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Outright Monetary Transactions sterilised?

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'Sterilisation' – where purchases of assets by a central bank are offset by withdrawals – may help the ECB to control inflation. This column discusses how the ECB's current approach may be fraught with danger, however. In a world where sovereign default risk is perceived to be likely, the ECB's only real hope is that its approach makes a Eurozone default impossible.

The Governing Council of the ECB recently announced that the Eurozone will be undertaking 'Outright Monetary Transactions' (OMT). This means that the ECB will be transacting directly in secondary markets for sovereign bonds of Eurozone Member States. The ECB went on to insist that it will offset any purchases in full by taking an equivalent amount of money out of circulation, "[t]he liquidity created through Outright Monetary Transactions will be fully sterilized" (ECB 2012).

Will the ECB lose its control over inflation?

There has been some scepticism as to whether the ECB's 'sterilisation' could work, given that the ECB is also offering unlimited liquidity against suitable collateral. Even if the sterilisation is successful, Outright Monetary Transactions, if not properly designed, may compromise the control that the ECB can exercise over the inflation process.

The particulars of the programme, including sterilisation, have been extensively discussed:

- Eligibility requires effective conditionality attached to an appropriate European Financial Stability Facility/European Stability Mechanism (EFSF/ESM) programme.
- This can take either the form of a full EFSF/ ESM macroeconomic adjustment programme or of a precautionary programme, called an 'Enhanced Conditions Credit Line', provided that the latter includes the possibility of EFSF/ESM primary market purchases.
- Purchases shall focus on the shorter part of the yield curve, in particular, on sovereign bonds with a maturity of between one and three years.
- There are no *ex ante* limits set on the size of transactions.

What's different about sterilisation?

Sterilisation, the ECB claims, is an important feature that differentiates Outright Monetary Transactions from the rather unconventional easing policies undertaken by the Bank of Japan, the US Federal Reserve Bank, the Bank of England, and other central banks[1]. Like Outright Monetary Transactions, these policies depress bond yields and lower important reference interest rates for the economy. But, unlike Outright Monetary Transactions sterilisation, other unconventional policies explicitly aim at supporting the money supply. By preventing an overall increase in the money supply, sterilisation is supposed to prevent inflation that would otherwise occur. Textbook monetarist theory dictates, after all, that it is excessive monetary growth that leads to inflation, which is what the ECB is mandated to guard against.

The perils of quantitative easing

In McMahon, Peiris, and Polemarchakis (2012) we look at the implications of unconventional policies for the stochastic path of inflation. A major conclusion that had surprisingly gone unnoticed is that monetary policy determines the path of expected or average inflation, but not the distribution of possible paths of inflation. The stochastic path of inflation is determined by the manner in which monetary authorities adjust their portfolios over time. Under normal operations of monetary policy, the balance sheets of central banks are predominantly composed of short term assets and held to conform with a target maturity or duration structure[2]. On the other hand, under unconventional policies the asset side of the portfolio is more varied and is often not ex ante specified. It is dependent on market forces. Ultimately, market expectations determine the value of the assets held by the central bank. Variation in the value of the balance sheet of the central bank then determines the stochastic path in which money is injected or withdrawn, which in turn determines the path of inflation.

Unconventional easing policies

Both the US and UK authorities have pursued unconventional easing policies. The Fed describe their unconventional easing policy 'credit easing' (CE) due to their objective of reducing credit spreads and easing tensions in illiquid or dysfunctional credit markets, while the Bank of England Asset Purchase Facility (APF) is termed 'quantitative easing' (QE)[3]. Both central banks aimed to expand the size of their balance sheet but, especially in the early part of the policies, the Fed targeted a more specific set of assets. By targeting a specific portfolio composition with time- and state-independent maturity and duration structure, the CE approach in the US is expected to better control market expectations and the stochastic path of inflation relative to the QE approach in the UK.

Outright Monetary Transactions sterilised?

There are two dimensions of Outright Monetary Transactions that may affect its ability to pin down the stochastic path of inflation.

- First, the change in the asset portfolio of the central bank. Through sterilisation, the policy amounts to an increase in longer-term asset holdings (the purchased secondary market bonds) funded by shorter-term borrowing. As such, deposit account liabilities increase as the ECB sterilises the increase in the reserves that would otherwise take place after the bond purchases. This, in effect, tilts the ECB's asset portfolio towards a longer duration. However, given that the ECB is relatively clear that it will only purchase secondary market bonds with maturities between one and three years from countries which have applied for EFSF/ESM support, this asset change is likely to allow the ECB to continue to control the stochastic path of inflation. Sterilisation should ensure that the overall level of money supply, and hence inflation, is also contained.
- The second dimension is more subtle and relates to sovereign default risk. Let us illustrate the problem as it applies to the ECB. In a world where the possibility of (sovereign) default does not exist, any (sovereign) bond of the same maturity is a perfect substitute for any other. However, an environment characterised by a wide distribution of yields implies that the default risks of different Eurozone sovereign bonds are very different in both timing and likelihood. Holdings of different bonds, then, have different distributions of payoffs and, as a consequence of the ECB holding these bonds outright in large quantities, they also have different implications for the amount of money supply in the Eurozone[4]. That is, if default does occur, interest needs to be paid

out on the deposit accounts, but interest is not received from the defaulted bonds. This affects the outstanding money supply. Sterilisation, if effective, can indeed ensure that Outright Monetary Transactions do not affect the total money supply ex ante. But sterilisation is incapable of achieving this ex post in a world where sovereign default is a possibility[5].

Conclusions

For Outright Monetary Transactions not to impact inflation expectations, the ECB must hope that the programme, together with the raft of other packages and measures designed to facilitate sovereign solvency, will rule out any possibility of default. Alternatively, the ECB can pre-commit to a target portfolio composition, as is the case in the US. For the time being, the fact remains that the ECB will purchase unrestricted quantities of sovereign bonds of varying yields supported by differing expectations about default. By doing so, it introduces a real risk that inflation expectations could become de-anchored and, importantly, this is expected to happen well before any actual default occurs.

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1 The ECB sterilised bonds purchases under its old Securities Markets Program by withdrawing from circulation an equivalent amount of money.

2 Indeed, the fiscal theory of the price level in Woodford (1994) takes for granted that monetary authorities trade exclusively in short term nominally risk free bonds, and it fails to highlight the importance of this assumption for the claim of determinacy of the path of prices. The argument in Adao, Correia, and Teles (2011), Bloise, Drèze, and Polemarchakis (2005), Nakajima and Polemarchakis (2005) indicated the importance of the assumption but did not emphasize its policy implications or make the connection with credit easing; Magill and Quinzii (2012) emphasized the role of inflationary expectations.

3 "The Federal Reserve's approach to supporting credit markets is conceptually distinct from quantitative easing (QE), the policy approach used by the Bank of Japan from 2001 to 2006. Our approach–which could be described as 'credit easing'–resembles quantitative easing in one respect: It involves an expansion of the central bank's balance sheet. However, in a pure QE regime, the focus of policy is the quantity of bank reserves, which are liabilities of the central bank; the composition of loans and securities on the asset side of the central bank's balance sheet is incidental", Bernanke (2009).

4 Sovereign default is not, as many people fear, a threat to ECB solvency. As a central bank with the power to print money, ECB insolvency, as measured in the standard way for other firms by negative equity capital, is not a major concern (though it is likely that the national governments would recapitalize the ECB in such an event).

5 If instead the ECB were to commit to a particular level of money supply in any realised state, this would only be possible by manipulating interest rates and this is potentially even worse for economic outcomes.

About CAGE

Established in January 2010, CAGE is a research centre in the Department of Economics at the University of Warwick. Funded by the Economic and Social Research Council (ESRC), CAGE is carrying out a five year programme of innovative research.

The Centre's research programme is focused on how countries succeed in achieving key economic objectives, such as improving living standards, raising productivity and maintaining international competitiveness, which are central to the economic well-being of their citizens.

CAGE's research analyses the reasons for economic outcomes both in developed economies such as the UK and emerging economies such as China and India. The Centre aims to develop a better understanding of how to promote institutions and policies that are conducive to successful economic performance and endeavours to draw lessons for policy-makers from economic history as well as the contemporary world.

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