EPRG 2020 - 2021

MAY 2021

EPRG

HISTORIC RECESSION REMEDIATION

ANALYSTS

Nevin Benoy
Junghoon Kim
Donghyun Kim
Temmuz Ozcagatay

EDITORS

Dain Rohtla
Pratiksha Saha

St Andrews

Abstract

Our research project investigating four policies used in response to the Great Recession ('08 to '09) to ascertain whether they were viable to aid the recovery from the recession caused by the Covid-19 pandemic ('20). The four policies investigated were Quantitative Easing, Base Rate manipulation, fiscal stimulus measures and the use of Automatic Stabilisers. Quantitative Easing was a crucial part of the response to the Great Recession, its short-term efficacy and the lack of a similar financial crisis in the current economic picture suggests that it would be a viable but less effective policy for the current recovery. Fiscl stimulus, such as used after the Great Recession is viable but with concerns about the rising national debt, we found that the government would be better off utilising the 'stored stimulus' retained in household savings. Indeed, over the course of numerous national and regional lockdowns, households have accumulated billions in savings, with these aggregate savings some five times larger than at any point in the last nine years. Whilst unemployment has been suppressed through extensive use of the Furlough scheme, we found through independent modelling that unemployment is likely to substantially increase through the next few years. Our investigation has concluded that the four policy areas investigated would all be viable to aid the recovery as they did during the Great Recession, with important caveats.

Benoy, D. Kim, J. Kim, Ozcagatay

1 Introduction

The overall purpose of our research project is to investigate and ascertain which of the policies used in response to the Great Recession are viable for repetition in response to the Covid-19 Recession. The four policies that we have chosen to investigate are: Quantitative Easing, reducing the Base Rate, Fiscal Stimulus measures, and Unemployment Benefits.

The following report seeks to share the results of our investigation and is laid out into two main sections prior to a conclusion. The first section provides a brief descriptive comparison between the two recessions and recoveries investigated.

The second section consists of four essays detailing the policies that we have investigated. The first essay is on Quantitative Easing. The second essay is on a reduction of the Base Rate with a focus on the results of negative interest rates utilised by central banks in Europe. The third essay covers Fiscal Stimulus measures and the fourth essay is on the use of Unemployment Benefits with a focus on how severe unemployment is likely to be compared to the Great Recession.

2.1 A Comparison Between the Two Recession and Recoveries

This section compares the size of the two recessions investigated and how the recoveries are projected to differ.

To aid with this comparison, three figures are included, quarterly GDP, indexed size of the economy, and unemployment rate. These have the figures, and Monetary Policy Committee (2021) central projections, from a three-year period surrounding and including the two recessions (2008 Q1 to 2010 Q4 and 2019 Q4 to 2022 Q3), overlayed. The bottom dates correspond to the time period surrounding the Great Recession and the dates on top correspond to the time period surrounding the Covid-19 recession. Both recessions begin at the second quarter shown on the horizontal axis.

As seen in Figure 1., the Covid-19 recession has formally been much shorter than the Great Recession. The Great Recession formally lasted five quarters from 2008 Q2 to 2009 Q2 whilst the Covid-19 Recession has only lasted two quarters so far from 2020 Q1 to 2020 Q2. With the MPC (2021) only projecting a single more quarter of negative growth in 2021 Q1, the economy is likely to avoid a prolonged recession similar in length to that of the Great Recession.

However, as seen in Figure 2., the Covid-19 Recession has proved to be relatively more substantial with the economy around 21% smaller than the pre-recession size at the trough of the recession. During the Great Recession, at the trough, the economy was only 6% smaller than its prerecession size.

Despite the greater relative contraction, the Covid-19 Recession has had a much less impactful effect on unemployment so far, as can be seen in Figure 3. After five quarters of negative growth from 2008 to 2009, unemployment had risen by 2.6 percentage points, reaching 7.8%. In comparison, unemployment as a result of the Covid-19 recession, only rose by a single percentage point between 2019 Q4 and 2020 Q3 despite the economy being 9% smaller by the end of that period.

This has mainly been due to the rise in teleworking, saving jobs despite government-enforced lockdowns, and extensive use of the Coronavirus Job Retention Scheme (CJRS) which, at its peak in May '21, was supporting around 30% of the workforce (ONS 2021).

The recovery period for the Covid-19 recession is expected to be more sporadic than that seen after the Great Recession. With the introduction of the tiers system in October 2020 followed by the November circuit breaker lockdown and the reintroduction of nation-wide lockdown in January '21, the MPC (2021) predicts that economic growth will fall to just 0.6% in the final quarter of 2020 before turning negative again with a contraction of 4.2% in 2021 Q1. This will leave the economy 12% smaller than its pre-recession size.

However, the MPC (2021) predicts that this 'stop-go' economic growth, based on the introduction, easing and reintroduction of local and national lockdowns, will end as the vaccine rolls out, facilitating a permanent reopening of the economy. With fewer restrictions and health concerns, pent-up consumption and investment is expected to ensure a strong recovery with a projected economic expansion of 13% across the final three quarters of 2021, returning the economy to pre-recession size in early 2022. In comparison, the recovery from the Great Recession was much slower with quarter-onquarter growth never surpassing 1% in the years following the recession. Indeed, after the Great Recession, the economy would only return to pre-recession size in the second quarter of 2013, around five years after the onset of the recession.

The picture is less optimistic for unemployment during the recovery. Under the assumption that CJRS would end in April, the MPC (2021) predicted that unemployment would rise to a peak of 7.8%, a total increase of 5 percentage points above the pre-recession level. However, it was then projected to fall significantly as the economy recovered, falling to 5.4% by the middle of 2022. This is in comparison 4 to the recovery from the Great Recession in which unemployment stagnated at around 8%, only falling to pre-recession levels at the end of 2015.

With furlough extended until September, this uptick in unemployment is likely to be postponed until the final quarter of 2021 (BBC 2021). At this point, the economy will have mostly recovered to its pre-recession level, likely mitigating the size of the rise in unemployment.

Thus, the Covid-19 recession has proved to be the more substantial of the two but the recovery is expected to be much quicker. Moreover, unemployment has not risen to the extremes of the Great Recession, and is unlikely to do so, but will undoubtedly continue to grow, peaking either this year or next.

However, an important note of caution is required. As this projected recovery is dependent on reductions in Covid-19 cases facilitating the end of government-enforced lockdowns, it is uniquely susceptible to upset if vaccination supply stalls or vaccine-resistant Covid-19 variants spread. The possibility of necessary fiscal or monetary intervention to aid the recovery is investigated through the next four essays.

2.2. Graphs Used to Aid Comparison

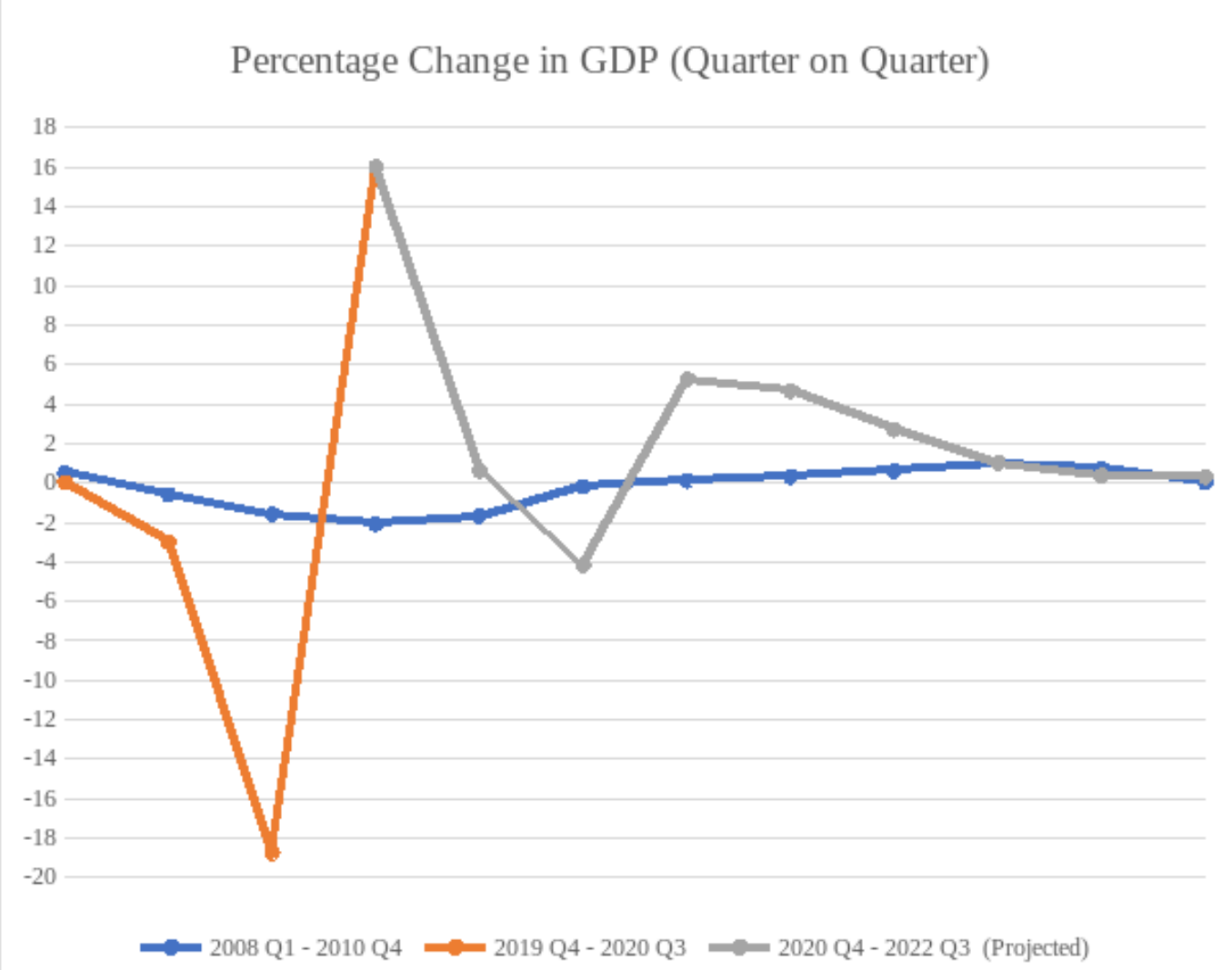

Figure 1. Sources: '2008 Q1 – 2010 Q4' figures are derived from ONS data ~ Gross Domestic Product: chained volume measures: Seasonally adjusted £m (ONS, 2021). '2019Q4 – 2022 Q3' figures inc. projections are derived from the MPC February 2021 Report data & central projections ~ GDP, £ billion chained-volume measure (reference year 2018) projections based on market interest rate expectations, other policy measures as announced (MPC, 2021).

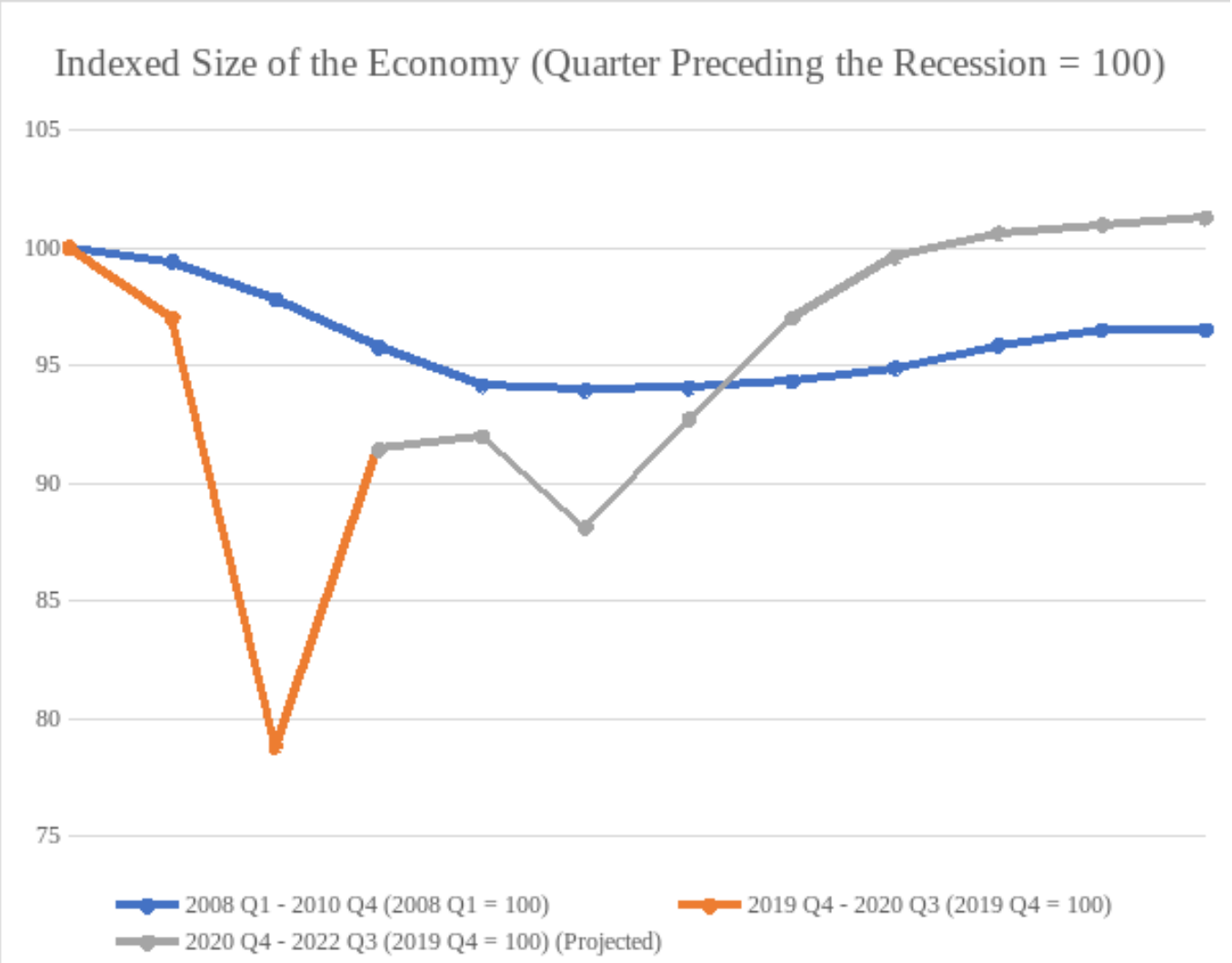

Figure 2. Sources: '2008 Q1 – 2010 Q4' figures are derived from ONS data ~ Gross Domestic Product: chained volume measures: Seasonally adjusted £m (ONS, 2021). '2019Q4 – 2022 Q3' figures inc. projections are derived from the MPC February 2021 Report data & central projections ~ GDP, £ billion chained-volume measure (reference year 2018) projections based on market interest rate expectations, other policy measures as announced (MPC, 2021).

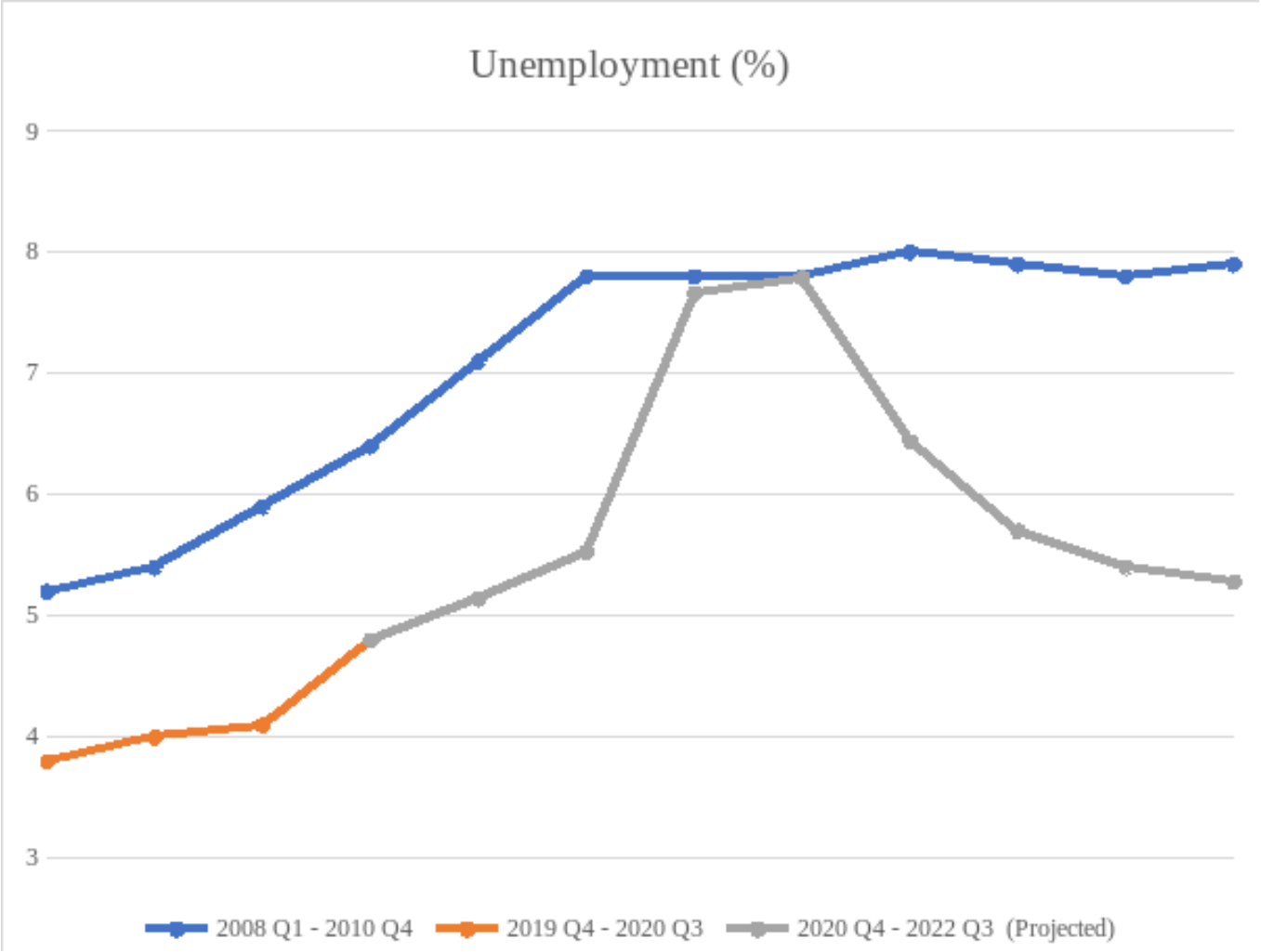

Figure 3. Sources: '2008 Q1 – 2010 Q4' & '2019 Q4 – 2020 Q3' figures are taken from ONS data ~ Unemployment rate (aged 16 and over, seasonally adjusted) (ONS, 2021). '2020 Q4 – 2022 Q3' projections are taken from the MPC February 2021 Report projections ~ Market mode forecasts of LFS Unemployment Rate (MPC, 2021).

3.1. Quantitative Easing

During the Great Recession in the UK, implementation of quantitative easing (QE) had been the key monetary policy to ameliorate the rapid collapse of financial giants. This essay investigates QE implementation in this period and compares its effectiveness to the similar measures taken by the government in the ongoing Covid-19 crisis in the UK. QE is a monetary policy aimed at the direct injection of capital into the economy by the central bank (Bank of England, 2020). Unlike the traditional money-printing method which inflicts inflation, QE injects capital into the digital side of the current monetary system. This is used to purchase assets such as gilts, and thus the lessening of interest rates of the corresponding loans which boosts spending and investment in the economy.

Haldane et al. (2016) elaborates on this process by dividing the values of QE into four main channels: asset price channel, portfolio rebalancing, bank lending channel and expectations channel. First, the asset price channel proposes a wealth effect from the purchase of financial assets by the central bank, thus the reduction in borrowing costs (e.g., interest rates). Second, portfolio rebalancing replaces interest-bearing government bonds with zero-interest bonds, thus stimulating demand for other financial assets and allowing the rebalancing of financial portfolio. Third, the bank lending channel increases the supply of the reserves, thus an increase in the liquidity. Finally, expectations channel proposes that reduction in interest rates would increase the confidence in consumption, thus minimizing the perceived long-term risks in investment.

In the context of the Great Recession, QE was introduced as an asset protection scheme on 5th March 2009 in response to bank runs and possible bankruptcies of financial institutions (Edmonds, Webb, & Long, 2011). This was after recapitalizations of Northern Rock in February 2008, HBOS in September 2008, and RBS in October 2008, as well as reductions in the base rate, were deemed insufficient in aiding the recovery. Hence total QE of £200 billion was introduced by November 2009 (Edmonds et al., 2011). It has been reported that growth rates of asset prices and GDP would have been weaker without the use of QE (Bridges, & Thomas, 2012). However, the focal point of this essay is whether QE genuinely increased the spending and investment in every sector.

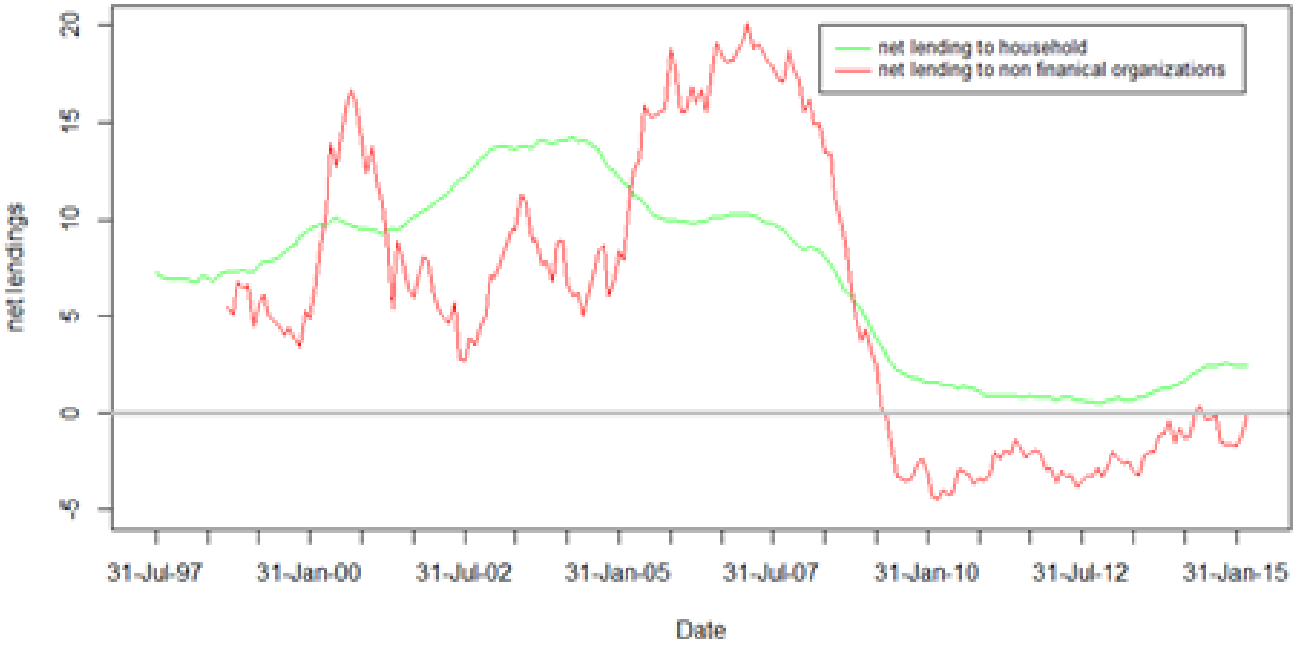

Figure 4. Monthly growth rate of UK bank net lending to NFOs and household sectors (in percent) (Bank of England, 2021)

Loans based on QE provided by banks to non-financial firms and households had indeed been disappointing relative to the financial firms (Deleidi and Mazzucato, 2018). As shown in Figure 4, lending to non-financial firms continued to contract until late 2015 while demand for loans remained low for both households and businesses, albeit with slight increase in the growth of lending to households. Stimulation by QE was ineffective, and it appeared to lack in stimulating business loans and investments.

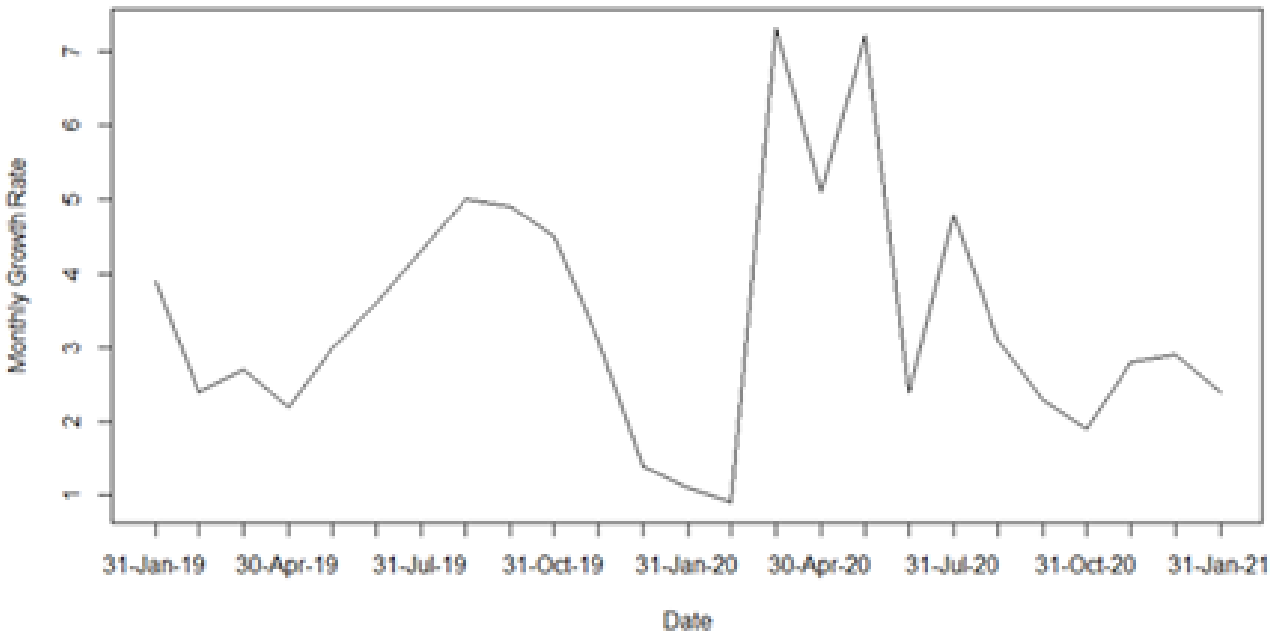

Figure 5. Monthly growth rate of monetary financial institutions' sterling net lending to private non-financial firms and household sector (in percent) (Bank of England, 2021)

In the context of the Covid-19 Recession in the UK, total QE of £895 billion was injected by the end of 2020 (Bank of England, 2020). For instance, as a result of QE, £66 billion in the form of loans were granted by commercial banks to support non-financial business by the end of the first national lockdown while £16 billion pounds were granted to public sectors, such as the NHS and TfL (Transport for London), as financial packages by the end of 2020 April (Inman, 2020). This is a record high QE and the Bank of England now owns one third of the UK's national debt. Hence the question of whether QE is effective in stimulating the economy remains at the center (King, 2020). According to the Bank of England database (2021), growth rate of net lending in percentage spiked in the first national lockdown while the current trend is of a declining net lending percentage, trending towards ~2% (see Figure 5.).

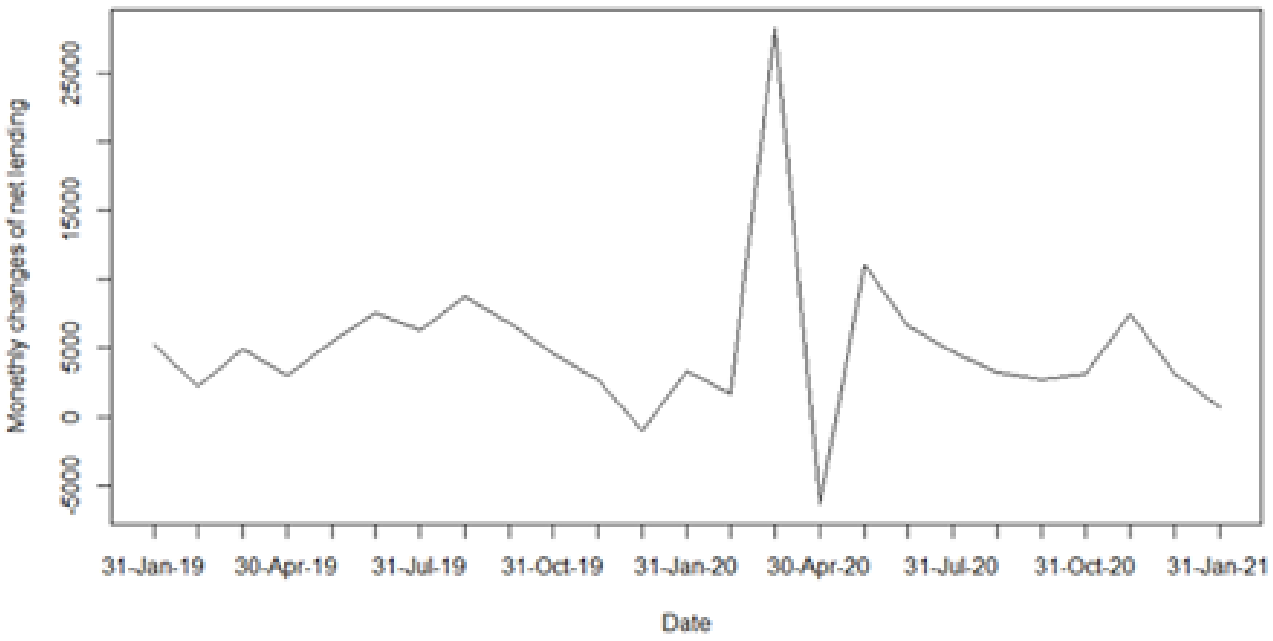

Figure 6. Monthly changes of monetary financial institutions' sterling net lending to private non-financial firms and household sectors (in millions) (Bank of England, 2021)

Furthermore, net lending to private enterprises and households is now below £800 million with a declining trend (See *Figure 6*; Bank of England, 2021). This presents a similar pattern of lending as the '08 financial crisis in which there is a relatively low amount of loans granted to non-financial firms and households despite a record high QE. Additionally, King (2020) corroborates this by claiming that QE increases prices of shares and mortgages in correspondence to gilts in which the price remains high for non-financial firms or households to re-invest their portfolios. This not only indicates that people in wealthy positions benefit the most from QE despite needing financial assistance the least, but it also reveals a flawed assumption of QE that capital injection will result in more lending by commercial banks.

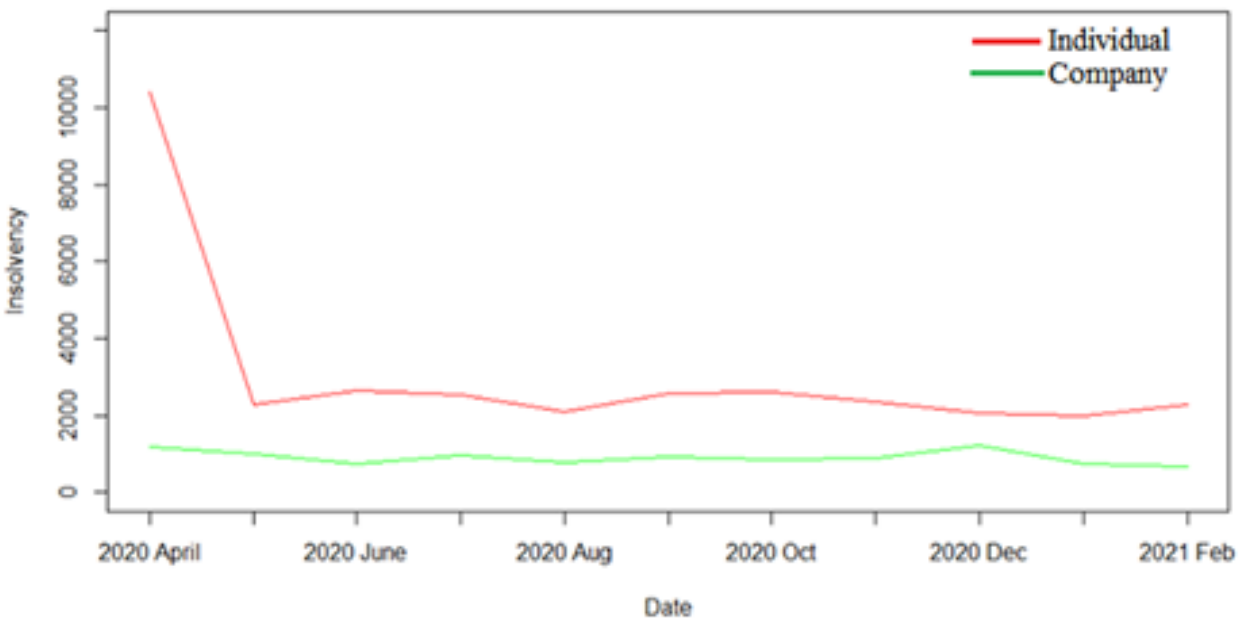

Figure 7. Monthly Insolvency rates of Company (Red) and Individual (Green) between April 2020 to February 2021 (Gov.UK, 2021)

Another aspect of examining the efficacy of QE is by looking at the insolvency rates of companies and individuals between April 2020 and February 2021 (See *Figure 7*). For instance, the first national lockdown during April 2020 resulted in 1,196 company insolvencies and 10,397 individual insolvencies. Although there has been an amelioration as company insolvencies dropped below 1,000 while individual insolvencies were dropped from 10,000 to ~2,000. From this, it is safe to infer that the first package of QE in the summer of 2020 was efficient in mitigating the immediate economic recession. However, the company insolvency rate remains above 700 with a steep incline to 1,228 in December 2020. It is only now that the company insolvency rate is dropping below 700. Also, individual 'relief remain orders' and bankruptcies in total are steady at the rate of 2000 despite a total of £895 billion of QE by the end of 2020. Thus, QE displays a short-term effect in mitigating urgent economic damage but is ineffective in the long-term. It is also noteworthy that the steady insolvency rate of individuals from June 2020 to February 2021 potentially indicates a relative inefficacy of QE in stimulating the economy at the household level.

There are three explanations for its relative effectiveness. First, the money supply was seen to be independent of economic growth due to the rule of inflation (Deleidi and Mazzucato, 2018). Second, QE assumes that reserves are a cause of commercial banks' lending activity, but reserves are a consequence of lending. Finally, Deleidi (2018) points out that different stakeholders react differently to the changes in interest rates. Households utilize credit for the purchase of goods or houses and are thus sensitive to changes in interest rates while firms determine their expenditure based on actual/expected aggregate demand and future growth opportunities rather than interest rates (Mazzucato, 2016).

Ultimately, it is important to remember that, unlike the Great Recession, every industry and sector is instigated by the economic fallout inflicted by Covid and subsequent national lockdowns. There is evidence of a short-term efficiency of QE in stimulating the economy but the question of its long-term efficacy regardless of status and wealth remains.

3.2. Reducing the Base Rate, and Negative Interest Rate Policy

Prior to the advent of Quantitative Easing, conventional monetary policy in Britain centred on manipulation of the base rate. This is the rate at which interest is earned on commercial banks' deposits at the Bank of England and the rate at which these institutions borrow from the Bank of England. Ceteris paribus, a fall in the base rate leads to a fall in the interest rates set by commercial banks for households and businesses (Tenreyro 2021). It is through this transmission mechanism that the central bank can effect change in the economy.

In response to the Great Recession, the Bank of England enacted this exact policy, cutting the base rate seven times from 5.25% in April of 2008 to 0.5% by March 2009 (Bank of England 2021). The transmission mechanism proved effective. The Bank of England found that the effective interest rate on household loans, deposits and mortgages all fell significantly (Tenreyro 2021). With lower costs of borrowing, and lower monetary incentive to save, consumers and firms will have been more likely to spend, driving up consumption and investment in the economy. Haldane (2018) assessed that without this monetary intervention, alongside QE, the economy would have been about 8% smaller and unemployment around 4% higher, exacerbating the recession.

The success of the policy suggests that it would be worth repeating in 2021. However, the Bank of England has left themselves unable to do so. They have maintained interest rates below 1% for the full period between the two recessions and two further falls in the base rate in March 2020, in response to the onset of the recession, has left it at a historical low of just 0.1% (Bank of England 2021). For any further significant reduction capable of providing stimulus, the bank must go negative.

Under NIRP, or Negative Interest Rate Policy, banks would pay interest charges on their reserves at the central bank. Whilst this may be novel in Britain, it has been implemented by five other central banks over the last decade. In order of implementation, these have been the central banks of Denmark, the Eurozone, Switzerland, Sweden and Japan (Tenreyro 2021). This provides ample evidence for accessing its viability.

The initial concern with NIRP is that monetary policy, in theory, would break down below the supposed Zero Lower Bound of a 0% base rate. The theory suggests that as savers have the alternative to simply hoard their savings, banks will be unable to pass on a negative base rate onto deposits without mass withdrawals. Some evidence from the Eurozone would corroborate the first part of the theory with the amount of physical cash in vaults and safes increasing by 57%, five years after the ECB first went negative (Arnold 2019). There is also evidence for the second part of the theory with household deposit rates in countries under NIRP largely bottoming out close to zero rather than becoming negative along with the base rate (Tenreyro 2021). This implies commercial bank reluctance to transmit negative rates onto savers, reducing the effectiveness of the policy in influencing the economy.

However, banks have found it much easier to apply negative rates to corporate deposits with 20% of Eurozone corporate deposits now having negative rates applied five years after the start of NIRP (Altavilla et al. 2019). The ability for banks to pass on these negative rates, especially to corporations, despite the threat of withdrawals, has been theorised to be due to the costs associated with storing large amounts of savings outside of banks (Tenreyro 2021) and concerns that small firms have about jeopardising their relationships with banks if they close their accounts (Altavilla et al. 2019). This suggests that reducing the base rate below zero remains effective as it can be relayed, to a degree, onto market agents.

Whilst the Zero Lower Bound may be disproven in practise, there is concern that there is an effective lower bound for interest rates at the point at which expansionary monetary policy becomes contractionary. Brunnermeier and Koby (2020) refer to this as the 'Reversal Interest Rate'. This is the point at which the cost of central bank reserves, combined with the difficultly of passing negative deposit rates smoothly onto households and firms, reduces banks' profits and thus the ability for banks to lend. This reduces the loan supply and thus constricts capital investment and consumer spending reliant on credit.

Yet in practise this rate has not yet been reached by any of the central banks pursuing NIRP. Whilst Tenreyro (2021) has found evidence that there has been a reduction in banks' net interest income under NIRP, there is little evidence that overall bank profits have declined. This is likely due to the economic stimulus of NIRP generating increased revenue for banks, making up for the cost of central bank reserves. Indeed, the Eurozone has instead seen increased bank lending, as the conventional theory behind reducing the bank rate would dictate. In the Eurozone, which has had its negative base rate increase gradually from -0.1% in 2014 to -0.5% from 2019, bank lending in 2020 was 12% higher for households and 3% higher for corporations than before the NIRP began (Milne and Arnold 2020).

Brunnermeier and Koby (2020) corroborate the notion that the ECB has yet to reach the Reversal Rate, estimating it to be close to -1% for the Eurozone. It thus seems plausible that the Reversal Rate for the British economy lies lower than 0% as well. This suggests that reducing the base rate below zero would largely function as a conventional reduction in the base rate, providing stimulus and expanding the economy much like the 4.75 percentage point reduction did during the Great Recession.

One such conventional mode of stimulus from a base rate reduction is cheaper credit. Whilst there has been little evidence of banks offering negative interest loans and mortgages, the transmission mechanism for loans has been shown to function as normal, albeit at a reduced rate. Indeed, in Denmark, Krogstrup et al. (2020) found that a reduction in the base rate by 1% below the 0% threshold would lead to a reduction in average commercial bank lending interest rates of around 0.35 percentage points within three months. This is compared to around a 0.7 percentage point reduction from a 1% fall in the base rate, whilst in positive territory.

Regardless, the cost of credit falls. In Germany, the average net borrower has saved around 2000 Euros per year since the implementation of NIRP (Schnabel 2020). These reductions in the cost of borrowing make it more affordable for firms and consumers to take on credit, increasing their spending and thus stimulating the economy. This would be a uniquely beneficial channel for the British economy as UK households have more debt and a greater proportion of short-term fixed-rate, and floating-rate mortgages compared with many European countries (Tenreyro 2021). By reducing interest payments in this way, borrowers would thus benefit more quickly than those in comparative European countries, providing them with more immediate disposable income with which to spend and stimulate the economy.

In addition to the conventional stimulus effects of base rate reduction, there may also be a novel corporate channel as negative rates on corporate deposits have been shown to be an effective tool to increase capital investment. Abildgren and Kuchler (2020) found that in a survey of 45,000 Danish firms from 2014 to 2018, those firms who experienced negative deposit rates, after two years, had increased employment by around 3 percentage points more than those firms which had not experienced negative rates. The investment ratio of these firms was also higher by an average of 0.5 percentage points. Altavilla et al. (2019) found a similar trend of increased investment by high-liquidity Eurozone firms facing negative deposit rates and found that this had a larger effect on investment than cheaper credit.

One such conventional mode of stimulus from a base rate reduction is cheaper credit. Whilst there has been little evidence of banks offering negative interest loans and mortgages, the transmission mechanism for loans has been shown to function as normal, albeit at a reduced rate. Indeed, in Denmark, Krogstrup et al. (2020) found that a reduction in the base rate by 1% below the 0% threshold would lead to a reduction in average commercial bank lending interest rates of around 0.35 percentage points within three months. This is compared to around a 0.7 percentage point reduction from a 1% fall in the base rate, whilst in positive territory.

Regardless, the cost of credit falls. In Germany, the average net borrower has saved around 2000 Euros per year since the implementation of NIRP (Schnabel 2020). These reductions in the cost of borrowing make it more affordable for firms and consumers to take on credit, increasing their spending and thus stimulating the economy. This would be a uniquely beneficial channel for the British economy as UK households have more debt and a greater proportion of short-term fixed-rate, and floating-rate mortgages compared with many European countries (Tenreyro 2021). By reducing interest payments in this way, borrowers would thus benefit more quickly than those in comparative European countries, providing them with more immediate disposable income with which to spend and stimulate the economy.

In addition to the conventional stimulus effects of base rate reduction, there may also be a novel corporate channel as negative rates on corporate deposits have been shown to be an effective tool to increase capital investment. Abildgren and Kuchler (2020) found that in a survey of 45,000 Danish firms from 2014 to 2018, those firms who experienced negative deposit rates, after two years, had increased employment by around 3 percentage points more than those firms which had not experienced negative rates. The investment ratio of these firms was also higher by an average of 0.5 percentage points. Altavilla et al. (2019) found a similar trend of increased investment by high-liquidity Eurozone firms facing negative deposit rates and found that this had a larger effect on investment than cheaper credit.

Some explanations for this are offered by Abildgren and Kuchler (2020) who argue that by applying negative interest rates on corporate deposits, firms re-evaluate whether they have excess liquidity, particularly because it will now cost them through deposit charges. It may also increase their appetite for risk, increasing their chance of engaging in capital investment or hiring workers, in aid of potentially positive returns.

This will be particularly beneficial in the UK in 2021 as the Monetary Policy Committee (2021) found that firms had accumulated excess savings of close to £100 billion between March and December 2020 due to postponed investment. This total 'stored stimulus' is likely to grow further in the first third of 2021 due to the renewed lockdown. By applying negative deposit rates banks may be able to prompt firms to spend this cash more quickly and assist in the economic recovery.

Ultimately, evidence suggests that as long as the negative interest rate is above the 'reversal rate', reducing the base rate below zero will continue to expand the economy as a normal reduction would. Thus, reducing the base rate to a few tenths of a percentage point below zero is a viable strategy to stimulate the British economy and aid the recovery.

3.3. Fiscal Stimulus Measures

This essay will cover the fiscal stimulus measures that were implemented in response to the Great Recession and ascertain whether they could be equally effective in aid of the recovery from the Covid-19 recession.

The signature piece of fiscal stimulus in response to the Great Recession was the £500 billion bank rescue package which included bailing out banks like The Royal Bank of Scotland and Lloyds TSB (Swaine, 2008). This helped to prevent the collapse of the financial sector in the UK, which would have exacerbated the recession.

However, this form of fiscal stimulus would be less relevant in response to the current economic climate. This is because the risk to the financial sector is more likely to come from failing businesses than exposure to risky exotic assets like Sub-Prime mortgages (GlobalData 2020). This suggests that a better way to support the financial sector and thus the economy as a whole is through measures to support consumer spending, and ensure firms don't go bust.

Other measures used in response to the Great Recession were a cut in VAT from 17.5% to 15% along with a £145 tax cut for basic rate taxpayers (Chirakijja et al. 2009). Looking back at the economic recovery it can be argued that these were effective policy measures as at the height of the recession there were demand side issues due to the lack of consumer confidence. Indeed, the Consumer Confidence Index fell by 5 points from January 2008 to January 2009 (OECD 2021). Blundell et al. (2020) suggest that the VAT reduction and tax cuts helped stimulate greater consumer spending in the economy which aided retail sales and thus the recovery.

These stimulus measures would be more viable than bank bailouts during the current crisis. Indeed, the government has already implemented some of these measures with VAT reductions targeting tourism, the hospitality sector and medical supplies (KPMG 2020). Further policies such as these would help to stimulate greater consumption in the economy as people are left with greater disposable incomes. The tax cuts would be particularly beneficial as they target low-income households who have a greater marginal propensity to consume which would mean the money would enter the economy at a relatively greater rate than measures targeted at middle or high-income households.

A major concern with fiscal stimulus measures are the cost, which, exacerbated by the recession cutting tax revenue, contributes significantly to the national debt. By the end of 2020, the budget deficit had already hit a monumental £270bn (Elliott 2021) which will only be made worse by further expensive fiscal stimulus measures. Yet, Pardington (2020) suggests that substantial government spending in this recession has been necessary as the alternative would have been mass unemployment and deep scarring of the economy which would have caused long-term detriment to government finances. Indeed, during the recovery for the Great Recession, focus of government shifted from fiscal stimulus to balancing the budget as the Coalition government came to power. Whilst this resulted in decreasing subsequent budget deficits, it prolonged the recovery period, discrediting a repeat of austerity in the current recovery.

.

Yet, there may not be need for such large injections of money into the economy, and the debt that comes with that, as there is a large degree of 'stored stimulus' waiting to be tapped into in the form of household savings. A poll of 10,000 consumers by LCP (2021) found that spending on transport, holidays, clothes, hobbies and eating out had all fallen sharply over the last year. This is likely due to repeated lockdowns, the rise in teleworking, Covid-19 health concerns discouraging consumers from traditional in-person consumption and concerns about potential unemployment. This has contributed to a substantial rise in household savings, predominantly in middle and high income households (Bank of England 2020). Indeed, the Monetary Policy Committee (2021) found that households had accumulated savings of over £125 billion in excess of what might otherwise have been the case with further rises in savings expected during the remaining months of lockdown. This is in comparison to the fact that between 2012 and 2019 the highest amount of equivalent savings accumulated over any nine-month period was around £25 billion (MPC 2021)

As a result, the economy has a unique and substantial store of cash which would provide much needed stimulus to the economy without any cost to the tax-payer. Yet, the Monetary Policy Committee (2021), despite record low interest rates, expects only 5% of these savings to be spent over the next few years, with most remaining in savings accounts. If the government is going to tap into this stimulus, they may will need to intervene with fiscal policies. These could range from another round of Eat Out to Help Out, incentivising outdoor dining, or something harsher like a 'use-it-or-lose-it' wealth tax.

Overall, the fiscal stimulus measures implemented by the government after the Great Recession would be somewhat viable in aid of the current recovery. Although the financial sector is in less need of support, tax and VAT cuts would help to stimulate demand in the economy. Ultimately, large rounds of fiscal stimulus measures may not be necessary if the government can only tap into the 'stored stimulus' resting in the nation's savings' accounts.

3.4. Unemployment Benefits

This essay will focus on the automatic stabilisers, specifically those related to unemployment benefits, carried out by the UK government to combat high unemployment rates after the Great Recession. The section will address the importance of such actions and assess their viability to aid the current recovery.

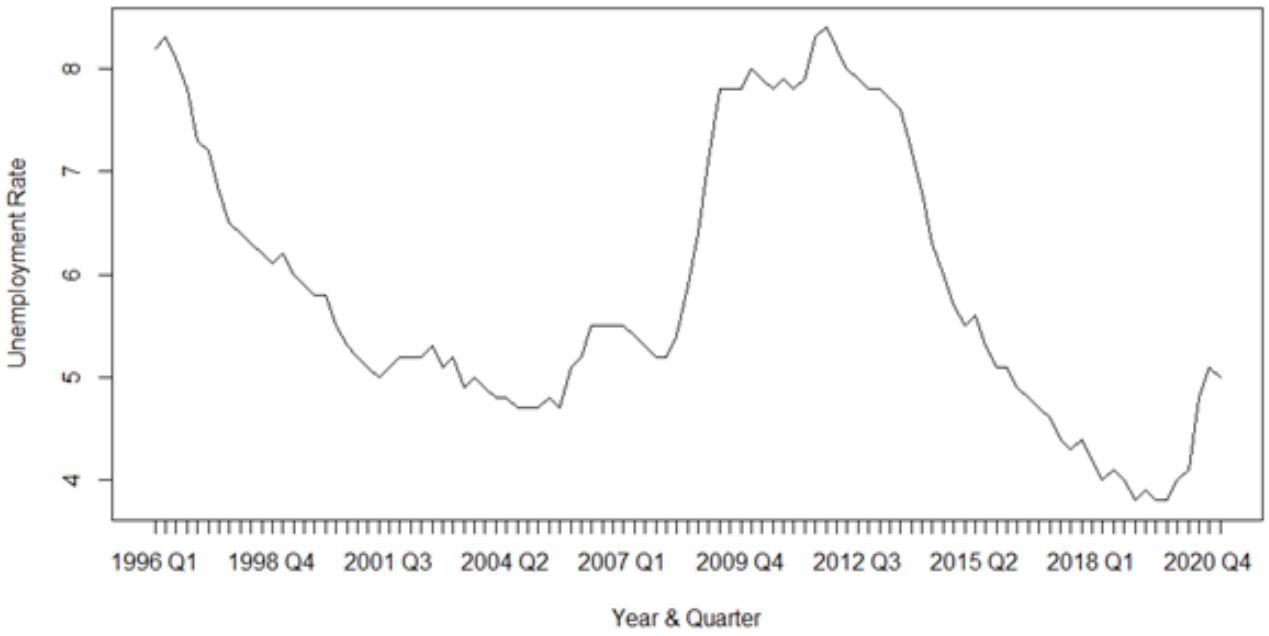

Figure 8. The historical data of the unemployment rate in the UK (Seasonally adjusted)

The above figure is the seasonally adjusted historic unemployment rate in the UK during the past 25 years measured every quarter (Office for National Statistics, 2021). As illustrated above, the number hit its peak most recently in 2012, the cause of which could be traced back to the 2008 financial crisis.

In response to the potential and actual rise of unemployment, the government implemented numerous benefits for individuals who were economically affected by the crisis. Webb et al. (2011) explains that the policies can be categorized into four sections: Pre-Action Protocols, Financial Assistance, Mortgage Rescue Schemes and Aid for Small Businesses.

The first type of policy were Pre-Action protocols. These were the first service an individual was recommended to receive. This was mostly consisted of financial advice, promoting communications with property owner or banks, and other none financially related support.

The second type of policy were financial assistance. Financial assistance consisted of numerous aid packages, such as Income Support, Income-based Jobseekers' Allowance or Pension Credit. These policies only covered mortgage interest payments and were subject to loan caps. Moreover, there was a certain waiting period to receive actual support. To increase the fluidity of assistance, the administration reformed aids to better reflect the value of properties and reduced the waiting period from 39 weeks to 13 weeks.

The next type of policy involved rent breaks and mortgage support schemes, with support occurring in three ways, the first being shared equity to help house holders who need assistance in mortgage payments, shared ownership to help those with larger financial gaps but who can contribute monthly payments, and the last being available for those who have the least chance of sustaining a mortgage. These systems were put in place for 6000 homeowners over the course of 2 years. However, access was restricted for those who had a reckless history of borrowing, with savings over £ 16,000, those with second properties, and recipients of SMI or mortgage rescue assistance.

The final type of policy was targeted towards small businesses. These included three main schemes: Enterprise Finance Guarantee, Working Capital Guarantee, and the Capital for Enterprise Fund. The Enterprise Finance Guarantee was available for business with under £25 million turnovers, and were repayable over the course of 10 years, and were available only via banks. The Working Capital Guarantee excluded small firms and was made to sustain the level of existing and increased lending, with this scheme also being accessible only via banks. Capital for Enterprise fund allowed companies in all sectors, excluding agricultural to sell debt for shares of the company. Moreover, the government allowed delayed payment of taxes with a net of £1.5 billion for businesses with financial difficulties.

Rodriguez (2015) claims that these policies allowed the government to reinforce the flexibility of the labour market with the use of extended trial periods for newly signed contracts and reductions in the length of the consultation period for redundancies. Moreover, the New Enterprise Allowance, opened new opportunities in terms of employment and the increment of the minimum wage proved to be effective contrary to the popular belief that it would disrupt the market and worsen the unemployment rate. Later the Administration would go on to create the Universal Credit, which increased efficiencies and eliminated the bureaucratic lag that comes with applying for benefits.

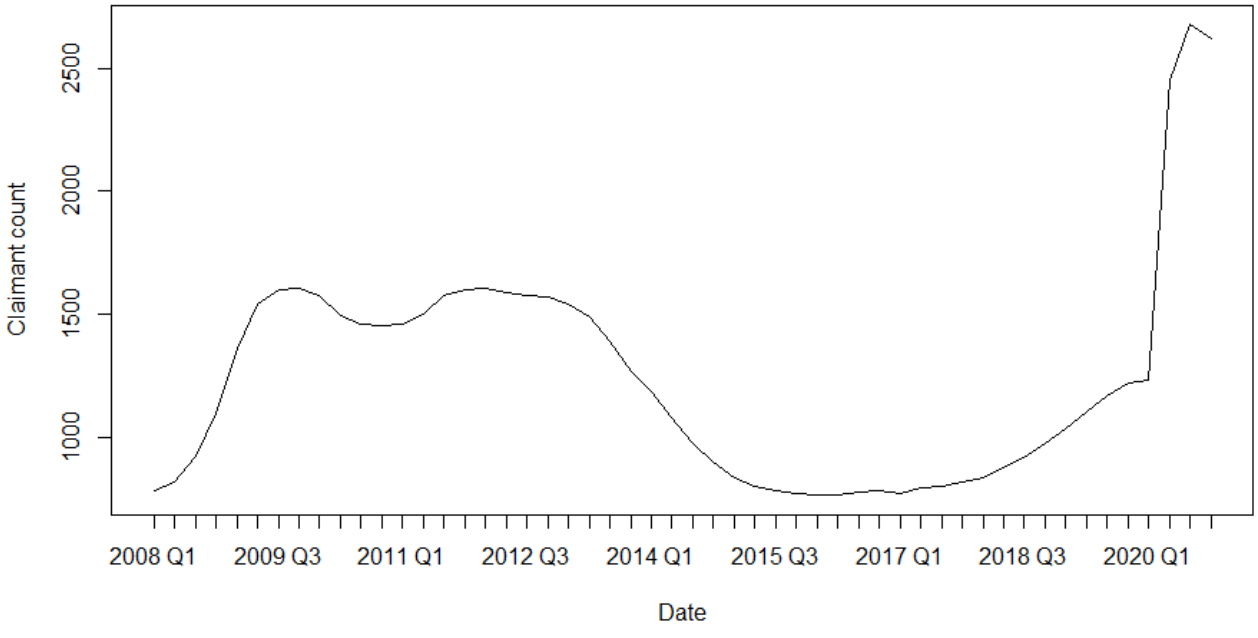

Figure 9. JSA Claimant court counts

The above figure from the Office for national statistics (2021) portrays how many claims for JSA was made since 2008 measured by quarter. As shown above the number of claims showed an even steeper increase than it did during post '08 recession. This suggests and highlights the importance of policy implementation to address the influence of the increasing trend.

Furthermore, as the importance of unemployment benefits in mitigating the recession and aiding the recovery depends on the magnitude of unemployment, the investigation utilised an ARIMA model with order (2, 1, 0) to forecast the rise in unemployment. This model was fitted with the data from figure 8. Using this model, a forecast was made to predict how the unemployment rate would change in the next 10 quarters.

	Point Forecast	Lo 80	Hi 80	Lo 95	Hi 95
102	5.014412	4.771102	5.257722	4.642302	5.386522
103	5.001439	4.576525	5.426352	4.351590	5.651288
104	4.998604	4.386628	5.610580	4.062668	5.934541
105	4.994890	4.204425	5.785356	3.785978	6.203803
106	4.992743	4.033256	5.952230	3.525334	6.460152
107	4.991103	3.872950	6.109255	3.281035	6.701170
108	4.989982	3.723100	6.256865	3.052453	6.927512
109	4.989184	3.582807	6.395560	2.838316	7.140051
110	4.988624	3.451131	6.526117	2.637232	7.340016
111	4.988229	3.327139	6.649319	2.447810	7.528647

Figure 10. Unemployment rate forecast

The point 102 in the above figure represents the Q2 of 2021, while point 103 representing Q3 of 2021 and so on. Since this analysis was done purely using the unemployment data, the actual values may differ depending on vaccinations and governmental policies. In other words, this analysis is only accurate under the assumption that the situation will not vary far from the current circumstances (e.g., vaccination rollouts, furlough schemes, etc). Thus, the 80% and 95% confidence intervals shown in the 3rd, 4th, 5th and 6th columns are a more optimal statistic of interest. The Lo 80, and Lo 95 represent the lower bound for 80% and 95% confidence intervals, while the Hi 80, Hi 95 represents the higher bound for 80% and 95% confidence intervals. Additionally, the variance of the forecasts increases as the time point increases, meaning the confidence interval will become larger, thus less accurate. According to Williams-Grut, the unemployment rate is expected to reach its peak at 6.5% upon the suspension of the furlough scheme (Williams-Grut, 2021). Moreover, with the furlough scheme planned to end in late September (Q4 of 2021), this statistic should be expected at points 105, 106 and 107, which is included within its interval given above.

Therefore, it is safe to assume that the unemployment rate will continue to show an increasing trend and as a response, the administration has introduced numerous policies to protect those who have been financially hit by the pandemic. Parallel to policies imposed during and after the Great Recession, these new measures can be categorized into two aspects: Support for those who have been unemployed and renters, and support for houseowners and landlords.

According to the Ministry of Housing, Communities & Local Government (2020), new measures targeting renters or those who are unemployed have overlapping policies, which consist of five main policies: The Discretionary Housing Payments, Universal Credit, the 'new style' Jobseeker's Allowance (JSA), the 'new style' Employment and Support Allowance (ESA), and the Furlough Scheme. The discretionary housing payments pays councils to distribute those who have been hit financially, while the JSA and ESA, much like in the Great Recession, provide support to people whose employment status has been altered due to illness or disability related to the coronavirus. While Universal Credit is directed towards people whose wage status has been negatively shifted by the pandemic. The Furlough scheme which was originally planned to last until early March has been extended to the 30th of April. In addition to these monetary policies, forced eviction will be suspended until the 31st of March. Moreover, much like the non-financial advisory service provided after the Great Recession, the same will be implemented for the current crisis while any rent disagreements or conflicts are suggested to be resolved through mediation, agreements etc.

Furthermore, the ministry of HCLG (2020) instructs that mortgage protection policies allow houseowners to apply for Mortgage Holidays for six months, the application of which it has been extended to the 31st of March. The action of doing so will not be recorded on their credit file.

Ultimately, although policies regarding automatic stabilisers show similarities with those implemented after the 2008 crisis, the pandemic related policies have been altered to fit more accordingly to the current situation. For instance, the JSA and ESA policies, which existed back in 2008, have been introduced in a way to allow people with health problems to be the recipient of such benefits (Ministry of HCLG, 2020). Moreover, despite these measures covering all cases on paper, its implementation may be controversial as there are numerous exceptions and steps that hinder the ability to apply and receive these benefits. For example, people with more than £16,000 savings will not be eligible for the Universal Credit and this may put a halt to any tax credits an individual might have been receiving (Ministry of HCLG, 2020). The Ministry of HCLG (2020) highlights that discretionary housing payments are not accessible for people who could cover rent, while the 'new style' JSA, are not available for people who work more than 16 hours a week regardless of the wage. Indeed, there are strict eligibility requirements to apply for the programme. The 'new style' ESA forces an individual to suspend their rights to claim Statuary Sick Pay and it comes with the condition that one is self-isolating and is conditional to local restrictions. Furthermore, if one were to get severe disability premiums, they would not be entitled to this programme.

Therefore, it can be argued that the exact unemployment benefits used in response to the Great Recession will not be effective in the current crisis. However, amended policies would be effective in mediating the effects of the recession and rising unemployment.

4. Conclusion

In conclusion, a successful vaccination rollout is undoubtedly the best policy to remediate the recession due to the unique causes of the Covid-19 recession. That being said, our investigation has concluded that the four policy areas investigated would be viable to aid the recovery as they did during the Great Recession, with important caveats.

Whilst Quantitative Easing was an important part of the response to the Great Recession, its short-term efficacy and the lack of a similar financial crisis in the current economic picture suggests that it would be a viable but less effective policy for the recovery this time.

Reducing the base rate further would likely leave the UK following the negative interest policies pursued across Europe and Japan. Yet, our research finds that such a policy, for the most part, functions as a conventional reduction in the base rate, stimulating the economy. Thus, we find NIRP to be a viable policy.

Fiscal stimulus measures used after the Great Recession are viable to aid the recovery, but with concerns about substantial budget deficits and rising national debt, we find that measures to convince households to run down accumulated savings could be equally beneficial whilst fiscally conservative.
The viability of unemployment benefits assisting the recovery depends on the rate of unemployment. Using independent modelling, we found that unemployment is likely to increase, and this is supported by Bank of England projections. Thus, measures similar to those used during the Great Recession will likely provide stimulus and aid the recovery as unemployment rises.

Reference List

2.1 – 2.2. A Comparison Between the Two Recessions and Recoveries

BBC News. (2021, March 3). Budget 2021: Rishi Sunak to extend furlough scheme until September. BBC News. [Accessed 24 March 2021]. Available from: https://www.bbc.co.uk/news/business-56259094

Monetary Policy Committee. (2021, February 4). Monetary Policy Report February 2021. Bank of England. [Accessed 22 March 2021]. Available from: https://www.bankofengland.co.uk/-/media/boe/files/monetary-policy-report/2021/february/monetary-policy-report-february-2021.pdf?la=en&hash=3638A7091B34164428A54277B55BD6901709AA44

Office for National Statistics. (2021, February 12). Gross Domestic Product: chained volume measures: Seasonally adjusted £m. Office for National Statistics. [Accessed 24 March 2021].
Available from: https://www.ons.gov.uk/economy/grossdomesticproductgdp/timeseries/abmi/pn2

Office for National Statistics. (2021, March 23). Unemployment rate (aged 16 and over, seasonally adjusted). Office for National Statistics. [Accessed 24 March 2021].
Available from: https://www.ons.gov.uk/employmentandlabourmarket/peoplenotinwork/unemployment/timeseries/mgsx/lms

Office for National Statistics. (2021, March 5). Comparison of furloughed jobs data, UK: March 2020 to January 2021. Office for National Statistics. [Accessed 24 March 2021]. Available from: https://www.ons.gov.uk/businessindustryandtrade/business/businessservices/articles/comparisonoffurloughedjobsdata/march2020tojanuary2021

3.1. Quantitative Easing

Bank of England, (2021). How is money created?. Bank of England. [Accessed 21st December 2020]. Available from https://www.bankofengland.co.uk/knowledgebank/how-is-money-created

Bank of England, (2021). What is quantitative easing?. Bank of England. [Accessed 21st December 2020]. Available from https://www.bankofengland.co.uk/monetary-policy/quantitative-easing

Bank of England. (2021). LPMB6NR. Bank of England Database. [Accessed 23rd March 2021]. Available from https://www.bankofengland.co.uk/boeapps/database/fromshowcolumns.asp?Travel=NIxAZxSUx&FromSeries=1&ToSeries=50&DAT=RNG&FD=1&FM=Jan&FY=2017&TD=31&TM=Dec&TY=2025&FNY=Y&CSVF=TT&html.x=66&html.y=26&SeriesCodes=LPMB6NR&UsingCodes=Y&Filter=N&title=LPMB6NR&VPD=Y

Bank of England. (2021). LPMB7DA. Bank of England Database. [Accessed 23rd March 2021]. Available from https://www.bankofengland.co.uk/boeapps/database/fromshowcolumns.asp?Travel=NIxAZxSUx&FromSeries=1&ToSeries=50&DAT=RNG&FD=1&FM=Jan&FY=2019&TD=31&TM=Dec&TY=2025&FNY=Y&CSVF=TT&html.x=66&html.y=26&SeriesCodes=LPMB7DA&UsingCodes=Y&Filter=N&title=LPMB7DA&VPD=Y

Bank of England. (2021). LPMB9Y9. Bank of England Database. [Accessed 23rd March 2021]. Available from https://www.bankofengland.co.uk/boeapps/database/fromshowcolumns.asp?Travel=NIxAZxSUx&FromSeries=1&ToSeries=50&DAT=RNG&FD=1&FM=Jan&FY=1997&TD=31&TM=Dec&TY=2015&FNY=Y&CSVF=TT&html.x=66&html.y=26&SeriesCodes=LPMB9Y9&UsingCodes=Y&Filter=N&title=LPMB9Y9&VPD=Y

Bank of England. (2021). LPMVVOO. Bank of England Database. [Accessed 23rd March 2021]. Available from https://www.bankofengland.co.uk/boeapps/database/fromshowcolumns.asp?Travel=NIxAZxSUx&FromSeries=1&ToSeries=50&DAT=RNG&FD=1&FM=Jan&FY=1997&TD=31&TM=Dec&TY=2015&FNY=Y&CSVF=TT&html.x=66&html.y=26&SeriesCodes=LPMVVOO&UsingCodes=Y&Filter=N&title=LPMVVOO&VPD=Y

Bridges, J., & Thomas, R. (2012). The impact of QE on the UK economy – some supportive monetarist arithmetic. Bank of England, Working Paper No. 422. [Accessed 25th March 2021]. Available from https://www.bankofengland.co.uk/-/media/boe/files/working-paper/2012/the-impact-of-qe-on-the-uk-economy-some-supportive-monetarist-arithmetic.pdf

Deleidi, M. (2018). Post Keynesian endogenous money theory: A theoretical and empirical investigation of the credit demand schedule. Journal of Post Keynesian Economics, 41(2): 185-209. Doi: 10.1080/01603477.2017.1338967

Deleidi, M., & Mazzucato, M. (2018). The effectiveness and impact of post-2008 UK monetary policy. UCL, Institute for Innovation and Public purpose.

Edmonds, T., Webb, D., & Long, R. (2011). The economic crisis: policy responses. House of Commons Library. [Accessed 21st December 2020]. Available from https://commonslibrary.parliament.uk/research-briefings/sn04968/

Gov.UK, (2021). Monthly Insolvency Statistics March 2020 - February 2021. Gov.UK. [Accessed 20th March 2021]. Available from https://www.gov.uk/government/collections/monthly-insolvency-statistics

Haldane, A., Roberts-Sklar, M., Young, C., & Wieladek, T. (2016). QE: the story so far. Bank of England, Staff Working Paper No. 624. [Accessed 21st December 2020]. Available from https://www.bankofengland.co.uk/working-paper/2016/qe-the-story-so-far

Inman, P. (2020, April 30). UK Covid-19 business bailouts have already cost more than 100 bn pounds. The Guardian. [Accessed 22nd March 2021]. Available from https://www.theguardian.com/world/2020/apr/30/uk-coronavirus-business-bailouts-have-already-cost-more-than-100bn

King, B. (2020, November 25). Coronavirus: How much will it cost the UK and how will we pay?. BBC. [Accessed 20th March 2021]. Available from https://www.bbc.co.uk/news/business-15198789

Mazzucato, M. (2016). From market fixing to market-creating: a new framework for innovation policy. Industry and Innovation, 23(2): 140-156. Doi: 10.1080/13662716.2016.1146124

Office for Budget Responsibility, (2020). Economic and fiscal outlook – November 2020. Office for Budget Responsibility. [Accessed 21st December 2020]. Available from https://obr.uk/publications/economic-and-fiscal-outlook-november-2020/

Richard, P. (2019, March 8). The verdict on 10 years of quantitative easing. The Guardian. [Accessed 21st December 2020]. Available from https://www.theguardian.com/business/2019/mar/08/the-verdict-on-10-years-of-quantitative-easing

3.2. Reducing the Base Rate, and Negative Interest Rate Policy

Abildgren, K., & Kuchler, A. (2020, November 19). Do firms behave differently when nominal interest rates are below zero? Danmarks Nationalbank Working Paper 164. [Accessed 22 March 2021]. Available from: https://www.nationalbanken.dk/da/publikationer/Documents/2020/11/DNWP164.pdf / https://voxeu.org/article/firms-facing-negative-deposit-rates-invest-more-and-create-more-jobs

Altavilla, C., Lorenzo, B., Giannetti, M., & Holton, S. (2019, June). Is there a zero lower bound? The effects of negative policy rates on banks and firms. ECB Working Paper Series No 2289. [Accessed 22 March 2021]. Available from: https://www.ecb.europa.eu/pub/pdf/scpwps/ecb.wp2289~1a3c04db25.en.pdf?e0c348b9bd29608f0dc3854a26f2464f / https://voxeu.org/article/impact-negative-interest-rates-banks-and-firms

Arnold, M. (2019, September 5). ECB set to consider damage done by negative rates. The Financial Times. [Accessed 22 March 2021]. Available from: https://www.ft.com/content/21aae97e-cb3d-11e9-af46-b09e8bfe60c0

Bank of England, (2021). Official Bank Rate history. Bank of England. [Accessed 19 February 2021]. Available from: https://www.bankofengland.co.uk/boeapps/database/Bank-Rate.asp

Brunnermeier, M. K., & Koby. Y. (2019, January 30). The Reversal Interest Rate. Princeton University. [Accessed 23 March 2021]. Available from: https://scholar.princeton.edu/sites/default/files/markus/files/25b_reversalrate.pdf

Haldane, A. G. (2018, April 10). How Monetary Policy Affects Your GDP. Bank of England. [Accessed 21 February 2021]. Available from: https://www.bankofengland.co.uk/-/media/boe/files/speech/2018/how-monetary-policy-affects-your-gdp-speech-by-andy-haldane.pdf?la=en&hash=FCBD26BEE0C888B53856C099796780DED35190A4

Krogstrup, S., Kuchler, A., & Spange, M. (2020, October 2). Negative interest rates: The Danish experience. Centre for Economic and Policy Research. [Accessed 23 March 2021]. Available from: https://voxeu.org/article/negative-interest-rates-danish-experience

Milne, R., & Arnold, M. (2020, February 20). Why Sweden ditched its negative rate experiment. The Financial Times. [Accessed 23 March 2021]. Available from: https://www.ft.com/content/478fe908-5168-11ea-8841-482eed0038b1

3.3. Fiscal Stimulus Measures

Bank of England (2020, November 25). How has Covid affected household savings? Bank of England. [Accessed 25 March 2021]. Available from: https://www.bankofengland.co.uk/bank-overground/2020/how-has-covid-affected-household-savings

Blundell, R., Levell, P., & Miller, H. (2020) A temporary VAT cut could help stimulate the economy, but only if timed correctly. The Institute for Fiscal Studies. [Accessed 4 February 2021]. Available from: https://www.ifs.org.uk/publications/14903

Chirakijja, J., Crossley, T.F., Lührmann, M., & O'Dea, C. (2009). The Stimulus Effect of the 2008 U.K. Temporary VAT Cut, National Tax Association Proceedings from the 102nd Annual Conference.

Elliott, L. (2021). Sunak has little choice but to delay plans to reduce budget deficit. The Guardian. [Accessed 20th March 2021]. Available from: https://www.theguardian.com/politics/2021/jan/22/sunak-has-little-choice-but-delay-plans-to-reduce-budget-deficit-chancellor-covid-support

GlobalData Report Store. (2020). Coronavirus (COVID-19) Sector Impact: Retail banking - the UK. GlobalData. [Accessed 20th March 2021]. Available from: https://store.globaldata.com/report/gdfs0359ci--coronavirus-covid-19-sector-impact-retail-banking-the-uk/

KPMG. (2020). UK: Temporary rate reduction, VAT for hospitality and tourism sector (COVID-19). KPMG. [Accessed 21st March 2021]. Available from: https://home.kpmg/us/en/home/insights/2020/07/tnf-uk-temporary-rate-reduction-vat-for-hospitality-and-tourism-sector-covid-19.html

Lane Clark & Peacock LLP. (2021, February). Britain's army of 'accidental savers' – who are they and what are they doing with their windfall? LCP Insight Clarity Advice, Lane Clark & Peacock LLP. [Accessed 25 March 2021]. Available from: https://insight.lcp.uk.com/acton/attachment/20628/f-8f9fd90e-4d3c-4a61-b25f-5f9209de9919/1/-/-/-/-/Britain%E2%80%99s%20accidental%20savers%20%E2%80%93%20who%20are%20they%20and%20what%20are%20they%20doing%20with%20their%20windfall.pdf

Monetary Policy Committee. (2021, February 4). Monetary Policy Report February 2021. Bank of England. [Accessed 22 March 2021]. Available from: https://www.bankofengland.co.uk/-/media/boe/files/monetary-policy-report/2021/february/monetary-policy-report-february-2021.pdf?la=en&hash=3638A7091B34164428A54277B55BD6901709AA44

OECD. (2021). Consumer confidence index (CCI) (indicator). OECD. [Accessed 25 March 2021]. Available from: https://data.oecd.org/leadind/consumer-confidence-index-cci.htm

Partington, R. (2021, January 22). UK government borrowing hits highest December level on record. The Guardian. [Accessed 23rd March 2021]. Available from: https://www.theguardian.com/business/2021/jan/22/uk-government-borrowing-hits-highest-december-level-on-record

Swaine, J. (2008). Gordon Brown hails £500 billion bank rescue plan. The Telegraph. [Accessed 15th December 2021]. Available from: https://www.telegraph.co.uk/finance/financialcrisis/3157728/Gordon-Brown-hails-500-billion-bank-rescue-plan.html

3.4. Unemployment Benefits

Edmonds, T., Webb, D., & Long, R. (2011). The economic crisis: policy responses. House of Commons Library. [Accessed 21st December 2020]. Available from: https://commonslibrary.parliament.uk/research-briefings/sn04968/

GOV.UK. (2020). Chancellor extends furlough and loan schemes. Gov.UK. [Accessed 23 March 2021]. Available from: https://www.gov.uk/government/news/chancellor-extends-furlough-and-loan-schemes

GOV.UK. (2020). Chancellor extends furlough and loan schemes. Gov.UK. [Accessed 23 March 2021]. Available from: https://www.gov.uk/government/news/chancellor-extends-furlough-and-loan-schemes

GOV.UK. (2021). Guidance for landlords and tenants. Gov.UK. [Accessed 23 March 2021]. Available from: https://www.gov.uk/government/publications/covid-19-and-renting-guidance-for-landlords-tenants-and-local-authorities/coronavirus-covid-19-guidance-for-landlords-and-tenants

HM Treasury. (2020). Chancellor extends furlough and loan schemes. HM Treasury. [Accessed 23 March 2021]. Available from: https://www.gov.uk/government/news/chancellor-extends-furlough-and-loan-schemes

Ons.gov.uk. (2021). Claimant Count: K02000001 UK: People: SA: Thousands - Office for National Statistics. Gov.UK. [Accessed 24 March 2021]. Available from: https://www.ons.gov.uk/employmentandlabourmarket/peoplenotinwork/outofworkbenefits/timeseries/bcjd/unem

Ons.gov.uk. (2021). Unemployment - Office for National Statistics. Gov.UK. [Accessed 23 March 2021]. Available from: https://www.ons.gov.uk/employmentandlabourmarket/peoplenotinwork/unemployment

Williams-Grut, O., (2021). UK unemployment unexpectedly falls to 5%. Uk.finance.yahoo.com. [Accessed 23 March 2021]. Available from: https://uk.finance.yahoo.com/news/uk-unemployment-january-ons-official-rate-covid-19-coronavirus-070913945.html