

## Changes in the Liquidity Effect Over Time: Evidence from Four Monetary Policy Regimes

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Monetary policy, post Bretton Woods, saw the emergence of the short-term interest rate as the primary policy instrument. However, in the wake of the financial crisis, balance sheets have, again, become part of the monetary policy toolkit, now empowered to perform more than an automated role in policymaking. The present-day incarnation of balance sheet policy differs in character, though, from historically used balance sheet mechanisms. We now observe that under certain monetary policy regimes, balance sheet policies operate independently from movements in the central bank policy rate. The independence of these monetary policy tools contests the conventional wisdom on the role of central bank balance sheets in policymaking (Borio and Disyatat, 2010). One of the implications is that balance sheets potentially could be used to extend the policy reach of central banks to promote financial stability.

To appreciate fully the changing role of balance sheets in policymaking one needs to look at the history of monetary policy implementation. Since the Second World War there has been a significant evolution in the way monetary policy is conducted. During this period central banks adopted several operational frameworks. Monetarism, which was dominant in monetary policy implementation from the early 1970s to the late 1980s, emphasised the ability of central banks to exert tight control over the money supply. This gave rise to use of several quantitative concepts<sup>1</sup> as preferred operational targets in this era. Operational targets of monetary policy refer to some class of economic variable that the central bank can control using its monetary policy tools. Central banks utilise three tools toward this end, namely, reserve requirements, standing facilities and open market operations (Bindseil, 2004).

This monetarist view coincides with the textbook model of monetary policy implementation, which largely is shaped by the experience of the United States (US). According to this view central banks actively practice their influence over the money supply in order to pursue their intermediate target and ultimately economic objectives (Keister et al., 2008). However, since the early 1980s central banks have shifted their focus away from quantitative targets toward a short-term interest rate

This textbook narrative underlines the fundamental link between the balance sheets of central banks and monetary policy (Keister et al., 2008). In this framework, central banks can use the available monetary policy tools, generally open market operations, to make the short-term market interest rates effective. These operations entail a change in the level of reserves<sup>3</sup> to bring about changes in the interest rate (Disyatat, 2008; Kahn, 2010). The negative causal relationship between central bank reserves and the short-term interest rate is known as the “liquidity effect” (Kopchak, 2011).

A substantial body of empirical work has sought to identify a clear and stable link between several components of central bank balance sheets and key policy interest rates (Friedman and Kuttner, 2010). The results have been mixed. Some authors have found significant liquidity effects for the US economy in the 1980s and early 1990s<sup>4</sup>. However, when the analysis is extended beyond this timeframe one finds that the relationship fades. This has important implications for the understanding of how monetary policy implementation works in the 21st century. Theoretical models of monetary policy implementation stress the negative relationship that exists between liquidity and interest rates, but in modern central bank practice, we do not necessarily see clear evidence of this.

Several explanations have been posited to explain the disappearance of this liquidity effect in recent years. The implementation of new operational frameworks at central banks is often the reason that is put forward for the fading out of this effect. It has been suggested that because of innovations in conducting of monetary policy that interest rates and reserves have been decoupled, which means that various levels of reserves can exist for a given interest rate. The independent movement of these policy targets has been referred to as the “decoupling principle” (Borio and Disyatat, 2010).

The hypothesis of the paper is that no clear and stable link exists between liquidity and interest rates, so that various levels of reserves can exist for a given interest rate. The results from a Bayesian TVP-VAR model show that the relationship between money market interest rates and the various reserve concepts used disappears over time for three of the countries selected. This result is corroborated by rolling regression and VAR results.

From these results, one can conclude that the decoupling principle exists for countries that do not employ a reserve regime. The implication for monetary policy is that central banks might be able to use their balance sheets independently from their interest rate instrument, providing an additional dimension to monetary policy conduct. This result is significant in the wake of the events of the financial crisis of 2007. Central banks could potentially use their balance sheets to combat financial instability while retaining their key policy rate as a tool with which to combat inflation.

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