Helicopter Money – a Proposal for Macroeconomic Reform

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The Wilberforce Society
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Introduction

In 2008, the UK saw a financial crisis, and a massive shock to spending across the economy. The result was a deep recession and a sluggish, at best, recovery. The combined action of the Bank of England and the Treasury was insufficient to prevent this. We want to answer two questions in this paper – what prevented the response to slack by fiscal and monetary authorities from being stronger; and, bearing in mind these issues, what an optimal stimulus policy would look like. The UK economy is finally growing again, and perhaps further stimulus is finally no longer needed. But beyond this we want to look at how to prevent Britain’s worst economic performance in a century from happening again:

There are good reasons to expect that such a situation might arise in the future, as we explain in the paper. Therefore creating a set of institutional reforms, to put in a framework to deal with any future repeat of the last five years, is imperative. Our policy proposal is so-called ‘helicopter money’. In short, we would give the Bank of England the power to make lump sum cash payments to British households during a slump, so that consumers would go out and spend the money, boosting demand and ending recessions. As in Milton Friedman’s famous metaphor, the Bank would figuratively drop bundles of cash from a helicopter, so that people would go out and spend them.

Our proposal is not altogether new. In one form or another, top commentators at the Financial Times, the Daily Telegraph and the Economist have all mooted the idea. A few leading policymakers, in particular Lord Adair Turner are enthusiastic. However, to our knowledge there is not yet a piece of work that takes the wealth of important, rapidly-evolving academic ideas relating to helicopter money, and brings them together into an accessible proposal which has resonance with a much wider audience. Nor, we feel, is there a work that fully sketches out the political economy of helicopter money – only in this way can we understand what the optimal institutional design is, an issue which many discussants puzzle over or pass by. If we want a genuinely forward-looking reform to deal with future crises, this last step is necessary.

The outline of our argument is as follows. We spend Section 1 discussing the failure of the status quo. We discuss why historically The UK has preferred monetary policy to fiscal policy when managing the economy, above all because monetary policy is run by apolitical technocrats. We then move on to why both fiscal and monetary policy fell down in response to the crisis – the former because of politicised decision-making, and the latter due to the zero lower bound on

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1 Respectively, Martin Wolf (2013a) and a Financial Times (2012) editorial; Ambrose Evans-Pritchard (2013); and Ryan Avent (2013).

2 In Turner and Woodford (2013)
Section 1: The Failure of the Status Quo

In the tranquil period from the early 1990s until the financial crisis, dubbed the "NICE"³ decade by Mervyn King and the 'Great Moderation'⁴ by Ben Bernanke, the status quo in the UK and other advanced economies was to manage macroeconomic variables near-exclusively through monetary policy. Central banks were tasked with independently achieving some government-mandated target, normally by varying the short-term interest rate to affect investment and consumption. In the UK since 1997, the Monetary Policy Committee (MPC) of the Bank of England has engaged in ‘flexible inflation targeting’ (FIT)⁵, under operational independence from the UK government. The point of the ‘flexible’ part of FIT is that the MPC seeks to manage both medium term inflation relative to a target of 2%, and also to stabilise employment and keep the economy close to potential output. As then-Chief Economist Mervyn King (1997) said in a landmark speech, the MPC are not ‘inflation nutters’, but rather weighed unemployment and output in their mandate alongside deviations of inflation from target. A key question, then, is why policymakers preferred this institutional set-up, whereby they delegated macroeconomic policy to an independent central bank. In particular, this was a deliberate choice to use monetary policy, and not fiscal policy – that is, management of demand via taxes and government spending – to manage the economy. The answer unveils a crucial insight into our recommendation of helicopter money.

1.1 Goals of Monetary Policy – Flexible Inflation Targeting

In the tranquil period from the early 1990s until the financial crisis, dubbed the “NICE”³ decade by Mervyn King and the ‘Great Moderation’⁴ by Ben Bernanke, the status quo in the UK and other advanced economies was to manage macroeconomic variables near-exclusively through monetary policy. Central banks were tasked with independently achieving some government-mandated target, normally by varying the short-term interest rate to affect investment and consumption. In the UK since 1997, the Monetary Policy Committee (MPC) of the Bank of England has engaged in ‘flexible inflation targeting’ (FIT)⁵, under operational independence from the UK government. The point of the ‘flexible’ part of FIT is that the MPC seeks to manage both medium term inflation relative to a target of 2%, and also to stabilise employment and keep the economy close to potential output. As then-Chief Economist Mervyn King (1997) said in a landmark speech, the MPC are not ‘inflation nutters’, but rather weighed unemployment and output in their mandate alongside deviations of inflation from target. A key question, then, is why policymakers preferred this institutional set-up, whereby they delegated macroeconomic policy to an independent central bank. In particular, this was a deliberate choice to use monetary policy, and not fiscal policy – that is, management of demand via taxes and government spending – to manage the economy. The answer unveils a crucial insight into our recommendation of helicopter money.

1.2 The problems with fiscal policy – why policymakers preferred monetary policy during the Great Moderation

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³ NICE standing for Non-Inflationary Consistently Expansionary in King’s (2003) speech
⁴ Bernanke (2004)
⁵ In recent speeches by MPC members, Martin Weale (2013), David Miles (2013) and Ian McCafferty (2013) all describe this as the consensus view of the Bank’s mandate, and agree that it has not materially changed since Chancellor George Osborne redefined the precise terms of the mandate in early 2013.
John Taylor (2000), one of the godfathers of modern central banking, neatly laid out some of the canonical arguments behind the superiority of monetary policy over fiscal policy. Here, we take his arguments, and add several more, to get a better understanding of why monetary policy was preferred during the Great Moderation – or conversely why fiscal policy was flawed. The key thread running throughout is that monetary policy is superior because of its institutional design. The main areas are:

1.2.1 Implementation lags

Monetary policy is easier to implement than fiscal policy because of legislative confusion. Even as the signs become clear that the legislature needs to act to either stimulate or restrain the economy, the time taken to conceive of, design and pass appropriate fiscal policy can be lengthy.

There are further problems with what President Obama (2009) called ‘shovel-readiness’. Even as governments decide to carry out fiscal stimulus, they may struggle to find appropriate areas to spend. It is possible that relatively few plausible projects are immediately ready to be carried out, creating further lag times. Overall, then, the gap between the point at which the need for fiscal stimulus becomes apparent to policymakers, and the moment at which its tangible impacts can be felt, can be problematically large – indeed so large as to obviate the usefulness of fiscal policy in the first place.

Consider the contrast with monetary policy – the MPC can rapidly cut interest rates and thus deliver timely macroeconomic stimulus. Clearly this is a benefit of institutional design. The leadership of central banks comprises a small group of professionally trained macroeconomists. They meet regularly, and adjust a relatively narrow set of well-understood economic tools.

1.2.2 Politicisation and public choice considerations

It is indisputable that in the past, ideologically minded attempts to alter the size or scope of the state have flown under the false flag of fiscal stimulus, from both the Left and the Right. A fairly uncontroversial example of this phenomenon is George W. Bush's 2003 tax
cuts. In hindsight, and indeed at the time according to many economists\(^6\), they were at least in part a political attempt to alter the US federal tax burden, rather than an anti-recessionary measure. Given that to a large extent the Bush tax cuts have now been made permanent, their ideological aims have been successful. Similarly, before fiscal stimulus became unpopular, there was the notion in the UK of the ‘political business cycle’, whereby various governments interfered with the economy under the guise of macroeconomic management, so as to alter their prospects for re-election.

In sum, business cycle management and political decisions are best kept separate. It is as well understood in economic theory\(^7\) as in practice that unelected technocrats at central banks have a comparative advantage in using monetary policy, leaving politicians only to worry over the size and scope of the state.

1.2.3 Interest rate spikes on sovereign debt

A particular worry of recent years, in the UK more than most countries, has been that fiscal stimulus can raise public debt levels to dangerous levels. This can increase interest rates as investors doubt the creditworthiness of sovereign debt, and so demand higher compensation for the greater risk. Whether or not this is likely to happen in an advanced economy such as Britain is hotly disputed – indeed the current balance of theory and evidence suggests it is unlikely\(^8\). Nevertheless, the fact that fiscal stimulus adds to national debt has often been seen as a problem by policymakers, and certainly contributes towards the relative preference for monetary policy. A good example from recent British history would be Chancellor Gordon Brown’s commitment to a series of fiscal rules in 1997, to limit the ability of the then-Labour government to engage in fiscal stimulus. Again, it is clear that central banks face no such problem when applying monetary stimulus, given that they simply manage interest rates.

Thus on the eve of the financial crisis, macroeconomic policy existed in a comfortable consensus. Fiscal policy was unnecessary, politicians could and largely did stay away from managing aggregate demand, and management of the business cycle was left to monetary policy in the hands of technocratic central bankers. As then-Chief Economist of the IMF, Olivier Blanchard (2008), wrote as the Great Moderation ended, *the state of macro is good*: This period of tranquility ended in 2007 with the liquidity crunch in financial markets, and the economic stagnation that has persisted to this day. Clearly monetary policy has not been sufficient for the task of reinvigorating the economy. Again, the reasons behind this failure point us towards a better institutional design, which motivates our proposal of helicopter money.

1.3 The problem with conventional monetary policy – the zero lower bound on interest rates

After the 2007 financial crisis, in contrast to the Great Moderation, Britain went into a deep recession, which monetary policy could not fully offset. As the financial crisis struck, total spending on goods and services fell off a cliff:

\(^6\) In particular, from the famous open letter (Economists’ Statement 2003) signed by numerous economists including ten Nobel laureates.

\(^7\) The classic work here is a 1985 paper by Kenneth Rogoff, which establishes that independent, inflation-targeting central bankers can improve social outcomes relative to politicians who may be tempted to over-inflate economies to reduce unemployment, and therefore cause greater long-term inflation. This builds on earlier work by Barro and Gordon (1983) and Kydland and Prescott (1977), which shows under general conditions that rule-constrained central bankers should outperform discretionary politicians in macroeconomic management. Alesina and Summers (1991) find that Rogoff’s observation holds in cross-country data sets.

\(^8\) In an elegant model, Krugman (2013) points out that interest rate spikes of this kind are unlikely in an economy such as Britain, which is in full control of its own currency. This accords with various empirical studies (e.g. Guajardo et al 2011, Dube 2013) overturning a problematic study by Reinhart and Rogoff (2010).
It is worthwhile understanding the analytics of this point a little more deeply. Before 2007, central banks steered the aggregate economy through varying the short-term interest rate, thereby affecting consumption, investment, and future growth and inflation expectations. However, when interest rates reach their zero lower bound (ZLB), theory and common sense indicate\(^9\) that this severely constrains the power of monetary policy to stimulate the economy through interest rate policy. This is because central banks cannot cut interest rates below zero, stopping their ability to add stimulus through that channel. This is the phenomenon that Paul Krugman (1997) famously termed a ‘liquidity trap’ with interest rate policy powerless, akin to ‘pushing on a string’. The financial crisis was such a large shock that even after the Bank of England cut interest rates to near zero, the British economy was still contracting. With this tool exhausted, the Bank struggled to provide further easing.

\(^9\) The seminal works here are Krugman (1997) and Eggertsson and Woodford (2003). The key result established in all of these is that when the short term interest rate is at its lower bound, the main tool left available to central banks is to credibly promise higher inflation and lower interest rates in the future.
We can estimate the extent to which the ZLB constrained easing in various ways. One method is to simulate how far the MPC would have preferred to cut interest rates, based on its past reaction to macroeconomic data – and hence the extent to which the ZLB is binding. In recent work, economists Cynthia Wu and Dora Xia (Wu and Xia 2014) have done exactly that for the UK. The results starkly illustrate the problem of the ZLB in the UK economy:

Similarly, plausible models of the Bank’s mandate, in particular by David Miles (2013b), show that much further monetary easing would have been justified without the ZLB, despite uncertainty about the degree of slack in the UK economy and relatively high inflation.

1.4 Unconventional monetary policy

The upshot of the problem of the ZLB was that central banks attempted to develop new tools, given that conventional interest policy became impotent. The Bank of England developed a class of so-called ‘unconventional’ policy tools, principally:

- Quantitative Easing (QE) – the effort to lower long term interest rates by purchasing long-dated UK government bonds, lowering the term premium on long term interest rates
- Forward guidance – the so-called ‘Carney Rule’, promising to keep short-term interest rates lower for longer, in the future, again therefore attempting to lower long term interest rates

The very fact of such experimentation is evidence that the Bank requires further tools for macroeconomic stabilisation. The disturbing point is that this innovation has been unable to prevent recession and then stagnation, as in Figure 1. As we discuss below, the success of these policies has been mixed and possibly subject to diminishing returns, while coming with potentially large costs.

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10 Here, we choose not to discuss the Funding for Lending Scheme (FLS). FLS is the policy of easing credit to businesses and households through direct provision of funding by the Bank of England to banks, alongside an incentive. We note only that the scheme has somewhat mixed results, and can probably not be scaled up into more than a secondary stabilisation tool.
1.5 The costs and benefits of unconventional monetary policy

We do not seek to argue that QE has not been an important stabilising mechanism in the UK. Against the counterfactual of no other policy action, it has almost certainly been beneficial – the authoritative study by the Bank of England\footnote{Curdia and Woodford (2010) is the clearest treatment of this effect} finds that in aggregate QE added, or saved, approximately 1.5% to UK GDP after a total of £375 billion of quantitative easing. But it is still increasingly clear that the costs of such action were possibly quite high, while other programmes, such as our proposal, could have been far more effective for growth.

With regard to efficacy, a key point is that monetary policy is reliant on the health of the financial intermediation industry, and the appetite for borrowing by households and firms. By manipulating interest rates the aim is to induce consumers to spend more or businesses to invest more, and this, in turn, is contingent on the existence of a healthy banking sector that is able to lend out the necessary funds. Clearly, however, the health of finance in Britain in recent years has been dire – discussed in, for example, Paul Tucker’s (2012) speech – limiting lending and blunting the transmission mechanism from lower interest rates into higher aggregate spending. In theory, this is likely to blunt the effect of programmes such as QE or forward guidance\footnote{See Joyce, Tong and Woods (2013)}, and we can certainly see this effect in practice, given widespread deleveraging by banks over the last five years – as in Figure 5. Meanwhile, in the aftermath of the financial crisis the appetite by consumers and businesses for taking on more debt has been very weak. As Tucker (2012) points out, household appetite for leverage has been at historic lows, as agents attempt to repair their balance sheets – this is Richard Koo’s (2011) famous concept of the ‘balance sheet recession’, whereby the impact of monetary policy is partly curtailed.

![Figure 6: The decline in lending following the onset of the financial crisis, reflecting both weak demand by households and firms, and poor supply of lending by financial intermediaries](source: Bank of England)

This presents an obvious problem for unconventional monetary policy – in the aftermath of a financial crisis, when banks do not want to lend, and actors in the real economy do not want to borrow, manipulating long-term interest rates may not be an especially powerful weapon. To some extent, all the previously discussed channels of unconventional monetary policy rely on the Bank being able to coordinate expectations, to persuade people to borrow and lend more – insofar as this has proven difficult, the case for further stabilisation tools is clear.
We also see a number of putative costs to the current set of unconventional monetary policy tools. Clearly these costs are uncertain – after all, tools such as QE and forward guidance were almost unprecedented in modern, post-1980 financially developed economies, until recently. Even so, these costs are potentially large. There is an emerging consensus that current unconventional monetary policy, if not ineffective, may at least be subject to significant diminishing returns. The putative costs come from several sources:

1.5.1 Asset price volatility

Many fear that the combination of QE and forward guidance will mean financial asset prices shift away from fundamentals, causing a so-called bubble. Currently, this seems to be a remote possibility. MPC member David Miles (2013a) noted in a speech this year that the possibility of an asset-price bubble in UK financial markets still seems remote, at least in equity markets. On most measures of fundamental value, UK equity markets seem reasonably priced, at least against their own historical values:

![Figure 7: real (i.e. inflation-adjusted share prices) in the UK](image)

While there is perhaps more justified concern about bubbles in the UK housing market, this is largely under the Treasury’s purview and not the Bank of England’s, given the existence of the Treasury-run Help to Buy programme.

A related problem is that a prolonged period of low short- and long-term interest rates may increase volatility in interest rates and bond prices. A mechanism through which this is posited to happen is ‘reach for yield’, a term promoted by Fed Governor Jeremy Stein (2013). The main idea is that persistently low interest rates may cause investors to take on added duration risk to maintain a given level of yield. As interest rates begin to rise, these investors unwind their trades, adding to price fluctuations. While this is very much an experimental hypothesis, it seems to accord well with the volatility in UK and global bond markets over the summer, as long-term interest rates began to rise. Paul Tucker (2012), drawing on some earlier Bank of England studies\(^{13}\) as well as some new empirical analysis, found that the effect may have been quantitatively important, and hence a downside of QE.

1.5.2 Collateral scarcity

\(^{13}\)In particular Joyce, Kaminska and Lildholdt (2008). The work accords well with Stein and Hanson (2012) on US data
A large body of work focuses on the potential costs of QE in terms of removing risk-free assets, such as gilts, from the marketplace. Since these assets are often used as collateral in financial markets (i.e. as security on the value of a loan), the removal of gilts may harm the flow of funds through the financial system, ultimately reducing credit growth and total economic welfare. Recent work finds theoretical support for this idea, and empirical studies also verify some of the effect. These works raise the possibility of deflationary QE, the possibility that sufficiently large QE may harm the QE by removing safe assets and restricting credit growth. Though it is not clear how large the effect might be, it is certainly of potential concern.

1.5.3 Increasing wealth inequality

As discussed, unconventional monetary policy necessarily works through financial markets, increasing asset prices and lowering interest rates in the hope of stimulating growth. It therefore tends to disproportionately benefit those who hold a significant proportion of their wealth in financial assets. This portion of the population tends to be relatively wealthy, meaning that they benefit disproportionately. These distributional implications of unconventional monetary policy were found to be relatively significant in a Bank of England (2012) paper.

It is important to emphasise that unconventional monetary policy was almost certainly a net positive for the UK economy relative to the status quo of no policy action, as the previously mentioned Bank of England study confirms. However the costs mentioned above are non-trivial. Thus what we hope to propose, with helicopter money, is a policy with the demonstrable benefits of unconventional monetary policy, and without its costs.

1.6 Politicisation is an insurmountable problem for fiscal policy

In light of the impotency of conventional (i.e. interest rate setting) monetary policy, and the problems with unconventional monetary policy, it seems logical to review the usefulness of fiscal policy as a stabilisation tool. As discussed, economists decided monetary policy was superior during a period when the UK was never at the ZLB, so that interest rate policy was always powerful. At the ZLB however, despite all its flaws fiscal policy can in principle pick up the slack where conventional monetary policy cannot. Indeed, both theory and empirics suggest that, in the current environment, fiscal policy will be a particularly effective stabilisation tool. This is because, with interest rates stuck near zero, and a large amount of slack in the economy, increased government spending does not risk crowding out spending through rising interest rates, while using up resources that would otherwise be idle. In principle, then, greater fiscal stimulus could have done much more to ease the UK recession after 2008. In particular, because it delivers stimulus through either tax cuts, or direct government spending, it is able to avoid having to pass through the financial system, unlike monetary policy.

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14 Araujo, Schommer and Woodford (2013) and Caballero and Farhi (2013) are two of the most recent and persuasive. Stella (2013) and Singh (2013) provide a detailed explanation of the mechanism, through the mechanics of the shadow banking system. For related though distinct reasons, again to do with the stock of safe assets, Williamson (2012, 2013) proposes the possibility of deflationary QE, although his hypothesis is controversial.

15 The key study finding empirical support for the hypothesis that QE lowers welfare via safe asset removal is Krishnamurthy and Vissing-Jorgensen (2013), in a study of the US QE programmes.

16 In technical terms, a key consensus finding over recent years, in both theory and empirics, has been that the multiplier on government spending – the increase in output for every greater pound of government spending – is high at the ZLB. Theoretical works, in particular Christiano, Eichenbaum and Rebelo (2009), as well as empirical analyses such as Blanchard and Leigh (2013) and Hall (2009) tend to confirm this.
Problematically, we have had exactly the opposite, namely contractionary fiscal policy at the bottom of the business cycle, under the current Coalition government’s banner term of austerity. The cumulative costs of such contraction have been large, with estimates around 5% of total output cost by budget contraction\(^{17}\). Equally, we note that Britain has fared far worse than countries undergoing less severe austerity; and indeed better than those, such as some Eurozone members, who have suffered even greater fiscal contraction, as shown in Figure 9.

Moreover, to some extent this contraction was motivated by political considerations about the size of the state, as opposed to macroeconomic considerations about the business cycle. David Cameron (2013) has explicitly framed austerity in these terms. In a recent speech, he explicitly made the point that austerity has been, to some extent an ideological choice:

"We are sticking to the task [of austerity]. But that doesn’t just mean making difficult decisions on public spending. It also means something more profound. It means building a leaner, more efficient state. We need to do more with less. Not just now, but permanently."

In this sense, the recent experiment with austerity points back to the earlier problem identified by Taylor (2000) – that using conventional fiscal policy to manage the business cycle is fundamentally flawed, because it is likely to be subverted by political considerations.

1.7 The need for a long-term solution

The problem of the ZLB is not just one of the past five years. Many analysts content that ZLB episodes will become increasingly likely in the near future – the point is to build a durable policy consensus on how to cope with them, and hence a series of robust institutional reforms. This is what we might call the ‘secular stagnation’ hypothesis, put forward by amongst others Lawrence Summers (2013) in the US, and Martin Wolf (2013b) in the UK. For various reasons\(^ {18}\), the UK has

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\(^{17}\) Jorda and Taylor (2013) and OBR (2013) estimate this figure.

\(^{18}\) The precise causes of the long-term decline in interest rates are complex, and still controversial. Putative explanations include a dearth of investment in the UK, according to Wolf (2013b); an excess of global savings, promoted by Bernanke (2004); and a global shortage of safe assets, as found by Caballero, Farhi and Gourinchas (2008).
seen a persistent secular decline in long term interest rates, meaning that, even during normal times, rates have come ever-closer to the ZLB.

![Figure 9: The long term decline in UK interest rates](image)

This suggests that bringing interest rates to the ZLB in response to a recession may become increasingly likely in the near future. A particularly British aspect to this problem is that future Conservative governments have committed to budget surpluses, exerting further downwards pressure on interest rates if carried out. A cautionary tale, here, is Japan – for the last two decades, Japan has been almost permanently at the ZLB. Because of this, the Bank of Japan has struggled to manage demand, and has been forced to attempt various innovations to monetary policy. The problem of the ZLB, then, is not just one for the last five years, but also one that is likely to recur over the future. Therefore we need to outline an institutional reform, so that macroeconomic policy can improve in response to future crises.

### 1.8 Helicopter money – the best of both worlds

Consequently, we have something of a quandary. Fiscal stimulus could be beneficiary to the good management of the UK business cycle, but is handicapped by the same problems of institutional design that caused it to fall out of favour during the Great Moderation. Monetary policy is preferable in normal times because of its superior institutional design, but has come to be increasingly problematic in a ZLB world. In response to the current crisis, and looking at the future of the British economy, a better approach to macro-level easing is needed. An ideal solution, then, would marry the efficacy of fiscal policy at the ZLB with the efficient design of monetary policy. Our argument – and the next part of this paper – is that the proposal of helicopter money can unite these two objectives.
Section 2: Helicopter Money in Practice

"Let us suppose, then, that one day a helicopter flies over the economy and drops additional money from the sky equal to the amount already in circulation. ... The money will, of course, be hastily collected by members of the community. ... If everyone simply decided to hold on to the extra cash, nothing more would happen. ... But people do not behave in that way."

Milton Friedman – Optimum Quantity of Money, 1969

2.1 Implementation

In outline, we want to allow the Bank of England to make lump sum cash payments to all those eligible, i.e. 'helicopter money' in the Friedman sense of the term. This is not currently legal, and a change to the tools available to the Bank would be needed. Helicopter money could be deployed at any given meeting, in the same way that QE or a change in interest rates can currently be set. Normally, of course, we would expect the MPC to use this power exclusively when the short-term interest rate is at the zero lower bound, when conventional monetary policy is exhausted.19

Abstractly, a fixed sum of money, chosen by the Bank to provide appropriate stimulus, is dropped by helicopter to each National Insurance number. Concretely, where this NI number is linked to a bank account, the money is paid in to that account. Where the NI number is not associated with a bank account, the money would be held for a year at the Post Office, where it could be claimed by the NI number holder. In this case, the Bank would then simply credit the chosen amount of stimulus, the same to each individual, to the appropriate bank accounts.

We do not propose to alter the Bank's aims under its current mandate, which are to stabilize demand consistently with flexible inflation targeting. In our paradigm, helicopter money is merely an additional tool, to be activated when conventional policy has been exhausted, i.e. at the ZLB when interest rates can go no lower. This would replace the way that unconventional monetary policy has been used over the past five years. Essentially the Bank would use lump sum payments to stimulate consumer spending.

2.2 How helicopter money affects the economy

As with most of macroeconomics, when we discuss helicopter money there are various levels of technical complexity. In the appendix, we take a look at the analytics with more advanced theory20, while we explain the intuitive results here.

In very simple terms, the effect of helicopter money is similar to a lump sum tax cut by the government, financed by money instead of bonds – in each case, the policy move is a cash rebate to households. We can therefore analyse the effects of helicopter money on demand as we would tax cuts.21 In another sense, helicopter money is an alternative to quantitative easing, where the Bank gives the money spent on QE directly to households, instead of purchasing assets. Indeed, economists understand the mechanisms behind tax cuts far better than QE, lending some

19 Our framework is similar to various proposals over the last few years, such as Lord Turner (Turner and Woodford 2013), Professor Michael Woodford (2012), Professor David Beckworth (2013) and Ryan Avent (2013). As will hopefully become clear, we think our policy has various important refinements that the others lack. We explain this further through the text and in the appendix.

20 We discuss the main results in both the context of an IS-LM model, and with full intertemporal analysis.

21 Ex-MPC member Willem Buiter (2003, 2005, 2007) provides a fully specified dynamic general equilibrium model of this intuition, discussed in the appendix. He demonstrates that at the ZLB helicopter money has a 'pure fiscal effect', and so functions in much the same way as a tax cut.
certainty to our analysis. Overall, then, helicopter money is a hybrid between monetary and fiscal policy.

We can best understand the effects with some simple rule-of-thumb arithmetic – though of course the figures are merely illustrative. Consider the consequences if, instead of QE, the Bank of England had given lump sum cash transfers to consumers. The current outstanding value of QE is £375 billion, around 16% of GDP. Split over the four years that QE has been in effect, it would have been equivalent to 4% of GDP per year. Under our scheme this would be equivalent to a £7 000 rebate for each British adult. Evidently this would have solved the demand side problem immediately, and indeed have caused quite the opposite problem. Assuming, that the boost in output for every pound of tax cut is around £1.25 at the ZLB22, the boost to spending and output would have been ridiculously large. Hence a much smaller programme would have been sufficient; a helicopter money drop of just £100 billion, or £2 000 per adult, could have eliminated the estimated demand shortfall23. By contrast, the best estimates of the cumulative impact of QE have it saving around 2% of GDP, a stark contrast. In this light it seems clear that helicopter money would be effective stimulus at the ZLB, especially when compared with QE. Therefore we think it would have been a far better stabilisation tool over the last five years than those put in place by the Bank of England and the Treasury. Moreover – and this is a crucial point – having given the Bank of England a powerful tool to stabilise the economy even at the ZLB, the fiscal policy of the Treasury becomes increasingly irrelevant as a stabilisation tool.

The student of economics will notice that this analysis elides two points. The first is whether the injection into the monetary base – the money created by the Bank to rebate to consumers – will be excessively inflationary. The second is whether the forward-looking expectations of consumers will offset the tax cut effect of helicopter money. We leave these issues to the appendix – here, we hope it is sufficient to emphasise that these considerations do not change the basic thrust of our previous analysis24.

We think that the chief virtue of such a policy, compared with many proposals of a similar nature25, is the institutional setup. In particular, it removes the power to stabilise at the ZLB from the fiscal authority, and gives it to the monetary authority. It does not require any coordination between the Bank of England and the Treasury, nor does it require the Treasury to make any decisions about macroeconomic stabilisation whatsoever. We previously argued that independent central banks have historically proven very good at managing the economy, while fiscal authorities in general, and the Treasury in particular recently, have proven relatively inadequate. In this way we expect helicopter money to provide vastly better outcomes – in much the same way transferring monetary policy from the Treasury to an independent MPC vastly improved macroeconomic policy over the Great Moderation.

Beyond this important point, we argue that the proposal retains the benefits of both conventional fiscal and monetary policy, without their costs. It has the institutional efficacy associated with conventional monetary policy, combined with the power at the ZLB of fiscal policy. We turn to these issues in sections 2.3 and 2.4.

2.3 How helicopter money avoids the flaws of conventional fiscal policy

22 We base our rule-of-thumb estimate on an IMF study by Blanchard and Leigh (2013).
23Based on OBR (2013) data. Again, these figures are highly speculative, but hopefully give some idea of the potency of helicopter money.
24 In short, the presence of various frictions, in particular the presence of consumers who are unable to borrow easily from financial markets, tends to diminish the importance of these two points. As Weale (2012) points out, these so-called ‘liquidity-constrained consumers’ are probably quantitatively important for the behavior of the UK economy.
25 The notable exception is Ryan Avent’s (2013) piece. However every other proposal we cover requires coordination between a fiscal authority (i.e. the Treasury) deciding to enact helicopter money, and a monetary authority (i.e. the Bank of England) that implements it.
Helicopter money retains the benefits of fiscal stimulus, by directly boosting consumer spending at the ZLB in much the same way as a tax cut. However, it does not have the costs of conventional fiscal policy that we outlined previously. One of the key arguments against fiscal policy has been, especially over the last five years, that it will lead to accumulating sovereign debt and rising interest rates. Helicopter money is not subject to such problems. Central banks do not face this problem, given that the liability they issue, money, is not risky. Thus they have no problem with servicing debt.\textsuperscript{26}

A second flaw with conventional fiscal stimulus is the lag time between the decision to apply stimulus, and its eventual effects. Helicopter money suffers from no such problems. Lump sum payments are simple to apply. They avoid the lengthy allocative issues associated with designing appropriate fiscal stimulus, and the administrative time between conceiving of and applying policy. Since the cash rebates are lump sum, we would expect minimal effects on incentives, because the size of the payments are the same irrespective of the behaviour of consumers. In contrast to fiscal stimulus, our version of helicopter money is a policy of minimal intervention – it is a decision about increasing the aggregate spending power of the public without allocating resources specifically.

The third key flaw of fiscal policy that we highlighted was politicisation. By its nature, helicopter money sidesteps this issue. The institutional credibility of the Bank of England as an inflation-fighter, confirmed over the last 20 years, is key. It would surely convince the public that helicopter money is merely a tool to stabilise inflation in line with the Bank’s mandate, and not a return to the politically motivated monetary financing of government spending. Moreover, the MPC is of course a politically neutral and technocratically minded body. It is therefore able to aim for optimal macroeconomic policy, even at the ZLB, by using helicopter money.

2.4 How helicopter money avoids the flaws of unconventional monetary policy

Beyond retaining the favourable institutional framework of monetary policy, helicopter money also avoids the problems of the monetary policy approach over the last five years at the ZLB. Above all, helicopter money entirely bypasses the financial system – in Ryan Avent’s (2013) words it ‘reduces the ability of the financial sector to break monetary policy’. We can see this point from several angles. Firstly, unconventional monetary policy relies on convincing households and firms to borrow, by lowering long-term interest rates. We pointed out that this requires a healthy financial intermediation industry to supply credit. Helicopter money, on the other hand, bypasses finance to the real economy, by making payments directly to households. Therefore its success does not rely on the behaviour of banks and other financial institutions. In this way helicopter money is a robust policy response in the aftermath of a financial crisis, perhaps unlike unconventional monetary policy.

Secondly, we argued that unconventional monetary policy could lead to non-trivial costs for financial stability, because it necessarily intervenes in financial markets. Helicopter money, on the other hand, is not an intervention in financial markets. We would expect the impact on financial stability to be correspondingly lower – though of course, given the largely untested nature of the policy, we cannot be sure in advance.

A final key point is that unconventional monetary policy relies, in one form or another, on coordinating the public’s expectations, and persuading them to spend or borrow more. We argued that over the course of the last five years, the ability of central banks to do this effectively has been somewhat circumscribed. Part of the beauty of helicopter money is that this problem is entirely avoided. It does not rely on manipulating expectations in any sense, but merely that consumers spend the contents of their bank accounts. Even if households are intent on paying down debt instead of spending, or are intent on building up savings, helicopter money would accelerate this process by increasing short-run disposable income.

\textsuperscript{26}For more details on this point, see De Grauwe and Ji (2013).
Section 3: Potential Flaws

Clearly helicopter money is a profound change to the existing state of affairs on monetary policy. As such, it isn’t without potential difficulties. In our final section, we try and foresee what some of these objections might be, and try to address them.

3.1 Effects on work incentives

In normal times, an obvious proposition is that if the government unconditionally transfers money to the workforce, we would expect them to opt for more leisure time. However, this is a tangential consideration because by design helicopter money would only be implemented during periods of depressed demand, i.e. at the ZLB. During these periods unemployment is constrained by labour demand by businesses, and so changes to the labour supply make little difference at the margin. Given that helicopter money is a series of lump-sum payments, it will likely have little effect on incentives, given that individuals cannot under-report earnings, or shift them between periods, in the hope of gaining more from the helicopter money drop. We would note that other proposals are more problematic in this regard – for example Avent (2013) argues that helicopter money payments should be implemented by cutting payroll taxes, instead of as a lump sum rebate. This could have problematic effects on labour markets, by creating uncertainty and variation in the future level of taxes on labour, therefore perhaps altering incentives for employers or workers.

3.2 Higher inflation

Under our proposal, the Bank would still be a flexible inflation targeter, always targeting some nominal variable to anchor price expectations. Over the last five years, the credibility of the inflation target has been complete – through the crisis market inflation expectations\(^{27}\)have remained anchored and relatively stable, in spite of the various large shocks hitting the economy over the period:

![Figure 10: Market expectations for RPI inflation\(^{28}\) in 5 years time](source)

Source: Bank of England

\(^{27}\)Technically, the data in the chart is RPI inflation whereas the Bank of England target is in CPI inflation. However market data is not widely available for the latter.

\(^{28}\)The Bank of England targets CPI inflation, a slightly different and normally lower measure of inflation. However this cannot be easily calculated from market expectations data.
Moreover the Bank will always have the tools to hit its inflation target via manipulation of the short-term rate. If excess money growth becomes a problem due to helicopter money, and starts to increase inflation, the Bank has already developed the tools to counteract it, and can broadcast their ability and intention to use these loudly to market participants and households alike. Some might fear that in helicopter money lies a return to the money-financed deficit spending of 1970s UK, with its inflationary consequences. One of our key points, however, is that helicopter money is fundamentally different, from an institutional point of view. It is not an elected authority subordinating monetary policy to politically based financing needs. Rather, it is a specific set of apolitical interventions designed to stabilise the business cycle. This is the key point raised by Lord Turner (Turner and Woodford 2013). The credibility of the Bank of England will almost certainly prevent an inflationary snapback, given that our proposal is not monetary financing of a government deficit, but rather a new tool for independent monetary policy.

3.3 Electoral unpopularity

Perhaps out of public fears over a return to the inflationary monetary policies of the 1970s, helicopter money might be politically untenable. Hopefully, we have already addressed why these fears are unfounded. Moreover such reasoning flies in the face of the recent history of macroeconomics and central banking. Macroeconomics is still a young subject, starting with Keynes in the interwar period. The recent financial crisis is only the latest in a series of unprecedented challenges. Therefore there is still space for innovation in central banking. We do not have to look far to find examples of quite radical and rapid shifts: QE was first used by the Bank of Japan in 2001, explicit forward guidance by the Bank of Canada in 2009. The MPC was only made independent fifteen years ago, while the economics profession settled on inflation targeting as a roughly-optimal policy only around that time. The Bank of England has already expanded its powers into less conventional territory over the crisis, an obvious example being the Funding for Lending Scheme. Broadly speaking, the public has accepted, or at least failed to reject, these steps. In this light, helicopter money would simply be another step in the Bank's history of recent innovations. Moreover, the form of delivery of helicopter money is quite attractive – handing people money in general, and during recessions in particular, is popular. Given the radical and much more painful monetary innovations the public has accepted in the past – a good example is the 1980s Thatcher disinflation – we think that helicopter money would be electorally feasible.

3.4 Centralisation of power – will politicians surrender helicopter money?

A possible argument we foresee against helicopter money is the following. Giving the tool to the Bank of England is an unprecedented transfer of power to the Old Lady of Threadneedle Street. At this point the Bank would then have control over short-term interest rates; the effective size of the tax burden; and the bulk of financial regulation, via the Prudential Regulatory Authority. An obvious question to ask, then, is whether or not politicians would be willing to surrender such a major lever of power to an independent central bank. In response, we note that helicopter money continues the logic of existing economic structures, whereby the technocrats of the MPC manage the business cycle, without political interference. Our core contention through this study has been that central bankers have historically been far more effective at managing macroeconomic policy than politicians. Thus helicopter money is the sort of power that, in the recent past, politicians and the electorate have been broadly happy to surrender to central bankers. The macroeconomic importance of helicopter money is roughly of the same order of magnitude as the control of the short-term interest rate. Nevertheless, this was willingly given to an independent MPC by the 1997 New Labour government, in a decision popular with politicians of all parties both then and now. It is therefore hardly unprecedented that a similar change could take place for our proposal.

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29 Technically, the Bank of England currently pays interest on bank reserves at the Bank Rate, similarly to the US Federal Reserve. This is designed to ease a future exit from QE and avoid the problems associated with excess money growth. A similar mechanism could come into play with helicopter money.
3.5 Mandate change

It is worth noting that many helicopter money proposals tie the idea to a change in the central bank’s mandate. In particular, instead of flexible inflation targeting, the central bank would move towards nominal GDP level targeting, whereby the Bank of England would attempt to manipulate the sum of output growth and inflation growth. The underlying logic is that there is a credible commitment to higher inflation when output growth is below trend, shifting demand forward at times of lower growth. While the merits of such a mandate shift are apparent, the policy is not without its detractors – notably ex-MPC member Charles Goodhart, in a recent paper. While this is an important debate, it is not one we think is inside the scope of this proposal. We merely point out that irrespective of the specifics of the Bank’s mandate, helicopter money is almost surely a better policy tool to achieve it.

A related and more technical point is as follows. It is well understood in the technical literature that central banks can stabilise the economy at the ZLB by credibly committing to inflation in the future, lowering interest rates and stimulating current demand. Again, we are not in any sense against these sorts of policies, we merely note that central banks have struggled to generate this sort of credibility in recent years, a point made repeatedly by Paul Krugman (Krugman 2012). In this light helicopter money is an important alternative policy, as long as the Bank maintains its commitment to flexible inflation targeting, as it has thus far.

Conclusion

Over this paper we discussed what makes a good demand management policy – why monetary policy was up to the task before the financial crisis but has not been since; and why fiscal policy is fatally hampered by politicization, amongst other issues. Bearing this in mind, we tried to make a policy recommendation that married the power of fiscal policy in the ZLB with the technocratic efficiency of monetary policy. In this way, we hope, we have brought together a great deal of important academic literature into an accessible proposal for someone with only a cursory knowledge of macroeconomics.

Our point is not so much that helicopter money should be used now, but rather that it is the best response if we need to provide stimulus during a future ZLB episode. If fears over secular stagnation are correct, the need for such a reform is pressing.

We believe that helicopter money is far more powerful than unconventional monetary policy, because it bypasses financial institutions and does not rely on the willingness of households to borrow. Furthermore it would avoid the increasingly apparent costs of unconventional monetary policy, be they asset price volatility, collateral scarcity or increasing wealth inequality. Moreover while having similar potency to fiscal stimulus, helicopter money addresses the flaws of fiscal policy as we see them – the long implementation lags, the political motive often behind fiscal stimulus, and worries over the trajectory of public debt.

Finally – and most importantly – we think our proposal would be effective, stimulating the economy without major collateral damage. Both relatively simple and more complex economic analysis suggests that helicopter money would be a powerful stabilizer at the ZLB. The possible costs, on either a political or economic level, seem to be mild at best. Overall, then, it seems an ideal solution. If helicopter money becomes reality, the economic calamity of the last five years should not be repeated.

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30 Woodford (2012), Avent (2013) and Beckworth (2013) all explicitly tie helicopter money to nominal GDP level targeting.
31 Goodhart, Baker and Ashworth (2013)
32 Any number of studies over the last ten years take this line. The most accessible explanation, as well as the seminal work, is probably Krugman (1997).
Appendix

Theoretical Analysis

For more technically minded economists, we can dig deeper into the analytics of helicopter money outlined in section 2.2. On a theoretical level, we can think of the theory behind helicopter money in three distinct ways. Firstly we use simple static analysis of the IS-LM type. Next, we consider the effects of helicopter money through a fully specified dynamic model. Finally, we examine the effect of significant imperfections. Overall, this should provide sound theoretical backing to the earlier discussion of the analytics of helicopter money. Ultimately each strand comes to a similar conclusion, that helicopter money is expansionary in much the same way as a tax cut. We then go on to examine the implications for inflation in more detail.

In terms of the simple static analysis, helicopter money is best thought of as a combination of tax cuts (i.e. lump sum transfers to households) and an increased money supply. We can analyse the effects under a basic IS-LM framework at the ZLB. In this situation monetary expansion, such as QE, is ‘pushing on a string’ whereas helicopter money shifts the IS curve outwards, leading to an increase in the level of real income. The crucial distinction between the two is that helicopter money involves not just a monetary expansion, but also a transfer, leading to output growth. The simple point can be made graphically:

![Diagram showing IS-LM curves with IS and IS" intersecting near Y*, LM and LM' intersecting near Y' with Y on the Y axis and i on the i axis.]

Of course, as is well known, simple static model of this type elides the role of expectations and dynamics. In particular, in the classic dynamic treatment of tax cuts, they have no effect on output – this is so-called Ricardian Equivalence. However, even taking Ricardian Equivalence into account, helicopter money should still have an effect on demand output. Ex-MPC member Willem Buiter laid out the argument in a series of papers. The reason is that, as Buiter (2007) says:

“If the recipients of [helicopter money] do not expect it to be reversed (in present discounted value terms) in the future, this would, at a given price level, represent an increase in the real net wealth of the private sector. Because base money does not

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33 Barro (1974)
Therefore households do not expect the money to be taxed back to repay debt, and so raise their spending. Consequently helicopter money has a ‘pure fiscal effect’. As long as expansion in the money supply is not expected to be fully reversed, then demand will increase. Hence we arrive at much the same conclusion as the static IS-LM model.

Moreover, as we take into account more realistic frictions, we would expect helicopter money to be correspondingly more powerful. A good example is raised by Weale (2012) – over the last five years, there have most likely been a significant group of ‘liquidity constrained consumers’ in the UK, i.e. those who lack access to credit at reasonable interest rates. Factoring this in, we would expect the impact of measures such as helicopter money to be correspondingly higher. This is because the lump sum transfer substitutes for spending which consumers wish to make, but are unable to do so due to tight credit markets. Another important point is that, clearly, consumers and firms do not behave under rational expectations. We expect the powerful effects on sentiment associated with an injection of helicopter money to also raise spending – the injection of such a large volume of spending into the economy would likely make households and firms more confident about the future economic outlook, and so borrow, consume and invest even more. Put another way, regardless of the strict theory of Ricardian Equivalence, it is generally accepted in policy circles and academia that tax cuts have powerful real effects – given that helicopter money works in much the same way, it should have similar potency.

Finally, then, we come to the impact of helicopter money on inflation. Clearly, given that helicopter money aims to stimulate demand, it should be inflationary in the short run in line with the Bank’s mandate. A more subtle point is whether, to be effective, helicopter money will have to lead to greater inflation than the Bank of England would otherwise want to achieve. To some extent this is true – the analysis of the Buiter work implies that, to be effective, the expansion in the money supply associated with helicopter money must be permanent. All else being equal, a permanent monetary expansion is associated with higher inflation. Nevertheless, we feel that this does not pose significant challenge to the Bank’s flexible inflation targeting mandate. Firstly, because the Bank has consistently been comfortable with tolerating relatively high levels of future inflation to boost current demand growth, the ‘flexible’ interpretation of the mandate discussed through this paper. Secondly, once we factor in the more realistic frictions mentioned, we expect even a temporary expansion in the monetary base to have a strong effect in boosting demand, similar to a temporary tax cut. In this case, the output/inflation tradeoff becomes less pronounced.

Criticisms of Other Proposals

As noted above, the framework we are working with is similar to models outlined in Turner and Woodford (2013), Beckworth (2013), Woodford (2012) and Avent (2013) – ours is most conceptually similar to Beckworth’s; though it is still conceptually slightly different to all of the above.

Turner, in Turner & Woodford (2013), talks about Helicopter Money as overt money finance of increased deficits. Whilst we believe that this could work in theory, we believe that in practise governments won’t necessarily run deficits at the correct time to stimulate the economy. Overtly financing fiscal deficits will only work if the government has the correct tools to analyse future demand, as the Bank of England already has these tools and so should put them into use in this case. The lack of shovel readiness that this would have compared to our proposal would hinder its effectiveness.

Woodford, in his response to Turner, makes the point that Helicopter Money may be the same as Quantitative Easing if the Government has the same path of purchases throughout and if the

35 More broadly, as we relax the assumption that consumers are Ricardian, helicopter money should become increasingly potent. This is empirically substantiated in general, as in Bernheim (1988), and specifically in the UK, as in IFS (1992).
36 See, for example, Romer and Romer (2007)
public expects that they will be permanent to the same degree. As we have argued throughout this paper, it should not necessarily be taken as given that Government purchases would be of the magnitude necessary to stimulate the economy, unlike our policy tool, and so they would have different real effects.

Beckworth (2013) outlines a model where the central bank adopts an NGDP level target and then the Fed and Treasury sign an agreement that should a liquidity trap emerge and knock NGDP off its targeted path, they would then quickly work together to implement a helicopter drop. The Fed would provide the funding and the Treasury Department would provide the logistical support to deliver the funds to households. Woodford (2012) outlines a very similar proposal – the central bank would commit to a nominal GDP target, while committing to funding government tax cuts to achieve this.

Avent 2013 suggests that “the Fed could move to an NGDP target, and the government could pass a law giving the Fed direct control over the payroll tax rate (as it applies to both the worker and the employer).” Whilst all of these proposals have merits, we believe that they would all potentially threaten the Bank of England’s independence, whilst at the same time relying on politicians being supportive of these measures. Avent’s argument also faces the specific problem that if a government wanted to change the size of the state then consultation with the central bank would be necessary. The effect would be distortionary, with individuals moving earnings around throughout different time periods so they are taxed least, which again would potentially be costly.
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