European Banks’ Response to COVID-19 “Quick Fix” Regulation and Other Measures
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Abstract
Based on hand-collected data from 27 banking groups in 10 EU Member States, this study shows that banks have used COVID-19 relief measures extensively, with some cross-country differences as for the intensity of use. Flexibility in risk classification does not seem to have impaired banks’ ability to report and recognise risk properly, even for loans under moratoria. The findings suggest that the impact of the measures on banks’ credit supply has been overall positive and mainly driven by capital-enhancing measures such as the “Quick fix”.

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<tr>
<td>APP</td>
<td>Asset Purchase Program</td>
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<td>CET1</td>
<td>Common Equity Tier 1</td>
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<td>CRM</td>
<td>Credit Risk Mitigation</td>
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<td>CRR</td>
<td>Capital Requirements Regulation</td>
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<td>EBA</td>
<td>European Banking Authority</td>
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<td>EC</td>
<td>European Commission</td>
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<td>ECB</td>
<td>European Central Bank</td>
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<td>ECL</td>
<td>Expected Credit Loss</td>
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<td>EP</td>
<td>European Parliament</td>
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<td>EU</td>
<td>European Union</td>
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<td>G-SIB</td>
<td>Global Systemically Important Bank</td>
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<td>IFRS</td>
<td>International Financial Reporting Standard</td>
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<td>LCR</td>
<td>Liquidity Coverage Ratio</td>
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<td>LGD</td>
<td>Loss Given Default</td>
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<td>LLP</td>
<td>Loan Loss Provisions</td>
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<td>LLR</td>
<td>Loan Loss Reserves</td>
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<td>LTRO</td>
<td>Longer-Term Refinancing Operations</td>
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<td>MREL</td>
<td>Minimum Requirements for own funds and Eligible Liabilities</td>
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<td>MRO</td>
<td>Main Refinancing Operations</td>
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<td>NPL</td>
<td>Non-Performing Loan</td>
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<td>PEPP</td>
<td>Pandemic Emergency Purchase Program</td>
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<td>PGS</td>
<td>Public Guarantees Scheme</td>
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<td>QE</td>
<td>Quantative Easing</td>
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<td>Abbreviation</td>
<td>Full Form</td>
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<tr>
<td>RTS</td>
<td>Regulatory Technical Standards</td>
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<td>RWA</td>
<td>Risk Weighted Assets</td>
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<td>SME</td>
<td>Small Medium Enterprises</td>
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<td>SREP</td>
<td>Supervisory Review and Evaluation Process</td>
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<td>SRB</td>
<td>Single Resolution Board</td>
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<td>SyRB</td>
<td>Systemic Risk Buffer</td>
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<td>TARP</td>
<td>Troubled Asset Relief Program</td>
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<td>TLTRO</td>
<td>Targeted Longer-Term Refinancing Operation</td>
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<td>US</td>
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EXECUTIVE SUMMARY

Background
The COVID-19 pandemic has deeply affected societies and economies around the world. In an attempt to limit the multiple negative effects of the spread of the virus, policy makers implemented unprecedented and extraordinary containment measures along with several policy initiatives to support businesses and households affected by the pandemic. The interventions include a wide set of monetary, fiscal, regulatory and supervisory measures for the banking sector, mainly aimed to maintain banks’ ability to provide funds to the economy.

Aim
The aim of this study is to investigate the usage of COVID-19 relief measures introduced to safeguard the banking system and their effect on banks’ behaviour. The focus is on measures taken to support the banking system’s ability to provide credit to the real economy. To this end, the measures under analysis are:

- monetary policy measures, and in particular the (targeted) injections of long-term liquidity (TLTRO);
- fiscal measures, namely loans under moratoria and subject to public guarantees;
- measures introducing flexibility in prudential, supervisory, and resolution practices;
- measures introducing changes in extant rules, such as the restrictions on dividends distributions and the adjustment to prudential regulation (“Quick-fix”).

Specifically, the study aims to address the following questions: Have banks adjusted their balance sheets in response to these measures, and how? Have these measures been detrimental in terms of proper risk monitoring of loan portfolios? Have banks actually increased lending as an effect of the introduction of the COVID-19 measures?

The analysis was carried out on a sample of 27 large European banking groups, corresponding to 50% of banking assets in the 10 EU Member States considered.

Key Findings
Our first finding is that banks have used COVID-19 relief measures extensively, although there are some cross-country differences regarding the intensity of their usage. In particular, the monetary policy intervention in terms of the TLTRO III, providing banks with funds at negative rates to lend to businesses, was widely used across banks and countries. This contrasts with previous liquidity interventions by the ECB in the context of the European sovereign debt crisis, when banks from peripheral countries were the most active users of the ECB borrowing facilities. On the other hand, the usage of borrower relief measures (moratoria and public credit guarantees) that are implemented at the national level was heterogeneous. Moratoria were widely used in high debt countries, and for longer maturities. Public credit guarantees were mostly concentrated in the large, core Member States, with little availability in smaller countries.

About the effect of the measures on risk monitoring, we analysed in particular the case of risk reporting of loans under moratoria, one of the key areas of concern among bank supervisors. The empirical analysis shows systematic and consistent application of EBA guidelines, with few data gaps. The increasing trend in loan loss provisions and share of loans under moratoria where credit risk has increased significantly (i.e., loans in Stage 2 under the IFRS 9 classification) suggests careful loan
monitoring on part of banks. Similarly, we did not observe the emergence of a culture of forbearance, as while asset quality deteriorated for loans under moratoria more so than for loans not in moratoria, the level of provisioning and loan coverage ratios also increased, reflecting the banks’ capacity to bear future losses on these loans. We were however not able to establish the extent to which the additional provisioning was adequate, given the lack of information on future recovery rates.

Another important finding concerns the impact of the measures on bank capital. The most effective capital-enhancing measures were the “Quick-fix” temporary amendments (the IFRS 9 transitional arrangements and the SME supporting factor). The dividends pay-out ban was an effective but probably temporary way to reinforce banks’ capital position, as banks started paying back as soon as the regulation allowed them to do so.

Finally, we provide an estimate of the impact of these measures on lending. Identifying the causal impact of shocks to bank capital on loan supply is a difficult empirical task, because capital and lending are correlated with the economic cycle. Isolating the causal effect of the COVID-relief measures on banks’ lending and funding policies is even more challenging because these measures were designed and implemented simultaneously, together with other support measures such as monetary policy easing.

We addressed this problem by measuring how COVID-relief initiatives affected credit supply indirectly, namely via their impact on capital ratios. We then used an estimated elasticity of lending with respect to capital as found in the existing academic literature. Hence, multiplying this estimated elasticity by the change in capital induced by “Quick-fix” measures enabled us to estimate the potential impact of the measures on bank credit supply. Given the total amount of credit in our sample of banks in 2019, this translates into an estimate of €63 billion of additional credit.

Summing up, our finding suggests that about half of the observed credit increase in our sample banks (corresponding to €123 billion) could be due to the implementation of the “Quick-fix” regulation and its effect on bank capital. This amount is likely to represent a lower bound as some other measures may have also played a role, including the liquidity injections under the TLTRO program and loans provided under the public guarantee scheme.
1. INTRODUCTION

The COVID-19 pandemic has fundamentally affected economies around the world. In an attempt to limit the spread of the virus, governments have implemented several containment measures (e.g., lockdowns) that have led to a sharp reduction in economic activity. Non-financial firms in sectors hit by these containment measures have faced steep losses and severe liquidity shortages, potentially triggering layoffs and wage cuts. In turn, individuals and households have been also affected.

The policy response has been swift and massive, as national and supranational authorities at different levels have reacted with an impressive number of support measures. Some of these measures are meant to safeguard banks and the stability of banking sector. Banks are a crucial component of policy support measures to prevent risks from triggering the most severe scenarios as well as vectors enabling a quick economic recovery. Among the many functions provided by the banking system, the one at the core of COVID-related policy measures is that of credit allocation. In policy makers’ view, banks can play an active role in mitigating the consequences of the pandemic crisis, as long as they are prevented from adopting a defensive stance by deleveraging and cutting back lending.

To prevent banks from reducing credit supply, policy makers have taken a wide set of initiatives that ranges from monetary policy actions, entailing large liquidity injections to support bank funding, as well as measures introducing relaxation of certain prudential and accounting requirements. The list of interventions also includes recommendations and clarifications on how to interpret and implement the prudential, supervisory and accounting frameworks in the context of the pandemic. In fact, clarifying the authorities’ expectations on how much operational flexibility in prudential, accounting, and reporting rules is acceptable, is important to steer the banks’ behaviour and avoid unnecessary defensive strategies.

Against this background, this research project aims to address the following questions: Have banks adjusted their balance sheets in response to these measures, and how? Have these measures been detrimental in terms of correct risk reporting? Have banks actually increased lending as an effect of the introduction of the COVID-19 measures?

To address these issues, we first provide insights on the institutional framework set up in spring 2020 as a response to the pandemic outbreak. In the first part of the study (Section 2), we summarise the main initiatives taken by the different authorities since March 2020.

In doing this, we aim to provide a comprehensive (but not necessarily exhaustive) view. The view is comprehensive in that monetary, fiscal, prudential and supervisory interventions are discussed. Yet, it is not exhaustive, in that we do not carry out a punctual analysis of each single COVID-related policy initiative. In fact, to avoid excessive fragmentation, we group and comment on initiatives by following a thematic, rather than a “measure-by-measure”, approach.

In discussing the measures, we illustrate with greater detail those more explicitly designed to support the banking sector (namely, banks and their borrowers). Having in mind the objectives of the study as requested by the European Parliament, we first focus on the initiatives aimed to provide banks with operational flexibility in terms of prudential and accounting treatment. This is the case of borrower relief measures, i.e., loans under eligible moratoria and public guarantees scheme (PGS). We also provide details of those actions that entailed an actual change in the ex-ante framework: the dividend restrictions and the so-called “Quick-fix” regulation.

In illustrating these measures, we not only clarify “what has changed”, but also what the rationale behind the measure itself is. This is important to understand the mechanism or channel by which the different measures could potentially affect bank behaviour and in particular their ability to provide...
lending. This aspect is covered in Section 2.2 and represents the conceptual framework backing the empirical analysis carried out in the second part of the study.

The second part of the study corresponds to the empirical analysis (Sections 3 and 4) that is devoted to address the research questions relative to the usage of COVID-related measures and their impact on bank behaviour.

The analysis is carried out on a sample of 27 large European banking groups, corresponding to 50% of banking assets in the 10 countries considered. Banks were selected based on significance (size by total assets) and data availability criteria.

To investigate the uptake of COVID relief measures, we have collected data manually, relying on the information provided primarily in Pillar 3 and annual reports, together with quarterly/semi-annual financial statements whenever necessary. As for the use of the measures, the following facts emerge:

- Banks have overall used the COVID-19 relief measures extensively, with some cross-country differences as for the intensity of the usage.
- Thanks to the very generous funding conditions, the usage of banks of the Targeted Longer-Term Refinancing Operation (TLTRO) III facility was generalised across banks and countries, i.e., not just limited to peripheral countries as in the case of past European Central Bank (ECB) interventions.
- Virtually all banks in the sample stopped (or reduced drastically) dividend payments.
- Moratoria and public loan guarantees have been widely used, but with significant cross-country variation. Namely, moratoria were used more extensively by banks in peripheral countries, while government-backed guarantees were concentrated in the France, Italy, Spain and, to a lower extent, in Germany.
- The most commonly reported and used temporary amendment to the Credit Requirements Regulation (CRR), i.e., the “Quick-fix”, pertains the two-year extension of the transitional arrangements to mitigate the impact of the adoption of IFRS 9 on capital.

To understand whether increased operation flexibility in risk classification could turn into risk underreporting and eventually threaten banks’ balance sheet transparency, we have assessed the evolution of banks’ asset quality by looking at the trend of four indicators: Non-Performing Loan (NPL) ratio, loan coverage ratio, loan loss provisions, and Stage 2 loans. On the one hand, NPL ratios have been relatively stable, and even decreased in some countries, possibly due to a combination of government support measures, including moratoria and a suspension of the bankruptcy process. On the other hand, loan loss provisions and coverage ratios have increased remarkably, reflecting bank expectations of a future deterioration in loan portfolios which has not yet materialised in NPL. In this respect, even though only a small portion of loans under moratoria is currently classified as NPL, many are at a risk of turning into NPL, since nearly 14% of loans under moratoria are in Stage 2. While that might be of concern, evidence suggests that banks are monitoring the loans under moratoria carefully and have accumulated provisions to withstand potential future losses. Based on this evidence, we cannot observe that a culture of forbearance has emerged, although we are unable to ascertain the extent to which the additional provisioning was adequate, given the lack of information on future recovery rates.

1 The 2004 Basel II framework relies on three “pillars”: minimum capital requirements (Pillar 1), supervisory review (pillar 2), and market discipline (Pillar 3). Pillar 3, in particular, aims to favour market discipline, by setting disclosure requirements on the banks’ risks and capital adequacy.
Finally, in Section 4 we try to measure the effect of COVID-related measures on the banks’ lending policy. The observed credit increase in our sample banks over the period has been €123 billion. Of course, not all such increase can be ascribed to the COVID-related measures under analysis. As we explain in the methodological section (4.2), assessing the impact of a certain measure on the banks’ ability to provide credit is empirically very challenging. A major reason is that all the measures mentioned above have been designed and/or implemented at (basically) the same time, and also came in addition to other forms of policy support such as monetary policy easing. Hence, it is hard to distinguish the role played by, say, “Quick fix” rules over other policy factors, as well as identify a causal nexus between any single measure and credit supply.

The way we address this problem is indirectly, via assessing the impact of the measure on capital ratios in the first place. As explained in Section 2.4, most of the measures investigated are bound to have an indirect effect on bank lending, by reinforcing the banks’ capital position, which is a precondition for them to continue supplying credit to the economy.

In Section 4.1, as a first step, we focus on the impact of the measures on bank capital. The most effective measure in this respect were the “Quick fix” temporary amendments (IFRS 9 transitional arrangements and SME supporting factor). The dividends pay-out ban was an effective but presumably temporary way to strengthen capital ratios as banks, especially high-dividend paying ones, started paying back as soon as the regulation allowed them to do so.

Specifically, based on hand-collected data on the impact of the measures on CET1 ratio, we are able to establish the amount of the shock to capital induced by the different measures, with more data available for the “Quick fix” initiatives.

In Section 4.2, we then use an estimated elasticity of lending with respect to capital as found in the existing academic literature. The elasticity of lending to capital represents the change in lending expressed in euro given a 1 percentage point change in bank capital. Hence, multiplying this estimated elasticity by the change in capital induced by “Quick fix” measures enables us to estimate the potential impact of the measures on bank credit supply. Given the total amount of credit in our sample of banks in 2019, this translates into an estimate of €63 billion of additional credit.

How to interpret this result? The interpretation of this result requires some caution, for the reasons explained in Section 4.2. However, all factors considered, our finding suggests that about half of the observed credit increase in our sample banks (corresponding to €123 billion) could be due to the implementation of the “Quick fix” regulation and its effect on bank capital. This amount is likely to represent a lower bound as some other measures may have also played a role. These include the liquidity injections under the TLTRO program, loans provided under the public guarantee scheme, and also the usage of capital buffers.
2. THE COVID-19 “QUICK FIX” AND OTHER MEASURES

2.1. The measures in a snapshot

From March 2020 onwards, international bodies such as the Basel Committee for Banking Supervision, supranational institutions such as those of the European Union (EU), as well as national governments have enacted and implemented numerous extraordinary measures to support firms, households and financial institutions in response to the COVID-19 pandemic and the related economic downturn.

Some of these measures have been explicitly designed to support the economy by preventing banks from deleveraging and reducing credit supply. Financial institutions, and banks in particular, play a fundamental role in stimulating economic growth through the allocation of credit. Banks also play a crucial role in the transmission of monetary policy impulses to the real economy. The effectiveness of governments’ interventions and monetary policy decisions to support the economy therefore depends to a large extent on the response of the banking system.

Below, we provide a brief description of COVID-related support measures, distinguishing three categories of interventions: monetary policy, fiscal measures, as well as prudential and supervisory initiatives. Given the objective of this study, within each category we will place more emphasis on those designed to affect bank lending more directly.

- **Monetary policy measures.** The European Central Bank implemented two main initiatives aimed to support funding capacity of sovereigns, corporates, and banks:
  - asset purchases of securities issued by governments and corporations; and
  - targeted injection of long-term liquidity in the banking system to finance new loans for the real economy.

Regarding the first measure, the ECB introduced the Pandemic Emergency Purchase Program (PEPP), consisting of €1,850 billion of purchases in public and private sector assets in addition to the regular Asset Purchase Program (APP) introduced in 2015. The PEPP is a temporary measure expected to last (at least) until March 2022. The amount of purchases has been remarkable: the Eurosystem purchased over €1.35 trillions of assets under the PEPP between March 2020 and August 2021. Although most of purchases consisted of public sector securities, there is a substantial degree of flexibility embedded in the program, allowing for fluctuations in the distribution of purchase flows not only over time, but also across asset classes, and among jurisdictions. The measure has only an indirect effect on banks’ ability to provide lending, its primary objective being that of supporting market liquidity and keeping borrowing yields low in government and corporate debt markets.

As for the second measure, in March 2020 the ECB enhanced its third round of Targeted Longer-Term Refinancing Operations, through a program known as TLTRO III. The ECB increased the total amount banks could borrow under the program, extended (to June 2022) the period over which considerably more favourable terms would apply, and eased the collateral framework. Access to finance under TLTRO III being conditional on banks extending credit to businesses, the goal of the measure is to support the firms’ access to bank credit in the face of funding shortages associated with the outbreak. To complement the refinancing scheme, the ECB also decided to keep key policy rates unchanged.

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2 The impact of large-scale asset purchases, commonly known as Quantitative Easing (QE), on bank lending is still subject of debate. For example, Chakraborty et al. (2019) find that purchases of mortgage-backed securities in the first and third rounds of US QE expanded mortgage lending at the expense of loans to non-financial firms, muting the overall impact of QE on lending. Rodnyanski and Darmouni (2018) also show large heterogeneous effects depending on bank exposure to QE and the type of assets being purchased.
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including the negative rates at the deposit facility, as a further measure to enhance banks’ funding capacity and, by this means, their ability to provide credit to the economy.

- **Fiscal policy measures.** This category includes a wide array of supranational and national interventions to help the overall economy as well as specific types of firms (e.g., small and medium enterprises, SMEs) or sectors to mitigate the impact of the COVID-19 shock.

  In terms of supranational measures, owing to the exceptional circumstances, the European Commission (EC) modified the EU state aid rules to allow Member States to support their economies by means of direct or indirect interventions. On 19 March 2020, the EC adopted a Temporary Framework to enable Member States to use the full flexibility foreseen under state aid rules to support their economy. The Temporary Framework complements other possibilities available to Member States to mitigate the social-economic impact of the coronavirus outbreak³. The Temporary Framework will be in place until the end of 2021.

At the national level, we can distinguish between:

- measures aimed to compensate firms for the containment measures enforced to slow the spread of the virus (e.g., lockdowns); and
- measures set up to either provide relief to outstanding bank borrowers or facilitate the access to new loans to both firms and individuals.

The first category includes a wide set of interventions, some of which being country-specific. For example, government-sponsored job retention programs allowed firms to adjust working hours and reduce the wage bill, while maintaining employment. Government grants to firms were used to compensate firms for specific fixed costs such as rents or interest on loans. Aid was sometimes granted in the form of tax cuts or deferrals, and payment advantages particularly for hard-hit sectors. Overall, measures often targeted smaller firms and the self-employed or firms with large revenue losses⁴.

The second category of interventions includes a plethora of “borrower relief measures” such as public guarantee schemes (PGSs) and moratoria on loan repayments. By their own nature, these measures are bound to affect the banking industry more directly than other forms of support. In fact, public guarantees were intended to incentivise (new) bank lending by shifting credit risk to the public sector, while moratoria were meant to provide temporary relief to cash constrained borrowers. We will discuss the implication of borrower relief measures in the next section.

- **Prudential, supervisory, and resolution measures for the banking industry.** The last leg of COVID-related policy measures dealt with the banking authorities’ decisions to provide operational and capital relief to banks. These initiatives include a flurry of recommendations, clarifications, and guidance to promote flexibility in the interpretation of prudential and accounting and regulation, for example by allowing the usage of capital and liquidity buffers and by relaxing loan classification criteria and loan loss provisioning practices. Banking authorities also introduced a more flexible approach to supervisory processes, timelines and deadlines. For example, in order not to put unnecessary pressure on banks, the EU-wide stress test exercise for 2020 was postponed. Banks were also given the possibility to discuss individual measures with bank supervisors, such as adjusting timetables and deadlines (e.g., to reschedule on-site ECB

³ Amendments extending the scope of the Temporary Framework were adopted on 3 April, 8 May, 29 June and 13 d 2020 and 28 January 2021.

⁴ See Ebeke et al. (2021) for a discussion of country-specific corporate sector relief measures taken in response to the pandemic and their effects on corporate liquidity and solvency risk.
inspections or extend deadlines for the remediation actions stemming from internal rating model investigations).

Furthermore, resolution authorities used some flexibility in drafting resolution plans for banks in the EU under their remit (namely, significant financial institutions). Finally, temporary regulatory changes (“Quick fix”) to the Capital Requirement Regulation (CRR) were also introduced, which mainly anticipated or postponed already decided measures, as we will illustrate in detail the following section.

The following sections first provide insights on the measures introduced to promote flexibility in banking activity. Second they clarify the main contents of “Quick fix” rules. Third, they illustrate by which mechanisms those measures are expected to affect bank balance sheets, primarily looking at their effects to bank capital and lending strategies.

2.2. Prudential, supervisory and resolution measures to promote flexibility

In the spring of 2020, the European Central Bank, the European Banking Authority (EBA) and the European Commission issued a number of recommendations and interpretative communications, providing clarity and guidance on the application of the prudential regulatory framework in the context of the COVID pandemic. It is important to highlight that these announcements and guidelines are not introducing new rules, but rather provide constant reminders to banks that they can use all the flexibility already embedded in the banking regulations in response to the COVID-19 pandemic.

Banking authorities’ recommendations and clarifications have addressed three main issues:

- The usage of capital and liquidity buffers;
- The accounting and prudential treatment of bank exposures; and
- The banks’ dividend pay-out policy.

Moreover, in March 2020 the Single Resolution Board (SRB) introduced some flexibility in the bank resolution planning. We will provide details on those measures in the following sections.

2.2.1. Flexibility in capital and liquidity buffers

Prudential regulation requires banks to comply with minimum liquidity and capital requirements.

Regarding liquidity requirements, the Basel III framework introduced for the first time liquidity standards for banks destined to address short and longer term liquidity shortage. In particular, the Liquidity Coverage Ratio (LCR) measures the ability of banks to withstand liquidity shocks on the liability side by selling short-term assets. Namely, banks have to hold enough highly liquid assets to cover the net outflows over a 30 days stress period, corresponding to a \( \text{LCR} \geq 100\% \).

Minimum regulatory capital requirements for European banks are the result of several building blocks, partly contained in regulations and partly set by bank supervisors. Figure 1 below reports a description of these minimum capital requirements and the additional buffers.
The basis of the pyramid consists of the Pillar 1 in the Basel Framework regulation, with a minimum Common Equity Tier 1 (CET1) ratio of 4.5% and a minimum total capital ratio of 8%. While the CET1 ratio needs to be covered using CET1 capital instruments (i.e., common equity and other regulatory deductions), the remaining Pillar 1 requirement can be held in the form of other capital instruments, such as additional Tier 1 and Tier 2 instruments.

Supervisors then set an additional Pillar 2 requirement — a bank-specific requirement determined in the Supervisory Review and Evaluation Process (SREP) — which is an add-on to the minimum capital requirement under Pillar 1. On top of minimum capital requirements, a number of regulatory buffers are applied to each bank. These buffers include the capital conservation buffer, which applies to all banks, as well as other macroprudential buffers set at the national level such as the countercyclical capital buffer, the systemic buffers for global systemically important banks (G-SIB) and other systemically important banks and the Systemic Risk Buffer (SyRB).

All these buffers make up the “combined buffer requirement”, which is unique to each bank and is added to the Pillar 1 and Pillar 2 requirements. Finally, the ECB can further include a requirement called Pillar 2 Guidance, determined by a bank’s performance in the regular EU-wide stress test. Going below these buffers can trigger restrictions on dividend payments and variable remuneration such as bonuses.
This explains why banks are normally hesitant to use these buffers and prefer to maintain ample management buffers above these requirements.

Since 12 March 2020, both ECB and EBA encouraged banks to use liquidity and capital liquidity buffers in order to free-up resources from regulatory constraints and support lending. Specifically, the supervisory authorities made clear to banks that they could fully use their liquidity and capital buffers by operating temporarily below the LCR threshold, Pillar 2 Guidance requirements and the capital conservation buffer. Banks were also allowed to partially use capital instruments not qualifying as CET1 capital, such as Additional Tier 1 or Tier 2 instruments, to meet the Pillar 2 Requirements. The rationale behind this measure is to enable banks to temporary comply with the requirement by using instruments that are less expensive than those normally required. Moreover, several national authorities revised to zero the countercyclical capital buffer rates as a further signal of the reduced capital constraints in a context of COVID pandemic.

2.2.2. **Flexibility in accounting and prudential treatment**

According to the prudential, supervisory, and accounting frameworks, the way in which banks classify exposures as forborne, or exposures with a significant increase in credit risk or “defaulted” is important. The choice can lead to more intensive reporting and monitoring requirements, increased risk weighted assets (RWA) (and capital absorption), and increased expected credit losses and provisions.

An important aspect requiring clarifications was the prudential and accounting treatment of COVID-related measures such as moratoria and PGS. Providing clarifications on how borrower relief measures (moratoria in the first place) should be reported, was, in fact, at the core of numerous documents released by banking authorities in spring 2020. These clarifications were reinforced and complemented by EBA guidelines, issued on 2 April 2020, in which the EBA specifies the prudential treatment applicable to moratoria and sets out the criteria to fulfil in order to qualify for this treatment (Box 1). As of 28 April 2020, to support banking authorities’ measures and recommendations, the EC released an interpretative communication that confirms the flexibility embedded in the accounting requirements (IFRS 9) and prudential rules. In particular, the EC further clarified the accounting and prudential implication of using flexibility when eligible moratoria and public guarantee are in place.

As for moratoria, it was important to make clear whether, and the extent to which, loans under moratoria could be classified in default and as forborne exposures. In this respect, banking authorities made clear that debt moratoria introduced as a response to the pandemic will neither entail automatic reclassifications in default or under the definition of forbearance, nor determine an automatic significant increase in credit risk and hence, an automatic worsening of the impairment stage (i.e., Stage 2) and therefore of loan loss provisions to set aside, according to the IFRS 9.

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6 This action brings forward a measure initially scheduled to come into effect in January 2021, as part of the revision of the Capital Requirements Directive (CRD V).

7 For example, according to the International Financial Reporting Standard (IFRS 9), a significant increase of credit risk is a precondition for loans to be classified in the so-called Stage 2.

8 The IFRS 9 classifies loans in three stages according to their relative credit risk at the reporting date. Such a distinction influences the way provisions are measured and interest revenues are recognised. In particular, the shift from low credit risk (Stage 1) to riskier stages (Stage 2 and 3) will entail a significant increase in provisions, since these will be calculated on a lifetime expected credit loss rather than on the 12 month after the reporting date (as in Stage 1).
Box 1: Eligibility criteria of loans under moratoria by the EBA Guidelines

The eligibility criteria for a loan to obtain a moratorium are the following:

- The moratorium must be based on a national law (legislative moratorium) or on a private initiative which represents an agreement reached by the banking sector, or a material part thereof (non-legislative or private moratorium). Therefore, neither private moratoria established individually by banks nor those negotiated with clients on a case-by-case basis are eligible;
- The moratorium has to apply to a broad range of clients, without an ex-ante assessment of their ability to pay;
- The moratorium must offer the same conditions to all the exposures subject to it. Acceptance is not obligatory for borrowers;
- The moratorium may only entail changes to the schedule of payments, namely by suspending, postponing or reducing the payments of principal amounts, interest or of full instalments, for a predefined period of time;
- The moratorium does not apply to new loans granted after the date when the moratorium was announced.

The moratorium must have been launched in response to the COVID-19 crisis. It is a temporary measure and applied before 30 June 2020 in the first place. Subsequently, on 25 June 2020, the EBA extended this deadline to 30 September 2020. Following the developments of the pandemic, on 2 December 2020 the deadline was postponed to 31 March 2021.

To understand the meaning of this clarification, it is worth recalling the definition of default and forbearance according to the prudential framework.

As for the definition of default, banks should classify as defaulted:

- according to the ‘past due’ criterion, exposures to past-due borrowers, when the payment delay is above 90 days; and
- according to the ‘unlikely to pay’ criterion, at the bank’s discretion, when the lender considers that there are reasonable doubts that the borrower will repay the loan.

The guidelines explain that for exposures subject to eligible moratoria, the instalments will not be considered past due, and the counting of days past due will be based on the new schedule resulting from application of the holiday payment. In other words, eligible moratoria do not trigger an automatic reclassification of the loan. This is important, as the prudential definition of default would entail higher risk weight and, hence, a greater capital absorption.

Likewise, loans subject to eligible moratoria should not automatically be reclassified as forborne. The rationale behind the absence of automatism is that loan under eligible moratoria do not reflect the key features of forbearance exposures. For the purposes of supervisory reporting, a forbearance measure is a “concession” entailing a modification of previous terms and conditions of the contract that the borrower is considered unable to comply with due to his/her financial difficulties resulting in insufficient debt service. It follows that at the core of the EBA’s definition of forbearance is that the concession has to be a tailored measure, granted to a specific borrower after an individual assessment of the debtor’s financial difficulties.

On the contrary, as it emerges from the criteria in Box 1, eligible moratoria introduced as a response to COVID-19 pandemic are not borrower-specific measures, being granted as part of a general scheme to borrowers meeting certain criteria, without borrowers being subject to any individual, ex-ante credit
As such, loans under eligible moratoria should neither be reclassified automatically, nor be subject to the same supervisory reporting requirements as forbearance exposures.

Regarding public guarantees, the banking authorities clarified that while the prudential framework requires evaluating whether a borrower has become unlikely to pay without recourse to a guarantee, making recourse to a guarantee per se does not trigger the classification as default. It remains, however, that a guarantee does not prevent a borrower from being classified as defaulted, which highlight the relevance, in banking supervisors’ view, that banks keep on monitoring risk properly, even under the exceptional circumstances induced by the COVID outbreak.

In fact, clarifications on flexibility go pari passu with recommendations on the importance of accurate risk monitoring. Authorities made clear that while banks should apply the flexibility available, they should also continue identifying and reporting asset quality deterioration properly, so as to maintain a clear and accurate picture of risks in the banking sector. The potential consequences of risk underreporting and balance sheet opacity are remarkable. For example, the reduced ability of investors to exert market discipline and risk monitoring can either increase cost of funding or favour opportunistic behaviour (moral hazard) and excessive risk taking. In both cases the allocation function could be impaired.

To further promote bank balance sheet transparency in a context of exceptional measures, in June 2020 the EBA introduced additional reporting and disclosure requirements on the application of both moratoria (to existing loans) and public guarantees (to new lending). This was an important step to counterbalance the lack of information induced by the temporary reporting regime. On this basis, the EBA has published subsequent reports on the implementation of specific COVID-19 related measures. In particular, the EBA clarified that, for the duration of the moratoria banks had to continue to analyse their borrowers’ creditworthiness and unlikeliness to pay and ensure that credit risk developments were recognised, in compliance with the prudential and accounting framework.

Finally, as of December 2020, the EBA provided clarifications on the identification of a downturn during the pandemic and its incorporation into the Loss Given Default (LGD) estimation. This is a further aspect affecting risk weights and capital requirements calculation, as explained in Box 2.

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9 Similarly, the ECB requests that, in exercising flexibility, the right balance should be achieved between helping banks absorb the impact of the current downturn, on the one hand, and maintaining the correct risk identification practices and risk management incentives, on the other, as well as ensuring that only sustainable solutions for viable distressed debtors are deployed. It remains crucial, in times of distress, to continue identifying and reporting asset quality deterioration and the build-up of NPLs in accordance with the existing rules, so as to maintain a clear and accurate picture of risks in the banking sector. At the same time flexibility should be deployed to help banks absorb the impact of credit risk developments and mitigate the procyclicality of that impact.
European Banks’ Response to COVID-19 “Quick Fix” Regulation and Other Measures

Box 2: Loss Given Default estimation in normal times and downturn periods

According to the Basel II framework, the LGD is one of the parameters - along with the “probability of default” of the borrower and the “exposure at default” - that banks adopting advanced internal rating systems are required to estimate in order to calculate risk weights and capital requirements. It expresses the estimated loss for the bank (in percentage) in the event of a borrower’s default.

To estimate the LGD, banks use internal data on the amount recovered net of the expenses incurred during the recovery process. The LGD estimate is affected by multiple factors, including the type of collateral and guarantees backing the loan, their seniority level, and the recovery proceedings (e.g., if judicial or extra judicial). The economic conditions are also important, as negative economic cycles may influence the efficiency and effectiveness of the recovery process, e.g., by impairing the value of the collateral and/or by making the loan recovery plan more lengthy and costly.

Accordingly, bank capital regulation requires banks to use LGD that are appropriate to downturn scenarios, if these are more conservative than estimates reflecting the long-run average.

In compliance with the prudential framework, the EBA drafted regulatory technical standards (RTS) and provided specific guidelines on how to calculate LGD not only in normal times, but also in downturn. In this last respect, the EBA’s RTS specify the concept of economic downturn and provide details on how to identify downturn periods in practice, given the nature (relevant economic factors to consider), the severity (the value of the economic factor to take into account) and the duration of the downturn. Starting from the downturn periods identified in accordance with the RTS, the guidelines provide guidance on estimations of the so called downturn LGD.

In particular, the EBA clarified that banks, in identifying the (likely) downturn periods triggered by the COVID-19 pandemic, should follow the existing policy on the economic downturn identification. The EBA also expected that the severity of the crisis and its effects materialising in credit losses could be assessable with some delay. Due to the uncertain macro scenario, however, careful monitoring was also recommended.

2.2.3. Flexibility in bank resolution

Banking authorities have also been promoting a certain degree of flexibility in the context of bank resolution, i.e., the process by which bank authorities manage a bank’s failure in an orderly manner. Banks’ insolvency proceedings are different from that of non-financial corporates because a failure of a bank can have financial stability implication. In accordance with the Banking Resolution and Recovery Directive, the Single Resolution Board (SRB) and the National Recovery and Resolution Authorities have to provide a resolution plan, which is a comprehensive document describing the preferred resolution strategy of a bank, depending on the bank’s characteristics (e.g., business model; governance structure). The document contains an assessment of how the bank can be resolved and sets a Minimum Requirements for own funds and Eligible Liabilities (MREL). The objective of MREL is to create a buffer of liabilities with a high loss-absorbing capacity, to avoid the use of public bailouts and to reduce the risk of interbank contagion, hence increase financial stability. The MREL is composed of two requirements on own funds and eligible liabilities, one expressed as a fraction of risk-weighted exposure and one as a fraction of total exposure.

In March 2020, the SRB first announced that it would postpone requests for less urgent information, prioritising the essential reports on MREL instruments. On 20 May 2020, the SRB published a final “MREL Policy under the Banking Package”, acknowledging the challenges that banks faced during COVID-19 and reiterating that their focus should be on supporting the real economy.
For the existing binding MREL targets (set in the 2018 and 2019 cycles), the SRB will take a forward-looking approach for banks that may face difficulties meeting those targets, before new decisions take effect. Despite bank requests to postpone the implementation of MREL, the target dates were not changed, with the binding intermediate target to be met by 1 January 2022 and the fully calibrated MREL (final target) to be met by 1 January 2024.

2.2.4. Constraints to dividend distribution

In March 2020, the ECB asked banks not to distribute profits in the form of dividends or share buy-backs and to be conservative in variable remuneration until October 2020, with the recommendation later extended until January 2021. This was a significant intervention, and among the first of its kind. Effectively, this is the only “new” intervention compared to the other regulatory changes discussed in this study (e.g., “Quick fix”), which were instead anticipation or postponement of rules already foreseen in the prudential framework. The measure had the goal of preserving capital, so that banks could sustain lending to the economy until the evolution of the pandemic would become clearer and the effect on banks’ asset quality would materialise. Supervisors were worried that banks would use the release of the capital buffers, following the ECB and EBA recommendations of 12 March 2020, to reward their shareholders rather than to support lending to the real economy. In December 2020, the ECB recommendation not to pay dividends was extended, although with some relaxation, as the dividend-ban was replaced by a request to limit dividend payment until September 2021. Specifically, banks were required to limit dividends to (i) 15% of cumulated 2019-20 adjusted profits, or (ii) 20 basis points of CET1 ratio, whichever is lower. The ban was implemented uniformly to all European banks, regardless of their level of capital, to avoid the stigma effect that would be associated to the cancellations of dividends at specific (weak) banks (Anguren et al., 2020).

Interestingly, the US Federal Reserve System, in its role as bank supervisors of the largest US banks, also issued a similar recommendation in June 2020, but stopped short of banning dividends altogether, capping them instead at the 2019 level (a ban on share buybacks was issued instead).

2.3. The CRR “Quick fix”

In addition to the measures aimed at clarifying the prudential and accounting treatment of the extraordinary measures, European authorities undertook an unprecedented urgent review of banking legislation on capital requirements, known as the CRR “Quick fix” that entered into force starting from the end of June 2020 (Regulation (EU) 2020/873 of 24 June 2020)10. The goal of the regulatory changes is to make the regulatory framework interact smoothly with the COVID related relief measures. The main adjustments to banking legislation on capital requirements are reported below.

- **Extension by 2 years of the transitional arrangement** for mitigating the impact on bank capital of the introduction of IFRS 9 in 2018. Briefly, the accounting standard introduced a new, forward looking approach in provisioning based on the Expected Credit Loss (ECL) concept (as opposed to the backward-looking perspective of the “incurred loss” approach, as in the previous accounting standard). To smooth out the day-one effect of IFRS 9 and avoid a capital shock due to increased provisions triggered by the application of the new standard, banks were given the option to adopt a transitional arrangements and “phase-in” the day-one capital impact. The arrangement would give banks time to rebuild their capital resources following the introduction of IFRS 9. Against this background, the “Quick fix” allows banks to add back to their CET1 capital.

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any increase in new credit loss provisions set aside in 2020 and 2021 for exposures that are not already credit-impaired. This applies also to banks that had previously decided not to take advantage of the transitional arrangement, i.e., those that originally decided not to opt for the “phase in” of the day-one capital impact;

- **Early application of certain 2021 measures** aimed to incentivise lending to SMEs, infrastructure projects, pensioners and employees, through a more favourable prudential treatment. In this regard, the “Quick fix” decreased the SME and infrastructure project supporting factors. Supporting factors are capital reductions introduced by the prudential regulatory framework to allow lower capital absorption for certain exposure categories. The SME supporting factor refers to a capital reduction factor in the amount of capital that banks need to hold for prudential reasons in respect of loans they grant to SMEs; it was introduced by the CRR to allow banks to ensure an adequate flow of credit to this particular category of companies. The quick fixes in this respect increased the capital discount for exposures to SMEs (the “revised SME supporting factor”). As for infrastructure financing, the “Quick fix” introduced a new discount on the capital requirements for exposures to entities that operate or finance physical structures or facilities, systems and networks that provide or support essential public services (the “infrastructure supporting factor”). Another related measure was the change to the regulatory treatment of “prudently valued software assets”. Banks will not be required anymore to deduct these particular software assets from their Common Equity Tier 1 capital as they normally do for intangible assets. Overall, these adjustments would result in lower capital absorption for these types of investments;

- **Revision of the prudential backstop for NPLs**: The prudential backstop (established by (Regulation (EU) 2019/630 on minimum loss coverage for non-performing exposures) sets out minimum loan loss coverage threshold for problem loans. The “Quick fix” adjustment introduces a favourable treatment for exposures granted by public entities, allowing a provision of 0% for the first seven years should the exposure be classified as non-performing. As such, loans backed by guarantees provided by national governments and other public entities in the context of the COVID-19 pandemic have been given the same treatment as NPLs backed by official export credit agencies. Concretely, this means that banks do not have to set aside provisions for seven years after a loan with a public guarantee becomes non-performing. By this means, the special treatment avoids a negative impact on banks’ capital ratios in the event that exposures guaranteed by the public sector are classified as non-performing;

- **Introduction of temporary prudential filter** for unrealised gains and losses on banks’ holdings of public debt measured at fair value from 1 January 2020 to 31 December 2022. This measure is aimed to neutralise the impact on bank capital of losses deriving from increased volatility in central government debt markets (see Altavilla et al., 2017 and De Marco, 2019 for an analysis on the negative impact of increased sovereign risk on credit supply). To guarantee that the market understands the effects of this filter and the transparency of the new requirements if it is applied, banks must disclose the capital ratios they would have had without its application;

- **Introduction of a more favourable regulatory treatment of public debt** issued in the currency of another Member States. This would result in lower risk weights (in particular, risk weights will be 0% until December 2022) and therefore, in lower capital absorption for these types of public exposures. This measure is aimed to favour public financing that may be necessary to support measures to face the pandemic; and
Changes to the implementation of leverage ratio requirements. These comprise the postponement by one year (to January 2023) of the leverage ratio buffer requirement for global systemically important institutions as well as the temporary exclusion of certain exposures to central banks from the total exposure measure (i.e., the denominator of the leverage ratio). The measure is meant to ease monetary policy implementation by enabling banks to release regulatory capital upon application of this exemption.

2.4. The expected impact on banks’ ability to provide credit

In this section, we aim to illustrate the mechanisms by which the COVID-19 relief measures presented so far may affect the banks’ balance sheets and their ability to provide lending. To this end, we will focus on those initiatives that have been explicitly addressed to banks and their borrowers, i.e., the TLTRO III, moratoria and Public Guarantee Schemes, dividend-restrictions, and the temporary amendments brought by the CRR “Quick fix”. Table 1 summarises the measures and their expected/potential effect on the banks’ balance sheets.

- **TLTRO interventions.** These interventions have a direct positive effect on credit supply as banks are required, as a condition to access the facility, to use these funds to provide new loans to firms. There is also a more indirect positive effect due to the lower funding cost associated with this source of financing, which is expected to restore bank profitability and ultimately capitalisation. Moreover, some studies (Benetton and Fantino, 2020), suggest that targeted interventions may succeed in promoting lending to the real economy, without necessarily increasing risk-taking, and preventing banks from using the central bank liquidity to buy government bonds, which was shown to be an unintended consequence of previous (un-targeted) liquidity-providing operations (Crosignani et al., 2020).

Table 1: Summary of COVID-19 measures and expected impact on bank balance sheets

<table>
<thead>
<tr>
<th>Measure/Date</th>
<th>Institution</th>
<th>Description</th>
<th>Expected Impact</th>
</tr>
</thead>
</table>
| TLTRO III, March 2020 | ECB         | Three year loan to banks at negative rates (as low as -1%) conditional on using the funds for new loans to non-financial firms. | • Direct increase in lending.  
• Improvement in net interest income through low interest expenses, increase in profits and hence, in CET1 ratio. |
| Dividend pay-out ban, 27 March 2020 | ECB | Recommendation not to pay dividends at least until October 2020; extended to January 2021 on 28 July 2020; partially repealed on 15 December 2020 when the ban was replaced with a limit on dividend and share buy-backs to 15% of 2019-2020 profits. | • Immediate increase in CET1 through higher retained earnings.  
• Reduced stock prices.  
• Likely temporary increase in CET1 when the ban is lifted. |
| Moratoria on loan payments, March-April 2020 | National authorities (legislative) or association/bank itself (non-legislative); EBA coordinated | Allows borrowers to suspend loan payments without automatically triggering default/non-performing status. Banks still required to monitor and report deterioration in credit quality. | • Decrease in interest income and hence in profits.  
• Decrease CET1 ratio  
• Lower/delayed provisions |
### European Banks’ Response to COVID-19 “Quick Fix” Regulation and Other Measures

<table>
<thead>
<tr>
<th>Measure/Date</th>
<th>Institution</th>
<th>Description</th>
<th>Expected Impact</th>
</tr>
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</table>
| PGS, March-April 2020 | National authorities | Details vary across countries but all comply with guidelines adopted by EC. General features: new lending; medium and long-term loans (5 years or more); the maximum amount per borrower is 25% of 2019 sales or twice the wage bill; guarantee coverage between 70% and 90% of the loan principal, although 100% guarantee schemes are also available in a few countries, such as Italy and Germany, especially for small loans. | • Direct increase in lending.  
• Potential to improve profitability with no or reduced capital charge (low risk weights), and hence increase in CET1 ratio. |
| "Quick fix" CRR 26 June 2020 | EP and Council | 1. Extension by two years of transitional arrangements for mitigating the impact on own funds (i.e., regulatory capital) of the introduction of IFRS 9.  
2. Revised and more generous supporting factor for lending to SME and other sectors (infrastructure), introduced ahead of schedule (Art. 501 of CRR2).  
3. Other measures include: temporary prudential filter for unrealised gains and losses measured at fair value through other comprehensive income; more favourable treatment of loans to pensioners or employees; temporary treatment of public debt issued in the currency of another Member State. | Increase in CET1 ratio due to lower provisions.  
Reduction of RWA and increase in CET1 ratio.  
Increase in CET1 ratio. |

Source: Authors’ own elaboration.

- **Dividend restrictions.** Authorities set restrictions on managers’ variable remuneration and dividend distributions to prevent banks from using the full capital release allowed by the ECB to reward managers and stockholders at the expense of borrowers. The overall impact of the dividend pay-out ban on bank capital and the capacity to stimulate lending is hard to estimate. On the one hand, it mechanically increased CET1 ratios by increasing retained earnings. On the other hand, it also contributed to further depress stock prices, which increases the cost of new equity issuances in the future. Moreover, the restrictions have been applied uniformly to all European banks. Although important to avoid the stigma associated with cancellations of dividends to impact on the reputation of specific (namely more problematic) banks, this measure may have affected banks in an asymmetric way. In particular, it likely benefited low capital banks who could boost their retained earnings, but was detrimental to banks with a solid capital base, who had no need for a further increase in capital and would have preferred to pay-
out dividends instead. All in all, the beneficial effect on bank capital position of these restrictions is deemed to be temporary and might be (at least in part) offset by the negative effect of the measure on bank stock prices;

- **Moratoria.** This borrower relief measure can help restore bank balance sheet health by preventing bankruptcy of temporarily illiquid but still solvent borrowers. This was a particular concern during the COVID crisis, as some otherwise viable businesses were affected by shutdowns and other lockdown measures, which suddenly dried up their cash flows. Granting moratoria to these borrowers mitigated the adverse liquidity shock and lowered the probability of default of viable businesses, thus reducing the banks’ expected losses on loan portfolios. On the other hand, while beneficial in the short term, moratoria may prove detrimental to bank balance sheets in the long run, due to reduced interest revenues and thus, lower profits. Another criticism is that prolonged moratoria may delay appropriate provisioning, by making risk monitoring more difficult to ascertain due to the lack of data on bank payments and the potential development of a “non-payment” culture among borrowers. Delayed or insufficient provisioning may impair bank lending (see, e.g., Laeven and Majnoni, 2003). One potential mechanism is that inaccurate provisioning reduces bank balance sheet transparency, which may in turn negatively affect the banks’ ability to raise funds in financial markets: the higher risk perception would increase funding costs and threaten the banks’ ability to make loans. This justifies the emphasis, in recent policy makers’ clarifications and recommendations, on loan monitoring and the issuance of detailed guidelines on the reporting of loans under moratoria from the EBA;

- **Public Guarantee Schemes.** The effect of public guarantees on lending is in principle more direct and easy to anticipate. First, there is a mechanical, positive effect on lending as the relief measure typically applies to newly originated loans as required by the national laws. Second, by shifting risk away from banks to governments, PGSs are considered for prudential purposes a credit risk mitigation (CRM) tool reducing bank risk-weights. It follows that the deployment of PGSs may contribute to improve (risk based) regulatory capital ratios. Moreover, the banks’ capital position could be reinforced in a more indirect way, also because the risk reduction deriving from PGS adoption is likely to be associated with lower expenses due to reduced loan loss provisions and hence, potentially higher retained earnings. There are, however, a few negative side effects that need to be taken into account. First, government-guaranteed loans are cheap for borrowers and insensitive to credit risk and hence reduce interest revenues for banks, which in turn will negatively affect retained earnings and bank capital. Second, by shifting credit risk onto the public sector, public guarantees incentivise banks to lend to borrowers with low credit worthiness, who would normally be screened out by the bank loan officers. Further, moving risk away from bank and onto government balance sheet may potentially end up reinforcing the sovereign-bank risk loop (Altavilla et al., 2017 and De Marco, 2019); and

- **“Quick fix”.** Most of the temporary adjustments to the capital regulation are meant to relax the prudential treatment of certain bank exposures (e.g., public debt securities, loans to SMEs and employees, and software assets) namely by reducing their risk weights, and therefore their capital absorption.

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11 In practice though, the extent to which public guarantees were able to stimulate new lending, as opposed to credit that would been granted even in the absence of the guarantee (crowding-out), has not yet been established in the literature.

12 The way PGS affect risk weights in practice depends on the approach adopted by the bank (i.e., whether standardised or internal rating based) as for the calculation of minimum capital requirements. In a report on the implementation of COVID-related policies, the EBA provides clarifications on the treatment of PGS as a form of credit risk mitigation under the advanced internal rating approach.
In particular, the supporting factors allow for a more favourable prudential treatment of certain exposures to SMEs and infrastructure, with a view to incentivise banks to prudently increase lending to those sectors that were severely affected by the COVID crisis. Likewise, the two-year extension of the transitional arrangements for the application of IFRS 9 to mitigate the impact on own funds is particularly important to reduce procyclicality in lending. In fact, absent these changes, the COVID crisis may have led to a significant increase in the forward-looking loan loss provisions of banks, which would have further depleted bank capital, and impaired bank ability to provide lending to firms and households during the economic downturn. Finally, other changes introduced by the “Quick fix” (i.e., the prudential filter for unrealised gains and losses on banks’ holdings of public debt) are expected to mitigate volatility in banks’ regulatory capital and financial statements stemming from price changes in central government debt.

All in all, among the measures considered above, only TLTRO III and PGS have a direct impact on bank lending, the former because the provision of cheap long-term financing is conditional on the supply of additional credit, the latter because mostly new originated loans are subject to public guarantee schemes. The other measures may affect the banks’ ability to provide credit more indirectly, by influencing in the first place the banks’ balance sheet strength, namely their profitability and capital position. By improving bank capital, these measures have the potential to boost the supply of credit.

The nexus between bank balance sheet health and credit supply has been widely examined in the academic banking literature. According to the capital channel hypothesis, capital-constrained banks deleverage and reduce credit supply when they are affected by a negative shock to capital because shrinking the balance sheet and cutting back on risky assets, such as loans, is less costly than issuing equity or retaining a higher proportion of earnings (Berger and Udell, 1994). Asymmetric information issues are typically cited as the main reasons why banks prefer to deleverage rather than to issue new equity. Recent empirical studies also confirm that binding capital requirements induce banks to deleverage and reduce assets subject to higher capital charges, instead of raising new equity (Gropp et al., 2019). In the same vein, the literature also finds that the transmission of monetary policy tightening is stronger for illiquid and poorly capitalised banks (Peek and Rosengren, 1995; Kashyap and Stein, 2000; Jiménez et al., 2012, 2014).

Moreover, accommodative monetary policy and relaxed capital regulation may interact and provide a larger stimulus when they are used jointly rather than separately. Altavilla et al. (2020a) show that the increase in bank lending that follows monetary policy easing is larger if the macroprudential environment is also more accommodative.

All this explains why reinforcing the banks’ capital position is at the core of COVID-related policy interventions.
3. EMPIRICAL ANALYSIS: THE USE OF COVID-19 RELIEF MEASURES

KEY FINDINGS

Using hand-collected data on the usage of COVID-19 relief measures from a representative sample of 27 large banking groups in Europe, representing 50% of banking assets in the 10 countries considered in the study, we find that:

- Virtually all banks did not pay, or drastically reduced, dividend payments in 2020. Placing dividends into reserves mechanically increased CET1 ratios (by 36 basis points for a subsample of 14 publicly listed banks). However, the increase is not likely to last: most banks have been paying dividends in 2021 to the maximum extent allowed by the ECB recommendation (15% of profits) and plan to resume normal dividend payments from 2022 onward;

- The most commonly reported and used temporary amendment to the CRR “Quick-fix” pertains the two-year extension of the transitional arrangement to mitigate the impact of the IFRS 9 on capital. Other amendments, including SME supporting factor, are less frequently mentioned. The forward looking provisioning of loan losses entailed by IFRS 9, together with expected higher future default rate in some sectors affected by the COVID crisis are the most likely factors that have pushed banks to adopt the deadline extension;

- Moratoria and public loan guarantees have been widely used, but with significant cross-country variation. Banks in peripheral countries had 10% or more of their total loans under moratoria at some point in 2020, whereas banks in other countries, such as Germany, had significantly less. Government-backed guarantees are concentrated in the main countries of the euro area (France, Italy, Spain and, to a lower extent, in Germany);

- In terms of asset quality, the situation is still evolving. On the one hand, NPL ratios have been relatively stable, and even decreased in some countries, due to a combination of government support measures, including moratoria and a suspension of the bankruptcy process. On the other hand, loan loss provisions and coverage ratios have massively increased, reflecting bank expectations of a future deterioration in loan portfolios not yet materialised in NPL. In this respect, even though few loans under moratoria are outright NPL, many are at a risk of turning to NPL status, more so than loans not under moratoria. While being of concern, this also suggests that banks are monitoring the loans under moratoria carefully and have appropriate provisions in place to withstand future losses;

- Borrowing under the ECB TLTRO III has been high, completely replacing all other ECB funding facilities and tripling overall bank borrowing from the ECB compared to 2019. Thanks to the very generous funding conditions (as low as -1%), banks all over Europe borrowed funds under the TLTRO III, not just in peripheral countries as in the case of past ECB interventions.

This section, which represents the first part of our empirical analysis, aims to provide insights on the extent to which European banks have used the COVID-relief measures illustrated in previous sections. Given the goal and the scope of the research project, the analysis is carried out on a sample of large European banks. We start by describing the construction of the sample, including the criteria for selecting the 27 banks in the sample. We then illustrate how those banks have been using the measures, by providing some key trends in the data in terms of capitalisation, use of moratoria and
Public Guarantee Schemes, quality of the loan portfolios, application of the dividend pay-out ban and ECB TLTRO interventions.

### 3.1. Sample selection and dataset construction

First, we have identified the largest and most representative banks in each of the 10 EU Member States that were requested to be analysed in this study. Selection was based on size (i.e., total assets) and data availability. In this respect, certain banks (e.g., some German Landesbanken), although significant in size, only report annual rather than quarterly or semi-annual data. Moreover, the last available reports for some banks are as of December 2020 and not March 2021, as required for this study, while others do not even report a comprehensive Pillar 3 disclosure document.

The sample construction has resulted in 27 large banking groups, covering on average about 49% of total banking assets in each country and 52% of total banking assets. Table 2 lists the number of banks and coverage of total banking assets by country.

#### Table 2: Number of banks in the sample by country

<table>
<thead>
<tr>
<th>Country</th>
<th>Number of Banks</th>
<th>% of total banking assets (Dec 2019)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belgium</td>
<td>2</td>
<td>45%</td>
</tr>
<tr>
<td>Finland</td>
<td>2</td>
<td>99%</td>
</tr>
<tr>
<td>France</td>
<td>4</td>
<td>65%</td>
</tr>
<tr>
<td>Germany</td>
<td>5</td>
<td>35%*</td>
</tr>
<tr>
<td>Italy</td>
<td>3</td>
<td>50%</td>
</tr>
<tr>
<td>Ireland</td>
<td>2</td>
<td>18%†</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>2</td>
<td>7%†</td>
</tr>
<tr>
<td>Poland</td>
<td>2</td>
<td>26%</td>
</tr>
<tr>
<td>Portugal</td>
<td>2</td>
<td>43%</td>
</tr>
<tr>
<td>Spain</td>
<td>3</td>
<td>98%‡</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>27</strong></td>
<td><strong>52%</strong></td>
</tr>
</tbody>
</table>

Source: Authors’ own elaboration.

Note: *most German Landesbanken do not have quarterly reports.
†under-estimated in countries that have large presence of foreign banks.
‡over-estimated in countries that are headquarters of global banks with significant international presence.

The list of the specific banks in the sample are reported in Table 3 below. All the seven G-SIB banks in the Member States included in the study (France, Germany, Italy and Spain - the Netherlands are not part of the study) are present, plus four other domestic systemically important banks in Italy and Spain. The table also shows that banks in our sample, although all large, are heterogeneous in terms of size, capitalisation, and business models. Asset size ranges from around €100 billion for the Finnish OP Osuuskunta (Op-Pohjola Group) to over €2 trillion for BNP Paribas. Capitalisation also varies greatly, with highly capitalised banks showing a CET1 ratio over 18% and low-capital banks reporting a CET1 ratio below 13%.
As for their business model, although loans represent on average the most significant asset class (52% of the balance sheet), for some G-SIB (e.g., Deutsche Bank and Crédit Agricole) the investment banking business is actually more relevant than the commercial banking one.

Table 3: List of banks

<table>
<thead>
<tr>
<th>Name</th>
<th>Country</th>
<th>Total Assets, EUR billion (12/2019)</th>
<th>CET1 Ratio, % (12/2019)</th>
<th>Loan/Total Assets</th>
<th>Quarterly Reports*</th>
<th>Separate Pillar 3 Document</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belfius Bank</td>
<td>BE</td>
<td>172</td>
<td>16.7</td>
<td>54%</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>KBC Groep</td>
<td>BE</td>
<td>291</td>
<td>18.7</td>
<td>54%</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Bayrische Landesbank (BayernLB)</td>
<td>DE</td>
<td>226</td>
<td>15.9</td>
<td>64%</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Commerzbank AG</td>
<td>DE</td>
<td>463</td>
<td>13.9</td>
<td>53%</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Deutsche Bank AG</td>
<td>DE</td>
<td>1298</td>
<td>15.0</td>
<td>33%</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>DZ Bank AG</td>
<td>DE</td>
<td>559</td>
<td>15.9</td>
<td>33%</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Landesbank Baden-Württemberg (LBBW)</td>
<td>DE</td>
<td>257</td>
<td>15.6</td>
<td>40%</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>BBVA, S.A.</td>
<td>ES</td>
<td>699</td>
<td>13.4</td>
<td>55%</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Banco Santander, S.A.</td>
<td>ES</td>
<td>1523</td>
<td>13.1</td>
<td>62%</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>CaixaBank, S.A.</td>
<td>ES</td>
<td>391</td>
<td>13.5</td>
<td>57%</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Nordea Bank Abp</td>
<td>FI</td>
<td>555</td>
<td>18.3</td>
<td>58%</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>OP Osuuskunta</td>
<td>FI</td>
<td>105</td>
<td>18.6</td>
<td>38%</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>BNP Paribas</td>
<td>FR</td>
<td>2165</td>
<td>13.5</td>
<td>37%</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>BPCE</td>
<td>FR</td>
<td>765</td>
<td>11.2</td>
<td>23%</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Groupe Crédit Agricole</td>
<td>FR</td>
<td>1768</td>
<td>13.2</td>
<td>22%</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Société générale</td>
<td>FR</td>
<td>1356</td>
<td>15.6</td>
<td>33%</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>AIB Group plc</td>
<td>IE</td>
<td>99</td>
<td>18.6</td>
<td>62%</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>
### European Banks’ Response to COVID-19 “Quick Fix” Regulation and Other Measures

<table>
<thead>
<tr>
<th>Name</th>
<th>Country</th>
<th>Total Assets, EUR billion (12/2019)</th>
<th>CET1 Ratio, % (12/2019)</th>
<th>Loan/Total Assets</th>
<th>Quarterly Reports*</th>
<th>Separate Pillar 3 Document</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bank of Ireland Group plc</td>
<td>IE</td>
<td>132</td>
<td>15.1</td>
<td>60%</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Banco BPM S.p.A.</td>
<td>IT</td>
<td>167</td>
<td>15.1</td>
<td>73%</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Intesa Sanpaolo S.p.A.</td>
<td>IT</td>
<td>816</td>
<td>15.3</td>
<td>51%</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>UniCredit S.p.A.</td>
<td>IT</td>
<td>856</td>
<td>14.9</td>
<td>61%</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Banque et Caisse d’Epargne de l’Etat (BCEE)</td>
<td>LU</td>
<td>48</td>
<td>20.9</td>
<td>48%</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Banque Internationale</td>
<td>LU</td>
<td>28</td>
<td>14.5</td>
<td>52%</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Bank Polska Kasa Opieki SA (Bank Pekao)</td>
<td>PL</td>
<td>48</td>
<td>15.0</td>
<td>69%</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Powszechna Kasa Oszczednosci (PKO, Bank Polski) SA</td>
<td>PL</td>
<td>82</td>
<td>18.6</td>
<td>66%</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>BCP, SA</td>
<td>PT</td>
<td>82</td>
<td>13.3</td>
<td>61%</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Caixa Geral de Depósitos</td>
<td>PT</td>
<td>86</td>
<td>17.3</td>
<td>56%</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total/Average (€ billion or %)</strong></td>
<td><strong>EU15,293 billion</strong></td>
<td><strong>15.4%</strong></td>
<td><strong>52%</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Authors’ own elaboration.

Note: *1/0 indicates that the document is available/not available.

After determining the sample size and the list of banks, we hand-collected the bank-specific reports to be used in our analysis (see Annex 1 for an example of the data gathering process). Example of documents collected are Pillar 3 and Annual reports, and quarterly/semi-annual financial statements or other press-releases. Most banks have quarterly reports (or semi-annual reports) and separate Pillar 3 disclosure documents, although others (e.g., large French or German banks) report it together with their annual report. We have also complemented these sources with Orbis Bank Focus data to retrieve information on bank balance sheet characteristics such as size, asset quality, capitalisation, funding structure, and profitability in 2019 and 2020.
The main problem encountered in the data collection process, which spanned several weeks, pertained to the lack of standardisation across banks in the type of information provided. Some banks include Pillar 3 disclosure together with other registration documents; some report the impact of COVID-19 related measures in footnotes or sub-sections across various types of document. Some banks report the documents only in the local language and not in English. Overall, the creation of a digital database regarding the implementation and use of COVID-19 relief measures, even for just 27 banks, proved to be a challenging and highly time-consuming task.

This first level analysis was important to understand how banks have reported the relevant information, and, most of all, how to reconcile and use this information in order to address the issues raised in the EP’s detailed request for this study. While retrieving the data, we also created a simple Yes/No flag reflecting the accuracy of reporting by each bank in regard to the measures that are the object of the study and the general level of transparency in the reports. In general, we find a high level of accuracy in bank reports and Pillar 3 documents. The completeness and clarity of the information provided, as expected, is positively correlated with bank size. In this respect, it is worth mentioning that, given that our sample of banks is skewed towards large banks and we selected the list of banks given the availability of data, we are likely looking at the most transparent banks.

3.2. Data Description

3.2.1. Use of “Quick fix” and other COVID-19 relief measures
In this section we describe the usage of COVID-19 relief measures, listing the number of banks that reported information on these measures. In the following sections we dig deeper into each one of them and provide a more thorough quantitative assessment, together with other bank balance sheet analysis. Table 4 below reports the number of banks using each of the measures described in Table 1.

Table 4: Usage of COVID-19 relief measures

<table>
<thead>
<tr>
<th>Measures</th>
<th>Number of banks reporting measure</th>
<th>Number of banks using measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dividend pay-out ban</td>
<td>26</td>
<td>25</td>
</tr>
<tr>
<td>&quot;Quick fix&quot; CRR – IFRS 9 transitional arrangements</td>
<td>26</td>
<td>25</td>
</tr>
<tr>
<td>&quot;Quick fix&quot; CRR – SME supporting factor</td>
<td>15</td>
<td>14</td>
</tr>
<tr>
<td>&quot;Quick fix&quot; CRR - other</td>
<td>12</td>
<td>11</td>
</tr>
<tr>
<td>Moratoria on loan payments</td>
<td>27</td>
<td>25</td>
</tr>
<tr>
<td>Public Loan Guarantees</td>
<td>26</td>
<td>26</td>
</tr>
<tr>
<td>TLTRO III</td>
<td>24</td>
<td>24</td>
</tr>
</tbody>
</table>

Source: Authors’ own elaboration.

Note: The two Polish banks considered in the study are not part of the Eurosystem, so only 25 banks can report information about TLTRO usage.

Almost all banks report information on the dividend pay-out ban, and all of them refrained from paying dividends to shareholders in 2020 or limited them in case they were approved shortly before the ECB decision.

Regarding the temporary amendments to the CRR brought by the “Quick fix”, the measure that was mostly reported and used was the two-year extension of the transitional arrangement for the impact
on capital of IFRS 9 adoption. Around half of the banks also implemented the more generous SME supporting factor, while other measures are reported less frequently. Moratoria and public loan guarantees were also widely reported and used, along with TLTRO III borrowing from the ECB.

Overall, banks are heavily relying on the key COVID-19 relief measures that were put in place by various European institutions. Concerning the temporary amendments brought by the “Quick fix”, which is an important object of the study, it appears that the deadline extension of two years of the IFRS 9 to mitigate the impact on bank capital was the most widely used measure. The forward-looking nature of provisioning of loan losses under IFRS 9, which use an expected loss approach as opposed to incurred losses, together with the potential impact of COVID-19 on the solvency of many borrowers, was probably a key reason for postponing the application of IFRS 9. The excessively pro-cyclical nature of IFRS 9 provisioning has been subject of debate in policy and academic circles in recent years (Abad and Suarez, 2018; Goncharenko and Asauf, 2021). The COVID-19 crisis provided an opportunity to re-think the impact of such measures on lending procyclicality and financial stability.

3.2.2. Dividend pay-out ban

Almost all banks followed the ECB recommendation first issued on 27 March 2020 not to pay dividends in 2020. Some banks still made some payments in 2020, because they had approved the payment to shareholders shortly before the ECB recommendation of March 27, while others only limited payments instead of halting them altogether\(^\text{13}\). In general though, all banks took the ECB recommendation seriously and drastically reduced payments to shareholders in 2020. Using data on dividends paid for the 14 largest publicly listed banks in our sample we find that total dividend payments went down by about 73% in 2020 compared to 2019, from €24 billion to €6.5 billion (see Figure 2).

Figure 2: Total dividends paid, 2017-2020

[Figure 2: Total dividends paid, 2017-2020]

Source: Author’s own elaboration. Data from 14 largest publicly listed banks in the sample.

The immediate impact of the dividend pay-out ban was that most of the 2019 dividends, which had typically been scheduled for distribution at the beginning of 2020, went into capital reserves, mechanically increasing regulatory capital ratios. Only a handful of banks however reported the quantitative impact that not paying dividends in 2020 had on their CET1 ratios. One can still estimate such magnitude using the dividends paid out in 2019 and assume a constant dividend in 2020.

\(^{13}\) For example on 9 April 2020 the Spanish bank BBVA, according to a decision approved at the General Shareholders’ Meeting on 13 March 2020, made a cash payment of €0.16 per share for a supplementary dividend for the 2019 financial year.
On average, the 14 largest public banks in our sample paid €1.7 billion in dividends in 2019, representing about 0.36% of RWA.

Thus, the dividend pay-out ban had the potential to increase CET1 ratios by 36 basis points in 2020. This is a large increase if compared to the impact of other regulatory measures such as the “Quick fix” as we will see later. However, it is likely not to be long-lasting, as banks plan to resume paying dividends, including the unpaid 2019 dividends, in 2021.

The dividend pay-out ban was a controversial measure. It was clearly a very sensitive issue for banks’ shareholders and all banks discussed it at length in their annual report. This is not surprising because dividends are an important determinant of bank market valuations and when prices are low relative to book values, as was the case between March and November 2020, banks have a strong incentives to pay out dividends (Gambacorta et al., 2020). In this respect, the pay-out restriction was a binding constraint on those banks who would have paid dividends if the restrictions had not been in place. This is also evident from the fact that, after the ECB changed its recommendation in December 2020, allowing banks to distribute up to 15% of the 2019-2020 profits (but not for more than 0.2% of CET1), all banks responded by distributing dividends in 2021, if their capital position allowed it.

As expected, the uniform dividend pay-out ban benefited low capital banks who could boost their retained earnings, but was detrimental to banks with a solid capital base, who had no need for a further increase in capital and would have preferred to pay out dividends instead. These banks were keen to signal to market participants that the ban was only a deferral of their 2020 dividend distribution, not a permanent increase in retained earnings. As soon as these banks were allowed to pay dividends, they did so to the maximum extent allowed by the law.

Could the ECB have adopted a targeted approach, where the dividend pay-out ban only applied to some (low capital) banks and not others (high capital)? This may not have been a good policy either, as the stigma effect would have further damaged stock prices of weak institutions. This is similar to the lesson learned in the US during the 2007-08 financial crisis, where the case-by-case bank resolution approach used until September 2008 was replaced with the equity injection at all US banks under the Troubled Asset Relief Program (TARP), regardless of each bank’s financial condition.

3.2.3. Moratoria and public guarantees

Moratoria on loan payments have been widely used by the banks in our sample, with a total of €535 billion in loans to households and firms that have gone into some form of payment holiday throughout 2020 (6.7% of total loans). Most (80%) of the moratoria issued throughout 2020 had a maturity of 3-6 months, hence they expired as of December. The only notable exceptions are found in some peripheral countries (Italy and Portugal) that had 70% or more of their moratoria still outstanding after December 2020.

There is large cross-country heterogeneity in the use of moratoria, reflecting the different impact of COVID-19 across countries. German banks have not been using moratoria much, whereas banks in the periphery (Ireland, Italy, Poland and Portugal) had on average 10% or more of their total loan portfolio in 2020 under moratoria (see Figure 3).

---

14 Andrea Enria, chair of the ECB’s supervisory board, told reporters on 28 July 2020, after the announcement that the dividend pay-out ban was extended for two years, that: “We know that investors have not been particularly pleased with our decision, but we think this is a necessary action to be taken at this stage of heightened uncertainty”. See https://www.bankingsupervision.europa.eu/press/speeches/date/2020/html/ssm.sp200729-4177c94f5b.en.html

15 Total loans reported here includes loans to households, non-financial firms, governments and other financial institutions. Hence, the share of loans to firms and households under moratoria is likely to be higher than 6.7%.
European Banks’ Response to COVID-19 “Quick Fix” Regulation and Other Measures

Figure 3: Share of loans under moratoria, 2020

Contrary to the cross-country heterogeneity in their usage, we noticed a high degree of homogeneity in the reporting of moratoria. Virtually all banks have been very transparent in reporting (in either the Pillar 3 or annual report) the following information: 1) the amount of loans under moratoria expired by December 2020; 2) the carrying value of performing and non-performing portfolio under moratoria; 3) moratoria subject to forbearance measure in both the performing and non-performing portfolio; 4) the performing moratoria in Stage 2; and 5) the non-performing moratoria which are unlikely-to-pay or past-due. The homogenous reporting and disclosure happened thanks to the EBA guidelines 2020/07 issued on 2 June 2020\textsuperscript{16}. There appears to be no data gaps, at least among the banks in our sample, which are all under EBA supervision.

Looking at the use of PGS, we first notice that the overall stock of aggregate credit increased by €123 billion in 2020. Part of the increase was driven by firms, especially large ones, drawing down on previously agreed credit lines in March 2020, but later on, it was fuelled by €196 billion of newly originated loans subject to PGS issued by local governments to the banks in our sample. Consistent with the fact that our sample of banks covers about 50% of banking assets in the list of Member States considered in this study, this figure represents about 44% of the total amount of government-backed guarantees issued by Member States, the bulk of which is concentrated in Italy, France, Spain and, to a lesser extent, in Germany. The usage of PGS has been, in fact, widely dispersed across banks and countries (see also EBA, 2020).

3.2.4. Evolution of asset quality

The COVID-19 crisis caused massive business disruptions and a firm liquidity crunch, especially among small businesses. However, this shock has yet not translated into higher default rates because of a combination of government support measures, including a temporary stop of the bankruptcy process in some Member States. In this section, we examine the evolution of banks’ asset quality by looking at three main indicators: Non-Performing Loan (NPL) ratios, loan loss provisions (LLP), and loan coverage ratios, i.e., the ratio of Loan Loss Reserves (LLR) to NPLs.

Looking at the loan coverage ratio is important because what matters even more than the absolute amount of NPLs in a bank’s balance sheet is the level of loss coverage, that is the amount of loan loss reserves, as this determines how losses originating from NPLs will impact bank capital. The mechanism can be explained as follows: Each year banks set aside LLPs that accumulate in LLRs. These reserves work as a buffer to absorb expected loan losses because, when the losses materialise, banks can draw on these reserves without impairing their capital. Hence, the ‘uncovered’ portion of NPLs represents the real threat to a bank’s balance sheet health. Ceteris paribus, banks with larger volumes of NPLs and lower coverage ratios are more vulnerable to negative shocks affecting borrowers’ credit quality, as they have lower buffers to withstand them, especially in bad times when loan losses are more likely (Alessi et al., 2021).

The level of NPLs on bank balance sheets has remained relatively stable throughout 2020. While there is some dispersion in the change in NPL ratios (i.e., the ratio of NPL to total loans) across countries (see Figure 4), the increases are modest and a few peripheral countries such as Portugal and Italy even saw their NPL ratios decrease in 2020.

Figure 4: Change in NPL ratios across countries, 2019-2020

This is not surprising, also in light of the numerous measures set up over the period to provide relief to borrowers as well as operational flexibility to banks, as for example the reclassification of loans under moratoria.

Differently from NPL rates, however, aggregate LLP almost doubled in 2020, going from €30.8 billion to €54.8 billion, i.e., from 0.19% to 0.32% of total assets, reflecting the banks’ expectations about the future deterioration of the quality of their loan portfolios, which has not yet materialised in NPL ratios (see Figure 5).
A similar trend can also be seen in loan coverage ratios: Figure 6 shows that average coverage ratios for banks in our sample increased from 64.5% to 67.7% between 2019 and 2020.

We finally focus on exposures under moratoria. As widely discussed (see Beck et al., 2021, among others), there are a few potential side-effects associated with moratoria on loan repayments, most of which related to their long-term effect on bank credit risk and balance sheet transparency.

First, the break given to borrowers is only temporary as deferred payments have to be repaid later, which may increase future risks for banks. Second, prolonging moratoria may increase systemic risk, by either developing a “non-payment” culture among borrowers, or because of a sudden increase in the level of NPLs (cliff effect) at the expiration of moratoria. Third, prolonged moratoria may reduce bank
balance sheet transparency, because the lack of periodical payments would make monitoring complicated.

This may have an impact on specific provisioning policies that rely on the borrowers’ payment history, although this may be compensated, at least partly, with a proper accumulation of generic provisions. Likewise, it would be more difficult for banks to ascertain when credit risk has increased significantly, a condition for loans to be classified in the so-called Stage 2, according to IFRS 9. Inadequate provisioning for too long could also impair bank lending (see, e.g., Laeven and Majnoni, 2003). This is why banking authorities, while offering relief to borrowers and flexibility to banks, have reiterated the importance of carefully monitoring loans under moratoria in order to tackle more effectively any actual increase in credit risk at expiry of the measure.

With respect to the reclassification of exposure under moratoria, we find that on average about 1.8% of the loans under moratoria were classified as non-performing (€9.6 billion in total). This is lower than the ratio of NPLs to total loans (the NPL ratio) which stands at 3.7% for the banks in our sample. Moreover, about half of the banks sample have less than 1% of the loans under moratoria classified as non-performing, compared to only one bank with an overall NPL ratio below 1%. Of the total €9.6 billion of non-performing moratoria, €4.3 billion have some forbearance measure. Thus, the fraction of borrowers in distress who received a moratoria is lower than that of the overall loan portfolio. This was expected, as many schemes only allowed performing loans to be eligible for moratoria on loan repayments.

A borrower with a performing loan who asks for a moratorium, however, may signal an increase in risk which is not yet reflected in the NPL portfolio, and thus might raise risk flags at the bank. In this respect, we find that banks have been closely monitoring performing loans under moratoria, in particular by disclosing the amounts relative to loans that are still performing, but which have shown a significant increase in credit risk since their initial categorisation as performing (i.e., loans classified under IFRS 9 in Stage 2). A total of €71.4 billion of moratoria in the performing portfolio have been classified as Stage 2 (13.5% of the total). This is twice as high as the ratio of all loans in Stage 2 (6.1%). There are also large differences across banks, with about a third of the banks reporting over 10% of the performing moratoria under Stage 2. These banks are also those with a high NPL ratio, probably due to a low quality of the underlying pool of borrowers.

Overall the evidence suggests that, even though the share of reported NPLs under moratoria is relatively small compared to the share of NPLs in the overall loan portfolios, the credit quality in the performing loans under moratoria can deteriorate faster than that of performing loans not under moratoria. This is also consistent with the intended target of the moratoria: the recipients of moratoria, i.e., solvent borrowers affected by temporary liquidity difficulties related to the COVID-19 crisis, were also the segment most at risk of a downgrade in credit quality. As the uncertainty regarding the future state of the economy and the lockdown measures persisted throughout the year in autumn 2020, the level of financial distress among these borrowers eventually increased.

It seems however that banks have been monitoring increased risk and reacting to signals, as shown by the evolution of loan loss provisions, loan coverage ratios and exposures in Stage 2, to the benefit of correct risk reporting and balance sheet transparency.

3.2.5. ECB liquidity interventions (PEPP and TLTRO III)

The two largest liquidity interventions by the ECB were the PEPP and the TLTRO III. Under the former, the ECB would purchase private and public sector securities for a total of €1.85 trillion; purchases will be conducted at least until March 2022. Essentially, this represented an expansion of the purchases already scheduled under the APP, which in the process was also enlarged by €120 billion in 2020. TLTRO
refers to refinancing operations consisting of direct loans to banks, with a maturity of four years (three years for the TLTRO III), whose amount is capped by a share of the banks' loans and provided under the condition that the funds are used to finance new loans. The interesting feature of the TLTRO III is that the interest rate on the borrowed funds is 0.5% below the deposit rate facility, which translates into an interest rate as low as -1%. Thus banks can borrow money at negative rates from the central bank, as long as they use the borrowed money for new loans extended to firms and households.

Given that the PEPP program was not specifically designed for banks, but rather to stimulate the economy at large, we do not expect a direct effect on the banks' health or capacity to provide loans. On the other hand, all banks discuss and report their borrowing amount in the TLTRO III program. Banks in our sample borrowed a total of €931 billion through TLTRO III, about half of total TLTRO III borrowing from euro-area banks, which also includes roll-over of previous TLTRO funds and other refinancing operations. As of 2020, in fact the entire borrowing from the Eurosystem, which has tripled, from €600 billion at the end of 2019 to about €1800 billion, is composed of TLTRO III borrowing (see Figure 7, taken from Altavilla et al., 2020a).

Figure 7: Total borrowing from the Eurosystem

Source: Figure 5 in Altavilla et al., 2020a. Latest observation June 2020.

Note: MROs stands for Main Refinancing Operation. LTROs for Longer-Term Refinancing Operations.

On average, TLTRO III funding represents 5.9% of total assets and 24% of total wholesale funding, i.e., non-deposit liabilities, for the banks in our sample. There is not much dispersion across Member States in the usage of TLTRO III funds (see Figure 8): while Italian banks have the largest take-up rate at 9% of total assets, banks in Belgium, France, Germany and Spain are also drawing funds in excess of 4% of total assets. This is different from ECB Long Term Refinancing Operations (LTROs) in 2011-12, where most of the funding went to banks in peripheral countries, which were more severely affected by the sovereign debt crisis. The large borrowing among banks across the euro area reflects the very generous funding conditions at negative rates and the fact that COVID-19 crisis generated a more homogenous shock than the sovereign debt crisis.
Figure 8: TLTRO III funding over total assets, 2020

Source: Authors’ own elaboration. Data from banks in the sample.
Note: Polish banks are not participating in TLTROs because the country is not part of the euro area.
4. EMPIRICAL ANALYSIS: THE IMPACT OF COVID-RELIEF MEASURES

After providing insights on the usage of COVID-relief measures using our sample of banks, in this section, which represents the second part of our empirical analysis, we aim to provide a quantitative assessment of the impact of those measures on bank lending. As we will explain in the methodology section, this is not an easy task. The approach we use to address this issue is by measuring the effect of COVID-relief measures indirectly, via their impact on bank capitalisation. We proceed in two steps. We first measure the impact on banks’ Common Equity Tier ratios of the specific measures. We then provide an estimate (based on the extant literature on the effect on bank capital on credit supply) of how such a capital shock could turn into a change in lending.

4.1. CET1 improvements in 2020 and the “Quick fix” impact: a preliminary analysis

As a first step, we calculate the variation of CET1 ratio in our sample banks. As shown in Figure 9, average CET1 ratio increased by 53 basis points in 2020, going from 15.01% to 15.54%. The rise in CET1 ratio fits a recent trend of increasing capitalisation levels among European banks that started in 2012, but the 2020 increase is remarkable considering that in crisis periods capitalisation levels tend to deteriorate, not improve. Importantly, the CET1 ratio increased not only on average but virtually for all banks in the sample, i.e., 22 out of 27 (see Figure 9). Moreover, the three largest decreases come from banks with very high levels of CET1 ratio in 2019, above 18%. These banks could bear a decrease in capitalisation and remain well capitalised in 2020. In conclusion, the vast majority of banks improved their regulatory capital over the course of 2020.

Figure 9: Change in CET1 ratios, 2019-2020

Source: Authors’ own elaboration. Data from banks in the sample.
How much of the increase in CET1 ratio can be attributed to temporary adjustments to the prudential framework under the “Quick fix” regulation? On average, the application of temporary changes, in particular from the IFRS 9 transitional arrangements, increased CET1 ratios (i.e., as a fraction of RWA) by 54 basis points (22 banks out of 27 report quantitative information in this regard).

There is however large cross-country variation around this average: some banks (e.g., German banks), reported little to no impact on their CET1 ratios, whereas others (e.g., Irish, Belgian and Italian banks), benefited strongly, with increases of 100-150 basis points.

Some examples of what banks are reporting about the “Quick fix” impact include:

- Credit Agricole (FR), whose CET1 ratio improved by 1.3 percentage points in 2020, reports that “0.2 percentage points is due to the allocation of the 2019 dividend to reserves and 0.7 percentage points due the “Quick fix” regulation (the IFRS 9 phasing: +31 basis points; the application of the SME supporting factor: +35 basis points)”;
- UniCredit (IT), whose CET1 ratio improved by 2.7 percentage points in 2020, reports that “0.4 percentage points due to €1.4 billion of dividends not deducted and 0.8 percentage points due to transitional IFRS 9 adjustment”; and
- Commerzbank (DE), whose CET1 ratio decrease by 0.2 percentage points in 2020, reports “We have received approval from the supervisor for the application of the transitional regime to IFRS 9 in accordance with Article 473a CRR. However, the effects from the application are so marginal that we do not take these into account as of 31 December 2020.”

We then investigate the bank-level determinants of such variation in the “Quick fix” impact. One may expect that banks with lower capital ratios in 2019 would have more incentives to exploit the temporary amendments brought by the COVID-19 relief measures to improve their CET1 ratio. However, looking at the entire cross-section of banks in the sample we find that the opposite is true: banks with higher CET1 ratio in 2019 also recorded a larger impact of the “Quick fix” regulation on their CET1 ratio in 2020 (see Figure 10 below).17

Figure 10: Relationship between “Quick fix” CET1 impact and CET1 ratio in 2019 (%)

![Figure 10: Relationship between “Quick fix” CET1 impact and CET1 ratio in 2019 (%)](image)

Source: Authors’ own elaboration. Data from banks in the sample.

Note: Each dot represents a bank.

17 In unreported results, we find that such correlation is strong and robust to the inclusion of additional controls such as bank size (natural logarithm of total assets) and the bank business model (loans over assets).
A similar relationship emerges if we replace the 2019 CET1 ratio with the share of deposits over assets or loans over assets (see Annex 2). Furthermore, there is no correlation between the actual change in CET1 ratio between 2020 and 2019 and the “Quick fix” impact on CET1.

In fact, some banks that benefitted positively from the application of transitional arrangements had negative or small changes in the CET1 ratio, while others had large increases.

Overall this finding suggests that the temporary amendments brought by the “Quick fix” regulation were used to support the capital ratio of banks that already had a solid capital base in 2019 and whose business model is related to traditional commercial banking activities such as deposit-taking and lending. The application of the temporary prudential rules did not however exacerbate differences in regulatory capital ratios between high and low capital banks, since the change in CET1 ratios between 2020 and 2019 are not systematically correlated with the “Quick fix” impact.

4.2. **Empirical Methodology: Elasticity of credit supply with respect to capital**

Identifying the causal impact of bank capital on loan supply is notoriously a difficult empirical task. The key problem is that bank capital and lending supply are endogenous to economic conditions and correlated with firms’ and households’ demand for credit. For example, credit demand is low in a crisis because there is a reduced need for investment or consumption, while bank credit supply is tightened because of higher funding costs on financial markets due to higher uncertainty. Bank capital is also low because of losses and defaults on existing credit portfolios and low stock market valuations discourage new equity issuances. Hence, observing a decline in aggregate credit and bank capital in bad times is not sufficient to conclude that low capital causes a decline in the supply of credit, because the decline in credit may be caused by a lack of credit demand or by an omitted factor (e.g., reduced investment opportunities, higher uncertainty) that negatively affects both.

The state-of-the-art technique to deal with these issues is a regression of credit growth between each bank and firm or, even better, loan application outcomes including firm-time fixed-effects to absorb all unobserved heterogeneity at the firm time-varying level, including firm-specific credit demand (Khwaja and Mian, 2008). Doing so requires access to confidential credit register data. Access to such data is restricted to researchers at central banks and, until recently, there was no single credit register for Europe.

Moreover, in terms of the specific questions set out in the study, isolating the causal effect of the COVID-relief measures on banks’ lending and funding policies is even more challenging. In fact, all COVID-relief measures were designed and implemented in the space of just a few months, together with other forms of policy support such as monetary policy easing. Moreover, there could be complementarities across monetary policy and prudential regulation measures, where one reinforces the effect of the other (Altavilla et al., 2020b). Hence, it is hard to distinguish the role played by, say, “Quick fix” temporary changes as opposed to TLTRO III or the dividend pay-out ban, as well as to identify the causal effect of each of these measures on bank credit supply.

One way to address this problem is to measure how COVID-relief measures affected credit supply indirectly, for example via their impact on capital ratios. Intuitively, as shown in Table 1, we expect the...
COVID-relief measures to free up regulatory capital, which in turn would allow banks to extend more credit to the economy.

To approximately evaluate the effect of these measures on bank lending, we use an estimated elasticity of lending with respect to capital (i.e., the percentage change in lending growth given a 1 percentage change in bank capital) as found in the existing academic literature. Multiplying this estimated elasticity by the change in capital induced by COVID-relief measures would allow us to estimate the potential impact of the measures on bank lending. A similar approach has been followed by Matyunina and Ongena (2020).

As there is no commonly agreed estimate of such an elasticity in the literature and methodologies, samples or time periods differ widely across papers, we have selected a number of relevant papers and we will use the one that fits best with respect to our project. The papers are listed in Table 5.

Table 5: Estimated elasticities of lending with respect to capital from academic literature

<table>
<thead>
<tr>
<th>Paper</th>
<th>Country/Area of Study</th>
<th>Period</th>
<th>Identification/Methodology</th>
<th>Outcome variable</th>
<th>Elasticity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Berrospide and Edge (2019)</td>
<td>USA</td>
<td>2012-2016</td>
<td>Stress Test (CET1 ratio)</td>
<td>Bank-firm credit growth</td>
<td>1.5</td>
</tr>
<tr>
<td>Favara, Ivanov and Rezende (2021)</td>
<td>USA</td>
<td>2014-2017</td>
<td>G-SIB surcharge</td>
<td>Bank-firm Log(Credit)</td>
<td>3.3</td>
</tr>
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</table>

Source: Authors’ own elaboration. Data from banks in the sample.

The first paper, Berrospide and Edge (2019), provides our preferred estimate for the elasticity of lending with respect to capital because they are the closest to our study in terms of the sample period, the type of banks analysed and the capital measure being impacted by shock (CET1). They examine the effect of an increase in capital requirements for large banking groups in the US, similar to the ones we have in our sample. Therefore, our baseline estimate for the elasticity is 1.5, which means that credit supply will be 1.5% higher per 1 percentage point (pp) of CET1 reduction. Given the average CET1 increase of 54 basis points (0.54 percentage point) due to the “Quick fix” regulation, the credit growth is estimated to be 0.81% higher than it would otherwise have been in the absence of such regulation. Given the total amount of credit in our sample of banks in 2019, this translates into €63 billion of additional credit. This is less than the observed increase in credit of €123 billion, which was to be expected, since many other factors affect the actual growth of total credit (e.g., changes in credit demand, public credit guarantees, and central bank liquidity interventions).

Interestingly, a simple correlation between total credit growth and changes in CET1 ratios in our sample of banks yields a similar elasticity to the one estimated above (1.38). While this correlation does not imply any causation, and the relationship between the two variables is statistically weak given the small sample size, it is however useful to see that the empirical relationship between the two variables lines up reasonably well with the magnitudes established in the literature.

For completeness, we also report the estimates from other recent papers which however provide less than ideal comparisons than Berrospide and Edge (2019) for our purposes.
For example, Mésonnier and Monks (2015) analyse lending by European banks, but focus on an earlier time period during the sovereign debt crisis (2011-12). Their estimates are however remarkably close to those in Berrospide and Edge (2019), which is reassuring. Favara et al. (2021) exploit time and bank-level variations in G-SIB additional capital surcharges and find a larger elasticity of lending than other papers (however they use the level of credit, as opposed to the growth rate). Their sample of banks is not similar to ours, being composed only of the very large G-SIB banks. Finally, Fraisse et al. (2021) use the introduction of time-varying heterogeneous capital requirements in Basel II and find somewhat larger elasticities. The limitation of this study is that it focuses on the 2007-08 financial crisis period, which is too remote in time and different in essence from the crisis we analyse here.

An important caveat to remember in the above studies is that the inference about the magnitude of the elasticity of lending with respect to capital is made based on a “differences-in-differences” approach: the comparison of lending by a “treated” group of banks, where treatment in this case is the change in bank capital, to that of a “control” (i.e., not or less affected) group of banks. The idea behind this methodology, similar to that of medical studies, is to obtain an estimate of the effect of the treatment by comparing the response of a group that receives the treatment to one that does not receive it, which “simulates” what would have happened to the treated group in the absence of treatment. In practice, while this is easy to implement in medical studies, randomising the subjects that receive the treatment to those that receive the placebo, it is difficult to apply this approach to in real-world economic situations. This means that the actual credit supply growth can be lower or higher than the €63 billion mentioned above.

Finally, it is also worth mentioning that the elasticities estimated in many of the papers in Table 5 refer to changes in capital requirements as opposed to changes in actual capital. While the temporary changes brought by COVID-relief measures can be considered as decreases in capital requirements, what we measure in the data are changes in actual capital ratios (CET1) induced by the regulatory changes. Using elasticities based on capital requirements for actual capital changes may potentially lead to biased results. However, we think this is unlikely to be the case, because banks typically hold a target, constant management buffer above the requirement (Gropp and Heider, 2010) and gradually rebuild it when the minimum capital requirement changes (Bridges et al., 2014).
5. CONCLUSIONS

COVID-19 has been a challenge to all aspects of society and the economy, from healthcare to the daily life activities of millions of individuals. With regard to the finance industry, although the shock was large enough to potentially cause disruptions orders of magnitude larger than 2007-08 financial crisis, the effects were quite limited. European governments and EU authorities in fact responded with unprecedented strength to this shock, using a wide range of measures.

In this study, we zoomed in on the measures taken to safeguard banks, examined the effects of a host of fiscal, prudential and monetary policy interventions on bank balance sheet and provided suggestive evidence on the banks’ ability to continue lending to the real economy. More specifically, in this research project we asked the following questions: Have banks adjusted their balance sheets in response to these measures, and how? Have these measures been detrimental in terms of correct risk reporting? Have banks actually increased lending as an effect of the introduction of the COVID-19 measures? We did so by hand-collecting data from bank reports and Pillar 3 disclosure documents for a representative sample of 27 large European banking groups. Our main findings can be summarised as follows:

First of all, regarding the usage of measures, we uncovered two main patterns. There was limited cross-country heterogeneity in transmission of monetary policy: the TLTRO III, providing banks funds at negative rates to lend to businesses, was widely used across banks in several countries. This contrasts with past liquidity intervention by the ECB, especially in the context of the European sovereign debt crisis in 2011-12, which saw a substantial cross-country dispersion in usage. While this was partly due to the less asymmetric nature of the COVID-19 shock compared to that of the sovereign debt crisis, it was also partly due to very generous funding conditions that were perceived generous even by banks with low funding costs that would not normally use ECB funding (e.g., German banks).

In contrast to the limited variation in ECB borrowing by euro area banks, we found large heterogeneity for the fiscal policy interventions, in particular borrower relief measures (moratoria and public guarantees) that are implemented at the national level. Moratoria were widely used in high debt countries, and for longer maturities. Public Guarantee Schemes were mostly concentrated in the large, core Member States (Italy, France, Spain and, to a lesser extent, in Germany) with little availability in smaller countries. This is another reminder of the fragmentation in fiscal capacity of the EU, as opposed to the common monetary policy.

Second, we analysed the risk reporting of loans under moratoria, one of the key areas of concern among bank supervisors. The empirical analysis shows systematic and consistent application of EBA guidelines, with few data gaps. The increasing trend in loan loss provisions and share of performing loans under moratoria with an increase in risk (i.e., Stage 2) suggests careful loan monitoring on part of banks. In other words, moratoria did not increase bank opacity as one might have worried, rather the opposite. Similarly, we do not observe the emergence of a culture of forbearance, as while asset quality deteriorated for loans under moratoria more so than for loans not under moratoria, the level of provisioning and loan coverage ratios also increased, reflecting the banks’ capacity to bear future losses on these loans. We were however not able to establish the extent to which the additional provisioning was adequate, given the lack of information on future recovery rates.

Third, we focused on the impact of the measures on bank capital. The most effective measure in this respect were the “Quick fix” temporary amendments (IFRS 9 transitional arrangements and SME supporting factor). Dividends pay-out ban was effective but probably short-lived, as banks, especially high-dividend paying banks, started paying back as soon as the regulation allowed.
Finally, we attempted to provide an estimate of the impact of these measures on lending. Identifying the causal impact of shocks to bank capital on loan supply is a notoriously difficult empirical task, because capital and lending are correlated with the economic cycle. Isolating the causal effect of the COVID-relief measures on the banks’ lending and funding policies is even more challenging because these measures were designed and implemented at the same time, together with other forms of policy support such as monetary policy easing. Hence, it is hard to distinguish the role played by, say, “Quick fix” temporary changes as opposed to TLTRO III or the dividend pay-out ban as well as to identify the causal effect of each of these measures on bank credit supply.

One way to address this problem was to measure how COVID-relief measures affected credit supply indirectly, for example via their impact on capital ratios. We then used an estimate elasticity of lending with respect to capital as found in existing academic literature. The elasticity of lending to capital represents the change in lending expressed in euro given a 1 percentage point change in bank capital. Hence, multiplying this estimated elasticity by the change in capital induced by “Quick fix” measures enabled us to estimate the potential impact of the measures on bank credit supply. Given the total amount of credit in our sample of banks in 2019, this translates into an estimate of €63 billion of additional credit.

Summing up, our findings suggest that about half of the observed credit increase in our sample banks (corresponding to €123 billion) could be due to the implementation of the “Quick fix” regulation and its effect on bank capital. This amount is likely to represent a lower bound as some other measures may have also played a role. These include the liquidity injections under the TLTRO program, loans provided under the public guarantee scheme, and also the usage of capital buffers.
REFERENCES

- EBA (2020). First evidence on the use of moratoria and public guarantees in the EU banking sector.


Figure: Example of data gathering

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<td>BANCO SANTANDER, S.A.</td>
<td>Measure description</td>
<td>Impact on balance sheet (description)</td>
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<td>1</td>
<td>1. limits on dividends</td>
<td>From table 34 of page 35 of the Pillar 3 report, it seems they distributed 0 dividends in 2020 and 1.662 million dividends in 2019. “RENUMERATION AGAINST THE 2019 RESULTS: In February 2019, the board of directors announced the payment of a gross dividend of 0.05€ per share, corresponding to 1.662 million euros.”</td>
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<td>4</td>
<td>2. Moratoria</td>
<td>From table 42 of page 93 of the Pillar 3 report: Loans and advances subject to moratorium (granted) = 111,836 million euros, of which 70,178 million euros as legislative moratorium. As of 31/12/2020, for 88,509 million euros.</td>
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<td>3. Guarantees</td>
<td>From table 41 of page 91 of the Pillar 3 report, as of 31/12/2020: Loans and advances subject to moratorium = 111,836 million euros, of which: 108,143 performing and 3,694 non-performing. Among the performing loans, 105,595 million euros (95%) are guaranteed.</td>
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<td>6</td>
<td>4. “Quick fix” EU regulation 2020/873 of 24 June 2020</td>
<td>No mention found</td>
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<td>8</td>
<td>5. MPL</td>
<td>No specific mention of temporary prudential filters. “The prudential filters exclude any positive or negative valuation adjustments from cash flow hedges. They also exclude gains or losses on liabilities and derivative liabilities measured at fair value through profit or loss.”</td>
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<td>14</td>
<td>5. ECP</td>
<td>No mention found</td>
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<td>16</td>
<td>7. ECB monetary policy</td>
<td>At 31 December 2020, the European Central Bank targeted longer-term refinancing operations (TLTRO (Targeted Long-Term Refinancing Operation)) amounted to EUR 77,732 million, of which EUR 77,460 million corresponded to the extended TLTRO III.</td>
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<td>18</td>
<td>7. Other issues</td>
<td>“At year-end, the group-wide CET1 ratio amounted to 12.34%, it increased by 69 bps from the previous year, above our target ratio and comfortably meeting the levels required by the regulator of 8.85% (from 9.69%).</td>
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<td>19</td>
<td>8. Accuracy in reporting</td>
<td>Accurate</td>
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</table>

Source: Authors’ own elaboration. Data from banks in the sample.
ANNEX 2

Figure: Relationship between “Quick fix” CET1 impact and Loans/Asset ratio in 2019 (%)

Source: Authors’ own elaboration. Data from banks in the sample.

Figure: Relationship between “Quick fix” CET1 impact and Deposits/Asset ratio in 2019 (%)

Source: Authors’ own elaboration. Data from banks in the sample.
Based on hand-collected data from 27 banking groups in 10 EU Member States, this study shows that banks have used COVID-19 relief measures extensively, with some cross-country differences as for the intensity of use. Flexibility in risk classification does not seem to have impaired banks’ ability to report and recognise risk properly, even for loans under moratoria. The findings suggest that the impact of the measures on banks’ credit supply has been overall positive and mainly driven by capital-enhancing measures such as the “Quick fix”.

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