

Chapter 2

Transmission Channels for QE and Effects on Interest Rates

Recent literature on unconventional monetary policy has identified a number of potential channels through which QE can potentially have an impact on interest rates, which in turn may change the willingness of companies to invest and employ, individuals to spend, and banks to lend (see, for example, Joyce et al. 2011a, b; Krishnamurthy and Vissing-Jorgensen 2011). These changes are then expected to influence the level of inflation and economic growth.

Basically, the purpose of undertaking QE is the same as cutting policy rate. It affects interest rates through various transmission channels. First, by announcing large-scale asset purchases, central banks provide information about the likely path of future monetary policies to market participants through a *signaling channel*. Purchasing a large quantity of long-term assets under QE serves as a credible commitment by central banks to keep interest low in the future. This is because, if the central banks raise interest rate later, they will see huge losses on the assets they purchased under QE. The signaling channel is expected to affect interest rates across the yield curve with effects depending on bond maturities (Krishnamurthy and Vissing-Jorgensen 2011).

Second, by purchasing a large quantity of assets held by the private sector through QE, central banks change the relative supply of the assets being purchased, and thus induce equilibrating changes in their relative yields. Since the base money issued and the financial assets purchased under QE are not perfect substitutes, the sellers of financial assets may attempt to rebalance their portfolios by buying other assets which have similar characteristics to the assets sold. This process, therefore, further pushes up the prices of the assets purchased under QE as well as the prices of their close substitutes, and brings down the associated term premiums and yields. The impact of QE through this *portfolio rebalance channel*, therefore, should be more significant on the prices of assets with characteristics similar to those that the central bank purchases.

Finally, central banks increase the liquidity in the hands of investors by purchasing long-term securities and issuing bank reserves under QE. Joyce et al. (2011a, b) assert that increased liquidity and improved market functioning, as the results of central banks' asset purchases, will lower premium for illiquidity, and thus increase asset prices. On the contrary, Krishnamurthy and Vissing-Jorgensen (2011) argue

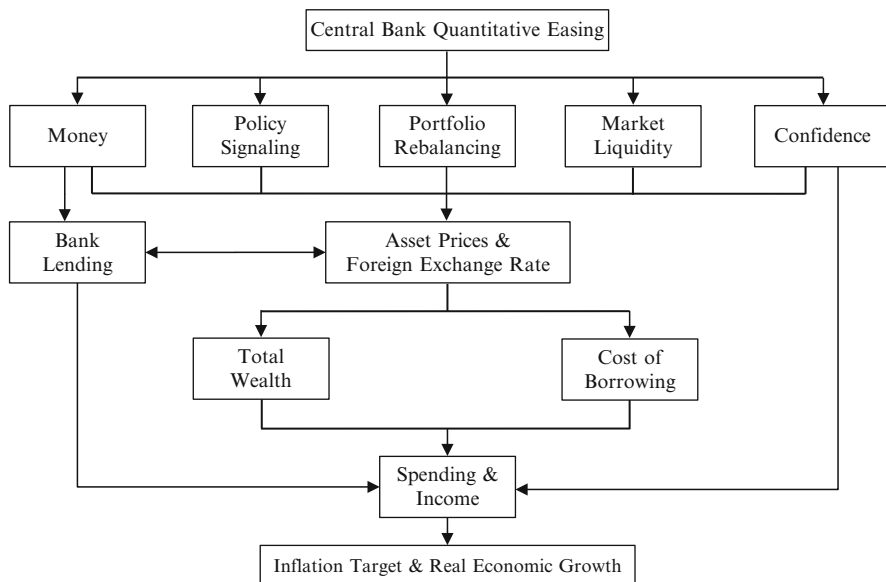


Fig. 2.1 Transmission channels of quantitative easing. *Note:* Adopted from Joyce et al. (2011a, b)

that an expansion in liquidity reduces the liquidity price premium carried by government bonds relative to other less liquid assets and therefore increase government bond yields. However, the effect of QE through the liquidity premia channel may only persist while the central banks are conducting asset purchases.

Large-scale asset purchases financed by central banks under QE, therefore, push up asset prices by lowering expectations about the path of future short rate and reducing term premium. Higher asset prices, on the one hand, increase the net wealth of asset holders, on the other hand, reduce the cost of borrowing. Both the wealth and borrowing cost effects created by QE are expected to boost nominal spending of companies and individuals, so as to achieve inflation target, stimulate real economic growth, and reduce unemployment rate.

Apart from QE working through the asset prices channel, it may also have an impact on inflation and economic growth through bank lending and confidence channels. Since QE improves the liquidity of the banking sector, it encourages banks to finance more new loans than they would have done. But the bank lending channel is expected to have very limited effect given the strains in the financial system in the wake of the crisis. Under such circumstances, banks are more likely to choose to hold central bank injections of money as a cushion rather than pass liquidity onto the real economy through lending. QE is also expected to improve economic outlook and thus have a broader confidence effects. The boosted confidence, on the one hand, may encourage investment and spending directly; on the other hand, it may further increase asset prices by reducing risk premium.

Various channels through which QE may support investment and spending are summarized in Fig. 2.1. In this brief, we highlight the importance of signaling of portfolio rebalancing effects of QE on interest rates with different maturities, which in turn may impact the broader economy.

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