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# A Modern Guide to Financial Shocks and Crises

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Chapter 9

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## 9. Reflections on the shifting consensus about monetary and fiscal policies following the GFC and the COVID-19 crises

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### 9.1 INTRODUCTION

The twenty first century witnessed two major crises that forced policymakers to revise their thinking about desirable codes of conduct for monetary and fiscal policies. The establishments of price stability by mean of central bank (CB) independence and inflation targets during the last decade of the twentieth century managed to establish an era of great moderation which solidified the view that CBs should focus on long-run price stability and stabilization of the business cycle in between. The budget should be balanced over the business cycle and fiscal policy should be subject to strict limits on the deficits and national debt.

The large financial shock associated with the global financial crisis (GFC) forcefully reminded CBs that they also are expected to deliver financial stability. The short-run policy rate was reduced to zero and replaced by large quantitative easing operations (see Chapter 1 for more details). Large fiscal packages were deployed and the coordination between fiscal and monetary authorities increased (for a broader view on the role of fiscal policies see Chapter 10). A new consensus charged CBs to handle the previously neglected macro-prudential regulation.

Unlike the GFC that originated in the financial sector, the COVID-19 crisis originated in a medical shock whose large effects on the economy and the financial sector are due to full or partial lockdowns designed to moderate the spread of the virus. To date monetary and fiscal policies responded to the economic and financial challenges by using instruments developed during the GFC on a scale never seen before. The limits on deficits and debts were quickly forgotten and the world's debt/GDP ratios swelled to levels previously seen only during major wars.

This chapter describes those policy responses against the background of those two major crises. It then discusses their impact on the shifting consensus about current and future monetary and fiscal policies.

The chapter is organized as follows. Section 9.2 describes the consensus about recommended monetary and fiscal policies in the pre-GFC era. The consensus that emerged following the GFC including regulatory reforms and the low interest rate phenomenon are discussed in Section 9.3. The evolution of the COVID-19 crisis and the responses of fiscal and monetary policies during the first half of 2020 is discussed in Section 9.4. Section 9.5 describes the changes in the consensus about aggregate demand policies caused by the crisis and Section 9.6 discusses the wider implications of the coronavirus crisis for the future. This is followed by concluding remarks.

## 9.2 THE PRE-GLOBAL FINANCIAL CRISIS CONSENSUS

Prior to the GFC the common view about the division of labour between fiscal and monetary policies was that, due to its longer decision-making lag and political nature, the role of fiscal policy (FP) in short-run stabilization policy should be limited to the operation of automatic stabilizers. In parallel, stabilization of the cycle should be left mainly to monetary policy implemented by a politically independent CB.

Fiscal policy should be conducted subject to appropriate limits on the GDP shares of deficits and of the national debt. When those limits are binding government's budget should be balanced over the business cycle. When those limits are not binding full employment deficits may be allowed temporarily. The stability and growth pact in the European Union (EU) required that the debt/GDP ratio not exceed 60 per cent and the deficit to GDP ratio not exceed 3 per cent. Although many countries in the EU did not always abide by those limits they became a standard for responsible government behaviour within and outside the EU. Obviously, a country with initial debt substantially above the limit cannot achieve the limit in one year or two. But it can decide to commit to a path of deficits/GDP ratios that will eventually reduce the debt/GDP ratio to 60 per cent.<sup>1</sup>

During the two decades preceding the GFC the following consensus on monetary policy and institutions emerged: The main objective of monetary policy is to maintain price stability in the medium and long terms. This objective is operationalized in terms of an inflation target (usually 2 per cent). As long as inflation does not deviate too much and/or too long from the target, monetary policy can and should be used to reduce the output gap.<sup>2</sup> The conduct of monetary policy should be delegated to

an independent CB with full authority to set policy interest rates and to conduct open market operations. The interest rate is the main instrument of monetary policy and open market operations should be devised so as to support decisions about this instrument. Lending to government and interference with the instruments of monetary policy is prohibited. It bears repeating that since it can react more swiftly than fiscal authorities to changing circumstances most of the burden of short stabilization of the inflation and output gaps was expected to be borne by the independent CB.

In parallel, the New-Keynesian framework provided a micro-founded sticky prices conceptual framework that recognized explicitly the central role of forward-looking expectations for the conduct of monetary policy within an inflation targeting (IT) framework.<sup>3</sup> In this micro-founded version of IT, an independent CB picks the short-term interest rate (taking the structure of the economy and inflationary expectations as given), so as to minimize a weighted linear combination of the social costs of the inflation and output gaps. Here the first gap is the deviation of inflation from the IT and the second gap is the deviation of actual from potential output.

Prior to the 1990s most CBs were largely dominated by treasuries and governments. Under the Bretton-Woods (BW) regime that operated between 1945 and 1971 price stability in many countries was achieved by a system of fixed, but periodically adjustable, pegs with respect to the US dollar backed by limited capital mobility implemented through exchange controls. During this period the role of CBs was limited to maintaining the fixed pegs and they had little independence. The post-BW period witnessed a period of experimentation with alternative nominal anchors that would permanently stabilize the high inflations of the 1970s and the 1980s. This process culminated during the 1990s to a wholesale process of upgrading's in CB independence.<sup>4</sup>

### 9.3 CONSENSUS FOLLOWING THE GLOBAL FINANCIAL CRISIS

The GFC eroded the pre-crisis consensus along several dimensions. Policymakers and the economic profession realized the central role of financial stability (see Chapter 2) and of systemic risks that had taken second seat prior to the crisis. This led to widespread regulatory reforms as well as to the emergence of, at the time, unconventional monetary policy instruments. The emergence of the zero lower bound (ZLB) constraint led to the widespread use of quantitative easing (QE) as a substitute for interest rate policy. In the US, to prevent potential inflationary consequences of widespread QE operations the Fed supplemented this policy

by paying interest on bank reserves.<sup>5</sup> The Fed and other CBs bought long-term bonds in order to directly affect interest rates over the entire yield curve. Other instruments like forward guidance became standard instruments of monetary policy and a number of economies engaged in direct forex intervention.

During the early stages of the crisis large fiscal packages were deployed to lift the equity capital and the liquidity of both financial and non-financial institutions. Two examples from the US are the 2008 TARP bill designed to help the financial sector and the 2009 ARRA designed to stimulate investments and the real economy. Governments in the EU, China and elsewhere also deployed fiscal packages, albeit of relatively smaller magnitudes than the US. Thus, in the face of large financial shocks that spread to the real economy policymakers responded by substantial expansionary fiscal policies.

### **9.3.1 Unconventional (at the Time) Monetary Policy Instruments<sup>6</sup>**

This subsection contains a somewhat more detailed discussion of the unconventional monetary instrument deployed during the GFC.

*Quantitative easing (QE)*: (also known as Large Scale Asset Purchases) are not new. Buying or selling assets by the CB is a normal by-product of conventional interest rate policy even during normal times since maintenance of the policy rate at the level desired by the CB has to be supported by the injection or removal of liquidity through the buying or selling of assets. There are several factors that distinguish asset purchases during the crisis from their normal times counterparts. First, such purchases increased dramatically only once the policy rate reached the ZLB. Second, particularly in the US, the range of assets purchased was much wider than during normal times. Rather than limiting itself to government debt, the Fed bought mortgage-backed securities and other types of commercial debt. During the immediate aftermath of Lehman's fall the Fed also bought banking stocks in an attempt to strengthen the capital position of the banking system. Finally, the exceptionally large magnitude of US QE operations distinguishes it from asset purchases during normal times. In reaction to the panic that engulfed financial markets in the immediate aftermath of Lehman's collapse QE was used mainly to inject liquidity into the capital market. But, as the recession caused by the financial crisis persisted, QE gradually became a device for circumventing the ZLB by directly lowering long-term interest rates in order to stimulate the economy. Between August 2008 and October 2014, the monetary base in the US increased by a factor of five. Although it receded somewhat since then it was still about four times larger at the eve of the coronavirus

crisis than in August 2008. This reflected the Fed's decision to reduce the monetary base gradually by attrition.

Although it engaged in some limited asset purchases already in 2008–09 the ECB started to engage in large-scale asset purchases only at the beginning of 2015.<sup>7</sup> From that time and on the ECB intensified the use of this instrument. A partial reason for this later adoption of QE is the strong focus of the ECB charter on price stability.

*Forex market interventions* are not new. They have been used by CBs of emerging markets as a device for ironing out “excessive fluctuations” in exchange rates long before the GFC. For several decades prior to the crisis China pegged its currency to the US dollar in order to maintain the competitiveness of its exports. But the sustained zero interest rate policy of the Fed and the negative European Central Bank (ECB) policy rate since 2015 added a new dimension to such interventions. To preserve their competitiveness small open economies such as Switzerland, Israel, the Czech Republic and others reacted to the expansionary monetary policies of the big blocks by lowering their policy rates, often in conjunction with forex interventions designed to stem the appreciation of their currencies. The potential importance of such interventions gradually increased as their policy rates approached the ZLB. In small open economies an important transmission channel of monetary policy operates through the exchange rate. Once the ZLB is reached, the relative importance of foreign exchange purchases as a device for moderation of appreciation rises. Some countries such as Israel have initially used this instrument to build up forex reserves and occasionally to iron out excessive appreciation tendencies.

As of September 2011, the Swiss National Bank (SNB) introduced a one-sided peg on the Euro/SF exchange rate at 1.2 and effectively defended it until January 2015 when the ECB announced a large QE programme. This policy led to a substantial increase in Switzerland's forex reserves which, as of late 2015, were at a level similar to that of the country's GDP. The SNB's extreme reliance on forex interventions is directly related to the GFC. Being a safe haven currency the Swiss franc tended to appreciate in reaction to frequent panics experienced during the GFC eroding the competitiveness of Swiss exports. Having reached the ZLB relatively early the SNB found it expedient to rely relatively heavily on forex interventions. It is notable that, once the ZLB is reached, there is no need to sterilize such interventions implying that they become similar to the QE operations practised by the Fed and the ECB.

*Negative interest rates and long-term asset purchases:* recent negative inflation rates along with economic activity below potential induced a number of CBs to experiment with negative policy rates. Sweden, Denmark and Switzerland set their deposit rates at negative levels to

preserve competitiveness and to induce banks to lend. During the first quarter of 2015 the ECB adopted a negative deposit rate mainly in order to stimulate banks' lending. A similar policy was enacted in early 2016 by the Bank of Japan.

Negative rates on banking reserves mean that banks have to pay for keeping deposits at the CB. Most banks did not initially pass this cost to small and medium-size deposits but did charge large depositors. Those developments suggested that the bound on the policy rate may be reduced somewhat below zero. Nonetheless, as long as the returns on cash and on deposits differ, it will not be possible for institutional reasons to reduce the policy rate substantially below zero.

This may be a serious problem if the short-term Wicksellian natural rate of interest is expected to remain below zero for an extended period of time. Cúrdia et al. (2015) and Cúrdia (2015) estimate that this rate reached a minimum of -4 per cent in the US over the GFC and remained below zero for several years. However, long-term risky rates whose impact on economic activity is more important than the direct impact of the short-term policy rate remained in the positive range. Recognizing this the Fed directed a large part of its QE operations to the purchase of long-term risky bonds. The accepted view prior to the GFC was that the CB should influence long-term rates through the short end of the yield curve. Once this became infeasible due to the ZLB the Fed aimed at directly reducing long-term risky rates through targeted QE operations. In chapter 22 of his memoirs Bernanke (2015, p. 521) recounts that this policy was initially criticized by the political establishment in Congress on the grounds that the Fed should "resist further extraordinary interventions in the US economy".

*Forward guidance:* like QE and forex interventions forward guidance is not a new monetary policy instrument. However, the ZLB constraint along with widespread use of QE in the US and more recently in the Euro area made it an effective complementary policy tool. Obviously, to be effective, preannouncements of future policy plans have to be subsequently delivered. This may be a problem if unexpected future developments call for deviations **from** previously announced policies.



Following experimentation with date-based statements about the target policy rate through 2012 the Fed started to handle this difficulty by using contingent forward guidance. In 2013 the Fed announced numerical thresholds for the rate of unemployment and inflation. In particular, it stated that the target policy rate will stay low as long as unemployment is above 6.5 per cent and inflation remained at or below 2.5 per cent. In his memoirs Bernanke (2015, p. 532) stresses that the figure for unemployment was a threshold rather than a trigger in the sense that the FOMC would not even consider lifting the policy rate as long as unemployment was

above 6.5 per cent. This numerical statement had repeatedly been backed up by the more general statement that the Fed would do “whatever it takes” to reduce the rate of unemployment. In the face of mounting doubts about the viability of the Eurozone (EZ) President Draghi of the ECB used similar language to signal that the ECB will do whatever it can to assure the viability of the EZ.

### **9.3.2 Is the Low Rates Phenomenon a Consequence of Monetary Policies during the Global Financial Crisis?**

Shortly after the collapse of Lehman brothers in September 2008 the Fed reduced the policy rate to practically zero and maintained it there until the last quarter of 2015. CBs of most developed and emerging economies followed similar paths shortly after.<sup>8</sup> Along with QE operations over the entire yield curve monetary policies contributed to the creation of an era of low short- and long-term interest rates. In addition, by depressing real economic activity and growth the GFC reduced the natural rate of interest.

On the other hand, Bean et al. (2015) document a downward trend in long-term riskless rates much before the GFC. They attribute it mainly to a world saving glut that preceded the GFC and to a lesser extent to a decrease in the demand for investment. A large part of the increase in savings was due to a very high Chinese saving rate out of which a high fraction was directed at the purchase of long-term high-quality bonds. In parallel there was an increase in the fraction of individuals in the middle-aged cohort in other economies. Since those individuals are responsible for the bulk of savings this also contributed to the increase in savings. Caballero et al. (2016) argue that the demise of mortgage-backed securities that were considered as safe assets prior to the GFC also contributed to reduce long-term safe interest rates by reducing the supply of safe assets.

In summary, it appears that, although large liquidity injections through QE operations and maturity extension programmes were not the only cause of low safe long-term rates, it contributed to their persistence and solidification.

### **9.3.3 Increasing Awareness of Financial Stability Considerations and Regulatory Reform**

Although, prior to the GFC, financial stability was not as visible as IT CBs kept an eye on the segments of this objective that were under their regulatory authority. As is well known, the allocation of regulatory

functions between different regulators varies across countries. Pre-crisis regulation, whether within or outside the CB, focused mainly on micro-economic regulation and paid relatively less attention to the risks posed by systemic crises and “too big to fail” institutions. The confluence of large-scale failures of systemic institutions and the associated financial panics that combined to start the GFC gave monetary policymakers and other regulators a dramatic wake up call. This triggered a wholesale process of regulatory reform with a strong focus on macro-prudential regulation, substantial increases in banks’ capital requirements, stress tests for systemically important financial institutions and the closing of loopholes. Major pieces of legislation in this context are the July 2010 Dodd-Frank Act in the US and the creation of a European banking union by the heads of state and government of the EU in June 2012. In both cases, the respective CBs (the Fed in the US and the ECB in the EZ) were charged with the supervision and regulation of systemic risks and, in parallel, given more authority in comparison to the pre-crisis era. Similarly, in the UK, an independent Financial Policy Committee charged with monitoring and reducing systemic risks was created in April 2013 within the Bank of England.<sup>9</sup>

Regulatory reforms in all three areas are based on the notion that the CB is the choice institution for macro-prudential supervision and regulation. This consensus is supported by two main considerations. First, the CB is the public sector’s institution that is likely to have the widest view of the overall state of the financial system. Second, the CB is also the institution that acts as lender of last resort in case of crisis. It therefore makes sense to charge the CB with systemic stability and to endow it with the additional policy instruments needed to perform this task. Consequently, the CB is well positioned to evaluate the trade-offs involved in taking preventive measures against a systemic crisis and the injection of public funds to limit the adverse effects of such a crisis if it materializes (see Chapter 13).

#### **9.4 EVOLUTION OF THE COVID-19 CRISIS AND AGGREGATE DEMAND POLICY RESPONSES**

Unlike the GFC and the Great Depression the coronavirus crisis originated in the real economy and was totally unanticipated. The initial absence of vaccine against the COVID-19 virus and its speedy contagiousness prompted medical and political authorities to curtail mobility by imposing lockdowns, quarantines, social distancing and an almost complete standstill of international air travel. By forcing large portions of

the work force into segregation and closing down businesses this inevitable policy reaction transformed the impact of the virus from a pure medical emergency into a major real negative supply shock.

Mobility restrictions led to a substantial shut down of the economy, reduced production, layoffs, income losses, disruption of supply chains, and elevated personal and aggregate uncertainty. Those effects were amplified by the universality of the medical cum economic crisis and the associated reduction in world trade. The actual and expected GDP shrinkages quickly spilled over to financial markets leading to credit restrictions and capital outflows from developing economies. Sectors relying on social interactions such as travel, entertainment, restaurants and tourism took a particularly heavy toll. In parallel, international demand for producers of medical supplies soared. The drastic reduction in air and car travel along with production stoppages led to the collapse of the price of crude oil creating serious problems for government finances in some oil producing countries like Russia and Saudi Arabia. Unlike the GFC the COVID-19 crisis is characterized by a sharp decrease in aggregate consumption.

Table 9.1 shows actual rates of growth by major country groups and selected countries as well as projections for 2020 and 2021 from the April and June issues of the World Economic Outlook. As of June 2020, world output was expected to shrink by 4.9 per cent, advanced economies by 8.0 per cent and emerging markets and developing economies by 3.0 per cent. Except for China, all the countries in the table were predicted to experience negative rates of growth in 2020 reflecting the global reach of the virus and its economic ramifications.

Rates of growth were more negative in advanced economies than in emerging markets and developing countries. Within developed economies there were substantial differences in the adverse growth effects on GDP ranging from a minimum of -4.8 per cent for other advanced economies to a maximum of -12.8 per cent for Italy and Spain. Due to initially overoptimistic assumptions, the projections for 2020 growth as of June were uniformly more pessimistic than those made in April 2020. In particular, in economies with declining infection rates, the slower recovery path in the updated forecast reflected persistent social distancing into the second half of 2020; more persistent damage to supply potential from the larger-than-anticipated hit to activity during the lockdown in the first and second quarters of 2020; and a hit to productivity as surviving businesses incorporate workplace safety and hygiene practices. For economies still struggling to control infection rates, a lengthier lockdown would inflict an additional toll on activity. The June forecast assumed that financial conditions, which had eased following the release of the

Table 9.1 World yearly growth projections for 2020 and 2021 from the April 2020 IMF World Economic Outlook and the June 2020 update

	2019 (actual)	2020 projection (as of April)	2020 projection (as of June)	2021 projection (as of April)	2021 projection (as of June)
<b>World Output</b>	<b>2.9</b>	<b>-3.0</b>	<b>-4.9</b>	<b>5.8</b>	<b>5.4</b>
<b>Advanced Economies</b>	<b>1.7</b>	<b>-6.1</b>	<b>-8.0</b>	<b>4.5</b>	<b>4.8</b>
<b>US</b>	<b>2.3</b>	<b>-5.9</b>	<b>-8.0</b>	<b>4.7</b>	<b>4.5</b>
Euro Area	1.2	-7.5	-10.2	4.7	6.0
Germany	0.6	-7.0	-7.8	5.2	5.4
France	1.3	-7.2	-12.5	4.5	7.3
Italy	0.3	-9.1	-12.8	4.8	6.3
Spain	2.0	-8.0	-12.8	4.3	6.3
Japan	0.7	-5.2	-5.8	3.0	2.4
UK	1.4	-6.5	-10.2	4.0	6.3
Canada	1.6	-6.2	-8.4	4.2	4.9
Other	1.7	-4.6	-4.8	4.5	4.2
Advanced					
<b>Emerging Markets and Developing Economies</b>	<b>3.7</b>	<b>-1.0</b>	<b>-3.0</b>	<b>6.6</b>	<b>5.9</b>
<b>China</b>	<b>6.1</b>	<b>1.2</b>	<b>1.0</b>	<b>9.2</b>	<b>8.2</b>
<b>India</b>	<b>4.2</b>	<b>1.9</b>	<b>-4.5</b>	<b>7.4</b>	<b>6.0</b>
ASEAN-5	4.8	-0.6	-2.0	7.8	6.2
<b>Russia</b>	<b>1.3</b>	<b>-5.5</b>	<b>-6.6</b>	<b>3.5</b>	<b>4.1</b>
Latin America and the Caribbean	0.1	-5.2	-9.4	3.4	3.7
Saudi Arabia	0.3	-2.3	-6.8	2.9	3.1
Nigeria	2.2	-3.4	-5.4	2.4	2.6
South Africa	0.2	-5.8	-8.0	4.0	3.5
Low Income Developing Countries	5.1	0.4	-1.0	5.6	5.2

April 2020 IMF World Economic Outlook, would remain at current levels. Those forecasts as well as the general outlook were subject to an unusually high degree of uncertainty whose sources and implications are discussed later.

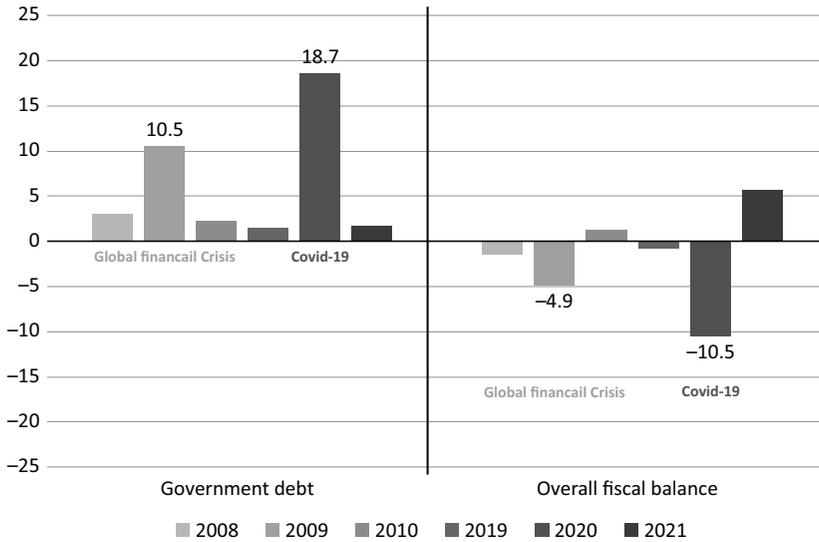
### **9.4.1 Fiscal and Monetary Policy Responses**

The deep decreases in economic activity, employment and incomes triggered by lockouts quickly led to a wide consensus that extraordinarily expansionary fiscal policies should come to the rescue even at the cost of large budget deficits and substantial increases in debt/GDP ratios. This consensus was quickly put into action through fiscal packages that often were substantially larger than their counterparts at the beginning of the GFC. Thus, at the end of March 2020 President Trump signed into law a historic 2.2 trillion-dollar stimulus package marking the biggest rescue deal ever in US history. In parallel, the Fed expanded its QE operations in both size and scope buying, for the first time, corporate bonds below investment grade. As a consequence, by the last quarter of June, the bloated balance sheet it cumulated during the GFC increased further by about 75 per cent. Similar policies, although not always as extreme, were deployed by the majority of governments and CBs the world over.

#### **Fiscal responses**

As of June 2020, the IMF estimated that global public debt would reach an all-time high; exceeding 101 per cent of GDP in 2020/21 and the average overall fiscal deficit would soar to 14 per cent of GDP in 2020. Figure 9.1 shows the yearly changes in the global public debt and the global fiscal deficit in comparison to their counterparts in 2009 – a year that marks the peak of the response to the GFC. Those changes are larger by an order of magnitude during the COVID-19 pandemic than during the GFC. In particular, the debt/GDP ratio was expected to rise by almost 19 per cent during the pandemic in comparison to an increase of “only” 10.5 per cent in 2009 and the increase in the overall fiscal deficit in 2020 was expected to be about two times larger than in 2009.

Beyond discretionary fiscal measures, automatic stabilizers from taxes and social protection were expected to help cushion the fall in household incomes during the recession, but also to contribute to one-third of the rise in deficits on average. In particular, government revenues were expected to fall more than output and projected to be 2½ percentage points of GDP lower, on average, than in 2019, reflecting lower personal and corporate incomes and hard-hit private consumption. Figure 9.2 shows the magnitudes of fiscal stimulus for selected countries and country groups through additional spending and foregone revenues as well as through loan and equity guarantees measured in percentages of GDP. The fiscal stimulus was uniformly positive but was substantially larger for advanced economies and the G20 than in the rest of the world. The combined stimulus package was largest in advanced economies (about 20 per cent), second



Source: Author elaborations on IMF data (World Economic Outlook Update, June 2020, IMF).

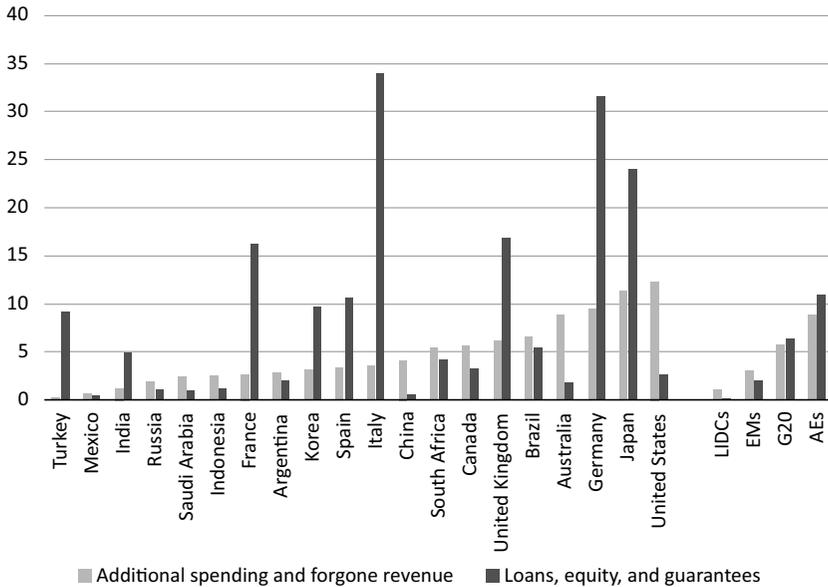
Figure 9.1 Change in global government debt and overall fiscal balance (per cent of GDP)

largest in the G20 (about 12 per cent), 5 per cent in emerging markets and about 1 per cent in low income developing countries.

### Monetary policy responses<sup>10</sup>

Policy rates in a number of countries have been cut further and investors expect interest rates to remain at very low levels for several years. Balance sheets of advanced economies' CBs have swelled following new rounds of asset purchases, liquidity support for the banking system, US dollar swap lines, and other facilities intended to sustain the flow of credit to the economy. Aggregate assets of the Group of Ten (G10) CBs have increased by about \$6 trillion since mid-January, more than double the increase seen during the two years of the GFC from December 2007, with the rise in assets accounting for almost 15 per cent of G10 GDP.

A number of emerging markets CBs have embarked on unconventional policy measures for the first time. In some countries, these asset purchase programmes were started to support the economy; in other countries, the motivation was to support market liquidity. These programmes have included purchases of a range of assets, including government bonds, state-guaranteed bonds, corporate debt and mortgage-backed securities.



*Note:* AEs, advanced economies; G20, Group of Twenty economies; EMs, emerging markets; LIDCs, low income developing countries.

*Source:* Author elaborations on IMF data (World Economic Outlook Update, June 2020, IMF).

*Figure 9.2 Fiscal measures in response to the COVID-19 pandemic (per cent of GDP)*

Fiscal and financial policy measures have also helped support investor sentiment. Financial policies by both fiscal and monetary authorities have bolstered market confidence through government credit guarantees, support for the restructuring of loans, and encouraged banks to use available capital and liquidity buffers to support lending. This combination of unprecedented policy support appears to have been successful in maintaining credit flows. The lift to investor risk appetite has helped raise bond issuance in markets, and banks have also continued to lend in most major economies.

## 9.5 POLICY CONSENSUS EMERGING IN THE WAKE OF THE COVID-19 CRISIS

The consensus emerging from those actions is that, in the face of emergencies such as the COVID-19 crisis, restrictions on budget deficits

and debt/GDP ratios should be suspended. This consensus is reinforced by the very low cost of government debt in advanced economies (see for example Blanchard, 2019) and by the argument that fiscal policy is particularly effective at the ZLB. On the monetary policy front, large and risky QE operations designed to safeguard the stability of the financial system and to revive the economy are increasingly becoming accepted practice even in CBs with initially large balance sheets. Although the GFC and its aftermath paved the way for such instruments the COVID-19 pandemic raised their scope to previously unseen levels.

The extraordinary increases in debt/GDP ratio prompted some economists to recommend a temporary lifting of the taboo on monetary financing of deficits (Galí, 2020a; Yashiv, 2020). Using a New-Keynesian framework Galí (2020b) finds that a fiscal stimulus is more effective when it is money financed than when it is financed by debt – and particularly so when the ZLB is not binding. In the UK, the government even borrowed directly from the Bank of England in April 2020 for a limited period of time in order not to flood the bond market with the extraordinary financial requirements imposed by the large fiscal responses to the crisis. Although most countries did not have recourse to direct monetary finance, large QE operations with minimal limits on maturities and risk classes purchased by the CB provide a non-negligible substitute to monetary financing by maintaining the market for government and corporate bonds (Cukierman, 2020).

## 9.6 POLICY AND WIDER IMPLICATIONS FOR THE FUTURE

During the first years of the GFC there was a deep and persistent drop in the provision of credit to the economy (Cukierman, 2019, figure 3). By contrast, following a brief financial panic in March 2020 the massive responses of monetary and fiscal authorities quickly restored a reasonable flow of credit to the economy and facilitated the financing of budgetary deficits. Looking into the future, this success is likely to increase the coordination between fiscal and monetary authorities. Although the CBs of advanced economies are likely to remain responsible for price and financial stability they will become more sensitive to the large financing needs of their governments.

The massive expansion of aggregate demand management policies also lifted asset markets from their initially depressed levels in March 2020 and created a disconnect between expectations about the future of the real economy and stock market values. In particular, the S&P 500 index

became overly high in comparison to the US Conference Board index of consumer confidence.

It is likely that the ZLB will become binding more frequently than in the past. Partly in response to this, large QE operation and accumulation of huge balance sheets by western CBs will become a norm. In spite of opposition of economists that believe in established standards of pre-crisis good behaviour, some countries may temporarily lift the taboo on monetary financing of deficits. In the foreseeable future this tendency is likely to be reinforced by the absence of inflation and even deflation in some countries.

### **9.6.1 The Impact of Uncertainty**

The COVID-19 pandemic created an unusually high level of uncertainty for everybody in the economy including businesses, consumers and policy-makers. The initial absence of a vaccine and of sufficient knowledge about the virus opened the door for experimentation with a wide array of methods for addressing the medical/economic trade-offs of the crisis. It also injected politics into the decision-making processes of governments. The drop in consumption and investment is likely to persist as long as unemployment is large and there is substantial uncertainty about future levels and duration of governmental income relief and other form of help.<sup>11</sup>

The pandemic demonstrated once again that in the face of a worldwide shock such as the COVID-19 pandemic the only insurer of last resort is government. Looking into the future this implies that governments should prepare in advance sufficient financial and medical resources to be able to provide a minimal safety net in case similarly disruptive shocks realize in the future. If left with no response a real shock like the pandemic endangers the stability of the financial system and the flow of credit reinforcing reductions in economic activity. Luckily, the massive responses of fiscal and monetary policies in advanced economies stopped such a scenario but introduced new distortions some of which are discussed later.

Uncertainty about the length of the lag between partial or full lockouts and their sanitary outcomes also complicates communications with the public and may dent the process of building trust between policymakers and the public. Needless to say, that trust is essential since, in its absence, part of the public will not abide by the lockouts reducing their effectiveness and pushing the economy into longer than necessary lockouts in the future.

An example may clarify the mental process involved. Suppose that following a period of a tight lockout the contagion curve flattens and the lockout is lifted. After a while indicators of contagion resume a modest upward trend which convinces medical experts that, in the absence of targeted lockouts, this trend will intensify within several weeks. Even if

this information is honestly conveyed to the public some individuals who observe the current low contagion levels will not take the medical recommendation seriously, particularly if an economic or other personal cost is involved. In retrospect, they might realize their error when the contagion rises but this is too late.

### **9.6.2 Impact on Inequality**

The distribution of financial wealth in many advanced economies is highly skewed. In the US the top 1 per cent of the wealthiest families holds 40 per cent of all wealth and the bottom 90 per cent owns less than a quarter of total wealth. Furthermore, the financial wealth of individuals below the median is practically nil. A by-product of the large fiscal packages and extraordinarily expansionary monetary policies deployed since the start of the pandemic is that financial assets have flourished while large numbers of employees and small businesses experienced unemployment and income losses. The trend in financial markets is likely to permanently raise the value of financial assets. Since individuals with incomes below the median hold only a small share of those assets this will tend to permanently increase inequality in the distribution of wealth and (after various temporary social policies subside) also to an increase in income inequality.

The income of workers in occupations that make it possible to work from home are largely immune to income losses due to lockdowns. By contrast, employees in occupations in which this is not feasible lose their jobs and are subject to substantial cuts in their income. Since on average the income of the second group of workers tends to be lower lockdowns raise inequality in the distribution of income.

At the global level low income countries that have less fiscal and monetary space and relatively underdeveloped medical facilities are less prepared to meet the challenges of the pandemic. Interestingly, evidence from previous pandemics shows that the loss of employment and income makes the uneducated poor even poorer (Furceri et al., 2020).

### **9.6.3 Will the Pandemic Reinforce International Cooperation in the Struggle against the Virus?**

The high contagiousness of the coronavirus within and across countries implies that success in moderating its spread in any given country produces a positive spill over effect for the rest of the world. Looking forward, this factor should reinforce international cooperation in fighting the virus. But another factor is likely to operate in the opposite direction. Countries may compete to be the first in line to obtain the effective vaccines. Since, in

the early post-vaccine phase world demand will exceed the available supply by an order of magnitude this will, at least temporarily, reduce cooperation between countries. Strong and reasonably equitable international leadership is needed to help the long-run basic common interest dominate the short-run scramble to acquire the vaccine.

## 9.7 CONCLUDING REMARKS

Major crises trigger substantial adjustments, and at times even revolutions in accepted views about the role of the public sector and the structure of its institutions. In particular, this statement applies to monetary and fiscal policies. Ninety years ago, the Great Depression led to the birth of Keynesian economics, to the creation of the US social security system and to the discovery of the potency of fiscal policy. With a lag of about 30 years the Friedman-Schwartz (1960s) counter-revolution recognized the potency of monetary policy. The inflation of the 1970s and the breakdown of the Bretton-Woods system led with a lag of about ten years to the CB independence revolution and to the establishment of inflation targeting. For almost 20 years this system helped maintain the great moderation in which CBs delivered price stability in the long run and stabilization of the cycle in the short and medium term while, subject to limits on debts and deficits, stabilization by fiscal means was expected to operate through automatic stabilizers and discretionary actions.

The GFC drove monetary policies to the zero lower bound, leading to the emergence of large-scale asset purchases by CBs, triggered large fiscal packages and generally increased cooperation between fiscal and monetary authorities. At times this cooperation dented CB independence. Monetary policy tools such as forward guidance and forex intervention became more popular and the realization that prior to the crisis regulation was inadequate and that systemic factors were neglected led to regulatory reforms and the creation of macro-prudential authorities, often within the CB.

The COVID-19 crisis led to expansionary monetary and fiscal policies at levels observed only during major wars. Conventional limits on debts and deficits were set aside and global government debt was forecasted to rise by almost 19 per cent over 2020 (Figure 9.1). Some economists and policymakers even advocate temporary lifting of the taboo on monetary financing of deficits. The overblown balance sheets of CBs in developed economies inherited from the GFC have almost doubled. In spite of those measures, as of June 2020 world output for the 2021 was forecasted to shrink by almost 5 per cent (Table 9.1). This economic cost is directly traceable to the full and temporary lockouts and to an unusually high degree of

uncertainty about the future. Unfortunately, although many countries have recently exited from total lockouts, partial lockouts uncertainty will persist due to virus variants.

## NOTES

1. Using such a strategy Israel reduced the debt/GDP ratio from over 90 per cent in 2003 to around 60 per cent in 2019.
2. Although most CBs were sensitive to financial stability considerations this objective did not take centre stage until the arrival of the GFC.
3. Woodford (2003) and Gali (2008) are prominent examples.
4. Further details appear in Cukierman (2008) and Cukierman (2018).
5. Those inflation risks did not materialize. Instead sustained periods of below target and even negative inflation followed during the second half of the GFC and its aftermath.
6. The following discussion draws on parts of section 2 in Cukierman (2019).
7. Prior to that the bulk of its liquidity injections operations were done through limited term advances to the banking system.
8. An important exception is the ECB whose deposit facility rate reached the ZLB only during the last quarter of 2013.
9. Further details appear in section 5 of Cukierman (2019).
10. This subsection draws on the Global Financial Stability Report Update (June 2020).
11. Forecasting at currently high levels of uncertainty is obviously difficult. In the June 2020 WEO update the IMF presents forecast under several alternative scenarios in order to capture some of the dimensions of this uncertainty.

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