

Economic Letter

COVID-19: Monetary policy and the Irish economy

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COVID-19: Monetary policy and the Irish economy¹

Policy makers and governments across the world are taking exceptional measures against the ongoing health and economic crisis resulting from the spread of COVID-19. The Central Bank has taken action within all aspects of its mandate, including through participation in monetary policy decisionmaking in the Eurosystem. This Letter describes the monetary policy actions taken to combat the crisis, in particular liquidity policies and asset purchases, and outlines what these measures mean for Ireland.

Introduction

The spread of COVID-19 is a major shock to economic growth prospects across the globe. The pandemic is disrupting economic activity, both internationally and in Ireland, with adverse implications for the financial position of households, businesses and the financial system in the near term. Countries and policy makers across the world are taking exceptional measures against this health and economic crisis. As we move further along the disease trajectory, the economic costs are becoming higher, and predicting the path ahead has become nearly impossible, as multiple dimensions of the crisis are unprecedented and unpredictable.

The rapid deterioration in the global outlook has been met with increasingly large policy measures. Central banks across the world have responded to counter the impact of the coronavirus pandemic.² There have been numerous monetary policy meetings over the past few weeks, many of which were unscheduled, and policy actions have been rapidly taken.

The Central Bank of Ireland contributed to this response as a member of the Eurosystem and the Governing Council of the European Central Bank (ECB).3 In two meetings on March 12 and 18, the ECB Governing Council announced a series of monetary policy measures aimed at supporting households and firms through the significant uncertainty and disruption being caused to the euro area economy. This letter documents these measures, in particular the liquidity policies and the asset purchases, in the context of the Irish economy.

The response to the crisis by the Central Bank is multifaceted, and involves all aspects of its mandate. In addition to the monetary policy measures, decisions made by the ECB's Supervisory Board allowing banks to use capital and liquidity buffers fully are also important policy responses

¹ The views presented in this paper are those of the authors alone and do not necessarily represent the official views of the Central Bank of Ireland or the European System of Central Banks. The authors are grateful for the contributions of several colleagues which have informed parts of this Letter, including: Conor Parle, David Byrne, Mary Everett, Brian Golden, Robert Goodhead, Giuseppe Corbisiero and Zivile

² See Appendix 1 for an overview of responses by a selection of 12 central banks.

³ The Eurosystem comprises the European Central Bank (ECB) and the National Central Banks (NCBs) of those countries that have adopted the euro.

enabling the banking system to continue supporting households and businesses in this challenging time. Additionally, the Central Bank, in its role as macroprudential authority in Ireland, has responded by cutting the Irish Countercyclical Capital Buffer (CCyB) rate to 0 per cent. The CCyB is part of the Central Bank's macroprudential toolkit and is considered a useful instrument to promote a stable financial system in times of financial and economic distress.4

Overall, economic policy action during the acute phase of the crisis needs to be implemented swiftly and targeted to those most affected. Central to this are the decisions taken, not only by central banks, but in particular by governments. Fiscal policy needs to support the health sector and measures to counter the economic consequences of the pandemic; this will increase public debt burdens. While this virus is an exogenous shock that is more or less common across countries, debt sustainability concerns could prompt an unmanageable spike in individual countries' borrowing rates. A purely national approach to this common and unavoidable shock could result in funding difficulties for some countries and undermine the European Union as a whole. Therefore, a unified and coordinated approach will benefit all European member states, including Ireland.

Recent monetary policy decisions lay the groundwork for an ambitious and coordinated European fiscal policy response to mitigate the economic impact of the virus and support workers and businesses. Additional asset purchases by the ECB for the remainder of 2020 will amount to around 7.3% of euro area GDP.5 The cost of borrowing for governments is low, and will be kept low by these asset purchases. Governments thus can more easily issue debt to respond to the crisis.

The remainder of this Letter outlines in greater detail the monetary policy actions taken by the Central Bank of Ireland through its membership in the Eurosystem. We provide an overview of the effects of the pandemic on the economy and focus in particular on the liquidity policies and the asset purchases being undertaken to combat these effects, and what they mean for Ireland.

Economic effects of COVID-19: an Irish perspective

COVID-19 constitutes an unusual shock, involving demand, supply and confidence or uncertainty effects. Moreover, it is very hard to forecast the disruption in any given economy due to the uncertainty surrounding severity of the outbreak and the necessary public-health measures undertaken to contain it.6

https://www.ecb.europa.eu/press/blog/date/2020/html/ecb.blog200319~11f421e25e.en.html

⁴ A discussion of the rationale for this decision can be found in "Releasing the CCyB to support the economy in a time of stress", Financial Stability Note No.1 2020.

⁵ See comments by President Lagarde:

⁶ The most recent Central Bank Quarterly Bulletin makes heavy use of judgement and draws on a range of analytical tools, in an attempt to provide some assessment and estimate of the impact of the crisis

On the demand side, the shock has two components; an international trade effect and a domestic demand effect. The trade effect is due to a fall in demand for domestic goods from abroad, because of the economic shock arising from the crisis worldwide. The fall in domestic demand comes from reduced consumption due to lockdown restrictions, increased uncertainty and short-term unemployment arising from the crisis on a local level. Falling consumer confidence can lead to deferrals in longer-term discretionary purchases and exacerbate the downturn.

At the same time, there is a direct supply side shock. First, international supply chains have slowed, reducing the availability of goods produced abroad used in local production. Secondly, an additional supply shock derives from the vast numbers of businesses that are unable to operate due to the virus and the necessary containment measures. This will lead to a period of inactivity for both workers and firms.

The costs of a period of inactivity for both firms and workers is likely to lead to a "cash crunch", where meeting ongoing fixed costs (e.g., rent, interest payments) becomes difficult, even in the absence of long term solvency concerns. These effects are magnified by uncertainty about how long the pandemic will last. The pandemic will cause long-term damage to the economy if it lasts for a protracted period.

Monetary policy response in the context of Ireland

Ireland's role in monetary policy decision making at the ECB

The Governing Council is the primary decision-making body of the Eurosystem. It comprises the six members of the ECB's Executive Board and 19 Governors of the National Central Banks (NCBs) of the euro area. As a member of the Eurosystem, the Central Bank of Ireland plays an important role in developing and implementing monetary policy. The Central Bank of Ireland contributes to the formation of euro area monetary policy via the Governor's membership on the Governing Council. It also contributes via a range of Eurosystem committees and task forces that feed into the Governing Council. Centralised decision-making is accompanied by decentralised implementation, as specified in Article 12 of the Treaty on the Functioning of the European Union (TFEU), whereby NCBs carry out monetary policy operations, when possible or appropriate.⁷

In considering the appropriate monetary policy response to mitigate the effects of the pandemic, one must consider its unusual and unprecedented nature. In contrast to the previous economic crisis in Europe, the current crisis comes from an external public health shock, meaning that usual moral hazard concerns do not apply. The exceptional size and nature of the shock

under certain assumptions in the Irish economy. See Central Bank of Ireland Quarterly Bulletin, April

⁷See: https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:12012E/TXT.

requires an appropriate and strong response. Supply of bank credit during the pandemic is important to keep fundamentally sound firms afloat that would otherwise not be able to survive the pandemic-related losses.

While fiscal policy will be paramount in counteracting the effects of the coronavirus pandemic, monetary policy can help prevent it morphing into another sovereign debt crisis. It can safeguard liquidity conditions, protect the flow of credit, and prevent a pro-cyclical tightening of financing conditions. Moreover, the fiscal burden of the pandemic will be great, and monetary policy can ensure that interest rates on sovereign debt remain low.

The full package of measures announced by the Governing Council following its meetings in March is outlined in Box 1. In this letter, we will focus on the two main planks of the package: the targeted longer-term refinancing operations (TLTROs) and asset purchases. These measures are likely to have the most significant impact on the macroeconomic environment in the euro area, including Ireland, in the months ahead.

Box 1: Timeline of monetary policy responses by the ECB's Governing Council

At the scheduled meeting of ECB Governing Council on 12 March 2020, a number of policy measures were announced:

- Additional longer-term refinancing operations (LTROs);
- 2) More favourable terms on the targeted longer-term refinancing operations (TLTROs);
- Additional net asset purchases under the Asset Purchase 3) Programme (APP).

The Governing Council strengthened its response to COVID-19 outbreak on 18 March, with the announcement of:

- A new temporary asset purchase programme (Pandemic Emergency Purchase Programme or PEPP);
- Broadening of eligible assets under the corporate sector purchase programme (CSPP) to include non-financial commercial paper of sufficient credit quality;
- Expansion of eligible collateral with respect to refinancing operations, to include additional claims related to the financing of the corporate sector under Additional Credit Claims (ACC).

The additional LTROs will be conducted on a temporary basis until June 2020 to provide immediate liquidity support to the euro area financial system. They are being carried out under a fixed rate full allotment procedure with an interest rate equal to the average rate on the deposit facility over the period.

⁸ The nature of this crisis and how it calls for a common responses is highlighted by: <u>Bénassy-Quéré et al.</u> (2020), Gourinchas (2020), Giavazzi and Tabellini (2020), and Wolf (2020).

Targeted Long-term Refinancing Operations (TLTROs)

TLTROs are Eurosystem liquidity operations that provide longer term financing to credit institutions. The objective of TLTRO is to stimulate credit supply and its design incentivises bank lending to the private sector. By offering banks longer-term funding at attractive conditions they preserve favourable borrowing conditions for banks and stimulate bank lending to the real economy. The TLTROs are targeted operations, as the amount that banks can borrow is linked to the amount of loans on their balance sheets and the interest rate a bank pays is linked to their lending patterns. The more loans that participating banks issue to the real economy, the more attractive their interest rate, up to a certain point. The TLTROs, therefore, reinforce the ECB's current accommodative monetary policy stance and strengthen the transmission of monetary policy by further incentivising bank lending to the real economy.

TLTRO-III is a series of seven quarterly liquidity operations, each with a maturity of three years, starting in September 2019. The "targeted" aspect of the operations refers to lending to non-financial corporations and to households excluding loans for house purchase. This is what is called "eligible lending". Examples of eligible lending include lending to Small and Medium Enterprises (SMEs) and consumer credit to households. Mortgages are not part of eligible lending. The rationale for excluding loans for house purchase is to dissuade credit from flowing to areas, like real estate, that may be prone to asset price bubbles, while at the same time, stimulating credit to more productive sectors. The so-called "entry rate" on the operation, or the interest rate that banks can achieve regardless of how their lending activity develops, is linked to the rate on marginal refinancing operations (MRO), which is currently set at zero. The rate a bank pays will decrease in line with their eligible lending activity up to a certain point; the minimum rate that a bank can achieve will be linked to the deposit facility rate (DFR), which is currently set at -50bps. This minimum rate will apply if a bank manages to achieve a specific lending performance threshold.

In March 2020, the ECB's Governing Council decided to ease the conditions on this operation in light of the COVID-19 shock. Specifically, they made the lending performance threshold easier to achieve and decided to reduce the interest rates on all outstanding liquidity in this operation by 25 basis points for a year starting from the next operation in June 2020. This means that over this period the rate that will apply to banks will start at -0.25% and can be as low as -0.75% if the bank achieves the lending benchmark for the programme. The maximum total amount that counterparties can borrow has also been increased from 30% to 50% of the eligible loans on their balance sheets less outstanding TLTRO funds, against adequate collateral. This raises the total possible borrowing amount by more than €1 trillion for euro area banks. Overall, the programme ensures that euro area

⁹ See Introductory statement to the press conference (with Q&A) by Mario Draghi, President of the ECB, 5 June 2014: https://www.ecb.europa.eu/press/pressconf/2014/html/is140605.en.html

banks, including those in Ireland, have recourse to stable funding at favourable terms, particularly in times of stress.

What does this mean for bank lending to firms and households in Ireland?

Irish banks engage with the Central Bank of Ireland, not with the ECB, when borrowing in TLTRO, in line with the decentralised implementation of monetary policy, as set out in the TFEU. Taking into account the stock of eligible loans and the outstanding TLTRO borrowings, the main Irish retail banks could potentially borrow just in excess of €20 billion in these operations.

Loans for house purchase are not included in eligible lending and thus the stock of mortgages held by Irish banks does not count towards the borrowing allowance in TLTRO. While banks can use liquidity drawn down in TLTRO for any purpose, the interest rates they can achieve on the funds obtained are not linked to developments in mortgage lending.

Overall, banks benefit from a reduction in funding costs associated with the attractive terms on TLTRO. A general reduction in bank funding costs, even a temporary one, could and should be reflected in the interest rates they offer their customers, particularly so for variable rates. The most attractive rates on the operation are only applicable on the liquidity outstanding for one year from June 2020; therefore, banks would need to take account of the maturity mismatch present if they fund a long-term asset, like a mortgage, with this liquidity. Loans to businesses and to households for consumer credit tend to be for shorter maturities and are, therefore, more appropriately matched to TLTRO funding.

The uncertainty about the eventual outcome of the COVID-19 pandemic and the economic fallout make it difficult for households and firms to borrow to finance investment. The TLTRO can help in these circumstances by ensuring there is adequate liquidity at favourable terms, which is crucial in terms of helping households and businesses struggling with cash flow problems in the current environment. When the recovery starts, the TLTRO can help stimulate the economy by making it easier and less expensive to borrow, encouraging firms and consumers to accelerate investment and purchasing decisions.

Asset purchases

The Governing Council announced an additional envelope of €120 billion in net asset purchases under the Asset Purchase Programme (APP) until the end of 2020, at their meeting on 12 March 2020. Purchases of assets from the private sector in the Corporate Sector Purchase Programme (CSPP) - specifically bonds issued by euro area firms - will make up a significant portion of this amount, as well as government bonds.

As the crisis related to the pandemic further escalated, on the 18 March 2020 the Governing Council announced a package of additional, more substantial measures, including a new temporary Pandemic Emergency

Purchase Programme (PEPP) to counter the serious risks to the transmission of monetary policy and to the macroeconomic outlook for the euro area. Under the PEPP, asset purchases worth another €750 billion will be conducted throughout 2020, including securities issued by the Greek government that are excluded from the APP. Furthermore, the purchases now also include euro area short-term corporate debt securities, or "commercial paper". This should free up banks' capacity to grant credit to smaller firms by making it easier and less costly for larger non-financial corporations to issue debt. Together, the monthly purchases under the APP and the PEPP, will amount to just over €1 trillion in asset purchases between now and the end of the year.

Furthermore, the ECB announced explicitly that it would consider revising the "self-imposed limits", if necessary. This refers to two limits: an issue and issuer limit in the public sector purchase programme. The issue share limit is the maximum share of a single security that the Eurosystem is prepared to hold and the issuer limit is the maximum share of an issuer's outstanding securities that the ECB is prepared to buy. These limits can be binding and so alleviating them can allow for a more unconstrained response to the macroeconomic shock hitting the world economy.

The Governing Council has explained that it is fully prepared to increase the size of its asset purchase programmes and adjust their composition. They have communicated that they will do everything within their mandate to support all citizens of the euro area through this challenging time.

What do these asset purchases mean for Ireland?

These additional net asset purchases together with easier collateral standards will support financing conditions for the real economy in Ireland, during this current period of heightened uncertainty. 10

Of the asset purchases, the CSPP and its expansion into commercial paper will offer the most direct financing support for euro area firms. In sectoral terms, utilities, industrial and communications businesses account for almost half of the eligible universe of CSPP securities in the euro area. 11 The Finnish central bank conducts the purchases of bonds issued by Irish resident corporates. 12 Irish corporate bonds in the CSPP include issuances by the following firms: Ryanair, Caterpillar International Finance, ESB, Kerry Group, Dublin Airport Authority (DAA), Gas Networks Ireland, Partner Re Ireland Finance, CRH, Fresenius, Zurich, Eaton Capital and Liberty Mutual. 13 Purchases of debt from firms that are heavily exposed to

 $^{^{10}}$ On 18 March, the Governing Council also decided to ease the collateral standards by adjusting the main risk parameters of the collateral framework. In particular, the Eurosystem will expand the scope of Additional Credit Claims (ACC) to include claims related to the financing of the corporate sector. See: https://www.ecb.europa.eu/press/pr/date/2020/html/ecb.pr200318 1~3949d6f266.en.html

¹¹ See: "The ECB's corporate sector purchase programme: its implementation and impact", Box in ECB Economic Bulletin, Issue 4, 2017.

 $^{^{12}}$ The CSPP purchases are carried out by six NCBs acting on behalf of the Eurosystem. The ECB coordinates the purchases. The NCBs conducting the purchases are the Nationale Bank van $Belgi\ddot{e}/Banque\ Nationale\ de\ Belgique,\ the\ Deutsche\ Bundebank,\ the\ Banco\ de\ Espa\~na,\ the\ Banca\ d'Italia,$ the Banque de France and Suomen Pankki - Finland's Central Bank.

¹³ See: https://www.ecb.europa.eu/mopo/implement/omt/html/index.en.html#cspp

the pandemic and the related containment measures should be particularly beneficial at the current juncture.

While it is typically larger firms that issue debt securities and commercial paper eligible for purchase in the CSPP, the expansion in the programme can have positive spillovers to other sectors. First, interest rate reductions, and thus easier financing conditions, at least partly cascade from eligible to non-eligible corporate bonds; second, the CSPP frees up capacity on banks' balance sheets that they can use to lend to bank-dependent firms, such as SMEs. Therefore, while they tend not to benefit directly, SME financing conditions improve because of the programme. Money market funds (MMFs) based in Ireland, which constitute a large share of the euro area MMF industry, predominantly hold commercial paper issued by banks rather than non-bank commercial paper targeted by the ECB programme. More generally, MMFs have been adversely affected by a lack of liquidity in money markets since late February. The expansion of CSPP to commercial paper should have an indirect, second round effect on these liquidity conditions, however, by relieving pressures on the balance sheets of their counterparties and relative bid-ask spreads across debt markets. Indeed, since the expansion of CSPP to commercial paper, MMFs have shown some sign of stabilisation.¹⁴

Public sector bonds will be purchased in line with the ECB capital key.¹⁵ Since the cost of borrowing for governments is low, and will be kept low by the asset purchases, governments can more easily issue debt to respond to the crisis.¹⁶ This will help alleviate concerns regarding the sustainability of debt in Ireland and in other euro-area countries, which was a key concern in the previous euro area sovereign crisis.

Our recently published Quarterly Bulletin projects that the impact on the general government balance will be to move from an estimated surplus of 0.4 per cent of GDP to a deficit of 6 per cent of GDP.¹⁷ The purchase programme aims to safeguard favourable financing conditions in all euro area countries. Overall, these measures ensure supportive financing conditions for Irish firms and facilitate the Irish government's response to the pandemic.

Conclusion

It is extremely difficult to quantify the exact magnitude of the impact of the pandemic on the macroeconomic environment, but is clear that there will

 $^{^{14}}$ See "The ECB's commercial paper purchases: A targeted response to the economic disturbances caused by COVID-19". Blog post by Luis de Guindos and Isabel Schnabel.

https://www.ecb.europa.eu/press/blog/date/2020/html/ecb.blog200403~54ecc5988b.en.html

15 The capital of the ECB comes from NCBs. Each NCB's share is determined by the respective country's share in the total population and gross domestic product of the European Union (weighted equally). See: https://www.ecb.europa.eu/ecb/orga/capital/html/index.en.html

¹⁶ As of end-March 2020, the book value of the cumulative net purchases by the Eurosystem of Irish Government debt under the PSPP was almost €34.5billion. See:

https://www.ecb.europa.eu/mopo/implement/omt/html/index.en.html#cspp

¹⁷ Quarterly Bulletin 2, April 2020, page 7: https://centralbank.ie/docs/default-source/publications/quarterly-bulletins/qb-archive/2020/quarterly-bulletin---q2-2020.pdf?sfvrsn=6

be sharp contractions in the level of output, household spending, corporate investment and international trade. To overcome this crisis many households and firms will have to resort to emergency credits to sustain businesses and living standards.

The Central Bank of Ireland, as a member of the Eurosystem, has responded rapidly to help mitigate the threat posed by the global pandemic to our economy in the euro area. The policy measures outlined in this Letter aim to ensure supportive financing conditions for all sectors in the economy - individuals, families, firms, banks and governments - as they navigate this challenging period. In particular, the Irish government's ability to respond decisively to the pandemic is enhanced by the accommodative monetary policies measures in introduced in March. At the same time, expansions in liquidity measures and asset purchases ensure that credit continues to flow to households and businesses during this difficult time and that the financial system does not amplify the shock to the economy.

In addition to monetary policies, the Central Bank of Ireland supports the economy, by providing protection and information to consumers who are trying to navigate the crisis. 18 Macroprudential measures are also important in combatting the current crisis, as outlined in De Nora et al (2020). Notwithstanding the importance and necessity of central bank actions, they are not sufficient to cope with the economic harm of the COVID-19 crisis. Crucially, there has to be a substantive and coordinated fiscal response to support businesses and households. This should aim, in particular, to mitigate as much as possible permanent damage to the economy so that when the pandemic recedes, the economy can grow again, and supply goods and services to meet demand.

¹⁸ See the Central Bank of Ireland Consumer Hub: https://www.centralbank.ie/consumer-hub

Appendix 1: Monetary Policy Actions of 12 Central Banks in response to the global pandemic¹⁹

Central banks across the world have responded rapidly to counter the impact of the coronavirus pandemic. Table A1 summarises the measures taken by 12 central banks, including the four major central banks, five central banks in other advanced economies and three in emerging market economies. The table details policy actions into four broad categories: interest rate cuts, asset purchases, lending schemes to encourage credit flow to the real economy, and liquidity provision. These are the main responses, however, central banks have instituted wide-ranging policies, and the list should not be considered exhaustive.

Most central banks have cut interest rates and provided liquidity to the financial system. By and large, central banks with the scope to do so have cut interest rates and policy rates are now at record-low levels in nearly all countries (Sweden is an exception). Furthermore, interest rates are near or below zero everywhere other than in Brazil, China, Iceland and India. In some cases, the cumulative sum of rate cuts have been very large: the Fed cut the Federal Funds target range by 150 basis points and Norges Bank cut its policy rate by 125 basis points. With respect to liquidity, central banks injected vast amounts through various repo operations and short-term loans. The Fed in particular established several liquidity facilities to address strains in various funding markets, including the standing US dollar liquidity swap line in a coordinated move with other central banks.

In addition, many central banks have increased or begun to purchase public and private debt securities. The ECB has increased its existing purchase programme by €120bn and created a new temporary programme to buy another €750bn of private and public debt securities, including Greek debt, in 2020. In Japan, planned equity purchases for the year have doubled. The Fed has embarked again on (unlimited) purchases of Treasury and agency mortgage-backed securities, including commercial mortgage-backed securities, and set up new facilities to purchase corporate bonds in both primary and secondary markets. Central banks in Australia, Iceland and New Zealand announced their first asset purchase programmes ever. Meanwhile, the Central Bank of Brazil is seeking legal permission to purchase government debt with the purpose of quantitative easing.

One of the main innovations in response to the current crisis is central bank support for lending to the corporate sector, with a particular focus on SMEs. Many central banks have begun or stepped-up purchases of short-term nonfinancial commercial paper (Fed, BoE, ECB, Sveriges Riksbank, Bank of Japan). In addition, several central banks now provide conditional loans for banks on favourable conditions to increase lending to the real economy. In Australia, the government developed a complementary facility for other types of lenders, such as non-banks. The BoJ lends against corporate bonds as collateral, while the Fed grants loans secured by collateral that includes

¹⁹ This Appendix was prepared by Zivile Zekaite (MPOL).

asset-backed securities backed by student loans, auto loans, credit card loans, etc. With regard to emerging economies, the Reserve Bank of India offers conditional three-year loans via repo operations, while the Central Bank of Brazil announced an emergency credit line to fund firms' payroll costs.

There have been additional auxiliary measures introduced by a number of central banks, reflecting the scale of the disruption. Central banks have altered reserve requirements (PBoC, Iceland, India) and eased collateral rules (Riksbank, Fed, ECB). The Reserve Bank of Australia is the second central bank (after BoJ) to introduce a policy of yield curve control, targeting a yield on 3-year government bonds of 0.25%. The list of monetary policy counterparties was expanded in some countries.

Table A1: Summary of monetary policy actions by twelve central banks

Country	Interest rate	Asset purchases	Lending facilities	Liquidity facilities	Other
Australia	By 50 bps to 0.25%	Government bond and semi- government securities (quantities unspecified)	Funding for banks, with access to extra funds if lending to businesses increases (at least A\$90bn), at 0.25% for 3 years; Australian government developed a complementary facility for non-banks, small lenders and the securitisation market (A\$15bn)	Short- and longer-term repo operations; US dollar swap line (Fed)	Yield curve control at 3-y maturity at 0.25%; remuneration of exchange settlement balances at 0.1%
Brazil	By 50 bps to 3.75%	Requested powers to purchase public and private debt with the purpose of quantitative easing	Funding for banks (loans packaged into long-term deposits acquired by central bank); funding for smaller lenders through guaranteed special bonds; emergency credit line for companies (joint with government and commercial banks)	Longer-term repo operations; a temporary liquidity line; US dollar swap line (Fed)	Min. reserve requirements reduced; exchange rate interventions; flexibility in collateral framework
China	1-y and 5-y loan prime rates cut by 10 bps to 4.05% and 5 bps to 4.75%; repo rate by 20 bps to 2.20%	-	Special loans at a favourable interest rate (half of 3.15%) to affected companies in Hubei province (¥2.4bn), processed by three commercial banks	Reverse repo operations to inject vast amounts of liquidity	(Targeted) required reserve cuts to increase lending to small business; interest rate lowered on a medium-term lending facility
Euro area	Unchanged at -0.50%	Government and corporate bond purchases: additional €120bn under existing programme and €750bn under the new facility, including non-financial commercial paper	Increased allowance under the targeted longer-term refinancing operations together with more favourable funding conditions and eased eligibility criteria	Additional (temporary) longer-term refinancing operations	Flexibility in collateral framework; flexibility in limits with respect to the new asset purchase facility
Iceland	By 100 bps to 1.75%	Government bonds (no details announced yet)	-	Reduced offerings of 1-month term deposits due to changed domestic market conditions	Average reserve requirements reduced; exchange rate interventions
India	By 75 bps to 4.40%	-	Targeted three-year repo operations at the policy rate to support credit flows (banks to increase holdings of investment-grade corporate bonds, commercial paper, etc.)	Marginal standing facility limit increased; long- and variable-term repo operations; foreign exchange swap line	Reserve requirements lowered
Japan	Unchanged at -0.1%	Doubled purchase pace of stock-annual ETFs (to Y12tn) and J-REITs (to Y180bn); ongoing purchases of JGBs to control yield curve; increased limits on commercial paper and corp. bond purchases (by Y2tn)	New operation to provide loans against corporate debt up with the maturity up to one year as collateral at 0% (Y8tn).	US dollar swap line (Fed)	-
New Zealand	By 75 bps to 0.25%	NZ\$30bn government bonds	Term funding of up to three years to complement the Government's Business Finance Guarantee Scheme, priced at a margin over the policy rate	Weekly open market operations backed by corporate and asset- backed securities; Term Auction Facility to offer loans with longer maturities; US dollar swap line (Fed)	Remuneration of cash balances
Norway	By 125 bps to 0.25%	-	-	Short- and longer-term loans to banks (F-loans), fully alloted; US dollar swap line (Fed); US dollar F- loans	Increased foreign exchange sales to finance gov. spending in response to the pandemic (oil revenue); extended list of monetary policy counterparties
Sweden	Lending rate cut by 55 bps to 0.2%; repo rate unchanged at 0%	Purchases of government, municipal, covered bonds and non-financial commercial paper (SEK300bn or \$245m)	Loans to banks of up to SEK500bn (\$51.64 billion) to be grant credit to the economy at repo rate (0%); loans in US dollars (\$60bn)	Unlimited 3-motnh loans against collateral (at 0.2%); US dollar swap line (Fed)	Flexibility in the collateral framework; list of counterparties expanded to all supervised institutions (the programme for lending to companies)
UK	By 65 bps to 0.10%	Government bonds and non- financial corporate bonds (£200bn); and non-financial commercial paper purchases	Funding scheme for banks with more favourable funding costs to those that increase net lending to economy	US dollar liquidity swap line; contingent term repo operations to allow borrowing bank reserves in exchange for other less liquid assets	-
US	By 150 bps to 0- 0.25%, discount window rate by 150 bps to 0.25%	Unlimited purchases of Treasury securities and agency (commercial) mortgage-backed securities and reinvestment; unsecured and asset- backed commercial paper purchases; corporate bonds in primary and secondary market	The Term Asset-Backed Securities Loan Facility (\$100bn) to enable the issuance of ABS backed by student loans, auto loans, credit card loans, loans guaranteed by the Small Business Administration. Three-year loans	mutual funds (includign short-term municipal debt); US dollar swap lines	Flexibility in the collateral framework; reduced pricing of some facilities; expanded eligible assets list under the commercial paper facility

Sources: NCBs, <u>www.centralbanking.com</u> and the IMF policy response tracker. *Note*: Table is updated to 3 April 2020.

