INSPIRE

A Toolbox of Sustainable Crisis Response Measures for Central Banks and Supervisors

Second Edition: Lessons from Practice

INSPIRE Briefing Paper

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Contents

Key messages

- Since the beginning of the COVID-19 crisis, central banks and supervisors have introduced a plethora of policy measures to respond to its economic and financial consequences, using both conventional and unconventional instruments. Many of the same institutions have also been deepening their commitment to taking action to confront the systemic threat of climate change and environmental decline.
- In June 2020, we released the 1st edition of the Sustainable Crisis Response Toolbox, setting out how central banks could join the dots between these two agendas. The Toolbox sets out measures in three broad categories – monetary, prudential and 'other' – and includes nine types of tools. It provides central banks and financial supervisors with options to align their crisis response measures.
- This 2nd edition of the Toolbox significantly expands the empirical assessment of the crisis response of central banks and supervisors globally and examines how far central banks are incorporating climate and other environmental factors into their COVID-19 strategies and wider operations.
- Our core finding is that there is currently a divergence between crisis response measures and wider efforts to promote sustainable finance. So far, less than 1 per cent of central banks and supervisors from 188 economies have directly connected their crisis response with sustainability factors.
- However, more than 20 per cent of these same institutions have also scaled up their broader sustainability efforts since the beginning of the COVID-19 crisis. Authorities in Europe and East Asia are the most active in terms of these parallel sustainability efforts. This highlights the potential for convergence in the next phase.
- Many of the instruments that are already being applied by central banks and financial supervisors in the crisis could be calibrated in ways that account for climate- and other sustainability-related risks and objectives. Doing this will enable central banks and supervisors to avoid the build-up of climate risks in the financial system. It would also align their actions with the growing call from national governments, international organisations and central banks themselves for a green recovery from COVID-19.
- The updated Toolbox provides a framework for achieving this integration, and reinforces the importance of focusing attention on four areas for priority action:
    1. Amending collateral frameworks to account for climate change-related and other environmental risks.
    2. Removing the carbon bias within corporate asset purchase programmes and align refinancing operations with Paris Agreement goals.
    3. Adjusting prudential measures to minimise climate risks and strengthen disclosure and stress testing requirements.
    4. Adopting sustainable and responsible investment principles for portfolio management, including policy portfolios.
- Central banks and supervisors should now work to overcome the gap between their strategic commitment to climate action and the delivery of crisis response measures. Practical steps include the development of agreed sustainability classifications that can be applied to calibrate their crisis interventions, and updating core conventions such as the 'market neutrality' principle.
- In future research, we will investigate the technical and regional implementation details of our four priority actions.

1. Introduction

Central banks and financial supervisors have taken measures extraordinary in both nature and scale to respond to the financial and economic crisis brought about by the COVID-19 pandemic. They have played a crucial role in the immediate stabilisation phase and this will continue in the recovery phase. The policies adopted during the crisis will have profound implications for long-term outcomes and need to be consistent with climate and sustainability goals, contributing to a just transition to a sustainable economy. Indeed, the pandemic provides an opportunity to do things differently and better. In the words of Isabel Schnabel (2020), Member of the Executive Board of the European Central Bank, "COVID-19 provides a chance to build a greener economy" and "build a deeper and greener financial market that reduces the costs of transitioning towards a low-carbon economy".

Aim of the paper

This briefing is designed to provide central banks and financial supervisors with an empirically based toolbox of options to align their crisis response measures with climate and sustainability objectives and mitigate potential sustainability risks. It has been produced by the Grantham Research Institute on Climate Change and the Environment at LSE and the Centre for Sustainable Finance at SOAS for the International Network of Sustainable Financial Policy Insights, Research and Exchange (INSPIRE), a research stakeholder of the Network for Greening the Financial System (NGFS). It builds on the first edition released in June 2020 by extending the analysis of the uptake of sustainability-linked measures.

Why should central banks and supervisors be concerned with climate change and the environment at this time of crisis?

The shock caused by COVID-19 has served to deepen rather than deflect the strategic case for central banks and supervisors to fully integrate the long-term risks associated with climate change and environmental degradation into their routine operations. As a zoonotic disease – one that has crossed from animals to humans – COVID-19 has shown the fragility of human systems and there is an increasing likelihood of similar pandemic diseases as deforestation, biodiversity loss and climate change intensify. COVID-19 has also accelerated many fundamental trends in the global economy, bringing forward the peak in global oil demand by many years, for example (Evans, 2020). In this way, it has been a live 'transition stress test', showing that sustainability factors are not a distant threat but are shaping markets today.

Given these circumstances, the strategic rationale for central banks and supervisors to incorporate climate and sustainability factors into their crisis response measures, as set out in the first edition of the Toolbox, remains relevant and reinforces the key arguments for action by researchers and policymakers over recent months:

1. To ensure that climate risks are accurately reflected in central banks' balance sheets and operations, particularly in the context of pervasive market failures.[1]
2. To reduce climate-related risks in regulated financial institutions through effective prudential supervision.
3. To avoid the build-up of climate-related risks at the level of the financial system.
4. To support the efforts of governments to deliver a green recovery from COVID-19 in line with the Paris Agreement and the Sustainable Development Goals.[2]

[1] Strictly speaking, central banks are not existentially threatened at present by their exposure to climate risks, given their ability to expand the money supply if these risks should manifest in their balance sheets. There is, however, an important signalling effect to central bank actions.

[2] This support can be part of the primary or secondary mandates and depends not only on the jurisdiction, but also on the perception of risks. If climate change is perceived as a systemic risk, supporting the government can be interpreted as an insurance strategy, as long as it does not affect the ability to achieve the primary mandate (Bolton et al., 2020).

2. Key features of the Toolbox

Tools and areas

The instruments that are being applied by central banks and financial supervisors in the crisis can be calibrated in ways that first, account for climate- and other sustainability-related financial risks and, second, contribute to the achievement of climate and sustainability goals. To enable this, the Toolbox identifies nine different types of tools, grouped in three broad areas: monetary policy, financial stability, and 'other', as summarised in Box 1.

Box 1: Types of tools in the Toolbox

1. Monetary policy

(1) Collateral frameworks

(2) Indirect monetary policy instruments

(3) Non-standard instruments

(4) Direct monetary policy instruments

2. Prudential policy: Regulation and supervision

(5) Microprudential instruments

(6) Macroprudential instruments

3. Other policies

(7) Further financing schemes and other initiatives

(8) Management of central bank portfolios

(9) Supporting sustainable finance

The full Toolbox is set out in Section 6. It presents the policy tools available to central banks and financial supervisors, distinguishing between conventional (often sustainability-blind) measures and those that are sustainability-enhanced, i.e. measures that take climate and wider sustainable development factors into account. Details from our empirical review of the COVID-19 response by central banks and supervisors in 188 economies, identifying which tools have been applied and with what sustainability dimensions, are provided in Section 7.

The current situation, in which central banks are implementing large-scale stimulus measures, presents an important moment for alignment with climate and sustainability policies. Liquidity-enhancing stimulus measures that are not aligned with sustainability objectives could contribute significantly to the build-up of sustainability-related risks in portfolios of financial institutions and within the financial system as a whole by locking in investment pathways. The easing of countercyclical and other prudential instruments without a sustainability-risk-sensitive calibration could further increase these risks. This issue is particularly pressing as many central banks and supervisory authorities are currently relaxing micro- and macroprudential standards to encourage lending by financial institutions. This means that the implementation of prudential instruments that account for sustainability risks – and climate risks in particular – should not be delayed, but rather be strengthened to prevent the build-up of additional volatility in portfolios. Finally, the profound social consequences of the COVID-19 crisis have highlighted the need for central banks and supervisors to consider the role they could play in delivering a just transition – one that is inclusive of and fair to all groups it affects – alongside governments and other actors in the financial system (Thallinger and Robins, 2020).

The Toolbox includes both monetary and financial stability-related instruments, since each type is currently employed by central banks and supervisors for countercyclical policy responses. Monetary expansion that is calibrated by central banks to achieve an inflation target (in expectation of a certain time horizon), but does not take sustainability objectives into consideration in its operational implementation (e.g. in open market operations, standing facilities and reserve requirements), creates an even stronger urgency for supervisors to address the potential build-up of climate-related risks in the calibration and current easing of prudential instruments. Instruments such as interest rates, asset purchase programmes and collateral framework changes are usually seen as the main crisis response tools. However, the countercyclical calibration of prudential instruments, including capital buffers, liquidity coverage ratios (LCR) or loan-to-value ratios (LVR), is also actively used and can therefore be discussed as a crisis response measure that needs to be aligned with sustainable objectives in the current context, and for which general progress should not be delayed (e.g. tools 5, 6, 8 and 9 in the Toolbox; see Section 6).

Informed by global experience

Central banks and supervisors across different jurisdictions operate within different mandates and legal frameworks (Dikau and Volz, 2020a). They also face diverse challenges in their economies and financial systems. This has strong implications for the selection of instruments that can be employed and for the degree to which a country-specific selection of them could be calibrated in a sustainability-enhanced way. The Toolbox draws on global experience, reflecting differing financial cultures and objectives of central banks and supervisors around the world. Instruments that are seen as standard by some central banks may not conventionally be used elsewhere (e.g. directed lending in India, targeted refinancing in Bangladesh and window guidance in China).[3] It is clear that there is no 'one-size-fits-all' recommendation for crisis response measures that support a transition towards a sustainable economy.

At the same time, acknowledging that different institutions have different mandates should not be taken as a reason for inaction. The response of central banks and supervisors to COVID-19 has demonstrated the vast array of policy measures and instruments potentially at their disposal, and renders ongoing debates redundant regarding the availability of a number of 'unconventional' measures. The threat of financial crisis brought on by COVID-19 provides a uniquely clear picture of what measures each institution is capable of. Now, these measures should take climate and sustainability into account.

What have we learned since the first edition of the Toolbox?

We have discussed the first edition of the Toolbox widely with central banks and supervisors. The following main themes emerged from these discussions:

- The current crisis has become a live example of a disruptive transition. At the onset of the crisis, however, all efforts were entirely focused on rescuing the economy, with little consideration for sustainability goals.
- Adding sustainability criteria to existing directional policy frameworks, such as refinancing operations that target specific sectors (such as SMEs), was identified as potential low-hanging fruit for central banks.
- The absence of common definitions, classifications and taxonomies has held back integration. However, practical approaches are emerging for how interventions (such as monetary operations) can be calibrated with sustainability factors.
- The incorporation of sustainability and climate or environmental risk-related factors into prudential policy is often complicated by gaps in methods and data.
- The lack of coherent disclosure frameworks was highlighted as a key bottleneck, constraining sustainable finance policy in practice and specifically in the context of the crisis response of central banks and supervisors.
- The time horizon of financial regulation, usually three to five years, was discussed as a central factor hindering the incorporation of environmental and climate risks into

[3] While in the absence of well-developed financial markets some central banks in emerging and developing economies may have to rely on these direct instruments for the implementation of monetary policy, these tools may be inappropriate or even harmful if implemented by central banks operating in highly advanced financial markets.

prudential policy. An extension of this timeframe and the use of scenario analysis could help overcome this.

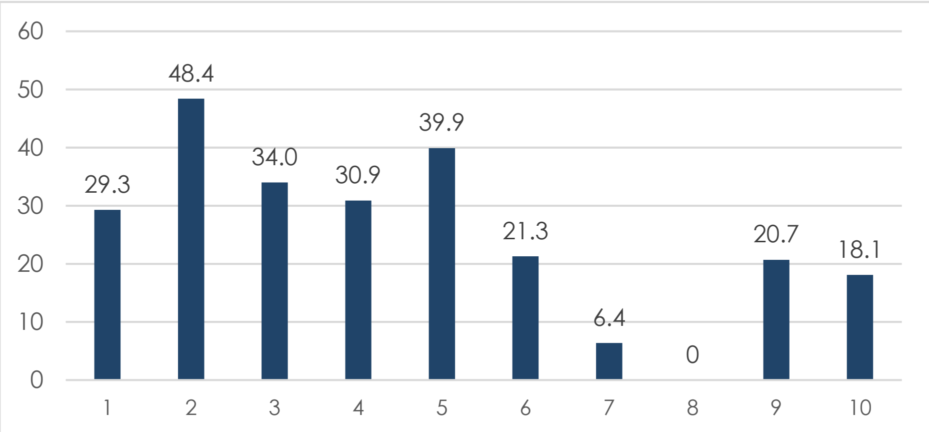
- The importance of further and enhanced capacity-building efforts for central banks and supervisors is a key enabling factor for the application of the sustainable instruments suggested in the Toolbox.
- Last but not least, it was highlighted that the Toolbox was relevant beyond the crisis, as central banks and supervisors need to account for sustainability risks and align their operations and policies with sustainability goals under any circumstances.

3. How sustainable is the crisis response in practice?

Our empirical investigation sheds light on the use of available instruments since the start of the crisis. We investigate the policy responses of central banks and supervisors of 188 economies, drawing on the International Monetary Fund's Policy Responses to COVID-19 Policy Tracker.[4] We complement this with information from the homepages of central banks and supervisors as well as media reports. Section 7 gives a full overview of the responses to the COVID-19 crisis taken globally up to October 2020 by monetary and financial authorities.

Figure 1 provides an overview of the relative use of tools in the nine instrument categories of the Toolbox. It shows that, with the exception of changes in central bank portfolio management practices (category 8), instruments in all categories have been widely used. Unsurprisingly, the adjustment of indirect monetary policy instruments (category 2) is used in 48 per cent of the 188 economies, dominating the crisis response. This is followed by a change of microprudential instruments (category 5) in 39 per cent of the economies. Overall, Figure 1 illustrates the broad variety of instrument categories from which financial policymakers have drawn their response. In all economies, central banks and supervisors have relied on at least one of the monetary or prudential crisis response measures in the Toolbox. This shows that prudential and monetary policies have played central roles globally in the immediate crisis responses.

Figure 1. Percentage of economies in which central banks and supervisors have employed instruments in each of the categories of the Toolbox



Key to instruments (X-axis):

1. Collateral frameworks
2. Indirect monetary policy instruments
3. Non-standard instruments
4. Direct monetary policy instruments
5. Microprudential instruments
6. Macroprudential instruments
7. Further financing schemes and other initiatives
8. Management of central bank portfolios
9. Supporting sustainable finance
10. No toolbox instrument used

Source: Compiled by authors based on the table in Section 7 of this report. Notes: In each category the percentage of countries out of the total 188 in which central banks or supervisors have employed instruments is displayed. Initiatives under '(9) Supporting sustainable finance' are not crisis response-related, but are independent initiatives that have been launched during the time in question.

Turning to the sustainability dimension, the following findings emerge:

- In only one economy has the monetary authority explicitly calibrated a crisis response instrument in a sustainability-enhanced way: the Reserve Bank of Fiji raised its Import Substitution and Export Finance Facility by FJ$100 million to provide credit to, among others, renewable energy businesses at concessional rates.

[4] Available at www.imf.org/en/Topics/imf-and-covid19/Policy-Responses-to-COVID-19

- However, central banks and supervisors in 40 economies (or 21 per cent of the total) have taken parallel measures that fall into category (9) of the Toolbox, sustainable finance – but it should be emphasised that these are not direct crisis response measures.
- Regionally, Europe and East Asia have been most active in terms of introducing these parallel sustainability measures, as set out in Figure 2, which shows the use of instruments by region. We have not identified any sustainability measures being introduced during this period by authorities in North America or South Asia.
- These parallel sustainability actions have been taken mostly by central banks and supervisors in high-income countries (with 42 per cent of economies taking at least one action), falling to 24 per cent of upper-middle-income countries, just 6 per cent of middle-income countries and no sustainability measures among low-income economies (Figure 3).[5]

One insight from this empirical exercise is that many central banks have, in addition to lowering interest rates, moved quickly to expand their collateral frameworks to include a broader variety and quality of assets, implemented new or scaled-up existing quantitative easing programmes and introduced various targeted and non-targeted additional (re)financing and purchase facilities. Given that most of these instruments do not take environmental, social or climate-related risks into account, these efforts might slow the pace at which a just and sustainable transition can be achieved, and lead to a significant additional build-up of climate risk on the balance sheets of financial institutions, the financial system, and the economy as a whole. This risk could be exacerbated by our finding that most central banks and supervisors have eased countercyclical capital buffers and general (microprudential) regulation and supervisory standards. We recognise that the situation is highly dynamic, and many newly announced programmes will take time to be fully designed and implemented: this provides considerable scope for central banks and supervisors to 'retrofit' sustainability factors into their crisis response measures.

The empirical evidence also illustrates national differences in the policy responses of central banks and supervisors, reflecting differences in legal mandates and associated differing degrees in policy space. While most of the crisis response measures presented in Section 7 have been implemented as 'market neutral' and quantity-targeting easing or prudential release measures, there have also been numerous efforts by central banks and supervisors that aim to support specific sectors of the economy, most notably small and medium enterprises (SMEs). In most cases, these instruments fall under the monetary policy category (category 4) of direct instruments. Assuming that this promotional calibration of instruments were aligned with government priorities to extend support to these specific sectors of the economy, central banks and supervisors potentially could be tasked to enhance sustainability efforts through similar instruments.

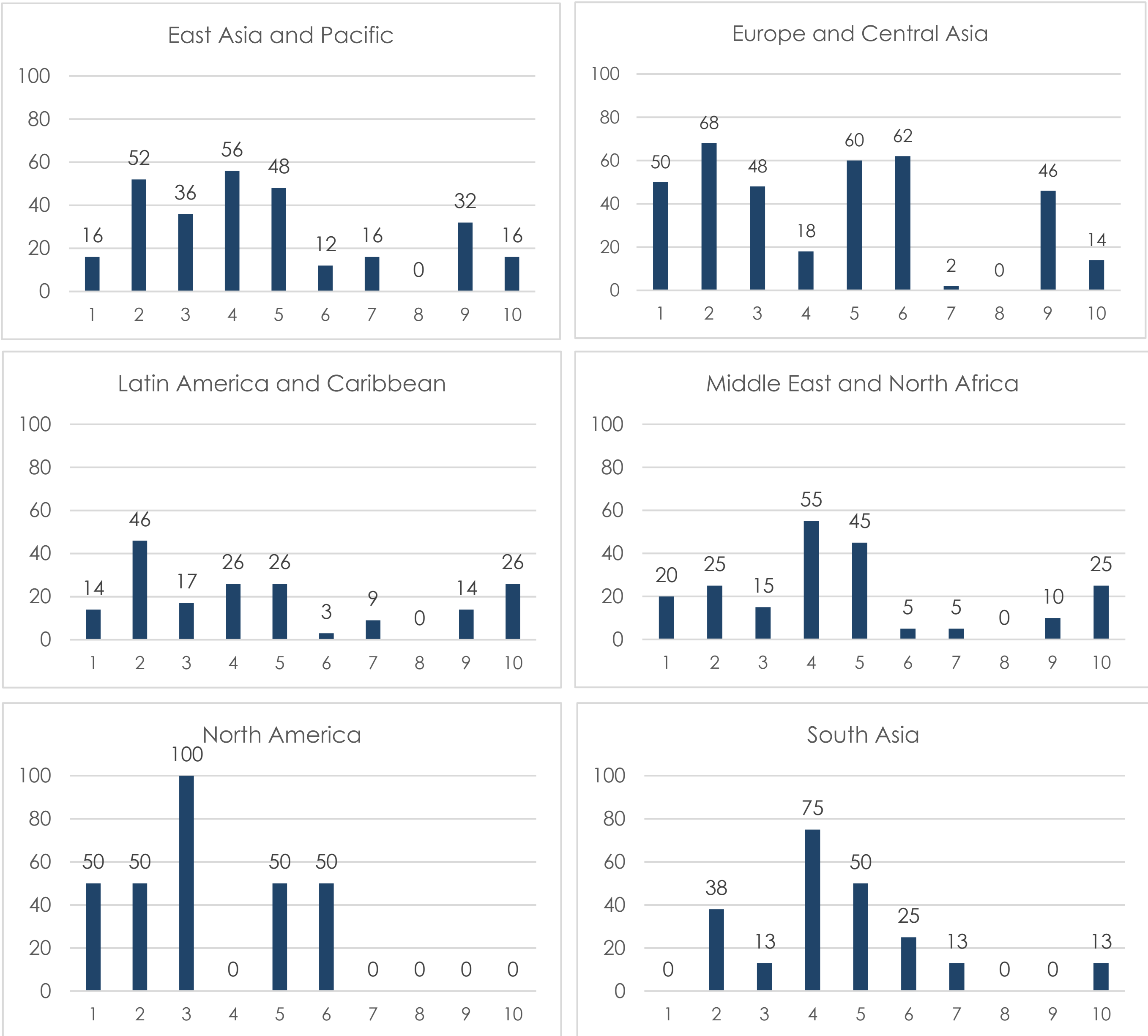
In addition, there are noteworthy regional differences regarding the relative popularity of instruments in the different Toolbox categories (see Figure 2). In the East Asia and Pacific region, only 16 per cent of monetary authorities have implemented collateral framework changes, while 50 per cent of European and Central Asian central banks have recalibrated their frameworks. In contrast, indirect instruments have been adopted as crisis response measures more equally across the different regions. The use of direct monetary policy instruments is, as may be expected, less widely used by European and Central Asian economies (18 per cent), where financial markets are mostly well-developed.

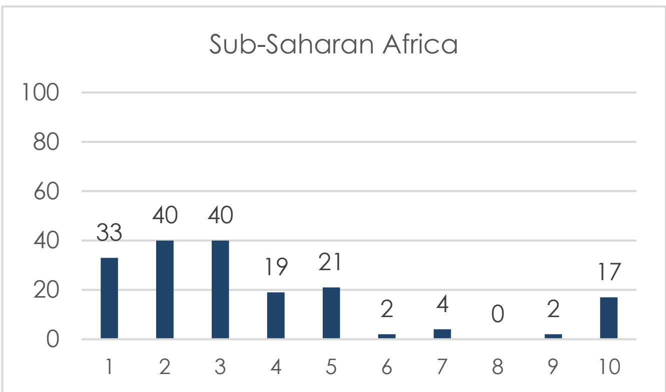
[5] This finding also reflects the membership of the NGFS, which has initially been dominated by central banks and supervisors from more advanced economies. It also points to the severe capacity constraints that can hold back sustainable financial policy implementation in lower income economies.

Figure 2. Central banks and supervisors using Toolbox instruments by region (%)

Key to instruments (X-axes):

1. Collateral frameworks 2. Indirect monetary policy instruments 3. Non-standard instruments
4. Direct monetary policy instruments 5. Microprudential instruments 6. Macroprudential instruments
7. Further financing schemes and other initiatives 8. Management of central bank portfolios
9. Supporting sustainable finance 10. No toolbox instrument used





Source: Compiled by authors based on Section 7 of this report. Note: Regions according to World Bank Country Classifications, June 2020.

Figure 3. Use of Toolbox categories by income group (%)

Key to instruments (X-axes):

1. Collateral frameworks 2. Indirect monetary policy instruments 3. Non-standard instruments
4. Direct monetary policy instruments 5. Microprudential instruments 6. Macroprudential instruments
7. Further financing schemes and other initiatives 8. Management of central bank portfolios
9. Supporting sustainable finance 10. No toolbox instrument used

Source: Compiled by authors based on Section 7 of this report. Note: Regions according to World Bank Country Classifications, June 2020.

As shown in Figure 3, some of the regional differences can be attributed to income differences, which are also an indicator of the level of financial market development. For example, direct monetary policy instruments are slightly more popular in upper-middle- and lower-middle-income countries, where 35 and 36 per cent respectively of central banks adopted these, than in high- and low-income countries, where these instruments are used by only 30 and 15 per cent respectively of central banks. Furthermore, the analysis shows that central banks and supervisors in high-income countries have relied on a much broader set of policy instruments and categories in their crisis response than central banks in middle- and low-income countries.

Parallel tracking: advancing sustainability but limited alignment with crisis measures

A striking development of 2020 has been the intensification of central bank and supervisor commitment to action on climate change and sustainability. Leading examples of these at the national level are presented in Box 2, and steps taken in terms of collaborative action through the NGFS in Box 3. These steps are not directly related to the COVID-19 crisis, but show the potential for convergence in the next phase of the crisis.

Box 2. Sustainability initiatives by central banks and supervisors in 2020

January

• Abu Dhabi Financial Services Regulatory Authority: Launches the Abu Dhabi Climate Initiative.

February

• National Bank of Georgia: Joins NGFS and publishes environmental, social and governance (ESG) reporting and disclosure principles.
• Central Bank of Hungary: Endorses the UN's Principles for Responsible Investment.
• Banco de México: Publishes report on Climate and Environmental Risks and Opportunities in Mexico's Financial System.

March

• Central Bank of Ireland: Annual report announces the establishment of a Climate Change Team.
• Banco de Portugal: Publishes commitment to sustainability and sustainable finance.

April

• BaFin: Makes sustainable finance a supervisory priority.
• Bangko Sentral ng Pilipinas: Approves a Sustainable Finance Framework.
• Central Bank of Armenia, Banco Central do Brasil, Central Bank of Cyprus, Central Bank of West African States, Danish Financial Supervisory Authority, Eesti Pank (Estonia), Latvijas Banka (Latvia), Lietuvos bankas (Lithuania), Malta Financial Services Authority: Join NGFS.

May

• Financial Superintendence of Colombia: Creates the Sustainable Finance Working Group to implement its sustainability strategy and publishes a Good Practice Guide for Issuing Green Bonds.
• Banco Central de Costa Rica: Strategic Plan 2020-2023 includes analytical activities on climate change.
• European Central Bank: Launches public consultation on its guide on climate-related and environmental risks.
• Autorité de Contrôle Prudentiel et de Résolution (France): Publishes a report on good practice in governance and management of climate-related risks.
• Hong Kong Monetary Authority: Launches a Green and Sustainable Finance Cross-Agency Steering Group, development of a common framework to assess the 'Greenness Baseline' of individual banks.
• Banxico: Creates a Sustainable Finance Committee together with the Ministry of Finance.
• People's Bank of China: Releases Green Bond Endorsed Project Catalogue.
• Bank of Thailand: Announces sustainability as an integral part of all operations and as a strategic Challenge of the Bank's Strategic Plan 2020–2022.

June

• People's Bank of China: Publishes public consultation draft of its 'Notification on Evaluation of Green Finance Performance of Deposit-Type Financial Institutions in the Banking Industry'.
• Central Bank of Estonia: Launches report that outlines the long-term impact of climate change on the Estonian economy.
• Banque de France: Launches responsible investment strategy.
• Bank of Lithuania: Financial Stability Report 2020 addresses climate change challenges to financial stability.
• De Nederlandsche Bank: Publishes report on biodiversity loss and associated risks.
• Bank of Russia: Begins consultation on the prospects for estimating and monitoring of climate risks.
• Monetary Authority Singapore: Publishes three consultation papers on Proposed Guidelines on Environmental Risk Management for banks, asset managers and insurers; launches the MAS Global FinTech Innovation Challenge.
• Reserve Bank of South Africa: Publishes working paper on 'Climate change and its implications for central banks in emerging and developing economies'.
• Swiss Financial Market Supervisory Authority: Starts addressing climate risks in the financial sector.

July

• Bank of Mauritius: Joins NGFS.
• Central Bank of Mongolia: Launches its Green Loan Statistics based on the Mongolian Green Taxonomy (2019) to calculate the amount and ratio of green loans in portfolios.
• De Nederlandsche Bank: Publishes report on good practices to manage climate risks.

• Sveriges Riksbank: Launches consultation on the sustainable finance strategy for improved and uniform disclosure of climate-related risks.

August

• Bangko Sentral ng Pilipinas: Joins NGFS.
• Central Bank of Colombia: Publishes working paper on 'Climate Change: Policies to Manage its Macroeconomic and Financial Effects'.
• Central Bank of Ecuador: Launches and leads Sustainable Finance Initiative.
• Bank Negara Malaysia: Issues VBIAF Sectoral Guides on Palm Oil, Renewable Energy and Energy Efficiency.
• Bank of Thailand: Signs MoU with UK government, including consideration for the environment and risks from climate change.

September

• Bank Negara Malaysia: Starts pilot implementation of the Climate Change and Principles-Based Taxonomy.
• Banco Central do Brasil: Launches sustainability agenda, embedding sustainability into currency reserves management, bank stress tests and lending criteria.
• European Central Bank: Bonds with coupon structures linked to certain sustainability performance targets will become eligible as collateral for Eurosystem credit operations and also for Eurosystem outright purchases for monetary policy purposes.

Source: Compiled by authors, drawing from central bank and supervisor homepages and reports.

Box 3. Collaborative actions published by the NGFS in 2020

'Guide for Supervisors: Integrating Climate-related and Environmental Risks into Prudential Supervision'

'Status Report on Financial Institutions' Practices with Respect to Risk Differential between Green, Non-green and Brown Financial Assets and a Potential Risk Differential'

'Statement on the Need for a Green Recovery Out of the Covid-19 Crisis'

'Guide to Climate Scenario Analysis for Central Banks and Supervisors'

'Climate Change and Monetary Policy: Initial Takeaways'

'The Macroeconomic and Financial Stability Impacts of Climate Change: Research Priorities'

'Overview of Environmental Risk Analysis by Financial Institutions'

'Case Studies of Environmental Risk Analysis Methodologies'

Sources in order: NGFS, 2020a, 2020b, 2020c, 2020d, 2020e, 2020f; Ma et al., 2020

It is striking that almost all the instruments that are included in the Toolbox are currently being used as crisis response measures by central banks and supervisors, although not in a sustainability-enhanced calibration. Recent announcements point to how these instruments could be used as part of future crisis response actions. Examples include the announcements in September 2020 by the Banco Central do Brasil of its intention to create a sustainable liquidity financial line, and by the European Central Bank (ECB) of its intention to accept bonds with coupons linked to sustainability performance targets as collateral, with potential eligibility also for asset purchases under the Asset Purchase Programme (APP) and the Pandemic Emergency Purchase Programme (PEPP). Both are calibrations suggested in the Toolbox, but in practice so far have been unrelated to recovery policy. Clearly, further work is needed to bridge this gap between growing commitment to sustainability and the lack of integration to date in the crisis response to COVID-19.

4. Priority areas for integrating sustainability factors

This Toolbox provides a framework for categorising the range of measures that central banks and financial supervisors can take to support a sustainable recovery from COVID-19 and ensure that their crisis response measures do not have unintended consequences in terms of enhancing climate and other sustainability risks. In order to enable central banks and supervisors to take the next steps in practice, it will be important for further research to explore in greater technical detail the application of instruments in the particular circumstances facing individual countries during the crisis. Considerable scope also exists for collaboration between central banks, supervisors and researchers to explore priority actions across a range of countries and jurisdictions. Supporting this type of collaboration is a core goal of INSPIRE (INSPIRE, 2020).

Without putting an undue burden on financial firms during this time of crisis, monetary and financial authorities can take steps now that would contribute to sustainable crisis responses and prevent a further build-up of climate risks in financial institutions' balance sheets. Out of the broad range of central banking and supervisory instruments that are included in the Toolbox, four priority areas deserve special attention, described below.

1. Collateral frameworks

The underlying risk assessment for collateral frameworks could be adjusted to better account for climate change-related and other environmental risks, leading to a change of haircuts and collateral valuation, as well as of the eligible collateral pool. In a second step, assets from firms heavily exposed to climate-related transition risk could be excluded, which would have positive implications for the Paris-alignment of asset purchase programmes, refinancing operations and other central bank operations. Because the exclusion of these high-risk assets would reduce the total amount of pledgeable collateral, thereby adversely affecting the access of financial institutions to liquidity, it is essential to replace them in the collateral framework with environmentally-friendly assets.

Furthermore, central banks could require commercial banks to pledge a pool of collateral aligned with sustainability objectives, while leaving banks free to choose the composition of this pool. The development of climate-aligned collateral frameworks could, for example, build on the work by Dafermos et al. (2020c), who present two practical approaches for the adjustment of haircuts and exclusion or inclusion of assets based on sustainability assessments for the Eurosystem. First, under a *climate footprint approach*, the collateral framework could be adjusted based on the climate footprint of the bond issuers. Secondly, their *climate risk approach* envisions the framework to accommodate the expected default rates of the bond issuers under different transition scenarios.

To date, 55 central banks have adapted and expanded their collateral frameworks as part of their policy response to the COVID-19 crisis. While changes to collateral frameworks were largely deemed off limits prior to the crisis, this shows that central banks are capable and willing to change their frameworks in response to emergencies and crises. Furthermore, this provides an indication of the policy space that central banks have to adapt their collateral frameworks, should climate change and the need to achieve a sustainable transition be considered an emergency.

2. Asset purchase programmes, crisis facilities and refinancing operations

Central banks could better align their asset purchases with the goals of the Paris Agreement. As shown by research, efforts to apply the market-neutrality principle to corporate APPs can lead to a significant carbon bias and hence have strong negative implications for economies' ability to achieve a sustainable and just economic transition. In practice this is the case when carbon emission-intensive sectors are over-represented on the list of APP-eligible bonds despite a relatively lower contribution to employment and gross value added in an otherwise market-neutral portfolio. For example, central banks could decrease the share of assets exposed to climate-related transition risks in their corporate debt purchases. This option would align their asset purchases with environmental objectives, but also reduce their own exposure to climate risks.

The corporate bond purchase programmes that have been implemented by central banks in response to the pandemic continue to be biased towards carbon-intensive sectors (Dafermos et al., 2020a, 2020b), which has been a well-known issue of the past programmes of the ECB and Bank of England. A particular concern in this regard is that a bias towards carbon-intensive industries improves financing conditions for these sectors, while simultaneously failing to adequately reflect climate change-related and other environmental risks of the purchased assets. A proposal for the decarbonisation of the Bank of England's asset purchase programme has been presented by Dafermos et al. (2020a), who are proposing two options. First, under a *lower-carbon pandemic* quantitative easing (QE) scenario, bonds issued by the most carbon-intensive sectors would be excluded from the programme and replaced with bonds that are connected to more sustainable economic activities. Secondly, under a *low-carbon pandemic* QE scenario, Dafermos et al. propose to eliminate the vast majority of bonds issued by all carbon-intensive sectors and to replace these bonds issued by sectors that are not carbon-intensive.

Central bank governors have increasingly discussed the possibility of aligning asset purchase programmes with the sustainability objectives of their governments. The Bank of England's Governor Andrew Bailey has voiced support for aligning the Bank's corporate bond purchase scheme with the Government's climate goals (Reuters, 2020). However, in the context of the Bank of England's crisis response lending programme, Bailey has also defended the position to not incorporate a test based on climate considerations that would enable a sustainability-enhanced calibration (Bailey, 2020).

ECB president Christine Lagarde has discussed calibrating the ECB's €2.8tn asset purchase scheme to pursue green objectives (Khalaf and Arnold, 2020). By 23 October, the ECB held assets worth €616,856 million in its €750 billion pandemic emergency purchase programme (PEPP) – all without explicitly considering a sustainability-enhanced calibration of its collateral framework. Furthermore, the calibration of a 'market neutral' corporate APP could potentially impede efforts to achieve an economic transition towards climate-neutrality when pervasive market failures in current markets lead to a suboptimal allocation of resources towards transition industries and sustainable sectors of the economy.[6] While the ECB has announced intentions to accept sustainability-linked bonds as collateral from 1 January 2021 (ECB, 2020b), these measures will come too late to affect the first round of monetary crisis response policy.

Central banks' refinancing operations and crisis facilities could be conditioned on borrowers' alignment with sustainability goals (see, e.g., van 't Klooster and van Tilburg, 2020). Several central banks have introduced refinancing and related policy initiatives as crisis response measures that are targeting specific sectors or asset classes.[7] These initiatives could be calibrated in a sustainability-enhancing way. For example, it should be ensured that no unreasonable investment in assets that carry high transition risks and that could be stranded in the future are conducted. This would support a sustainable recovery through the greening of the financial system while mitigating the exposure to climate change-related and other environmental risks. Furthermore, some central banks, notably the

[6] In the context of 'market neutrality principle'-based construction of the ECB's asset purchase programme and the ensuing carbon bias, Dafermos et al. (2020b) propose two strategies for how carbon-intensive bonds could be replaced with more climate-friendly bonds.

[7] The Appendix outlines several examples of targeted refinancing operations that are employed to support specified sectors, most notably SMEs, but that fail to also add sustainability criteria.

People's Bank of China and the Banco Central do Brasil, are engaging in, or have announced plans for, 'green' refinancing operations. These operations offer a valuable starting point and should be extended to central banks' crisis response operations.

3. Prudential measures

In contrast to the Financial Crisis of 2008, the current crisis can be understood as exogenous and not as the result of the unravelling of previous financial imbalances. Furthermore, this time the shock found banks in a strong financial position and policymakers have recognised banks and the financial system as part of the solution rather than as part of the problem (Borio, 2020). Supervisors did not tighten their policy stance and instead released prudential restrictions to encourage a sustained flow of credit to the economy.

However, climate change and related risks are in no way less threatening for financial stability. In response to the current expansionary liquidity provision measures and the release of countercyclical regulatory and supervisory instruments, it is necessary to adjust prudential measures to avoid a manifestation of transition risks on the balance sheets of financial institutions. Financial supervisors and regulators have been quick to release either micro- or macroprudential requirements or expectations. Announcing environmental disclosure requirements and stress testing for 2021 is a first step that would limit immediate regulatory burdens on financial institutions, but would signal the necessity to account for potential exposure to climate risks added through lending and investment decisions in the current crisis phase.

The importance of moving from voluntary to mandatory environmental reporting is also highlighted by the need to generate the information base to effectively assess default probabilities (for mortgages, for example) and to calibrate prudential instruments accordingly. Progress is being made with the adoption of the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD), but comprehensive reporting is still rare. A priority for supervisors is to ensure effective disclosure to regulated financial institutions, notably banks, insurers, investment institutions and capital market intermediaries (such as exchanges and rating agencies).

Supervisors should also announce their intention to calibrate risk weights for climate-risks exposures and work towards an adoption of such an approach globally through the Basel Committee on Banking Supervision. Furthermore, where prudential instruments such as capital requirements are eased, there should be exploration of how the persistent exposure of certain assets classes to climate risks, and transition risks in particular, can be taken into account.

4. Management of central bank portfolios

Last but not least, and as outlined by the NGFS (2019), central banks should adopt sustainable and responsible investment principles for portfolio management, including policy portfolios, such as the Principles for Responsible Investment (PRI), and commit to following the TCFD recommendations. They should also integrate climate risk metrics in portfolio risk managements, to better control for the exposure of their assets to such risks.

The Bank of England has taken a first significant step in this direction by issuing a climate disclosure report, indicating that it is falling short of the terms of the Paris Agreement (Bank of England, 2020). The Bank of England's climate-related financial disclosure indicates that parts of its investment portfolio currently support an average temperature increase of 3.5°C above pre-industrial levels by 2100. In disclosing its own approach to climate risk management for all its operations for the first time, the Bank of England is playing an important signalling role for the broader financial system. However, it also indicates the significance of the challenges to align central banking portfolios and the overall market with the Paris agreement goals, requiring an internationally coordinated material reduction of carbon emissions.

The COVID-19 crisis should not deter the resolve of central banks and supervisors to integrate sustainability and climate risks into financial decision-making. Rather, the pandemic crisis illustrates the need to strengthen the resilience of our economies and societies, and this requires financial markets to better mitigate climate and other sustainability risks. The current crisis, which has prompted radical changes of long-established policy practices, also offers a window to include and address climate risks in these new-found approaches. Central banks and supervisors must ensure that they do whatever they can, within their mandate, to align their own COVID-19 crisis responses and decision-making in the financial sector with long-term sustainability goals to help the world economy to achieve a just transition to sustainability.

5. The next phase of crisis response

Over the course of 2020, central banks have responded at unprecedented scale and supervisors have relaxed prudential regulations and supervisory expectations across the board. This has led to a significant expansion of liquidity, credit and investment without the incorporation of sustainability considerations or the explicit alignment with climate neutrality goals.

The crisis is not over yet. As central banks and supervisors extend existing measures or implement new follow-up crisis response measures, it remains urgent to incorporate sustainability considerations into measures aimed at easing lending conditions, as well as to take environmental- and climate-related risks in prudential release efforts into account, to avoid lock-in to a high-carbon recovery.

Understandably, central banks' and supervisors' capacity to incorporate sustainability considerations and account for climate risks in their immediate crisis response has been limited. For the time being, data, knowledge and classification gaps are also obstacles that prevent policymakers from feeling comfortable with integrating sustainability and climate risks considerations on an ad hoc basis into conventional large-scale policy initiatives, such as APPs, collateral framework expansions or the countercyclical release of capital requirements.

Bringing together crisis response and sustainability

It is now important to bring together the two largely separate tracks of crisis response and sustainability commitments. Steps and considerations include the following:

- Regarding policy aimed at easing lending conditions and expanding credit, it is urgent that sustainability considerations are incorporated, to avoid a significant expansion of lending to economic sectors and companies whose business model is not aligned with ambitious transition scenarios and under which this would constitute a significant investment in essentially stranded assets.
- Closely related to the previous point, the widespread and undifferentiated countercyclical release of regulation and supervisory expectations in face of significant transition (and physical) risks is problematic. If prudential measures are released, assets and related exposure to sectors bearing the highest transitions risks should be exempt.
- Since the beginning of the year, the NGFS as well as national central banks and supervisors have made significant progress in expanding their capacity and knowledge on climate change and related risks. This has been translated by many into announcements of future policy action. The implementation of these measures should be brought forward and be applied to all crisis response measures. The Toolbox (presented in Section 6 below) offers insights for where to start in the context of the global crisis policy response by central banks and supervisors (as outlined in Section 7).
- Focus should be applied on practical and targeted calibration of monetary policy instruments (such as collateral frameworks, APPs and refinancing), identifying 'no regrets' measures that can be taken to start incorporating climate and sustainability factors rather than waiting for a fully comprehensive approach.
- Finally, further dialogue and analysis is needed to explore how well-established approaches such as the market neutrality principle can be updated in light of market-failures such as climate change and biodiversity loss. In the case of the ECB, which has explicitly based its asset purchase programmes on a specific

understanding of the market-neutral calibration of its asset portfolios, ECB President Christine Lagarde and Executive Board Member Isabel Schnabel have started to discuss whether, in face of pervasive market failures, market neutrality should remain the guiding principle for central banks' policy portfolio management (Look 2020).

Looking ahead, our future research will focus on providing more technical and regional specific detail on how priority tools could be deployed by central banks and supervisors as they support economies through the COVID crisis and simultaneously deepen their commitment to climate action and sustainable development.

6. The Toolbox: Policy tools available to central banks and financial supervisors

	Conventional (sustainability-blind) calibration	Sustainability-enhanced calibration
1. Monetary policy		
(1) Collateral frameworks	• Collateral credit quality is assessed based on conventional methods, perpetuating exposure to and market mispricing of climate risks and carbon bias and maintaining financing conditions for industries not aligned with the Paris Agreement.	• Collateral frameworks become carbon-neutral, take climate- and other sustainability-related financial risks into account and apply haircuts[8] to account for these risks. • Collateral frameworks exclude asset classes that are not aligned with sustainability goals such as the Paris Agreement.[9]
(2) Indirect monetary policy instruments	• Standard instruments such as open market operations, standing facilities, reserve requirements and refinancing operations are calibrated without sustainability considerations, leading to a potential carbon bias.	• Align refinancing operations with sustainability goals such as the Paris Agreement.[10] • Differentiated reserve requirements, risk weights, accounting for carbon footprint, climate-related financial risk (particularly transition risks),[11] or other sustainability factors. • Interest rates based on sustainability criteria.
(3) Non-standard instruments	• Asset purchase programmes (APPs) ignore climate- and other sustainability-related financial risks, perpetuating financial markets' exposure to climate risks and carbon bias.[12] • Direct (short-term) credit to the government to support standard fiscal spending. • Helicopter money without conditionality.	• APPs exclude carbon-intensive assets.[13] • Direct (short-term) credit to the government to support sustainable/ Paris-aligned fiscal policies.[14] • Purchase of green sovereign bonds • Helicopter money conditioned on sustainable/Paris-aligned spending.

8 Further research is needed to provide a framework for the calculation and application of these haircuts, building on the application of an appropriate risk assessment methodology.

9 Monnin (2020) stresses the shortcomings of the risk metrics to sufficiently reflect climate financial risks used by central banks to assess whether securities are eligible as collateral. He proposes to (i) supplement the external risk assessments with existing climate risk analytics; (ii) integrate climate risk analysis in their in-house risk assessments; (iii) to only accept assessments provided by rating agencies that adequately account for climate financial risks; and (iv) accept counterparties' risk assessments conditional on these counterparties' climate financial risk assessments. For more on the greening of collateral frameworks in the context of the Eurosystem Collateral Framework, see Schoenmaker (2019).

10 Building on collateral framework adjustments, this could be operationalised through the exclusion of highly polluting and carbon-intensive assets eligible under different refinancing programmes. Alternatively, additional haircuts or differentiated interest rates could be used to account for higher climate-related risks and to disincentivise non-Paris alignment. In the European context, this could include the greening of the targeted longer-term refinancing operations.

11 The incorporation of physical risks could also have adverse side effects for countries vulnerable to climate change (Buhr et al., 2018).

12 See Matikainen et al. (2017).

13 In order to maintain the same total value of purchases and to replace excluded assets, it could be necessary to ease some of the standard assessment criteria of eligible assets.

14 The Fed's municipal bond purchases under its Municipal Liquidity Facility are of particular interest in this context as they could potentially offer a set of decarbonisation opportunities given the limited fiscal capacity of cities/states.

(4) Direct monetary policy instruments[15]	• Direct controls on interest rates (e.g. minimum and maximum interest rates, preferential rates for certain loan categories). • Credit ceilings (at aggregate level or on individual banks). • Directed lending policies (e.g. preferential central bank refinance facilities to direct credit to priority sectors). • Window guidance/moral suasion to promote priority sectors.	• Credit interest rate ceilings for sustainable priority sectors, asset classes, and firms. • Minimum/maximum allocation of credit through credit ceilings or quotas to restrict/promote lending to carbon-intensive/sustainable sectors. • Targeted refinancing lines to promote credit for sustainable sectors. • Window guidance/moral suasion to promote lending to sustainable sectors.[16]
2. Prudential policy: Regulation and supervision		
(5) Microprudential instruments	• Conventional stress testing / excessive delay of climate-stress testing. • No disclosure requirements for climate-related financial risks. • Standard supervisory review process (SRP). • Conventional calibration of other Basel III instruments.	• Stress testing frameworks that acknowledge climate and other sustainability risks and help firms take into account longer-term risks.[17] • Mandatory disclosure requirements for climate-related financial risks or other sustainability risks. • Supervisory review process (SRP) that highlights management of climate-related financial risks or other sustainability risks. • Climate risk-sensitive calibration of other Basel III instruments, distinguishing between low-carbon and carbon-intensive/high-exposure assets to create buffers against climate-related losses (e.g. differential risk-based capital requirements, lower required stable funding factor for green loans).
(6) Macroprudential instruments	• Conventional system-wide stress testing. • Calibration of instruments along the cyclical dimension without explicit acknowledgement of climate-related financial risks. • Calibration of instruments along the cross-sectional dimension without explicit acknowledgement of climate-related financial risks.	• System-wide stress testing that acknowledges and assesses systemic climate-related financial risks (see Battiston et al., 2017). • Cyclical instruments calibrated to account for and mitigate systemic risk implications of climate change and restrain the build-up of risk-taking during the recovery/expansion phase (e.g. countercyclical and higher capital buffer in order to protect the financial sector from periods of excessive carbon-intensive credit growth, LVRs and loan-to-income ratios to limit the extension of credit by banks to carbon-intensive industries and investment in non-sustainable asset classes).[18]

[15] Direct instruments, which are mostly relevant in the emerging market and developing economy context where underdeveloped financial markets permit the effective employment of indirect instruments, operate by setting or limiting either prices or quantities through regulations and may also be used to allocate credit. Furthermore, it is important to note that the calibration of many central banking and supervisory instruments can have intended or unintended consequences for the allocation of credit.

[16] Window guidance, also known as moral suasion, has been used in the past by the BOJ and the PBOC to influence the quantity and quality of credit. The PBOC has, until recently, used window guidance to promote sustainable finance. See Dikau and Volz (2020).

[17] Stress-testing frameworks that include both 'conventional' stress tests that are applied to climate tail risks over a shorter period to assess capital adequacy, and the development of stress tests to account for longer-term risks that can have other prescriptive outcomes.

[18] See Schoenmaker and van Tilburg (2016) for more details on the incorporation of climate change-related risks into macroprudential instruments.

		• Cross-sectional instruments calibrated to account for and mitigate systemic risk implications of climate change and to mitigate individual institutions' contribution to systemic risk (e.g. large exposure restrictions to limit financial institutions' exposure to highly carbon-intensive assets, capital surcharges for systemically important financial institutions and institutions with high exposure to carbon-intensive assets).
3. Other policies		
(7) Further financing schemes and other initiatives	• Corporate financing facilities or loan guarantees without climate or sustainability conditionality. • Financial sector bailouts without climate or sustainability conditionality.	• Corporate financing facilities or loan guarantees subject to reduction of CO_2 emissions or sustainability enhancing activities. • Incorporation of sustainability considerations into bailout packages in case of partial or full nationalisation of financial institutions. • Funding sustainable lending/investment schemes by public banks and development finance institutions (e.g. for renewable energy or retrofitting of buildings) through refinancing credit lines or purchase of bonds under APPs in secondary market or direct refinancing operations. • Tailoring of supervisory frameworks for development banks to enhance their public policy capacity to bear risk, promote economic transformation.
(8) Management of central bank portfolios	• Management of central bank portfolios without consideration of climate change and other sustainability risks.	• Disclosure of climate-related financial risks in own portfolios (e.g. following the TCFD recommendations) (see NGFS, 2019 and Fender et al., 2019). • Adopting sustainable and responsible investment principles for portfolio management (e.g. PRI).
(9) Supporting sustainable finance	• No new sustainable finance initiatives launched, ongoing efforts are postponed or halted.	• Sustainable finance roadmaps/ guidance for financial institutions. • Advice and dialogue with other parts of the government. • Research and publication of handbooks and resources (e.g. reference scenarios, risk assessment methodologies). • Capacity building programmes in sustainable finance for the financial sector, convening role of central banks.

Source: Compiled by authors drawing on Dikau and Volz (2019, 2020a), Dikau et al. (2019) and Schoenmaker and van Tilburg (2016).

7. Policy tools used by central banks and financial supervisors in 188 countries during the COVID-19 pandemic (as of 5 October 2020)

1. Monetary policy[19]	
(1) Collateral frameworks	• Algeria – Banque d'Algérie (BDA): Lowered haircuts on government securities used in refinancing operations. • Australia – Reserve Bank of Australia (RBA): Broadened the range of eligible collateral for open market operations to include securities issued by non-bank corporations with an investment grade. • Cameroon, Central African Republic, Chad, Equatorial Guinea, Gabon, Republic of the Congo – Bank of Central African States (BEAC): Reduced haircuts applicable to private instruments accepted as collateral for refinancing operations. • Benin, Burkina Faso, Guinea-Bissau, Ivory Coast (Côte d'Ivoire), Mali, Niger, Senegal, Togo – Central Bank of West African States (BCEAO): Extended the collateral framework to access central bank refinancing to include bank loans to prequalified 1,700 private companies. • Botswana – Bank of Botswana (BOB): Extended collateral constraints for banks to include corporate bonds and traded stocks. • Canada – Bank of Canada (BOC): Expanded the list of eligible collateral for term repo operations to the full range of eligible collateral for the standing liquidity facility, except the non-mortgage loan portfolio. • Chile – Banco Central de Chile (BCC): Included corporate securities as collateral for the Central Bank's liquidity operations and included high-rated commercial loans as collateral for the funding facility operations. • Colombia – Banco de la Republica (BANREP): Expanded liquidity overnight and term facilities in terms of amounts, applicable securities and eligible counterparts. • Czech Republic – Czech National Bank (CNB): Expanded the types of securities and counterparties CNB can engage with in secondary markets in case of disorderly market conditions. • Dominican Republic – Banco Central Republica Dominicana (BCRD): Allowed banks to use public bonds towards reserve requirements on foreign currency deposits. • Austria, Belgium, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Luxemburg, Malta, the Netherlands, Portugal, Slovak Republic, Slovenia and Spain – European Central Bank (ECB)/European System of Central Banks (ESCB): Broadened the package of collateral easing measures for Eurosystem credit operations (e.g. expanded the scope of so-called additional credit claims framework so that it may also include public sector-guaranteed loans to SMEs, self-employed individuals, and households), expanded range of eligible assets under the corporate sector purchase programme, and relaxed collateral standards for Eurosystem refinancing operations.[20] • Hungary – Magyar Nemzeti Bank (MNB): Expanded eligible collateral. • Israel – Bank of Israel (BOIL): Expanded the acceptable collateral for repos to include corporate bonds rated AA or higher. • Italy – Banca d'Italia (BDI): Extended additional credit claim frameworks to include loans backed by COVID-19-related public sector guarantees in order to promote the use of credit claims as collateral and to incentivise lending to SMEs. • Jamaica – Bank of Jamaica (BOJM): Broadened the range of acceptable repo collateral. • Japan – Bank of Japan (BOJ): Expanded the range of eligible counterparties and collateral to private debt (including household debt).

[19] Excluded in the table are policy interest rate changes, the expansion of repo facilities and swap arrangements, and instructions to defer the repayment of loans and employ flexibility to banks regarding loan classification.

[20] The ECB has also announced its intention to accept sustainability-linked bonds as collateral from 1 January 2021.

	• Kazakhstan – National Bank of Kazakhstan (NBK): Expanded the list of eligible collaterals. • Republic of Korea – Bank of Korea (BOK): Expanded of the list of eligible open market operations participants to include select non-bank financial institutions; expanded eligible open market operations collateral to include bank bonds, certain bonds from public enterprises and agencies, and government-guaranteed mortgage-backed securities issued by Korea Housing Finance Corporation; eased collateral requirements for net settlements in the BOK payments system. • Mexico – Banco de México (Banxico): Expanded liquidity facilities to accept a broader range of collateral and expanded list of eligible institutions. • Morocco – Bank Al-Maghrib (BKAM): Expanded the range of collateral accepted for repos and credit guarantees to include public and private debt instruments (including mortgages). • Serbia – National Bank of Serbia (NBSR): Made local-currency denominated corporate bonds eligible for open market operations and as collateral for banks. • Singapore – Monetary Authority Singapore (MAS): Wide range of collateral accepted under the new MAS SGD term facility; domestic systemically important banks also able to pledge eligible residential property loans as collateral at the term facility, expand range of collateral that banks can use to access US dolllar liquidity from the MAS USD facility. • Sweden – Sveriges Riksbank (Riksbank): Eased rules for the use of covered bonds as collateral. • Tanzania – Bank of Tanzania (BOTZ): Reduced collateral haircuts requirements on government securities. • Turkey – Türkiye Cumhuriyet Merkez Bankası (TCMB): Broadened the pool of assets for use as collateral in TCMB transactions. • Ukraine – National Bank of Ukraine (NBU): Expanded list of eligible collateral that banks can use to obtain financing, incorporating municipal bonds and government-guaranteed corporate bonds; expanded the list of collateral eligible for emergency liquidity assistance (ELA) facility; revised the haircuts for domestic government bonds pledged as collateral under refinancing loans, direct repo, IRS and transactions on cash storage agreements.
(2) Indirect monetary policy instruments	• Algeria – BDA: Lowered the reserve requirement ratio from 8 to 3 per cent and activated one month open market operations. • Aruba – Centrale Bank van Aruba (CBVA) Lowered the reserve requirement on commercial bank deposits from 12 to 7 per cent. • Botswana – BOB: Reduced the primary reserve requirement (PRR). • Brazil – Banco Central do Brasil (BCB): Reduced the reserve requirements and capital conservation buffers and temporarily relaxed provisioning rules; opened new facility to provide loans to financial institutions backed by private corporate bonds as collateral. • Cambodia – National Bank of Cambodia (NBC): Reduced reserve requirements for banking and financial institutions. • Cabo Verde – Banco de Cabo Verde (BCV): Reduced the minimum reserve requirement and set up a long-term lending instrument for banks. • Chile – BCC: Introduced new funding facility for banks conditional on banks to increase credit. • China – People's Bank of China (PBC): Injected RMB 3.33 trillion (gross) liquidity into the banking system via open market operations (reverse repos and medium-term lending facilities). • Colombia – BANREP: Lowered the reserve requirement applicable to savings and checking accounts. • Comoros – Banque Central des Comoros (BCCKM): Reduced reserve requirements to 10 per cent. • Croatia – Croatian National Bank (HNB): Reduced the reserve requirement ratio from 12 to 9 per cent. • Democratic Republic of the Congo – Banque Centrale du Congo (BCCD): Eliminated mandatory reserve requirements on demand deposits in local currency. • Denmark – Danmarks Nationalbank (DN): Launched an 'extraordinary lending facility' which will make full-allotment, 1-week, collateralised loans available to banks at -0.5 per cent interest rate. • Dominican Republic – BCRD: Reduced the reserve requirement rate. • El Salvador – Central Reserve Bank of El Salvador (BCR): Reduced the reserve requirements. • Eswatini – Central Bank of Eswatini (CBSZ): Reduced the reserve requirement.

	• Austria, Belgium, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Luxemburg, Malta, the Netherlands, Portugal, Slovak Republic, Slovenia and Spain – ECB/ESCB: Temporary additional auctions of the full-allotment, fixed rate temporary liquidity facility at the deposit facility rate and more favourable terms on existing targeted longer-term refinancing operations; introduced a new liquidity facility, which consists of a series of non-targeted Pandemic Emergency Longer-Term Refinancing Operations carried out with an interest rate that is 25bp below the average main refinancing operations rate prevailing over the life of the operation. • The Gambia – Central Bank of the Gambia (CBG): Reduced the reserve requirement from 15 to 13 per cent. • Germany – Bundesbank: Introduced additional €100 billion to refinance expanded short-term liquidity provision to companies through the public development bank KfW, in partnership with commercial banks. • Ghana – Bank of Ghana (BOG): reduced the primary reserve requirement from 10 to 8 per cent. • Guinea – Banque Centrale de la Republique de Guinea (BCRG): reduced the reserve requirement ratios from 16 to 15 per cent. • Guyana – Bank of Guyana (BOGY): Reduced reserve requirements from 12 to 10 per cent. • Haiti – Banque de la Républic d'Haiti (BRH): Reduced the reserve requirements. • Honduras – Banco Central de Honduras (BCH): Reduced reserve requirements from 12 to 9 per cent. • Hong Kong – Hong Kong Monetary Authority (HKMA): Cut regulatory reserves by half to increase banks' lending capacity. • Hungary – MNB: Introduced a long-term unlimited collateralised lending facility; suspension of penalties for unmet reserve requirements. • Indonesia – Bank Indonesia (BI): Reduced the reserve requirement ratios for banks • Iraq – Central Bank of Iraq (CBIQ): Reduced the reserve requirement from 15 to 13 per cent. • Jordan – Central Bank of Jordan (CBJ): Reduced the compulsory reserve ratio on deposits from 7 to 5 per cent. • Republic of Korea – BOK: Provided unlimited amounts through open market operations, expansion of BOK repo operations to non-banks, creation of a BOK lending programme to non-banks with corporate bonds as collateral. • Kyrgyz Republic – Nation Bank of the Kyrgyz Republic (NBKR): Reduced mandatory reserve requirements. • Lao People's Democratic Republic – Bank of Lao (BOL): Reduced the reserve requirements. • Malawi – Reserve Bank of Malawi (RBM): Reduced the liquidity reserve requirement. • Malaysia – Bank Negara Malaysia (BNM): Lowered the Statutory Reserve Requirement Ratio from 3 to 2 per cent. • Maldives – Maldives Monetary Authority (MMA): Reduced the minimum reserves requirement. • Mauritania – Banque Centrale de Mauritania (BCMr): Reduced the reserve requirements. • Mexico – Banxico: Reduced the mandatory regulatory deposit with Banxico, in conjunction with the Ministry of Finance, seeking to strengthen market making in the government bond market; opened a facility to repurchase government securities at longer maturities than those of regular open market operations for up to 100 billion pesos. The cost of the repos was reduced significantly and a debt securities temporary swap facility was introduced to promote orderly debt markets and provide liquidity for trading instruments; established a corporate securities repo facility to support the corporate bond market. • Moldova – National Bank of Moldova (BNMD): Reduced the reserve requirement ratio. • Mongolia – Mongalbank: Reduced reserve requirements. • Montenegro – Central bank of Montenegro (CBCG): Reduced the reserve requirement rate. • Mozambique – Banco de Moçambique (BANCOMOC): Reduced the reserve requirement requirements on domestic and foreign currency deposits. • Myanmar – Central Bank of Myanmar (CBM): Reduced the reserve requirement ratio. • Nepal – Nepal Rastra Bank (NRB): Reduced the cash reserve ratio.

	• New Zealand – Reserve Bank of New Zealand (RBNZ): Introduced Term Auction Facility allowing banks access to collateralised loans of up to 12 months, and a corporate facility in which the RBNZ offered up to NZ$500 million per week in open market operations with banks against corporate paper and asset-backed securities; introduced Term Lending Facility, a longer-term funding scheme for banks at 0.25 per cent. • Nicaragua – Central Bank of Nicaragua (CBN): Reduced the reserve requirement in domestic currency deposits. • North Macedonia – National Bank of the Republic of North Macedonia (NBRM): Reduced the base for the reserve requirement by the amount of new loans to firms in affected sectors. • Norway – Norges Bank (NB): Provisioned additional liquidity to banks in form of loans of differing maturities. • Papua New Guinea – Bank of Papua New Guinea (BPNG): Reduced the cash reserve requirement. • Paraguay – Banco Central del Paraguay (BCP): Reduced the minimum reserve requirements on domestic and foreign currency deposits. • Peru – Banco Central de Reserva del Perú (BCRP): Reduced the reserve requirements. • Philippines – Bangko Sentral ng Pilipinas (BSP): Reduced the reserve requirement ratio for commercial banks. • Poland – National Bank of Poland (NBP): Reduced the required reserve ratio. • Russian Federation – Central Bank of Russia (CBR): Introduced long-term refinancing instrument (long-term repos are planned for one month and one year). • Rwanda – National Bank of Rwanda (NBR): Purchased Treasury bond through the rediscount window until September; lowered the reserve requirement ratio. • São Tomé and Príncipe – Central Bank of São Tomé (BCSTP): Reduced the policy rate and minimum cash reserve requirement. • Seychelles – Central Bank of Seychelles (CBS): Reduced the Minimum Reserve Requirement (MRR) on Rupee deposits from 13 to 10 per cent. • Sierra Leone – Bank of Sierra Leone (BSL): Extended the reserve requirement maintenance period. • Solomon Islands – Central Bank of Solomon Islands (CBSI): Reduced the cash reserve requirements. • South Africa – South African Reserve Bank (SARB): Reduced the upper and lower limits of the standing facility; and raised the size of the main weekly refinancing operations as needed. Programme aimed to purchase government securities in the secondary market across the entire yield curve and extend the main refinancing instrument maturities. • Republic of South Sudan – Bank of South Sudan (BSS): Reduced the reserve requirement ratio. • Sri Lanka – Central Bank of Sri Lanka (CBSL): Reduced the reserves requirement ratio. • Suriname – Central Bank van Suriname (CBVS): Reduced the reserve requirement from 35 to 27.5 per cent. • Sweden – Riksbank: Announced lending of up to SEK 500 billion to companies via banks; introduced a new lending facility whereby banks can borrow unlimited amounts (given adequate collateral) with 3-month and 6-month maturity. • Switzerland – Swiss National Bank (SNB): Introduced COVID-19 refinancing facility to operate in conjunction with the federal government's guarantees for corporate loans, allowing banks to obtain liquidity from the SNB. • Tajikistan – National Bank of Tajikistan (NBT): Reduced the reserve requirement. • Tanzania – BOTZ: Reduced the minimum reserve requirement from 7 to 6 per cent. • Trinidad and Tobago – Central Bank of Trinidad and Tobago (CBTT): Reduced the reserve requirement from 17 to 14 per cent. • Turkey – TCMB: Reduced the reserve requirements on foreign currency deposits; raised the reserve requirement ratios for all types and maturities of foreign exchange liabilities. • Ukraine – NBU: Modified the calculation of reserve requirements. • United Arab Emirates – Central Bank of the United Arab Emirates (CBUAE): Halved banks' required reserve requirements from 14 to 7 per cent; introduced zero-interest rate collateralised loans to banks (AED 50 billion). • United Kingdom – Bank of England (BoE): Activated a Contingent Term Repo Facility to complement the Bank's existing sterling liquidity facilities.

	• United States – Federal Reserve System (Fed): Purchased Treasury and agency securities in the amount as needed. Expanded overnight and term repos. Lowered cost of discount window lending. • Uruguay – Banco Central Del Uruguay (BCU): Reduced the reserve requirements. • Zimbabwe – Reserve Bank of Zimbabwe (RBZ): Reduced the reserve requirement ratio.

(3) Non-standard instruments	• Bolivia – Banco Central de Bolivia (BCBO): Purchased bonds from pension funds.
	• Cameroon, Central African Republic, Chad, Equatorial Guinea, Gabon, Republic of the Congo – BEAC: Introduced a new programme of government securities purchases with the possibility of extension until July 2021.
	• Benin, Burkina Faso, Guinea-Bissau, Côte d'Ivoire, Mali, Niger, Senegal, Togo – BCEAO: Introduced measures to promote the use of electronic payments; issued special 3-month refinancing window at a fixed rate of 2.5 per cent for limited amounts of 3-month 'Covid-19 T-Bills' by each West African Economic and Monetary Union sovereign to help meet funding needs related to the current pandemic. When the Covid-19 T-Bills matured in August, new 3-months T-Bills issued which banks may refinance with the BCEAO for their term to maturity at 2 per cent.
	    o Benin allowed to issue the equivalent of 1.5 per cent of GDP
	    o Burkina Faso allowed to issue the equivalent of 0.5 per cent of GDP
	    o Côte d'Ivoire allowed to issue the equivalent of 0.6 per cent of GDP
	    o Guinea-Bissau allowed to issue the equivalent of 1.2 per cent of GDP
	    o Mali allowed to issue the equivalent of 0.5 per cent of GDP
	    o Niger allowed to issue the equivalent of 1.3 per cent of GDP
	    o Senegal allowed to issue the equivalent of 0.7 per cent of GDP
	    o Togo allowed to issue the equivalent of 2.1 per cent of GDP
	• Canada – BOC: Extended the bond buyback programme across all maturities; supported the Canada Mortgage Bond (CMB) market by purchasing CMBs in the secondary market; launched the Bankers' Acceptance Purchase Facility; announced the Provincial Money Market Purchase programme, the Provincial Bond Purchase Programme, the Commercial Paper Purchase Programme, the Corporate Bond Purchase Programme, and the purchase of Government of Canada securities in the secondary market.
	• Chile – BCC: Introduced bank bonds purchase programme (up to US$8 billion). Later introduced additional measures to support liquidity and credit through an additional funding-for-lending facility in the total amount of US$16 billion effective for eight months and a special asset purchase programme in the total amount of US$8 billion over a 6-month period.
	• Colombia – BANREP: Introduced programme to purchase securities issued by credit institutions and treasury purchases in the secondary market.
	• Costa Rica – Banco Central de Costa Rica (BCCR): Purchased government securities in the secondary market to provide liquidity during market distress.
	• Austria, Belgium, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Luxemburg, Malta, the Netherlands, Portugal, Slovak Republic, Slovenia and Spain – ECB/ESCB: Permitted additional asset purchases of €120 billion under the asset purchase programme and introduced €750 billion asset purchase programme of private and public sector securities (Pandemic Emergency Purchase Programme, PEPP). Later expanded the size of the PEPP by €600 billion to €1.35 trillion.
	• Egypt – Central Bank of Egypt (CBEG): Launched an EGP 20 billion stock-purchase programme.
	• Fiji – RBF: Purchased FJ$280 million of Government bonds in the first half of 2020 to help finance the Government deficit.
	• Finland – Bank of Finland (BOF): Provided support to liquidity through investing in short-term Finnish corporate commercial paper (€1 billion).
	• The Gambia – CBG: Used GMD 855 million of retained earnings to increase statutory capital and pay some of the central government liabilities to the Central Bank.
	• Ghana – BOG: Introduced a new bond purchasing programme to provide emergency financing to the government in light of a higher projected fiscal financing gap.
	• Guatemala – Banco de Guatemala (GOB): Announced plans to purchase GTM Treasury Bonds for up to GTQ11 billion (about US$1.5 billion).
	• Hungary – MNB: Launched a quantitative easing programme consisting of buying government securities on the secondary market, and re-started the mortgage bond purchase programme.

	• India – Reserve Bank of India (RBI): Created a facility to help with state government's short-term liquidity needs; relaxed export repatriation limits; increased the state's Ways and Means Advance limits by 60 per cent. • Indonesia – BI: Given authority to purchase government bonds in the primary market as a last resort. This scheme covered: purchases of government bonds with coupons at the BI's policy rate to finance priority spending on public goods such as health and social protection; subsidised by BI transfers to the budget the budgetary interest cost of spending support to firms; acted as buyer of last resort for long-term local-currency bonds to finance other spending. The government issued the first bond under the burden sharing scheme on 6 August. BI provided funding to Indonesian Deposit Insurance Corporation (LPS) through repo transactions and purchases of government bonds owned by LPS. • Israel – BOIL: Announced government bond purchases up to NIS50 billion (NIS 23.4 billion as of end-June); launched plan to purchase corporate bonds on the secondary market for up to NIS 15 billion. • Japan – BOJ: Targeted liquidity provision through an increase in the size and frequency of Japanese government bond (JGB) purchases, special funds-supplying operation to provide loans to financial institutions to facilitate financing of corporates, a temporary increase in the annual pace of BOJ's purchases of Exchange Traded Funds (ETFs) and Japan-Real Estate Investment Trusts (J-REITs), and a temporary additional increase of targeted purchases of commercial paper and corporate bonds. • Republic of Korea – BOK: Purchased Korean Treasury Bonds (KRW 3.0 trillion). • Mauritius – BOM: Introduced one-off exceptional contribution of Rs60 billion (12 per cent GDP) for the purpose of assisting government in its fiscal measures. • New Zealand – RBNZ: Near doubled the Large-Scale Asset Purchase programme (LSAP) to purchase up to NZ$60 billion of government bonds and Local Government Funding Agency (LGFA) bonds in the secondary market over the next 12 months, adding NZ$3 billion (equivalent to 30 per cent on issue) of LGFA debt to the LSAP, doubling the overdraft on the crown settlement account to NZ$10 billion for April to June to meet the government's short-term cash needs. • Papua New Guinea – BPNG: Repurchased government securities in an open market quantitative easing programme. • Philippines – BSP: Purchased PHP 300 billion worth government securities (about 1.5 per cent of 2019 GDP) through a repurchase agreement with the government, made secondary market purchases of government securities, and remitted PHP 20 billion as dividend to the government. • Poland – NBP: Purchased Polish Treasury securities in the secondary market and expanded eligible securities to include those guaranteed by the State Treasury. • Romania – Banka Nationala a Romaniei (BNRO): Purchased government securities on the secondary market. • Seychelles – CBS: provided credit to government limited up to SCR 500 million • Solomon Islands – CBSI: Plans to buy government bonds in the secondary market as part of its stimulus measures. • Sweden – Riksbank: Increased purchases of securities of up to SEK 500 billion in 2020 (where securities may include government and municipal bonds, covered bonds and securities issued by non-financial corporations). • Thailand – Bank of Thailand (BOT): Introduced Corporate Bond Stabilization Fund to provide bridge financing of up to THB 400 billion to high-quality firms with bonds maturing during 2020/21, at higher-than-market 'penalty' rates; purchased government bonds in excess of THB 100 billion in March to ensure the normal functioning of the government bond market; set up a special facility to provide liquidity for mutual funds through banks. • Turkey – TCMB: Increased purchases of sovereign bonds • Uganda – Bank of Uganda (BoU): Purchased Treasury Bonds held by microfinance deposit taking institutions and credit institutions to ease liquidity pressures. • United Kingdom – BoE: Expanded the central bank's holding of UK government bonds and non-financial corporate bonds by £200 billion; HM Treasury and the BoE agreed to extend temporarily the use of the government's overdraft account at the BoE to provide a short-term source of additional liquidity to the government if needed. • United States – Fed: Introduced Commercial Paper Funding Facility to facilitate the issuance of commercial paper by companies and municipal issuers; introduced Primary Dealer Credit Facility to provide financing to the Fed's 24 primary dealers collateralised by a wide range of investment grade securities; introduced Money

	Market Mutual Fund Liquidity Facility (MMLF) to provide loans to depository institutions to purchase assets from prime money market funds (covering highly rated asset backed commercial paper and municipal debt); introduced Primary Market Corporate Credit Facility to purchase new bonds and loans from companies; introduced Secondary Market Corporate Credit Facility to provide liquidity for outstanding corporate bonds; introduced Term Asset-Backed Securities Loan Facility to enable the issuance of asset-backed securities backed by student loans, auto loans, credit-card loans, loans guaranteed by the Small Business Administration, and certain other assets; introduced Paycheck Protection Programme Liquidity Facility (PPPLF) to provide liquidity to financial institutions that originate loans under the Small Business Administration's Paycheck Protection Programme (PPP) which provided a direct incentive to small businesses to keep their workers on the payroll; introduced Main Street Lending Programme to purchase new or expanded loans to SMEs; introduced Municipal Liquidity Facility to purchase short-term notes directly from state and eligible local governments.
(4) Direct monetary policy instruments	• Angola – Banco Nacional de Angola (BNA): Increased the minimum allocation required from banks to extend credit to producers of priority products and instructed banks to provide credit in local currency to assist importers of essential goods. • Argentina – Banco Central de la Republica Argentina (BCRA): Lowered reserve requirements on bank lending to households and SMEs; introduced regulations that limit banks' holdings of central bank paper to provide space for SME lending; temporary easing of bank provisioning needs and of bank loan classification rules. • Australia – RBA: Established a Term Funding Facility (TFF) of at least A$90 billion for access to three-year funding at 25 basis points to allow banks to lend more to SMEs during the period of disruption caused by COVID-19. The TFF has since been expanded to A$200 billion and extended the access through June 2021. • Bangladesh – Bangladesh Bank (BB): Export Development Fund was raised to US$5 billion, with the interest rate now fixed at 2 per cent and the refinancing limit increased; created several refinancing schemes amounting to a total of Tk380 billion, a 360-day tenor special repo facility and a credit guarantee scheme to support exporters, farmers, SMEs and to facilitate the implementation of the government stimulus packages; announced an agriculture subsidy programme to further support farmers. • Bhutan – Royal Monetary Authority of Bhutan (RMA): Converted the concessional working capital soft loans to tourism, manufacturing and wholesale business (April-June 2020) to term loans for 4 years at 5 per cent rate; extended soft loans to cottage and small industries through the CSI Development Bank. • Chile – Comisión para el Mercado Financiero (CMFC): Introduced measures to facilitate the flow of credit to businesses and households, including special treatment in the establishment of provisions for deferred loans; adjusted the treatment of assets received as payment and margins in derivative transactions. • China – PBC: Expanded re-lending and re-discounting facilities by RMB1.8 trillion to support manufacturers of medical supplies and daily necessities, MSMEs and the agricultural sector at low interest rates; reduced targeted medium-term lending facility rate by 30 and 20 bps; targeted reserve requirement ratio cuts by 50–100 bps for large- and medium-sized banks that meet inclusive financing criteria which benefit MSEs; an additional 100 bps for eligible joint-stock banks, and 100 bps for small- and medium-sized banks in April and May to support SMEs; expanded policy banks' credit extension to private firms and MSEs (RMB 350 billion); introduced new instruments to support lending to MSEs, including a zero-interest 'funding-for-lending' scheme (RMB 400 billion) to finance 40 per cent of local banks' new unsecured loans. • Colombia – Superintendencia Financiera de Colombia (SFC): Introduced regulation prohibiting banks from increasing interest rates on loans, charging interest on interest, or reporting entities to credit registries for availing themselves of any forbearance measures. • Costa Rica – BCCR: Reduced the cost of credit, including through ₡900,000 million loans at preferential interest rates to firms across all sectors from state-owned banks. • Cyprus – Central Bank of Cyprus (CBCY): Encouraged banks to apply favourable interest rates for new loans and newly restructured loans. • Democratic Republic of the Congo – BCCD: Created a new collateralised long-term funding facility for commercial banks of up to 24 months to support the

	provision of new credit for the import and production of food and other basic goods. • Dominican Republic – BCRD: Capped the interest rate at 8.0 per cent for credit to households and businesses. Introduced a Rapid Liquidity Facility to provide funds for up to RD$60,000 million for productive sectors, consumption loans and SMEs. • Egypt – CBEG: Reduced the preferential interest rate from 10 to 8 per cent on loans to tourism, industry, agriculture and construction sectors, as well as for housing for low-income and middle-class families; announced a housing initiative to provide low-cost financing for housing units; announced a new lending initiative with soft loans at zero-to-low interest rates from banks aimed at replacing old cars with natural gas-powered vehicles; announced a government guarantee of EGP 3 billion on low-interest loans by the central bank for the tourism industry soft loans; approved an EGP 100 billion guarantee to cover lending at preferential rates to the manufacturing, agriculture and contracting loans; made available loans with a two-year grace period for aviation sector firms; announced support for small projects harmed by COVID-19, especially in the industrial and labour-intensive sectors, through the availability of short-term loans of up to a year, to secure the necessary liquidity for operational expenses until the crisis is over. • Fiji – RBF: Raised the Import Substitution and Export Finance Facility by FJ$100 million to provide credit to exporters, large-scale commercial agricultural farmers, public transportation and renewable energy businesses at concessional rates; raised the Natural Disaster and Rehabilitation Facility to FJ$60 million to provide concessional loans to commercial banks for them to on-lend to businesses affected by COVID-19. • France – Banque de France (BdF): Introduced credit mediation to support renegotiation of SMEs' bank loans. • Georgia – National Bank of Georgia (NBG): Launched a new tool for liquidity management to support the financing of SMEs in Georgia, which consisted of two components: the first for commercial banks, which receive liquidity support from the NBG in exchange for mortgaging the loan portfolio; the second for micro-financing organisations. • Guinea – Banque Centrale de la Republique de Guinea (BCRG): Permitted banks, for the duration of the pandemic, to count against their reserves credit provided to SMEs, businesses in the services sector affected (hotels, restaurants and transport), and major importers of food and pharmaceutical products. • Guyana – BOGY: Permitted commercial banks to provide short term financing for working capital at concessional rates of 5–6 per cent and reduce interest rates on consumer loans below G$10 million by 1–2 per cent until December 2020. • Hong Kong – HKMA: Introduced low-interest loans for SMEs with 100 per cent government guarantee (HK$ 70 billion). Enhanced the 80 and 90 per cent government guarantee products by raising the maximum loan amount and extending the eligibility coverage to listed firms. • Hungary – MNB: Introduced a new SME lending programme (FGS GO!) with interest rate subsidy. • India – RBI: Introduced measures to promote credit flows to the retail sector and MSMEs; the priority sector classification for bank loans to non-banking financial institutions has been extended for on-lending for FY 2020/21; special refinance facilities for rural banks, housing finance companies, and SMEs; credit support to the exporters and importers and extension of the tenor of the small business refinancing facilities; extended the benefit under interest subvention and prompt repayment incentive schemes for short-term agricultural loans. • Iran – Central Bank of the Islamic Republic of Iran (CBI): Announced the allocation of funds to import medicine. • Iraq – CBIQ: Introduced a moratorium on interest and principal payments by SMEs through the directed lending initiative; offered 5 million Iraqi dinars (US$4,200) of additional support and reduced of the interest rates on loans extended through the 'one trillion ID' scheme. • Israel – BOIL: Introduced a term funding scheme amounting to NIS 5 billion to provide 3-year loans for banks to fund credit for MSEs. • Japan – BOJ: New fund-provisioning measure to support financing of mainly SMEs through the provision of funds against loans such as interest-free and unsecured loans made by eligible counterparties based on the government's emergency economic measures. The total size of the special funds-supplying operation and the new fund-provisioning measure amounts to about ¥90 trillion (US$838 billion).

	• Jordan – CBJ: Expanded of the sectoral coverage and reduced interest rates on its refinancing programme. • Republic of Korea – BOK: Increased the ceiling of the Bank Intermediated Lending Support Facility by a total of KRW 5 trillion (about 0.26 per cent of GDP) and lowering the interest rate to 0.25 per cent (from 0.5–0.75 per cent) to augment available funding for SMEs. • Kuwait – Central Bank of Kuwait (CBK): Instructed banks to provide SMEs affected by the shock with financing at maximum of 2.5 per cent interest rate. • Lao People's Democratic Republic – BOL: Provisioned the availability of kin 200 billion for low interest rate SMEs loans. • Latvia – Latvijas Banka (LVB): Introduced a 50 per cent cut in interest rates on loans for SMEs in the tourism sector and a 15 per cent cut for large enterprises. • Lebanon – Banque Du Liban (BDL): Allowed banks and financial institutions to extend exceptional 5-year, 0 per cent interest rate loans; in turn provide banks and financial institutions 5-year, 0 per cent interest rate credit lines. • Mauritius – BOM: Announced the Mauritius Investment Corporation Ltd (MIC) as a special purpose vehicle that will focus investment into the pharmaceutical and 'blue economy' as new strategic sectors. • Mexico – Banxico: New financing facilities for commercial and development banks (350 billion pesos) to allow them to channel resources to MSMEs and individuals affected by the COVID-19 pandemic. • Mongolia – Mongalbank: Implemented state owned enterprise-issued bond purchases, short-term concessional financing to gold miners, and temporary resumption of the subsidised mortgage programme. • Morocco – BKAM: Suspended loan payments for SMEs and self-employed people; increasing and lengthening of central bank refinancing operations to support banking credit to SMEs. • Nepal – NRB: Increased the size of the Refinance Fund to provide subsidised funding for banks willing to lend at a concessional rate to priority sectors including SMEs; required banks to increase their loans from 25 to 40 per cent by 2024 to priority sectors, such as agriculture, energy, tourism and MSMEs. • Nigeria – Central Bank of Nigeria (CBNG): Created a N50 billion (US$139 million) targeted credit facility; introduced liquidity injection including N100 billion to support the health sector, N2 trillion to the manufacturing sector, and N1.5 trillion to the real sector to impacted industries. • Pakistan – State Bank of Pakistan (SBP): Expanded the scope of existing refinancing facilities and introduced three new refinancing facilities aimed at: supporting hospitals and medical centres; stimulating investment in new manufacturing plants and machinery, modernisation and expansion of existing projects; and incentivising businesses to avoid laying off their workers during the pandemic. Also, increased the regulatory limit on extension of credit to SMEs; introduced mandatory targets for banks to ensure loans to construction activities account for at least 5 per cent of the private sector portfolios by December 2021. • Paraguay – BCP: Created a National Emergency Special Credit Facility (FCE) to channel up to US$760 million in liquidity support to SMEs; allowed banks to automatically refinance loans to private sector companies that are in repayment difficulties. • Philippines – BSP: Allowed loans to MSMEs to be counted as part of banks' compliance with reserve requirements, temporarily reduced their credit risk weights to 50 per cent, and assigned zero risk weight to loan exposures guaranteed by the Philippine Guarantee Corporation to encourage extension of loans to enterprises, particularly MSMEs; BSP increased the limit on banks' real estate loan share from 20 per cent of their total loan portfolio (net of interbank loans) to 25 per cent. • Poland – NBP: Introduced programme to provide funding for bank lending to enterprises. • Russian Federation – CBR: Introduced RUB 500 billion facility for SME lending; reduced interest rate on CBR loans from 4.0 to 3.5 per cent to support lending to SMEs, including for urgent needs to support and maintain employment. Introduced an additional RUB 50 billion allocated for similar purposes to borrowers that do not have SME status. • Saudi Arabia – Saudi Arabian Monetary Authority (SAMA): Announced a SAR 50 billion (US$13.3 billion, 2 per cent of GDP) package to support the private sector, particularly SMEs, by providing funding to banks.

	• Seychelles – CBS: Established a credit facility of SCR 500 million to assist commercial banks with emergency relief measures to support SMEs and another credit facility of SCR 750 million to support large enterprises. • Sierra Leone – BSL: Introduced a special credit facility of Le 500 billion to support production, procurement and distribution of essential goods. • Singapore – MAS: Introduced measures package to help individuals and SMEs facing temporary cashflow difficulties. The package has three components: help individuals meet their loan and insurance commitments; support SMEs with continued access to bank credit and insurance cover; and ensure interbank funding markets remain liquid and well-functioning. • Solomon Islands – CBSI: Introduced an export-import facility to assist businesses with opportunities for competitive financing. • Somalia – Central Bank of Somalia (CBSO): Released funding-for-lending support for SMEs through commercial banks. • Sri Lanka – CBSL: Provided refinancing and concessional lending facilities of 1 per cent of GDP for the tourism, garment, plantation and IT sectors, and SMEs. • Suriname – CBVS: Instructed banks to provide loans below market lending rates to persons or businesses affected by COVID-19. • Thailand – BOT: Introduced soft loans to financial institutions amounting to THB 500 billion for on-lending at 2 per cent interest to SMEs with outstanding loans not classed as non-performing loans; Thai government covered the first six months of interest and guarantees up to 60–70 per cent of these loans. • Turkey – TCMB: Introduced a new lending facility for SMEs in the export sector; exporters' inventory financing was supported by extending maturities for existing and new export rediscount credits; reallocated TL 20 billion of the TL 60 billion rediscount credit facility for exporters towards advance loans for investment in support strategic projects. • United Arab Emirates – CBUAE: Reduced provisioning for SME loans by 15–25; limited bank fees for SMEs. • United Kingdom – BoE: Introduced New Term Funding Scheme to reinforce the transmission of the rate cut, with additional incentives for lending to the real economy, and especially SMEs. • Vanuatu – Reserve Bank of Vanuatu (RBV): Reactivated the Bank's Imports Substitution and Export Finance Facility (ISEFF) and the Disaster Reconstruction Credit Facility (DRCF). • Vietnam – State Bank of Vietnam (SBV): Reduced the short-term lending rate cap for priority sectors by 50 bps; issued a circular on refinancing the Vietnam Social Policy Bank (VSPB) up to VND 16 trillion at 0 per cent interest rate; asked credit institutions to channel credit to 5 priority economic sectors, and to accelerate consumer loans to meet legitimate demand of individuals and households. • West Bank and Gaza – Palestine Monetary Authority (PMA): Launched an SME fund to provide soft loans to SMEs impacted by the crisis. • Zimbabwe – RBZ: Increased private sector lending facility by the central bank from ZW$1 billion to ZW$2.5 billion.
2. Prudential policy: Regulation and supervision	
(5) Microprudential instruments	• Algeria – BDA: Eased solvency, liquidity and non-performing loan ratios for banks. Allowed banks to extend payments of some loans without a need to provision against them. • Aruba – CBVA: Lowered the minimum capital adequacy ratio from 16 to 14 per cent and the prudential liquidity ratio from 18 to 15 per cent. Increased the maximum allowed loan-to-deposit ratio from 80 to 85 per cent. • Australia – Australian Prudential Regulation Authority (APRA): Provided temporary relief from capital requirement, allowing banks to utilise some of their current large buffers to facilitate ongoing lending to the economy as long as minimum capital requirements are met. • Bahrain – Central Bank of Bahrain (CBB): Reduced the cash reserve ratio for retail banks from 5 to 3 per cent and relaxed the LVR for new residential mortgages. • Barbados – Central Bank of Barbados (CBBB): Lowered the securities ratio for banks from 17.5 to 5 per cent and eliminated the 1.5 per cent securities ratio for non-bank deposit taking licensees. • Belarus – National Bank of the Republic of Belarus (NBRB): Mitigated a number of prudential requirements and partially released the capital conservation buffer.

- Belize – Central Bank of Belize (CBBZ): Reduced the statutory cash reserve requirements and reduced risk-weights for banks on loans in the tourism sector from 100 to 50 per cent.
- Botswana – Bank of Botswana (BOB): Relaxed rules to meet capital requirements and introduced measures to improve liquidity; reduced capital adequacy ratio for banks.
- Brazil – BCB: Changed capital requirements for small financial institutions, and allowed banks to reduce provisions for contingent liability provided the funds are lent to SMEs.
- Cabo Verde – BDCV: Reduced the capital adequacy ratio.
- Cambodia – NBC: Delayed additional increases in the Capital Conservation Buffer.
- Chile – BCC: Expanded eligible currencies for meeting reserve requirements in foreign currencies, made Central Bank regulations for bank liquidity flexible. Relaxed the LCR (the ratio remains unchanged but temporary deviations could be tolerated on a case-by case basis).
- Curaçao and Sint Maarten – Centrale Bank van Curaçao en Sint Maarten (CBCS): Announced that commercial banks are allowed to exceed the debt service ratio from 37 per cent to a maximum of 50 per cent.
- Cyprus – CBCY: Released capital and liquidity buffers for banks directly supervised by the CBCY (€100 million); simplified documentation requirements for new short-term loans and other credit facilities.
- Czech Republic – CNB: Relaxed credit ratios for new mortgages, increased the maximum recommended LVR and the debt-service-to-income ratio and removed the debt-to-income ratio from its list of recommendations.
- Democratic Republic of the Congo – BCCD: Postponed the adoption of new minimum capital requirements.
- Denmark – Danish Financial Supervisory Authority (DFSA): Announced case by case relaxation of regulation on the LCR requirement.
- Austria, Belgium, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Luxemburg, Malta, the Netherlands, Portugal, Slovak Republic, Slovenia and Spain – ECB/ESCB Banking Supervision: Decided on a temporary basis to exercise flexibility in the classification requirements and expectations on loss provisioning for non-performing loans; provided temporary capital relief for market risk by adjusting the prudential floor to banks' current minimum capital requirement; made changes to the capital requirements regulation (CRR 2), including greater flexibility in the application of the EU's accounting and prudential rules, which are aimed at facilitating bank lending to support the economy.
- Eswatini – Central Bank of Eswatini (CBSZ): Reduced the liquidity requirement.
- Ghana – BOG: Reduced the capital conservation buffer from 3 to 1.5 per cent.
- Guinea – BCRG: Introduced measures to mitigate prudential requirements which included lowering the LCR; suspending the non-performing loan classification and relaxing the limits on foreign exchange positions.
- Guyana – BOGY: Lowered liquid asset requirements for demand deposits, savings and time deposits.
- Hong Kong – HKMA: Encouraged banks to deploy their liquidity buffers more flexibly, and ease interbank funding conditions by reducing the issuance size of Exchange Fund Bills; permitted banks to delay of loan payment, extension of loan tenors, and principal moratoriums for affected SMEs, sectors and households as appropriate and to the extent permitted by the banks' risk management principles.
- India – RBI: Reduced the LCR; directed banks to assign 0 per cent risk weight on the credit facilities extended under the emergency credit line guarantee scheme.
- Israel – BOIL: Reduced the bank's regulatory capital requirement; increased the LVR cap on residence-backed loans; eliminated the additional 1 per cent capital requirement on housing loans; allowed banks to calculate the debt-payment to income ratio for mortgage loans using pre-crisis income, under certain circumstances; raised the cap (from 20 to 22 per cent) on the banks' loan portfolio allocated to construction companies.
- Italy – BDI: Allowed possibility to temporarily operate below selected capital and liquidity requirements; extended some reporting obligations.
- Japan – Financial Services Authority (FSAJ): Permitted banks to assign zero risk weights to loans guaranteed with public guarantee schemes.
- Kazakhstan – NBK: Lowered risk weights for SMEs, for FX loans and for syndicated loans; lowered capital conservation buffer and reduced the LCR requirement.

	• Kenya – Central Bank of Kenya (CBKE): Lowered cash reserve ratio. • Republic of Korea – BOK: Temporarily eased loan-to-deposit ratios for banks and other financial institutions and the domestic currency LCR for banks. • Kuwait – CBK: Decreased the risk weights for SMEs in calculation of risk-weighted assets for determining capital adequacy; reduced banks' capital adequacy requirements; reduced the regulatory net stable funding ratio and liquidity core ratio, reduced the liquidity ratio and increased the LVR limits. • Kyrgyz Republic – NBKR: Lowered or removed liquidity ratios and reduced risk weights of FX corporate and retail loans. • Malaysia – BNM: Temporarily eased regulatory and supervisory compliance on banks to help support loan deferment and restructuring. • Malta – Bank Ċentrali ta' Malta (BCTM): Relaxed debt-service-to-income limits for 6 months. • Morocco – BKAM: Authorised banks to go below the 100 per cent LCR until end of June 2020; provisioned requirements are suspended for loans benefiting from a temporary payment moratorium until end of June 2020; reduced the capital conservation buffer by 50 bps for one year. • Myanmar – CBM: Revised the formula for calculating the liquidity ratio. • Namibia – Bank of Namibia (BON): Relaxed the determination on liquidity risk management and reduced the capital conservation buffer. • The Netherlands – DNB: Allowed banks under direct supervision of the DNB to exclude specific central bank exposures when calculating their leverage ratios. • Nepal – NRB: Raised the LVR for personal residential home loans. • New Zealand – RBNZ: Reduced bank's core funding ratio requirement to 50 per cent from 75 per cent; regulatory change requiring higher capital for banks has been postponed. Removed mortgage LVR restrictions. • Norway – NB: Temporarily eased mortgage regulations, in particular increased the percentage of mortgages that can deviate from the regulations. • Oman – Central Bank of Oman (CBO): Reduced the capital conservation buffer and increased the lending ratio ceiling (net credit to deposit base). • Pakistan – SBP: Reduced the capital conservation buffer and relaxed the debt burden ratio for consumer loans. • Philippines – BSP: Relaxed prudential regulations regarding marking-to-market of debt securities. • Poland – NBP: Granted flexibility on how banks meet capital and liquidity requirements; reduced the risk weight for properties to reduce bank capital requirements. • Russian Federation – CBR: Temporarily eased regulation for banks intended to help corporate borrowers; introduced new credit risk assessment methods and lowered risk weights in mortgage lending; applied lower risk weights to subordinated bonds (including perpetual bonds) of largest non-financial corporations; postponed higher risk coefficients for bank holdings of non-financial corporations capital; extended lower risk coefficients at 70 per cent for loans to medical and pharmaceutical companies; reduced the risk coefficient on loans to non-commodity exporters guaranteed by EXCAR from 20 to 0 per cent to promote high-tech exports. • São Tomé and Príncipe – BCSTP: Temporarily eased some prudential ratios. • Serbia – NBSR: Relaxed the LVR cap for first-home-buyer mortgage loans. • Singapore – MAS: Adjusted selected regulatory requirements and supervisory programmes. • Slovak Republic – Národná Banka Slovenska (NBS): Implemented measure that allowed banks to partially meet Pillar 2 requirements using capital instruments that do not qualify as common equity tier 1 (CET1) capital; banks may, in duly justified cases, temporarily be permitted to operate below the level of capital defined by the capital conservation buffer; banks were temporarily exempted from full compliance with the LCR where justified. • Solomon Islands – CBSI: Relaxed some commercial banks' prudential guidelines. • South Africa – SARB: Announced temporary relief on bank capital requirements and reduction in the LCR from 100 to 80 per cent to provide additional liquidity and counter financial system risks. • Sri Lanka – CBSL: Reduced the LCR and net stable funding ratios; capital conservation buffers and loan classification rules have been relaxed. • Spain – BDE: Applied flexibility for setting of transition periods and the intermediate minimum requirements for own funds and eligible liabilities targets. • Suriname – CBVS: Temporarily alleviated solvency and liquidity requirements.

	• Tajikistan – NBT: Relaxed enforcement of prudential requirements. • Turkey – TCMB: Increased the LVR limit on mortgages; Turkish Banking Regulation and Supervisory Agency (BRSA): reduced the minimum asset ratio. • Ukraine – NBU: Delayed the introduction of additional capital buffers, including the capital conservation buffer and the systemic buffer; postponed stress testing; abolished the requirements for minimum statutory capital to increase. • United Arab Emirates – CBUAE: Allowed the use of banks' excess capital buffers (AED 50 billion); increased LVRs for first-time home buyers by 5 percentage points; raised the limit on banks' exposure to the real estate sector from to 30 per cent of risk-weighted assets, subject to adequate provisioning; relaxed the net stable funding resources ratio until the end of 2021. • United Kingdom – Prudential Regulatory Authority (PRA): Set Pillar 2A requirements as a nominal amount instead of a percentage of total Risk Weighted Assets; temporarily allowed firms to offset the increase in risk-weighted assets in order to mitigate the possibility of procyclical market risk capital requirements due to the automatic application of a higher Value-at-Risk (VaR) multiplier through a commensurate reduction in risks-not-in-VAR capital requirements. • United States – FED: Temporarily excluded holdings of U.S. Treasury Securities and deposits at the Federal Reserve Banks from the calculation of the supplementary leverage ratio for holding companies; lowered community bank leverage ratio to 8 per cent; PPP covered loans received a 0 per cent risk weight; assets acquired and subsequently pledged as collateral to the MMLF and PPPLF facilities will not lead to additional regulatory capital requirements. • West Bank and Gaza – PMA: Lowered the liquidity requirement by 1 per cent. • Vanuatu – RBV: Reduced the commercial banks' capital adequacy ratio.
(6) Macroprudential instruments	• Azerbaijan – Central bank of the Republic of Azerbaijan (CBAR): Relaxed the capital requirements (system wide and the countercyclical capital buffer) and risk weights on mortgage loans. • Belgium – National Bank of Belgium (NBB): Reduced the countercyclical bank capital buffer to 0 per cent. • Bulgaria – Central Bank of the Republic of Bulgaria (BNB): Cancelled the increase of the countercyclical capital buffer. • Canada – Office of the Superintendent of Financial Institutions (OSFI): Lowered the domestic stability buffer for domestic systemically important banks. • Costa Rica – BCCR: Temporarily reduced in the minimum accumulation of countercyclical provisions for financial entities to zero. • Cyprus – CBC: Introduced an additional capital release measure, with a 12-month extension of the phased-in introduction of other systemically important institutions capital buffer. • Czech Republic – CNB: Reduced the countercyclical capital buffer rate by 75 bps to 1 per cent. • Denmark – DN: Released the countercyclical capital buffer and cancelled the planned increases meant to take effect later. • Estonia – Eesti Pank: Reduced the systemic risk buffer for the commercial banks from 1 to 0 per cent. • Austria, Belgium, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Luxemburg, Malta, the Netherlands, Portugal, Slovak Republic, Slovenia and Spain – ECB/ESCB Banking Supervision: Allowed significant institutions to operate temporarily below the Pillar 2 Guidance, the capital conservation buffer, and the LCR; front-loaded new rules on the composition of capital to meet Pillar 2 Requirement to release additional capital; permitted appropriate release of the countercyclical capital buffer by the national macroprudential authorities will enhance its capital relief measures; allowed banks under direct supervision (i.e. the largest banks) to exclude cash holdings and central bank reserves from the calculation of their leverage ratio until end June 2021. • Finland – BOF: Introduced 1 ppt reduction in the structural buffer requirements of all credit institutions by removing the systemic risk buffer and adjusting institution-specific requirements; Finland's Financial Supervisory Authority (FIN-FSA) relaxed to 90 per cent the macroprudential limit on loan-to-collateral ratios for residential mortgages. • France – BdF: Reduced the countercyclical bank capital buffer to 0 per cent. • Germany – Bundesbank: Released the countercyclical capital buffer for banks from 0.25 to 0 per cent. • Hong Kong – HKMA: Reduced the countercyclical capital buffer from 2 to 1 per cent; eased countercyclical macroprudential measures for mortgage loans on

	non-residential properties by raising the LVR cap to 50 per cent from 40 per cent for general cases. • Hungary – MNB: Reduced the Foreign Exchange Coverage Ratio; temporary elimination of additional capital buffer requirement for systemically-important banks. • Iceland – Sedlabanki: Reduced the countercyclical capital buffer from 2 to 0 per cent. • India – RBI: Increased the large exposure limit. • Indonesia – BI: Adjusted macroprudential regulation to ease liquidity conditions and support bond market stability. • Ireland – Central Bank of Ireland (CBIE): Released the countercyclical capital buffer, which will be reduced from 1 to 0 per cent. • Japan – FSAJ: Permitted banks to draw down their capital conservation and systemically important bank buffers to support credit supply, and draw down their stock of high quality liquid assets below the minimum LCR requirement. • Lithuania – Bank of Lithuania (LBLT): Reduced the countercyclical capital buffer from 1 to 0 per cent. • The Netherlands – De Nederlandsche Bank (DNB): Reduced systemic buffer requirements for the three largest banks to support bank lending; provided temporary regulatory relief to less significant banking institutions; planned introduction of a floor for mortgage loan risk weighting is postponed. • Nepal – NRB: Released the requirement for banks to build up the 2 per cent countercyclical capital buffer that was due in July 2020. • Norway – NB: Eased the countercyclical capital buffer by 1.5 percentage points; banks can temporarily breach the LCR. • Poland – NBP: Repealed the 3 per cent systemic risk buffer for bank capital requirements. • Portugal – Banco de Portugal (BP): Relaxing some aspects of its macroprudential measures for consumer credit; series of measures directed to less significant banks under its supervision; possibility to temporarily operate below selected capital and liquidity requirements. • Russian Federation – CBR: Introduced measures to ease liquidity regulations for systemically important credit institutions and cancelled add-ons to risk weights for mortgage loans. • Slovak Republic – NBS: Lowered the capital buffer for systemically important institutions for one of the systemically important banks (Postova Banka) from 1 to 0.25 per cent, effective 1 January 2021. • Spain – BdE: Adopted new macroprudential liquidity tool empowering the National Securities Market Commission to modify requirements applicable to management companies of Collective Investment Schemes. • South Africa – SARB: Extended easing of macroprudential policies until further notice. • Sweden – Riksbank: Eased countercyclical capital buffer by 2.5 percentage points; introduced the possibility for banks to temporarily breach the LCR for individual currencies and for total currencies; suspended amortisation requirement; extended the phase-in period for banks to comply with the new minimum requirements for own funds and eligible liabilities. • Switzerland – SNB: Deactivated the countercyclical capital buffers; Swiss Financial Market Supervisory Authority (FINMA) temporarily excluded deposits held at central banks from the calculation of banks' leverage ratio. • Turkey – Bankacılık Düzenleme ve Denetleme Kurumu (BDDK): Loosened the macroprudential restrictions on credit card spending by low-income households. • United Kingdom – BoE: Reduced the UK countercyclical buffer rate to 0 per cent from a pre-existing path towards 2; Prudential Regulation Authority (PRA): postponed the publication of results of 2019 Insurance Stress Test 2019 (including a climate change exploratory exercise) and the next Insurance Stress Test until 2022; PRA and Financial Policy Committee: postponed the launch of the Climate Biennial Exploratory Scenario exercise for large banks and insurers until at least mid-2021.

3. Other central banking or supervisory policies	
(7) Further financing schemes and other initiatives	• Cambodia – NBC: Published guidelines to financial institutions on loan restructuring for borrowers experiencing financial difficulties (but still performing) in priority sectors (tourism, garments, construction, transportation and logistics). • Chile – CMFC: Used mortgage guarantees to safeguard SME loans. • Fiji – RBF: Expanded the SME Credit Guarantee Scheme to assist small entities. • Indonesia – BI: Introduced initiatives to further financial deepening, access to financial services, and monetary operations, including by facilitating collaboration between the banking industry and fintech companies, introducing Sharia-compliant instruments and including digital payment in various sectors. • Jordan – CBJ: Reduced the cost and expanded the coverage of guarantees provided by the Jordan Loan Guarantee Corporation on SME loans to the tourism sector. • Mauritius – BOM: Introduced special credit line of Rs5 billion (1.1 per cent or GDP) through commercial banks for affected firms to meet their cash flow and working capital requirements. • Nigeria – CBNG: Coordinated a private sector special intervention initiative targeting N120 billion (US$333 million) to fight COVID-19. • Peru – BCRP: Approved 60 billion soles (over 8.8 per cent of GDP) package in liquidity assistance (backed by government guarantees) to support lending and the payments chain. • Singapore – MAS: Introduced S$125 million support package to sustain and strengthen financial services and fintech capabilities (funded by the Financial Sector Development Fund, this package has three main pillars: supporting workforce training and manpower costs; strengthening digitalisation and operational resilience; and enhancing fintech firms' access to digital tools). • Sri Lanka – CBSL: Construction sector is eligible to borrow from banks with government guarantees. • Timor-Leste – Banco Central de Timor-Leste (BCTL): Extended access to the Credit Guarantee System to micro-enterprises and increased the type of economic activities eligible for the programme. • United Kingdom – BoE: Launched the joint HM Treasury–Bank of England Covid Corporate Financing Facility which, together with the Coronavirus Business Loans Interruption Scheme, makes £330 billion of loans and guarantees available to businesses (15 per cent of GDP). • Uruguay – BCU: Expanded the fund that guarantees loans for SMEs from US$50 million to US$500 million (utilising financing from international organiszations).
(8) Management of central bank portfolios	• No initiatives found.

(9) Supporting sustainable finance (examples of measures newly implemented in the context of COVID-19)	• Brazil – BCB: Launched sustainability agenda to embed green and climate issues into its policies and decisions on currency reserves management, bank stress tests and lending criteria. • China – PBC: Released draft Green Bond Endorsed Project Catalogue (2020 edition) which will unify green bond guidelines. • Colombia – Financial Superintendence of Colombia: Created Sustainable Finance Working Group to implement its sustainability strategy; published a Good Practice Guide for Issuing Green Bonds. • Costa Rica – BCCR: Included analytical activities on climate change within Strategic Plan 2020-2023. • Austria, Belgium, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Luxemburg, Malta, the Netherlands, Portugal, Slovak Republic, Slovenia and Spain – ECB: Launched public consultation on guide on climate-related and environmental risks. • Ecuador – Central Bank of Ecuador (BCE): Leads newly launched Sustainable Finance Initiative. • France – BdF: Introduced responsible investment strategy focused on five objectives: (i) getting aligned with a 2°C trajectory; (ii) contributing to financing the energy and ecological transition; (iii) integrating a filter into its asset management procedures based on ESG ratings and climate indicators; (iv) exercising its voting rights (for 100 per cent of companies in which it is a direct shareholder); and (v) influencing issuers. Autorité de Contôle Prudentiel et de Résolution (ACPR): Published report on 'Governance and management of climate-related risks by French banking institutions'. • Georgia – NBG: Published ESG reporting and disclosure principles. • Germany – Federal Financial Supervisory Authority (BaFin): Announced sustainable finance is as a supervisory priority. • Hong Kong – HKMA: Created Green and Sustainable Finance Cross Agency Steering Group. • Hungary – MNB: Endorsed the UN's Principles for Responsible Investment. • Malaysia – BNM: Issued the first cohort of the VBIAF Sectoral Guides on Palm Oil, Renewable Energy and Energy Efficiency. VBIAF Sectoral Guides also support the climate-change initiative by BNM. • Mexico – Banxico: Created a Sustainable Finance Committee. • Mongolia – Mongolbank: Launched Green Loan Statistics based on the Mongolian Green Taxonomy (2019) to calculate the amount and ratio of green loans in portfolios. • Philippines – BSP: Introduced Sustainable Finance Framework to safeguard the financial system from the evolving material hazards from climate change and energy transition risk including stranded assets. • Russia – CBR: Began consultation on the prospects for estimating and monitoring of climate risks. • Singapore – MAS: Issued three consultation papers on Proposed Guidelines on Environmental Risk Management for banks, asset managers and insurers. • South Africa – SARB: Published working paper on 'Climate change and its implications for central banks in emerging and developing economies'. • Sweden – Riksbank: Launched consultation on the sustainable finance strategy for improved and uniform disclosure of climate-related risks. • Switzerland – FINMA: Began addressing climate risks in the financial sector. • Thailand – BOT: Signed MoU with UK government to develop the financial sector to support inclusive growth with consideration for the wider implications of policies on the economy, environment – in particular risks from climate change – and those who are disadvantaged in society. • United Arab Emirates – Abu Dhabi Global Market: Launched the Abu Dhabi Climate Initiative.

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