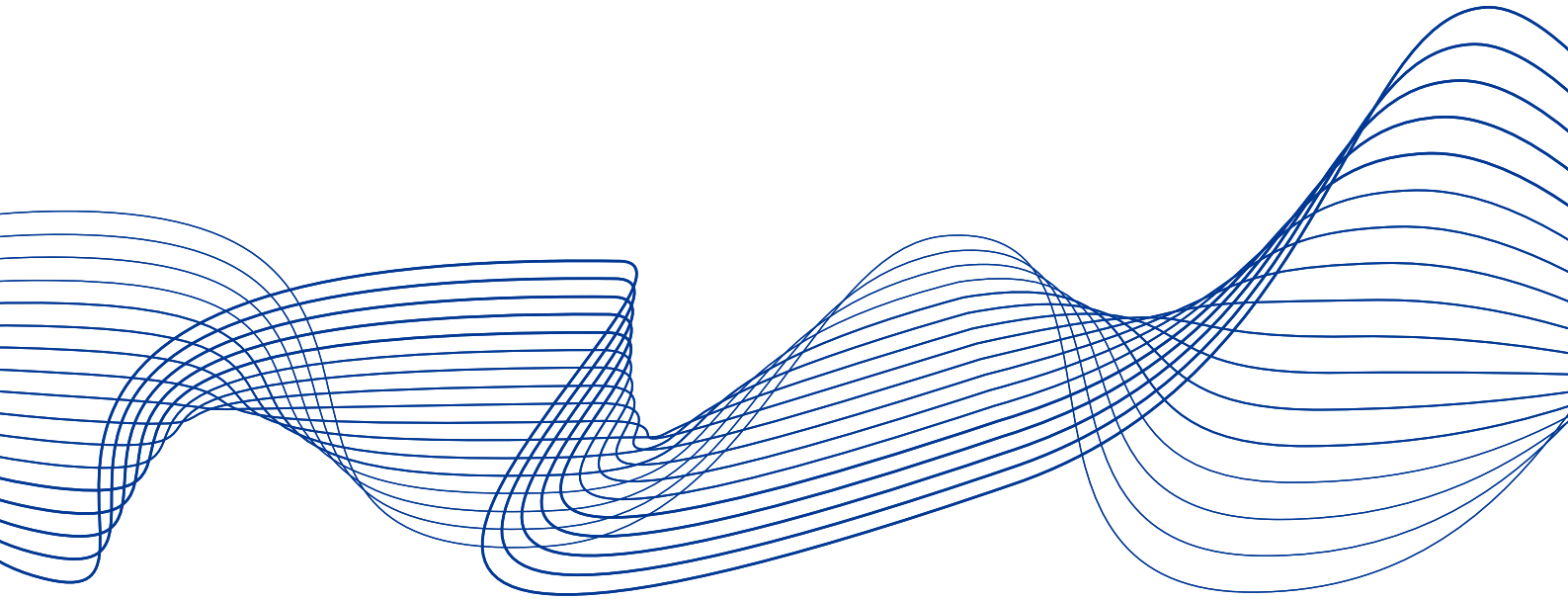
Financial stability implications of support measures to protect the real economy from the COVID-19 pandemic

February 2021



ESRB
European Systemic Risk Board
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1 Motivation

The ESRB Working Group on monitoring financial stability implications of fiscal measures[1] to protect the real economy in the context of the coronavirus (COVID-19) pandemic (henceforth, the WG) was established in June 2020 under the auspices of the General Board. It builds on the work of a related ad hoc ESRB Steering Committee Workstream. It was mandated to develop a regular EU-wide monitoring of the financial stability implications arising from the temporary measures that governments have put into place in response to the COVID-19 pandemic, with a focus on cross-border and cross-sectoral implications. This report summarises the work conducted and was approved by the ESRB General Board on 15 December 2020.

The pandemic has intensified risks and vulnerabilities in the real economy, but prompt action by governments has provided crucial relief to households and non- financial corporations (NFCs). Fiscal measures such as loans with public guarantees and direct grants have helped to prevent the loss of viable businesses and contain the impact of the pandemic. Moratoria schemes have also been providing liquidity support during the health emergency. So far, backed by government support, monetary policy and regulatory easing, the financial system has continued to provide funding to the real economy and losses in banking books have been contained. However, the financial stability implications still need to be monitored. This Report provides a framework for monitoring financial stability implications of the measures and illustrates some initial results and policy findings.

The Working Group proceeded in four stages.

First, it developed a conceptual monitoring framework to analyse the financial stability implications of fiscal measures. Core to this framework are the transmission channels of the fiscal measures in terms of solvency and liquidity issues in the real economy and therefore the ability of these measures to shield the financial sector from the effects of the pandemic. Because these fiscal measures were mostly transmitted through the banking system, this channel was the focus of the report. Section 2 describes this framework.

Second, based on these transmission channels the Working Group derived a set of key indicators to monitor the financial stability implications of the fiscal measures put in place during the pandemic. These will serve as a basis for the ESRB's quarterly monitoring. A longer list of supplementary indicators may complement this at national level. The Working Group explored information collected directly by the ESRB, as well as from the EBA and the ECB. A description of these indicators is provided in Section 2 and Annex A. Section 3 describes the data sources used.

Third, the Working Group identified and started analysing key issues relevant to monitoring financial stability implications in more depth. It started to describe how the drivers of fiscal programmes are related to the structure and to the vulnerability of the real economy and the financial system to the COVID-19 pandemic. Then it focused on the solvency and liquidity of

[1] The report uses the term "fiscal measures" in a broad sense as it also provides information on measures such as loan moratoria which do not have direct fiscal implications.

borrowers and the implications for credit markets and the solvency of the financial sector. It also elaborated on the quality of balance sheet information, as there is a time lag before borrowers' vulnerabilities have an impact on banks' balance sheets. The report further considered the potential cliff effects related to the expiry of fiscal measures that warrant attention from the authorities. Section 4 details these issues.

Fourth, key findings and policy priorities are summarised at the end of this report.

Based on this initial monitoring work, the WG has now completed its mandate. Going forward, the ESRB will continue with regular monitoring, based on the indicators and transmission channels identified. Relevant analytical topics will be addressed in future work including, in particular, the analysis of cross-sectoral and cross-country spillovers. So far these have been contained by the fact that the COVID-19 shock has not been transmitted in full to the financial sector. However, such spillovers may become more important in future adverse scenarios.

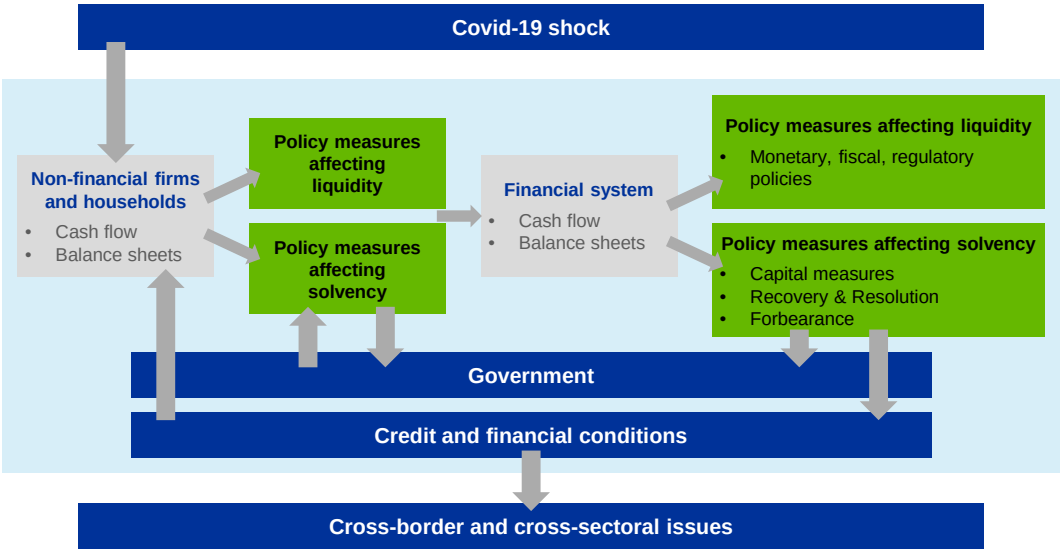
2 Conceptual and monitoring framework

This section provides a high-level overview of the financial stability implications stemming from the COVID-19 shock and the policy response to it. It discusses how fiscal measures to support the economy during the pandemic interacted with the financial sector to mitigate the immediate financial stability implications of the shock. It proposes a set of indicators to monitor the exposure of households, firms and financial intermediaries to risks stemming from the COVID-19-shock.

2.1 The COVID-19 shock and its transmission to the real economy and the financial sector

Figure 1 illustrates how the COVID-19 shock affected the liquidity and solvency of non-financial firms and households, the policy measures adopted to mitigate this, and the impact these had on the financial system. It also displays the policy measures that affect the financial sector directly and the potential feedback effects that may occur if the financial system becomes stressed. These effects can be amplified through cross-sectoral and cross-border transmission channels. The graphic distinguishes between the direct impact on firms and households and the indirect impact on the financial sector that may occur when the loss absorption capacity of firms and households is depleted.

Figure 1
Transmission mechanisms of financial stability implications of fiscal measures



Source: ESRB.

The figure distinguishes three different sectors: private non-financial sector (non-financial firms and households), financial sector (banks and other non-bank financial intermediaries) and public sector.

The degree to which the shock is transmitted through each of these depends on three factors detailed in Table 1:

1. resilience in terms of vulnerabilities or financial absorption capacity;
2. shock exposure in terms of the magnitude of the shock hitting a particular sector;
3. policy measures and their effectiveness in terms of cushioning the shock and/or enhancing resilience.

Table 1

Factors influencing the impact of the COVID-19 shock

	Resilience (vulnerability)	Shock exposure	Policy measures
Non-financial firms	Sector of economic activity Financing structure Degree of internationalisation Degree of digitalisation Net worth and liquidity reserves Access to credit and capital	Decline in demand due to lockdown and precautions Structural change in demand Disruption of value chains Cost of compliance with public health measures Physical proximity needed to do business	Fiscal measures to protect liquidity and solvency, including loan moratoria, public guarantees and public loans
Households	Occupation Debt level and debt service to income Net worth, composition of assets held and liquidity reserves	Decline in employment and wages	Fiscal measures to protect liquidity and solvency, including measures to support employment, direct grants to support income and loan moratoria
Banks	Sectoral exposure of portfolios Maturity or liquidity mismatch Leverage Profitability before the pandemic Credit quality Size of capital buffers	Increased credit risk Losses on securities held Increased funding costs Operational risks, including cybersecurity	Supervisory, regulatory and accounting measures Use of capital and liquidity buffers Monetary policy measures
Non-bank intermediaries	Sectoral exposure of portfolios Maturity or liquidity mismatch Leverage Profitability	Increased credit risk Losses on securities held Increased funding costs Lapses in insurance contracts/loss of business	Supervisory measures Monetary policy measures
National governments*	Debt levels Debt service	Lower tax revenue Increased spending Increased refinancing costs	External funding (European or international bodies) Monetary policy Structural measures to enhance growth

*Note: * Although National governments are impacted by COVID-19, any medium-term in-depth discussion of these implications goes beyond the scope of the Working Group, as well as a discussion of monetary policy.*

The transmission mechanisms feature a feedback loop from credit and financial conditions to the real economy. If the magnitude of the shock (i) cannot be absorbed by the resilience of non-financial firms and households and/or (ii) is not sufficiently mitigated by policy measures, the

financial sector might be severely affected, potentially becoming unable or unwilling to provide credit, liquidity and financial services to the economy. In this situation the financial sector could exacerbate liquidity and solvency problems in the real economy, eventually creating a doom loop between the real economy and the financial system.

The COVID-19 shock

The COVID-19 pandemic is fundamentally affecting economies around the world. Households and firms have adjusted voluntarily to the risk of uncontrolled spread of the virus by maintaining social distancing and reducing activities with a high infection risk. In an attempt to contain the spread of the virus and slow the pandemic, governments have implemented measures that substantially limit mobility and severely restrict economic activity.

There is high uncertainty with regard to the magnitude and duration of the shock. Despite the strong rebound in economic activity seen in the third quarter of 2020, the new waves of COVID-19 infections in the EU and the concomitant increase in the stringency of containment measures mean that the path to economic recovery is highly uncertain. At the same time, the fact that COVID-19 vaccines have become available has lowered the risk of more severe scenarios.

Containment measures and changes in behaviour have led to a sharp reduction in economic activity. Demand for non-essential goods and services has dropped. The service sector was strongly affected, in particular segments such as restaurants and travel, but the fallout from the pandemic and the containment measures were not limited to this sector. Disruptions in supply are accompanying the decline in demand. Border closures and disruption to the production of intermediate goods and transportation have caused a severe supply shock. These have had a particularly large impact on sectors that are closely integrated in global supply chains. The effects of the pandemic on the real economy are therefore very heterogeneous.

For the purpose of this work, the severity of the shock and its impact on member countries is best captured by a simple and straightforward measure of lost economic output. The summary indicator to be monitored is:

- **Foregone GDP as a percentage of pre-crisis forecasts.** This compares the pre-crisis GDP forecast (the European Commission's winter 2020 forecast is taken as the benchmark) with actual post-crisis GDP or the post-crisis forecast. The difference between the two provides a basis for drawing inferences about the severity of the shock.
- **Sectoral exposure.** Information on the aggregate effects of the shock on GDP can be supplemented with information on changes in sectoral output or employment or other information capturing sectoral shock exposure.

Effects on non-financial firms and households

Non-financial firms in sectors hit by the pandemic are facing a sharp reduction in cash inflows and losses. Lower demand for goods and services suppresses sales and increases

demand for short-term liquidity. The resilience/vulnerability of firms prior to the COVID-19 shock affects the strength of the necessary adjustments and the effect on their solvency. The stronger firms' balance sheets are in terms of equity and liquidity reserves, the longer they can withstand the decline in cash flows and absorb losses. Hence, firms' net worth is a buffer that prevents the further propagation and amplification of shocks. Different firms and sectors entered the crisis with different balance sheet positions, which affects their vulnerability to the shock. Moreover, the high degree of uncertainty about economic developments hinders investment decisions.

Households have been affected as firms have reduced wages or laid off workers, with negative implications for household income and net worth. The vulnerability of individual households depends on occupation and balance sheet/liquidity strength. Given the risk of job losses and expectations of a difficult financial situation, households may further restrict demand for goods and services and increase precautionary savings. This would reinforce the initial impact of the pandemic on firms, leading to further layoffs and company closures. Over time, the crisis could also affect the solvency of households and their capacity to absorb losses.

The effects of the pandemic on firms and households depend on their cash buffers and ability to absorb losses. Risk indicators such as insolvencies of NFCs and the level of non-performing loans (NPLs) typically lag the actual shock because policy measures delay the moment the risk materialises. For the purposes of this work, the effects on firms and households will be monitored using the following liquidity and solvency indicators.

- The number of **NFC insolvencies** relative to pre-crisis levels measures the materialisation of risk in this sector, with possible contagion to the household and financial sectors.
- The percentage of **credit lines** to NFCs undrawn gives information about the liquidity buffers NFCs can use if adverse conditions persist or deteriorate.
- NFCs' **debt to equity ratio** shows leverage and the vulnerability of NFCs to future shocks.
- **Household debt** as a percentage of pre-crisis net disposable income shows the vulnerability of households to future shocks.
- The percentage change in banks' stock of loans to NFCs shows the **flow of credit** to NFCs.
- The percentage **change in banks' stock of loans to households** shows the flow of credit to households.
- The growth in banks' **sectoral loan volumes** to NFCs operating in the sectors most affected shows the flow of credit to the most vulnerable sectors.

Direct effect on the financial system

At the onset of the pandemic, the functioning of the financial system was at risk. High uncertainty about the further course of the pandemic led to a significant collapse in asset values and a sharp deterioration in financing conditions. The slump in cash inflows led to short-term liquidity shortages. Uncertainty over whether the financial system would be ready to provide firms

and households with funding through credit lines or loans was high. Surging spreads and tighter financial conditions indicated that some sectors might lose access to funding. There was a clear risk that firms which had run into liquidity problems could see these turn into solvency problems due to the lack of access to liquidity.

This initial threat to financial stability was contained by a decisive policy response and a relatively high degree of resilience in the financial system. Fiscal policy measures have supported the liquidity and solvency of the real economy and thus, indirectly, the financial sector. Monetary policy has stabilised asset prices and maintained favourable funding conditions for banks. Moreover, the financial system was relatively resilient at the onset of the COVID-19 pandemic due to a comprehensive set of regulatory reforms implemented in the aftermath of the global financial crisis. Banks have higher capital buffers that help to absorb losses. Supervisors used the flexibility of the new regulatory framework to allow banks to draw on these buffers so they could continue lending. This was intended to reduce potential procyclicality that might stem from banks' responses to capital regulation.

For the purposes of this work, the impact of the COVID-19 shock on the financial system will be monitored using the following indicators.[2]

- Gross **NPLs** as a percentage of total gross debt instruments provide a backward-looking view by measuring realised losses on loans.
- **The percentage of stage 2 loans** as defined in IFRS 9 (those with increased credit risk) provides a forward-looking view of the risk in banks' balance sheets.
- Weighted average **probability of default** (PD) on the new NFC loan portfolio gives a more sensitive forward-looking view of the risk in banks' new lending.[3]
- **The CET1 ratio** measures banks' ability to withstand future shocks and support the real economy. It can be supplemented by the leverage ratio, which is not sensitive to risk weights.
- **The insurers' solvency ratio** measures insurers' ability to withstand future shocks and support the real economy.

The policy response and second-round risks to financial stability

Fiscal measures mitigate financial stability implications by reducing the losses suffered by households and firms and protecting their net worth. If the capacity of households and firms to absorb losses becomes insufficient, non-performing or forborne loans and defaults will increase. This risk is more likely to materialise over time if the mitigating measures are insufficient and/or if the design features of the measures are such that the uptake is insufficient.

[2] The first four indicators focus on the banking sector, where the COVID-19 risks are expected to be greatest, while the fifth indicator focuses on insurance companies.

[3] This indicator is available from AnaCredit only for banks using internal models.

Over the medium and longer term, however, the design features of fiscal measures could themselves create distortions, leading to second-round risks to financial stability. Some measures may increase the indebtedness of households and firms, with potential negative effects on financial stability. Others may have a positive impact on financial stability in the short run but create adverse incentives in the medium term, such as adverse selection, moral hazard and evergreening.

The phasing out of fiscal measures needs to be evaluated carefully. Premature termination might trigger system-wide distress in the banking sector due to cliff effects associated with the liquidity and solvency conditions of borrowers. At the other extreme, extending fiscal measures for too long could protect firms and banks that are no longer viable, delaying their exit from the market.

Prolonged financial problems for firms and households could pose a threat to financial stability. If the scale or uptake of national and EU-wide measures is insufficient, the sharp drop in economic activity could lead to write-downs in the financial sector over the medium term. Corporate insolvencies could lead to significant loan defaults. If household solvency is affected, the financial sector would also have to absorb additional losses from bad mortgages and consumer loans. Capital buffers in the financial sector may not be sufficient to cope with large-scale insolvencies in the real economy. The financial sector would have to react by reducing its balance sheet and restricting lending. Sectors could then have problems obtaining follow-up financing. In this situation, the financial system could exacerbate the economic downturn in the medium term or delay recovery.

Table 2 summarises the financial stability implications of different fiscal measures over both the short term, i.e. the containment phase, and the medium term, when measures are being phased out and the economy is moving into recovery.

Table 2

Financial stability implications of measures targeting the real economy

	Short-term implications (containment phase)	Phasing-out issues (recovery phase)
Loan and insurance premium moratoria	Avoids household/NFC defaults by easing liquidity problems Worsens liquidity of the financial sector due to reduced cash inflows	Risk of increase in NPLs when moratoria expire Keeps unviable NFCs in business for the duration of the moratoria
Public guarantee on loans	Eases liquidity difficulties of NFCs Supports lender solvency due to lower risk weightings	Debt overhang due to increased firms' leverage Risk of losses from granting new loans to unviable NFCs Risk of increase in NPLs when guarantees expire Cliff effect (guarantee may be called close to expiry) Risk of losses for guarantor Moral hazard for banks
Public guarantee on trade credit insurance	Eases access for NFCs to credit insurance	Risk of losses for guarantor Moral hazard
Direct grants and employment measures	Avoids NFC/household defaults by easing liquidity/solvency problems	Direct fiscal cost Risk of keeping unviable NFCs in business
Public/subsidised loans	Avoids defaults by easing liquidity problems of NFCs Supports NFC solvency (provided loan terms better than market funding) Excessive risk-taking due to mispricing of risks	Risk of losses from granting new loans to unviable NFCs Increase in firms' leverage Risk of keeping unviable NFCs in business
Equity participation	Avoids defaults by easing solvency/liquidity problems of NFCs Competition issues (bias towards large companies) Reduces leverage	Fiscal cost Risk of keeping unviable NFCs in business
Tax deferrals and tax relief	Eases liquidity difficulties of households/NFCs Supports solvency of households/NFCs (tax relief only)	Increased cash outflows when deferred taxes are due Fiscal cost of tax relief

Notes: Green and red implications are positive and negative respectively for financial stability in the short term. The phasing-out issues pertain to timing: too soon and risks may be triggered, too late and extensions to support programmes could lead to a build-up in vulnerabilities.

The impact of policy measures and their second-round effects will be monitored using the following indicators. These focus on the most important support measures adopted in member countries so far: moratoria, public guarantees, public loans and direct grants.

- Uptake of **direct grants** by NFCs and households as a percentage of 2019 GDP. This is a measure of solvency support for the private non-financial sector.
- Uptake of **public guarantees** and **public loans** by NFCs as a percentage of 2019 GDP. These are measures of liquidity support for the private non-financial sector.

- Uptake of **moratoria** by NFCs and households as a percentage of 2019 GDP or total credit granted measures the impact of programmes seeking to postpone and contain a wave of loan delinquencies.
- **General government debt** as a percentage of 2019 GDP measures the vulnerability of governments and their capacity to further support the real economy.
- **Loans with moratoria expiring** in less than three and six months as a percentage of total loans measures the potential cliff effect when moratoria programmes are discontinued.
- **Loans with public guarantees expiring** in less than six months as a percentage of total loans measures the potential cliff effect when public guarantee programmes are discontinued.

2.2 Cross-border implications

Tight real and financial linkages can generate positive cross-border externalities and affect financial stability. General spillovers represent one channel: measures in one country can stimulate demand for imported goods and services and benefit firms with cross-border operations. Also, stabilising production at firms that are highly integrated within cross-border value chains can have positive effects on aggregate supply. Positive cross-border spillovers stimulating the economy benefit financial institutions because they tend to lower defaults by firms and households abroad. This effect can be direct, through valuations of loans or securities, or indirect, through exposures to other financial institutions serving foreign entities. Banks in Europe have large cross-border activities. Banks with international operations can therefore benefit from measures taken abroad which might have positive cross-border effects on financial stability in their home country.

However, the design and timing of fiscal measures can also generate negative externalities. These need to be taken into account when timing the phasing out of fiscal measures and coordinating this across countries. Negative cross-border effects could arise through various channels.

First, the effects that domestic fiscal measures have on other countries may be insufficiently reflected in domestic policy decisions. For example, policy measures targeting critical nodes in cross-border value chains may find less support in the domestic policy process than measures targeting relevant domestic constituencies.

Second, in an adverse scenario banks may face higher losses and react to these by deleveraging. Such deleveraging may have a relatively greater impact on cross-border exposures than on domestic ones – countries in which foreign banks have a strong presence could see these withdrawn if the crisis worsens and the measures taken appear to be insufficient or poorly designed. Similarly, the need to support cross-border business might affect lending in the domestic economy.

Third, the size and design of fiscal measures can influence the extent to which non-domestic entities are affected. This applies, for instance, with moratoria and public guarantees on loans when the lenders are mostly non-domestic or foreign-owned. The design features of loan

guarantees and different national approaches to credit insurance support might affect the regulatory treatment of loans or credit insurance[4]. An uneven playing field and regulatory arbitrage due to differences in the design features of fiscal measures might have an adverse impact on the effectiveness of national policies.

Fourth, disparities across member countries can affect financial stability. Countries are being affected differently by the COVID-19 shock, and their resilience and fiscal space differ. If there is a high degree of heterogeneity across member countries in the implementation of fiscal measures, financial integration may decline, with potentially negative effects on financial stability. It is therefore important to monitor cross-border disparities and the appropriateness of these measures, including fiscal and monetary policy support at the EU level, to deal with such divergence. It should be noted that an uneven recovery makes EU policymaking less effective and more challenging to design and agree on.

Indicators to monitor

The evidence to date indicates that no material adverse cross-country spillovers have materialised.[5] Given the high degree of cross-border integration in Europe's real economies and financial sectors, however, two main channels of contagion require careful monitoring:

- **cross-border activity of financial institutions** and potential changes once measures have been introduced, in particular with regard to lending and capital allocation at cross-border groups;
- **trade openness** and cross-border value chains that might suggest a propensity for cross-border spillovers.

The methodological framework established by the ECB Task Force on Cross-border Spillover Effects of Macroprudential Measures can be informative for monitoring cross-border contagion. The Task Force created a short list of indicators[6] to monitor cross-border spillovers from macroprudential measures. In particular, capital-based indicators can also be useful for analysing spillovers from fiscal measures that operate through bank lending. Both outward spillovers (effects of fiscal measures on other countries) and inward spillovers (effects of fiscal measures introduced in other countries) are relevant. Level indicators (such as the percentage of loans granted by foreign banks) are helpful in identifying the propensity for cross-border spillovers, while change indicators (such as a decline in lending by foreign banks) might indicate that spillovers have materialised.

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4 For this reason EIOPA published a **Supervisory Statement** recommending that NCAs apply supervisory flexibility when assessing whether schemes that have the same consequences as reinsurance may be deemed to be risk mitigation techniques under Solvency II, even where they have been implemented directly by the government rather than state insurers or credit export agencies.

5 This evidence includes the results of the July and October rounds of the qualitative questionnaire reported by national authorities to the ESRB, as mandated by Recommendation ESRB/2020/8 (template 3).

6 See **Framework to assess cross-border spillover effects of macroprudential policies** and Kok and Reinhardt (2020).

2.3 Cross-sector implications

The COVID-19 shock and the resultant fiscal measures can have cross-sectoral implications through direct and indirect linkages. Direct interlinkages exist between financial institutions when they are direct counterparties or there is an ownership relationship. These are reflected both on-balance sheet and off-balance sheet. Indirect interlinkages relate to situations where financial institutions are exposed to common risks, such as the sectors most affected by the pandemic. If the measures taken are not sufficient to mitigate the impact of the crisis, these interlinkages may potentially interact to create systemic risks.

Design features of fiscal measures can affect incentives and competition in the financial sector, with cross-sectoral implications. If, for example, loan moratoria or guarantees apply only to banks, creditors will be treated inconsistently across sectors. Over the medium term, this might distort competition due to lock-in effects in lending markets. In this situation, the risks that are likely to materialise after measures have expired might accumulate in particular sectors of the financial system and not be shared. If measures are channelled through different parts of the financial sector correlated exposure to the same risks might increase.

Indicators to monitor

The survey among national authorities revealed that few cross-sectoral implications are currently expected. Nevertheless, the following indicators should be monitored to identify any relevant effects:

- market shares of banks and non-bank financial institutions;
- inter-sectoral exposures;
- common sectoral exposures.

Based on this conceptual framework, Annex A provides a list of key indicators that serve as a basis for the ESRB's quarterly monitoring, as well as a longer list of supplementary indicators that can be the basis of a monitoring framework in national authorities. These indicators can be subject to modification when more experience with the shock transmission is being gained. In any case, these indicators provide only limited information and should be complemented with any relevant qualitative and quantitative information.

3 Data sources used for monitoring

The ESRB is using existing and new datasets to establish the framework for monitoring the financial stability implications of fiscal measures. One of the key principles applied in setting up the framework is to use data already collected so as not to increase the reporting burden of the financial industry.

The main and most novel source of information is the results of the qualitative and quantitative questionnaires reported by national macroprudential authorities under Recommendation ESRB/2020/8.[7] This recommends that they: (A) monitor the design features and the uptake of measures and their implications for financial stability, and (B) report these design features and the uptake to the ESRB. The data gathered under Recommendation B encompass all fiscal measures relevant to financial stability, providing the most complete picture of the size, uptake and design features of fiscal measures taken by ESRB member countries.[8] The following section uses the data from this submission. The results should be interpreted with caution given the possible under-reporting of measures by some countries (in particular on uptake). The Annex B provides further detailed information about the features and the uptake of measures as reported by macroprudential authorities with a reference date of September 2020.

The monitoring is also based on existing data available to the ESRB Secretariat. These include the datasets (mainly from the ECB) used to prepare the regular ESRB risk assessment. The information is supplemented by granular data requested from the ECB (AnaCredit) and the EBA (EBA COVID-19 reporting). Each dataset covers different dimensions of the financial stability implications of fiscal measures.

The EBA COVID-19 reporting facilitates the monitoring of the uptake of moratoria and public guarantees of loans across banks, non-financial firms and households.[9] Data collected from banks via the EBA supervisory reporting framework provide an input which is essential to the financial stability monitoring framework. Regular EBA supervisory reporting has been temporarily extended to capture the implications of measures implemented in response to the COVID-19 pandemic, focusing on the impact of payment moratoria and public guarantees. EBA COVID-19 reporting is submitted by banks quarterly, starting as at 30 June 2020, and is expected to continue for 18 months. Specific data points relevant to financial stability have been shared by the EBA with the ESRB. These data are already being used to develop relevant indicators, such as the percentage of exposures with public guarantees and moratoria, the take-up of measures by different economic sectors, the maturity profile, and indicators showing a possible deterioration in credit quality among exposures benefiting from the measures.

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7 **Recommendation ESRB/2020/8 on monitoring the financial stability implications of debt moratoria, public guarantee schemes and other measures of a fiscal nature taken to protect the real economy in response to the COVID-19 pandemic**.

8 Recommendation (B) requires three reporting templates to be submitted to the ESRB, with the first submission due by 31 July 2020 and the second by 30 October 2020. These reporting templates are composed of three templates covering their features (template 1), their uptake (template 2) and a qualitative questionnaire (template 3). While the first two include information on fiscal measures taken, the third collects the main qualitative concerns of authorities regarding the implications of the measures.

9 For details see the EBA Guidelines on reporting and disclosure of exposures subject to measures applied in response to the COVID-19 crisis.

Another important data source is AnaCredit, which provides detailed information on individual bank loans to NFCs in the euro area, harmonised across member countries.[10] Information from a credit registry is important for three reasons. First, it makes it possible to monitor credit supply and demand and shifts in lending across different sectors of the economy and borrowers of different sizes and risk profiles. AnaCredit can provide information about changes in the characteristics of the firms and banks making use of fiscal measures. The use of granular data makes it possible to take a borrower-lender perspective, which is crucial to identifying where risks originate. Second, granular information is relevant when analysing financial stability, as it can help to identify how stress in the individual parts of the financial system can affect the system as a whole. This sort of contagion can arise from exposure at large financial institutions to idiosyncratic shocks, interconnectedness and common exposure to macroeconomic shocks. Third, AnaCredit provides information on new loans issued. Together with information from the ESRB reporting, it provides an approximation of the percentage of new loans to NFCs subject to fiscal measures.

[10] For details see the **ECB webpage on Anacredit** and Israël et al. (2017).

4 Financial stability implications of fiscal measures

The Working Group used the conceptual framework and available data sources to analyse the financial stability implications of fiscal measures from four perspectives. Section 4.1 describes the drivers of fiscal programmes and how these are related to the structure of the real economy and the financial system and their vulnerability to the pandemic. Section 4.2 focuses on the solvency and liquidity of borrowers and implications for credit markets and the solvency of the financial sector. Section 4.3 addresses the quality of balance sheet information, as it takes time for the vulnerabilities of borrowers to impact banks' balance sheets. Section 4.4 considers the potential cliff effects related to the expiry of fiscal measures that warrant the attention of the authorities.

4.1 Drivers of fiscal measures

Across Europe, governments have responded swiftly to the crisis, in line with the needs of their economies. Table 3 shows the uptake and announced size of the most important fiscal measures as at 30 September 2020. Macroprudential authorities reported government support packages related to the pandemic with a nominal value of more than €2,400 billion (around 14% of GDP) to the ESRB. This includes public guarantees on loans, public loans, direct grants and tax measures. By September 2020 the reported uptake of these programmes was over €700 billion (roughly 4% of GDP), with more than €400 billion of loans with public guarantees. In addition, more than €840 billion of loans (around 5% of banks' total loans)[11] were subject to moratoria.

[11] The total loans figure refers to September 2020 data from ECB CBD and BSI databases. There are methodological differences between these and the numbers published by the EBA with the reference date of June 2020 (which refer to data reported directly by banks).

Table 3

Announced size and uptake of moratoria and fiscal programmes (September 2020)

	Total uptake (EUR billion)	Total size announced (EUR billion)	Total uptake (percentage of 2019 GDP)	Total size announced (percentage of 2019 GDP)	Total uptake (percentage of total loans)	Total size announced (percentage of total loans)
Moratoria	838		5.0%		5.4%	
Public guarantees	435	1,580	2.6%	9.5%	2.8%	10.2%
Public loans	66	57	0.4%	0.3%	0.4%	0.4%
Direct grants	112	327	0.7%	2.0%		
Tax deferrals	77	170	0.5%	1.0%		
Tax relief	13	75	0.1%	0.4%		
Public support for credit insurance	n.a.	227	n.a.	1.4%		
Total	**1,541**		**9.2%**			
Total w/o moratoria	**704**	**2,436**	**4.2%**	**14.6%**		

Sources: Recommendation ESRB/2020/08 (reference date 30 September 2020), ECB (MNA, BSI, CBD).
Notes: Total size announced refers to field 1.1.01 and total uptake to field 2.2.10 for all measures apart from tax relief and tax deferrals, where field 2.2.12 was used. There are gaps in the data reported and results should be interpreted with caution, especially for the uptake of direct grants, tax measures and credit insurance guarantees, where reporting was not mandatory. For public loans, the total size announced is lower than total uptake owing to data gaps for the values reported by DE and PL. Total loans are taken from CBD and BSI databases.

Beyond the broad and fast policy support, the exact measures taken differ by country. By 31 October 2020 more than 600 measures had been reported by the 31 ESRB member countries.[12] Chart 1 illustrates the heterogeneity in the scale and scope of measures across countries.[13] The most common are public guarantees (used by all member countries), direct grants (used by 30), tax deferrals (29) and loan moratoria (23) (for more details, see Chart A). In terms of total uptake, moratoria are used most extensively, followed by public guarantees and direct grants (Table 3).[14]

[12] The ESRB reporting templates cover seven distinct types of measure. However, the range of different types of programme across countries has been much wider.

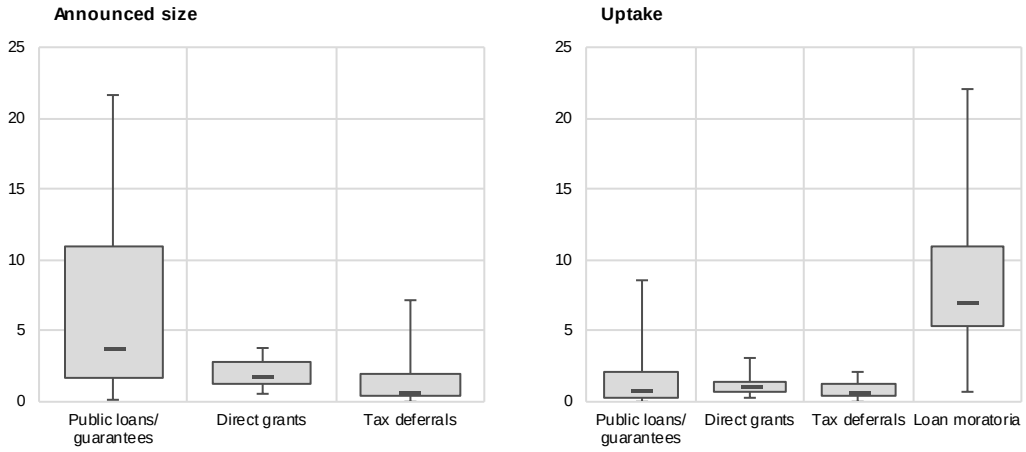
[13] In Figure 1, public guarantees and public loans are aggregated, because both directly increase the debt level of the borrower. As such, both feature the same economic mechanism when it comes to potential financial stability implications. Under the monitoring framework they are examined separately because they affect fiscal capacity differently.

[14] Note that, for other measures, the absence of reporting on uptake might not necessarily mean they are not being used, just that member countries were not able to report it (these fields were also not mandatory).

Chart 1

Heterogeneity in the announced size and uptake of fiscal measures

(percentages)



Sources: Recommendation ESRB/2020/08 by 31 October 2020 (reference date 30 September 2020), ECB (MNA).
Notes: Announced size (field 1.1.01) and uptake (field 2.2.10) as a percentage of 2019 GDP. The box plot shows the median, 25th and 75th percentiles (grey box), as well as the maxima and minima across countries for selected programmes. Announced size is not available for loan moratoria. Based on EU countries (IS, LI and NO are excluded).

The qualitative survey of macroprudential authorities identified both liquidity and solvency measures as important for providing support to NFCs and households.[15] **Across sectors in the real economy, moratoria (liquidity support) and direct grants (solvency support) are identified as the two most important measures for SMEs, large corporates and households.** Public guarantees on loans and tax deferrals follow suit, with the former focusing on NFC vulnerabilities and the latter aiding households to sustain reduced income levels. Measures also differ across financial sectors. Moratoria and public guarantees are seen by macroprudential authorities as the measures having the most impact on banks, while direct grants were deemed to have most impact on the business of insurance companies and investment funds. In this case, there is an indirect impact on the financial system only through the effect of fiscal measures on holders of financial instruments.

The immediate need for liquidity was an important driver of measures at the beginning of the pandemic. Liquidity support measures (moratoria, public guarantees on loans and public loans) are used in most countries. Also, the prompt introduction of public support for credit insurance in many member countries helped to ensure that cross-border trade was not disrupted.[16] While public guarantees are the most used fiscal programme in terms of announced size, moratoria have a higher uptake (see Table 3). It is worth noting, however, that in the case of moratoria there

[15] As provided under template 3 of Recommendation ESRB/2020/08. Please see the Annex B for more details on the answers received by October 2020 with reference date 30 September 2020.

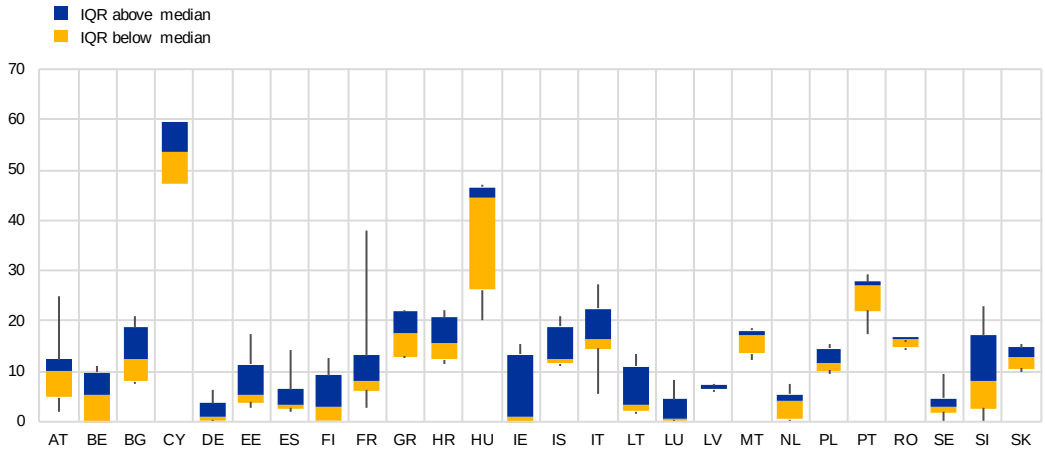
[16] Credit insurance covers the risk that a trade partner does not pay (e.g. following bankruptcy or insolvency) or pays very late. Within this category, export credit insurance protects an exporter against the risk of non-payment or late payment by a foreign buyer.

is a broad dispersion of use across countries, and across banks within the same jurisdiction (Chart 2).

Chart 2

Dispersion of the percentage of loans and advances under moratoria across countries and banks (June 2020)

(percentages)



Sources: EBA, ESRB calculations.
Notes: The chart shows the dispersion in loans under moratoria as a percentage of total loans and advances to households and NFCs across banks in a given jurisdiction. The boxes show the interquartile range (IQR): the median is where the box changes colour. The whiskers show the range between minimum and maximum values.

While moratoria apply to both NFCs and households, public guarantees are mostly extended to NFCs. Supervisory data from June 2020 show that moratoria are widely used, but there is a broad dispersion of magnitudes across countries (Chart 2). For some countries, the use of moratoria is higher in household lending, although for most it is higher for NFCs and is especially pronounced for SMEs (Chart 3). With public guarantees it is clear that most of the support is extended to NFCs (Chart 4), although since these are granted as new lending, the impact on the stock of loans is considerably smaller.[17] Note, however, that the supervisory data refer to June 2020, when uptake of public guarantees was still modest, meaning that they might not provide a full picture of their use.[18] As at June 2020 public guarantees had been granted predominantly to loans to NFCs, which made up around €169 billion or 94% of all new loans subject to such schemes. The impact of public guarantees was also very uneven across European countries and banks.

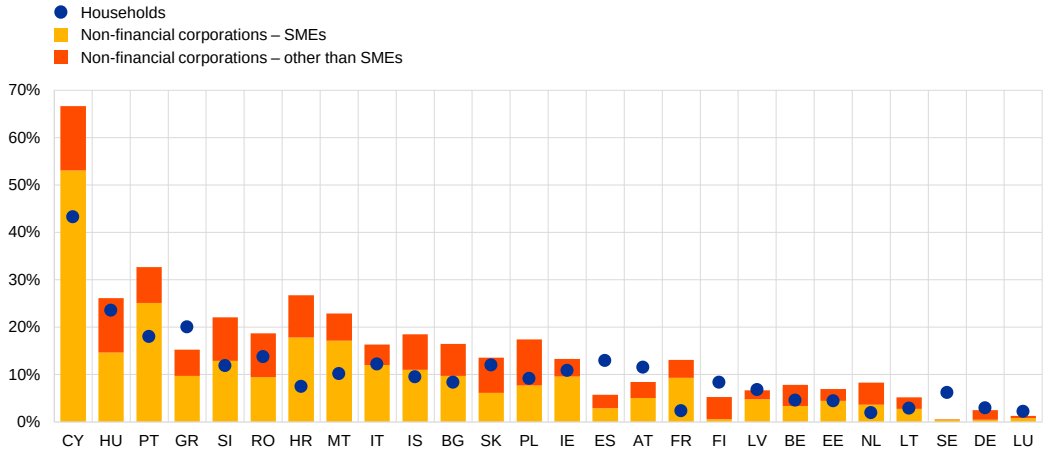
[17] According to supervisory data, the vast majority of these loans (98%) were newly originated. Only 2% were reported as restructured (i.e. loans not initially covered by the public guarantee and that were therefore restructured to become eligible).

[18] Additionally, according to the EBA, implementation of the COVID-19 reporting guidelines has been delayed in some countries. For this reason, the percentage of loans subject to public guarantees might not have been reported. In addition, banks that use IFRS 9 may not report loans that are fully guaranteed in the first place, as they deem that the risks remain with the guarantor, i.e. the state.

Chart 3

Loans and advances under moratoria by sector (June 2020)

(percentages of total loans and advances to the household, SME and NFC sectors)

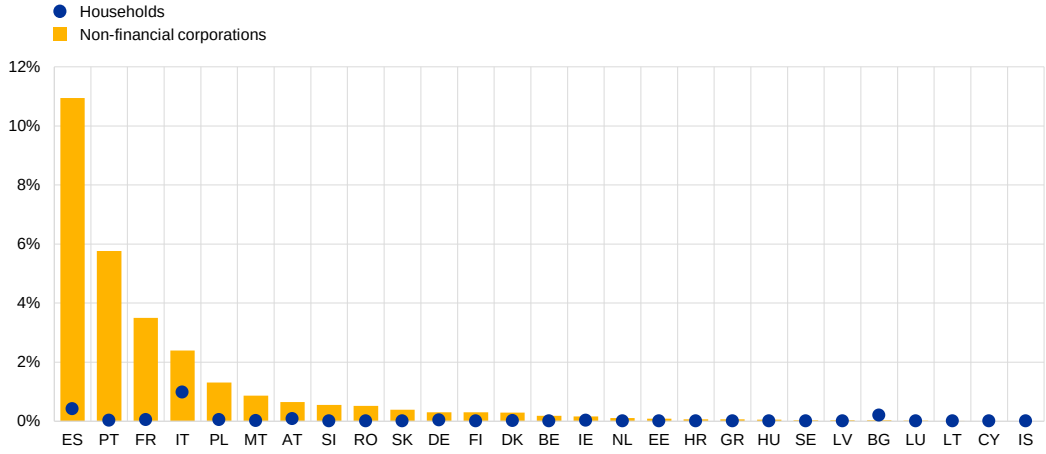


Sources: EBA, ESRB calculations.
Notes: Countries are ranked by loans under moratoria as a percentage of total loans and advances to households, SMEs and NFCs. The values are the mean value for banks in a given country.

Chart 4

New loans subject to public guarantees by sector (June 2020)

(percentages of total loans and advances to the household and the NFC sector)



Sources: EBA, ESRB calculations.
Notes: Countries are ranked by loans with public guarantees as a percentage of total loans and advances to households and NFCs. The values are the mean value for banks in a given country.

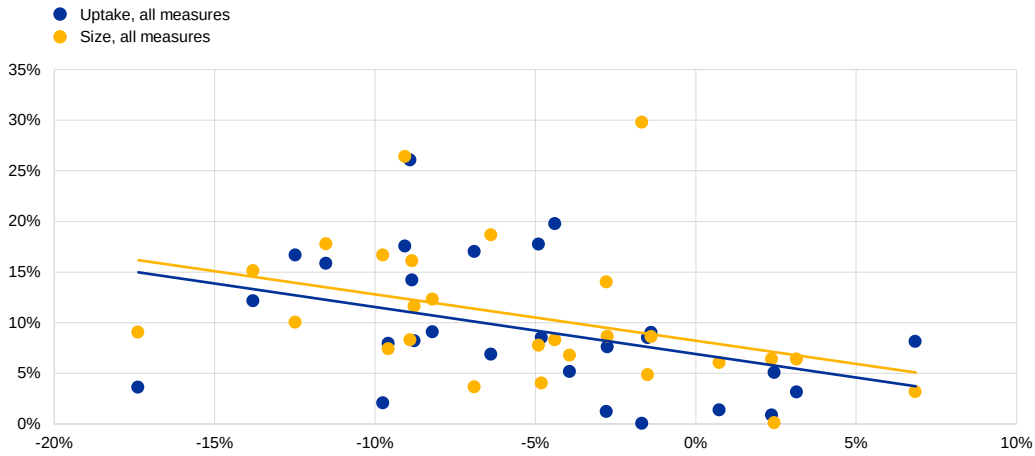
The effects of the pandemic on the real economy are an important driver of the announced size of fiscal measures. The severity of the pandemic shock has varied greatly across countries and sectors. Together with pre-existing differences in the structural characteristics of the economies, this has led governments to adopt different packages. Chart 5 shows that countries which experienced a larger drop in GDP following the onset of the pandemic tended to announce

larger programmes and experienced a larger uptake of measures (hence the downward sloping line). The uptake of moratoria, public guarantees on loans and public loans is higher in these countries.

Chart 5

Fiscal measures and GDP growth in the second quarter of 2020

(y-axis: size and uptake as percentages of GDP; x-axis: quarter-on-quarter GDP growth rate as percentages of GDP)



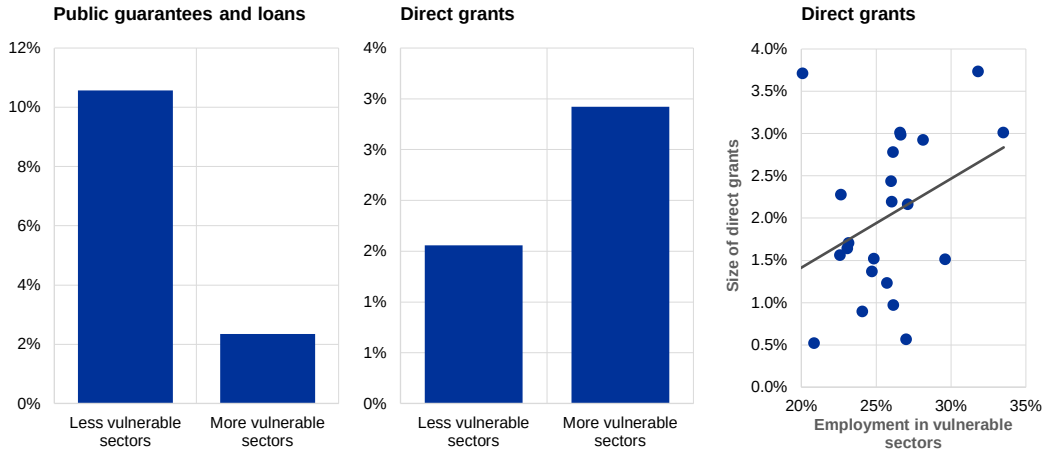
Sources: Recommendation ESRB/2020/08 by 31 October 2020 (reference date 30 September 2020), ECB (MNA).
Notes: Announced size (field 1.1.01) and uptake (field 2.2.10) for all measures combined as a share of 2019 GDP on the y-axis. Quarter-on-quarter GDP growth from the first quarter of 2020 to the second quarter of 2020 on the x-axis. Based on EU countries (does not cover IS, LI and NO).

Cross-country heterogeneity in economic structure is another important driver of the size and uptake of fiscal measures. There is a clear positive relation between the percentage of employment in vulnerable sectors and the uptake of state guarantees on loans, public loans, moratoria and direct grants. Also, economies with a larger share of employment in the sectors hit hardest by the COVID-19 shock had greater need for direct grants. Governments in these countries therefore tend to rely more on direct grants and less on public loans and guarantee programmes (Chart 6).

Chart 6

Fiscal measures and vulnerable sectors

(percentages)



Sources: Recommendation ESRB/2020/08 by 31 October 2020 (reference date 30 September 2020), ECB (MNA).
Notes: Announced size (field 1.1.01) as a percentage of 2019 GDP on the y-axis for all three graphs. Vulnerability is defined as the percentage of employment in NACE sectors G, H, I R, T, U in the fourth quarter of 2019. The bar plots depict the median over the lowest (highest) quartile of the vulnerability metric as "less vulnerable" ("more vulnerable"). The scatterplot compares the announced size of direct grants (as a percentage of 2019 GDP; y-axis) to the vulnerability metric (a higher percentage means greater vulnerability; x-axis). All graphs are based on EU countries (but do not cover IS, LI and NO).

Fiscal measures are also correlated with pre-crisis fiscal space. Countries with higher public deficits prior to the crisis tended to announce higher amounts of public loans and guarantees on loans (below-the-line measures) and use relatively fewer direct grants and tax measures. While an assessment of the fiscal impact of these measures is outside the scope of this report, it is relevant to note that policy choices can be influenced by fiscal space and that this fiscal space might also affect future vulnerabilities.

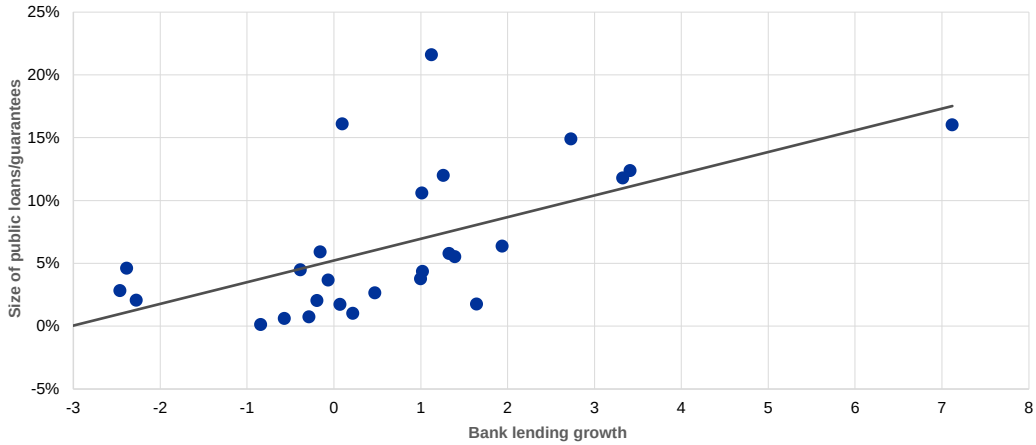
Apart from total uptake, announcements of measures seem to have signalling effects. The mere announcement of guarantees may have helped to stabilise the bank lending market in the early stages of the crisis. So far, the uptake of public guarantees on loans has been relatively limited (Table 3). This may be due to reporting issues or administrative constraints delaying approvals or discouraging applicants. However, it is also possible that signalling effects have been at work. Chart 7 shows that countries which announced larger programmes of public guarantees on loans experienced stronger loan growth in the second quarter of 2020. Regressing bank lending growth in the second quarter of 2020 on the announced size and uptake of public loan and guarantees shows that the coefficient on announced size is highly significant, while the effect on uptake is insignificant. This may simply reflect the fact that schemes are channelled through the banking system, and the coefficient might also be picking up a variable that has been omitted. But it could equally indicate that the announcement of large-scale liquidity programmes improves funding conditions, possibly because of the confidence effect these create by reducing uncertainty and

providing a backstop for banks. More analytical work is needed using granular data to differentiate between these hypotheses.[19]

Chart 7

Fiscal measures and bank lending growth

(percentages)



Sources: Recommendation ESRB/2020/08 by 31 October 2020 (reference date 30 September 2020), ECB (MNA).
Notes: Announced size (field 1.1.01) of public guarantees and loans as a percentage of 2019 GDP (y-axis). Quarter-on-quarter growth in total MFI lending to NFCs and households ("bank lending") from the first quarter of 2020 to the second quarter of 2020 (x-axis). Based on EU countries (does not cover IS, LI and NO).

Loans benefiting from public support represent a significant percentage of new loans.
Comparing new commitments to NFCs reported under AnaCredit with the total volume of new loans publicly originated or guaranteed shows the chart may be as high as one-third. Total uptake of public guarantees and loans for euro area countries amounts to €379.5 billion (as reported by the macroprudential authorities up to September 2020), while cumulative new commitments in AnaCredit for the same set of countries from March to August 2020 amount to €1,082.6 billion.[20] To put the two samples into perspective, these fiscal measures combined account for a sizeable 35% of new commitments reported under AnaCredit. This is even more remarkable given that new lending rose significantly in the first months of the pandemic. Box 1 presents an exploratory exercise showing how AnaCredit data can be useful for assessing the financial stability implications of measures impacting flows of new credit.

Qualitative information from macroprudential authorities highlights potential spillovers and debt sustainability issues stemming from the cross-border impact of fiscal measures.[21]
Several authorities pointed out that fiscal measures might lead to an increase in the indebtedness

[19] The effects of some measures could have a lagged impact on lending owing to rigidities. For example, in Romania lending to households and firms started to pick up in June, with the latter being supported by the "SME Invest" programme.

[20] New commitments represent the total amount drawn (outstanding nominal amount) plus the remaining amount contractually agreed (off-balance-sheet amount) for new credits originated in a given month as reported in AnaCredit. This does not include loans renegotiated or forborne.

[21] Information provided in July 2020 by macroprudential authorities in template 3 of Recommendation ESRB/2020/08. For more detail, see Annex B.

of private and public entities and hence heightened vulnerabilities, which could potentially spill over to other jurisdictions. Limited fiscal space may also prevent some jurisdictions from providing the necessary stimuli, with the risk of insufficient cross-border risk-sharing. Financial stability implications might also arise through (i) spillovers associated with banking groups with cross-border activities, including subsidiaries and branches in other countries, (ii) negative spillovers from dividend restrictions within banking groups, and (iii) spillovers from different approaches to credit insurance support.[22]

Box 1

Preliminary evidence from AnaCredit on new lending to NFCs during the COVID-19 pandemic

AnaCredit data can be used to monitor the flow of lending to NFCs on a very granular level. In this analysis, monthly aggregate data from the ECB AnaCredit dataset for euro area countries up to August 2020 were used to explore lending dynamics by NFC size and sector of economic activity, and to consider volume-weighted probabilities of default (PDs) for banks using the internal ratings-based (IRB) approach.[23]

New loan growth increased across firms of all sizes and in all sectors for the euro area as a whole in the first months of the crisis. Chart A shows that year-on-year growth rates in new loans increased significantly after the onset of the pandemic for firms of all sizes and that this trend was particularly pronounced for micro enterprises.[24] This is consistent with their higher dependence on bank lending. Lending to small, and especially micro, firms increased strongly early on in the crisis and peaked in April 2020, when lockdowns started to affect turnover and income. Lending to large and medium-sized firms, which possibly hold stronger liquidity reserves, seems to have increased less sharply and a little later, mostly in May and June 2020. Notwithstanding heterogeneity across countries, as AnaCredit data show, new loan growth was particularly strong in countries hit hardest by the pandemic. Also the euro area bank lending survey[25] indicates high demand by NFCs especially in the second quarter of 2020, in particular for working capital. The rejection rate was also reported to have declined in the same quarter. Therefore, bank lending played a supportive role at the aggregate level in the early months of the pandemic.

22 For further details, please refer to **EIOPA Financial Stability Report July 2020**, pp. 63.

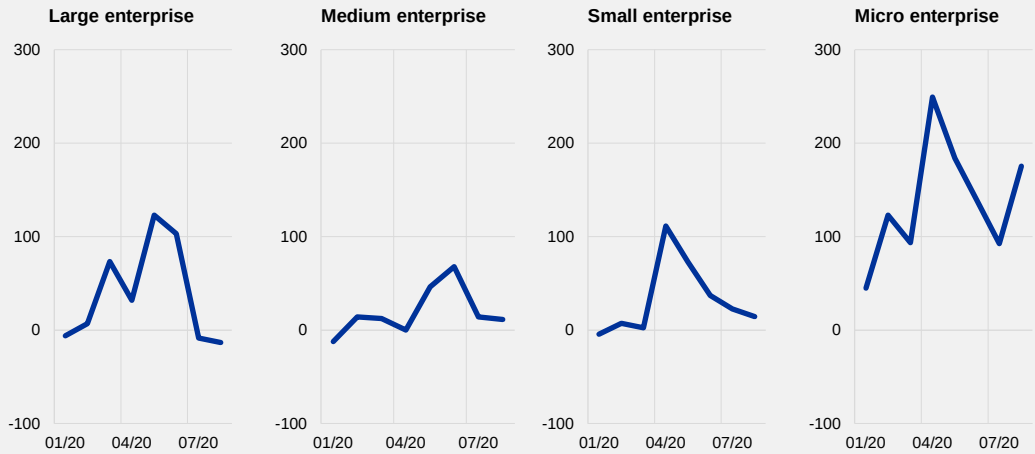
23 The results presented in this box are based on aggregate data provided by the ECB Directorate General Statistics as an interim solution, since the ESRB has not yet been granted access to AnaCredit. The underlying granular data still have quality-related issues, including outliers, gaps and dummy values. Therefore, the numbers should be considered experimental first evidence. Any conclusions derived from these experimental data should take these caveats into careful consideration.

24 The variable "New loans" represents the amount drawn (outstanding nominal amount) for new credit originated in the given month. This does not include renegotiated and forborne loans. Figures B.1 and B.2 show year-on-year growth rates for new loans.

25 See the ECB's website "**The euro area bank lending survey – Second quarter of 2020**".

Chart A

New loan growth (year-on-year) by size of NFC



Sources: ECB AnaCredit data, ESRB calculations.
Notes: Year-on-year growth rates for new loans; monthly values are for January to August 2020. There are still quality-related issues with the underlying granular data and all results are to be considered experimental first evidence.

New loan growth has been stronger for sectors more affected by the pandemic. Chart B compares the lending dynamics for the sectors most affected by the pandemic, such as transportation, wholesale and retail trade, accommodation and food service, with lending flowing to all other sectors. At the height of the first lockdown, in April and May 2020, new loan growth was twice as high for the sectors more affected by the pandemic compared with those less affected.

Chart B

New loan growth (year-on-year) by size of NFC

Sources: ECB AnaCredit data, ESRB calculations.
Notes: Year-on-year growth rates for new loans; monthly values are for January to August 2020; "Sectors most affected by COVID-19" are those identified by Eurostat as being associated with the largest decline in gross value added and hours worked. These are NACE sectors G to I (which include transport, accommodation and food services activities) and R to U (which include arts, entertainment and recreation activities).[26] There are still quality-related issues with the underlying granular data and all results are to be considered experimental first evidence.

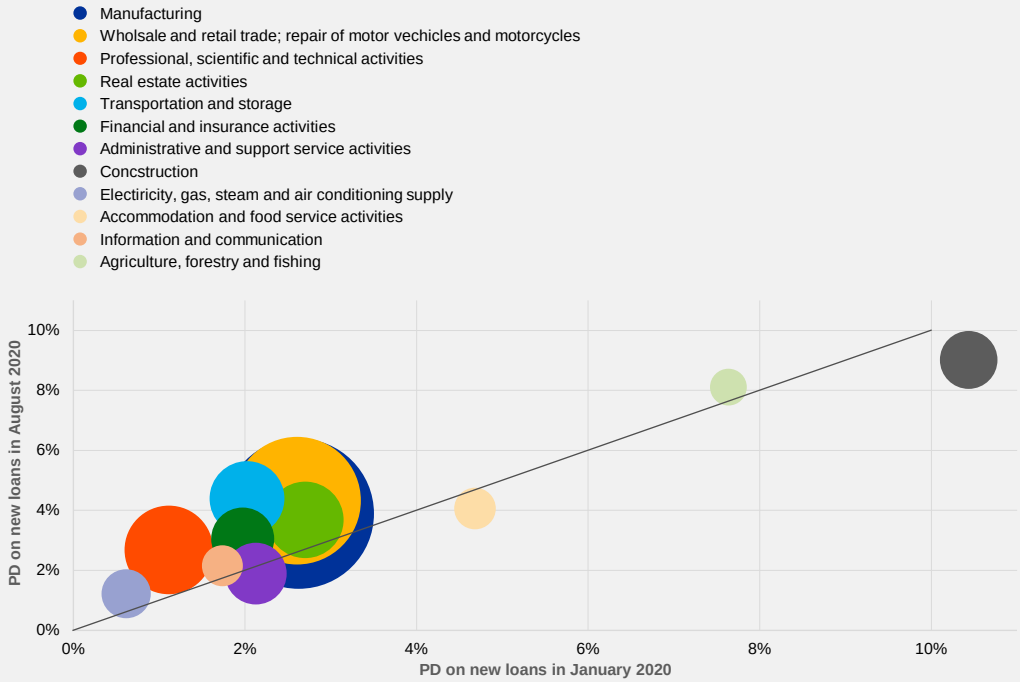
Across most sectors, the probabilities of default (PD) for debtors with new loans increased after the onset of the crisis. Chart C compares the volume-weighted average PD of debtors with new loans granted by IRB banks in August 2020 (y-axis) with the pre-crisis figure in January 2020 (x-axis) for each sector. It shows clearly that most sectors lie above the 45-degree line. This is true for sectors with particularly high volumes of new loans, as indicated by the size of the circles, such as manufacturing, or wholesale and retail trade. With few exceptions, it also holds for most sectors with lower volumes, indicated by smaller circles. The construction sector stands out in terms of probabilities of default. Although this sector's PD has not increased over the pandemic, it obviously needs to undergo careful monitoring, in particular given the large share of mortgage loans in banks' balance sheets.

[26] See Eurostat website "**Impact of COVID-19 on main GDP aggregates including employment**".

Chart C

New loan growth (year-on-year) by size of NFC

(percentages)



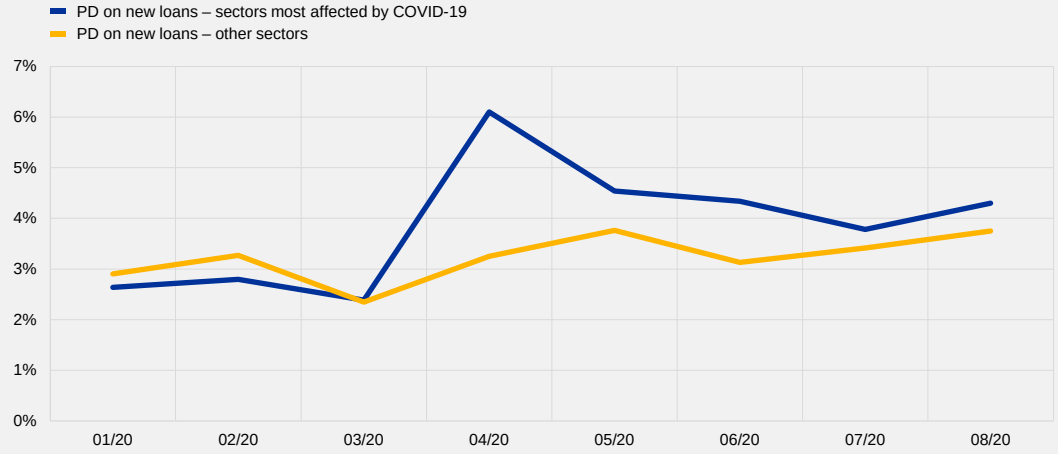
Sources: ECB AnaCredit data, ESRB calculations.
Notes: Volume-weighted average PDs for debtors with new loans for January (x-axis) and August 2020 (y-axis) by economic sector; IRB approaches only. The circle size indicates the loan volume. There are still quality-related issues with the underlying granular data and all results are to be considered experimental first evidence.

When comparing sectors by exposure to the pandemic, the upward shift in PDs for new loans is larger for those most affected. Chart D shows that volume-weighted average PD of new loans by IRB banks in sectors most affected by the pandemic, such as transportation, wholesale and retail trade, arts, entertainment and recreation, increased sharply during the early months of the crisis.[27] There was also a rise in the less affected sectors, but this was not so pronounced. PDs remained lower for most of the period observed, having been slightly higher at the beginning. It is interesting to note that the initial widening of the gap across sectors seen in the first phase of the pandemic, narrowed over the course of the year. This could be due to the effect of fiscal measures implemented over time. The trend in this spread across sectors more or less affected by the pandemic requires careful monitoring.

[27] The peak in April 2020 was to a large extent driven by the transportation sector, which arguably was one of the sectors most severely affected (especially aviation). This is confirmed in Figure B.4, where transportation also shows the largest increase.

Chart D

New loan growth (year-on-year) by size of NFC



Sources: ECB AnaCredit data, ESRB calculations.
Notes: Volume-weighted average PDs for debtors with new loans from January to August 2020 per category (sectors most affected by COVID-19 and other sectors). IRB approaches only. "Sectors most affected by COVID-19" are those identified by Eurostat as associated with the largest decline in gross value added and hours worked. These are NACE sectors G to I (which include transport, accommodation and food services activities) and R to U (which include arts, entertainment and recreation activities). There are still quality-related issues with the underlying granular data and all results are to be considered experimental first evidence.

Reporting limitations in AnaCredit and data quality issues warrant caution when interpreting the results. AnaCredit only conveys loans to NFCs greater than €25,000. PD data are only reported by IRB banks, which may be misleading, if banks are opting to follow the standard approach prevail in a given country. The smallest banks can be subject to reduced reporting requirements.[28] Owing to lags in reporting to national authorities, some loans may only be reported the following month. Finally, given the novelty of AnaCredit, there are still severe data quality issues, for example banks reporting certain variables inconsistently.[29]

4.2 From liquidity to solvency problems

Massive liquidity support was the policy action needed when the crisis struck at the beginning of the second quarter of 2020. When markets and expectations had to be backstopped and while a V-shaped recovery could be expected, quick and comprehensive liquidity support may have been sufficient**.** In a sharp recovery scenario, the liquidity shortage could be temporary, losses would be relatively limited, and the foregone income during the lockdown might be compensated to some extent by catch-up effects as pent-up demand boosts economic activity.

[28] The smallest banks can be granted these derogations by their national central bank, provided their combined contribution to the total outstanding amount of loans reported in the member country does not exceed 2%. This could potentially still comprise a considerable percentage of small credits.

[29] Data quality issues also hinder an investigation of pricing data. This is because averages on interest rates on new credit do not always appear to be fully reliable.

However, the longer the COVID-19 crisis lasts, the more likely it is that the rebound will not be immediate, with potentially deeper structural implications. In this scenario, insolvencies are likely to increase and simply extending liquidity support could delay insolvencies and the underlying structural change. Box 2 describes some of the challenges to identifying delayed structural change.

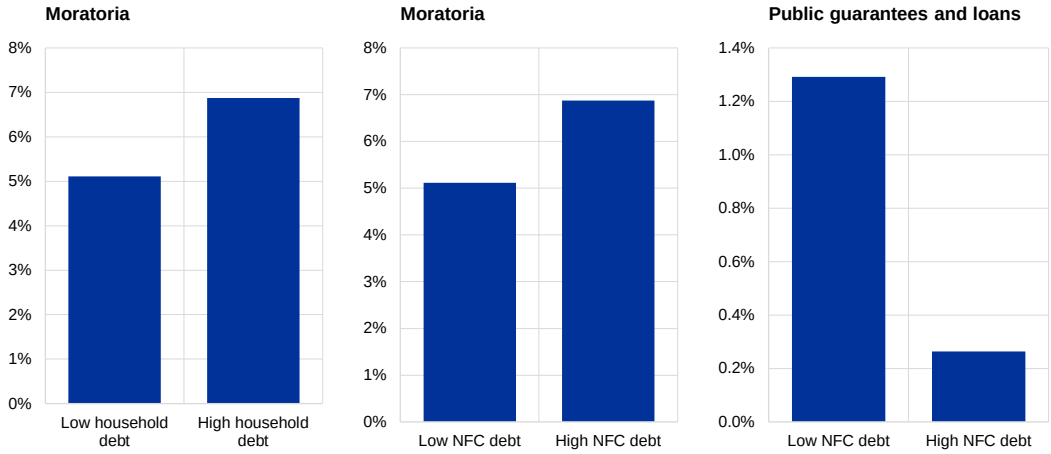
Over the medium and longer term, continued liquidity support may result in an accumulation of debt, increasing solvency risks. This could result in long and costly debt restructuring, or bankruptcies where losses are shifted to creditors or loan guarantors. Assessing this risk requires a viability assessment for the corporate sector. Loan moratoria and public guarantees on loans also have different effects on debt sustainability.

Loan moratoria may not directly increase the indebtedness of firms and households, but can postpone the materialisation of risks. The uptake of moratoria is especially high in countries which entered the crisis with high debt levels in the private non-financial sector (Chart 8). Even though not all loans will become non-performing when the measure expires, and not all firms which have these loans are unviable, the clustering could indicate a build-up of vulnerabilities among these borrowers.[30] This may suggest the need to consider more solvency support, at least for those firms that are viable.

Public guarantees on loans and public loans directly increase the leverage of borrowers. The uptake of public guarantees on loans has been relatively limited to date (Table 3). Also, in countries in which firms are more highly indebted, the uptake of public guarantees on loans has been slightly lower so far (Chart 8). This may be related to an unwillingness on the part of these borrowers to take on more debt, or on the part of the lender or guarantor to provide more credit.

Chart 8

Moratoria and fiscal measures by indebtedness of the private sector



Sources: Recommendation ESRB/2020/08 by 31 October 2020 (reference date 30 September 2020), ECB (MNA).
Notes: Uptake (field 2.2.20) of moratoria and public guarantees and loans as a percentage of 2019 GDP on the y-axis and median over countries in the lowest (highest) quartile of household or NFC debt over GDP in the fourth quarter of 2019 as "low debt" ("high debt") on the x-axis. All graphs are based on EU countries (do not cover IS, LI and NO).

[30] A more detailed analysis would be possible using granular data from AnaCredit and data from borrowers' balance sheets.

The longer the COVID-19 crisis lasts, the greater the need for policymakers to balance liquidity and solvency support. A smooth transition from liquidity measures to policies addressing solvency issues will require an assessment of firms' viability. It is important that those firms with a business model which is viable after the pandemic are granted (temporary) solvency support, while support to firms without such prospects should be avoided, or quickly phased out as soon as it becomes clear that they are no longer viable. A strategy should be developed for the use of liquidity and solvency support measures that minimises damage to the economy while fostering structural change and the reallocation of resources to economic activities that could thrive in the post-COVID-19 world. Such decisions are heavily reliant on good data and information systems.

Future solvency support must be targeted at firms with viable business models, and it should address governance issues and contain mechanisms for phasing out support. Unless it exercises ownership rights, the public sector runs the risk of not having control over its investments. At the same time, government ownership in the corporate sector could create severe incentive and governance issues, and any support of this type needs to be fully in line with national and European State aid rules. It may be possible to explore other ways of encouraging the private sector to share risks.

Box 2

Identification of delayed structural change associated to the assessment of firms' viability

In deciding when and how to phase out crisis-related measures, authorities need to consider the impact the decision may have on delaying economic restructuring. Keeping measures in place too long beyond the health emergency may prevent unviable firms from exiting the market, ultimately supressing growth and innovation. Removing support too soon may lead to a significant negative impact on economic activity and cliff effects. In this process, it is key to distinguish viable firms from unviable ones. As there is no clear metric for delayed structural change, the academic literature has developed tools to identify the access unprofitable and unproductive firms have to credit.

Firms are sometimes labelled "zombies" if they are persistently unprofitable and unable to cover debt-servicing costs yet continue to operate, often with rollover loans and subsidies from banks or government assistance. Caballero et al. (2008) produced the first academic paper to use the term "zombie" to describe unprofitable Japanese firms in the 1990s that received subsidised credit. Their analysis focused on the incentives for banks to continue providing credit to otherwise insolvent firms in order to avoid recognising losses and breaching regulatory capital limits. The paper compares the observed interest payments required from unprofitable firms to a benchmark rate based on credit rating, debt structure and market interest rates. Acharya et al. (2019) take a similar approach to identifying unprofitable European firms, with an added focus on leverage ratios that are above the industry/country median.

More recently, a number of cross-country studies have relied on accounting criteria to identify zombies. Adalet McGowan et al. (2018) focus on firms that have operated for at least ten years and had an interest coverage ratio (ICR) of less than one for at least three consecutive years. They measure earnings before interest and tax payments but after depreciation (EBIT), while Storz

et al. (2017) and Schivardi et al. (2017) argue that operating profits should include depreciation and amortisation (EBITDA), to take into account differing tax treatment between countries. They argue that using EBIT may inappropriately label firms as zombies in years when they invest heavily and amortise quickly in order to benefit from tax breaks. Banerjee and Hofmann (2018) use the ICR criteria and additionally measure expected profitability based on stock market valuation and growth potential (measured as the ratio of market value to replacement cost relative to the median in their sector in any given year). Andrews and Peroulakis (2017) incorporate information from country-level bankruptcy laws to take into account the ease with which firms can restructure.

Identifying delayed restructuring is complicated by the impact of the business cycle and government policies. Severe recessions may cause otherwise competitive firms to have difficulties meeting their interest obligations, especially if they are younger firms with high levels of debt. Hallak et al (2018) find that some of these firms are likely to eventually regain profitability and benefit from Hausbank-style relationships that carry them through difficult periods. Likewise, the availability of government assistance or a low-interest rate environment makes it difficult to distinguish firms that would exit under normal conditions. For example, Acharya et al. (2019) find that unprofitable European firms with long-standing bank relationships benefited to a markedly different extent from the ECB policies in 2012 that increased credit supply conditions for euro area banks.

Especially during recessions, it may be difficult to distinguish firms experiencing temporary problems from those in persistent difficulty and without a business model.[31] These studies often have access to more granular data on firms and their relationships with banks, allowing for country-specific zombie identification schemes that can take into account a wider array of firm, industry and regulatory characteristics.

The AnaCredit dataset can help to monitor signs of delayed structural change. This most likely requires merging the credit registry information from AnaCredit with firm-level datasets, as many established identification schemes rely on firm-specific information. Examples are Adalet McGowan et al. (2017), which uses the age of firms and the ICR to identify zombies, while Banerjee and Hofmann (2018) add to this firms' future growth potential. Acharya et al. (2020) rely on relative ICRs, leverage and cost of debt. These identification schemes require firm-specific data. Alternatively, one could experiment with identification based on a combination of AnaCredit attributes, for example loan interest rates (especially if those appear to be below market rates) or a recent history of having loans in arrears or default. Whichever identification scheme is used, the AnaCredit dataset will then facilitate an EA-wide, highly granular look at credit flows to firms where financial difficulties are structural rather than temporary.

4.3 Transparency of balance sheet information

Although financial stability has been maintained so far, the full effects of the pandemic have yet to show on banks' balance sheets. A significant volume of bank loans has been extended to

[31] See, for example, Barros et al. (2017), Cella (2020), Nurmi et al. (2020), Rodano and Sette (2019).

some of the hardest hit sectors in the economy. According to supervisory data, the sectors that are generally most impacted by the measures applied in various countries to mitigate the spread of COVID-19 also had the highest percentages of loans under moratoria.[32] Even though not all these loans will end up as non-performing, banks need to make timely and adequate assessments of credit risk by distinguishing viable but distressed borrowers from unviable borrowers. According to ECB estimates, in a severe but plausible scenario, NPLs in euro area banks could reach €1.4 trillion (roughly 12.9% of total loans)[33], well above the levels seen in the financial and sovereign debt crises.[34]

A transparent flow of information from debtors to banks and from banks to the market is crucial. Transparency with regard to banks' credit risk is vital to help markets understand how they are faring. Likewise, banks need information on the solvency and liquidity of their borrowers, and they need to be able to isolate the effects of fiscal and other policy measures. The longer the impact of the COVID-19 shock persists, the more important the transparency of banks' balance sheet information becomes. This holds especially true in the light of the challenges relating to credit risk models and the temporary adaptations of prudential rules. Credit risk models used for risk quantification are calibrated based on historical time series and are not designed to deal with the large-scale disruptions of a pandemic (for more details, see Box 3).

However, the high degree of uncertainty resulting from the pandemic has triggered measures that have increased the opacity of balance sheets. The provision of information has in many cases been reduced, delayed or subjected to temporary exemptions owing to the extraordinary magnitude of the shock. This reduction in the flow of information about financial intermediation gives rise to delicate and urgent considerations for financial stability and the provision of credit to the economy.[35]

In particular, the prudential rules for recognising forborne and defaulted exposures have been temporarily adapted. European regulators and supervisors have advised banks to make use of the flexibility provided by standards and take a long-term view in assessing which creditors are in a good position to recover from the crisis. Furthermore, for loans under moratoria deemed eligible under the EBA guidelines on moratoria, classification as forborne or defaulted based on the 90-days-past-due criterion is not automatic. The EBA has reactivated the extraordinary prudential treatment of loans under moratoria, recognising the exceptional circumstances of the second wave of COVID-19. Revised EBA guidelines which will apply until 31 March 2021 include additional safeguards against the risk of an undue increase in unrecognised losses on banks' balance sheets. Banks have also always been required to assess the unlikely-to-pay criterion when classifying exposures as non-performing.

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[32] According to the EBA "The percentages of loans under moratoria in the hospitality, education and entertainment sectors were significantly higher than the average percentage of loans under moratoria in the NFC segment. In particular, 27% of loans in the accommodation and food service sector were under moratoria, the highest across all sectors. In the education, entertainment, human health services and real estate sectors, as well as in the wholesale and retail trade sector, more than 10% of loans were under moratoria". See the **EBA Thematic note on moratoria and public guarantees, November 2020**.

[33] ECB-SDW, Total domestic and cross-border NFC and HH loans from euro area MFIs.

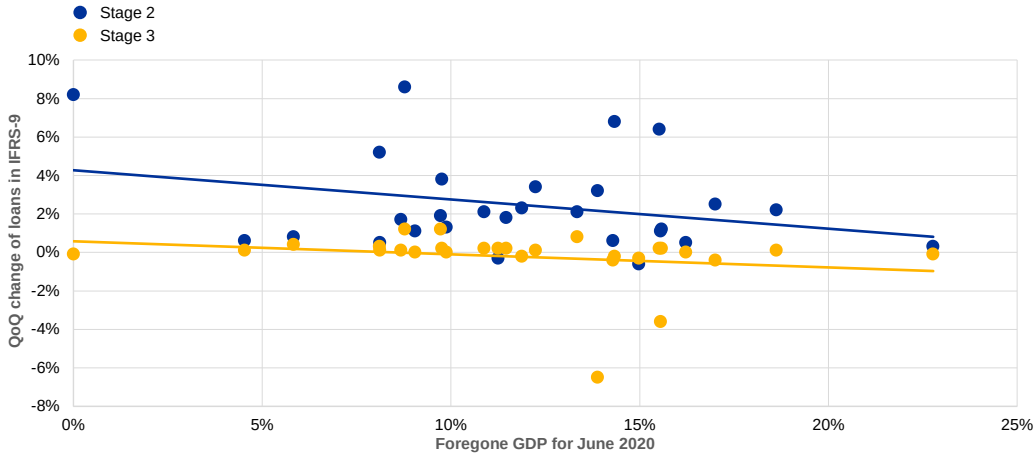
[34] See **Supervisory challenges of the pandemic and beyond, keynote speech by Andrea Enria, Chair of the Supervisory Board of the ECB, at the Handelsblatt European Banking Regulation Conference on 3 November 2020**.

[35] See, for example, "**The COVID-19 pandemic and the opacity of firms' and banks' balance sheets**", COVID-19 Note, Banca d'Italia, 15 June 2020.

The COVID-19 shock has not yet translated into a corresponding risk assessment in banks' balance sheets. In the first half of 2020 the percentage of loans classified as Stage 3 (impaired) increased only minimally. This might be explained by the success of supporting measures in avoiding insolvencies for the moment. The percentage of Stage 2 loans (increased credit risk) increased across the board, although at an uneven pace across countries. This divergence in the increase in Stage 2 loans cannot be explained by differences in the economic shock. In the six most severely hit countries, the increase in the percentage of Stage 2 loans was particularly small, while some of the least hit countries saw a marked increase (see Chart 9 and Chart 10). The temporary exceptional prudential rules might have played a role in this trend, while the use of public guarantees on new loans might also have had an impact. These are issues that should continue to be monitored going forward.

Chart 9

Foregone GDP compared with changes in IFRS 9 stages



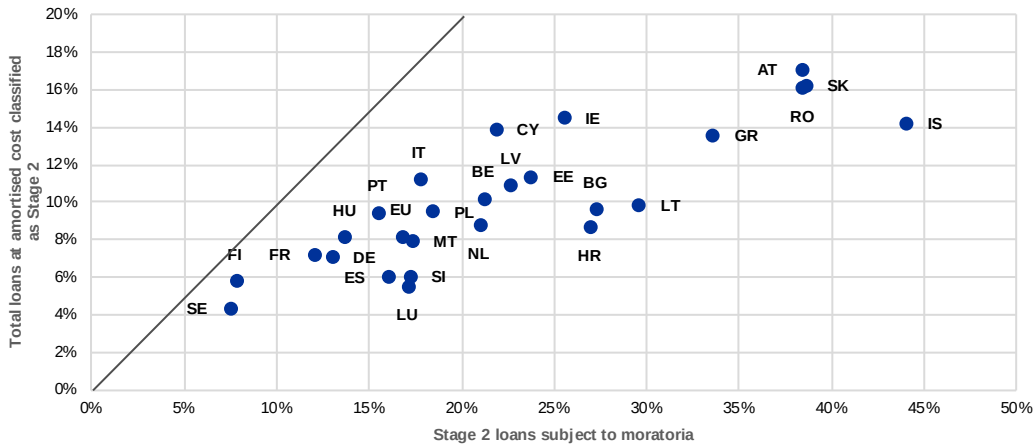
Sources: EBA, ESRB calculations.
Notes: Quarter-on-quarter change in the percentage of loans in Stages 2 and 3 under IFRS 9 to the second quarter of 2020 (y-axis). Foregone GDP as at June 2020 (for definition see Section 2.1)(x-axis). Based on EU countries (does not cover IS, LI and NO).

Loans under moratoria have a below-average NPL ratio, which seems striking given the current economic shock. For loans under moratoria, data from the EBA with a reference date of 30 June 2020 showed an NPL ratio of 2.5%, compared with 2.9% for all loans under non-expired moratoria. Many schemes allowed only performing loans to benefit from moratoria. Before the crisis, these loans were therefore probably performing. However, the use of moratoria may signal an increase in risk that is probably not reflected in the NPL ratio reported. Also, loans under moratoria have a higher percentage of Stage 2 assets (Chart 10). The amount of forborne and NPLs can therefore be expected to increase when EBA-compliant moratoria expire. As mentioned above, the fact that banks in countries in which more highly indebted firms and households are making greater use of moratoria could indicate a build-up of hidden vulnerabilities in banks' balance sheets (Chart 8).

Chart 10

Loans classified as Stage 2 (June 2020)

(percentages)



Source: EBA.

Notes: The chart shows whether loans subject to moratoria have a higher risk profile than the total loan portfolio of banks in a given jurisdiction as indicated by being classified as Stage 2 (to the right of the line) or lower (to the left of the line).

Spillover effects across countries and sectors can also be triggered by uncertainty arising from insufficient transparency with regard to the solvency of private debtors and the financial system. The absence of accurate information on borrower risk may lead to uncertainty over the soundness of financial institutions. Distress at one bank could affect others via information spillover effects.[36] Non-banks might also be affected owing to direct exposures to the financial sector.

Box 3
Challenges in credit risk modelling for accounting and prudential purposes

IFRS 9 encourages banks to recognise losses and be more transparent about their balance sheets.[37] They have to calculate expected credit losses (ECL) using forward-looking judgement, models and data. However, robust ECL modelling is challenging given the current high level of uncertainty over the duration and economic impact of the pandemic and the shape of the recovery. In addition, the methodologies and assumptions applied by banks to estimate ECL are generally complex and contain subjective elements**.** The non-linear relationship between ECL estimates and forward-looking macroeconomic scenarios means comparability is inevitably challenging. The use of judgement-based overlays to adjust ECL model inputs introduces a subjectivity in provisioning that requires robust processes, governance and transparency. Moreover, ECL models rely on

[36] See, for example, Clerc, L., Giovannini, A., Peltonen, T., Portes, R. and Scheicher, M. (2016), "Indirect contagion: the policy problem", *Occasional Paper Series*, No 9, ESRB.

[37] The prudential and accounting rules put in place in the aftermath of the global financial crisis a decade ago are now being tested for the first time in a stressed situation. In particular, the IFRS 9 rules introduced to tackle the "too little, too late" issue of credit loss recognition under the previous incurred-losses model are now being battle tested.

macroeconomic forecasts as crucial inputs; these are currently subject to extreme levels of uncertainty.

Furthermore, measures such as moratoria have reduced the signalling power of delinquency-related indicators under IFRS 9. In particular, key indicators for moving loans from Stage 1 to Stage 2 under IFRS 9 (notably arrears over 30 days) have a lower information content during moratoria. In addition to debt moratoria, other support measures (such as short-time work programmes and delayed insolvency filings by NFCs may also temporarily distort the picture and make it more difficult to identify insolvent firms. In these circumstances, banks must rely on other triggers to assess the need for loans under moratoria to be moved from Stage 1 to Stage 2 under IFRS 9.

IFRS 9 provides sufficient flexibility to address the significant uncertainties that make robust quantification of credit risk challenging. Banks are expected to address the limitations of statistical models and data by using a more judgement-based approach (i.e. overlays). In the current situation, where forward-looking assumptions are highly uncertain and the historical relationships between key variables may no longer hold, overlays to adjust ECL model outputs are particularly relevant. While these temporarily address the shortcomings of statistical models, they also further amplify the subjectivity of loan impairments. Consequently, any subjective inputs used by banks should be consistent with objective and verifiable evidence such as observable macroeconomic variables and forward-looking forecasts. Overlays should be supported by adequately documented processes and should be subject to strict governance oversight.

The challenges banks are facing with regard to credit risk quantification for accounting purposes also apply to the credit risk models they use for prudential purposes such as regulatory capital calculations. The unprecedented circumstances brought about by the global pandemic cannot be adequately captured in existing credit risk models, as these have been calibrated based on historical time series. They have not been calibrated for the unprecedented halt in both supply chains and aggregate demand triggered by the COVID-19 shock; nor has the large-scale deployment of support measures been factored in. Credit risk models may therefore require significant recalibration, depending on the length and permanent consequences of the crisis.

4.4 Cliff effects

As Europe is in the midst of the second wave of the COVID-19 pandemic, governments need to be mindful of cliff effects triggered by measures that are soon to expire. According to data from September 2020, many measures were due to expire at the end of 2020 or in the first quarter of 2021, well before the potential impact of any economic rebound enabled by a vaccine against COVID-19 (Table 4). However, in the meantime member countries have announced several additional measures or extensions to existing measures. In recognising the risk of cliff effects, governments have already started to extend the duration of some measures on a continuous basis. The following paragraphs should therefore be treated as an exploratory analysis of the importance of coordinating the phasing out of the different measures, with the aim of smoothing cliff effects.

Table 4

Breakdown of termination of meaures by time, as reported in September 2020

	Q4 2020	Q1 2021	Q2 2021	Q3 2021	Q4 2021	No end-date available	Total amount (EUR billion)
Moratoria	17%	22%	0.4%	5%		**55%**	**838**
Public guarantees	63%	2%	21%		3%	**11%**	**1,580**
Public loans	93%				0.4%	**6%**	**57**
Direct grants	51%	6%	3%		9%	**32%**	**327**
Tax deferrals	10%	28%	14%			**49%**	**170**
Tax relief	45%	14%	4%		19%	**18%**	**75**
Public support for credit insurance							**227**
Total (EUR billion)	**1,411**	**293**	**368**	**44**	**90**	**1,067**	**3,274**
Total excluding moratoria (EUR billion)	**1,270**	**109**	**364**			**693**	**2,436**

Source: Recommendation ESRB/2020/08 (reference date 30 September 2020).
Notes: Values reported as a percentage of the column "Total amount", by measure; amounts refer to programme size announced by government, field 1.1.01 (except for moratoria, for which total volume of loans, field 2.2.10, was used). There are gaps in the data reported and results should be interpreted with caution, especially for the uptake of direct grants, tax measures and credit insurance guarantees, where reporting was not mandatory.

Assessing the risks of cliff effects implies distinguishing between the different ways in which they work. An analysis of the effects of the phasing-out of moratoria and public guarantees needs to take into consideration the underlying duration of payment holidays or loans. In the case of direct grants or tax deferrals the effects might be more immediate. Nevertheless, simultaneous termination should be monitored carefully as it might lead to cliff effects, in particular for the most significant measures – public guarantees and loan moratoria.[38]

The expiry of moratoria could lead to a cliff effect. By September 2020 some countries had already extended their moratoria schemes, although expiries were still clustered in the fourth quarter of 2020 and the first quarter of 2021 (Table 4). As shown above, these schemes are by far the most widely used fiscal measures and countries in which borrowers were the most indebted seem to be making greatest use of them. This could lead to a surge in loan defaults once the moratoria are lifted and payment holidays gradually come to an end.[39] For now, anecdotal information from ECB Banking Supervision suggests that even though some of the moratoria put in place by national governments have expired, most borrowers have resumed loan payments and only a small proportion are showing signs of distress.[40] However, this could change if some borrowers are unable to maintain previous savings, especially if the economic rebound takes longer to materialise. Potential extensions to moratoria schemes should be carefully balanced, with the

[38] An example for the quantification of the joint impact of Covid-related policy support measures in the five largest euro area countries and the potential for cliff effects resulting from their phase-out can be found in Rancoita, E., Grodzicki, M., Hempell, H., Kok, C., Metzler, J., and Prapiestis, A. (2020): "Financial stability considerations arising from the interaction of coronavirus-related policy measures", ECB Financial Stability Review November, Special Feature A.

[39] It should be noted that the expiry of the application deadline for eligible moratoria (recently extended to 31 March 2021) does not affect the expiry date of payment holidays, which can continue until the date agreed between lender and borrower.

[40] See **Keynote speech by Andrea Enria, Chair of the Supervisory Board of the ECB, at the Handelsblatt European Banking Regulation Conference** on 3 November 2020.

aim of spreading the economic effects over time. A general extension of payment holidays beyond the health emergency situation may simply postpone the day when the risks from a possible build-up of debt materialise or have to be recognised and may mask underlying weaknesses in banks and borrowers.

The residual maturity of moratoria is short-term in order to avoid disruptions to the cash flows of lenders. According to EBA supervisory data as at June 2020, for most countries half of the loans under moratoria had a residual maturity of less than six months. The potential effects of moratoria expiry could therefore be substantial, especially if the solvency and liquidity of beneficiary firms have not stabilised by then.

Most loans with public guarantees have a longer maturity. According to EBA data as at 30 June 2020, in most countries surveyed where public guarantees are in place these loans had a residual maturity of between two and five years, while guarantees with a maturity of less than six months only accounted for 8% on average. This should make them less susceptible to cliff effects than moratoria.

Cross-border linkages and second-round effects can further amplify cliff effects. Countries with a large percentage of foreign banks and/or cross-border banking activities would be particularly affected. Lending by foreign subsidiaries, branches and cross-border lending amount to an average of 40% of total lending to domestic households and NFCs in euro area countries, although in smaller Baltic States and central and eastern European countries it exceeds 75%. Second-round effects within the financial system can also have an impact.[41] So far, there is little hard evidence that cross-border banking has been affected by the pandemic. However, the burden of a more adverse future scenario may fall disproportionally on banks' cross-border activities.

An exploratory analysis of the potential financial stability implications of bank failures was also conducted. This suggested that in the absence of policy action and further support measures second-round effects could be material in the event that additional tail risk materialise. Losses on interbank claims could bring about further bank failures, with losses on cross-border claims accounting for a large percentage of these. Contributions by surviving members to deposit guarantee schemes could be an additional source of stress, should these be requested to cover funding gaps.

[41] Source: data from ECB from end-June 2020. There has been no clear trend for this percentage since the end of 2019.

5 Key findings and policy priorities

Governments have provided swift and unprecedented support packages to the real economy during the COVID-19 pandemic. Differences in policy responses across countries reflect the varying impact of the crisis on fiscal space and financial systems. In general, countries hit harder by the pandemic tend to have larger programmes and report a larger uptake. Countries with a higher percentage of employment in vulnerable sectors rely more on direct grants. The uptake of moratoria is positively correlated with pre-COVID debt levels of NFCs and households. Moratoria and public guarantees on loans have been used most frequently to support lending, but the uptake and the relative share of measures supporting firms' solvency compared with liquidity differ across countries. Generally, the heterogeneity of policy responses can and should reflect relevant cross-country differences. However, it may also indicate a lack of policy coordination and differences in fiscal space, potentially hampering the efficient use of cross-border financial flows and risk-sharing. This may lead to weaker financial integration with potentially negative effects on financial stability.

The pandemic has intensified risks and vulnerabilities in the real economy, but prompt action taken by governments has provided crucial relief to households and NFCs. Fiscal measures such as loans with public guarantees and direct grants have helped prevent the loss of viable businesses and contain the impact of the pandemic. Moratoria schemes have been providing liquidity support during the emergency, and monetary policy measures have ensured favourable financing conditions. Together with supervisory action, these policies have been effective in supporting the real economy. This has effectively mitigated the spillover of stress from the real economy into the financial system.

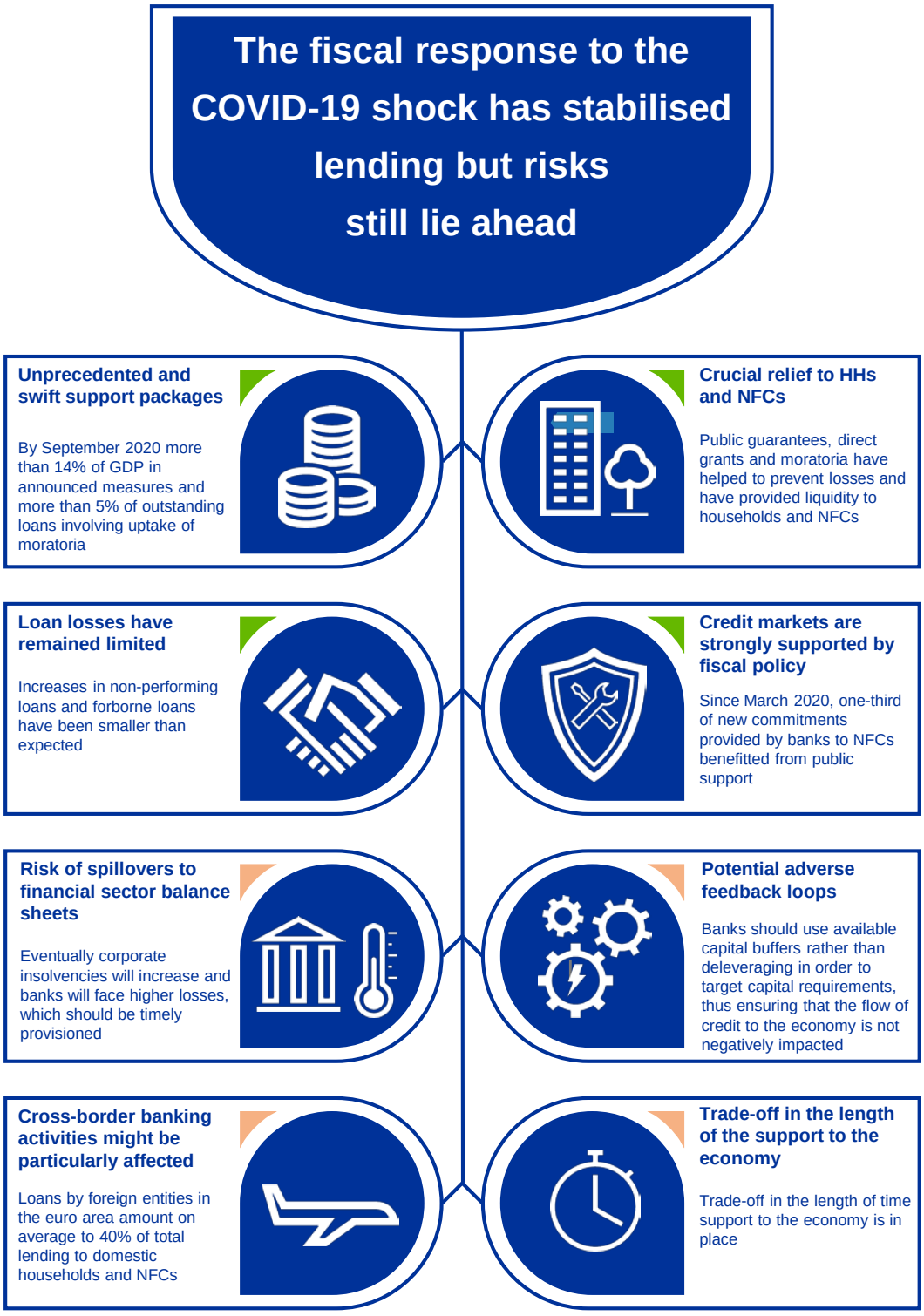
The financial system has continued to provide funding to the real economy and loan losses have remained limited. The financial system has therefore benefited from fiscal policy, monetary policy and regulatory measures. A liquidity crisis aggravating economic hardship for households and NFCs has been avoided. Thanks to the measures taken by public authorities, and to some extent also extraordinary prudential treatment, increases to date in non-performing and forborne loans have been smaller than might have been expected given the magnitude of the shock.

Credit markets are currently strongly supported by fiscal policy. Since March 2020 roughly 35% of new commitments provided by banks to NFC have benefited from either public guarantees or public loans, as shown by comparing data on measures collected under Recommendation ESRB/2020/8 to data on lending from AnaCredit.[42] Moreover, the flow of new credit to NFCs has been stronger for SMEs and firms in the most affected sectors than the growth in aggregate lending. However, uptake of public guarantees has remained limited in relation to the announced size of programmes; this may point to administrative bottlenecks, or a reluctance on the part of some borrowers to take on more debt. To some extent, announcement effects seem to have been at work, in the sense that the volume announced rather than the actual uptake of measures has influenced new lending.

[42] This figure compares the sum of the uptake of public guarantees and public loans to new commitments to NFC as reported to AnaCredit between March and August 2020. Please note that the uptake data are as at 30 September 2020. For more details, please refer to Section 4, in particular Box 1.

Figure 2

Key findings



The longer the crisis lasts and the weaker the economic recovery, the greater the risk that losses in the non-financial sector could spill over into the financial sector. Vulnerabilities take time to manifest themselves in banks' balance sheets, but eventually corporate insolvencies will increase and banks will face higher losses. This will require timely action to address evolving vulnerabilities and increase balance sheet transparency. If banks' balance sheets were to remain impaired for an extended period after the crisis, the economic recovery and financial stability would be at risk.

There could be adverse feedback loops if banks deleverage to meet capital requirements imposed by regulators or markets. The strength of such credit market responses depends, among other factors, on banks' ability and willingness to use their existing capital buffers to absorb loan losses and maintain lending to households and firms. ECB analysis highlights the importance of banks using them to maintain lending to the real economy, rather than deleveraging to meet regulatory requirements.[43]

Cross-border banking activities might be particularly affected by deleveraging. So far, there is little hard evidence that cross-border banking has been affected by the pandemic. However, the burden of a more adverse future scenario may fall disproportionally on such activities. It will therefore be particularly important to monitor whether and by how much banks reduce their cross-border activities, especially through subsidiaries. Loans by foreign subsidiaries and branches and cross-border lending account for 40% of total lending to domestic households and NFCs on average in euro area countries, although in smaller Baltic States and eastern European countries the figure exceeds 75%.[44]

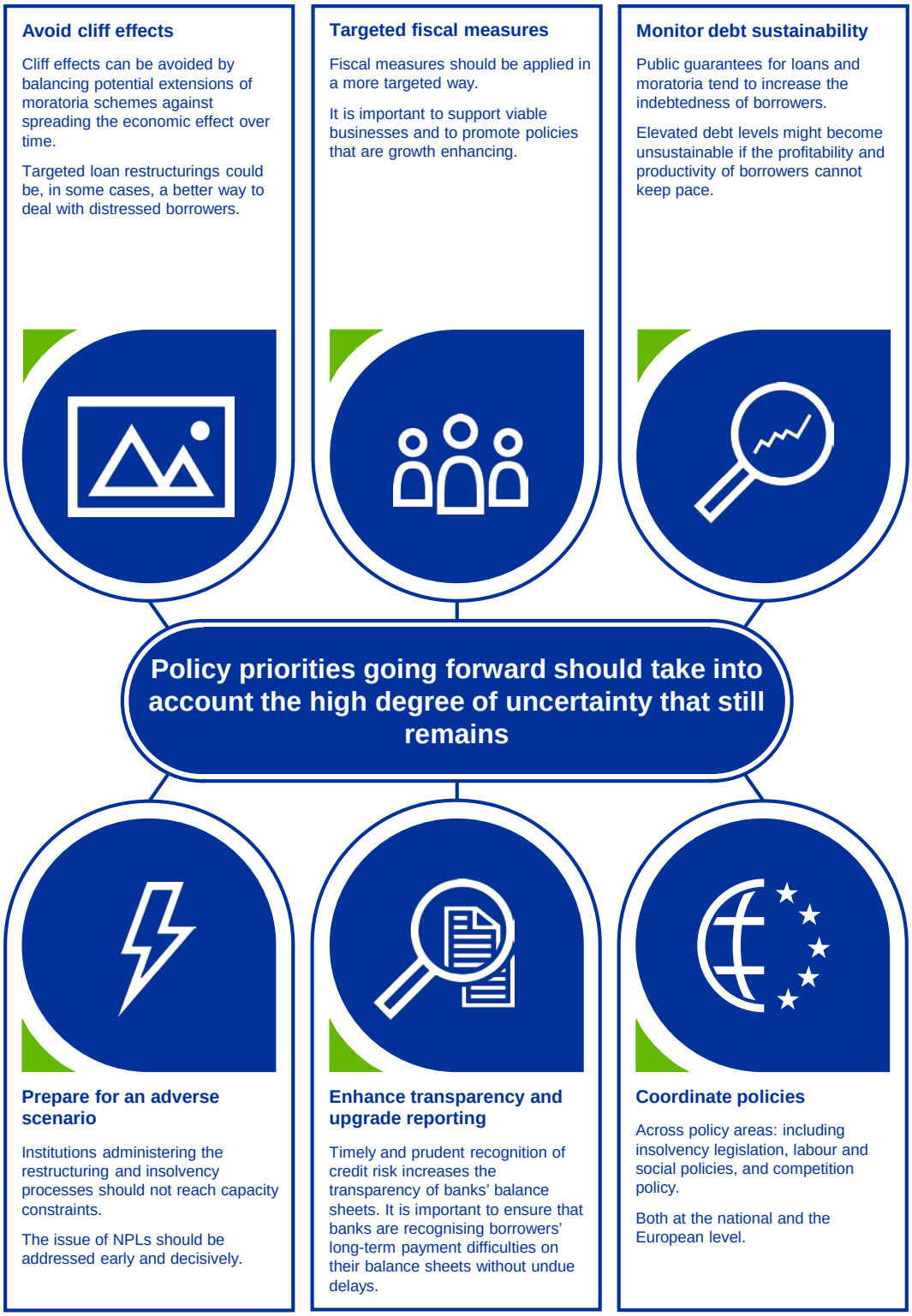
Authorities need to manage the trade-off between supporting the economy and not maintaining support for too long. The scale of potential future solvency problems depends on how the pandemic evolves, how robustly the different sectors perform and the appropriateness of policy responses**.** Lifting support too soon could exacerbate the effects of the economic crisis, while maintaining it for too long would increase budgetary pressures and affect competition in the real economy. This analysis shows that the bulk of fiscal measures were expected to expire at the end of 2020, but some measures have been extended since member countries last reported. Policymakers are facing a trade-off: if fiscal support is withdrawn prematurely, economic recovery and financial stability might be at risk, but if it is maintained for too long beyond the emergency, fiscal sustainability and longer-term growth may be jeopardised. Managing this trade-off effectively requires timely and reliable information on the state of the economy and the effects of policy measures.

[43] See Darracq Paries M., Kok C. and Rancoita E. (2020), "Macroeconomic impact of financial policy measures and synergies with other policy responses", Financial Stability Review, Box 5, European Central Bank, May 2020, pp. 98-101.

[44] According to the euro area dataset for June 2020 available to the ECB. There has been no clear trend for this percentage since the end of 2019.

Figure 3

Policy priorites



There is currently a high degree of uncertainty as regards the duration and severity of the pandemic, the longer-term supply and demand responses, and the remaining fiscal policy space. The longer-term sectoral effects of the pandemic will only become visible over time. Accordingly, the underlying reallocation of resources that needs to occur can hardly be assessed. Policy priorities for the future should take this uncertainty into account. The Working Group has identified a number of areas which require attention from policymakers:

Avoid cliff effects. In timing the withdrawal of public support, the risk of short-term cliff effects needs to be balanced against unintended longer-term distortions stemming from the measures put in place. On the one hand the early expiry of measures could lead to adverse feedback loops, especially if synchronised across countries or sectors. Without fiscal support loan losses might materialise, affecting banks' balance sheets and increasing the probability of deleveraging. On the other hand the longer programmes continue the more dependent the corporate and household sectors will become on these measures, and the more difficult it will be to withdraw support. The careful design and monitoring of programmes can help with phasing them out and avoiding cliff effects. Developing the analytical tools for assessing the more permanent effects on sectors and individual firms in order to identify measures that are no longer efficient and well targeted should also be a priority.

More specifically, cliff effects can be avoided by carefully balancing potential extensions of moratoria schemes against the aim of spreading the economic effect over time. A general extension of payment holidays beyond the health emergency situation may simply postpone the materialisation or recognition of risks, potentially allowing debt to build up and masking underlying weaknesses in banks and borrowers. Targeted loan restructuring tailored to specific circumstances may in some cases be a better solution for dealing with distressed borrowers than longer-term blanket measures.

Implement targeted fiscal measures. When the pandemic hit, taking timely and bold action was of the essence. Over time, fiscal measures will have to be applied in a more targeted way. It will be particularly important to balance liquidity and solvency measures and promote policies that enhance growth. Reducing fiscal support in line with the state of the economy and the impact of the COVID-19 pandemic could help reduce the risk of the economic recovery slowing or reversing. Likewise, targeting resources for restructuring to viable firms and improving the bankruptcy process is likely to help avoid delays in restructuring. Otherwise, fiscal capacity may be used inefficiently and ineffectively, structural change delayed and corporate indebtedness increase unduly. It remains important for firms with a business model that is viable after the pandemic to be granted (temporary) solvency support. Given the current high degree of uncertainty, this more targeted approach needs to be designed in a careful and State-dependent way to allow for the reactivation of measures already terminated, should this be warranted. The authorities therefore need to define their policy priorities, adjust programmes accordingly, evaluate policy effectiveness and recalibrate policies if needed.

Monitor debt sustainability. Public guarantees on loans and moratoria tend to increase the indebtedness of borrowers. Elevated debt might become unsustainable if borrowers' profitability and productivity cannot keep pace. High levels of debt may give rise to overhang problems, with projects that have a positive net present value no longer being undertaken, leading to reduced economic growth. This, in turn, would impair the sustainability of debt owed by the public and

private sectors. The solvency, liquidity and debt sustainability indicators developed by the WG form a dataset which is relatively easy to compile and can be compared across countries. National authorities may want to add indicators providing additional qualitative or quantitative information on the domestic economy. High levels of debt also expose borrowers to credit supply shocks. Monitoring credit markets requires more detailed analytical work using granular data from AnaCredit, and the WG has proposed a framework for this.

Prepare for an adverse scenario. An adverse scenario in which increased corporate distress leads to a pronounced accumulation of losses in the financial sector cannot be ruled out. This scenario requires preparation – a rise in corporate distress will impose strain on the legal and financial infrastructure. It is important that the institutions administering the restructuring and insolvency processes do not reach capacity constraints and that they do everything they can to avoid value destruction. Addressing the issue of non-performing loans as early and decisively as possible is essential to ensure the financial system is strong and stable and supports sustainable growth. In addition, cross-border banking groups in distress require close coordination between the relevant authorities to deal with their potential resolution. Since the global financial crisis, new rules and institutions for the recovery and resolution of banks have been established which provide enhanced options for authorities to deal with adverse scenarios.

Enhance transparency. The longer the crisis persists – and the deeper it is – the greater the likelihood of mounting solvency problems and the more pressing the need for structural change. Enhancing the transparency of banks' balance sheets can help to avoid undue forbearance and evergreening. Continued access to credit might have a stabilising effect in the short term, but extending loans to unviable firms may come at the expense of delaying structural change and may require a more painful adjustment over the longer term. However, many standard solvency indicators for firms and banks are currently misleading, making it hard to assess the degree of delayed restructuring. For instance, data on corporate insolvencies provide limited information, as mandatory filing has been suspended during the pandemic in many countries. Similarly, the reliability of banks' balance sheet information is heavily impacted by credit guarantees, moratoria and regulatory measures. Timely and prudent recognition of credit risk increases the transparency of banks' balance sheets. The risk of building up unrecognised NPLs increases if banks do not allow for the fact that firms are unlikely to pay. It is important to ensure that banks recognise borrowers' long-term payment difficulties on their balance sheets without undue delay. Following the global financial crisis, the EBA and the ECB issued practical guidance requiring banks to manage NPLs more actively, and legislation has been introduced to ensure that there is a progressive increase in the minimum coverage of impaired assets. Credit risk must also be properly measured to allow early intervention where necessary.

Coordinate policies. Addressing emerging solvency issues will require responses that are coordinated across many areas, including insolvency legislation and labour, and social and competition policy. This coordination must be effective at both the national and European levels. The European Recovery Fund has the potential to close gaps in national support schemes and complement these where needed. It can contribute to a faster and more sustainable recovery from the crisis. If successful, the Fund can help to stabilise the real economy and contribute indirectly to financial stability. Just as for measures taken at the national level, careful monitoring and evaluation is needed to achieve these objectives.

Upgrade reporting of fiscal measures. Although reporting under Recommendation ESRB/2020/8 has improved significantly since the first submission in July 2020, information gaps remain at both the European and the national level. In many countries disaggregated data by sector, region and firm size on the various measures taken to support the real economy are not available to authorities in a timely manner. In these cases, policymakers lack crucial information on the financial health of the corporate and household sectors and the effects of fiscal measures. For some jurisdictions, not all measures have been collated at the national level and the ESRB still lacks access to comprehensive reporting on equity participation measures.

Annex A – Monitoring indicators

The Working Group has developed a conceptual framework to analyse the financial stability implication of fiscal measures. This focuses on the transmission channels through which fiscal measures impact solvency and liquidity in the real economy, and therefore the ability of such measures to shield the financial sector from the effects of the pandemic. Based on these transmission channels, the Working Group has derived a set of indicators. This Annex provides a list of the key indicators that serve as a basis for the ESRB quarterly monitoring (subsection A.1), as well as a longer list of indicators that may be used in monitoring frameworks at national authorities (subsection A.2). These indicators may be subject to modification as experience of shock transmission accumulates. They provide only limited information, however, and should be complemented with additional relevant qualitative or quantitative information.

The quarterly monitoring report based on the list of key indicators will be submitted to the ESRB General Board every quarter starting in the first quarter of 2021. It will be updated with additional information, as appropriate, for each quarter.

Table A.1
Key indicators

#	Indicator	Comment	Data source	Relevant data series	Key or link
0	Foregone GDP (% of 2019 GDP)	Cumulative sum of the quarterly differences between the European Commission Winter 2020 Forecast and actual GDP standardised by 2019 figures. Dated 13 February, the forecast is affected by COVID in a very limited way. The baseline assumption is that the outbreak peaks (in China) in the first quarter, with relatively limited global spillovers.	ECB (MNA)	Gross domestic product at market prices	ECB Statistical Data Warehouse series key: MNA.Q.N.?.W2.S1.S1.B.B1GQ._Z._Z._Z.XDC.V.N
			EU Commission	European Commission Winter 2020 Forecast	**https://ec.europa.eu/info/business-economy-euro/economic-performance-and-forecasts/economic-forecasts/winter-2020-economic-forecast-offsetting-forces-confirm-subdued-growth_en**
1	NFC bankruptcies (% of 2019 average per quarter)	Number of bankruptcies each quarter divided by the average number of bankruptcies per quarter in 2019. Only available for a few countries (30%)	Eurostat - Business Demography Statistics	Bankruptcies, total, quantity	ECB Statistical Data Warehouse series key: BDS.Q.?.N.EDB.TTTT.?.Q
2	NFC volume of undrawn credit lines (% of total assets)	Ratio of aggregate undrawn (but contractually agreed off-balance-sheet) credit lines to total assets	AnaCredit	Off-balance-sheet amount (undrawn credit lines); balance sheet total (total assets)	Instrument data (off-balance-sheet amount); counterparty reference data (balance sheet total); also see: AnaCredit Reporting Manual – Part II

#	Indicator	Comment	Data source	Relevant data series	Key or link
3	NFC debt to equity ratio (%)	NFC debt each quarter (loans and securities) divided by the total equity of the NFC sector	ESB (QSA)	Debt securities issued by NFCs	ECB Statistical Data Warehouse series key: QSA.Q.N.?.W0.S11.S1.N.L.LE.F3.T._Z.XDC._T.S.V.N._T
			ESB (QSA)	Loans granted to NFCs	ECB Statistical Data Warehouse series key: QSA.Q.N.?.W0.S11.S1.C.L.LE.F4.T._Z.XDC._T.S.V.N._T
			ESB (QSA)	Equity issued by NFCs	ECB Statistical Data Warehouse series key: QSA.Q.N.?.W0.S11.S1.N.L.LE.F51._Z._Z.XDC._T.S.V.N._T
4	Transactions in loans to NFCs over total loans (%)	Transactions in MFI loans to domestic NFCs each quarter divided by the total stock of MFI loans to domestic NFCs	ECB (BSI)	Loans vis-a-vis domestic NFC reported by MFI excluding ESCB (transaction)	ECB Statistical Data Warehouse series key: BSI.M.?.N.A.A20.A.4.U6.2240.Z01.E
			ECB (BSI)	Loans vis-a-vis domestic NFC reported by MFI excluding ESCB (stock)	ECB Statistical Data Warehouse series key: BSI.M.?.N.A.A20.A.1.U6.2240.Z01.E
5	Growth in bank loans to NFCs (total stock) – hard-hit sectors (%)	Quarter-on-quarter growth in MFI loans to domestic NFCs that operate in the following sectors: - transport and storage, information and communication sector - wholesale and retail trade, repair of motor vehicles and motorcycles sector -accommodation and food service activities sector	ECB (BSI)	Transport and storage, information and communication sector	ECB Statistical Data Warehouse series key: BSI.Q.?.N.A.A20.A.1.U6.2240HJ.Z01.E
			ECB (BSI)	Wholesale and retail trade, repair of motor vehicles and motorcycles sector	ECB Statistical Data Warehouse series key: BSI.Q.?.N.A.A20.A.1.U6.2240G.Z01.E
			ECB (BSI)	Accommodation and food service activities sector	ECB Statistical Data Warehouse series key: BSI.Q.?.N.A.A20.A.1.U6.2240I.Z01.E
6	Household debt (% of 2019 net disposable income)	Household debt each quarter over 2019 net disposable income	AMECO	Net disposable income: households and NPISH	ECB Statistical Data Warehouse series key: AME.A.?.1.0.0.0.UVNH
			ESB (QSA)	Loans granted to households	ECB Statistical Data Warehouse series key: QSA.Q.N.?.W0.S14.S1.N.L.LE.F4.T._Z.XDC._T.S.V.N._T
7	Transactions in loans to households over total loans to households (%)	Transactions in MFI loans to domestic households each quarter divided by the total stock of MFI loans to domestic households	ECB (BSI)	Loans vis-a-vis domestic households reported by MFI excluding ESCB (transaction)	ECB Statistical Data Warehouse series key: BSI.M.?.N.A.A20.A.4.U6.2250.Z01.E
			ECB (BSI)	Loans vis-a-vis domestic households reported by MFI excluding ESCB (stock)	ECB Statistical Data Warehouse series key: BSI.M.?.N.A.A20.A.1.U6.2250.Z01.E

#	Indicator	Comment	Data source	Relevant data series	Key or link
8	Uptake of direct grants (% of 2019 GDP)	Total volume granted (all programmes reported by the macroprudential authority combined) divided by 2019 GDP	ESRB Recommendation 2020/8	Uptake	Template T2.5, 2.2.10
			ECB (MNA)	Gross domestic product at market prices	ECB Statistical Data Warehouse series key: MNA.Q.N.?.W2.S1.S1.B.B1GQ._Z._Z._Z.XDC.V.N
9	Uptake of moratoria (% of 2019 GDP)	Total volume accepted (all programmes reported by the macroprudential authority combined) divided by 2019 GDP	ESRB Recommendation 2020/8	Uptake	Template T2.1 2.2.10
			ECB (MNA)	Gross domestic product at market prices	ECB Statistical Data Warehouse series key: MNA.Q.N.?.W2.S1.S1.B.B1GQ._Z._Z._Z.XDC.V.N
10	Uptake of public guarantees (% of 2019 GDP)	Total volume accepted (all programmes reported by the macroprudential authority combined) divided by 2019 GDP	ESRB Recommendation 2020/8	Uptake	Template T2.2 2.2.10
			ECB (MNA)	Gross domestic product at market prices	ECB Statistical Data Warehouse series key: MNA.Q.N.?.W2.S1.S1.B.B1GQ._Z._Z._Z.XDC.V.N
11	Uptake of public loans (% of 2019 GDP)	Total volume granted (all programmes reported by the macroprudential authority combined) divided by 2019 GDP	ESRB Recommendation 2020/8	Uptake	Template T2.3 2.2.10
			ECB (MNA)	GDP at market prices	ECB Statistical Data Warehouse series key: MNA.Q.N.?.W2.S1.S1.B.B1GQ._Z._Z._Z.XDC.V.N
12	NPL ratios of banks (%)	Banks' gross non-performing debt instruments as a percentage of total gross debt instruments, each quarter	ECB (CBD2)	Banks' Gross non-performing debt instruments [% of total gross debt instruments]	ECB Statistical Data Warehouse series key: CBD2.Q.?.W0.67._Z._Z.A.A.I3614._Z._Z._Z._Z._Z._Z.PC
13	Share of Stage 2 loans (%)	Loans and advances at amortised cost: distribution among stages according to IFRS 9	EBA Risk dashboard	Stage 2	**https://eba.europa.eu/risk-analysis-and-data/risk-dashboard**
14	Volume-weighted average PD on credit stock (%)	NFC's average PD on their new loans, weighed by the credit volume	AnaCredit	PD, Outstanding nominal amount (new loans, for weights)	Counterparty risk data (PD); instrument data (outstanding nominal amount); filter: reference date (month, year) = inception date (month, year); Also see: AnaCredit Reporting Manual – Part II
15	Banks'CET1 ratio (%)	Banks' Common Equity Tier 1 ratio as a percentage of risk weighted assets, each quarter	ECB (CBD2)	Common equity Tier 1 ratio (%)	ECB Statistical Data Warehouse series key: CBD2.Q.?.W0.67._Z._Z.A.A.I4008._Z._Z._Z._Z._Z._Z.PC

#	Indicator	Comment	Data source	Relevant data series	Key or link
16	Insurers' solvency ratio (%)	Insurers' solvency ratio	EIOPA Insurance statistics	-	https://www.eiopa.europa.eu/tools-and-data/insurance-statistics_en
17	Loans with moratoria expiring in less than 6 months (% of total loans)	Gross carrying amount of loans and advances under moratoria and forbearance measures as % of total loans and advances	EBA Covid-19 reporting	Residual maturity of moratoria less than 3 months	(F90.01 r0010 c0070 + F90.02 r0010 c0060)/(F05.01 r080 c050 + F05.01 r080 c060)
				Residual maturity of moratoria less than 6 months	(F90.01 r0010 c0070 + F90.01 r0010 c0080 + F90.02 r0010 c0060 + F90.02 r0010 c0070)/ (F05.01 r080 c050 + F05.01 r080 c060)
18	Loans under public guarantees expiring in less than 6 months (% of total loans)	Gross carrying amount of loans and advances subject to public guarantee as% of total loans and advances	EBA Covid-19 reporting	Residual maturity of moratoria less than 6 months	F90.03 r0010 c0050/(F05.01 r080 c050 + F05.01 r080 c060)
19	General government debt (% of 2019 GDP)	Government debt each quarter divided by 2019 GDP.	ECB (MNA)	GDP at market prices	ECB Statistical Data Warehouse series key: MNA.Q.N.?.W2.S1.S1.B.B1GQ._Z._Z._Z.XDC.V.N
			ECB (GFS)	Government debt (consolidated)	ECB Statistical Data Warehouse series key: GFS.Q.N.?.W0.S13.S1.C.L.LE.GD.T._Z.XDC._T.F.V.N._T

Table A.2

Supplementary indicators

Sector	Mechanism	Indicator
-	Shock exposure	Total number of cases / inhabitants
		Stringency index
Private non-financial sector	Shock exposure	Change in output and employment by economic sector
		Change in household disposable income
		Change in unemployment rate
	Vulnerability	Undrawn short-term credit lines and deposits relative to GDP
		Undrawn short-term credit lines and deposits relative to short-term debt
		NFC debt relative to GDP
		Household deposits (incl. cash) versus debt service relative to disposable income
	Policy measures	Above-the-line measures: uptake of direct grants, tax deferrals and equity participation relative to GDP
		Below-the-line measures: uptake of guarantees and public loans
		Uptake of moratoria relative to total stock of loans by sectors
		Uptake of credit insurance relative to GDP
		Change in new lending to NFCs and households
		Stock of NFC debt (relative to pre-crisis period)
		Stock of household debt (relative to pre-crisis period)
		Change in credit standards or credit lines
Government	Risk materialisation vulnerability	Fiscal cost of guarantees provided and other measures
		Projected public debt relative to GDP
		Maximum cost of guarantees, equity participations, public loans, tax reliefs and deferrals relative to GDP
Financial sector	Risk materialisation vulnerability	Change in NPLs by sector
		Leverage ratios
		Banks' assessment of funding conditions and the ability to transfer credit risk off the balance sheet
		Liquidity ratio
		Liquid assets relative to short-term liabilities
		Sectoral credit exposures (levels)
		Loans to companies broken down by debt/EBITDA, debt service coverage ratios or firm leverage relative of total loans
		Gross written premia (life/non-life)
		Claims paid out (credit insurance, other non-life)
		Lapse rate (life insurance)
		Insurers' excess assets over liabilities/total assets
		Banks' return on equity
		Insurers' return on excess assets over liabilities
	Policy measures	Loans under moratoria relative to total loans, disaggregation by maturity
		Loans with public guarantees relative to total loans, disaggregation by maturity
		Loans with public guarantees - coverage rate
		Public guarantees paid out
		Percentage of bonds and equity held issued by NFCs assisted by public guarantees (split by banks, insurance, pension funds, investments funds)
		Percentage of bonds and equity held issued by NFCs assisted by moratoria (split by banks, insurance, pension funds, investments funds)

Sector	Mechanism	Indicator
Domestic, cross-border and cross-sectoral feedback channels	Risk materialisation	Number of banks subject to preventive, resolution or liquidation measures relative to banking population
		Size of public support for banks and precautionary recapitalisations relative to total bank sector capital
		Banks subject to preventive, resolution or liquidation measures exceeding some asset size thresholds relative to banking population
		Banks' loans growth rate
		Foreign banks' growth rate
	Vulnerabilities	Economic openness (export + import) relative to GDP
		Total loans supported by fiscal measures from foreign banks as a percentage of outstanding loans supported by fiscal measures
		Sectoral investment exposure (different instruments) – both direct exposure towards affected sectors and indirect exposure through other financial sector institutions exposed to the affected sectors
		Total amount of public equity participations taken since COVID-19 relative to GDP
		Total amount of subsidies since COVID-19 relative to GDP
		New public loans granted as a percentage of total new lending; since COVID-19
		Credit lines with public guarantee relative to GDP and relative to NFC stock of loans

Annex B – Data on fiscal measures

Under Recommendation ESRB/2020/8[45] national macroprudential authorities should report the design features and uptake of moratoria and fiscal measures to the ESRB. The three reporting templates cover the features of the measures, their uptake and qualitative information: **T1 - template to report features of the measures**; **T2 – templates to report the uptake of measures** (loan moratoria, public guarantees, public loans, equity participation, direct grants, tax measures and public support for credit insurance); **T3 – template for a qualitative questionnaire**. The first submission was due by 31 July 2020 (reference date June 2020), the second by 31 October 2020 (reference date 30 September 2020).

The results should be treated with caution, especially with regard to comparisons across countries, due to possible under-reporting, especially of the uptake of non-mandatory measures (only moratoria, public guarantees on loans and public loans were mandatory under template 2). The ESRB Secretariat will continue to interact with the macroprudential authorities to improve the data quality of future submissions.

There now follows an overview of the features and uptake of measures as reported by 31 October 2020, with reference date 30 September 2020.

[45] Recommendation ESRB/2020/8 on monitoring the financial stability implications of debt moratoria, public guarantee schemes and other measures of a fiscal nature taken to protect the real economy in response to the COVID-19 pandemic.

B.1 Types of fiscal measures

Table B.1

Measures reported under Recommendation (ESRB/2020/08 by 31 October 2020 (reference date September 2020)

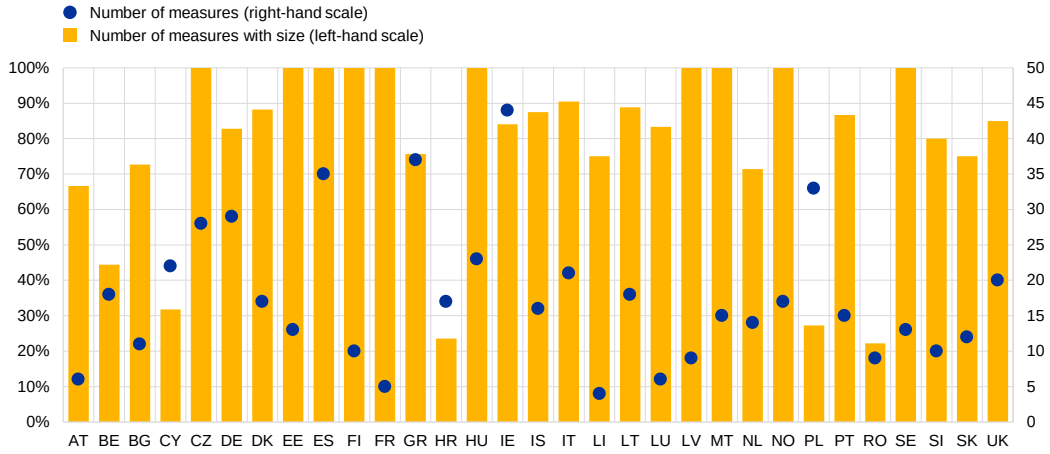
	Loan moratoria	Public guarantees	Public loans	Equity participation	Direct grants	Tax deferrals	Tax relief	Public support for trade credit insurance
Country	25	31	16	8	30	29	20	9
AT	2	1			2	2		
BE	3	2			8	4	2	
BG	1	3			5	1	2	
CY	2	3	1		10	2	4	
CZ	1	4			17	1	5	
DE	3	4	5	2	5	3	9	1
DK		4		2	5	2		
EE	1	3	4	1	4		1	
ES	4	7		2	8	7	6	1
FI		1			6	1		
FR	1	1			2	1		1
GR	5	2	2		26	5	2	
HR	3	2	2		1	5	7	
HU	5	2	2		7	1	6	1
IE	1	3	5	1	22	1	7	
IS	1	3			5	2	5	
IT	6	9		1	2	1	3	2
LI		1			2	1		
LT	2	4	4	1	7	2		
LU	1	3	2		1			
LV	1	2	1	1	3	1		1
MT	1	1			7	2	2	
NL	3	5			7	1		1
NO		3			3	6	4	
PL	2	4	3		1	8	13	
PT	4	1	2		3	2	1	2
RO	4	1	1		1	4	2	
SE		2	1		7	2	1	
SI	1	2	1			7		
SK	2	6			3	3		
UK		3	2		10	3	1	1
Number of measures	**60**	**92**	**38**	**11**	**190**	**81**	**83**	**11**

Source: Recommendation ESRB/2020/08 by 31 October 2020 (reference date September 2020).

Chart B.1

Completeness of the report in terms of the field “volume of the measure”, 1.1.01

(percentages, count)

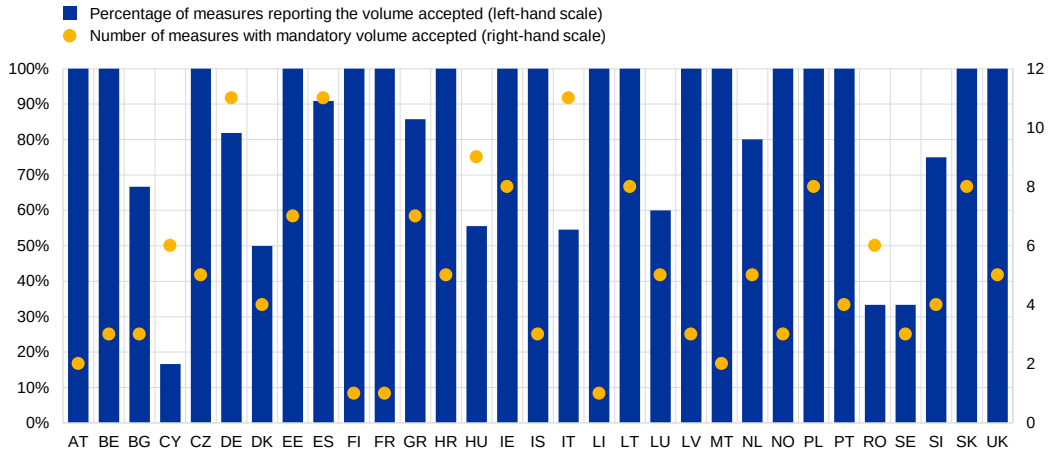


Source: Recommendation ESRB/2020/08 by 31 October 2020 (reference date September 2020).
Notes: Includes all measures except loan moratoria. Figures are shown as a percentage of the total numbers of measures reported under template T1.1. Volume of the measure is the total volume of the measure as initially launched by the government. For some measures there was no pre-announced value, although several countries still provided estimates.

Chart B.2

Completeness of report in terms of the field “total volume accepted”, 2.2.10

(percentages, count)



Source: Recommendation ESRB/2020/08 by 31 October 2020 (reference date September 2020).
Note: The measures with mandatory uptake fields are loan moratoria, public guarantees on loans and public loans. Bars are shown as a percentage of the total number of measures reported.

B.2 Amounts of fiscal measures

Table B.2

Distribution of the termination of measures over time, as reported by September 2020

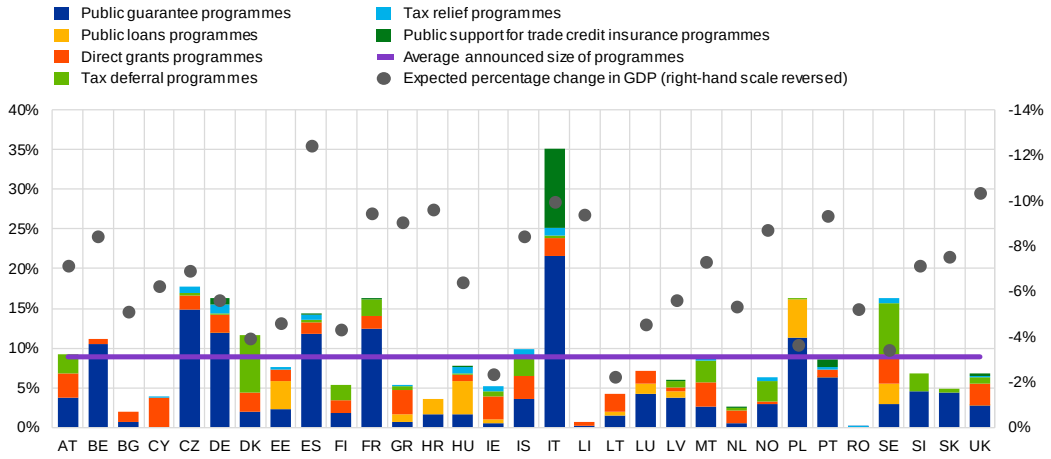
	Q4 2020	Q1 2021	Q2 2021	Q3 2021	Q4 2021	Percentage of measures with no end-date available	Total amount of measures as at September (EUR billion)
Moratoria	17%	22%	0.4%	5%		**55%**	**838**
Public guarantees	63%	2%	21%		3%	**11%**	**1,580**
Public loans	93%				0.4%	**6%**	**57**
Direct grants	51%	6%	3%		9%	**32%**	**327**
Tax deferrals	10%	28%	14%			**49%**	**170**
Tax relief	45%	14%	4%		19%	**18%**	**75**
Public support for credit insurance							**227**
Total (EUR billion)	**1,411**	**293**	**368**	**44**	**90**	**1,067**	**3,274**
Total without moratoria (EUR billion)	**1,270**	**109**	**364**			**693**	**2,436**

Source: Recommendation ESRB/2020/08 (reference date 30 September 2020), ECB (MNA, BSI, CBD).
Notes: Total size announced refers to field 1.1.01, and total uptake to field 2.2.10 for all measures apart from tax relief and tax deferrals, where field 2.2.12 was used. There are gaps in the reported data and results should be interpreted with caution, especially for the uptake of direct grants, tax measures and credit insurance guarantees, where reporting was not mandatory. For public loans the total size announced is lower than the total uptake due to data gaps in the values reported by DE and PL. Total loans are taken from CBD and BSI databases.

Chart B.3

Announced size of fiscal measures packages

(percentages of 2019 GDP)

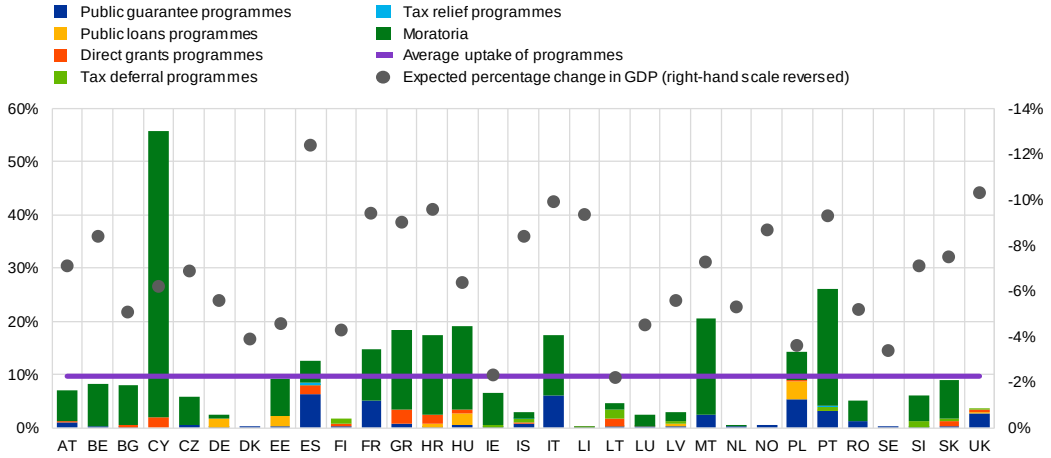


Sources: Recommendation ESRB/2020/08 by 31 October 2020 (reference date September 2020), ECB (MNA), European Commission Autumn economic forecasts.
Notes: The announced size reported under volume of the measure (field 1.1.01) is subject to reporting completeness. Moratoria programmes are not included as they do not usually have a pre-defined size. There are gaps in the reported data and results should be interpreted with caution, especially for the uptake of direct grants, tax measures and credit insurance guarantees, where reporting was not mandatory.

Chart B.4

Reported uptake of moratoria and fiscal measures packages

(percentages of 2019 GDP)

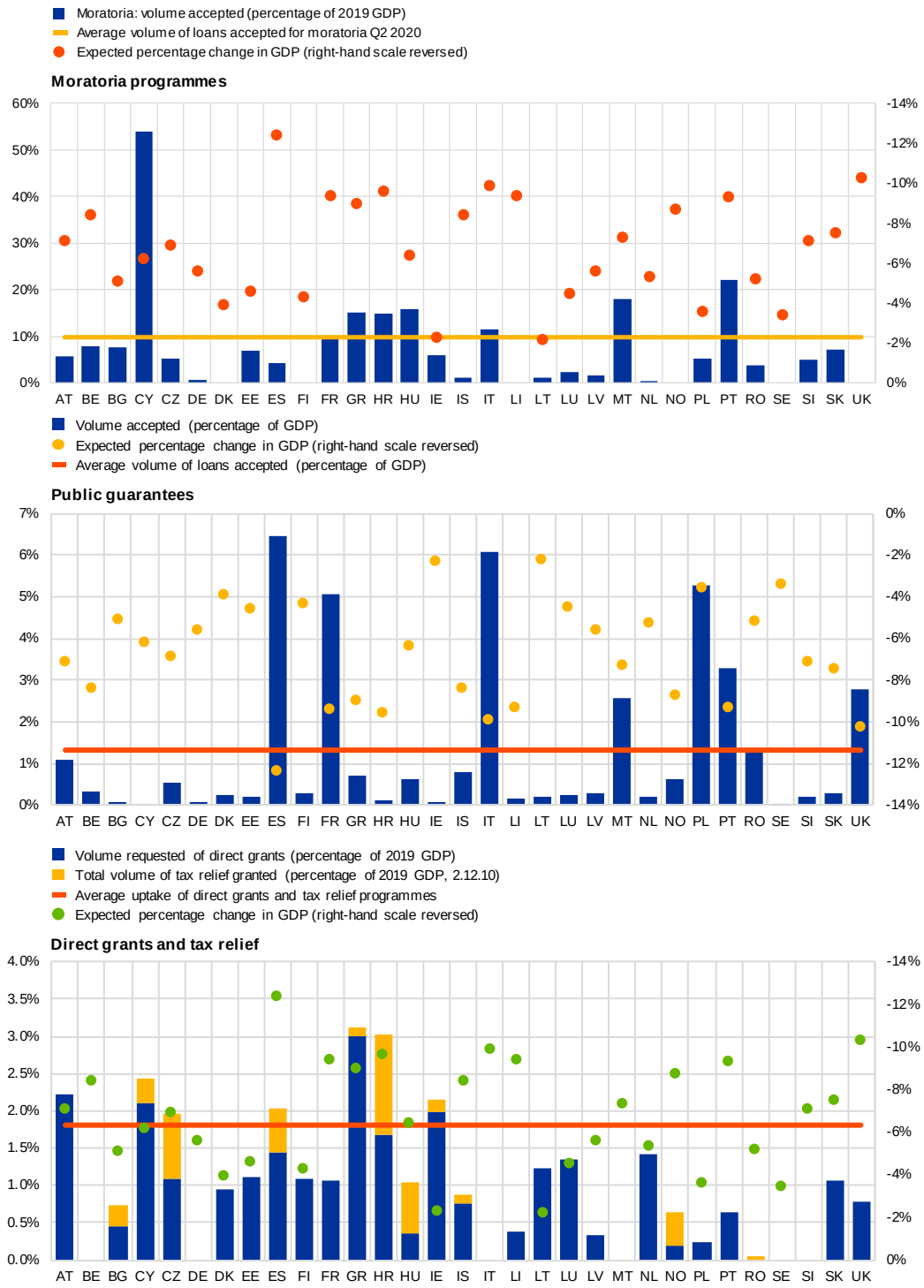


Sources: Recommendation ESRB/2020/08 by 31 October 2020 (reference date September 2020), ECB (MNA), European Commission Autumn economic forecasts.
Notes: Reported uptake as shown under total volume requested (2.1.10); tax measures as shown under total volume of the tax relief/deferral (Estimation) (2.12.10), subject to reporting completeness. Uptake for CY amounts to 58%. There are gaps in the reported data and results should be interpreted with caution, especially for the uptake of direct grants, tax measures and credit insurance guarantees, where reporting was not mandatory.

Chart B.5

Uptake of selected fiscal measures and GDP growth forecasts for 2020

(percentages of 2019 GDP)



Sources: Recommendation ESRB/2020/08 by 31 October 2020 (reference date September 2020), ECB (MNA), European Commission Autumn economic forecasts.
Notes: To illustrate uptake, mandatory fields from template T2 showing total volume requested (2.1.0) and total volume accepted (2.2.10) are shown as a percentage of 2019 GDP. For tax measures, total volume of the tax relief/deferral (estimation) (2.12.10) is used. Uptake of moratoria on loans for CY amounts to 54%. There are gaps in the reported data and results should be interpreted with caution, especially for the uptake of direct grants, tax measures and credit insurance guarantees, where reporting was not mandatory.

B.3 Moratoria on loans

Table B.3

Moratoria programmes across European Economic Area (EEA) member countries

Type of measure	AT	BE	BG	CY	CZ	DE	DK	EE	ES	FI	FR	GR	HR	HU	IE	IS
Legislative moratoria	■	■		■	■	■			■			■	■	■		
Non-legislative moratoria	■	■	■			■		■			■	■	■		■	■

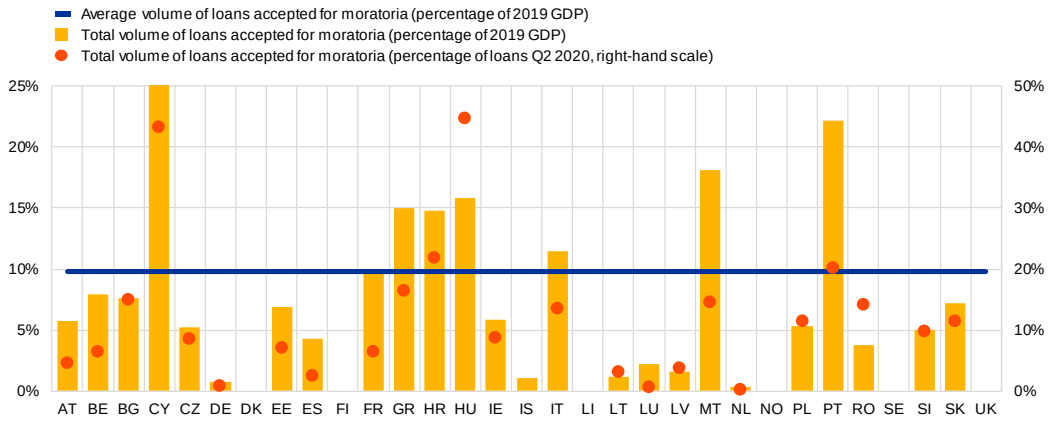
Type of measure	IT	LI	LT	LU	LV	MT	NL	NO	PL	PT	RO	SE	SI	SL	UK
Legislative moratoria						■			■	■	■		■	■	
Non-legislative moratoria	■		■	■	■		■		■	■					

Sources: Recommendation ESRB/2020/08 by 31 October 2020 (reference date September 2020), ECB (MNA), European Commission Autumn economic forecasts.
Notes: Reported uptake as shown under total volume requested (2.1.10); tax measures as shown under total volume of the tax relief/deferral (Estimation) (2.12.10), subject to reporting completeness. Uptake for CY amounts to 58%. There are gaps in the reported data and results should be interpreted with caution.

Chart B.6

Moratoria programmes – uptake volume

(percentages)

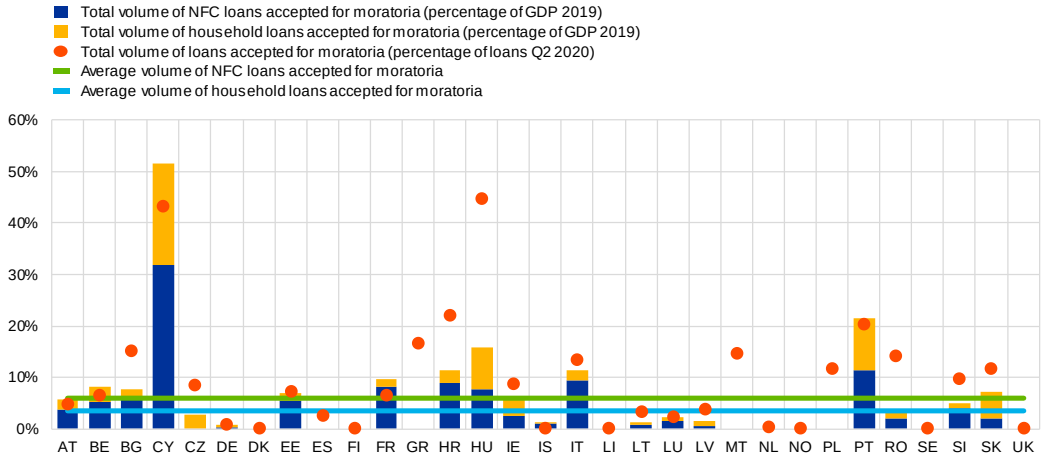


Sources: Recommendation ESRB/2020/08 by 31 October 2020 (reference date September 2020), ECB (MNA, CBD, BSI).
Notes: Mandatory uptake field from template T2 total volume accepted (2.2.10) is shown as a percentage of 2019 GDP and total loans. The total volume of loans accepted for moratoria (percentage of 2019 GDP) for CY is 53.8%. There are gaps in the reported data and results should be interpreted with caution.

Chart B.7

Moratoria programmes – volume of accepted moratoria – breakdown by NFC and household

(percentages)

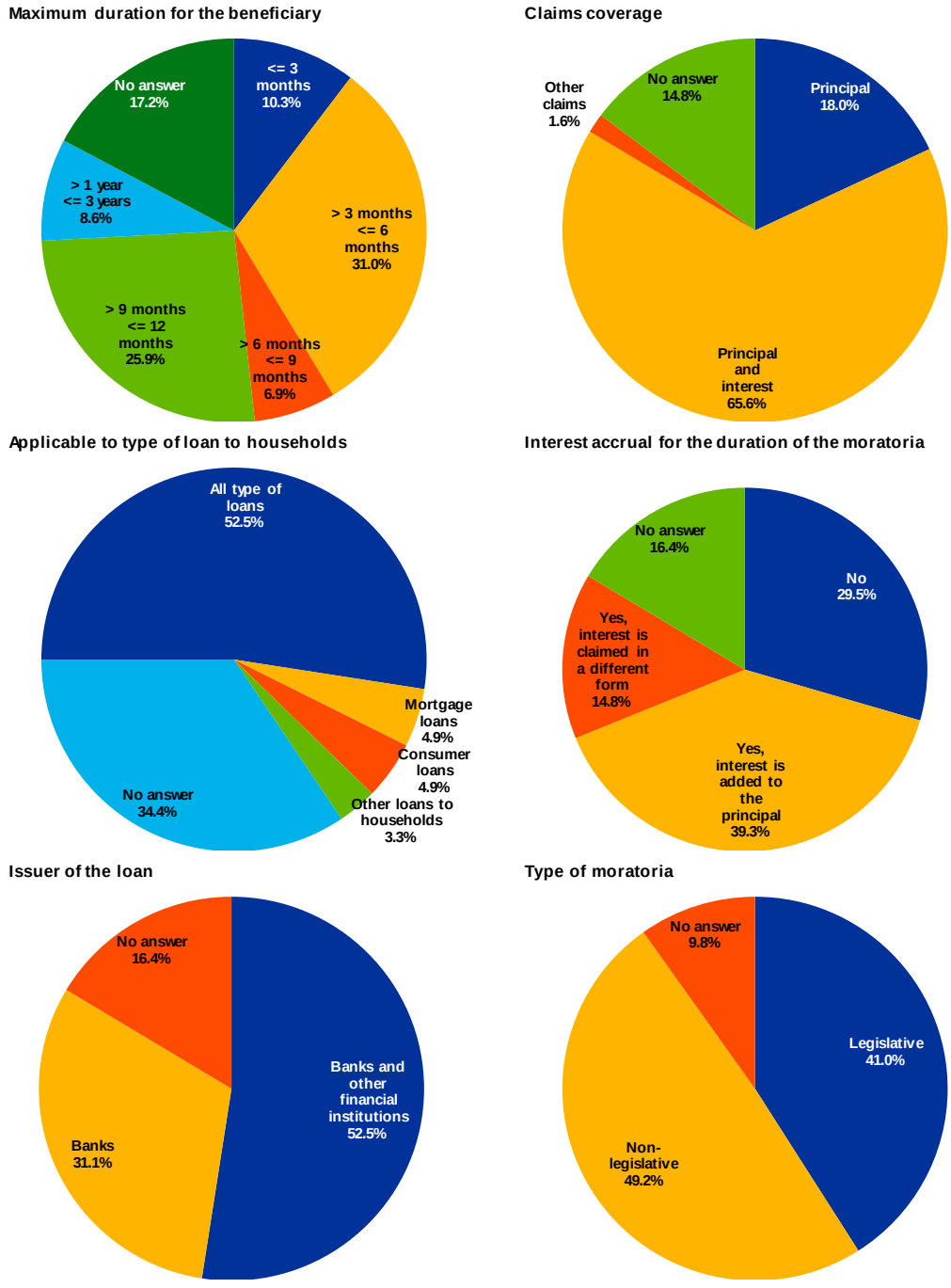


Sources: Recommendation ESRB/2020/08 by 31 October 2020 (reference date September 2020), ECB (MNA, CBD, BSI).
Notes: Uptake fields from template T2 volume accepted – NFC (2.2.12) and volume accepted – HH (2.2.13) are shown as a percentage of 2019 GDP or total loans. There are gaps in the reported data and results should be interpreted with caution.

Chart B.8

Specific features of moratoria across countries

(percentages)



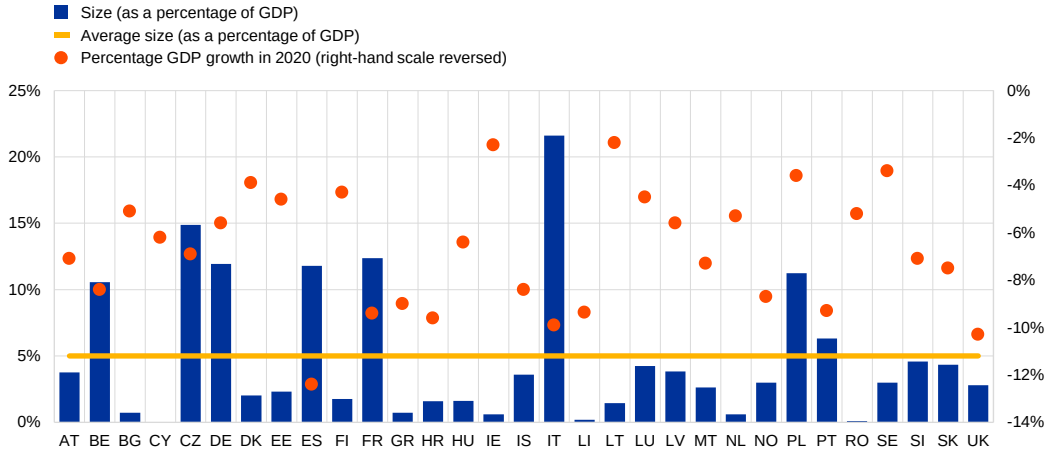
Source: Recommendation ESRB/2020/08 by 31 October 2020 (reference date September 2020).
Notes: Uses fields from T1: maximum duration of measure for the beneficiary (1.2.08), claims coverage (1.3.04), applicable to type of loan for HH (1.3.03), interest accrual for the duration of the moratoria (1.3.05), issuer of the loan (1.3.02) and type of moratoria (1.3.06). There are gaps in the reported data and results should be interpreted with caution.

B.4 Public guarantees on loans

Chart B.9

Announced size of public guarantee programmes

(percentages)

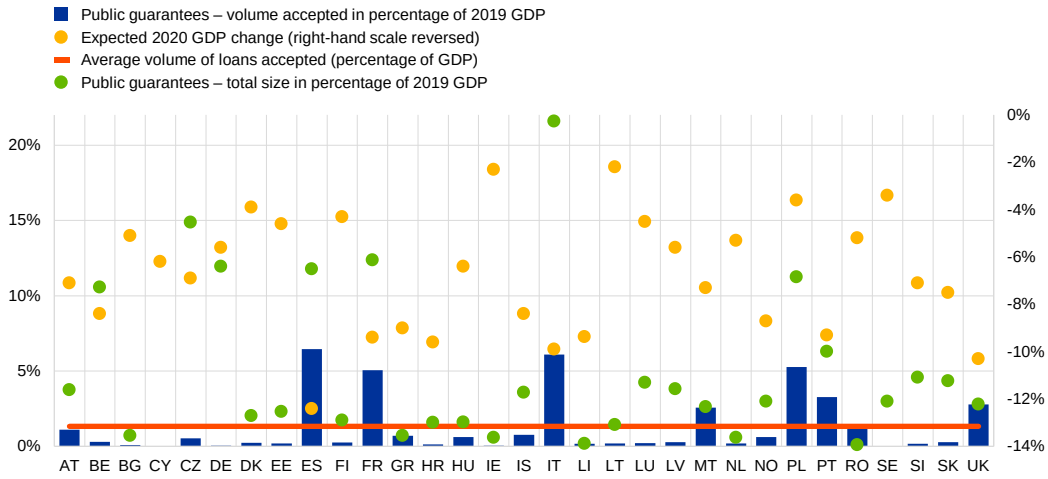


Sources: Recommendation ESRB/2020/08 by 31 October 2020 (reference date September 2020), ECB (MNA), European Commission Autumn economic forecasts.
Notes: The field from template T1 "volume of the measure" (1.1.01) is shown as a percentage of 2019 GDP. There are gaps in the reported data and results should be interpreted with caution.

Chart B.10

Announced size and uptake of public guarantee programmes

(percentages)

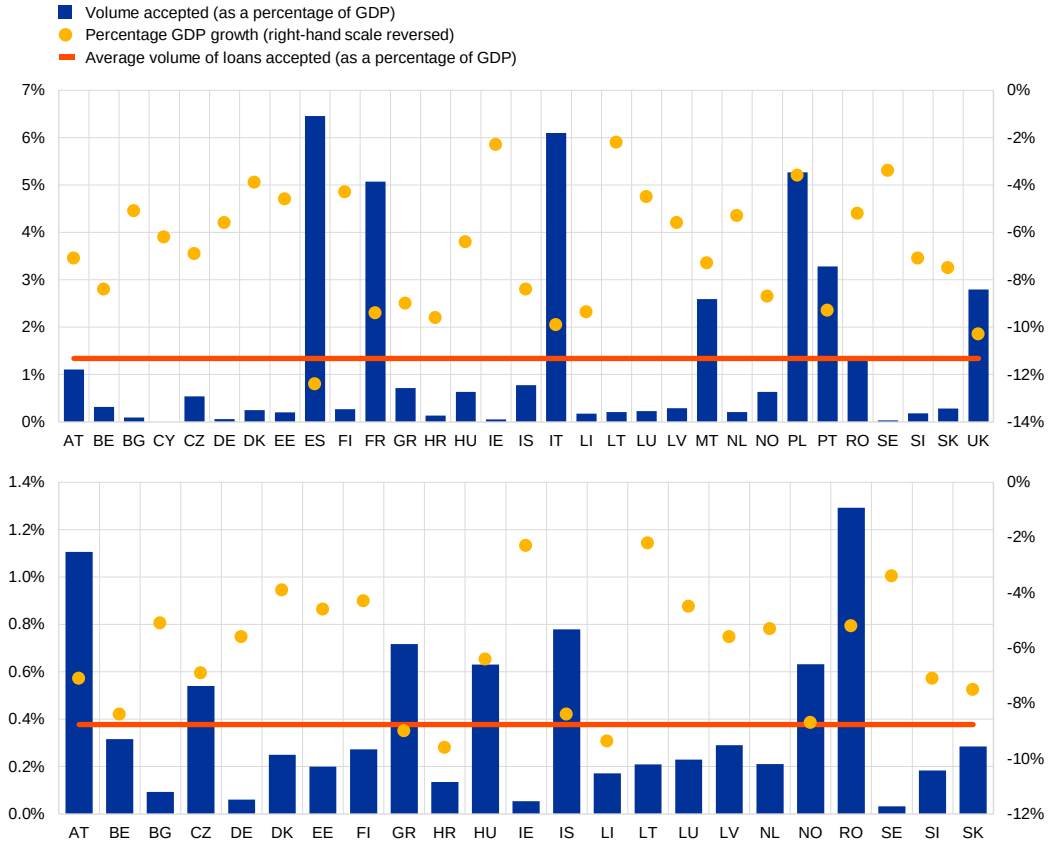


Source: Recommendation ESRB/2020/08 by 31 October 2020 (reference date September 2020), ECB (MNA), European Commission Autumn economic forecasts.
Notes: The fields from templates T1 and T2 volume of the measure (1.1.01) and volume accepted (2.2.10) are shown as a percentage of 2019 GDP. Only measures for which both fields were reported are included in the graph above. There are gaps in the reported data and results should be interpreted with caution.

Chart B.11

Uptake of public guarantees (top panel), zoom-in on smaller measures (bottom panel)

(percentages)

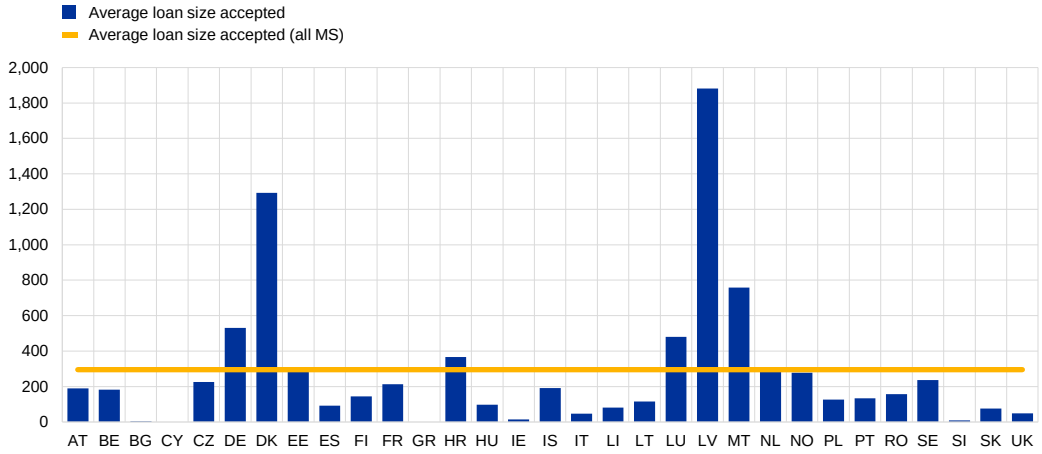


Source: Recommendation ESRB/2020/08 by 31 October 2020 (reference date September 2020), ECB (MNA), European Commission Autumn economic forecasts.
Notes: The field from template T2 volume accepted (2.2.10) is shown as a percentage of 2019 GDP. The graph on the bottom is a close-up on member countries where values are lower (less than 1.5% of GDP). There are gaps in the reported data and results should be interpreted with caution.

Chart B.12

Loan size under public guarantee

(EUR thousands)



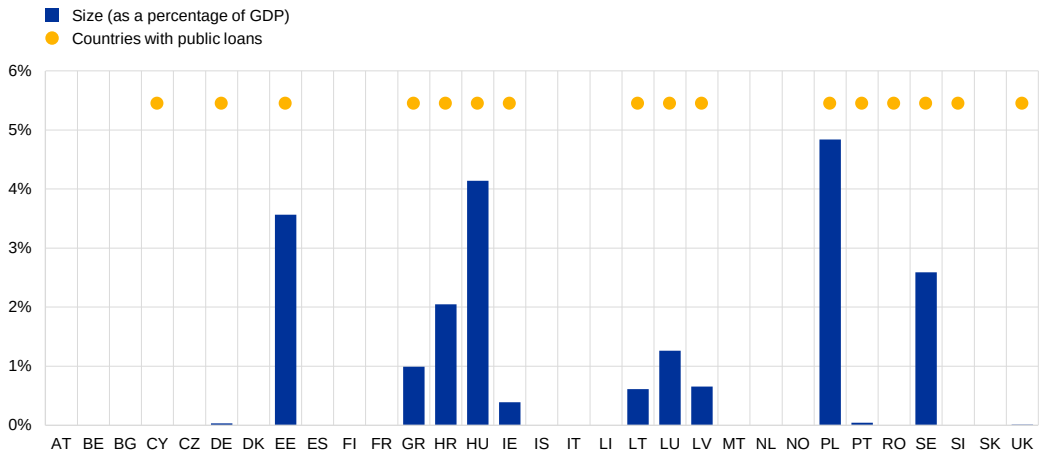
Source: Recommendation ESRB/2020/08 by 31 October 2020 (reference date September 2020).
Notes: Shows uptake field from template T2 volume accepted (2.2.10) divided by requests accepted (2.4.10). Only measures where both fields are populated have been included. There are gaps in the reported data and results should be interpreted with caution.

B.5 Public loans

Chart B.13

Size of public loans

(percentages)

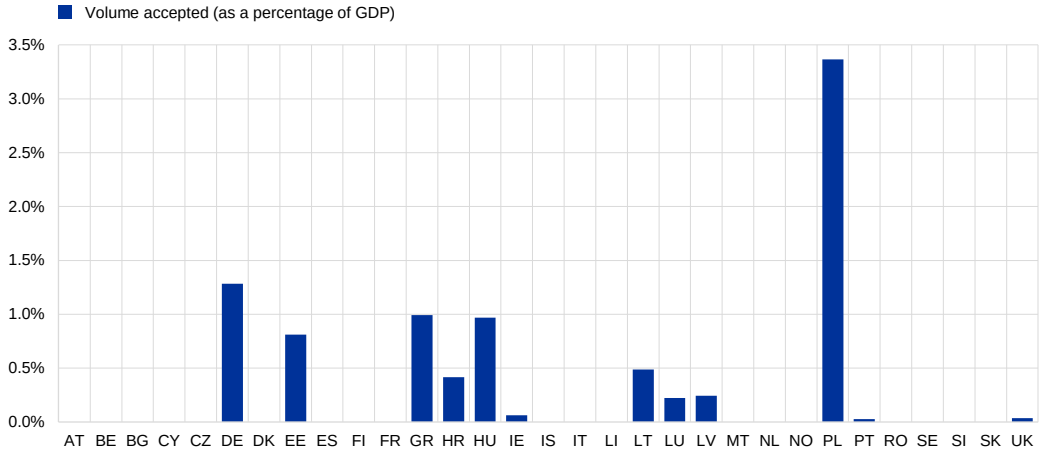


Source: Recommendation ESRB/2020/08 by 31 October 2020 (reference date September 2020).
Notes: Shows field from template T1 volume of the measure (1.1.01) as a percentage of 2019 GDP. There are gaps in the reported data and results should be interpreted with caution.

Chart B.14

Uptake of public loans – volume accepted

(percentages)

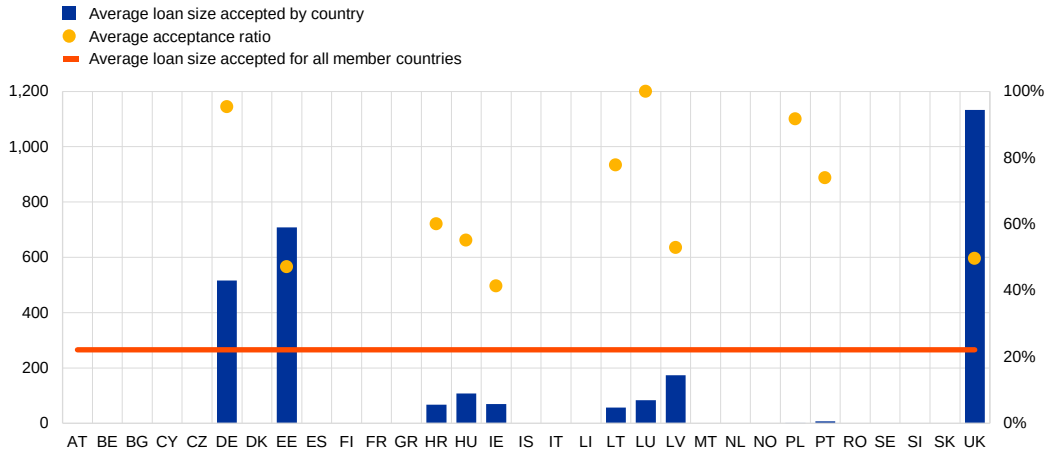


Sources: Recommendation ESRB/2020/08 by 31 October 2020 (reference date September 2020), ECB (MNA).
Notes: Shows uptake field from template T2 volume accepted (2.2.10) as a percentage of 2019 GDP. There are gaps in the reported data and results should be interpreted with caution.

Chart B.15

Uptake of public loans – average loan size and acceptance ratio

(EUR thousands; percentages)

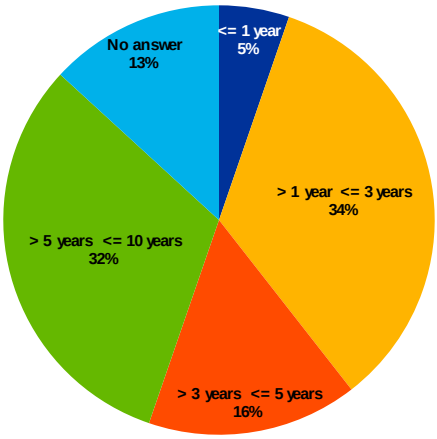


Source: Recommendation ESRB/2020/08 by 31 October 2020 (reference date September 2020).
Notes: Shows uptake field from template T2 volume accepted (2.2.10) divided by requests accepted (2.4.10).The acceptance ratio is calculated by dividing requests accepted (2.4.10) by requests made (2.3.10). Only measures where both fields are populated have been included. There are gaps in the reported data and results should be interpreted with caution.

Chart B.16

Specific features of public loans across countries – maximum duration of loan for the beneficiary

(percentages)



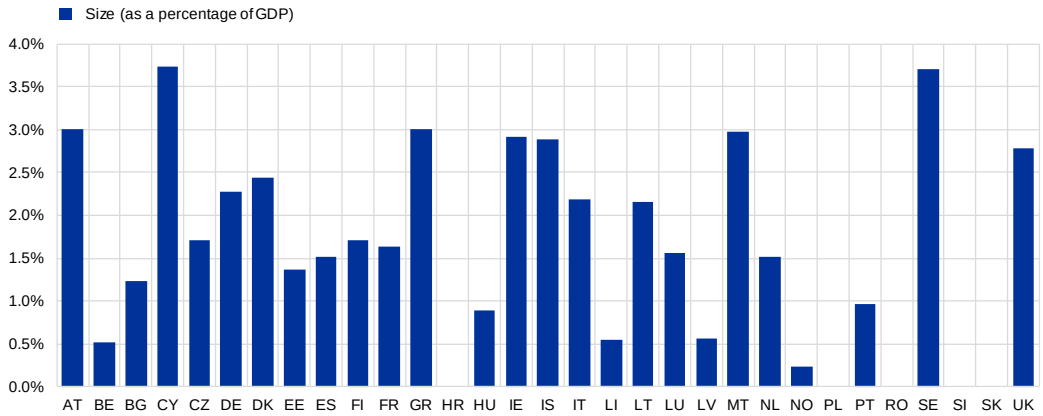
Source: Recommendation ESRB/2020/08 by 31 October 2020 (reference date September 2020).
Notes: Shows the ffield from T1, maximum duration of measure for the beneficiary (1.2.08), is shown. There are gaps in the reported data and results should be interpreted with caution.

B.6 Direct grants

Chart B.17

Announced size of direct grants

(percentages)

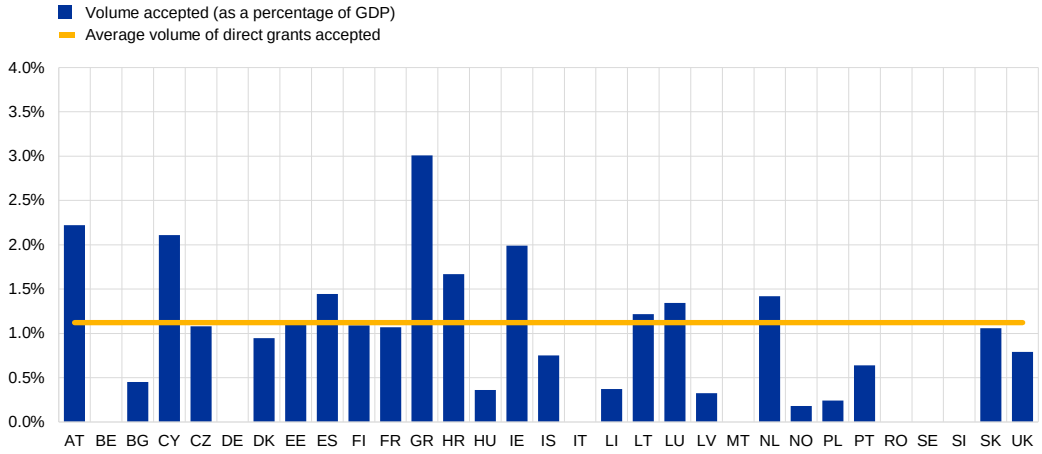


Source: Recommendation ESRB/2020/08 by 31 October 2020 (reference date September 2020).
Notes: Shows the field from template T1 volume of the measure (1.1.01) as a percentage of 2019 GDP. There are gaps in the reported data and results should be interpreted with caution, especially for direct grants, where uptake reporting was not mandatory.

Chart B.18

Uptake of direct grants – volume accepted

(percentages)

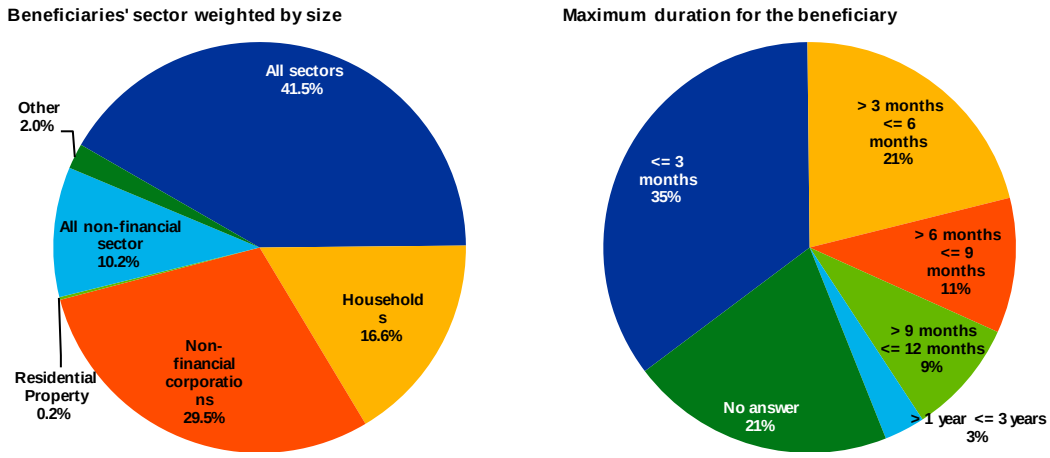


Source: Recommendation ESRB/2020/08 by 31 October 2020 (reference date September 2020).
Notes: Shows uptake field from template T2 volume accepted (2.2.10) as a percentage of 2019 GDP. There are gaps in the reported data and results should be interpreted with caution, especially for direct grants, where uptake reporting was not mandatory.

Chart B.19

Direct grants

(weighted by size of programme; percentages)



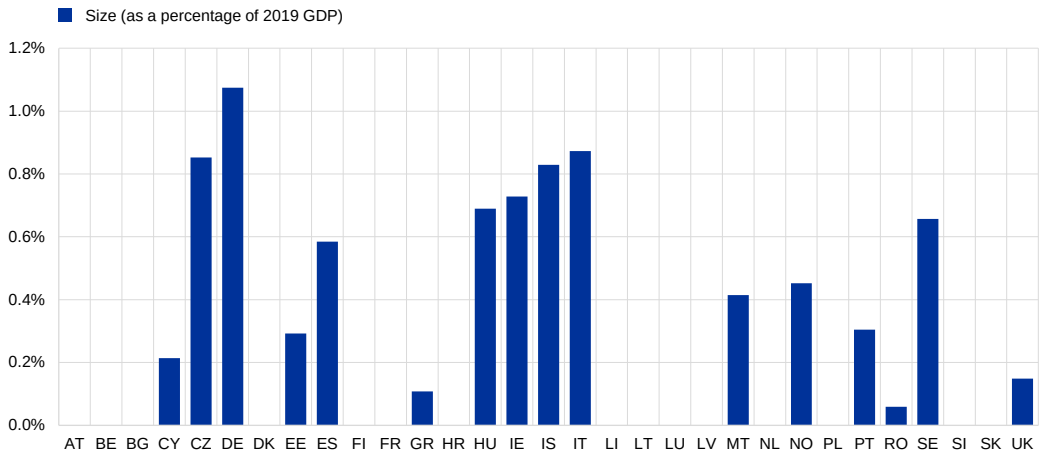
Source: Recommendation ESRB/2020/08 by 31 October 2020 (reference date September 2020).
Notes: Shows the field from template T1 beneficiaries' sector (1.2.01) weighted by volume of the measure (1.1.01) and maximum duration of measure for the beneficiary (1.2.08). There are gaps in the reported data and results should be interpreted with caution, especially for direct grants, where uptake reporting was not mandatory.

B.7 Tax deferrals and reliefs

Chart B.20

Size of tax relief

(percentages)

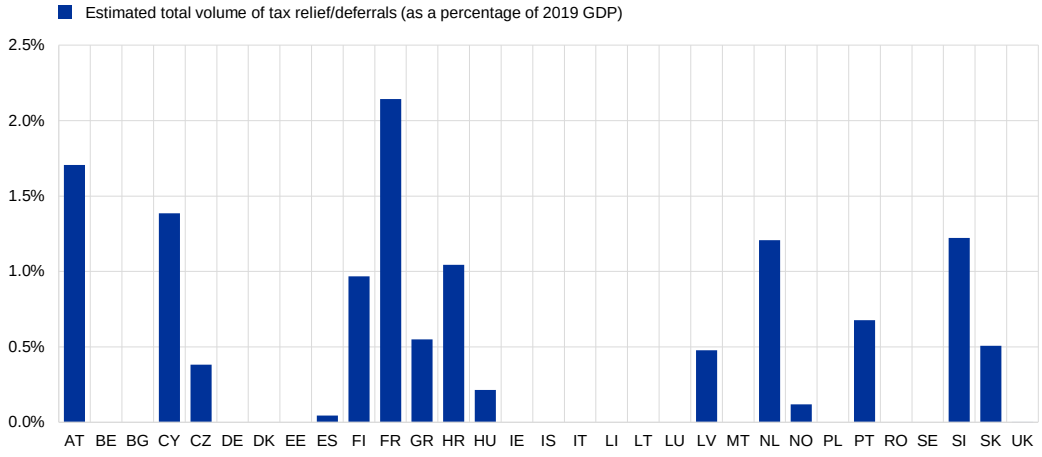


Sources: Recommendation ESRB/2020/08 by 31 October 2020 (reference date September 2020), ECB (MNA).
Notes: Shows the field from template T1 volume of the measure (1.1.01) as a percentage of 2019 GDP. There are gaps in the reported data and results should be interpreted with caution, especially for tax measures, where uptake reporting was not mandatory.

Chart B.21

Uptake of tax deferrals – total volume

(percentages)

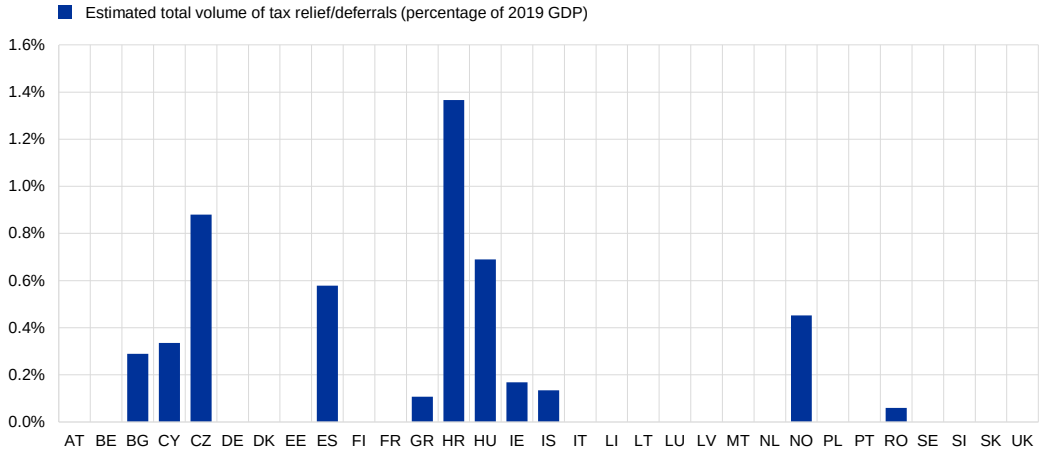


Sources: Recommendation ESRB/2020/08 by 31 October 2020 (reference date September 2020), ECB (MNA).
Notes: Shows the uptake field from template T2 total volume of tax relief/deferral (2.12.10) as a percentage of 2019 GDP. There are gaps in the reported data and results should be interpreted with caution, especially for tax measures, where uptake reporting was not mandatory.

Chart B.22

Uptake of tax reliefs – total volume

(percentages)



Sources: Recommendation ESRB/2020/08 by 31 October 2020 (reference date September 2020), ECB (MNA).
Notes: Shows uptake field from template T2 total volume of tax relief/deferral (2.12.10) as a percentage of 2019 GDP. There are gaps in the reported data and results should be interpreted with caution, especially for tax measures, where uptake reporting was not mandatory.

B.8 Equity participations

Table B.4

Equity participation programmes

Country	Adoption date	Company size	Volume of the measure (EUR)	Max. amount per beneficiary (local currency)	Max. duration for the beneficiary
DE	30/04/2020	Start-ups	2 billion	0.8 million	> 10 years
	27/03/2020	Medium and large companies (revenues >€50 million, balance sheet volume >€46 million or employees exceeding 249)	100 billion		> 10 years
DK		Large companies	10 billion		> 3 months <= 6 months
	18/04/2020		1.2 billion		> 6 months <= 9 months
EE	15/04/2020	NA	300 million		> 5 years <= 10 years
ES	31/03/2020	Small and medium companies	60 million	1.1 million	> 5 years <= 10 years
	03/07/2020	Unrestricted	10 billion	Unlimited	> 5 years <= 10 years
IE	02/05/2020	Medium and large companies (>€50m turnover or >250 employees)	2 billion		
IT	19/05/2020	Medium and large companies (>€50m turnover)	4.5 billion		> 10 years
LT	13/05/2020	Medium and large companies	1 billion		
LV	14/07/2020	Large companies	100 million	10 million	> 5 years <= 10 years

Source: Recommendation ESRB/2020/08 by 31 October 2020 (reference date September 2020).
Note: There are gaps in the reported data and results should be interpreted with caution, especially for equity participation programmes, where uptake reporting was not mandatory.

B.9 Public support for trade credit insurance

Table B.5

Public support for trade credit insurance programmes

Country	Adoption date	Announced volume of the measure (EUR)	Maximum duration of measure for the beneficiary
DE	16/04/2020	30 billion	
ES	21/04/2020	500 million	
FR	23/03/2020	5 billion	
HU	28/03/2020	164 million	> 9 months <= 12 months
IT	08/04/2020	180 billion	> 10 years
IT	19/05/2020	2 billion	> 1 year <= 3 years
LV	14/04/2020		> 1 year <= 3 years
NL	29/05/2020	970 million	> 9 months <= 12 months
PT	04/06/2020	2 billion	> 6 months <= 9 months
PT	12/03/2020	250 million	> 9 months <= 12 months
UK	01/04/2020	11 billion	> 1 year <= 3 years

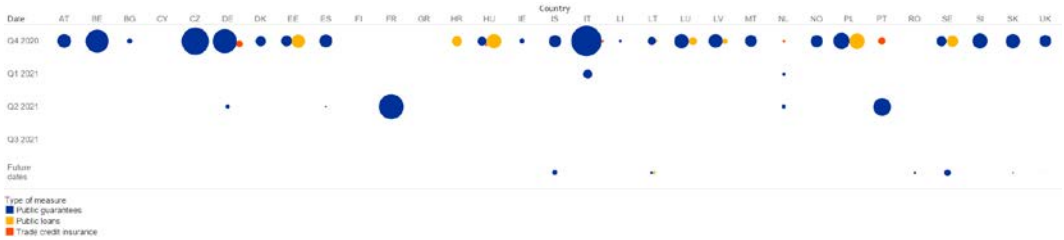
Source: Recommendation ESRB/2020/08 by 31 October 2020 (reference date September 2020).
Notes: Second column: field 1.0.09, thrid column, field 1.1.01, fourth column, field 1.2.08. There are gaps in the reported data and results should be interpreted with caution, especially for public support for trade credit insurance programmes, where uptake reporting was not mandatory.

B.10 Timeline of expiry as of 30 September 2020

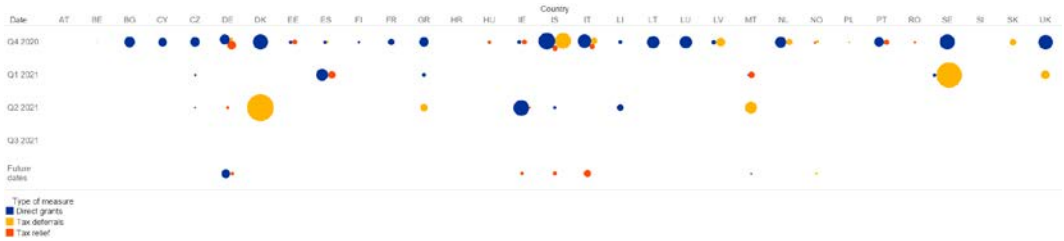
Chart B.23

Timeline of expiry of measures

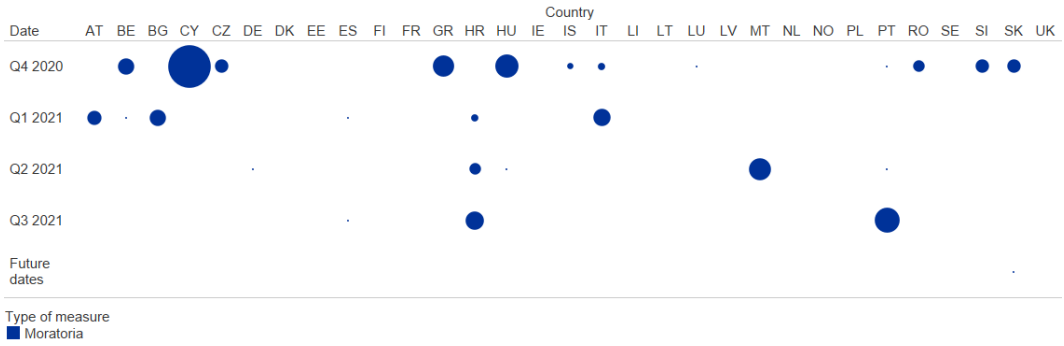
Public loans, guarantees, public support for trade credit insurance
(percentages of 2019 GDP)



Direct grants and tax measures
(percentages of 2019 GDP)



Uptake of moratoria
(percentages of 2019 GDP)



Source: Recommendation ESRB/2020/08 by 31 October 2020 (reference date September 2020).
Notes: The size of the bubbles represents the size of the measures (1.1.01 for all measures apart from moratoria and tax deferrals, where 2.2.10 and 2.2.12 are used) as a percentage of GDP in the fourth quarter of 2019. The dates shown are taken from field 1.0.11. Only measures for which fields 1.1.01 and 1.0.11 were both populated are shown. Dates before September 2020 were excluded from the graph. Dates after the third quarter of 2021 are aggregated under "Future Dates".

B.11 Summary of the qualitative assessment of the third quarter of 2020

Under Recommendation ESRB/2020/08 macroprudential authorities are required to report quarterly on a set of qualitative questions (template 3). The questionnaire covers national macroprudential concerns regarding the financial stability implications of support measures for both the financial and the non-financial sectors. The following paragraphs summarise the answers received at the end of October 2020, with reference date 30 September 2020.

In respect of the impact on the non-financial sector, the macroprudential authorities identified moratoria and direct grants as the two most important measures in their jurisdictions to protect both NFCs and households. This is consistent across SMEs, large corporates and households. Public guarantees and tax deferrals come next, with the former focusing on NFC vulnerabilities and the latter helping households to sustain reduced income levels. Equity participation and public support for trade credit insurance are barely mentioned in the answers, possibly because they are in the early stages of implementation or because they were not considered. Please note that these measures are rarely reported in templates 1 or 2 either.

The authorities are closely monitoring indicators reflecting credit aggregates and bankruptcy levels to gauge the effects fiscal measures are having on the non-financial sector. The measures adopted have helped prevent any deterioration in the solvency and liquidity positions of households and NFCs by smoothing the materialisation of credit risks. The flow of credit to the non-financial sector and debt ratios in both the NFC and the household sectors have remained broadly stable throughout the pandemic. Some authorities highlight that it might be difficult to determine the magnitude of the causal effects measures are having on the indicators used to monitor non-financial sector performance. However, most expect that the indicators will deteriorate considerably once the measures are lifted, causing cliff effects.

With regard to the impact on the financial sector, the authorities see moratoria and public guarantees as being most important for banks, while direct grants are deemed to be most important for insurance companies and investment funds[46]**.** Furthermore, most authorities perceive both solvency and liquidity risks as being relatively low across the financial sector. A medium level of risk is highlighted in some jurisdictions, in particular for investment funds. In general, solvency risk is highlighted more frequently for the banking sector.

The authorities are monitoring indicators reflecting the funding, profitability and asset quality of financial institutions to gauge the effects fiscal measures are having on the financial sector. Most authorities highlight the modest effects measures are having on financial sector indicators. Capital adequacy (as measured by CET1 ratio and RWA levels), liquidity (as measured by LCR and NSFR), asset quality (as assessed by growth in NPLs and variations in lending standards on newly issued loans) and lending growth remain broadly stable. Explanations for this phenomenon vary across authorities. Some attribute it to the high capitalisation of the banking sector before the outbreak of COVID-19, which ensured continuous funding to the real

[46] In the case of investment funds and insurance, the effects are likely to be indirect due to their benefits to NFCs and households which act as policyholders and investors.

economy. Others attribute it to the impact of the fiscal measures taken, which have so far prevented any deterioration in financial stability indicators. Authorities also highlight the heterogeneity of uptake of the different measures. Moratoria are the most common measure, while public guarantees lag behind in terms of application, owing to the unfavourable terms imposed on both borrowers and financial institutions.

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ESRB Working Group members

Member	Institution
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Alexandra Schober-Rhomberg	Oesterreichischer Nationalbank
Raquel Vegas	Banco de España
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Postal address 60640 Frankfurt am Main, Germany
Telephone +49 69 1344 0
Website **www.esrb.europa.eu**

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For specific terminology please refer to the **ESRB glossary** (available in English only).

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