

# The policy response to Coronavirus: theory and application

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## 1. Introduction

In order to guard against and mitigate the potential economic impacts of the pandemic, different policies have been implemented by the UK government and the Bank of England. In this report we aim to look at the rationale behind the implementation of both fiscal and monetary policies and what the potential consequences would have been in their absence.

We look at three main levers: conventional monetary policy, unconventional monetary policy and fiscal policy. For each we review the theory before setting this into context.

There have been constraints on policymakers' ability to implement some of these levers due to the macroeconomic situation prior to the pandemic, particularly with respect to conventional monetary policy where interest rates were already close to their effective lower bound. Unconventional monetary policy has continued in the form of quantitative easing, with some new tools being used during this pandemic and hints that so far unused methods, such as negative interest rates, are being considered. Fiscal policy has been where the most inventive and far-reaching policies have been found, with extremely high expenditure permitted by very low borrowing rates faced by government, partly itself enabled by the supportive actions of the Bank of England.

This article describes some of the key policy changes that we have seen over the past year and attempts to provide a good basis to understand the rationale for the policy choices, underpinned by economic theory. This article does not gauge success (or otherwise) of specific policies but is intended as a record of events with explanations of the reasoning behind them.

## 2. Conventional Monetary Policy

Monetary policy refers to tools used by the Bank of England in order to meet its remit as set out in the Bank of England Act (1998):

*"To maintain price stability, and; subject to that to support the economic policy of Her Majesty's Government, including its objectives for growth and employment"*<sup>1</sup>

Price stability generally refers to keeping inflation low and stable and the channels through which it works usually have an impact on economic activity. Boosting economic activity in a recession is justified on the basis of inflation targeting but also on the basis of part of the remit which supports the UK Government's objectives on growth and employment.

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<sup>1</sup> With thanks to Professor Julia Darby

## The theory

Inflation refers to the average change in prices over time that consumers pay for a basket of goods and services. Low and stable inflation provides relative certainty in how much goods and services will cost in the future, enabling households and businesses to plan their spending and investment. The extremes of inflation – hyperinflation and deflation – both create huge amounts of uncertainty, and often large costs, for consumers and firms.

The central bank tries to achieve price stability by stimulating either spending or saving in the economy. When economic activity is high, limits on available capacity can push up prices in the economy. For example, when unemployment is low, workers may ask for higher wages. Where demand for product goes up, if production lines are already working at full capacity, firms may be unable to boost supply any further, and excess demand will push up prices. These are just a couple of examples of why high levels of economic activity can push up inflation, but there are numerous ways this could happen, and often these are mutually reinforcing. For example, higher prices may mean that workers demand more wages to pay the higher prices, pushing up the cost of production, resulting in prices, and then wages rising again.

The opposite is true when economic activity is low; then there is spare capacity in the economy, potentially due to lower demand for goods and services. Workers may be willing to work for less, as they realise that many people could take their place. Production lines are working below capacity. Potential supply may outstrip demand, leading to downward pressure on prices. This leads to falling inflation and potentially deflation.

Given the Bank of England's remit on monetary policy, deficient demand, inflation below target, and the risk of deflation can justify monetary policy being used alongside fiscal policy to stimulate the economy whilst. The main conventional instrument that the Bank of England uses to achieve this is the interest rate charged on commercial bank deposits held at the Bank of England: the base rate.

### Conventional monetary policy mechanisms

Changes to the Bank of England's base rate affect the economy through one or more of the following mechanisms:

- Market rates

A change in the base rate changes the rate interest applied to the money commercial banks hold at the central bank. The commercial banks will generally pass on rate changes to the rates consumers and businesses are charged on bank loans or the interest they receive on their bank deposits. A fall in interest rates reduces the cost of borrowing and will reduce the incentive to save due to the reduced return from savings. Both effects lead to an increase in consumption and demand, increasing inflationary pressure. However, those who rely on income from savings will see their income fall due to the base rate change, meaning that their consumption may fall. The impact on consumption is not therefore entirely clear cut, but on aggregate it is hoped that the impact will be expansionary.

- Asset prices

Reducing interest rates will increase the demand for assets, as an alternative store of value and to provide financial returns to their owners, such as stocks and shares. The interest rates that banks set provide a 'safe' way to get a return on money deposited in the bank. As this rate decreases (and/or inflation rises), however, riskier ways of seek a higher expected return on your money become more attractive.

- Expectations/Confidence

Central banks have an important role in underpinning confidence in the economy. If people believe that the central bank will be effective in supporting the economy, while maintaining price stability, they may spend more today even without a change in interest rates. This is because they feel less need to save their money due to the expectation that their future earnings will improve in real terms.

- Exchange Rate

Low interest rates in the UK than in other countries can mean that investors look not only to assets in the UK, but also abroad in order to find financial returns. Likewise, foreign investors holding assets in the UK may seek higher returns elsewhere when UK interests fall. The resultant outward flow of financial capital implies a fall in demand for domestic currency, leading the currency to depreciate. A depreciating exchange rate can also boost demand for exports, as UK produced goods, if priced in sterling, will become cheaper overseas although the exchange rate channel will be less evident if interest rates are moved in the same direction by other central banks.

## **Conventional Monetary Policy in recent years**

The ability to use conventional monetary policy to respond to the pandemic has been constrained due to the fact that the base rate was already close to zero. The base rate had been kept low since the global financial crisis and Brexit referendum in 2016. These events set the context for monetary policy as we headed in to the pandemic.

### **The Global Financial crisis**

The financial crisis of 2008/9 occurred in a relatively high-inflation high-interest rate environment. The interest rate was the main mechanism through which the Bank of England used to respond to this crisis: dropping from 5.5% to 0.5% in less than a year (see Chart 1).

Growth after the global financial crisis was relatively slow and inflation also remained low; this explains why interest rates were kept low for a long period. Slow growth was partly due to the severity of the recession, but there are other factors that are likely to have played a role, including pessimistic expectations, low business investment, poor productivity performance, limited credit availability, and the extent of austerity policies after the crisis. Since interest rates were already close to zero, the Bank of England concluded further reductions in the base rate could not provide further stimulus to the economy.

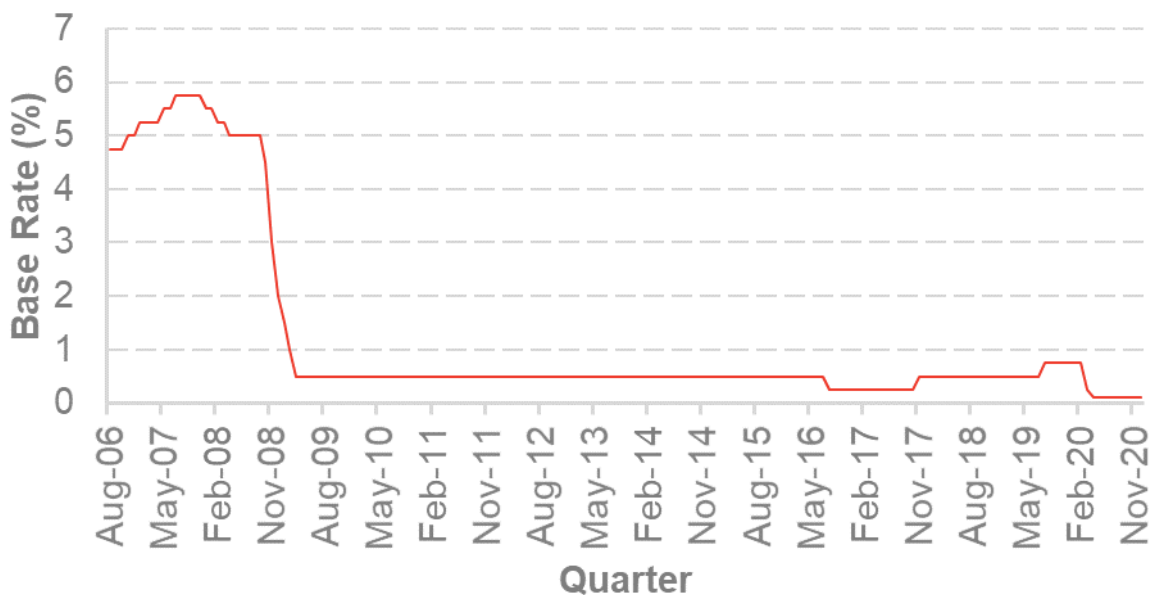
## Brexit

The 2016 Brexit Referendum affected the economy through two main channels: heightened uncertainty and pessimistic expectations.<sup>2</sup>

Uncertainty over the many possible exit options and timings had the potential to delay investment decisions. Investment involves considerable sunk costs making decisions hard to reverse. Faced with heightened it is understandable that firms prefer to delay irreversible investment decisions until uncertainty is resolved. The danger is they then lose market share to other domestic or international firms and miss out on opportunities to boost productivity and profits in the longer term. Furthermore, even if some firms are willing to invest they may be constrained by limited credit availability.

It is hard to separate the effects of uncertainty and pessimistic expectations but is clear that negative views, that are potentially self-reinforcing, also play a role in this process.

Chart 1: Bank of England base rate, August 2006 to March 2021



Source: Bank of England

In this context, following the Brexit referendum the Bank of England cut interest rates from the already low 0.5% to 0.25% to further incentivise spending and investment by reducing the value of holding onto cash. The impact of these reduced rates was limited due to uncertainty and pessimistic expectations, although these effects began to lessen with time as the situation became more certain and demand began to recover. The Bank of England base rate was subsequently raised to 0.75% by August 2019. But remained low relative to the prevailing rates prior to the global financial crisis.

The Covid shock and the policy response, therefore, should be seen as occurring in the context of persistently low interest rates, with demand only slowly beginning to recover.

## Covid response

The Bank of England responded quickly to the Covid economic shock by cutting interest rates to 0.25% from 0.75%, then again from 0.25% to 0.1%, the aim being to support demand, leaving the base rate at the lowest feasible positive level. The Bank of England has signalled that while a negative policy rate of interest rates is a potential policy tool, although it is yet to be used.<sup>3</sup> Instead the Bank of England turned to unconventional monetary policy measures and the Government to fiscal policy.

## 3. Unconventional Monetary Policy

Given the historically low interest rates of recent years, central banks have relied on newer and so-called unconventional tools, developed by monetary authorities, to meet their remit. Which unconventional tools are used depends on the characteristics of the financial system and the specifics of the economic shock they need to deal with.

### The theory

Unconventional monetary policy has the same purpose as conventional monetary policy. It seeks to change the cost (or benefit) of holding money and hence incentivise spending (or saving). Policy instruments are unconventional only in the sense that they are not directly concerned with changes to the base rate (like conventional monetary policy) and are fairly new – hence at the time of their introduction, their transmission mechanisms, that is the way they impact on activity and inflation, were less well understood, and central banks have been learning more about them from experience. However, unconventional monetary policy has played a key role during the financial crisis and continues to do so now.

The main way that the Bank of England has used unconventional monetary policy has been via Asset Purchasing Programmes, also known as Quantitative Easing (QE).

QE refers to the creation of new (electronic) money used to purchase assets, particularly existing government bonds, held by financial institutions particularly life assurance and pension funds, and potentially also by commercial banks. The central bank usually announces the total value of assets it intends to purchase over a specified time period.

Large scale purchases of government bonds leave the Bank of England holding the bonds and the financial institutions holding cash. Low interest rates, however, imply a low return to holding onto cash. Instead of holding on to the cash the life assurance and pension funds will seek to purchase other assets such as new issues of government bonds and corporate bonds. Large companies may now be able to issue new corporate bonds on relatively more favourable terms, and commercial banks that participated in selling assets may seek to earn a yield by increasing their lending to firms and consumers. In these ways QE has the potential to boost economic activity.

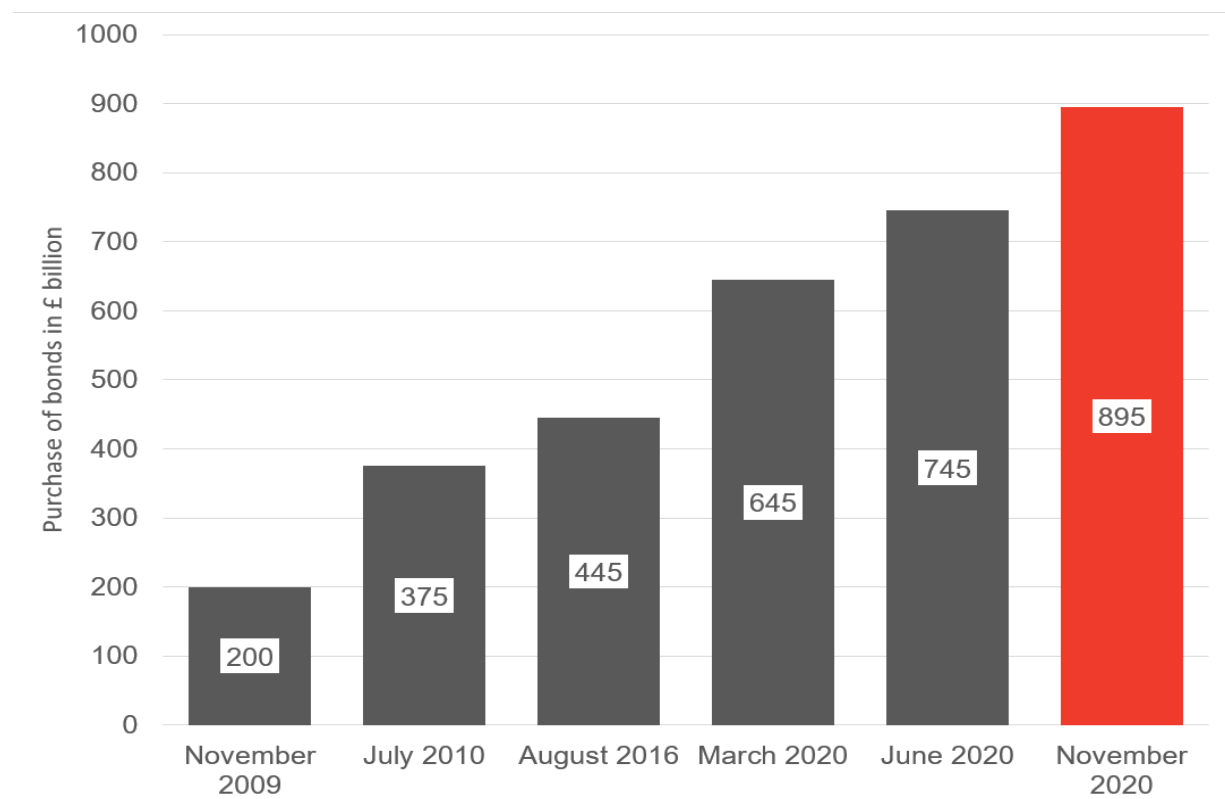
## Unconventional Monetary Policy in recent years

Given recent low interest rates and sluggish growth, the UK, along with other advanced democracies, has had to rely more on QE and other unconventional instruments of monetary policy to respond to recent shocks. While global trends tend towards lower interest rates, there are specific aspects of the UK environment since the financial crisis which have exacerbated this trend. Unconventional monetary policy is useful when the policy rate of interest is already at, or close to the lower effective bound.

### Global Financial Crisis

The Bank of England found it had to respond to the 2008/9 global financial crisis by doing more than lowering its base rate of interest to mitigate the crisis and stimulate recovery. The Bank embarked on an extensive programme of quantitative easing: in its first round of QE in 2009, it announced that it would purchase £200bn of assets from March 2009 to January 2010. Subsequent rounds of QE saw the bank accumulating asset purchases worth £375bn and £445bn by 2012 and 2016 respectively<sup>4</sup>. The aim was to lower longer term interest rates and to counteract the tightening of financial conditions while keeping inflation expectations anchored and mitigate the potential for pessimistic expectations to affect economic outcomes.

Chart 2: Quantitative Easing: total value of bonds held by the Bank of England, selected dates.



Source: Bank of England

The years after the crisis there have been characterised by heightened uncertainty, worries over credit availability, sluggish productivity and low wage growth.<sup>5</sup>

Recovery from the crisis was slow, yet the consensus is that without intervention the impact of the shock would have been much worse.

### Brexit

The uncertainty and pessimism that emerged after the Brexit referendum led the Bank of England to resort to further rounds of QE with the aim of moderating the slowdown of the economy; the Bank announced that it would buy £60bn worth of government bonds and £10bn of corporate bonds in August 2016.

The Bank's announcement of its plans for further QE was made much quicker than at the announcements made at the start of the financial crisis. probably because the MPC now had more evidence on the effectiveness of QE and the scale of potential effects. Monetary policy changes generally take some time to take effect so the quicker they decide to enact a necessary policy, the better.

### Covid

Previous experience of QE meant that the Bank of England could quickly respond to the pandemic by announcing further rounds of asset purchasing. The QE programme already stood at £445bn in the aftermath of the Brexit referendum. On March 19<sup>th</sup> 2020, the Bank of England announced an expansion of QE, with a target for an additional £200bn asset purchases to be completed by mid-July 2020.<sup>6</sup>

The Bank also allowed reduced the countercyclical buffer, enabling commercial banks to reduce their reserve deposits and to increase lending.

Aware of the adverse impacts that credit constraints can have on otherwise healthy businesses during recessions, the Bank of England also introduced the Covid Corporate Financing Facility (CCFF), this provides low cost finance directly to large companies with the objective of limiting job losses and other adverse effects of the Covid shock on the macroeconomy.

## 4. Fiscal Policy

Fiscal policy refers to the governments use of taxes and government spending to achieve desirable changes in economic activity. Fiscal policy involves direct intervention of the government in the real economy. The fiscal policy response to the pandemic has in part aimed to protect the income of households. The policy works by trying to support activity in the economy and jobs as well as direct transfers to households.

### The theory

The key route through which the economy affects households' living standards is via the labour market. Many factors determine the demand for labour (by firms wanting to employ workers) and the supply of workers (the number of workers prepared to work for a given wage). In countries with social security systems generally wages need to

be higher than level of out-of-work benefits to incentivise people to take up paid work although there may be other constraints, such as caring responsibilities, that have a significant impact on whether individuals are able to work.

A firm's profit depends on: the cost of producing goods (including wages paid to workers); the revenue they receive they sell their goods at (determined by prices, consumer preferences and relevant taxes); and the amount workers can produce per hour worked (their productivity). In a recession, firms typically see demand fall for their products and services. If productivity remains the same, then the firm is likely to reduce the wage they pay to their workers, cut workers hours, and/or cut jobs. Each of these responses are is likely to reduce consumption in the economy because workers and/or those who have lost jobs see their disposable income fall. The resultant decline in demand can lead to a further contraction in employment.

There are several routes a government can take to address deficient demand and reduce the likelihood of a downward spiral including through increasing government spending on goods and services, raising transfer spending and reducing taxation.

A distinction can usefully be made between automatic and discretionary elements of fiscal policy. Automatic fiscal policy occurs due to the interaction of the business cycle with the existing taxes and benefits system. For example, in a cyclical downturn, when unemployment rises, more people qualify to receive unemployment benefits so welfare spending automatically rises as incomes and sales decline. These automatic stabilisers do not rely on the government taking any active decisions and can cushion the impact of shocks in a timely manner. Discretionary policy, on the other hand, involves deliberate action by the government taken in response to specific shocks. Recognition, decision and implantation lags mean discretionary policy action is typically less timely. Nonetheless, the scope to target discretionary policy can make it more effective in responding to some kinds of shocks than automatic stabilisers.

### **Effectiveness of discretionary Fiscal Policy**

There are a number of economists who talk about fiscal policy is most effective if it is timely, targeted, temporary and transformational.<sup>7</sup>

Delayed response to a shock may amplify the initial economic impact, hence the need for timeliness in fiscal policy. For maximum effectiveness, the right policy needs to be enacted quickly. A poorly timed response could be counter-productive, for example only beginning to have an impact when a recovery is already underway.

However, in response to economic shocks, fiscal policy needs to be temporary, limited to the period in which the impacts of shocks are felt. Implementing fiscal policy for longer than necessary could harm prospects for sustained recovery by 'crowding-out' private sector activity, for example by competing for workers and other resources which would otherwise be used by private sector firms.

Similarly, effective policy requires that help is correctly targeted which requires correct identification of the channels through which negative shocks have or are affecting the economy. Incorrect targeting can lead to spending that has little or no effect.



In addition to having short-term impacts, fiscal policy should aim to create sustainable long-run positive impacts on the economy, potentially making it more resilient to future shocks or addressing other government concerns. For example, fiscal policy could be transformational by ensuring that the responses to unemployment generates 'green' jobs, boosting economic activity and addressing environmental concerns.

## **Different Forms of Fiscal Policy**

### **Government Spending**

In times of reduced economic activity, government can boost the economy through discretionary increases in government spending. Lower economic activity means some firms, households and banks may be less willing to spend. Uncertainty about the nature and duration of shocks exacerbates these effects. The government can, increase economic activity by spending money directly, for example, through public infrastructure projects.

Government spending typically has positive multiplier effects in recessions. The size of the multiplier effect is affected by the kind of government spending. For example, spending on an infrastructure project may involve hiring unemployed workers, those newly employed workers then receive earned income, and will likely spend a large proportion of it on goods and services provided by private sector businesses. Those businesses can then hire more workers and the consequences of the government's additional spending creates 'ripple' effects through the economy resulting in a change in economic activity that is a multiple of the increase in government spending.

### **Taxation and benefits**

The government can also boost economic activity through discretionary action on taxation. Reducing tax rates and/or increasing tax-free allowances can increase firms' post-tax profits and/or raise household's disposable income. However, the effect of tax cuts on economic activity occurs indirectly. While government spending has a direct impact and a multiplier effect, the stimulus generated by tax cuts relies on firms and households' responses to lower taxes and the stimulus is not guaranteed. In particular, when faced with heightened uncertainty, firms may wait for more evidence on the security of any recovery before increasing hours and investing in new equipment, while consumers may prefer to save any increase in disposable income rather than spending it.

Changes to income tax rates do not affect those on very low incomes (including those who are not working) so they do not reach the whole population. Increases to means-tested (or income dependent) benefits can be used to target support to those at the lower end of the income distribution. The multiplier effect is likely to be larger when targeting lower-income households, since those on low incomes tend to have a higher marginal propensity to consume and less likely to save.<sup>8</sup>

### **How the Government Finances Fiscal Policy**

The government can finance fiscal policy through tax revenues, borrowing, and/or via money financing (with the assistance of the central bank). Following an adverse economic shock, government borrowing typically rises for two reasons. Firstly, tax

revenues automatically fall as unemployment rises and household incomes and firms profit fall. Welfare payments rise and governments are likely to boost their spending to mitigate the impacts of the shock.

### **Box 1: Wage Subsidies**

*Although ‘furlough’ style wage subsidies had been used in various countries before now, they had not previously been a part of a fiscal stimulus in the UK until March 2020. For the workers receiving the payments, wage subsidies operate like a transfer payment, but the payments are made by the government via businesses. The government pays a proportion of firm’s normal wage costs, so they do not have to lay off workers to cut back on costs.*

#### **What are the benefits of wage subsidies?**

*There are a number of reasons for wage subsidies. As with the previously mentioned benefits from fiscal policy, it keeps money in workers pockets, preventing a spiral of falling incomes and falling demand which would otherwise lead to further harm on the economy.*

*Wage subsidies also have unique benefits when deployed during a time when structural change isn’t expected. That is, when a downturn is not caused by inherent weaknesses in the economy, but due to an outside force that leads normally productive businesses to struggle, temporarily.*

*Avoiding lay-offs means that firms will not lose firm-specific human capital and don’t incur search and hiring costs when the economy recovers. In contrast subsidised retention of employees can help reduce time out of employment, and any scarring that may occur due to skills loss. The longer the period of furlough however, the greater the risk that skills loss will occur.*

*Wage subsidies help firms that would otherwise be struggling to stay in business. If the firms do not suffer from underlying productivity problems, this help businesses recover when restrictions ease and demand pick up.*

#### **What are some issues with wage subsidies?**

*The longer the pandemic goes on, the more likely that the structure of the economy will have changed by the time recovery happens. Structural change would be more likely to mean that different skills and experience will be required and furloughed jobs become redundant.*

*The availability of wage subsidies may stifle innovation since people retain the same jobs instead of seeking new opportunities, such as entrepreneurship.*

*There is also the potential for fraudulent subsidy claims and difficulty in targeting workers not in traditional forms of employment – such as the self-employed and those on precarious work contracts.*

Because they borrow more and collect less tax revenue, the government’s debt increases. Although high government debt is generally undesirable, the higher government spending and tax cuts it finances are likely to limit the overall negative

economic consequences. The government will have to pay the interest payments of this debt in the future, so a low interest rate environment will make repayment easier and a high interest rate environment will make it harder.

## **Fiscal Policy during Covid-19**

In the UK, like most developed countries, fiscal policy has been at the centre of the Covid-19 recovery response. The fiscal response to the pandemic can be categorised into five broad segments: Additional (discretionary) spending, accelerated spending, foregone revenue, deferred spending and wage subsidies<sup>9</sup>.

- Additional (Discretionary) Spending

This composes of all spending by government in response to the pandemic that would not have occurred otherwise. In the UK this includes resources allocated to paid sick leave for individuals self-isolating; grants to businesses; support for the vulnerable by expanding the Universal Credit and Working Tax Credit schemes; provision of support to boost work search, skills, and apprenticeships; and additional transfers to devolved administrations among others.

- Accelerated Spending

To achieve a timely stimulus, some pre-planned government spending was brought forward – this is termed accelerated spending. Examples in the UK included bringing forward some public infrastructure spending. PM Boris Johnson promised to bring forward £5.6bn of infrastructure spending on 30th June 2020.<sup>10</sup>

- Foregone Revenue and Deferred Revenue

Another policy route is provision of tax waivers or reduced tax rates. For example, firms in affected sectors were provided a property tax holiday for 12 months. Additionally, there was a temporary tax cut to stamp and land duty and provisions were also made for value-added tax and income tax payments to be deferred to later periods.

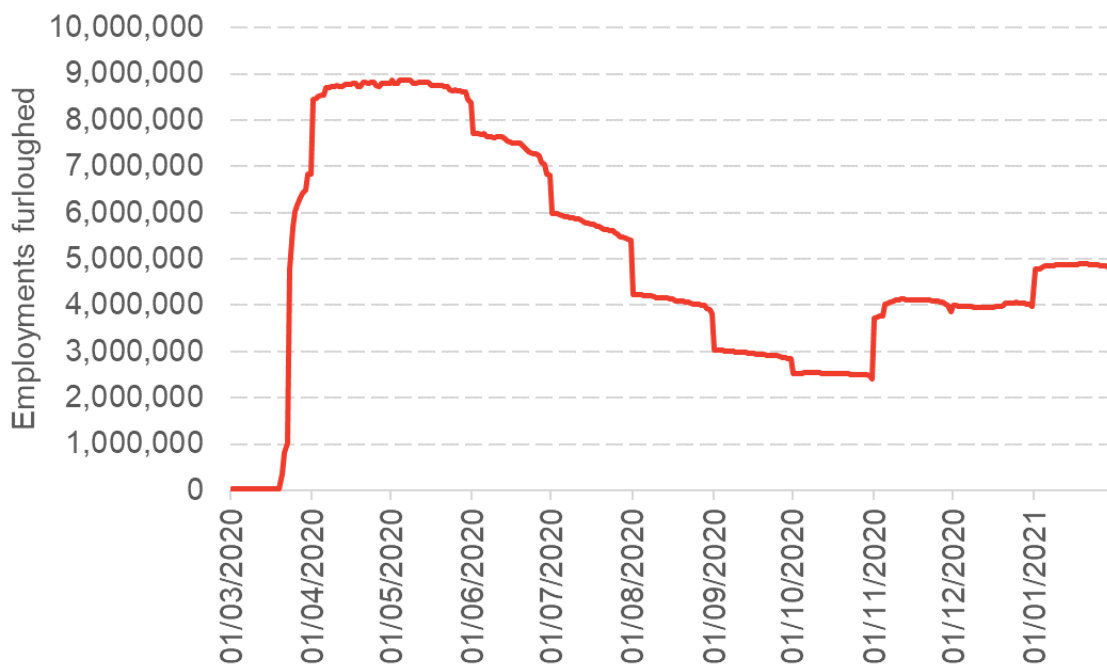
- Wage subsidies

As explained in Box 1, wage subsidies are a fairly new policy tool, but have been used extensively over the past year in the UK in the form of the Coronavirus Job Retention Scheme (CJRS) and the Self Employment Income Support Scheme (SEISS).

CJRS, also known as furlough, has been key in protecting jobs and avoiding what would otherwise have been a far larger rise in unemployment. According to the Scottish government, unemployment would probably have risen to 14% in the absence of the scheme<sup>11</sup>, while with the scheme the unemployment rate has remained just below 5%.

In addition, the extent to which the JRS is expected to incentivise firms to keep employees on furlough instead of laying them off is dependent on the extent to which firms feel optimistic about recovery. With high optimism, firms may keep more employees on furlough to avoid eventual costs of rehiring. This is reversed when firms' optimism is low.

Chart 3: Employments furloughed (UK)



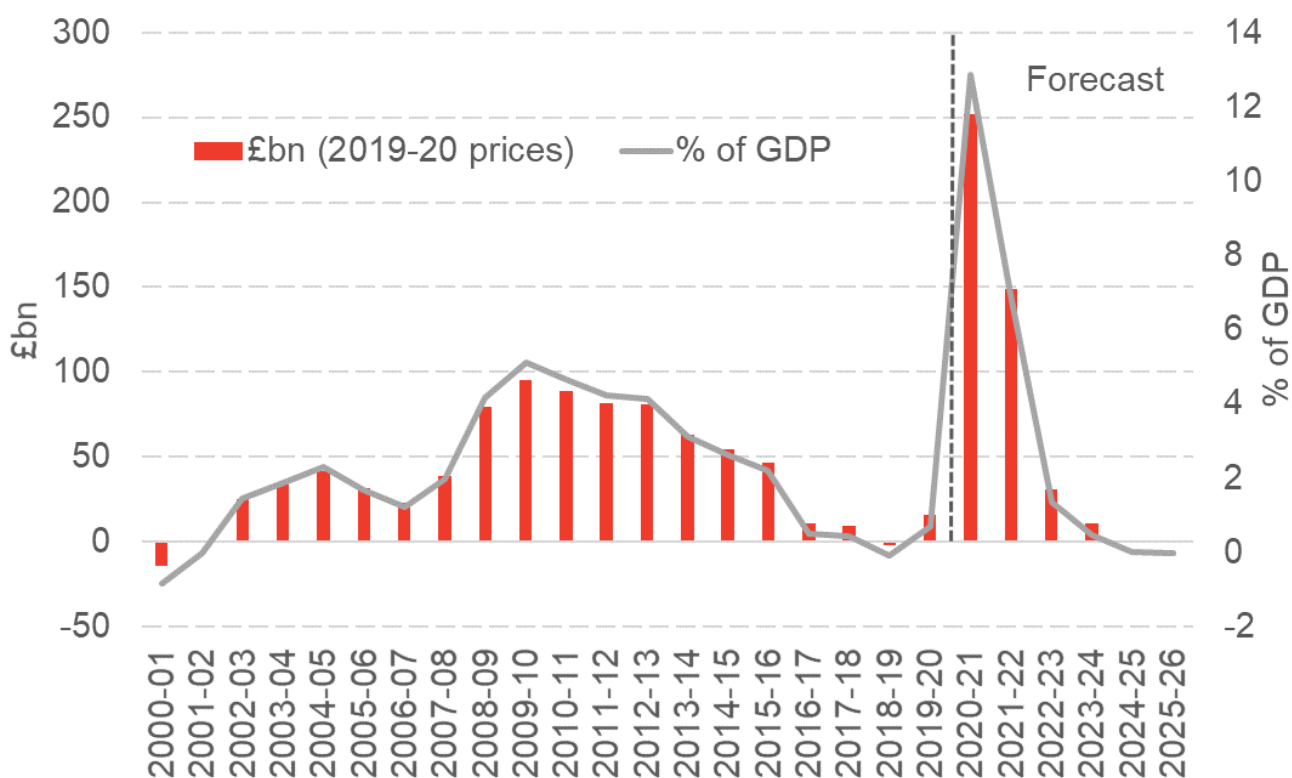
Source: HMRC

At its peak May 2020, around 9 million people were on the furlough scheme. By January 2021, 475,000 people had been on full furlough for at least 6 months<sup>12</sup>. Despite this number having fallen over time, it is very likely that some workers would have been made redundant in the absence of the furlough scheme.<sup>13</sup>

As a result of increases to government spending and decreases in tax revenue, the government has had to borrow significantly, as shown in Chart 4. The levels of borrowing dwarf that seen during the financial crisis.

According to the OBR, headline debt is at approximately 100 percent of GDP and is predicted to stay at this level for many years to come, yet servicing costs are at record lows<sup>14</sup>. Given this low debt cost environment, most are content that taking on this level of debt was appropriate given the scale of the crisis.

Chart 4: The UK deficit



Source: Office for Budget Responsibility

## 5. Conclusions

The UK has used both fiscal and monetary policy in its response to the Coronavirus pandemic. The ensuing economic crisis has meant that the government and Bank of England have had to rely on traditional and previously used policy, such as lowering the base rate on the monetary policy side and using tax breaks and increased benefits for certain groups on the fiscal policy side. However, the nature and severity of the crisis has also meant the use of unconventional monetary policy, such as quantitative easing, and new fiscal policy, such as the job retention schemes.

By assessing the economic theory and rationale behind the adoption of such policies and the policy landscape in which they emerged, the policy response to the pandemic can be better understood. Going forward it is important to understand the key economic factors at play and the policies designed to mitigate these.

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