



Role of central banks during the Pandemic Crisis

Dr. Sharmila Ahlawat

Associate Professor of Economics, Govt. P. G. College, Panchkula, Haryana, India

Abstract

The COVID-19 pandemic triggered the most severe and synchronised global economic shock since the Great Depression, compelling central banks worldwide to respond with unprecedented speed and scale. This paper examines the monetary policy actions taken by major central banks — including the US Federal Reserve, the European Central Bank, the Bank of England, the Bank of Japan, the Reserve Bank of India, and several emerging market counterparts — between early 2020 and fiscal year 2020–21. The study analyses conventional and unconventional policy tools deployed, the scale of balance sheet expansion, liquidity support measures, and coordination with fiscal authorities. Evidence shows that central bank interventions successfully averted financial market meltdown, maintained credit flow, and supported aggregate demand, but also raised important long-term questions about inflation, financial stability, exit strategies, and central bank independence.

Keywords: Central bank, COVID-19, monetary policy, quantitative easing, interest rates, liquidity, lender of last resort, balance sheet expansion, emerging markets

Introduction

When the World Health Organization declared COVID-19 a global pandemic in March 2020, financial markets reacted with a severity not seen since the 2008 Global Financial Crisis. Equity markets fell 30–40% in weeks, credit spreads widened dramatically, and liquidity in government bond markets evaporated, and capital fled emerging market economies at a pace that surpassed even the 2008 crisis. The prospect of a simultaneous supply and demand shock — compounded by lockdown-induced economic paralysis — threatened a systemic financial collapse.

Central banks, as the guardians of monetary stability and, in many jurisdictions, financial system resilience, were thrust into the centre of the crisis response. Unlike the 2008 crisis, which originated within the financial system, the COVID-19 shock was exogenous — a public health catastrophe with immediate real-economy consequences. This distinction shaped both the nature and the limits of the central bank response. Central banks could provide liquidity and financial stability, but could not substitute for fiscal transfers to households and businesses that had lost income through no fault of their own.

This paper reviews the policy responses of central banks through the period ending in 2020–21, assessing the tools deployed, their effectiveness, and the attendant risks. Section 2 provides the macroeconomic context. Section 3 analyses the conventional policy response. Section 4 covers unconventional measures. Section 5 examines specific major central banks. Section 6 discusses emerging market challenges. Section 7 addresses risks and exit considerations. Section 8 concludes.

Macroeconomic Context: The Scale of the Shock

The economic contraction associated with the COVID-19 pandemic was historic in both its speed and breadth. According to IMF World Economic Outlook data, global GDP contracted by approximately 3.1% in 2020 — the deepest recession since the Second World War. Advanced economies contracted by an average of 4.5%, while the Euro area and the United Kingdom suffered particularly severe downturns of around 6.4% and 9.9% respectively. Emerging market and developing economies contracted by 2.1%, the first such aggregate contraction in decades.

Table 1: GDP Growth Rates during the Pandemic Period

Economy / Region	GDP Growth 2019 (%)	GDP Growth 2020 (%)	GDP Growth 2020–21 (%)
United States	+2.3	-3.4	+5.7
Euro Area	+1.3	-6.4	+5.3
United Kingdom	+1.4	-9.9	+7.4
Japan	-0.4	-4.3	+1.7
China	+6.0	+2.3	+8.1
India	+4.0	-7.3	+8.9
Brazil	+1.1	-4.1	+4.6
World	+2.8	-3.1	+6.0

Source: IMF World Economic Outlook, April 2022

Unemployment surged across advanced economies. In the United States, the unemployment rate spiked from 3.5% in February 2020 to 14.7% in April 2020 — the highest recorded since the Great Depression — before declining as

policy support took effect. In the European Union, job retention schemes (Kurzarbeit in Germany, furlough in the UK) cushioned formal unemployment statistics but masked substantial effective labour market slack. In emerging

economies, the informal sector — unprotected by such schemes — bore a disproportionate burden.

Financial market stress was acute. The VIX volatility index reached 82.7 in March 2020, surpassing its 2008 peak of 80.7. The US Treasury bond market — traditionally the world's most liquid financial market — experienced severe dysfunction in mid-March 2020, with bid-ask spreads widening dramatically and primary dealers unable to intermediate normal flows. This dysfunction was the immediate trigger for the Federal Reserve's extraordinary interventions.

Conventional Monetary Policy Response

1. Interest Rate Cuts

The first and most immediately visible response from central banks was the aggressive reduction of policy interest rates. The US Federal Reserve cut the federal funds rate target by 150 basis points in two emergency meetings in March 2020, bringing it to the effective lower bound range of 0–0.25%. The Bank of England cut its base rate to 0.1% — a historic low — in two steps in March 2020. The Bank of Canada, Reserve Bank of Australia, and Reserve Bank of New Zealand implemented similarly rapid and large cuts.

Table 2: Policy Rate Changes by Major Central Banks, 2020

Central Bank	Rate (Pre-COVID, Jan 2020)	Rate (Post-Cut, April 2020)	Change (bps)
US Federal Reserve	1.50–1.75%	0.00–0.25%	-150
Bank of England	0.75%	0.10%	-65
European Central Bank	0.00%	0.00%	0 (at LB)
Bank of Japan	-0.10%	-0.10%	0 (at LB)
Reserve Bank of India	5.15%	4.00%	-115
Bank of Canada	1.75%	0.25%	-150
Reserve Bank of Australia	0.75%	0.25%	-50
People's Bank of China	4.15%	3.85%	-30

Sources: Respective Central Bank Publications

For central banks already at the effective lower bound — notably the ECB and Bank of Japan — rate cuts were not available as a tool. The ECB had maintained its deposit facility rate at -0.50% since September 2019, and the Bank of Japan had operated with a negative policy rate since 2016. These institutions were compelled to rely more heavily on unconventional measures from the outset of the crisis.

The Reserve Bank of India acted boldly in an emerging market context, reducing the repo rate by a cumulative 115 basis points between February and May 2020 — to 4.00%, the lowest level in the post-reform era — and cutting the reverse repo rate by a wider 155 basis points to discourage banks from parking excess funds with the RBI. These moves were significant given India's concurrent concerns about inflation, which the RBI temporarily subordinated to the imperative of growth support.

2. Forward Guidance

Alongside rate cuts, central banks deployed enhanced forward guidance — explicit commitments about the future path of policy rates — to anchor expectations and reinforce the credibility of their accommodative stance. The Federal Reserve's FOMC adopted outcome-based forward guidance in September 2020, committing to maintain near-zero rates until maximum employment had been achieved and inflation had risen to 2% and was on track to exceed that level moderately for some time. This represented a shift to average inflation targeting (AIT) and was among the most significant shifts in Federal Reserve communication strategy since the Volcker era.

The European Central Bank similarly committed to maintaining policy rates at present or lower levels until

inflation dynamics were durably consistent with its target. The Bank of England provided calendar-based and state-contingent guidance. The cumulative effect of this guidance was to suppress expectations of rate hikes well into the medium term, reducing the term premium on long-term bonds and supporting financial conditions.

Unconventional Monetary Policy Measures

1. Asset Purchase Programmes (Quantitative Easing)

The signature unconventional tool of the pandemic crisis was the massive expansion of asset purchase programmes — commonly termed quantitative easing (QE). By purchasing government bonds and, in some cases, corporate bonds and other financial assets, central banks injected liquidity into the financial system, suppressed long-term interest rates, and signalled their commitment to accommodative conditions.

The US Federal Reserve restarted QE in March 2020 at an initially open-ended pace — promising to purchase 'in the amounts needed' — before settling at USD 120 billion per month in US Treasury securities and agency mortgage-backed securities. Between March 2020 and the end of 2020–21, the Federal Reserve's balance sheet expanded from approximately USD 4.2 trillion to over USD 7.9 trillion, an increase of nearly USD 3.7 trillion. The ECB launched its Pandemic Emergency Purchase Programme (PEPP) in March 2020 with an initial envelope of EUR 750 billion, subsequently expanded to EUR 1.85 trillion by December 2020. PEPP was distinguished from earlier ECB QE by its flexibility — it could deviate from the capital key in allocating purchases across member state bonds, thereby providing implicit support to higher-debt countries such as Italy and Spain.

Table 3: Central Bank Balance Sheet Expansion, 2020–21

Central Bank	Balance Sheet (Jan 2020)	Balance Sheet (Mar 2021)	Expansion
US Federal Reserve	USD 4.2 trillion	USD 7.7 trillion	+USD 3.5 trillion
European Central Bank	EUR 4.7 trillion	EUR 7.5 trillion	+EUR 2.8 trillion
Bank of England	GBP 0.6 trillion	GBP 0.9 trillion	+GBP 0.3 trillion
Bank of Japan	JPY 536 trillion	JPY 714 trillion	+JPY 178 trillion

Reserve Bank of India	INR 31 trillion (est.)	INR 41 trillion (est.)	+INR 10 trillion
People's Bank of China	CNY 36 trillion	CNY 38 trillion	+CNY 2 trillion

Sources: Federal Reserve, ECB, BoE, BoJ, RBI Annual Reports

The Bank of England expanded its QE programme by GBP 300 billion during 2020, bringing total gilt holdings to GBP 875 billion. The Bank of Japan, already the holder of over 45% of outstanding Japanese Government Bonds (JGBs), further entrenched its yield curve control (YCC) framework — targeting the 10-year JGB yield at approximately 0% — and removed its formal upper limit on JGB purchases.

2. Credit and Liquidity Facilities

Beyond asset purchases, central banks established a wide array of targeted credit and liquidity support facilities — many of them entirely novel in scope and design. The Federal Reserve invoked emergency powers under Section 13(3) of the Federal Reserve Act to launch facilities including the Primary Market Corporate Credit Facility (PMCCF), the Secondary Market Corporate Credit Facility (SMCCF), the Term Asset-Backed Securities Loan Facility (TALF), the Municipal Liquidity Facility (MLF), and the Main Street Lending Program (MSLP). The mere announcement of these facilities — before significant actual purchases had occurred — was sufficient to restore calm in several credit markets, demonstrating the power of central bank commitment signalling.

The ECB enhanced its Targeted Longer-Term Refinancing Operations (TLTROs), offering banks funding at rates as low as -1.0% contingent on maintaining lending to the real economy. The take-up was extraordinary: in the June 2020 TLTRO-III operation, euro area banks borrowed EUR 1.308 trillion — the largest liquidity operation in ECB history — providing massive support to bank funding conditions and indirectly to credit supply. The Bank of England launched the Term Funding Scheme with additional incentives for SMEs (TFSME) and the Covid Corporate Financing Facility (CCFF) in coordination with HM Treasury.

3. Foreign Exchange and Dollar Swap Lines

A critical dimension of the March 2020 financial stress was a global scramble for US dollar liquidity. As risk appetite collapsed, dollar funding markets seized up and the dollar surged. The Federal Reserve responded by enhancing and expanding its network of bilateral swap lines — agreements allowing foreign central banks to obtain dollars in exchange for their own currencies — to 14 central banks, including the ECB, Bank of Japan, Bank of England, Bank of Canada, Swiss National Bank, Reserve Bank of Australia, and others. The Fed also introduced a new temporary repo facility for foreign and international monetary authorities (FIMA repo facility), allowing a broader set of central banks to temporarily exchange their US Treasury holdings for dollar cash.

These swap lines proved extraordinarily effective. Within weeks of their expansion, dollar funding stress — as measured by cross-currency basis spreads — normalised significantly. The total amount drawn on swap lines peaked at approximately USD 449 billion in May 2020 before declining as conditions stabilised. This episode demonstrated the Federal Reserve's de facto role as a global lender of last resort for dollar liquidity, and the systemic importance of dollar funding conditions for global financial stability.

Key Central Banks: Country-Level Analysis

1. United States — Federal Reserve

The Federal Reserve's response to the COVID-19 crisis was its most comprehensive since its founding in 1913. Operating with the benefit of a reserve currency and deep capital markets, the Fed moved with speed and scale that was remarkable. Between March 2020 and March 2021, the Fed cut rates to the zero lower bound, purchased over USD 3 trillion in assets, launched nine emergency credit facilities, expanded swap lines, and adopted a new monetary policy framework. The combined effects successfully arrested the financial market collapse: by April 2020, credit spreads had narrowed, equity markets were recovering, and Treasury market functioning had been restored.

The Main Street Lending Program represented a novel attempt to channel central bank credit directly to medium-sized businesses — a function more typically associated with fiscal policy. However, take-up was limited (approximately USD 17.5 billion against a USD 600 billion capacity), reflecting the difficulty of central banks acting as credit intermediaries for non-financial corporates, where credit risk assessment and relationship lending are essential.

2. European Central Bank

The ECB's PEPP was its most important innovation of the crisis. The flexibility clause — allowing deviation from the capital key — effectively transformed the PEPP into a partial fiscal transfer mechanism, reducing sovereign spreads for peripheral euro area members significantly. Italy's 10-year spread over German Bunds, which had widened to over 280 basis points in mid-March 2020, fell back below 130 basis points by end-April 2020 following the PEPP announcement. This was critical to prevent the kind of sovereign-bank doom loop that had characterised the euro area crisis of 2011–12.

The ECB also enhanced its communications framework and provided more explicit forward guidance linked to its inflation outlook. ECB President Christine Lagarde's declaration in March 2020 that the ECB was 'not here to close spreads' caused a brief market panic — subsequently corrected — illustrating the communication challenges that accompany unprecedented interventions.

3. Reserve Bank of India

The RBI faced the additional complexity of operating within an emerging market economy characterised by a large informal sector, a still-developing bond market, and external vulnerability. The RBI's response was nonetheless bold. In addition to the cumulative 115 bps repo rate cut, the RBI implemented a loan moratorium scheme — allowing borrowers to defer EMI payments for six months — to prevent a wave of defaults. It launched targeted long-term repo operations (TLTROs) to inject liquidity into corporate bond and commercial paper markets, and undertook open market operations (OMOs) to manage yields.

India's GDP contracted by 7.3% in 2020–21 on an annual basis — one of the sharpest contractions recorded. However, the RBI's swift action, combined with the government's relief packages, helped stabilise financial markets and prevent systemic banking distress. The RBI's

foreign exchange reserves increased from approximately USD 480 billion in early 2020 to over USD 580 billion by March 2021, partly reflecting capital inflows attracted by India's sovereign debt yields and partly the RBI's own reserve accumulation strategy.

Emerging Market Central Banks: Distinctive Challenges

Emerging market central banks confronted a set of constraints absent in advanced economies. Capital outflows in March 2020 were the largest ever recorded — an estimated USD 83 billion left emerging markets in a single month, dwarfing the outflows seen during the 2008 crisis and the 2013 taper tantrum. Currency depreciation pressures were severe: the South African rand fell 24% against the dollar in Q1 2020, the Brazilian real fell 28%, and the Russian rouble fell 18%.

These exchange rate pressures severely constrained monetary easing. A central bank facing capital outflows cannot easily cut interest rates — doing so risks accelerating outflows and further currency depreciation, which can worsen inflation and aggravate sovereign balance sheets denominated in foreign currency. Many emerging market central banks therefore cut rates less aggressively than their advanced economy counterparts and were compelled to draw down foreign exchange reserves to defend exchange rates.

A notable development was the decision by several emerging market central banks — including those of South Africa, South Korea, Hungary, Poland, Colombia, and Indonesia — to embark on asset purchase programmes, crossing a threshold that had previously been considered exceptional for advanced economies only. These programmes were modest by advanced economy standards but represented a significant evolution in the accepted toolkit of emerging market monetary policy. The IMF provided crucial support through emergency financing, disbursing over USD 100 billion to approximately 80 countries in the first year of the crisis, helping to alleviate foreign exchange pressure.

Coordination with Fiscal Policy

The COVID-19 crisis produced unprecedented fiscal-monetary coordination — and, in some jurisdictions, raised concerns about the boundary between monetary financing and fiscal support. In the United States, the fiscal and monetary responses were explicitly coordinated through the CARES Act of March 2020, which allocated USD 454 billion to the Treasury's Exchange Stabilisation Fund to provide equity backstops for Federal Reserve credit facilities. In effect, the Treasury absorbed the first-loss risk, allowing the Fed to extend credit to sectors (municipalities, non-financial corporates) it would not otherwise have supported.

In the United Kingdom, the Bank of England temporarily expanded the government's Ways and Means facility — its direct overdraft facility — to allow the Treasury to borrow directly from the central bank. While the Bank stressed this was a short-term operational measure, critics argued it represented a foray into monetary financing. The ECB's PEPP similarly provided implicit fiscal support by relieving debt market pressure on high-deficit member states, facilitating the large fiscal deficits that pandemic relief required.

This fiscal-monetary blurring raised long-term questions about central bank independence. Central banks that had spent decades establishing their credibility as inflation fighters now found themselves acting as fiscal agents, purchasing government bonds at scale and underwriting government credit programmes. The challenge of unwinding these positions without disrupting fiscal sustainability would define monetary policy debates well into the 2020s.

Risks, Side Effects, and Exit Challenges

1. Inflation Risk

By fiscal year 2020–21, inflation remained largely subdued in most advanced economies — below or near central bank targets in the US, Euro area, and UK. However, supply chain disruptions, labour market tightening in the US, and commodity price increases (particularly energy) began generating price pressures in late 2020 and early 2021. The question of whether inflation would prove 'transitory' — as central banks maintained — or persistent would become the defining monetary policy debate of 2021–22.

2. Financial Stability Risks

Ultra-low interest rates and QE compressed risk premia across asset classes, supporting a strong recovery in equity and bond markets even as the real economy struggled. The S&P 500, after its March 2020 trough, recovered to new all-time highs by August 2020 — a disconnect from economic fundamentals that many observers attributed to central bank support. Asset price inflation raised equity, housing, and other asset prices, with distributional consequences: wealthier households who hold more financial and real assets disproportionately benefited. Central banks acknowledged financial stability risks but argued that the alternative — allowing financial market dysfunction — posed a greater near-term systemic threat.

3. Exit Strategy

The challenge of normalising monetary policy after the pandemic — withdrawing asset purchases, raising rates, and shrinking balance sheets — without causing disruptive tightening of financial conditions ('taper tantrums') was already apparent as a major strategic challenge by early 2021. The 2013 taper tantrum, triggered by then-Fed Chair Bernanke's hint at reducing QE, had caused sharp increases in long-term rates and capital outflows from emerging markets. The scale of pandemic-era balance sheet expansion meant that future normalisation would require careful sequencing and communication.

Conclusions

The role of central banks during the COVID-19 pandemic crisis was extraordinary by any historical standard. Acting with a speed, scale, and breadth of instrument deployment unprecedented in peacetime, central banks prevented what might otherwise have been a global financial system collapse layered atop an already severe real economy shock. The stabilisation of financial markets in the spring of 2020 — achieved within weeks of the crisis peak — stands as a significant policy achievement.

Several lessons emerge from the 2020–21 experience. First, central bank credibility and balance sheet capacity remain decisive: institutions perceived as committed and powerful stabilised markets more rapidly, often through announcement effects alone. Second, unconventional tools

— QE, targeted credit facilities, swap lines, yield curve control — are now firmly established as standard elements of the central bank toolkit, particularly at the zero lower bound. Third, fiscal-monetary coordination, while effective in crisis management, creates long-run challenges for central bank independence and inflation credibility that must be proactively managed. Fourth, emerging market central banks, despite operating under tighter constraints, demonstrated greater policy flexibility than historical precedent suggested, including through asset purchase programmes that had previously been considered off-limits. The pandemic era fundamentally reshaped the scope and ambition of central banking. As economies recovered and new challenges emerged — including rising inflation in 2021–22 — central banks faced the complex task of unwinding extraordinary support without undermining the recovery, while maintaining the institutional credibility that made their crisis interventions so effective. The 2020–21 period will be studied for decades as a defining episode in the evolution of modern monetary policy.

References

1. Bank for International Settlements (BIS). Annual Economic Report 2020: Central banks and the pandemic. BIS, Basel, 2020.
2. Bank of England. Monetary Policy Report, February 2021. Bank of England, 2021.
3. European Central Bank. ECB's Pandemic Emergency Purchase Programme: Initial Experience. ECB Economic Bulletin, 2020, (5/2020).
4. Federal Reserve. Financial Stability Report, November 2020. Board of Governors of the Federal Reserve System, 2020.
5. International Monetary Fund. World Economic Outlook, April 2021: Managing Divergent Recoveries. IMF, Washington DC, 2021.
6. International Monetary Fund. Global Financial Stability Report, April 2020: Markets in the Time of COVID-19. IMF, 2020.
7. Reserve Bank of India. Annual Report 2020–21. RBI, Mumbai, 2021.
8. Bernanke BS. The New Tools of Monetary Policy. *American Economic Review*, 2020;110(4):943–983.
9. Gourinchas PO. Flattening the Pandemic and Recession Curves. In R. Baldwin & B. Weder di Mauro (Eds.), *Mitigating the COVID Economic Crisis*. CEPR Press, 2020.
10. Lagarde C. The COVID-19 Crisis and Its Implications for Fiscal and Structural Policies. *ECB Forum on Central Banking*, 2020.
11. World Bank. *Global Economic Prospects*, January 2021. World Bank Group, Washington DC, 2021.