Problems and Opinions

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Monetary policy across the world in response to the COVID-19 pandemic[1]

Abstract

This paper presents monetary policy measures undertaken by selected central banks across the World following the outbreak of the COVID-19 pandemic, with a special focus on the Federal Reserve System and the Eurosystem. Against a background of falling global economic activity and rising risk aversion in global financial markets due to the pandemic, which was accompanied by announced or implemented large anti-crisis fiscal measures in many countries, a very large number of central banks eased their monetary policy. Not only did they lower short-term interest rates, they also employed a number of other tools, such as asset purchases, additional liquidity provision operations, foreign exchange interventions and swap lines. The universality, pace, range, and scale of monetary policy easing was unprecedented. At the current juncture, given the ongoing pandemic and the uncertainty about its economic impact, it is difficult to forecast the total scale and scope of the global monetary expansion.

Key words: monetary policy, central bank, US Federal Reserve System, European Central Bank, economic policy, COVID-19, pandemic

JEL: E52, E58

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1 This paper solely presents the opinions of the author and should not be interpreted otherwise.

Polityka pieniężna na świecie w reakcji na pandemię COVID-19

Streszczenie

W niniejszym artykule przedstawiono działania z zakresu polityki pieniężnej podjęte przez wybrane banki centralne w okresie luty–maj 2020 r., w reakcji na wybuch pandemii COVID-19, ze szczególnych uwzględnieniem Rezerwy Federalnej oraz Eurosystemu. W warunkach spadku aktywności gospodarczej na świecie i wyraźnego wzrostu awersji do ryzyka na rynkach finansowych wobec rozprzestrzeniania się pandemii, a także przy ogłoszonej lub podjętej jednocześnie antykryzysowej stymulacji fiskalnej w wielu krajach, bardzo duża liczba banków centralnych poluzowała politykę pieniężną. Władze monetarne stosowały zarówno obniżenie krótkoterminowych stóp procentowych, jak i szereg innych instrumentów takich jak skup aktywów finansowych, dodatkowe operacje zasilające w płynność, interwencje walutowe, linie swapowe. Powszechność, tempo, zakres i skala luzowania polityki pieniężnej miały charakter bezprecedensowy. Na obecnym etapie – ze względu na trwająca pandemię oraz niepewność dotyczącą jej gospodarczych skutków – trudno ocenić jakie będą łącznie skala i zakres ekspansji monetarnej na świecie.

Słowa kluczowe: polityka pieniężna, bank centralny, Rezerwa Federalna Stanów Zjednoczonych, Europejski Bank Centralny, Eurosystem, polityka gospodarcza, COVID-19, pandemia

Introduction

In early 2020, in the wake of the SARS-CoV-2 coronavirus epidemic and the efforts by the authorities in many countries to counteract the further spread of the disease, a sharp drop in global economic activity coincided with a marked increase in risk aversion in financial markets. Under these conditions, nearly all central banks worldwide markedly eased their monetary policy to limit the economic impact of the epidemic. With a view to easing financial conditions, central banks applied both short-term interest rate cuts (unless the rates were already negative) and a number of other easing measures, including the purchase of financial assets on an unprecedented scale.

The goal of the paper is to summarise the actions pursued by central banks between February and May 2020 in response to the SARS-CoV-2 coronavirus epidemic. Section 1 outlines the global macroeconomic and financial conditions in the context of the SARS-CoV-2 pandemic. Section 2 summarises the measures undertaken by a wide group of central banks worldwide between February and May 2020 *vis-a-vis* the pandemic. Sections 3 and 4 detail the relevant measures pursued by the US Federal Reserve System and the Eurosystem respectively.

1. Background

At the turn of 2019 and 2020 a number of cases of pneumonia were reported in China, due to infection by the previously unknown coronavirus (initially named 2019-nCov; later SARS-CoV2 and COVID-19 for the disease). In February 2020,

many cases of the disease were registered across Asia and Europe. The World Health Organisation (WHO) officially declared a pandemic on 11 March 2020. In the following weeks the SARS-CoV-2 virus reached almost all countries worldwide and the number of new cases registered per day rose from less than 2,000 in late February to over 70,000 in April 2020. With preventive measures in place, including a policy of *social distancing*, the daily number of confirmed new cases stabilised in April and early May 2020, and some countries saw a material decline.

Due to the rapid spread of SARS-CoV-2, many governments around the world implemented *social distancing* policies. Since early March, restrictions on community and business life were implemented in many countries, including most EU Member States and the United States[2]. Whereas these measures may have limited the spread of coronavirus, they had a dampening impact on economic activity.

The COVID-19 pandemic and the ensuing prevention measures impacted the economy in the short term via a number of channels, both supply and demand. As an immediate effect of the restrictions, production and added value in the sectors concerned declined. The pandemic also temporarily dampened the supply side of the economy by disrupting supply chains and decreasing labour productivity[3]. At the same time, the epidemic and the related restrictions and uncertainties adversely affected aggregate demand through several channels, including direct restrictions on consumption, deterioration of labour market conditions (and household income) and consumer sentiment.

Restrictions on business activity tamped down aggregate demand, through their dampening effect on the current and expected situation of employees in the labour market. Companies stopped or reduced their business, decreased orders and often decided to cut employment and wages. Furthermore, the consumption of complementary goods directly affected by the restrictions slumped[4]. In this way the initial supply shock very quickly triggered a parallel strong demand shock.

The adverse impact of the pandemic on aggregate demand was further aggravated by the situation in the financial markets, which was contributing to tighter financing conditions. Although no significant response in the financial markets was observed during the initial period of the epidemic, the outbreak in Italy in the second half of February 2020 was followed by a marked fall in share prices, an increase in risk premiums and capital outflow from emerging markets. Demand for liquidity in US dollars surged, and most currencies depreciated against the dollar. Yields on peripheral bonds of the Euro area countries increased, albeit to a lesser extent

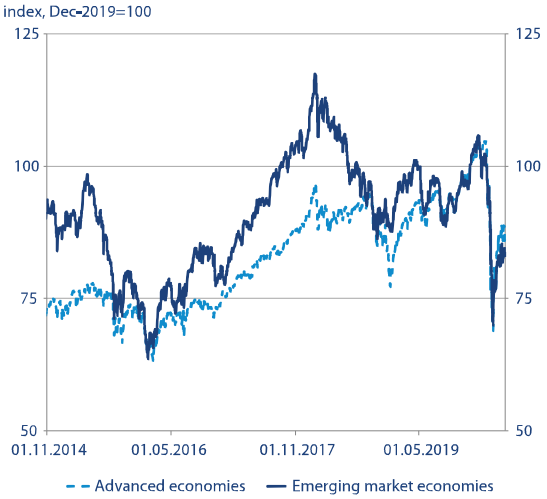
[2] T. Hale, A. Noam, B. Kira, A. Petherick, T. Philips, *Variation in government responses to COVID-19*, BGS Working Paper Series BSG-WP-2020/032, 2020.

[3] L. Fornaro, M. Wolf, *COVID-19 Coronavirus and Macroeconomic Policy*, Technical Report, Centre for Economic Policy Research, 2020.

[4] V. Guerrieri, G. Lorenzoni, L. Straub, I. Werning, *Macroeconomic implications of COVID-19: can negative supply shocks cause demand shortages?*, NBER Working Paper No. 26918, 2020.

than during the debt crisis of 2010–2012. There were also disturbances in the US Treasury bond market, with securities becoming less liquid and prices more volatile[5]. These trends were halted by measures pursued by central banks.

Figure 1. Share prices



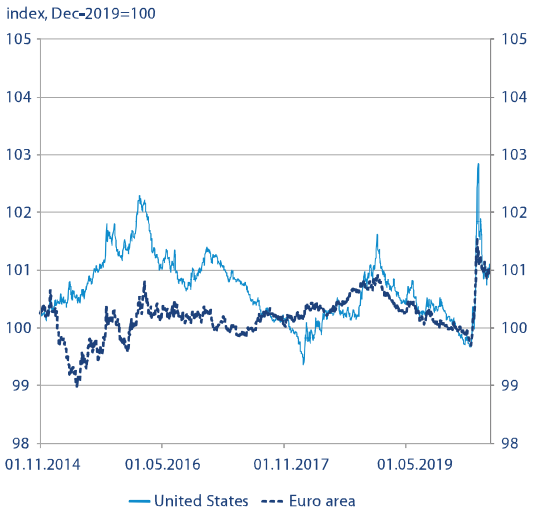
Source: Bloomberg data.

Figure 2. Nominal US dollar exchange rate, trade weighted (US dollar index)

Source: St. Louis Fed. data (https://fred.stlouisfed.org/series/DTWEXBGS).

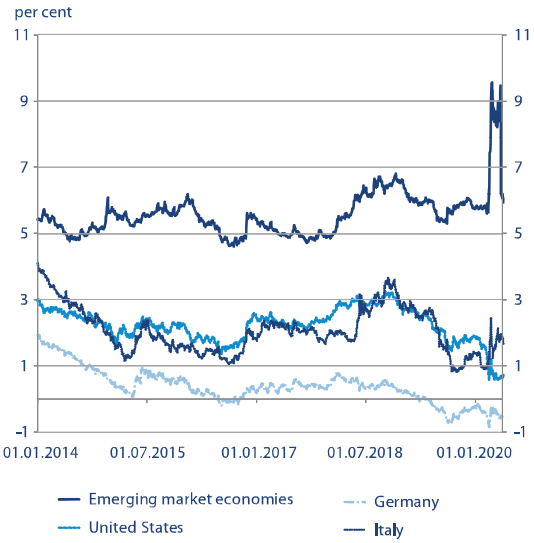
[5] M. Fleming, F. Ruela, *Treasury market liquidity during the COVID-19 crisis*, https://libertystreeteconomics.newyorkfed.org/2020/04/treasury-market-liquidity-during-the-covid-19-crisis.html, 17 April 2020.

Figure 3. Financing conditions in the Euro area and in the US



The *Goldman Sachs Financial Conditions Index* is established as a weighted average of risk-free interest rates, corporate bond yield spreads, stock prices and exchange rates (according to the estimated impact of individual variables on GDP).
Source: Bloomberg data.

Figure 4. Yields on 10-year government bonds

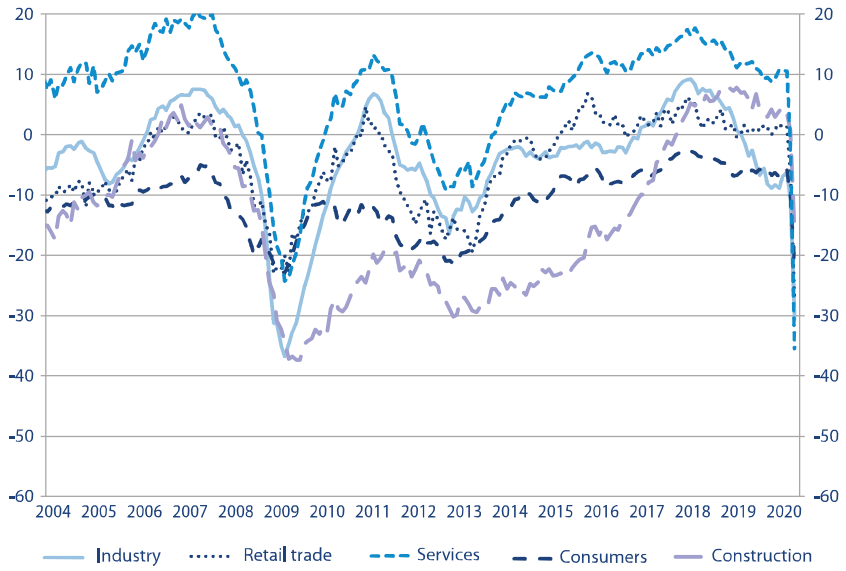


Emerging economies – Bloomberg Barclays Emerging Markets Sovereign Values.
Source: Bloomberg data.

Uncertainty proved an important factor dampening economic activity. Growing fears of unemployment supported the propensity to save, adversely influencing consumption. The risk of the epidemic relapse and uncertainty about the evolution of financing conditions may have discouraged economic agents from investing and increasing employment over the longer time frame, especially in sectors most exposed to prevention measures. According to the conclusions of different studies, uncertainty has a material role in fluctuations in economic activity. Uncertainty magnified the depth of the recession in the aftermath of the 2007–2009 financial crisis, for example[6].

A pandemic, featuring the massive spread of disease, means that the above processes take a global scope, and therefore subdues world trade.

Figure 5. Business climate indicators in the European Union

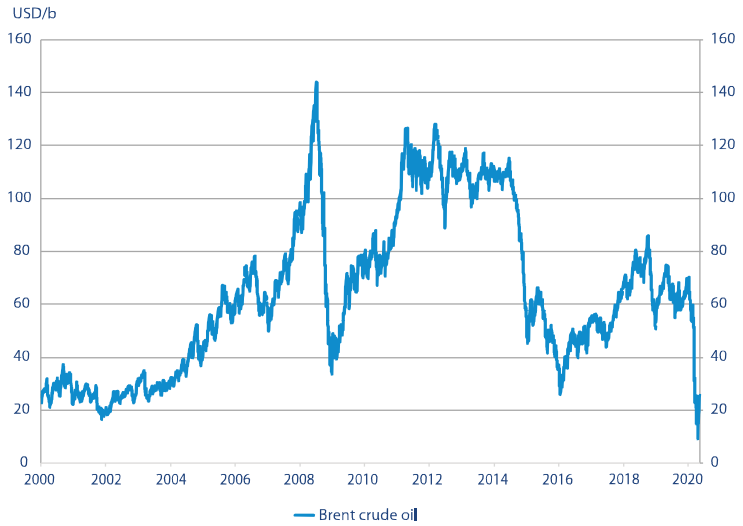


Source: European Commission (https://ec.europa.eu/info/business-economy-euro/indicators-statistics/economic-databases/business-and-consumer-surveys/download-business-and-consumer-survey-data/time-series_en). Cut-off date: April 2020.

The impact of the epidemic on price formation is an important aspect, especially for central banks pursuing an inflation targeting strategy. Commodity prices took a tumble, following the sharp contraction in economic activity, exerting a strong curbing effect on inflation.

[6] N. Bloom, *Fluctuations in Uncertainty,* Journal of Economic Perspectives 2014, Vol. 28, pp. 153–176.

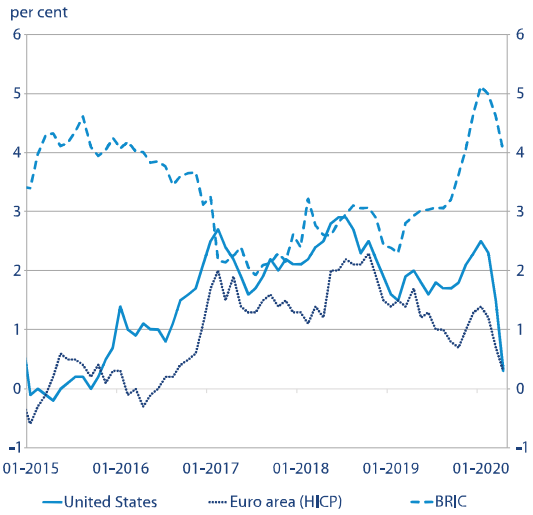
Figure 6. Brent crude oil price



Source: St. Louis Fed data (https://fred.stlouisfed.org/series/DCOILBRENTEU).

Initial experience and data available until May 2020 point to the predominance of the disinflationary effects of the COVID-19 pandemic. The major global economies posted falls in realised and expected inflation.

Figure 7. CPI in the US, Euro area and BRIC countries



CPI in BRIC countries – average inflation in Russia, Brazil, China and India weighted by GDP (for 2019).
Source: Source: Bloomberg data, IMF (World Economic Outlook April 2020).

Figure 8. Long-term market inflation expectations in the Euro area and the United States

Expected average inflation in 5 years for the next 5 derived from *forward inflation-linked swap rate.*
Source: Bloomberg data.

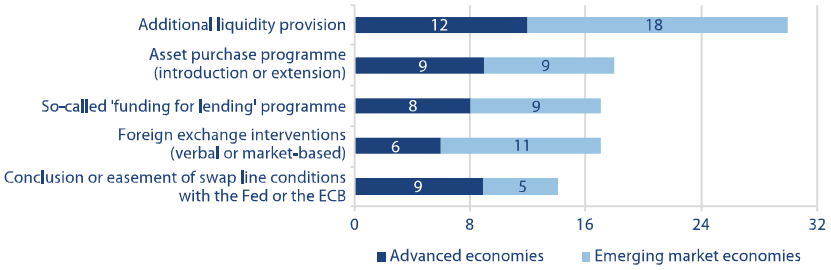
Against the backdrop of a massive deterioration in economic activity, many governments reached out for extensive fiscal stimulus measures, thus fuelling rapid upsurge in issuance of sovereign debt securities.

2. Monetary policy response by central banks to the COVID-19 pandemic

The spread of the COVID-19 pandemic prompted central banks around the world to undertake a number of monetary policy easing measures in the February-May 2020 period in order to mitigate the economic impact of the pandemic. To ease the monetary conditions, the central banks implemented short-term interest rate cuts and a number of other instruments. In particular, monetary authorities applied (Figure 9):

- additional operations providing liquidity to the banking sector, in some cases making the interest rate on these operations contingent on lending by the bank;
- asset purchase programmes;
- foreign exchange interventions;
- swap lines with the main central banks.

Figure 9. Selected measures between 1 February and 25 May 2020 of central banks from 12 developed and 19 emerging economies



Advanced economies: Australia, Denmark, Iceland, Japan, Canada, Norway, New Zealand, United States, Euro area, Switzerland, Sweden, United Kingdom.
Emerging market economies: Brazil, Chile, China, Croatia, Czech Republic, Philippines, India, Indonesia, Israel, South Korea, Malaysia, Mexico, Russia, South Africa, Romania, Thailand, Turkey, Ukraine, Hungary.
Source: Own study based on information from central banks' websites.

Nearly all the central banks worldwide reduced interest rates during this period (24 out of the 31 central banks examined; Figure 10, Figure 11). All those central banks in developed economies whose interest rates were positive in the early 2020 reduced their interest rates. As a result, nearly all developed economies posted zero or negative interest rates in May 2020[7,8]. In emerging economies, with materially higher pre-pandemic rates, the scale of rate cuts was even greater than in advanced economies, and stood at approx. 50–300 bps. Respectively, in most emerging market economies the interest rates also reached an all-time low, and in some of them the interest rates in May 2020 were already below 1.00%.

Already before the COVID-19 pandemic, nominal interest rates across the world were at very low levels, including zero or negative in many advanced economies. For some years, economists and central bankers were indicating that in a subsequent recession, a reduction in short-term interest rates may not suffice to support the economy[9]. For this reason, the monetary authorities in many countries around the world – although they did not foresee an epidemic – were well-positioned to employ monetary policy instruments that were previously considered unconventional[10].

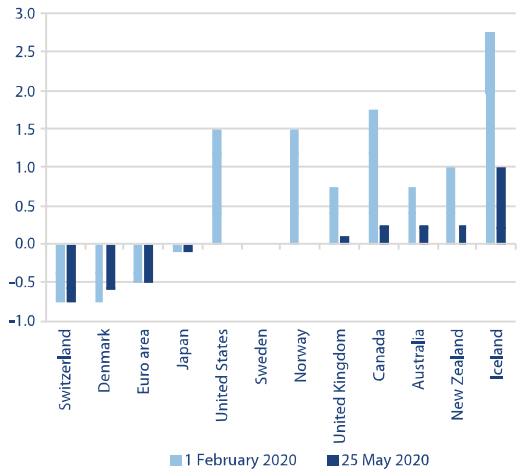
[7] With the exception of Iceland, where the nominal interest rates remained higher than in most other emerging economies since the 2008 banking crisis.

[8] In the Euro area, Switzerland, Japan, Norway, Denmark and Hungary, selected central bank interest rates were negative in late May 2020.

[9] Cf. for instance P. Szpunar, *Nowe wyzwania dla banków centralnych – czego nauczył nas globalny kryzys finansowy? [New challenges for central banks – what the global financial crisis taught us?]*, [in:] *Gospodarka narodowa wobec współczesnych procesów gospodarczo-finansowych w Europie [The national economy vis-à-vis contemporary economic and financial processes in Europe]*, L. Podkaminer (ed.), Wydawnictwo Wyższa Szkoła Finansów i Prawa w Bielsku-Białej [Editing House of Bielsko-Biała School of Finances and Law], Bielsko-Biała 2017, pp. 9–48 and BIS Committee on the Global Financial System, *Unconventional monetary policy tools: a cross-country analysis.* 2019.

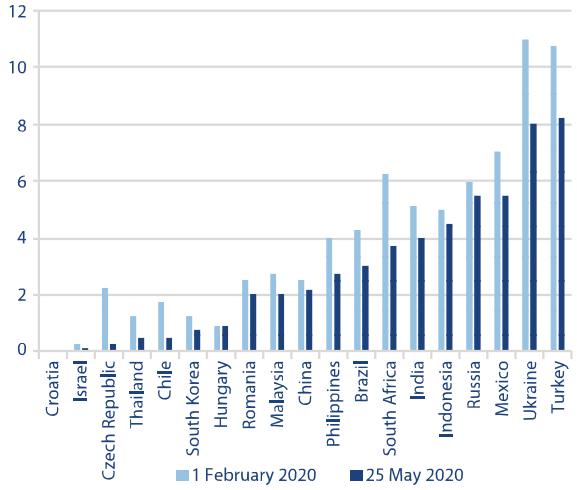
[10] Cf. for instance excerpts of minutes from FOMC meetings between July 2019 and January 2020 available on the Federal Reserve System website: https://www.federalreserve.gov/monetarypolicy/fomccalendars.htm

Figure 10. Central bank interest rates in selected advanced economies



Source: Bloomberg data.

Figure 11. Central bank interest rates in selected emerging market economies



Source: Bloomberg data.

The clear need for such actions is evidenced, for example, by the fact that despite lower nominal interest rates than in previous decades, even before the pandemic, amidst the marked slowdown in price growth due to recession in many advanced economies, real interest rates did not fall, even though central banks reduced nominal rates close to zero or below. On trepidation of the projected recession of unprecedented magnitude and the associated disinflationary or even deflationary

tendencies, central banks consequently decided to employ additional monetary policy instruments, apart from the reduction in short-term interest rates. Without this, there was a risk of pro-cyclical tightening of financing conditions, which may have aggravated the recession and spelled the emergence of deflationary tendencies.

Aside from interest rate cuts, the principal measures implemented by central banks in response to the pandemic included the large-scale purchase of financial assets. The crisis triggered by the COVID-19 pandemic was the first time in the history of modern central banking where many (18) in the pool of central banks around the world – both in advanced and emerging market economies – applied this instrument in response. Although similar actions were taken in previous years by monetary authorities in advanced economies, this time the scale and scope of purchases surpassed prior experience. In turn, for many emerging market economies, this was the first time that this monetary policy instrument was used in the history of the modern monetary system. In formulating justification for employing this instrument, monetary authorities generally invoked the need to support market liquidity and the transmission of interest rate cuts to the economy. Public sector bonds dominated in the assets purchased. On the top of that, central banks purchased other instruments such as corporate bonds, municipal bonds, mortgage bonds and asset-backed securities (MBS, ABS) – depending on the characteristics of the economy and the financial market as well as the market conditions. A number of central banks initially signalled *ex ante* the target scale of the asset purchases. Nonetheless, in the following weeks of the development of the crisis, many of them gradually increased the signalled scale, and some, including the Federal Reserve System, abandoned communicating it while asserting that the volume of purchases would be as high as necessary. At the same time, some central banks applied *yield curve targeting*, where they declared the target level of government bond yields with relevant terms to maturity, while also ceasing to communicate the target scale of purchase.

Another action in response to the spread of the COVID-19 epidemic undertaken by nearly all (30) of the central banks examined was the increase in the scale of liquidity-providing open market operations, despite the fact that in many of these economies the banking system operated under structural liquidity surplus. This was designed to moderate the risk of liquidity problems arising due to such factors as the risk of a drop in confidence between counterparties, which could lead to disturbances on the financial markets. In particular, the monetary authorities increased the offered and actual scale of liquidity-providing operations (in some cases without specifying a maximum scale or even signalling an unlimited potential scale), increased their frequency and extended their maturity. At the same time, some central banks expanded the spectrum of eligible collateral for credit operations (such as credit claims or mortgage bonds).

Apart from that, more than a half of the central banks examined (17) applied operations to provide the banking sector with liquidity, the interest rate of which depended on the credit activity of the relevant bank (referred to as funding for lending programmes). As declared, their objective was to stimulate bank lending.

In the initial phase of the COVID-19 crisis, the global financial markets experienced tensions due to a surge in demand for liquidity in the US dollar. In response, the Federal Reserve System established swap lines with some of the central banks worldwide – or enhanced the conditions of existing swap lines – providing US dollar liquidity at low cost. At the same time, some of the central banks (17) were engaged in verbal or actual market foreign exchange interventions. The direction of intervention was diverse, country-by-country, and the attitude of central banks to interventions in some of them changed over time.

3. US Federal Reserve System monetary policy in response to the COVID-19 pandemic

The United States Federal Reserve System (the Fed) identified relatively early the economic risks associated with the spread of SARS-CoV-2 coronavirus. Members of the Federal Open Market Committee (FOMC) at its meeting on 28–29 January 2020 noted that the outbreak of the epidemic in China boosted risk aversion, manifesting itself in a fall in equity prices and yields of U.S. Treasury securities. At the same time they pointed out that the spread of the virus was a new risk factor for the economic outlook. In a statement on 28 February 2020, J. Powell, president of the Federal Reserve System, mentioned that the coronavirus poses evolving risks to economic activity and that the Fed would use the available tools to support the economy.

On 3 March 2020, during an extraordinary FOMC meeting in response to the development of the epidemic, it was decided to lower the target range for the federal funds rate by 50 bps to 1.00–1.25%. The following days saw a number of decisions taken to extend the scope of the Fed's liquidity-providing operations. On 9–13 March 2020 it was decided to increase the scale of overnight (O/N) and two-week repo operations, and to launch liquidity-providing operations with a three-month maturity. It was also decided to extend the Treasury securities purchase programme with securities with a maturity of over one year. At the subsequent FOMC meeting on 15 March 2020, the target range for federal funds rate was lowered to 0.00–0.25%. The FOMC also announced that the Fed would purchase at least $500 billion of Treasury securities and $200 billion of MBS (mortgage-backed securities). Following its subsequent meeting on 23 March 2020, the FOMC declared that Fed would purchase government debt securities and MBS in the amounts needed to support smooth market functioning and effective transmission of monetary policy to broader financial conditions and the economy, without communicating the scale of the purchases.

At the same time, measures to support the liquidity of the banking sector were undertaken on 15 March 2020. Namely, it was decided to reduce the reserve requirement ratio to zero and to align the interest rate on loans granted through a *discount window* with the upper bound of the range for the federal fund rate (previously it had stood at 50 bps above the upper bound of the range). The Federal

Reserve System encouraged banks to draw from the credit facilities it provided, namely the intraday loan and the discount window. On 24 April 2020 access to intraday credit was facilitated by abolishing the limits for unsecured loans and simplifying the procedure for providing collateralised loans.

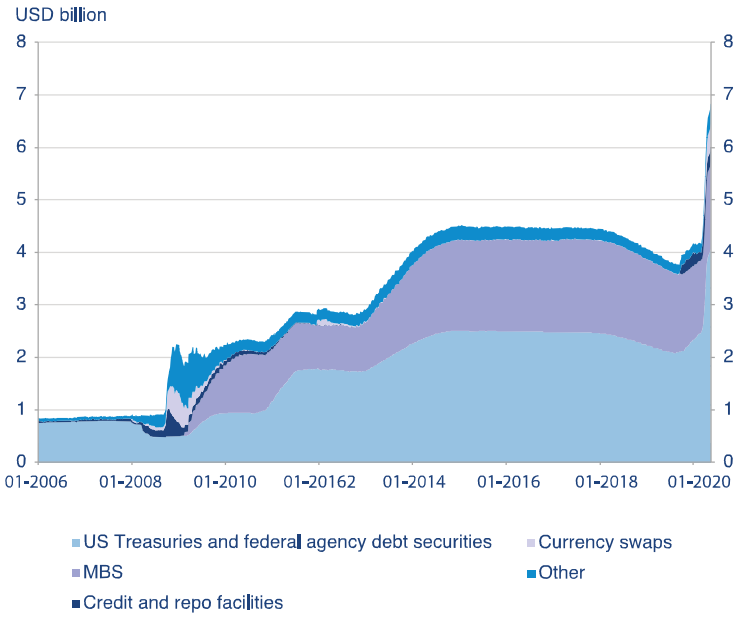
The Fed also took a number of measures to ensure the smooth operation of the corporate debt securities market and to maintain access for companies to financing. On 17 March 2020, it was decided to launch a Commercial Paper Funding Facility for short-term corporate debt securities and on 23 March 2020 the Fed announced that it would also purchase corporate bonds on the primary market (Primary Market Corporate Credit Facility) and secondary market (Secondary Market Corporate Credit Facility). April 2020 saw the launch of the Main Street Lending Programme. This allowed banks to grant 4-year loans to companies (with a one-year grace period in repayment) and then sell up to 95% of the loan value to the Main Street Lending Facility. The launch of the Paycheck Protection Programme Liquidity Facility was announced on 9 April 2020 to provide liquidity to financial institutions participating in the Paycheck Protection Programme. Paycheck Protection was to provide a two-year, low-interest, redeemable loan to small businesses, on condition that it was used to pay salaries or finance other fixed costs.

As regards other Fed measures aimed at maintaining the smooth functioning of the financial system and availability of financing, one should mention the Money Market Mutual Fund Liquidity Facility, announced on 17 March 2020, whereby money market funds acceded loans under a pledge of assets with a high investment grade and Term Asset Backed Loan Facility, introduced on 23 March 2020, to provide lending collateralised on loan-backed ABS (including car, card, student, equipment and accommodation). In order to ensure smooth operation of the Treasury debt securities market, on 17 March 2020, the implementation of 90-day liquidity-providing operations for treasury bond dealers (Primary Dealer Credit Facility) was announced.

On 23 March 2020 the range of assets that could serve as collateral for loans granted under the Money Market Mutual Fund Liquidity Facility was extended to include local government debt securities. These assets were also included in the Commercial Paper Funding Facility. On 9 April 2020 the launch of the Municipal Lending Facility was announced, whereby debt securities issued by cities, counties and states would be purchased.

Asset purchases and liquidity-providing operations resulted in a rapid increase in the Federal Reserve System total assets – in mid-May 2020 the assets of the Federal Reserve System were nearly 67% higher as against late February 2020 (see Figure 12) and exceeded by more than $1.5 trillion the figure at the end of previous quantitative easing programme in October 2014. The increase in the total assets primarily reflected both asset purchases (especially government debt securities), and the launch of new credit facilities. Between late February and mid-May 2020, a pronounced growth occurred in the use of the discount window (from USD 2 million to nearly USD 25 billion) and foreign exchange swaps offered to other central banks (from USD 45 million to nearly USD 443 billion).

Figure 12. Federal Reserve System assets



Source: St. Louis Fed (https://fred.stlouisfed.org).

4. Eurosystem monetary policy in response to the COVID-19 pandemic

With the European Central Bank's (ECB) deposit rate negative for nearly six years, the ECB had limited space to reduce short-term interest rates in the early stages of the pandemic. The first decision of the Governing Council of the ECB in response to the COVID-19 crisis was taken and announced at its standard scheduled meeting on 12 March 2020. The ECB's policy rates remained unchanged, with the ECB deposit facility rate persisting at 0.50%. The ECB increased the scale of its asset purchase programme by announcing additional purchases of €120 billion in 2020, but, contrary to previous asset purchase programmes, the ECB did not provide a monthly purchase schedule. Furthermore, the ECB continued with its asset purchases of €20 billion a month, which had resumed in November 2019.

On 12 March 2020 the ECB also launched longer-term liquidity-providing operations (LTROs) to the banking sector, with an interest rate that was equal to the average rate on the deposit facility (-0.50% at that time) over the life of the operation. The operations were to be provided temporarily, each week, on a potentially unlimited scale. These operations matured on 24 June 2020, the day of the subsequent tranche of the so-called targeted *longer-term refinancing operations* (TLTROs),

planned much earlier[11]. At the same time, the ECB lowered the potential TLTRO interest rate, eased the conditions of these operations and increased their available volume. According to the new conditions announced on 12 March 2020, during the special period from June 2020 to June 2021, assuming the no change in the interest rate by the ECB, the TLTRO rate could be -0.75% (that is deposit rate minus 25 bps), assuming the value of a bank's eligible loans did not fall during the reference period, or -0.25% (that is refinancing rate minus 25 bps) – if the loan value fell. At the same time, the ECB increased the maximum scale of operations from 30% to 50% of the eligible loans of a bank. The shortest possible period after which a commercial bank may resolve on earlier repayment of TLTRO was also shortened (from two years to one year, albeit not earlier than in September 2021).

Following the ECB communications of 12 March 2020, and the statements by some Governing Council members, the apparent divergence of yields on long-term government bonds between Germany and the Euro area countries considered vulnerable and more exposed to the crisis, occurred. In response, following an extraordinary meeting on 18 March 2020, the ECB's Governing Council, announced the launch of an additional asset purchase programme (Pandemic Emergency Purchase Programme – PEPP) on a cumulative scale of EUR 750 billion. The announced horizon of the programme was made contingent on the development of the pandemic; nonetheless it was to cover the period to at least the end of 2020. The PEPP structure was considerably more flexible than that of the previous ECB asset purchase programmes. First, the composition of purchases in terms of asset classes remained unspecified, it was only mentioned that the ECB could purchase all asset classes that it had been purchasing under previous programmes and additionally short-term debt securities of non-financial institutions. Second, Greek government bonds, which had not been previously eligible, were included in the programme for the first time. Third, the ECB waived the issue share and the issuer limits that it had imposed in previous purchase programmes; the ECB also signalled flexibility in its approach to the capital key, which, however, was intended to remain the benchmark for the distribution of cumulated purchases between the euro area countries. Fourth, the ECB signalled its willingness to alter the parameters of the programme, including an increase in its scale, and emphasised that it would not tolerate any risks to the smooth transmission of its monetary policy in all jurisdictions of the euro area.

At the same time, the Eurosystem increased the scale and maturity of its US dollar liquidity providing operations to the banking sector. This was supported by the agreement announced on 15 March 2020 between the world's leading central banks on swap operations with the Fed to reduce costs and extend the maturity of US dollar liquidity.

With a view to counteracting the tightening of financing conditions, including bank lending, at an extraordinary meeting on 7 April 2020 the Governing Council decided

[11] TLTRO-III are 3-year liquidity-providing collateralised operations whose interest rate depended on the lending of the bank concerned and was based on the ECB's floating rates of deposit facility and main refinancing operations.

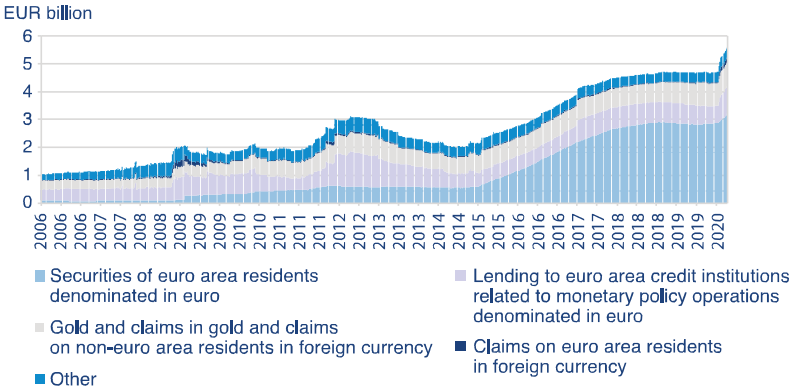
to temporarily ease the collateral standards for liquidity-providing operations in the banking sector. In particular, Greek government bonds and credit claims also below EUR 25,000 (previously only credit claims above this amount had been accepted) were included in the list of eligible collateral, and the general reduction of collateral valuation haircuts was adopted.

Subsequently, in a context of a renewed increase in the spread of long-term government bond yields between the euro area countries considered vulnerable (and more exposed to the consequences of the pandemic) vs Germany, as well as reports of possible credit rating downgrades for Italy, in particular, the ECB's Governing Council on 22 April 2020, after an unplanned meeting, announced another decision to ease the collateral standards for operations with the Eurosystem. A temporary rule was introduced whereby assets whose rating had been downgraded after 7 April 2020 (but no more than two notches below the previously agreed threshold), might be eligible as collateral for operations with the Eurosystem in accordance with the rating on that date.

In turn, on 30 April 2020 the ECB again reduced the interest rate on TLTRO operations. As a result, assuming unchanged ECB main interest rates, the minimum interest rate on these operations from June 2020 to June 2021 could be as low as -1.00% (that is the ECB deposit rate minus 50 bps), provided that the bank concerned did not reduce its eligible loan portfolio. At the same time, the ECB announced the launch of additional long-term liquidity-providing operations (pandemic emergency longer-term refinancing operations, PELTROs) offered in *fixed-rate, full-allotment* auctions, maturing in the summer of 2021 at a rate 25 bp lower than the ECB's main refinancing operations rate, thus above the interest rates on TLTROs.

The Eurosystem's response to the COVID-19 pandemic directly translated into an increase in the Eurosystem total assets. Between 28 February and 22 May 2020 the increase amounted to around 18% (Figure).

Figure 13. Eurosystem assets



Source: ECB data.

Summary

In early 2020, in the wake of the SARS-CoV-2 coronavirus epidemic and government action in many countries to counteract the further spread of the disease, global economic activity posted a sharp deterioration, and a marked upsurge in risk aversion was observed in financial markets. The immediate effect of the restrictions included a decline in output in the sectors concerned and other supply disruption, including disruption of supply chains. At the same time, the epidemic and the related restrictions and uncertainties adversely affected aggregate demand both due to direct restrictions on consumption and via the deterioration of labour market conditions and consumer sentiments. Data and projections available until May 2020 have suggested a stronger and potentially longer-lasting impact on the global economy of the demand-side shock associated with the COVID-19 pandemic, rather than supply-side one, which was reflected in a drop in current and expected inflation rates. Against this background, many governments undertook extensive anti-crisis fiscal stimulus measures.

At the same time, a very large number of central banks around the world embarked on considerable monetary expansion with a view to moderating the economic impact of the pandemic. To ease financial conditions, central banks employed short-term interest rate cuts and a number of other instruments, including the purchase of financial assets, additional liquidity-providing operations, foreign exchange intervention and swap lines with major central banks. The prevalence, speed, scope and scale of monetary policy easing was unprecedented. At the current juncture, given the ongoing pandemic and the uncertainty about its economic impact, it is difficult to assess the combined scale and scope of monetary expansion worldwide.

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