-ons to the remaining banks. If, for a specific country, there is more than one bank in the stress test sample, the other banks in the same country get the average add-on for the country. The remaining countries are grouped in three buckets according to the home country's GDP decline foreseen in the 2018 stress test adverse macroeconomic scenario (i.e. the magnitude of the shock to banks in different countries will follow the severity rank of the 2018 adverse scenario).

4) To get bank-specific transition rates, the stressed add-ons to transitions are applied to the actual bank-specific point-in-time transitions rates for Q4 2019. This calculation is performed, for each bank, in a distance-to-default space to ensure a starting point dependency of the transition rates' add-on.[95] The percentage increase of transition rates is smoothed for higher starting points compared with a straight scalar and it ensures that the probability stays between 0 and 1.

5) The bank-specific stressed transition rates are applied to the Q4 2019 exposure classified in S1 to obtain stressed S1-S2 and S1-S3 flows as well as to S2 exposure to obtain stressed S2-S3 flows.

[94] Other than those included in the held for trading or trading assets portfolios.

[95] Bank-specific stressed transition rates are calculated as follows:
$\text{Stressed TR}_{\text{bank}} = \text{normsdist}\,(\text{normsinv}(\text{stressed TR}_{\text{stress test}}) - \text{normsinv}(\text{starting point TR}_{\text{stress test}}) + \text{normsinv}\,(\text{PiT TR}_{\text{bank}}))$

6) COVID-19-specific add-ons are applied in sensitivities 2 and 3 to the most affected sectors and countries with the respective addition of one and two standard deviations to the stressed transition rates from sensitivity 1.[96]

7) Additional ECL is calculated under the assumption that banks would keep the same coverage ratios for each stage (e.g. the exposure flow S1-S2 is subject to the average coverage ratio for S2 exposures instead of the one for S1 exposures). The total additional ECL is assumed to impact directly CET1 (i.e. no impacts on deferred tax assets or transitional arrangements or other CET1 changes are considered).

8) For IRB banks, stressed regulatory PDs are calculated also in a distance-to-default space and inputted in the IRB formula to derive an increase in risk weights and regulatory expected loss.

9) For standardised approach banks, the stress test multiple of RWA increase between Q4 2017 and Q4 2020 is calculated. This multiple is then applied to the banks' actual RWA in Q4 2019 to get directly a stressed RWA. Changes to RWA are also considered due to higher transitions to stage 3 in sensitivities 2 and 3.

The sensitivity analysis is based also on the following assumptions: (i) no cures or transitions from S2 to S1 are considered; (ii) banks would aim at keeping the same coverage ratios for each stage and those ratios are assumed to reflect an appropriate provisioning of the portfolios; (iii) no explicit consideration of government guarantees and moratoria; (iv) no consideration of further deterioration or additional provisioning of the existing NPLs; (v) IRB shortfall changes in line with the aggregate impact in regulatory expected loss and ECL; (vi) outlier parameters are smoothed in line with percentiles of the distribution; and (vii) the application of the IRB formula to calculate RWA is done at portfolio level taking into account projected changes in the average PD.

## Sensitivity on drawing of loan commitments: key assumptions and approach

The sensitivity analysis, which aims to calculate the additional capital impact from drawing of performing loan commitments, uses a two-step approach. First, for each bank the CCF for corporates and households exposures is calculated based on the reported off-balance sheet exposures and their exposure value. In addition, for these two portfolios, the average risk weight is calculated for all exposures (off and on balance sheet). As a second step, the impact calculation assumes that, once a credit line is drawn, the impact on RWA from the CCF is eliminated. For calculating the increase in RWA due to the drawn loans the average risk weight for each portfolio is used.

[96] On the identification of most affected countries and sectors, see Chapter 1.

## Sensitivity on market RWA: key assumptions and approach

In order to compute the projections for the Q1 2020 RWA, some assumptions were made on the single components of the IMA own funds requirements (VaR, sVaR, IRC[97], CTP[98], see also Figure 29). In particular, the Q1 2020 VaR is assumed to be equal to the Q4 2019 sVaR while the sVaR in Q1 2020 is kept at the same level as in Q4 2019. Finally, regarding the IRC, the percentage changes observed in the 2018 stress test were used as proxies.

Figure 29: Assumptions for the IMA RWA projection in Q1 2020

| IMA RWA component | Assumption for 2020 Q1 |
|---|---|
| VaR | Equal to sVAR 2019 Q4 |
| sVaR | Equal to sVAR 2019 Q4 |
| IRC | % change increase in line with 2018 Stress test |
| CTP | No change |

*Source: EBA calculation*

Once the projected single IMA RWA components for Q1 2020 are obtained, two sensitivities for the quantitative VaR multiplier add-on in Q1 2020 are assumed:

1. all banks registering 9 overshooting with a consequent value of the add-on equal to 1 (this sensitivity represents the upper bound for the quantitative VaR multiplier add-on).

2. all banks registering a number of overshooting equal to the maximum quarterly number of overshooting in the last 5 years.

The sVaR multiplier is assumed to be equal to the VaR multiplier. The sensitivities on the VaR multiplier for banks under the ECB Banking Supervision already takes into account the recently announced ECB measures regarding the qualitative VaR multiplier add-on.[99]

## Further information related to the impact assessment on the leverage ratio

CRR2 includes several paragraphs (Article 429a(5), (6) and (7)) that provide the conditions and workings of the temporary exemption of central bank exposures. (Article 429a(1)(n)), which may be first triggered by the competent authority once the 3% Pillar 1 minimum requirement will be introduced under the CRR2 by 28 June 2021. Specifically, a bank can exempt exposures only if its competent authority has made a public declaration "after consultation with the relevant central bank" stating that "that exceptional circumstances exist that warrant the exclusion in order to facilitate the implementation of monetary policies", which can last no longer than a year. Also, the

[97] Incremental default and migration risk capital charge (IRC).

[98] All-price risk charge for correlation trading portfolio (CTP).

[99] See announcement by the ECB.

central bank exposures are funded by deposits taken in the same currency, without a significant maturity mismatch.

Also the condition (Article 429a(7)) applies which states that a bank's 3% minimum requirement needs to increase in proportion to its amount of exposures exempted. This is referred to as offsetting and is expressed in the following formula:[100]

$$aLR = 3\,\% \cdot \frac{EM_{LR}}{EM_{LR} - CB}$$

The EC proposal amends the offsetting mechanism (Article 429a(7)) highlighted above, by freezing the offsetting at the public announcement date of the competent authority. Specifically, it leaves the offsetting static as it would depend on the amount of central bank exposures held by an individual bank on the public announcement date, which is defined as the date when the competent authority announces that all banks under its supervision may start to apply the exemption.

## Lending potential of capital relief measures: key assumptions and approach

The lending potential of bank $i$ is calculated according to the following formula:

$$New\ lending_{c,i} = \frac{\left(\frac{Remaining\ buffer_i}{\overline{Cap\ Req_i}}\right)}{Share^{HH} * (stressed\ RW_i^{HH}) + Share^{CORP} * (stressed\ RW_i^{CORP})}$$

The potential new lending by bank is calculated for the amount of capital left after considering credit losses, dividends and OCR capital measures announced by competent authorities by deducting 50% of the original buffer above OCR ($Remaining\ buffer_i$). $\overline{Cap\ Req_i}$ is an individual constant CET1 minimum requirement consisting of Pillar 1 minimum requirement, P2R (after the Capital Requirements Directive V (CRDV) frontloading in the euro area), capital conservation buffer (CCB), G-SII buffer, O-SII buffer and SyRB (after considering the actual releases and taking into account the combination rules of the last three buffers at the highest level of consolidation) and 50% of the original buffer above OCR.

The CCB, the SyRB, the O-SII and G-SII buffer are not considered as measures to boost lending. It is deemed unlikely that a bank would willingly deplete its capital to levels below the combined buffer requirement for the purpose of increasing its lending capacity.[101] Doing so would trigger the MDA provision of the CRD.[102] Along the same line, it is assumed that banks would rather keep 50% of their existing management buffer levels given the uncertainties about the impact of the COVID-19 crisis.

[100] Abbreviations used in this formula: LR, leverage ratio; EM, exposure measure; CB, central bank.

[101] The combined buffer requirement consists of the CCB, SyRB, O-SII, G-SII and CCyB buffer requirements.

[102] See Article 141(2) to (6) of the CRD. This implies that banks would be subject to measures designed to ensure that they fully restore the level of own funds in a timely manner and would be severely restricted in (i) making dividend distributions, (ii) paying variable remuneration or discretionary pension benefits and (iii) making payments on AT1 instruments.

For each bank, a stressed risk weight is calculated for household and corporate segment following the results from sensitivity 3 (stressed $RW_i^{HH}$ and $stressed\ RW_i^{CORP}$). $Share^{HH}$ $and$ $Share^{CORP}$ represent the distribution of new lending between the household and corporate segment.

## Sample of banks (as at 31 December 2019)

| Name | Country |
|---|---|
| BAWAG Group AG | AT |
| Erste Group Bank AG | AT |
| Raiffeisen Bank International AG | AT |
| Raiffeisenbankengruppe OÖ Verbund eGen | AT |
| Sberbank Europe AG | AT |
| UniCredit Bank Austria AG | AT |
| Volksbanken Verbund | AT |
| AXA Bank Belgium | BE |
| Belfius Bank | BE |
| BNP Paribas Fortis | BE |
| Dexia | BE |
| ING Belgie | BE |
| Investeringsmaatschappij Argenta | BE |
| KBC Groep | BE |
| The Bank of New York Mellon | BE |
| DSK Bank Bulgaria | BG |
| First Investment Bank | BG |
| UniCredit Bulbank Bulgaria | BG |
| United Bulgarian Bank AD | BG |
| Bank of Cyprus Holdings Public Limited Company | CY |
| Hellenic Bank Public Company Ltd | CY |
| RCB Bank Ltd | CY |
| Česká spořitelna, a.s. | CZ |
| Československá obchodní banka, a.s. | CZ |
| Komerční banka, a.s. | CZ |
| Aareal Bank AG | DE |
| Bayerische Landesbank | DE |
| COMMERZBANK Aktiengesellschaft | DE |
| DekaBank Deutsche Girozentrale | DE |
| Deutsche Apotheker- und Ärztebank EG | DE |
| Deutsche Bank AG | DE |
| Deutsche Pfandbriefbank AG | DE |
| DZ BANK AG Deutsche Zentral-Genossenschaftsbank, Frankfurt am | DE |
| Erwerbsgesellschaft der S-Finanzgruppe mbH & Co. KG | DE |
| Hamburg Commercial Bank AG | DE |

| | |
|---|---|
| HASPA Finanzholding | DE |
| Landesbank Baden-Württemberg | DE |
| Landesbank Hessen-Thüringen Girozentrale | DE |
| Münchener Hypothekenbank EG | DE |
| Norddeutsche Landesbank -Girozentrale- | DE |
| State Street Europe Holdings Germany S.a.r.l. & Co. KG | DE |
| Volkswagen Bank Gesellschaft mit beschränkter Haftung | DE |
| Danske Bank A/S | DK |
| Jyske Bank A/S | DK |
| Nykredit Realkredit A/S | DK |
| Sydbank A/S | DK |
| AS LHV Group | EE |
| AS SEB Pank | EE |
| Luminor Holding AS | EE |
| Swedbank AS | EE |
| Abanca Corporación Bancaria, S.A. | ES |
| Banco Bilbao Vizcaya Argentaria, S.A. | ES |
| Banco de Crédito Social Cooperativo, S.A. | ES |
| Banco de Sabadell, S.A. | ES |
| Banco Santander, S.A. | ES |
| Bankinter, S.A. | ES |
| BFA Tenedora de Acciones, S.A. | ES |
| CaixaBank, S.A. | ES |
| Ibercaja Banco, S.A. | ES |
| Kutxabank, S.A. | ES |
| Liberbank, S.A. | ES |
| Unicaja Banco, S.A. | ES |
| Kuntarahoitus Oyj | FI |
| Nordea Bank Abp | FI |
| OP Osuuskunta | FI |
| Säästöpankkiliitto osk | FI |
| Banque centrale de compensation | FR |
| BNP Paribas | FR |
| Bpifrance S.A. (Banque Publique d'Investissement) | FR |
| C.R.H. – Caisse de refinancement de l'habitat | FR |
| Confédération Nationale du Crédit Mutuel | FR |
| Groupe BPCE | FR |
| Groupe Crédit Agricole | FR |
| HSBC France | FR |
| La Banque Postale | FR |
| RCI Banque | FR |
| SFIL | FR |

| | |
|---|---|
| Société générale | FR |
| Alpha Bank, S.A. | GR |
| Eurobank Ergasias Services and Holdings S.A. | GR |
| National Bank of Greece, S.A. | GR |
| Piraeus Bank, S.A. | GR |
| Erste & Steiermärkische Bank d.d. | HR |
| Privredna Banka Zagreb d.d. | HR |
| Zagrebacka Banka d.d. | HR |
| Kereskedelmi és Hitelbank Zrt. | HU |
| OTP Bank Nyrt. | HU |
| UniCredit Bank Hungary Zrt. | HU |
| AIB Group plc | IE |
| Bank of America Merrill Lynch International Designated Activity | IE |
| Bank of Ireland Group plc | IE |
| Barclays Bank Ireland Plc | IE |
| Citibank Holdings Ireland Limited | IE |
| Ulster Bank Ireland Designated Activity Company | IE |
| Arion banki hf. | IS |
| Íslandsbanki hf. | IS |
| Landsbankinn | IS |
| Banca Monte dei Paschi di Siena S.p.A. | IT |
| Banca Popolare di Sondrio, Società Cooperativa per Azioni | IT |
| Banco BPM S.p.A. | IT |
| BPER Banca S.p.A. | IT |
| Cassa Centrale Banca – Credito Cooperativo Italiano SpA | IT |
| Credito Emiliano Holding S.p.A. | IT |
| ICCREA Banca S.p.A. – Istituto Centrale del Credito Cooperativo | IT |
| Intesa Sanpaolo S.p.A. | IT |
| Mediobanca – Banca di Credito Finanziario S.p.A. | IT |
| UniCredit S.p.A. | IT |
| Unione di Banche Italiane S.p.A. | IT |
| AB SEB bankas | LT |
| Akcinė bendrovė Šiaulių bankas | LT |
| Swedbank AB | LT |
| Banque et Caisse d'Epargne de l'Etat, Luxembourg | LU |
| Banque Internationale à Luxembourg | LU |
| BGL BNP Paribas | LU |
| Deutsche Bank Luxembourg S.A. | LU |
| J.P. Morgan Bank Luxembourg S.A. | LU |
| Precision Capital S.A. | LU |
| RBC Investor Services Bank S.A. | LU |
| Société Générale Luxembourg | LU |

| | |
|---|---|
| Akciju sabiedrība "Citadele banka" | LV |
| AS SEB banka | LV |
| Swedbank AS | LV |
| Bank of Valletta Plc | MT |
| Commbank Europe Ltd | MT |
| HSBC Bank Malta p.l.c. | MT |
| MDB Group Limited | MT |
| ABN AMRO Bank N.V. | NL |
| BNG Bank N.V. | NL |
| Coöperatieve Rabobank U.A. | NL |
| de Volksbank N.V. | NL |
| ING Groep N.V. | NL |
| Nederlandse Waterschapsbank N.V. | NL |
| DNB BANK ASA | NO |
| SPAREBANK 1 SMN | NO |
| SPAREBANK 1 SR-BANK ASA | NO |
| Bank Polska Kasa Opieki SA | PL |
| Powszechna Kasa Oszczędności Bank Polski SA | PL |
| Santander Bank Polska SA | PL |
| Banco BPI, SA | PT |
| Banco Comercial Português, SA | PT |
| Caixa Central – Caixa Central de Crédito Agrícola Mútuo, CRL | PT |
| Caixa Económica Montepio Geral, Caixa Económica Bancária, S.A. | PT |
| Caixa Geral de Depósitos, SA | PT |
| LSF Nani Investments S.à r.l. | PT |
| Santander Totta, SGPS, S.A. | PT |
| Banca Comerciala Romana SA | RO |
| Banca Transilvania | RO |
| BRD-Groupe Société Générale SA | RO |
| Aktiebolaget Svensk Exportkredit | SE |
| Kommuninvest – group | SE |
| Länsförsäkringar Bank AB – group | SE |
| SBAB Bank AB – group | SE |
| Skandinaviska Enskilda Banken – group | SE |
| Svenska Handelsbanken – group | SE |
| Swedbank – group | SE |
| Abanka d.d. | SI |
| Biser Topco S.à.r.l. | SI |
| Nova Ljubljanska Banka d.d., Ljubljana | SI |
| Slovenská sporiteľňa, a.s. | SK |
| Tatra banka, a.s. | SK |
| Všeobecná úverová banka, a.s. | SK |

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