

Perils of debt forgiveness and helicopter money

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Summary

This paper analyses the proposal by the Italian government that ECB should forgive the debt and argues against it. The proposal for debt forgiveness is the true proposal for the helicopter money as it was proposed by Milton Friedman (1969). Friedman wrote that the money should be “dropped by helicopter” the implication of such behavior is that the central bank gives money for nothing. The paper argues such behavior is dangerous and could cause long term instability. The paper also analyses the theoretical perspective of bank’s reluctance to increase credit in the low interest rate environment. Combining the two perspectives on monetary policy the paper argues the post-COVID-19 economic policy should be government debt decrease and gradual increase of interest rates to stimulate lending and investing.

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Let us suppose now that one day a helicopter flies over this community and drops an additional \$1,000 in bills from the sky, which is, of course, hastily collected by members of the community.

Milton Friedman

1. Introduction

We have been witnessing nonconventional monetary policy for over a decade now. After the start of the housing crisis in the US, now known as the great recession, the central banks around the world have moved one step at a time into a new frontier of monetary policy. New tools and approaches were invented to cope with the times. Monetary policy tools like quantitative easing, purchases of non-government debt, purchases of all issues along the yield curve, forward guidance, negative interest rates have all been used in order to meet the challenging times. The use of the aforementioned tools was initially nonconventional or extraordinary monetary policy but now has become standard monetary policy tools in the arsenal of the central bank. Yet there is one more barrier that was discussed but never implemented in practice: helicopter money.

Recently Italy has again² proposed that ECB should forgive Italian debt³. This proposal for helicopter money is as it was originally coined by Milton Friedman. This paper reviews what is true helicopter money. What are some misunderstandings of helicopter money and ultimately concludes that it is a bad idea which can have long term destabilizing consequences.

The proposal for helicopter money comes from a famous paper by Milton Friedman (1969) in which he describes a way to distribute money to the economy. It represents giving money for free. This is an exceptionally important point. The helicopter flies over the population and drops the money. In this transaction, the central bank creates paper bills and gives them away getting nothing in return. This is substantially different from the existing unconventional monetary policies where the central banks had broadened the number of instruments they purchase.

It is exceptionally important to clearly define what is helicopter money. Any transaction by the central bank which involves money in exchange for some asset is not helicopter money in the original sense of Friedman's example. True helicopter money has to involve the

² <https://www.reuters.com/article/us-italy-politics-draft-idUSKCN1IG3EM>

³ <https://www.bloomberg.com/news/articles/2020-11-26/italy-wants-ecb-to-cancel-pandemic-debt-conte-s-top-aide-says>

central bank giving the money away and not purchasing an asset, it is literal money for nothing.

Although at the time of the example, and even today, the idea is considered controversial or revolutionary (depending on your point of view) the operations of helicopter money have been long put into effect in ex-Yugoslavia where the central bank has directly financed companies. In order to stimulate certain industries, the companies would get funding directly from the central bank in form of loans or grants. Therefore, what is a novel approach in the USA and EU, is in fact an old transaction which has been executed in Yugoslavia and it ends with a prolonged period of high inflation and economic instability.

The policy of giving money for nothing is controversial and potentially dangerous. This paper argues the policy creates significant moral hazard and opens doors to prolonged instability of the economy because of its extremely inflationary nature.

The paper is structured as follows, part two clearly defines what is helicopter money. Part three investigates the importance of the credit channel and its connection to the money multiplier. Part four analyses the theoretical framework for helicopter money and part five argues against helicopter money. Part six concludes.

2. Distinction between monetary transactions

As we have mentioned in the introduction, in the post-2008 world, the real helicopter money was never implemented. We will make a clear distinction between three sets of monetary transactions: quantitative easing, direct financing, and helicopter money and their relation to the flow of money in the economy and their impact on the central bank's balance sheet.

Quantitative easing implies the central bank purchases significant quantities of debt with different maturities. The debt is usually government issued, but FED has purchased mortgages backed bonds as well. In terms of accounting central bank books bonds on the asset sides of its balance sheet and bank reserves on the liabilities side of its balance sheet. QE is usually conducted along the whole of the yield curve, but with a focus on longer maturities. There is a simple explanation of why the central bank has to purchase bonds along the yield curve and that is quantity. The quantity of government debt or any other issuer's is known at any point in time. Given the number of new issuances, if the central bank wants to purchase significant quantities in order to maintain an orderly supply of government debt for the market, the purchases have to be distributed over the yield curve. Focus on a particular point or section of the yield curve would cause significant disruption of the usual bond market activities and could cause inadvertently instability of the yield curve.

Direct financing implies the central bank gives loans by purchasing debt from a corporate issuer with the fact the debt is purchased from a particular issuer. Debt and issuer are targeted. There are two sets of operations in this case that have to be distinguished. The first is the loan to a bank. The second set of the transaction is when the central bank buys debt issued by a corporation. In this case, the central bank is lending directly to a corporate issuer. The accounting of this transaction is the same as with QE, bonds on the asset side, bank reserve on the liabilities side of the central bank's balance sheet.

The first two sets of transactions have one important thing in common and that there is an actual transaction. The central bank purchases an asset and issues new money for it.

Helicopter money is for the central bank to give money to the citizens of any other segment of the economy directly into their bank accounts. The central bank does not purchase an asset in a helicopter money transaction.

It should be noted there is a difference between the purchase of government bonds and then the government giving money to the citizens⁴ and helicopter money. Government distributing money to the public are simple fiscal budget operations. The central bank buys government bonds and then the government issues checks to the general public. When the central bank purchases bonds it does not know what the government has will use the proceedings for. Buying government bonds, knowing that money will be handed out to the public is not helicopter money since the central bank is performing a transaction not giving money away. Also, transactions of giving government money to the public have existed long before the great recession. They are called welfare.

For helicopter money to be helicopter money the following accounting has to occur. The central bank has to deposit money into checking accounts which would increase M2 monetary aggregate and it has to decrease the central bank's capital. In essence, helicopter money is the central bank paying dividends to the public

Another way to perform the operation of the helicopter money is for the central bank to increase currency in circulation, physically deliver money to the banks, and have that money deposited into the checking accounts. This transaction would increase currency in circulation in the liabilities of the central bank and it would decrease the central bank's capital. Again the transaction is exactly like the central bank paying out dividends to the general public. The central bank does not obtain any assets after the transaction. Cash to the public is the original Friedman proposal

⁴ This was a popular COVID-19 measure where governments would subsidize paychecks for companies that could not work because of lockdown.

The question: Can the central bank actually perform the operation of helicopter money is a moot point limited only by legislation. FED for example already pays dividends to the members of the federal reserve system and to the government so the dividend transaction is by no means new.

Following the original definition of helicopter money as used in the example by Milton Friedman helicopter money transaction decreases the central bank's capital since the central bank gives away the money. If the legislative limit of the central bank's capital is 0 then the upper limit of helicopter money is the amount of the balance sheet capital the central bank has. If the central bank's capital can go negative, then the amount of helicopter money is infinite.

3. Bank's credit policy and money multiplier

The natural question arises: how did we get to this point? How is it possible for the central banks to increase the quantity of money at unprecedented scales and there is no inflation? This fact goes against the simple premise of introductory economics: higher quantity implies a lower price. But in the case of money over the last decade, we are not seeing this fundamental economic equation uphold.

The explanation for the lack of inflation from the theoretical point of view lies in the fact that the velocity of money has decreased because the money is not circulating through the economy. This also goes against Friedman's dictums: the velocity of money is constant. However, the practical interpretation of the decrease in the velocity of money is much more important.

The velocity of money basically means how fast the money is changing hands in the economy. The decrease in the velocity of money means the money is not changing hands as fast as it used to do. The flow of money through the economy has been hampered. The explanation of this fact lies in the relation to the banking system to the interest rates. The fact that interest rates are negative or close to zero has decreased the bank's incentives to transfer money to the real economy consequently decreasing the velocity of money.

Banks operate on the following formula when it comes to lending:

1.
$$\pi = A(r^a - r^l) - \beta A$$

Where π is the profit, A is the size of interest-bearing assets, r^a and r^l represent the average rate of interest on assets and liabilities used for lending and β represents the cost of bad

loans which bank has to incur. No matter the state of the economy there are always some loans that will not be paid back to the bank and which are going to be costly for the bank. In order for lending to be profitable for the bank the following condition has to be met:

2.
$$A(r^a - r^l) > \beta A$$

Another way to look at equation 1 is a separation between the monetary and credit policy. When the central bank decreases interest rates, demand for loans increases, and banks lend more. The decrease of interest rates stimulates the economy through investments and spending and the profitability of banks increases because of the higher amount of loans on the balance sheet.

At interest rates that are close to 0 the interest rate spread diminishes so much that it cannot cover the cost of bad loans which is the profitability condition from equation 2. Since bad loans are unavoidable at some point the banks will significantly decrease their lending in order to protect their profitability.

Also looking at equation 2 it is very simple to explain why the interest rates on some government bonds are negative and banks are still willing to purchase them. The loss on negative interest rates when purchasing government bonds is simply lower than the loss then banks incur when they lend at low-interest rates to households and companies because of the cost of bad loans. Under certain conditions, if banks purchase government bonds with negative interest rates they will lose less than if they lend to companies or households. So the obvious choice for the banks is between lower loss on their balance sheet assets.

Equation 2 also explains why the monetary policy is ineffective when the interest rates are low or when they are pushed deeper into negative territory. The banks cannot function for a prolonged period of time under extremely low-interest rates the cost of bad loans simply destroys banks' profitability. The importance of this is completely missed by Brei, Borio, Gambacorta (2020) and Borio, Gambacorta (2017).

Understanding the behavior of banks also explain the decrease in velocity of money over the last decade. Since the banks are not willing to lend the velocity of money has decreased and consequently, the monetary multiplication has decreased as well all resulting in an economic paradox: a significant increase in the quantity of money with persistently low inflation.

The central banks have been trying to increase inflation (or make it closer to their objective) by introducing novel tools like forward guidance. But in the long run, there is only one thing which can increase the flow of money in the economy and that is bank lending which can

only be stimulated by making lending profitable through higher interest rates not through increasing the quantity of money or through making interest rates even lower.

There is also another important dimension to equation 1 and that is the fact that equation 1 is responsible for the time lag of monetary policy. When the central bank decreases interest rates and increases the quantity of money in the economy it is the banks who have to translate that policy decision to the real economy. Even though the decrease of interest rates and subsequent purchases of debt can be done in a very short time period the process of lending and actually pushing the money through the economy takes a longer time. Because of the credit process, there is the famous lag in the monetary policy as proposed by Friedman (1961) reference. It takes time for the bank to approve a loan and then it takes time for the company to use the money for investments.

Direct lending by the central bank and helicopter money can bypass equation 1 and it can also bypass the monetary policy lag caused by banks. Helicopter money is even faster it can be used the same day then the central bank makes deposits into the checking accounts of households.

4. Theoretical framework for the helicopter money

There are several objectives that can be achieved through helicopter money. The first is to maintain the aggregate demand in the economy. Giving money to the public would certainly increase aggregate demand as a one-off effect. Even if the helicopter money is used for debt repayment it would free up the household's income expected to be used as repayment of debt. The second objective is to increase the velocity of money and consequently inflation by increasing the number of transactions because of the free money the public will be given. To achieve the two main objectives, it is very important to clearly define the operations of the helicopter money in terms of time. The first option is for the helicopter money to be one-time deal. In this case, the effects of the problem would be to create a temporary increase in spending with dubious effects on inflation.

The second option is for the helicopter money to have a clearly defined time horizon and objective. The initial program could be for a "prolonged period of time" but eventually it would have to stop once the inflation picks up.

The operations of the helicopter money bring us to the main problem of the idea. It is hard to model the effects of helicopter money on the economy. It is easy to understand why after reviewing just several examples.

The first example will be Friedman's permanent income hypothesis. If we use the permanent income hypothesis as a benchmark for the model and in the model we have one-time payment the effects of the helicopter money would be limited. According to Friedman (1957) this one time increase in income would have a limited effect on the spending of households and the net effect would be just a small temporary increase in aggregate demand with effects on inflation will depend on what types of pricing schemes we use in the model.

Exploring further the effects on spending and inflation, then any result of any amount of helicopter money would depend on the utility function we use to model the policy. The importance of the utility function was pointed out by Kimball (1993). If we make household risk-averse the payments would have no effect because all of the free money would be used as precautionary savings. If we make households with a limited horizon and no risk aversion the money would be spent instantaneously, and it would have a significant effect on the economy.

The role of expectations is also important. If we benchmark the model on Lucas's critique (1975) then helicopter money would have limited or no real effect and instantaneous inflationary effect leading to the neutrality of money and fast acceleration of inflation. Since the sellers know about the free money the prices would rise and the real effect on the economy would not exist. The above model is invalidated if we use menu costs with sticky prices as in Mankiew (1985) and Sims (1998).

Following the arguments in this part of the paper, we see that implementation of helicopter money in practice because of modern finance is simple, however, the creation of correct theoretical understanding is exceptionally difficult. Any model would have to make significant stylized facts and the real-world effects are going to be unknown.

One of the main reasons why hyperinflations occur is not just the increase in the quantity of money, but the loss of faith in the money itself. as shown in Sargent (1986) and Sargent and Wallace (1973). This brings us to the question of how will the central bank control the faith of the economic participants in the stability of money?

The control of inflation is the main problem for the central bank in the case of helicopter money. The funds used for the distribution to the public will be given to the public fast and will move into the economy just as fast, but in order to decrease the quantity of money, the central bank would have to use standard monetary tools which would have to rely on transactions with the banks and increase interest rates.

As we have already discussed the one-time helicopter money would have dubious effects, a longer-term helicopter money would have economic participants question the stability of the currency at one point. After all, there is no such thing as free lunch.

5. Perils of helicopter money

In the previous section, we have gone over the transaction of helicopter money and we have made a brief review of the problems such a program would face in the real world. We now have to address the possible perils of the helicopter money.

If the policy objective is to generate aggregate demand for a short period of time as is the case with the Covid 19 virus then the government can issue bonds, sell them to the central bank and use the proceeds for the distribution to the public for a specific program. As we have defined this is not helicopter money.

In the case of real helicopter money as we have defined it longer-term program or helicopter money over an extended period of time will lead to a significant increase in inflation. The relationship between unknown short-term effect and known long term effect makes the helicopter money policy extremely risky. The central bank is risking a possible one time increase in aggregate demand for a long-term price instability. Once the free money is given to the public there will always be pressures to do it “just one more time” which creates classical Kydland-Prescott time consistency problem and it undermines the independence of the central bank as described in Kydland and Presscott (1977) and solved in Persson, Persson, and Svensson (2006).

The central bank is the institution that performs the transactions of helicopter money. It is in fiscal's policy interest to have helicopter money for the simple reason that it is politically opportunistic.

We can now go back to the Italian debt forgiveness proposal. Here are some ways how the central bank could “forgive” the country's debt. Countries could issue perpetuities with 0% interest rates. In this case, ECB would purchase the bonds, give countries money and that money would never be paid back. Another possibility for the country to issue bonds with negative interest rates on the principal of the bond. In this case, the bond would pay itself at the expense of the ECB.

However, every proposal leads to the possibility of undermining the credibility of the ECB. Forgiving the government debt implies the fiscal constraints are irrelevant and reckless behaviour is rewarded. Giving money to the public would create room for argument that the euro as a currency is worthless.

The obvious policy would be to raise the interest rates to stimulate bank lending and investments in the economy with a more conservative fiscal policy and decrease of public

debt. Both policies are currently impossible because of the COVID crisis which makes the future of Euro even more unstable.

6. Conclusion

From a transactional perspective, helicopter money is simple to undertake. Same as with the forgiveness of debt held by the central bank. The new money created by the helicopter debt or forgiven by the central bank is simply expensed by the central bank. This transaction will decrease the capital of the central bank and if done in large amounts can cause insolvency of the central bank. This paper argues strongly against such a proposal. It would diminish trust towards ECB, it would reward fiscally irresponsible behavior, and could ultimately cause investor's dismissal of the Euro as a serious currency.

The solution to the problem is in the banking sector which requires higher interest rates to increase profitable lending. So the optimal policy mix for the post-COVID economic policies are fiscal restraint with debt reduction with the gradual normalization of interest rates in order to increase banks lending.

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