Global

Helicopter money

■ **"Helicopter money" is a term coined by Milton Friedman in his 1969 book, "The Optimum Quantity of Money". It illustrates the monetary causes of inflation.**

■ **The term owes its popularity to Ben Bernanke, who envisioned it as a tool for combating deflation. It consists of an expansionary fiscal policy financed by the central bank.**

■ **Unlike the equilibrium situation imagined by Milton Friedman, in which the increase in money supply does not have any effect on real variables, Ben Bernanke envisions a deflationary environment in which the economy is operating below potential. Here, a helicopter money policy could positively affect real growth.**

■ **To evaluate its effectiveness, a helicopter money policy must be compared to a debt-financed fiscal stimulus combined with a quantitative easing programme (QE) by the central bank.**

■ **For there to be a difference, we must first assume that the behaviour of economic agents is based on rational expectations. Second, we must assume that helicopter money is synonymous with a permanent increase in money supply. This is equivalent to raising the central bank's inflation target, which can also be achieved by promising infinite QE.**

There has been renewed interest in the concept of helicopter money recently, notably in the eurozone. When asked whether there was a possibility the ECB would resort to this kind of policy instrument, Mario Draghi responded that it was a very interesting concept, but that the ECB has not studied it *yet*[1]. Although several Governing Council members were quick to reframe his statement[2], the subject continues to fuel debate about the effective limits of monetary policy. Without addressing the question of its feasibility, notably from a legal perspective, we examine the economic aspects of helicopter money, especially by focusing on what sets it apart from already used macroeconomic policies.

Inflation, a monetary phenomenon

The expression "helicopter money" was first coined by Milton Friedman in 1969 in his book "The Optimum Quantity of Money". To illustrate the relation between the quantity of money and price levels, M. Friedman proposed a thought experiment: A helicopter flies over an economy in state of equilibrium (at full employment) dropping bills so that each citizen finds himself twice the cash he held before. It is also assumed that this is a unique event which will never be repeated. After a transition period, the only change observed would be in terms of prices, which would double, without a permanent change in any of the real variables (output, employment). Keys to this thought experiment are assumptions of the equilibrium state of economy and the uniqueness of the liquidity drop. It explains why economic agents would decide to spend money that falls from the sky (why double their savings rate if it is already at an equilibrium level and nothing else has changed?). It also explains why production remains unchanged (there is no idle production capacity). In this case, only higher prices can absorb the excess liquidity. Nominal revenues increase, but not real income.

M. Friedman used this image of helicopter money to illustrate the monetary nature of price inflation. It justifies the central bank's mandate: as the institution in charge of printing money, it is in the best position to control inflation, which makes it the guarantor of purchasing power, i.e. the value of money expressed as a quantity of goods and services.

Combating deflation

Although the term was first coined by M. Friedman, the concept owes its popularity to Ben Bernanke, who in a speech in 2002[3], insisted on the symmetrical nature of the central bank's mandate of price stability: it must avoid deflation just as much as inflation.

Deflation is not simply a decline in prices, but a general, self-sustaining decline in prices and activity due to insufficient demand. An expansionist monetary policy is thus needed to combat deflation. In an "extreme" case, when monetary policy is no longer able to normalise the situation, it could become more effective through cooperation with the fiscal authorities, via a tax credit financed by printing money. B. Bernanke described this policy as equivalent to the helicopter money imagined by M. Friedman. Indeed, there is no difference between the direct distribution of money to economic agents and its indirect distribution channelled through the Treasury.

From a balance sheet perspective, it consists of an increase in the supply of money (liability side of the central bank's balance sheet) that is not directly linked to an asset purchase. The equilibrium of the balance sheet can be obtained either by recording a perpetual government bond on the asset side or by creating a negative equity as a compensating item on the liability side.

All in all, helicopter money can take two different forms: 1) the direct distribution of money by the central bank, or 2) a fiscal stimulus financed by monetisation. In the first case, Mr. Bernanke recently signalled a problem of political legitimacy[4]: although the central bank is in charge of printing money, it cannot unilaterally decide how to use the funds which is the government's job. This brought him to the idea that helicopter money should be seen in terms of the cooperation between the central bank and the fiscal authorities.

[1] "It's a very interesting concept that is now being discussed by academic economists and in various environments. But we haven't really studied yet the concept" (M. Draghi, ECB press conference, 10 March 2016).

[2] "We are not considering anything of that sort. So it's not on the table in any shape or form" (V. Constancio).

[3] Bernanke B. (2002), *Deflation: Making Sure 'It' Doesn't Happen Here*, Federal Reserve Board November.

[4] See Bernanke B. (2016), *What tools does the Fed have left?*, Brookings, April.

Naturally, the way they go about it can change: the fiscal stimulus can take the form of a tax credit and/or increased public spending. Similarly, monetisation can be direct, if the central bank credits the Treasury's account, or indirect, if it cancels a previously purchased debt instrument.

Permanent QE

Unlike the equilibrium economy in M. Friedman's thought experiment, in which the increase in money supply does not have an impact on real variables; B. Bernanke starts with a deflationary environment in which the economy operates below potential. Within this framework, a money-financed fiscal stimulus will have a positive impact on growth. It would end up increasing the production of goods and services and fuelling job creations, which in turn would generate additional activity etc. This is the idea of the fiscal multiplier. As activity returns to its equilibrium level, it would be accompanied by the return to price stability (i.e. moderate inflation). The effectiveness of a helicopter money policy can be evaluated by comparing it with a fiscal stimulus financed through government bond issues combined with a quantitative easing programme by the central bank.

Let us first look at the effects of fiscal stimulus alone. Its effectiveness can be measured by the increase in activity in response to a 1-point increase in public spending. When it is debt-financed, its effectiveness depends heavily on whether or not there are any Ricardian effects[5]. According to Ricardian equivalence, any debt-financed public spending will be offset by an increase in private sector savings in preparation for the future increase in fiscal pressure. By internalising the government's fiscal constraint, the private sector reduces or cancels out the expansionary effect of public spending.

The presence of Ricardian effects assumes that the behaviour of economic agents is based on rational expectations. Even with this assumption, their intensity is still a subject of fierce debate, notably when the output gap is negative[6]. Let us simply say that a debt-financed fiscal stimulus would have positive effects in a depressed economic environment, but that its effectiveness could be reduced by any potential Ricardian effects, especially when the public debt is already at very high levels.

Let us now introduce the option that the government finances the increase in spending by issuing bonds that are purchased by the central bank under QE. Consolidating the balance sheets of the central bank and public administrations (central bank profits are transferred to the Treasury), it would be the same as cancelling out the interest charge: the government pays interest to the central bank which in turn are passed on to the government in the form of profits. In this case, there is *almost* no difference between a helicopter money policy and a policy combining a fiscal stimulus and QE.

The only difference -- but a fundamental one – lies in the temporary nature of the increase in money supply. A quantitative easing policy is not supposed to last indefinitely. After a certain amount of time, the central bank will begin reducing the size of its balance sheet by selling bonds or by no longer rolling over bonds that reach maturity, which are transformed back into government debt. In a Ricardian world of rational and far-sighted economic agents, this would be the equivalent of a debt-financed fiscal stimulus.

The same problem arises for a helicopter money policy if economic agents anticipate that at some point the government will have to recapitalise the central bank. For there to be a difference between helicopter money and a debt-financed fiscal stimulus, the increase in money supply would have to be irreversible, i.e. the central bank would have to operate permanently with negative equity as mentioned above. De Grauwe and Ji (2013)[7] argue that without a gold standard system or a fixed exchange rate regime, the central bank's only promise is to maintain a currency's purchasing power. Therefore, a credible central bank can operate with permanently negative equity. An equivalent but more satisfying solution from an accounting perspective would be to record a zero coupon perpetual bond on the central bank's balance sheet. In this case, the net public debt would remain unchanged, as would expectations about future tax increases. Ricardian effects would no longer be pertinent[8].

So far, we have considered helicopter money solely from a fiscal angle. Yet the concept clearly corresponds to a fiscal stimulus *and* a monetary support. Once again, the difference with quantitative easing lies in the permanent nature of the increase in money supply.

A quantitative easing policy helps to lower interest rates over the entire yield curve. Once interest rates reach a certain level, however, economic agents become indifferent about holding liquidity or bonds; and the marginal increase in money supply has no effect on interest rates: the economy falls into a liquidity trap. When there is deflation, real interest rates might be too high to strike the balance between savings and investment at full employment.

The only leverage that monetary policy can provide is to raise inflation expectations, an option that is only possible if monetary creation is considered to be permanent. As Mr. Bernanke points out, over the long term (i.e. once the economy has reached a state of equilibrium), price levels are proportional to money supply. In other words, an effective helicopter money policy, i.e. one that is better than a fiscal stimulus associated with QE, is theoretically equivalent to raising the inflation target, which can also be achieved by promising permanent QE.

[5] Theoretically, it can also have a crowding-out effect, if the call on market funds raises interest rates, which would discourage private sector investment. Yet such a reaction is unlikely to happen during a period of deflation.

[6] DeLong and Summers (2012), for example, esteem that in a very depressed economy, the fiscal multiplier is big enough to even lower the public debt ratio, cancelling any Ricardian effects.

[7] De Grauwe, P. and Ji, Y. (2013), *Fiscal Implications of the ECB's Bond-buying Programme*, CEPR, June.

[8] Here the central hypothesis is that monetary financing, unlike debt financing, will not generate interest payments for the government. In practice, however, liquidities deposited by commercial banks with the central bank do generate interest (which is not the case in the eurozone, where the key deposit rate is negative). In this case, for helicopter money policy to be effective, the central bank would not pay interest on the liquidities created to finance the fiscal stimulus.