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The effectiveness and impact of post-2008 UK monetary policy

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This policy brief discusses monetary policy in the UK after the financial and economic crisis which began in 2008. We focus on the Quantitative Easing (QE) programme, the money creation process in the modern economy, the determination of interest rates and the effect of these on firms' and households' demand for credit. The key points developed can be summarised as follows:

- Although a key aim of QE was to stimulate bank lending, this was relatively ineffective because there was insufficient demand in the economy for loans;
- A decrease in interest rates resulted in a modest increase in loans granted to households for the purchase of consumption goods and houses;
- Neither low interest rates nor the purchase of corporate bonds increase firms' demand for investment;
- Rather, investments are stimulated by expectations about future opportunities that are positively influenced by aggregate demand and by strategic government investments;
- We suggest that an expansive fiscal policy, aimed at achieving investment and innovation-led growth, is the best way to foster economic growth and stimulate private investments.



Quantitative Easing: The theory

The 2008 financial and economic crisis resulted in a severe contraction in money and credit markets. Central banks of developed countries have responded to this and related issues (such as tight credit market conditions caused by macro-prudential regulation, the spectre of a general deflation and the massive increase in unemployment) with a set of monetary policy interventions in order to attempt to restore the macroeconomic situation to its pre-crisis state. QE was introduced by the Bank of England (BoE) in March 2009 because 'conventional' monetary policy was ineffective in boosting the economy in the post-crisis period, despite a decrease of the short-term rate of interest from 5% to 0.5% between September 2008 and March 2009, and then again to 0.25% in August 2016.

QE involves the purchase of financial assets – the majority being UK government bonds (gilts) – on the secondary market by the BoE via money creation. The process is best understood as a portfolio switch, whereby government bonds are shifted from the balance sheet of the bond owners (e.g. pension funds or insurance companies) to the balance sheet of the BoE's Asset Purchase Facility (a subsidiary of the BoE) and replaced with newly created deposits. The process also involves an increase in central bank reserves held at commercial banks backing the newly created deposits.

QE was intended to boost spending and economic growth by increasing the quantity of money in the economy, reducing medium term interest rates and increasing the quantity of available reserves retained by commercial banks at the BoE (Bedford et al., 2009).

QE is theorised as having four main transmission channels (Haldane et al., 2016; Joyce et al., 2011):

An asset price channel: the purchase of financial assets by the central bank leads to a rise in asset prices, generating a ‘wealth effect’ which is assumed to stimulate current expenditures¹, and a fall in the corresponding rate of interest, reducing borrowing costs and allowing private sector debt – consumption and investment expenditures – to rise.

A portfolio rebalancing channel: by replacing interest-bearing government bonds with zero-interest deposits, the central bank stimulates demand for other, higher yielding real economy financial assets (e.g. corporate bonds) allowing agents to rebalance their portfolios to the desired composition.

Bank lending channel: increasing the supply of reserves increases the liquidity of the banking system, enabling them to grant new loans to borrowers (households and firms), thus fostering spending and investment.

Expectations or signalling channel: QE signals to markets, firms and households that the central bank plans to reduce interest rates and increase the money supply and this can raise confidence, reducing long term risk premiums and thus leading to a further increase in asset prices.

With regard to the bank lending channel, the effect of QE on loans provided by banks to firms and households has been disappointing relative to the huge increase in reserve holdings enjoyed by the

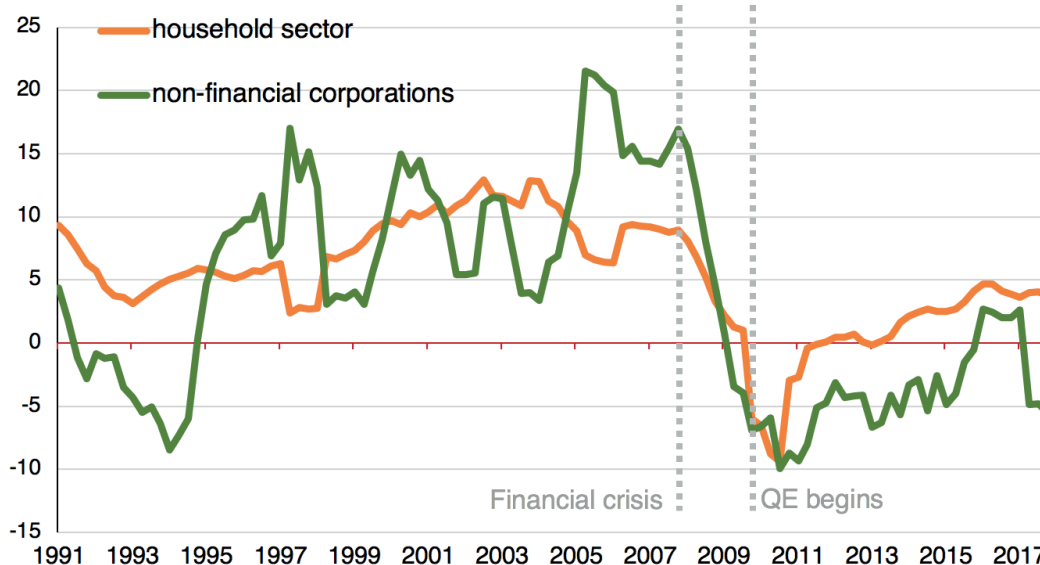
banking sector. While there was a small increase in the growth of lending to households, lending to non-financial firms continued to contract until late 2015 and has recent gone in to negative territory once more. QE did not appear to stimulate business loans. It has, however, sustained the demand for financial assets allowing an increase of asset prices and a decrease in the corresponding rates of interest.

The money creation process in the modern economy: A new theoretical perspective

Traditionally, it has been assumed that the money supply is largely determined by the central banks and that there is a relatively stable relationship between the quantity of reserves and deposits. By controlling the supply of reserves, they determine the quantity of deposits and loans supplied by commercial banks to households and firms via a ‘money multiplier’ effect. As such, the money supply was seen to be independent of economic growth, and any increase in the quantity of money increases the price of commodities.

An emerging alternative view is that the money supply is also determined by the demand for commercial banks’ loans², with deposits created when a commercial bank makes a loan and the reserves needed to back this deposit fully accommodated by the central bank. Reserves are thus a consequence of commercial banks’ lending activity rather than a cause of it and the money supply is dependent on economic activity, i.e. influenced by the effects of the real economy on the demand for loans.

Figure 1: 4 quarter growth rate of UK sterling bank lending by sector



Source: Bank of England M4 sectoral lending data series

1 A further indirect increase in assets prices can occur by means of the portfolio balance effect. The new money could stimulate the demand for further financial assets allowing agents to rebalance their portfolios to the desired composition.

2 This can be defined as the ‘endogenous money’ view (Fontana, 2009; Wray and Nersisyan, 2016). Aspects of the endogenous perspective have been recently endorsed by prominent monetary authorities, including the BoE (McLeay, et al., 2014; Jakab and Kumhof, 2015). Especially, in a recent BoE quarterly bulletin, it is argued that: “In the modern economy, most money takes the form of bank deposits. But how these bank deposits are created is often misunderstood: the principal way is through commercial banks making loans. Whenever a bank makes a loan, it simultaneously creates a matching deposit in the borrower’s bank account, thereby creating new money.” (McLeay et al., 2014, p. 1)

In this new ‘endogenous money’ perspective, interest rates have a more significant role. They are affected by the decisions of both central and commercial banks. Interest rates set by commercial banks depend on the central bank interest rate, and when the central bank cuts the rate of interest, a decrease in interest rates on commercial bank loans follows (McLeay et al., 2014). The money supply also depends on interest rates because credit demand could be stimulated by the rate of interest, by means of changes in costs of borrowing. However, different agents in the economy respond in different ways to changes in interest rates. Evidence suggests that households, who use credit for the purchase of homes or consumption goods, are more sensitive to changes in interest rates (Deleidi, 2018). In contrast, firms, that use loans to finance investment projects, are influenced in their expenditure decisions by the actual and expected level of aggregate demand and future growth opportunities, rather than by interest rates (Garegnani, 2015; Deleidi, 2018; Deleidi and Mazzucato, 2018). This framework is consistent with the data shown in Figure 1: a decrease in the bank rate and in interest rates applied by commercial banks on loans has increased the quantity of loans granted to households and thus their debt levels, but no positive effect has occurred on credit provided to firms to finance their investment projects.

In summary, reducing interest rates and increasing the liquidity of the banking system appear to have had only a weak effect (and only on loans granted to households). In order to increase economic growth and support real economy activity, it is necessary to stimulate greater loan demand by means of policies aimed to revive aggregate demand.

How can we stimulate credit demand?

In order to stimulate loan demand, policymakers have to increase aggregate demand by running expansive fiscal policies, as the US did after the financial crisis. Such policies should be mainly driven by an increase in government spending, rather than a cut in taxes or an increase in monetary transfers to firms and workers³. This guarantees a greater effect on GDP since the government spending multiplier is greater than tax and transfer multiplier (Batini et al., 2014; Deleidi and Mazzucato, 2018). Furthermore, focusing on what types of fiscal policies are more efficient in terms of output and investment growth, a persistent growth of government investment (e.g., targeted towards strategic missions and focused on the promotion of innovation) can increase business expectations and thus also lead to an increase in business investments and the demand for loans. Private investments are driven by expectations about future growth opportunities, which are in turn mainly driven by strategic public investment (e.g. through innovation or industrial policy) and government expenditure (Mazzucato, 2016; Deleidi and Mazzucato, 2018).



In contrast, austerity based fiscal policies have the opposite effect since they decrease actual and expected GDP, triggering a negative chain reaction on consumption and investment, as the Keynesian multiplier also operates in reverse (Kelton, 2016). In particular, as suggested by a recent publication of the International Monetary Fund, the multiplier has assumed a value of about 1.5, meaning that a decrease of £1 of public expenditure leads to a fall in real GDP by £1.5 (Blanchard and Leigh, 2013).

Final remarks

In conclusion, we can summarise the arguments set out above as follows:

- Central and commercial banks set the rates of interest that affect loans demanded by households;
- However, business investment and the demand for business loans are not primarily influenced by interest rates but by expectations about future growth opportunities, mainly shaped by public financing and government investment;
- The demand of credit-worthy borrowers influences the volume of loans granted by commercial banks;
- Loans create bank deposits and the size of deposits generates a corresponding demand for reserves, fully accommodated by the central bank.

Moreover, by analysing the current situation experienced by the UK, we conclude that:

QE has not been effective in stimulating the UK credit market and firm expenditures. The reasons behind QE's weakness can be understood by

³ Some forms of quantitative easing (e.g. corporate bond purchases) could be treated as a fiscal transfer to firms. However, if firms do not perceive a growth of market opportunities they will hoard money rather than make investments.

analysing the money creation process of the modern economy. In particular, we assert that the UK banking system is not “starved of cash” (Wray and Nersisyan, 2016) and the simultaneous creation of reserves does not increase loans and spending. In order to stimulate the credit market, the UK needs to foster the demand for loans which is positively influenced by the level of actual and expected demand.

Low interest rates affect the loans demanded by households for the purchase of consumption goods and houses. But the same does not apply to firms: a fall in interest rates does not stimulate investments and credit demand by business. On the contrary, investment and firms’ loan demand are driven by the level of actual and expected aggregate demand.

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Further information

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In order to emerge from a period of low economic and investment growth, government investment is required to stimulate business expectations about future growth areas, rather than a monetary policy focused on the purchase of financial assets. An expansionary fiscal policy is strongly recommended since this increases actual and the expected demand, thus stimulating private investment and volume of loans provided by banks. The fundamental challenge now is to understand which kind of public expenditure generates the greatest positive impacts on GDP growth and on investments. As argued in Deleidi and Mazzucato (2018), targeted public investment in innovation aimed at tackling societal and technological challenges are able to generate the largest effect on GDP, business investment and eventually firms’ demand for loans.

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