

# PLAYING WITH FIRE: THE UNINTENDED CONSEQUENCES OF MONETARY FINANCING

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## 1. Unprecedented Balance Sheet Growth Precedes HICP-Inflation

To the extent that the ECB's more recent monetary policies, among them cutting its main refinancing rate to a historical low of 0% in March 2016, failed to deliver the hoped for results in the wake of the financial crisis and the euro area started facing a "*Japanification*" (Dierks, 2015), unconventional monetary policy measures were adopted. These included unprecedented asset purchases, which caused the Eurosystem's total assets to soar to €4.3trn (about 35% of Euro area GDP) as per mid-October 2017, the latest date for which data were available (fig. 1).

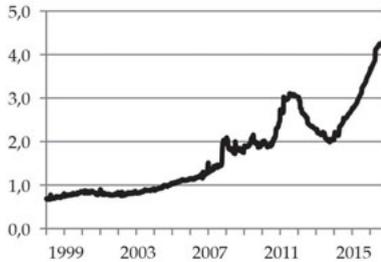
Originally, these unconventional policy measures were designed to stimulate economic growth, particularly in the Mediterranean Rim economies, and to spur inflation; "the (ECB's) Governing Council is more actively steering the size of the ECB's balance sheet towards much higher levels in order to avoid the risks of too prolonged a period of low inflation in a situation where policy rates have reached their effective lower bound" (ECB, 2014). In light of the most recent inflation data (fig. 2), this policy appears

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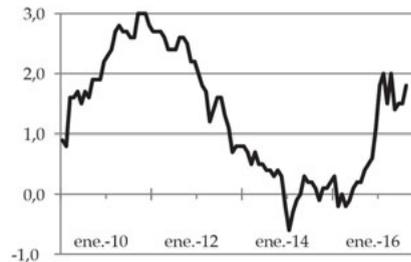
to have generated a positive outcome. Can it thus be concluded that an increase in money supply reliably spurs inflation, i.e. have reflation policies succeeded?

FIGURE 1  
ECB'S TOTAL ASSETS



Source: ECB, 2017

FIGURE 2  
EURO AREA HICP-INFLATION

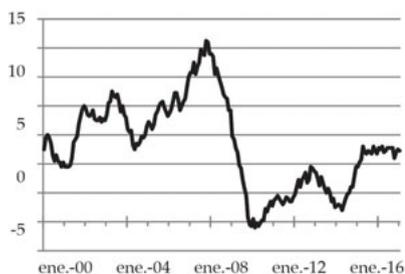


Source: Eurostat, 2017

Arguably so, if the above observation could be generalised, the ECB were well advised to pursue a strictly monetarist approach — creating inflation by simply letting the growth rate of money supply (fig 3.) exceed that of domestic income. Already, current excess liquidity in the euro area is estimated at around €1.5trn (ECB, 2017).

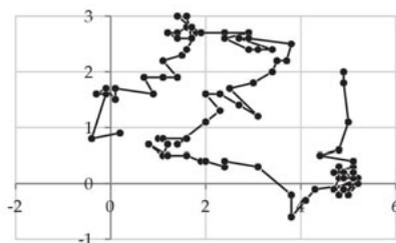
Plotting euro area M3-growth (fig. 3) against HICP-inflation reveals a considerable synchronisation since January 2015 (fig. 4) with the coefficient of correlation climbing to (an admittedly moderate) 0.32. The recent recovery in euro area HICP inflation to 1.50% in September 2017, the latest date for which data were available, is mostly attributed to a statistical basis effect related to the y/y upswing in energy and food prices, which is set to moderate again (Dierks, 2017). Accordingly, core inflation has reacted in a considerably more muted manner; increasing by only 1.1% y/y in September 2017, the latest date for which data were available. Still, perils of a higher inflation rate in the medium term should not be underestimated.

FIGURE 3  
EURO AREA M3 GROWTH  
(IN % Y/Y)



Source: ECB, 2017

FIGURE 4  
M3 GROWTH VERSUS HICP-  
INFLATION



Source: ECB, Eurostat, 2017

With the ECB's hitherto adopted unconventional policy measures likely not triggering the desired outcome in the short term and several euro area parliamentary elections being on the horizon, fiscal policy will come to the fore again. Considering the strained budgetary position of several euro area member states, a resurgence of government-induced fiscal stimuli, i.e. deficit spending to tackle the liquidity trap, remains questionable. Instead, should the unconventional policy measures adopted so far be to no avail — and notwithstanding legal issues and potentially negative equity, central banks might be tempted to turn to monetary financing, i.e. permanently increasing money supply (Dierks, 2016).

## 2. Unintended (and Unexpected) Consequences

Any such measures might well trigger unintended consequences such as inflation gaining further momentum and overshooting the ECB's envisaged target of "below, but close to, 2% over the medium term". Further, among the more severe consequences of a monetary stimulus is the reallocation of resources from the production of consumer to capital goods. Eventually, the increase in economic activity attributed to the increase in investment will start raising prices. (Alternatively, it could be argued that inflation was caused by the fact that the central bank had increased the amount of

money in circulation for its stimulating monetary policy (fig. 3)). These developments will lead monetary policymakers to gradually abandon previous policies. Eventually, interest rates will rise again. As a consequence, consumption is set to gradually increase at the expense of investments. Producers of low-order goods will find themselves unable to “bid labour, raw materials and non-specific capital goods away from the higher order capital goods industry” (Batemarco, 1994, pg. 217).

As this occurs, some of the previous investments will become unprofitable. Since capital goods are not homogeneous — but instead designed for very specific purposes, they cannot be transformed into investments that would be profitable in the new environment. Going forward, as investments start failing, the economy will contract. Unemployment is set to increase.

In other words: an expansionary monetary policy causes market agents to pursue investments that do not fully reflect consumer preferences. The resulting overinvestments, which can directly be related to the ultra-accommodative policies, ultimately cause recession and unemployment. (Note that this phenomenon preceded the 2007 financial crisis: The FED’s previous expansionary monetary policy had encouraged unproductive investments (Templeman, 2010)).

### 3. Monetary Financing as Monetary Policy’s Last Resort

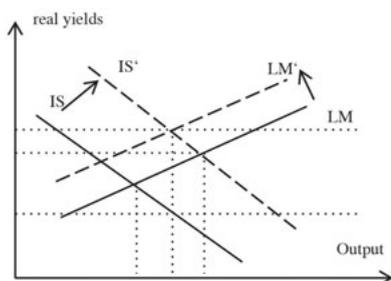
Based on a traditional IS-LM-curve, figure 5 shows the consequences of monetary and fiscal policy in a normal environment. Consequences in a ZIRP economy, in contrast, are featured in figure 6.

Under normal circumstances, an expansionary fiscal policy triggers a shift of the IS-curve towards the right, i.e. towards higher output and a higher interest rate (fig. 5). The impact on GDP, i.e. the fiscal multiplier, however, will remain below average, as higher interest rates tend to crowd out private expenditures.

Monetary policy functions in a comparable manner: to the extent that the central bank exchanges bonds into cash (e.g. by means of Quantitative Easing), yields decline and, *ceteris paribus*, private expenditures are set to increase. Money demand increases

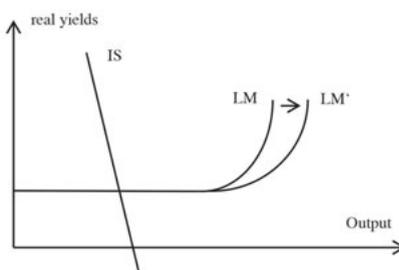
in line with an economy's output, i.e. money demand and supply can be influenced by means of the interest rate.

FIGURE 5  
IMPACT OF MONETARY POLICY  
IN NORMAL ENVIRONMENT



Source: author's own, 2017

FIGURE 6  
IMPACT OF MONETARY POLICY  
POLICY IN LIQUIDITY TRAP



Source: author's own, 2017

In a liquidity trap, however, risk adverse agents will typically prefer holding cash, as they fear a recession or a deflationary spiral. From a certain output level onwards, and regardless of the prevailing interest rate, agents will hold any amount of cash provided by the central bank. Short-term nominal yields tend towards nil (so-called zero lower bound — ZLB), which favours the formation of a liquidity trap, thereby considerably limiting any central bank's scope of action. Under certain circumstances nominal yields could turn negative; a phenomenon, which can currently be observed in the shorter end of most euro area government bond curves. Any increase in money supply as illustrated by the right shift of the LM-curve to  $LM'$  from  $LM$  (fig. 6) is entirely inefficient — as agents consider bonds and cash to be equivalent (Dierks, 2015). Apparently, classical monetary policy has reached its limits.

#### 4. Reaching the Limits of Ordinary Monetary Policy

Could monetary financing, i.e. helicopter money, be more efficient in such an environment? To answer that question, the understanding of three issues is of crucial importance.

1. Only fiscal policy can increase the GDP in a liquidity trap. An increase in money supply (e.g. through Quantitative Easing) will neither increase output nor real yields, as agents will prefer holding cash. An expansionary fiscal policy, in contrast, will *ceteris paribus* increase the GDP in a proportional manner, as the real interest rate remains unaffected. Money demand in a liquidity trap is independent from real yields. Crowding out will not occur (Turner, 2015). Thus, why is the potential financing of a fiscal deficit through central banks so heavily disputed?
2. Neglecting any Ricardian equivalence, monetary financing is little else but fiscal policy. The conventional financing of a budget deficit is inevitably accompanied by interest and amortisation payments. Upon reaching the final maturity, full and timely repayment or prolongation is required. The private sector will align its expenditures with the perceived sustainability of public debt. Conventional, debt-financed public expenditures typically lead private households to expect higher taxes in future. Therefore, in an attempt to mitigate the shock of forced expenditure cuts in the future, households typically react with a reduction of their current expenditures. This phenomenon, i.e. the so-called Ricardian equivalence, is not reflected within the scope of traditional IS-LM models. Still, it can be assumed that the perceived sustainability of public debt has a considerable impact on fiscal planning in the medium term. But what if today's deficits never had to be repaid? If this were the case, governments would not need to set aside any funds whatsoever for debt financing. Consumers would not limit current consumption to save for future tax hikes. As a result, aggregate demand would increase by at least the amount of the additional public expenditures; considering nominal wealth effects; likely even somewhat more (Turner, 2015).
3. A central bank's potential ability to absorb balance sheet losses and to feature negative equity are of crucial importance (Dierks, 2016). Monetary financing will lead to a permanent increase in the monetary base. To the extent that these positions constitute unlimited obligations on the central bank's balance sheet, both refinancing and the Ricardian equivalence are largely meaningless. This

constitutes a necessary, but not sufficient condition for any effective monetary financing. Yet, in case of a positive deposit rate, the creation of money on behalf of a central bank is limited to the minimum reserves held by commercial banks. Higher interest payments on the minimum reserves held will reduce the central bank's profit. As this reduces future transfers to the federal budget, the financial net effect will likely be close to nil. In case of continuing losses, the government could be required to recapitalise the central bank. This corresponded to a contractionary fiscal policy — and made any future Ricardian effects void. Yet, this is only relevant as long as the central bank aims at featuring positive equity, as is normally the case. As previously illustrated, however (Dierks, 2016), due to its monopoly on the creation of money, a central bank can accumulate *de facto* unlimited losses. Only its credibility and reputation (which, however, are of vital importance for any central bank) considerably limit such approach.

In case a central bank decides to pursue this very monetary policy in an attempt to spur inflation, the concept of helicopter money could eventually be more effective than traditional fiscal policies. Still, severe and unintended consequences might materialise.

## 5. Perils of Helicopter Money

The concept of helicopter money is by no means entirely new. In addition to positive and negative historical examples such as Germany (1914 to 1923), Japan (1932 to 1936), Canada (1935 to 1970), or, more recently, Zimbabwe or Venezuela (Saravolos, 2016), the United States need to be considered. In summer 2008, the Bush administration credited a \$95bn tax repayment to private households. Yet, this measure failed to spur consumption. Instead, the stimulus largely failed as private households anticipated a future tax hike and pre-emptively increased savings. This behaviour corresponds to the Ricardian equivalence (Barro-Ricardo-equivalence theorem).

In case of helicopter money, this phenomenon could also materialise in the euro area — provided that private households assume that the ECB required a recapitalisation at a later stage. If this were the case, households would not (entirely) spend the additional funds, making any such measure largely ineffective (Barro, 1974).

It is often stipulated that helicopter money could compensate the euro area's chronic demand weakness. The increase in money supply is believed to trigger a short-term demand boom, which might spur inflation. But the euro area's economic problems are to be found on the supply rather than the demand side. Notwithstanding the ECB's repeated calls, euro area governments still have not adopted meaningful structural reforms; thereby delaying a sustainable recovery in productivity and competitiveness. Monetary financing, in contrast, provoked the opposite effect. As opposed to accelerating reforms, monetary financing enlarged any policymaker's scope to inflate budget deficits and new debt; thereby paving the way for a vicious circle.

Supporters of monetary financing emphasise that the concept mostly faces political rather than (in light of the current low-yield environment) economic resistance (Sarvelos, 2016). An aversion against an increasingly expansionary fiscal policy is driven by concerns regarding federal budgetary stability. In this context, (Keynesian) demands for a deficit-financed expansionary fiscal policy to stimulate economic growth must be rejected. Notwithstanding other factors, evidence comes from Japan's largely unsuccessful policy of deficit spending in recent decades (Dierks, 2015).

What is more, lessons learnt in recent years illustrate that in light of the increasingly persistent deflation, the BoJ's monetary policy appears to have reached its limits. Governments bonds, which the BoJ could purchase, have become increasingly scarce, a further rate cut is hardly possible and inflation expectations have plummeted — again. From a monetary perspective, the world's third-largest economy appears to be stuck in a dead end.

A similar scenario might materialise in case of the ECB. Asset purchases of as much as €80bn per month (reduced to €60bn as per April 2017) have meanwhile led to a sizeable portion of Euro area sovereign debt being held by the ECB. Forecasts indicate that for select countries such as Portugal or Spain, for example, as much as

one third of the issue volume, i.e. the upper legal limit, will be held by the ECB by September 2017 (Financial Times, 2017). With several German government bonds (at the time of writing, those with a time to maturity of five years or less) feature a yield of less than -40bp, approximately 40% (i.e. c. €413bn) are outright excluded from the ECB's asset purchases.

Extending purchases to higher-yielding government bonds, such as those of Mediterranean rim economies, will blur the lines between monetary and fiscal policy even more (than already is the case). For a reason, the Bank for International Settlement has explicitly cautioned of the dangers of the continuously low interest rate environment and a debt-fuelled growth (BIS, 2016).

## **6. Helicopter Money Remains Highly Controversial Matter**

At first glance, monetary financing might appear to be little more than the perhaps logical extension of unconventional monetary policies. A second glance, however, reveals that in light of its potentially severe and unintended consequences, monetary finance remains a very controversial matter.

In case of euro area inflation moderating again in the months ahead, the discussion surrounding monetary financing, or, more precisely, helicopter money, will regain momentum. This alone shows that so far, even the unconventional monetary policy measures adopted by the ECB failed to prompt a sustainable upswing in inflation or a broad economic recovery. Recent estimates point towards a GDP-growth of merely 1.6% y/y in 2017 and 1.7% y/y, respectively (European Commission, 2017).

Notwithstanding legal issues, it is highly questionable whether helicopter money is an adequate means to spur inflation (i.e. reflation) in the euro area. Lessons learnt from past decades in Japan are disappointing. Further, adopting any such measures is little else but an act of desperation — as a central bank admitted that in addition to the malfunctioning of its interest rate, credit and expectations channels, respectively, the unconventional monetary policies adopted so far have all but failed.

Thus, before resorting to any premature measures, which moreover are hardly governed by its mandate, the ECB is well advised to carefully weigh the pros and cons of helicopter money. Under no circumstances can monetary financing be the ultima ratio of a modern monetary policy.

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