

Helicopter money and debt-financed fiscal stimulus: one and the same thing ?

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Introduction

First floated almost 50 years ago, the idea of helicopter money has recently been subject to renewed interest. Some observers actually reckon that, in certain economies struggling to pick up again, this kind of instrument deserves to be considered as an integral part of the policy-makers' toolkit. In this context, this article strives to throw some light on the effectiveness of helicopter money in stimulating economic activity and bringing inflation back towards its target, notably by comparing it with the likely effects of a conventional (i.e. debt-financed) fiscal stimulus.

It should be noted that the economic analysis carried out here is purely conceptual. In other words, it does not in any way seek to derive any particular implications for implementing fiscal or monetary policy in the euro area countries. Nor does it have any specific implications for the National Bank of Belgium functioning within the European System of Central Banks (ESCB). Moreover, this analysis does not investigate any legal aspects either. In particular, this article does not intend to take a stance on the legal feasibility of helicopter money in regard to the rules governing the ESCB, and more specifically from the perspective of Article 123 of the Treaty on the Functioning of the European Union (TFEU), which prohibits the monetary financing of European governments by the European Central Bank (ECB) and by the Member States' national central banks.

The article begins with an overview of what mechanisms proponents of helicopter money traditionally propose to

explain its effectiveness and then goes on to provide an integrated analysis of stylised balance sheets of a central bank and a State to examine these claims in more detail and facilitate a comparison between helicopter money and debt-financed fiscal stimulus.

From this analysis, it appears that helicopter money looks very much like financing public expenditure via the issuance of short-term government debt. Even if helicopter money does not increase gross government debt, the decline in central bank equity lowers the government's net worth position or, equivalently, increases its net debt position because the central bank is issuing a debt instrument (base money). Furthermore, in modern monetary systems, this base money is not interest free so that, after implementation, the dynamics for the consolidated government sector's finances look remarkably similar in the helicopter money and debt-financed fiscal expansion scenarios. Both policies will lead to higher interest charges for the public sector, through payments of interest, either by the central bank on its reserves or by the State on its outstanding debt.

The article then puts forward a series of elements explaining why helicopter money might nevertheless prove to be more effective than conventional debt-financed fiscal expansions. The last part, on the other hand, raises a possible complication of this policy option: the risk, even if it is remote, of creating an inflationary spiral in the event of any lack of coordination between monetary and fiscal policies. The main conclusion to be drawn seems – as Reis (2013) had earlier observed in his article on the mystique surrounding the central bank's balance sheet – that allowing inflation to rise is the major, if not the only, power that central banks have to generate resources.

^(*) The author would like to thank Jef Boeckx and Luc Aucremanne for their valuable remarks and suggestions.

1. Definition

The notion of “helicopter money” refers to policies where a permanent/irreversible increase in the monetary base, i.e. the sum of currency in circulation and commercial bank reserves held at the central bank (also referred to as central bank reserves), is used to finance a stimulus to aggregate demand. The concept was originally introduced by Friedman (1969), establishing a parallel between a “helicopter drop” and the idea of a central bank printing and distributing new banknotes to households as a one-off transfer payment to boost spending. Given the fiscal attributes of such a policy, the intervention of the government has been added to the picture, which broadened the definition of helicopter money to a “money-financed fiscal stimulus” (Bernanke, 2016; Buiter, 2014; Gali, 2014) or “overt monetary financing” (Turner, 2015). From this perspective, helicopter money requires explicit coordination between the government and the central bank as it consists of an expansionary fiscal policy (implemented by the government) funded by a permanent increase in the monetary base (thanks to the central bank) rather than by new public debt securities issuance.

2. General relevance in the current context

Against a backdrop of persistent production capacity under-utilisation issues, many of the major advanced economies are still faced with relatively low inflation rates. To create the necessary conditions for a sound recovery and to avoid a deflationary scenario, central banks across the globe have also loosened their monetary policy stance significantly in recent years. Among the policy measures they have used, central banks have reduced nominal interest rates towards their lower bound (in some cases, most notably by resorting to negative interest rates), made massive asset purchases (under so-called quantitative easing programmes) and adopted forward guidance ensuring that accommodative monetary conditions will be maintained for an extended period of time⁽¹⁾. With the deployment of this wide range of monetary policy instruments, fears of

(1) See, for example, the NBB's Annual Reports since 2007 for details on the various monetary policy measures taken by the Eurosystem in recent years. See also Cordemans and Ide (2014) for a brief review of monetary policy stances in the advanced economies since the economic and financial crisis. In addition, Cordemans *et al.* (2016) throws more light on the asset purchase programme launched by the Eurosystem in 2015.

(2) See Boeckx and Deroose (2016) for an extensive discussion of the role given to fiscal policy alongside monetary policy in the current economic debate.

(3) See in particular Christiano *et al.* (2009), Woodford (2012), DeLong and Summers (2012) or Melyn *et al.* (2016).

(4) A liquidity trap is a situation where money demand has become perfectly interest elastic as nominal interest rates are close to their lower bound. This causes conventional monetary policy to lose all traction while, at the same time, a more negative real interest rate may be desirable to appropriately boost the (very weak) economy. See e.g. Krugman (1998) and Dotsey (2010).

seeing undesirable spillovers set in – especially as regards financial stability – have started to emerge.

In this context, it is no accident that the idea of resorting to measures of a fiscal nature – including helicopter money – has come under the spotlight. These measures are regarded as supplementary instruments which, working together with monetary easing, can contribute to the process of stimulating aggregate demand. For any such contribution to work, it is of course vital to have sound public finances, which partly determine the efficiency of both monetary and fiscal impetus⁽²⁾.

Fiscal policies may seem all the more advisable given that, in the current economic environment, they are associated with a particularly high multiplier (i.e. greater efficiency)⁽³⁾. The main rationale behind this is as follows: since central banks are expected to keep their policy rates low – close to their lower bound – into the foreseeable future, there will indeed be no offsetting increase in nominal interest rates in reaction to the fiscal stimulus. In other words, there will be no crowding out effect “at least until the economy exits from the (zero) lower bound or cyclical unemployment drops substantially” (DeLong and Summers, 2012). From an alternative point of view, if it is assumed that some of the limits of monetary policy could to be related to a liquidity trap issue in the low-growth and low-rate environment⁽⁴⁾, (theoretical) evidence suggests that fiscal policies – operating via the “income flow”, i.e. targeting more directly expenditure than (conventional) monetary policy which relies on the “interest rate flow” – will help to boost spending more appropriately.

3. Helicopter money vs debt-financed fiscal stimulus

In today's context, some argue the case for deploying policy options of a fiscal nature – along with other economic policies like monetary policy and structural policies – to fuel the global recovery. So, helicopter money has come to be hotly debated, not least because it is often seen as the best option among policies of a fiscal nature in terms of effectiveness. This point of view is examined below.

According to its proponents, helicopter money would have an amplified impact on the economy in comparison to conventional debt-financed fiscal stimulus because, unlike the latter, it does not add to the future tax burden...

If appropriately designed (e.g. by targeting those with a high marginal propensity to consume out of wealth), both types of fiscal stimulus policies directly boost spending

and consequently nominal aggregate demand, too. As already mentioned, this kind of boost should be stronger in a very low interest rate environment than in normal circumstances because of the absence of crowding out effects. Generally speaking, how and how quickly the nominal expansion will eventually be split between increases in the price level and real output will depend on the more structural features of the economy. That said, because we initially assume here excess capacity, it is highly likely that suppliers will meet – at least in part – the higher demand by producing new goods and services using the idle resources or by selling from inventories. In this respect, DeLong and Summers (2012) show that, if the slack in the economy is sufficiently large, a large part of the fiscal stimulus can translate into a real output effect (rather than a pure price effect), and this not only in the short term but also in the long term because of avoided hysteresis (hysteresis arising when persistent weak growth ends up reducing the level of long-term production capacity).

Since debt-financed fiscal stimulus implies, in principle, an increase in privately-held gross public debt, and thus also higher debt-servicing costs for the State in future, private agents risk associating them with future tax burdens and will consequently spend less. This behaviour, referred to as “Ricardian”, is likely to offset all or part of the initial expansionary effect of the stimulus policy⁽¹⁾. As a general rule, it is hard to assess to what extent Ricardian effects may arise. In the most extreme case, one could argue that the initial multiplier effect of fiscal stimuli in a low-growth and low-rate environment is so large that it will eventually lead to a decline in the ratio of gross government debt to GDP, making Ricardian effects less likely (DeLong and Summers, 2012). Conversely, because concerns about the sustainability of gross government debt in many countries are widely discussed in political debates and economic commentary, Ricardian effects could also be very much at play today (Turner, 2015).

Since helicopter money is perceived by its proponents as a fiscal expansion that does not inflate government debt, they argue that it does not require higher taxes in the future and is not expected to in any case. So, they explain that there is no room for Ricardian offsetting effects to deploy. Basically, the “free lunch” character of helicopter money stems from the (more or less explicit)

assumption that the “money” used to finance the stimulus is not in any way comparable to the public debt resulting from new debt securities issued by the government, whether by its very nature (money that never has to be repaid against gross debt maturing one day) or whether one considers the related debt-servicing costs (non-interest-bearing money versus bonds with interest payments)⁽²⁾.

...yet, an integrated analysis shows that helicopter money is akin to financing public expenditure via the issuance of short-term government debt.

To see more formally to what extent helicopter money can be compared to conventional debt-financed fiscal stimulus, it may be useful to disentangle the impact and implications of both policies on the net position of the overall public sector.

To this end, it is worth starting with an explanation of the effect of the different possible forms of helicopter money on the central bank’s balance sheet. Although there are generally assumed to be four options for implementing helicopter money, only three of them are illustrated in chart 1⁽³⁾. The figure essentially shows that the common denominator of these helicopter money options is that central bank equity falls in order to fund the increase in liquidity ultimately available to the general public.

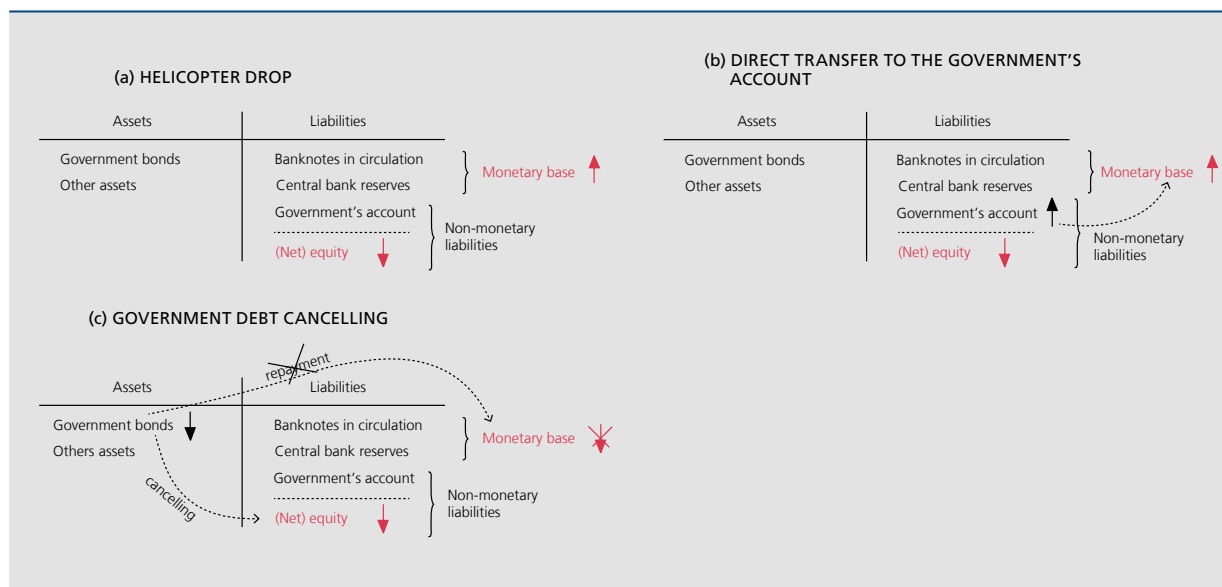
- (a) **Helicopter drop:** the central bank “creates” money and transfers it to private individuals directly (and irreversibly). In this case, the central bank’s monetary liabilities rise as the public’s money holdings against the central bank go up. This increase is offset by a corresponding loss on central bank equity. In principle, the intervention of the government is not required. In practice, however, the possibility of seeing the central bank coordinating action with the government and getting its support in order to provide funds to individuals on a conditional basis should not be ruled out. For instance, money could be retrieved from individuals if it is not spent after a certain period of time. An alternative option would be to only target individuals with the highest propensity to consume.
- (b) **Direct transfer to the government’s account:** the account the government has with the central bank is directly credited by the latter. Losses on central bank equity cover the increase in the credit available in the government’s account. As soon as the fiscal expansion is launched, it creates money transfers to the private sector and the government balance transforms into additional base money (see dotted arrow). In a way,

(1) When assuming that private agents might reduce their consumption in the face of an expected increase in the future tax burden, the theory of Ricardian equivalence assumes that they are indifferent between increases in taxes today or in the future. This also implies that the government debt securities that they hold do not constitute net wealth for them as they are counterbalanced by the discounted value of future taxes.

(2) For instance, see Buiters (2014) who strongly argues that irredeemable non-interest-bearing money is “by nature” net wealth to private agents in order to explain the superiority of helicopter money.

(3) The reason for the “omission” of the option where the central bank purchases zero coupon sovereign perpetuities directly from the government is given later on.

CHART 1 THE VARIOUS FORMS OF HELICOPTER MONEY AND THE CENTRAL BANK BALANCE SHEET⁽¹⁾



(1) The arrows indicate movements on impact in the balance sheet items. Movements are judged against the counterfactual situation (no policy), all other things being equal. In all cases, the net additional liquidity (compared to the counterfactual scenario) fans out between banknotes in circulation and central bank reserves depending on people's relative preference for these assets.

helicopter money here is transforming the government's stake in the central bank's capital into a more liquid asset that the State can use to finance a fiscal expansion.

- (c) **Government debt cancelling:** the central bank unilaterally restructures and/or forgives (a share of) its government debt holdings. The central bank's assets contract by an amount corresponding to the haircut, and this is registered as a loss on central bank equity. Because the government now no longer has to raise its primary balance to pay the central bank (in interest and/or principal), it has some fiscal space which enables it to go ahead with the fiscal expansion. Superficially, this operation does not look like a permanent increase in the monetary base. However, when judged against the counterfactual scenario, one can see that this transaction does indeed entail such an increase in the monetary base. Effectively, if the government had to repay the bonds held by the central bank, it would cause the monetary authority's portfolio of bond holdings to shrink, on the assets side, as well as the central bank reserves, on the liabilities side, because the government extracts resources from the private sector to repay the central bank. The debt cancellation makes it possible to avoid the drop in central bank reserves – they are kept constant – since the offsetting movement consists of a reduction in the monetary authority's equity.

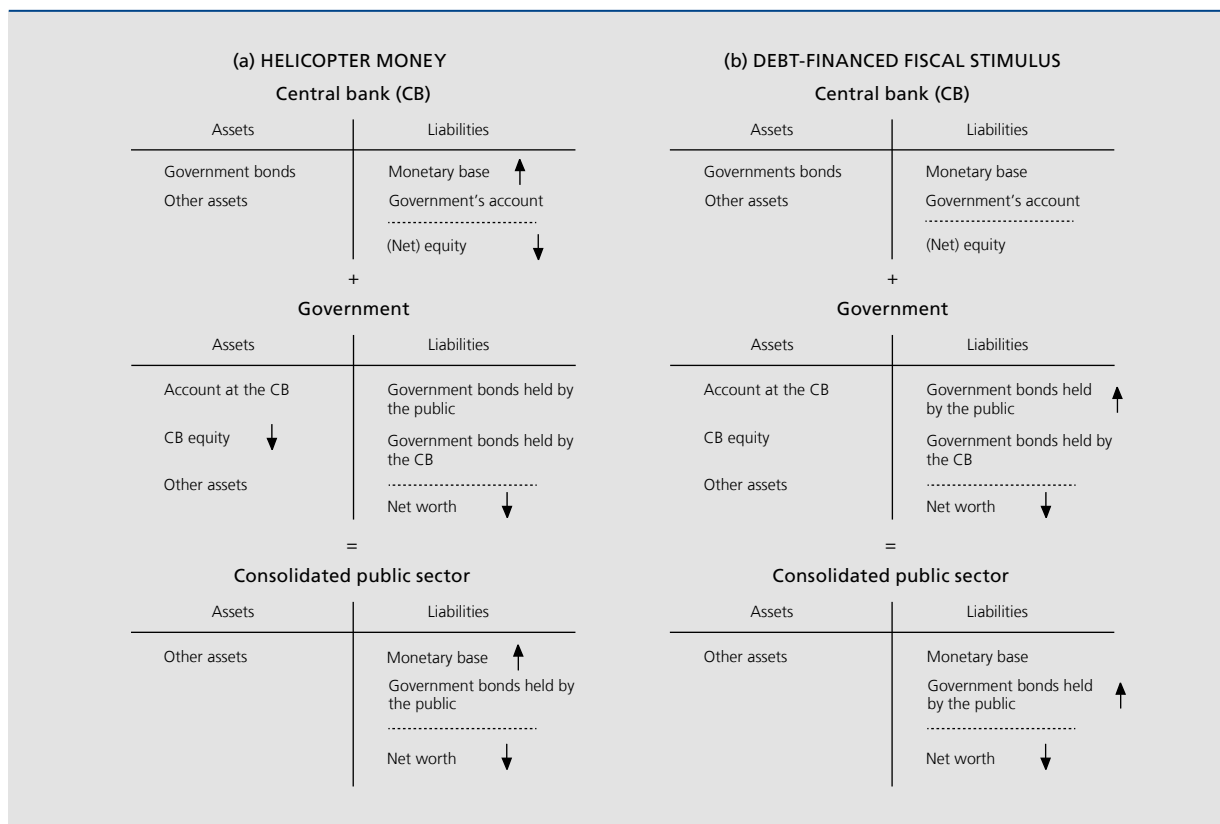
Although it is an option which is sometimes envisaged, this article does not consider here helicopter money implemented via the central bank directly purchasing zero coupon sovereign perpetuities. In fact, this form of helicopter money does not have the same immediate impact on the central bank balance sheet as the other options. Indeed, it does not imply any immediate fall in equity to compensate for the additional liquidity. That said, the impact on the central bank balance sheet across the four different forms of helicopter money is roughly equivalent assuming a more dynamic perspective: at some stage, they all imply a decline in equity compared to the counterfactual scenario if the interest rate on central bank reserves rises above zero. This issue is discussed in greater detail below.

Based on the above discussion, chart 2 presents a global analysis of the impact of helicopter money and conventional debt-financed fiscal stimulus using the simplified balance sheets of the central bank, on the one hand, and the government, on the other, as well as their consolidation into the overall public sector (the "consolidated public sector").

An analysis of the impact on the central bank balance sheet essentially points to the difference in the nature of funding the two policies. On the one hand, because the funding of debt-financed fiscal stimulus is in principle not associated with any increase in the monetary base or other central bank involvement, this type of stimulus does

CHART 2

IMPACT OF HELICOPTER MONEY AND DEBT-FINANCED FISCAL STIMULUS ON THE SIMPLIFIED BALANCE SHEETS OF THE CENTRAL BANK, THE GOVERNMENT AND THE CONSOLIDATED PUBLIC SECTOR⁽¹⁾



(1) The arrows indicate movements due to the impact of each policy on the balance sheet items. Movements are judged against the counterfactual situation (no policy), all other things being equal. We consider here in both cases a fiscal stimulus which has the immediate effect of a deterioration in the government balance sheet, such as an increase in expenditure on public sector wages or social transfers (this excludes public investment programmes which serve to accumulate assets and which could lead to – as long as the return on those assets exceeds the cost of funding them – a strengthening of the government balance sheet).

not change the central bank balance sheet. On the other hand, in the case of helicopter money, the composition of the liabilities side of the central bank balance sheet changes: as already demonstrated in chart 1, a fall in its equity does actually finance the increase in base money available to the private sector economy.

When looking at the balance sheets of the government and the consolidated public sector, the effects are more similar, whether from a static or a more dynamic perspective. More precisely,

- (i) on impact, both types of stimulus imply a decline in the net worth of government and the overall public sector. This is the case in the helicopter money scenario, despite the fact that the gross government debt remains unchanged as the fall in the central bank's equity used to finance the fiscal expansion means a decrease in the

government's assets – and this is because the central bank is, after all, owned by the government⁽¹⁾. Likewise, the decline in central bank equity ultimately triggers an increase in the net debt position of the overall public sector because at the consolidated level the liability position worsens following the creation of additional base money. These subsequent effects are very similar to a debt-financed fiscal stimulus where the increase in gross debt is counterbalanced by a contraction in the government and consolidated public sector's net worth;

- (ii) subsequently, both stimuli lead to a rise in the interest payments of the overall public sector since an interest-bearing debt instrument is in fact issued to pay for current expenditure. In other words, given that today's monetary frameworks provide for central bank reserves to be remunerated, helicopter money effectively also shows up as an increase in a form of interest-paying government debt, namely the short-term rate. Although part of the additional base money will be made up of banknotes, i.e. a non-remunerated liability

(1) Here, we exclude the case of central banks like the National Bank of Belgium that also have private shareholders.

for the central bank, it can reasonably be assumed that this share will not radically change things. If helicopter money is not forcing private agents to hold more banknotes than usual, there is indeed no reason to believe that demand for the latter will be driven by anything other than its “typical” structural determinants⁽¹⁾ after the helicopter money is launched. To put it in another way, there is basically no reason to expect a substantial rise in demand for banknotes in the wake of the helicopter money experiment. Thus, if interest rates on central bank reserves and government debt securities are initially in negative territory, both policies will originally result in a source of revenue for the government – because non-remunerated liabilities (net worth) are exchanged for “interest-receiving” liabilities⁽²⁾ – and hence lead to (temporarily) rising net worth compared to the counterfactual scenario. In the longer term, however, it will imply declining net worth once again if interest rates return to positive figures as the recovery gains ground.

In both scenarios, wealth initially held in a collective form (i.e. the public net worth) is thus transformed into a more liquid asset made available to private hands (i.e. government debt securities or money). To the extent that this asset is a net debt to the public entity and entails interest payments in both cases, there is *a priori* no reason to assume that rational private agents will form different expectations about the possible future tax burden that it might imply (or not). Consequently, it is unlikely that helicopter money would make a difference in terms of effectiveness compared to conventional debt-financed fiscal policy.

That said, a situation could be envisaged whereby the central bank decides not to remunerate the additional reserves injected on a permanent basis in the helicopter

- (1) Those determinants are demand for transaction balances, agents’ propensity to hoard cash (which depends in part on the level of interest rate, i.e. the opportunity cost of holding banknotes), the availability of alternative means of payment, the size of the shadow economy and demand by non-residents.
- (2) As regards the option where the central bank purchases zero coupon sovereign perpetuities, non-remunerated assets would be initially matched by “interest-receiving” liabilities.
- (3) See, for example, Boeckx and Ide (2012) for more details about a central bank’s balance sheet items and its liquidity management.
- (4) Borio *et al.* (2016) go even further by arguing that, in view of the fact that the liquidity absorption process related to growth in the economy would take too long, the decision not to remunerate the excess reserves created as part of the helicopter money exercise would entail giving up on monetary policy “forever”.
- (5) The possibilities for the central bank to impose a non-interest-bearing compulsory reserve requirement equivalent to the amount of the monetary expansion (so that the level of excess reserves remains unchanged) or to remunerate the additional reserves but recoup the costs through a separate levy on banks (Bernanke, 2016) are also commonly brought up to promote the superiority of the helicopter money argument. However, these suggestions amount to the same thing: tax-financed deficit spending as in both cases banks – that belong to the private sector – bear the ultimate costs (see also Borio *et al.*, 2016).
- (6) Consequently, in a (very) hypothetical example where jurisdictions deemed to have the highest estimated marginal propensity to consume would enjoy helicopter money, more limited Ricardian effects would be expected at euro area level. There, the liquidity would effectively fall into the hands of residents with a high estimated marginal propensity to consume from it, while the ultimate costs would be shared across the euro area, including among people with a lower propensity to consume less in the face of a negative shock to the net domestic public wealth. In fact, the increase in interest expenses resulting from helicopter money would be pooled in the Eurosystem’s monetary (net) income and ultimately shared across euro area countries according to the ECB capital key.

money scenario with a view to ensuring the latter’s superiority in terms of effectiveness over a conventional fiscal stimulus. As a lot of excess liquidity would not be remunerated, overnight market rates would still be stuck at 0% for probably a very long period (i.e. the time needed for this excess liquidity to be fully absorbed by the “growth-driven” net liquidity-absorbing autonomous factors and required reserves⁽³⁾). Overall, this would be equivalent to the central bank abandoning an active monetary policy and its primary objective of reaching price stability probably for some time⁽⁴⁾, while also leaving room for the undesirable consequences of maintaining low rates for too long. At the end of the day, a scenario of this kind may push the economy into a spiral of explosive inflation⁽⁵⁾. Although this is highly undesirable, the mere possibility of allowing inflation to rise is a very powerful mechanism, which is discussed in the following section.

4. When can helicopter money nevertheless be more effective?

Notwithstanding the above conclusions, there are two conditions that spring to mind that would make Ricardian equivalence effects less likely in the helicopter money case than in the conventional debt-financed fiscal stimulus case, thereby ensuring the superiority of the former policy over the latter in terms of a boost to the economy in a zero lower bound/low-growth environment.

4.1 The shallow argument: when no public sector balance sheet consolidation is deemed necessary

Helicopter money is likely to be more effective than debt-financed stimulus if private agents consider that the consolidation between the central bank and government balance sheets is not necessary. Consequently, lower central bank equity need not lead agents to anticipate higher future taxes or lower government expenditure.

As a general rule, such absence of a need to consolidate balance sheets could reflect “the real world” to the extent that financial markets, international institutions and also national and supranational governance frameworks often focus largely on gross government debt, while the net position of the consolidated public sector (including short-term monetary debt) tends to be neglected. In the euro area’s context, it could also be argued that the absence of balance sheet consolidation applies to some extent because monetary policy operations (in principle) lie under a risk-sharing regime while there is no fiscal union⁽⁶⁾. In any case and even if a link

between government and central banks is factored in, the central bank – which typically has positive equity – could be more easily viewed as able to cope with the decline in its net worth. Therefore, an increase in interest payments on its liabilities in the future could be financed without levying new taxes, so that Ricardian equivalence effects would not be of the same order of magnitude.

4.2 A more convincing argument: when a temporary acceleration in inflation is tolerated by the central bank

What is crucial here is that the central bank has the interest rate policy under control. This means that, unlike the government, it can decide on its debt-servicing costs. Indeed, not raising interest rates when helicopter money kick-starts the economy is still an option for the central bank so as to limit the costs of this stimulus and hence make Ricardian effects less likely⁽¹⁾. Of course, the ultimate “price to pay” in this strategy is higher inflation in the meantime.

One question that may arise here is whether such acceleration in inflation is welfare-enhancing. There are strong reasons for answering positively in the current context – where some economies tend to be faced with liquidity trap issues. Why? Because in a situation where the nominal rate cannot go further down, the Fisher equation indeed implies that the desirability of a more negative real interest rate also means that a (more) positive expected inflation is to be welcomed. To put it simply: if after the nominal rate has reached its lower bound, the real rate is still above its (negative) natural level, boosting (further) inflation expectations constitutes the key channel through which the real interest rate can continue to adjust further downwards to its desirable level, thus encouraging the recovery in an appropriate manner. It is important to note here that the inflation “overshoot” – in relation to the counterfactual situation of raising interest rates as soon as the economy recovers – does not necessarily imply seeing inflation overshoot the target set by the central bank, as the counterfactual situation can *a fortiori* imply an expectation of inflation below the target.

It goes without saying that such a strategy of keeping interest rates low for long while the recovery accelerates – and hence letting inflation go – could also be

implemented independently of helicopter money, that is also after a debt-financed fiscal expansion. That said, one can reasonably assume that such a commitment is easier to communicate and to be understood in the helicopter money scenario. Indeed, the central bank’s concern with its equity position has a signalling function in this case, leading private agents to attach more weight to the promise that interest rates will not be raised too quickly (because, otherwise, it could hurt the central bank’s finances). After all, this is also one of the assumed transmission channels of quantitative easing: buying long-term bonds sends out a signal about the path of future central bank policy rates as the latter have an impact on central bank finances⁽²⁾. Like quantitative easing, helicopter money can thus also be a powerful commitment device if the central bank believes in and is willing to use Odyssean forward guidance; in other words, forward guidance in a context where nominal short-term interest rates are close to their lower bound and where the central bank is trying to convince private agents that the recovery of the economy will not be accompanied by a rise in interest rates as has been the case in the past, but that it will instead wait longer before reacting to rising inflation and growth, and this to exert further downward pressure on long-term rates (Campbell *et al.*, 2012). In contrast, it is certainly not possible for governments in countries belonging to a monetary union, and also less straightforward for countries with an independent central bank to commit to keeping the service cost of its gross debt at low levels.

5. A limit to helicopter money: central bank capital losses and hyperinflation

Helicopter money as defined in this article implies an immediate decrease in central bank capital as well as further reductions in equity in the future if interest rates rise. If, for some reason, the path of central bank equity is seen as unsustainable, this could seriously undermine trust in money in the long run which could lead to a hyperinflation spiral where people cease to attach any value to the newly created money. Obviously, such a spiral would not only render any further monetary stimulus ineffective, but also any other expansionary policy denominated in domestic currency. This common argument against helicopter money opens the door to various considerations related to the central bank balance sheets which fall outside the scope of this article. That said, we set out below a few specific considerations that seem of particular relevance here:

- (i) The extent to which the government will ultimately support the central bank’s mandate to preserve price

(1) To put it differently: because the price level is allowed to increase via the acceleration in inflation, losses on real net worth can be (at least to some extent) avoided at the public sector level. Letting inflation go thus means that the real liabilities remain unchanged while the nominal public debt rises. As the Ricardian equivalence is a real concept, there is thus less room to see related effects deployed in such case.

(2) See Cordemans *et al.* (2016) for an overview of the quantitative easing transmission channels.

stability (for example, by allowing the central bank not to remit positive dividends for some periods or by committing to recapitalising it when needed (i.e. in the more extreme cases)) is crucial to determine to what extent/how quickly the central bank might be forced to allow more inflation than it would otherwise like⁽¹⁾. In other words, coordination between the central bank and the government when implementing a (substantial) increase in the monetary base is fundamental to avoid falling into a scheme where an insolvent central bank becomes trapped in a “hyperinflationary Ponzi scheme” – i.e. a situation where the central bank creates new liabilities (that is, new base money) in order to pay interest on existing liabilities because seigniorage income only covers in part the obligations related to these already existing liabilities⁽²⁾.

- (ii) the initial composition of the balance sheet of the central bank may also be important when judging the (perceived) capacity of a central bank to cope with a permanent increase in the monetary base without neglecting its inflation objective. In particular, jurisdictions with a central bank that is initially well capitalised are likely to be better candidates for a helicopter-money-type stimulus.
- (iii) Because hyperinflation (or expectations thereof which might ultimately become self-fulfilling, see also Del Negro and Sims (2015)) might also arise more specifically because people become convinced that moderate monetary financing today will be followed by excessive monetary financing in the future (e.g. because the central bank’s independence is called into question), the need for appropriate communication and good coordination around the deployment of a helicopter money policy is also essential. Overall, helicopter money policies do indeed pose “the challenge of achieving the necessary coordination between fiscal and monetary policy-makers, without compromising central bank independence or long-run fiscal discipline” (Bernanke, 2016).

Conclusion

Although helicopter money is often seen as a way of implementing a fiscal expansion at no cost, a thorough analysis based on the balance sheet of the consolidated public sector suggests that this policy at the end of the day is similar to issuing short-term public debt to fund current expenditure. Consequently, and as notably stressed by Borio *et al.* (2016), helicopter money is by no means a free lunch. It nevertheless seems that helicopter money could be more effective than conventional debt-financed fiscal stimulus if the central bank allows inflation to rise when the positive effects of the economic recovery fully emerge. This is also the essence of Reis’ analysis of the mystique surrounding the central bank balance sheet (Reis, 2013). While such a rise in inflation could also be considered in the conventional fiscal stimulus scenario, it might be somewhat easier to implement and be understood by the general public in the helicopter money scenario where the central bank is a genuine stakeholder of the fiscal impulse and where the helicopter money is therefore a commitment device. Overall, to be fully effective, there is no doubt that helicopter money would require strong coordination between the central bank and the government, as well as appropriate communication. Likewise, strong coordination and good communication would be key conditions if helicopter money were to be deployed to protect the economy from the possible danger of falling into a spiral of (expected) high inflation. In this respect, it also seems fundamental that the central bank is initially well capitalised. Although such an analysis is beyond the scope of this article, it is nevertheless worth pointing out that, within the euro area, it is possible that helicopter money might raise questions of compatibility with the legal framework of the ESCB, and in particular with the monetary financing prohibition.

(1) Besides the existence of fiscal/government support, the ability of the central bank to generate sufficient seigniorage revenues when inflation is high also plays a key role in the determination of central bank solvency (Del Negro and Sims, 2015).

(2) See, in particular, Del Negro and Sims (2015) and Reis (2015) for deeper analyses of a central bank’s economic net worth (as opposed to accounting net worth) and the concept of solvency.

Bibliography

Bernanke B. (2002), *Deflation: Making Sure 'It' Doesn't Happen Here*, speech before National Economists Club, 21 November.

Bernanke B. (2003), *Some Thoughts on Monetary Policy in Japan*, speech before Japan Society of Monetary Economics, 31 May.

Bernanke B. (2016), *What Tools Does the Fed Have Left? Part 3: Helicopter Money*, Brookings Institution, Ben Bernanke's blog, 11 April, <http://www.brookings.edu/blogs/ben-bernanke/posts/2016/04/11-helicopter-money>.

Boeckx J. and M. Deroose (2016), "Monetary policy in the euro area: independent but nevertheless connected", NBB, *Economic Review*, September, 7-25.

Boeckx J. and S. Ide (2012), "What can we and can't we infer from the recourse to the deposit facility", NBB, *Economic Review*, June, 31-37.

Borio C., P. Disyatat and A. Zabai (2016), *Helicopter money: The illusion of a free lunch*, 24 May, <http://voxeu.org/article/helicopter-money-illusion-free-lunch>.

Brehon D., G. Saravelos and R. Winkler (2016), *Helicopters 101: Your Guide to Monetary Financing*, Deutsche Bank Research, 14 April.

Buiter W. (2014), "The Simple Analytics of Helicopter Money: Why It works – Always", *Economics: The Open-Access, Open-Assessment E-Journal*, 8, 1-51.

Campbell J.R., C.L. Evans, D. Fisher and A. Justiniano (2012), "Macroeconomic Effects of a Federal Reserve Forward Guidance", *Brookings Papers on Economic Activity*, Spring, 1-54.

Cecchetti S. and K. Schoenholtz (2016), *A primer on helicopter money*, 19 August, <http://voxeu.org/article/primer-helicopter-money>.

Christiano L., M. Eichenbaum and S. Rebelo (2009), *When is the government spending multiplier large?*, NBER, Working Paper 15394.

Cohen-Setton J. (2015), *Permanent QE and helicopter money*, January, <http://bruegel.org/2015/01/permanent-qe-and-helicopter-money>.

Cordemans N, and S. Ide (2014), "Normalisation of monetary policy: prospects and divergences", NBB, *Economic Review*, December, 29-52.

Cordemans N, M. Deroose, M. Kasongo Kashama and A. Stevens (2016), "The ABC of quantitative easing – Or the basics of asset purchases by central banks", NBB, *Economic Review*, June, 29-41.

DeLong B.J. and L.H. Summers (2012), "Fiscal Policy in a Depressed Economy", *Brookings Papers on Economic Activity*, Economic Studies Program, the Brookings Institution, vol. 44(1), 233-297.

Del Negro M. and C. Sims (2015), "When does a central bank's balance sheet require fiscal support?", *Journal of Monetary Economics*, vol. 73(C), 1-19.

Dotsey M. (2010), "Monetary policy in a liquidity trap", *Federal Reserve Bank of Philadelphia, Business Review*, 9-15.

Friedman M. (2006) [1969], *The Optimum Quantity of Money: And Other Essays*, New Jersey: Transaction Publishers.

Gali J. (2014), *The Effects of a Money-Financed Fiscal Stimulus*, CEPR Discussion Paper, 10165.

Krugman P. (1998), "It's Baaack: Japan's Slump and the Return of the Liquidity Trap", *Brookings Papers on Economic Activity* 2, 137-205.

Melyn W., R. Schoonakers, P; Stinglhamber and L. Van Meensel (2016), "Should government investment be promoted", NBB, *Economic Review*, September, 99-113.

Reis R. (2013), "The Mystique Surrounding the Central Bank's Balance Sheet, Applied to the European Crisis", *American Economic Review*, vol. 103(3), 135-40, May.

Reis R. (2015), *Different Types of Central Bank Insolvency and the Central Role of Seignorage*, NBER, Working Paper 21226.

Stella P. (2016), *Helicopter Money without Helicopter and without Central Banks*, August, http://stellarconsultllc.com/blog/wp-content/uploads/2016/08/Helicopter-Money-without-Helicopters-and-without-Central-Banks_August-2016.pdf

Svensson L. (2003), *Escaping from a Liquidity Trap and Deflation: The Foolproof Way and Others*, NBER, Working Papers 10195.

Turner A. (2015), *The Case for Monetary Finance – An Essentially Political Issue*, November.

Woodford M. (2012), "Methods of policy accommodation at the interest-rate lower bound" ? *Proceedings – Economic Policy Symposium – Jackson Hole, Federal Reserve Bank of Kansas City*, 185-288.