

## Special Feature B

# Issues and Challenges in the Fiscal Policy Response to COVID-19

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COVID-19 has led to an economic crisis of historic proportions. While monetary policy has played an important role in stabilising financial markets and ensuring sufficient liquidity for corporates and households, many academics and policymakers had agreed at an early stage of the crisis that the larger burden for ensuring macroeconomic stability should be on fiscal policy. At the same time, economists have also pointed out that the COVID-19 shock differs in fundamental ways from those that have precipitated economic recessions over the past century, which complicates the application of traditional macroeconomic frameworks used to calibrate the optimal fiscal response.

This Special Feature begins by discussing key characteristics of the nature and transmission of the COVID-19 shock to the economy. It then reviews the academic and policy discussion on optimal fiscal policy responses to COVID-19. First, optimal design of the fiscal policy response is considered, taking into account the peculiarities of the shock. Second, possible long-term consequences of an aggressive fiscal response in the aftermath of COVID-19 are discussed.

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## 1 The Nature of the COVID-19 Shock

### Direct Supply and Demand Effects of a Pandemic

Pandemics, like other natural disasters, are typically regarded as examples of aggregate supply shocks. That is, spreading infection in the population reduces the amount of factor inputs available for production, leading to a temporary decline in potential output. In the current context, COVID-19 has also led to a significant negative aggregate demand shock; thus COVID-19 has induced negative shocks to both aggregate demand and aggregate supply.

The COVID-19 shock to aggregate supply has reduced the productive capacity of the economy via temporary reductions in factor inputs and factor productivity in several important ways.

- The spread of infection in the population reduces labour supply as workers fall ill, with further declines due to quarantining of those in close contact with infected persons. Closure of schools forces many parents of younger children to work from home while taking on additional childcare duties, also reducing the effective labour supply.
- Temporary closures of physical workplaces to reduce disease contagion also increase the stock of available physical capital that lies idle (e.g., factories and machinery).

- Trade disruptions may reduce the supply of imported intermediate inputs and/or increase import prices, exposing countries to cost-push shocks and reducing aggregate supply temporarily. By simulating the effects of country-specific lockdown measures in a global input-output model, Guan *et al.* (2020) show that the reduction of China's output due to lockdown measures in January and February had considerable indirect impact on other countries via global supply chain linkages. In the electronics sector specifically, the analysis finds that reduced production capacity in China had substantial effects on upstream suppliers, triggering production declines in South Korea's electronics sector, as well as in Japan's and Australia's production of metals (by about 21% in each case). In terms of effects on downstream electronic purchases, lower Chinese electronics output is estimated to have had the largest impact on the US, Japan, Mexico and France, reducing electronics purchases by an estimated 28% for each country.

The pandemic has also had direct negative impact on aggregate demand, via both external and domestic channels.

- Trade and mobility disruptions from cross-border movement restrictions designed to slow infection spread have external demand effects, which are particularly significant for countries that are highly dependent on trade and tourism.
- Distancing restrictions within countries also reduce consumer spending on categories associated with social activities. This effect has been only partially offset by increases in spending on other items, such as electronics.
- Uncertainty about the trajectory of the COVID-19 shock can also be a drag on aggregate demand. Facing uncertainty about their future income earning capacity, households and firms may increase their precautionary savings by scaling down their consumption and investment plans, which further reduces aggregate demand. Altig *et al.* (2020) find that broad measures of macroeconomic uncertainty rose to unprecedented levels globally in March. As of August, they remained elevated.

The simultaneous supply and demand effects of a pandemic are neatly illustrated in a simple macroeconomic model by Eichenbaum *et al.* (2020). The authors show that having a growing fraction of the population infected with the disease results in both aggregate supply shocks, from infected individuals being unable to work, and aggregate demand shocks, from households reducing consumption to avoid infection. In this framework, the foremost priority for governments is to aggressively reduce the infected share of the population via containment measures, in order to limit the impact of these simultaneous supply and demand shocks. In addition, the authors find that there are substantial public health and economic costs of easing containment measures too early; lifting containment measures before infections peak leads to a short-term surge in consumption by 17%, but also results in the death rate rising from 0.26% to 0.4% of the population and induces a second, persistent economic recession.

### Interactions between Supply and Demand

The initial supply shocks may also negatively affect aggregate demand, leading to the large output gaps that are familiar from traditional crises. For example, Guerrieri *et al.* (2020)

demonstrate that in the COVID-19 context, an initial negative shock to aggregate supply has the potential to cause an even larger decline in aggregate demand. The supply shock induced by COVID-19 has affected some sectors disproportionately, especially contact-intensive industries that have seen forced closures in many countries. As workers from these sectors see their incomes decline (if social insurance against income shocks is incomplete), they may cut back on spending, reducing demand in sectors that did not experience a supply shock. The demand shortfall is compounded if demand in sectors that have shut down is not reallocated to those that remain open, possibly because sector outputs are poor substitutes. In aggregate, this implies that the demand shock may be larger than the initial supply shock, a dynamic that the authors call a “Keynesian supply shock”.

The sharp and broad-based decline in revenues across the real economy could result in disruptions to financial stability in the presence of liquidity constraints and other financial frictions. While the economic effects of COVID-19 did not emanate from the financial sector, the potential for financial sector disruptions that amplify the economic damage for the rest of the economy remains a threat. As seen during the GFC, a financial crisis that results in synchronised tightening of financial conditions and plunging asset prices can have devastating effects on aggregate demand.

### Persistent Effects of the Shock

As long as the public health threat of COVID-19 remains significant, the dampening effects on economic activity will persist. Uncertainties over future waves of the disease in the absence of a vaccine, as well as over the long-term efficacy of any vaccine that is introduced, mean that the aforementioned supply and demand shocks may continue to stifle a nascent recovery.

Even after the public health risks dissipate, an extended period of income loss during COVID-19 may have severe scarring effects on the economy. As firm revenues continue to be depressed, many work stoppages that were initially temporary could turn into permanent job losses. Barrero *et al.* (2020) estimate that around the peak of US new unemployment claims in April, as much as 42% of job separations could lead to permanent job losses. This implies that even after the pandemic subsides, high unemployment may persist as the labour market struggles to absorb the large influx of jobless individuals. If COVID-19 induces persistent shifts in sectoral labour demand, an expedient reallocation of labour and reduction of unemployment may prove even more elusive, owing to mismatches between retrenched workers’ skills and the needs of expanding sectors.

Using data on 19 historical pandemics, Jordà *et al.* (2020) show some empirical evidence that they tend to induce labour shortages and deplete wealth, potentially reducing real interest rates for decades after the pandemic. While population losses experienced during past pandemics may not be as relevant today, their results suggest that a significant depletion of public and private wealth in the aggregate may limit the growth potential of economies in the medium term. Kozłowski *et al.* (2020) find that extreme adverse events like COVID-19 may persistently dampen economic growth by changing beliefs—after COVID-19, consumers and firms may revise their beliefs about the likelihood of economic tail risks, reducing incentives to invest and depressing the long-run natural rate of interest by up to 67 basis points.

## 2 The Role of Fiscal Policy in a Pandemic

### Challenges for the Fiscal Policy Response

The nature of the COVID-19 shock has complicated the fiscal policy response to the crisis in two ways. First, the contemporaneous supply and demand shocks have led many economists to argue that traditional aggregate demand management via fiscal stimulus is ineffective and that the fiscal response should instead aim at maintaining the productive capacity of the economy. Second, in the absence of a readily available vaccine, the ongoing public health threat will continue to suppress economic activity, preventing a full economic recovery from taking hold. Maintaining fiscal support beyond the duration of a typical business cycle recession is very costly and societies will have to contend with the resulting excessive debt accumulation.

In a standard business cycle downturn, countercyclical fiscal policy is typically employed to mitigate aggregate demand shortfalls, working through a classic Keynesian multiplier mechanism. In addition to raising aggregate expenditures directly by increasing public spending, fiscal policy aims to boost private sector consumption expenditures indirectly via the consumption multiplier. These mechanisms increase aggregate demand and help to forestall a deflationary spiral, as well as the accompanying rise in labour market slack and unemployment.

However, many economists have argued that stimulating aggregate demand would be ineffective during a phase of the COVID-19 crisis where government-imposed measures are weighing on aggregate supply. In the AS/AD framework, standard aggregate demand stimulus in the presence of aggregate supply constraints is ineffective at raising output and may even be inflationary. Instead of boosting aggregate spending, fiscal support should aim at ensuring that the economy retains its productive capacity. Several prominent economists, including Krugman (2020) and Furman (2020), have favoured the analogy of placing the economy into an induced coma while the pandemic spreads—rather than invigorate the economy, government spending should keep the economy “alive” while it undergoes necessary treatment. In a similar vein, Lazear (2020) argued that the key objective for the fiscal response to the pandemic should be to prevent demand shortages during COVID-19 from causing widespread firm and household defaults.

The fiscal response by most AEs reflects a general adherence to these prescriptions, as they have focused on facilitating credit to the broader economy and incentivising firms to retain workers.

Credit policies, in the form of liquidity provision and debt deferment schemes, have been widely employed not just by central banks, but also by fiscal authorities. In effect, these policies ease the budget constraints of firms and households during periods when negative income shocks are likely to tighten them. As such, credit policies aim to reduce defaults among solvent households and firms that are facing temporary liquidity shortages.

Perhaps the policies that best embody the principle of maintaining the economy’s productive potential are furlough schemes that have mainly been employed in Europe, and which have accounted for a large portion of the budgetary outlay in these economies. Many furlough schemes essentially subsidise firms under two conditions: that they operate near normal operating capacity and that they retain workers on payrolls. Incentives to keep workers on furlough maintain the economy just under full capacity, while preserving the

worker-firm matches that would allow production to recover quickly when economic activity resumes. By keeping workers employed, furlough schemes also provide indirect cash transfers to households.

Gourinchas (2020) contends that, given the economy-wide nature of the current pandemic, the consequences for personal and corporate bankruptcies may be dire and governments should adopt a “whatever it takes” approach to liquidity provision and cash transfers. This view has been echoed by Furman (2020) in terms of providing support for unemployed workers and by Beck (2020) in the provision of financial sector liquidity. Most governments have generally adopted such an approach, with the fiscal response to COVID-19 reaching unprecedented levels, and countries like Germany pledging to give out unlimited low-interest liquidity support to corporates. According to estimates from the IMF, the global fiscal deficit will rise by 10% points in 2020, double the increase of 4.9% points in 2009 amid the GFC.

### The Role of Stimulus in a Supply Shock

Given that a temporary reduction in economic activity may be necessary to contain the pandemic, many economists have argued that there is still a role for direct fiscal spending if it is targeted at sectors that bear a disproportionate share of the negative shock, or if aggregate demand declines by more than the “necessary” decline in aggregate supply. Indeed, acknowledging the inevitability of a larger output gap at the current economic juncture does not imply that policy intervention is undesirable. It is quite likely that the fall in aggregate demand disproportionately affects certain sectors of the economy, justifying the use of targeted fiscal measures.

The assessment that fiscal stimulus is inappropriate during a pandemic is typically associated with a generic AS/AD framework with one representative sector in the economy, which Woodford (2020) contends is an over-simplification of COVID-19 dynamics. With economic effects being concentrated in a few sectors, Woodford (2020) shows using a network model of the economy that reduced economic activity in these sectors will generate cashflow disruptions for sectors unaffected by the initial shock, leading to inefficient spillovers on overall demand, regardless of whether the initial disturbance was due to supply or demand deficiencies.

The dynamics underlying a “Keynesian supply shock” as described in Guerrieri *et al.* (2020) have similar implications, where large shortfalls in aggregate demand may occur in sectors that have experienced a relatively small supply shock. In their framework, curtailed spending on one product may not be fully transferred to an imperfect substitute when the first product becomes unavailable. Baqaee and Farhi (2020), using a realistic elaboration of the AS/AD model, provide empirical evidence to show that the impact of the aggregate demand shock has indeed significantly exceeded the aggregate supply shock in many sectors, even those heavily affected by COVID-19. They thus argue that fiscal stimulus targeted at sectors with negative output gaps remains the appropriate policy response.

While the primary aim of many fiscal policies in AEs might have been to maintain the economy’s productive potential, many have also indirectly stimulated aggregate demand. A strand of research has gathered increasing empirical evidence to show that cash transfers to households may have mitigated the effects of COVID-19 on incomes and significantly stimulated aggregate consumption. Benzeval *et al.* (2020) show that the UK furlough scheme has had significant positive impacts on household consumption, while Baker *et al.* (2020) show that cash payments to households in the US have led to strong consumption effects,

especially among lower-income households. Hence, in a crisis involving simultaneous demand and supply shocks, the difference between preserving productive potential and providing fiscal stimulus may have been somewhat overstated.

### 3 Potential Side Effects of the Fiscal Response

Economists are broadly in agreement that the outsized fiscal response to COVID-19 was crucial in preserving the economy's productive potential while government-imposed lockdowns and safe distancing measures suppressed economic activity on an unprecedented scale. As such, sharply raising current government outlays while accumulating public debt was an inevitable and indeed justifiable response to the supposed temporary nature of COVID-19.

Nevertheless, almost a full year since the first cases of COVID-19 made headlines, the pandemic is still running its course, with social distancing measures and expansionary fiscal policy remaining in place for many countries. In view of an extended suppression of economic activity, policymakers will increasingly have to contend with unintended side effects from the current fiscal response that could impinge on the eventual recovery.

#### Unwinding of Credit and Income Support

As continued fiscal largesse will be unviable even for countries whose public sector balance sheets were healthy before COVID-19, fiscal support must be gradually unwound. However, the process of withdrawing fiscal support is not trivial and must be conducted with care. A premature unwinding of official support measures—before the private sector is ready to take up the slack—could potentially set back the nascent recovery and, in some cases, may even lead to a deterioration in debt sustainability. At the same time, an extended period of public sector support is not only costly but could trap the economy in its pre-COVID configuration, delaying the adjustments that are necessary for businesses to adapt to the post-COVID world. As conditions, constraints and resources differ across countries, there is no one-size-fits-all solution.

Credit policies and income support are generally targeted at *liquidity* problems faced by households and firms during COVID-19. However, the prolonged nature of the negative income shock may have eroded household and firm balance sheets sufficiently to induce *solvency* problems.

Solvency problems are likely to be most prevalent for lower-wage workers and firms whose income streams have not recovered by the time fiscal support programmes expire. In these cases, continuing fiscal support through credit policies and short-term cash transfers may simply be postponing insolvencies. Thus, the cessation of fiscal support may lead to a sharp deterioration in balance sheet positions and a spike in defaults. A fundamental challenge facing policymakers is that in attempting to bridge the near-term revenue and liquidity strains of businesses to the recovered economy of the future, there is an acute degree of uncertainty regarding the impact of the pandemic on the longer-term operating capacities and viability of specific industries in the post-COVID era.

#### A World Awash with Liquidity

During this period of severe stress for private and public entities, central banks' efforts to keep interest rates low and financial conditions easy have led to an abundance of liquidity

in global financial markets. This has resulted in a situation similar to the aftermath of the GFC, when the world was awash with liquidity and interest rates reached record low levels.

Excess liquidity and low interest rates may drive investors with return mandates, such as pension funds, towards more risky investments in a search for yield. Low returns also slow down the accumulation of retirement savings by the middle-aged and impose significant strains on pension systems.

There are also concerns that low interest rates may affect the quality of investments, with negative consequences for productivity growth. This may occur because a decline in long-term interest rates triggers a stronger investment response by market leaders relative to market followers, thereby leading to more concentrated markets, higher profits and lower aggregate productivity growth (Liu *et al.*, 2020). Another possibility is that low interest rates reduce financial pressure on “zombie firms”, which crowd out investment in and employment at more productive firms (Caballero *et al.*, 2008; Banerjee and Hoffman, 2018).

### Rising Public Debt

Even before the COVID-19 crisis, there was an intense debate about whether the prevailing low interest rate environment would allow governments to accommodate their increasing indebtedness without suffering negative consequences.

A fiscal deficit is said to impose a cost if the service of the accompanying debt generated necessitates either expenditure cuts or tax increases in the future. Deficits have fiscal costs if the interest rate  $r$  that the government pays on its debt is higher than the growth rate of the economy  $g$ . At present,  $r - g < 0$  holds for most countries, and additional debt does not necessarily entail a fiscal cost. For the US in particular, Blanchard (2019) argues that the case of negative  $r - g$  may hold even in the steady state of the economy, and should thus not be regarded as extraordinary. However, Blanchard (2019) cautions that  $r - g < 0$  does not mean that governments should just pile up debt. Even if debt has no fiscal cost, it still crowds out private investment and large deficits may direct expenditure to less productive or even wasteful uses.

Cochrane (2020) argues that while  $r - g < 0$  means that debt-to-GDP ratios may be brought down even without primary surpluses, this does not mean that the ratio could safely grow without bounds. There is likely to be a threshold beyond which the private sector would demand higher interest rates to hold government debt, which would trigger an explosive path for the debt-to-GDP ratio in the absence of primary surpluses.

### Sovereign Debt Crises

In theoretical models, sovereign debtors service their debts by choice. At any point in time, they evaluate the costs and benefits of honouring their debt obligations. Debt service is costly but comes with the benefit of continued access to credit markets and avoids the penalties from defaulting or reneging on the debt. Sovereigns with a strong track record of honouring their obligations are charged lower interest when they need new borrowing. However, when debt grows too large, debt service becomes too costly and may dwarf the benefits from continued market access. When that happens, governments may choose to renege on or inflate away public debt, a path that has been taken on multiple occasions by some countries. In their seminal paper, Reinhart *et al.* (2003) argue that countries with a

history of serial defaults may have relatively low thresholds for debt sustainability, a phenomenon which they call debt intolerance.

While there is uncertainty about the precise level of debt that would trigger perverse debt dynamics for each country, history has shown many examples of how sovereign debt crises unfold. As debt rises, creditors understand that there is an increased risk of debt repudiation or monetisation, so they increase their assessment of the probability of higher inflation, caused by debt monetisation or outright default. This prompts perverse dynamics as domestic and foreign debt holders attempt to reduce their exposures to the overindebted sovereign, often reflected in reductions in government debt maturity and shifts in debt composition towards US\$-denominated bonds and exchange rate depreciation pressures.

Importantly, inflation can occur even before sovereigns actually resort to debt monetisation. Expectations of a debt crisis often trigger exchange rate depreciation, which is passed through to the domestic price of imported goods. Depending on the prevalence of price and wage indexation, inflation effects may be compounded via a wage-price spiral. Under high debt circumstances, monetary policy may be rendered ineffective as the government increasingly finances itself at short maturities, implying that a tighter monetary policy stance further worsens the fiscal situation and leads to even greater inflationary pressures. This mechanism underlies the unpleasant monetarist arithmetic described in the seminal Sargent and Wallace (1981) paper.

Facing a high marginal cost of finance, governments may follow several distortionary courses of action, such as delaying payments to payroll and contractors, forcing the private sector to hold government debt (financial repression) or reneging on its debt. Each one of these would impinge on economic recovery.

Recent experience has shown increased differentiation between EMs in terms of their capacity to issue sovereign debt. Unlike previous episodes such as the Russian default in the 1990s, which raised borrowing costs for almost all EMs, Argentina's recent debt restructuring had only a small impact on the borrowing spreads of other EMs. However, this state of affairs should not be taken for granted. As the rise in debt is set to be a global phenomenon, there is a risk that isolated sovereign defaults by large EMs could trigger tighter financial conditions for all other EMs. Although the world has seen increasing convergence of inflation rates among AEs and EMs, particularly after the GFC, this trend may reverse if EMs collectively face difficulties rolling over large stocks of sovereign debt.

## A Resurgence of High Inflation

High inflation episodes are often associated with fiscal crises. Recent articles have considered the possibility that the fiscal response to the COVID-19 crisis could lead to a resurgence of high inflation episodes in selected countries. While regarding high inflation after the pandemic as highly improbable, Blanchard (2020) argues that high inflation may occur if the following three conditions come to pass: (i) high debt levels relative to GDP; (ii) large increases in the real neutral rate; and (iii) fiscal dominance of monetary policy. He argues that a debt-laden fiscal authority may be incentivised to maintain low interest rates, even when the neutral rate rises after the pandemic, potentially leading to high inflation.

In other words, while high debt levels are likely to be the end-result of the COVID-19 crisis for many countries, these are not inflationary as long as the real neutral rate is low (which supports debt sustainability) and monetary policy is dominant (which requires fiscal policy adjustment to maintain debt sustainability).



## Private Debt Hangover

Increased private sector indebtedness is likely to pose a hurdle to the recovery of investment and productivity growth. This applies to both household and corporate debt. As households attempt to reduce their indebtedness, they would postpone purchases of durable or non-essential goods and this may pose a drag on demand for an extended period. As firms attempt to deleverage, they could either defer investments or take greater risks to ensure survival, leading to a drag on productivity growth. Further, the combination of low growth and high indebtedness may lead to elevated financial stability risks.

## 4 Sum-up

The COVID-19 shock, which has led to a combination of demand and supply contractions, poses particular challenges for macroeconomic policy. This Special Feature has reviewed key considerations that have informed the fiscal policy response in many AEs and EMs during the COVID-19 crisis. Alongside highly accommodative monetary policy, the deployment of fiscal support at unprecedented levels has been crucial for mitigating the severity of the global economic recession in the short term.

It is important, however, to appreciate that there will almost certainly be long-tailed side effects arising from the pandemic as well as countries' macroeconomic responses so far. It will be crucial for governments to invest in the capabilities of workers and firms, to ensure a robust resumption of growth and to avoid an extended period of high unemployment and capacity underutilisation. Such supply-side policies would also reduce the likelihood of a long-term impairment to the incomes of individuals.

Amid persistently elevated macroeconomic uncertainty, high public sector debt levels will lead to additional downside risks, while undermining the ability of both fiscal and monetary policy to respond to future crises. These conditions will present a new set of challenges for policymakers, demanding a different profile of interventions than those that have been successfully implemented so far.

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