assonebb
associazione nazionale
enciclopedia della banca e della borsa

Bankpedia Review Vol. 4 n.1 2014

TRANSMISSION MECHANISM OF MONETARY POLICY

Lorenzo CARBONARI[1]

Abstract

The transmission mechanisms of monetary policy may be defined as the channels, not mutually exclusive, through which the evolution of monetary aggregates affect, often after variable and not completely predictable intervals, the level of product and prices.

The economic literature has identified the existence of at least four different mechanisms through which monetary policy is able to influence the price level and the national income: the interest rate, the prices of financial assets, the domestic credit and the exchange rate (Mishkin, 1993). In the following paragraphs, we will analyse in detail the functioning of these mechanisms by examining the case of an expansionary monetary policy.

1. Interest rate

An expansionary monetary policy ($\uparrow M$) causes a sudden reduction in official rates ($\downarrow i_{ref}$), thus reducing the cost that each commercial bank faces to access the Central Bank's facility. Under "normal" conditions, the interbank rate should move downward ($\downarrow i_{int}$), generating an expansion of lending to individual banks. These, in turn, will use this excess of liquidity by buying financial assets, and providing greater credit to the private sector. On the securities market, the increased demand ex-

[1] Lorenzo CARBONARI, Assistant Professor of Economics, University of Rome "Tor Vergata", DEF and CEIS, Italy.

ISSN 2239-8023
DOI 10.14612/CARBONARI_1_2014

erts upward pressure on prices and determines a further reduction in nominal interest rates that, inflation expectations being equal, results in a reduction of the real interest rate
($\downarrow r$). All this helps the evolution of the domestic demand through the expansion of investment and consumption ($\uparrow I, \uparrow C$). In symbols:

$$\uparrow M \Rightarrow \downarrow i_{eff} \Rightarrow \downarrow i_{bank} \Rightarrow \downarrow r \Rightarrow \uparrow I, \uparrow C \Rightarrow Y$$

2. The prices of financial assets

As mentioned above, an expansionary monetary policy is able to exert strong upward pressure on prices of financial assets ($\uparrow P_E$), increasing the market value of firms in relation to the cost of capital (the so-called *q of Tobin*, $\uparrow q$) and positively influencing the value of securities wealth of households($\uparrow W$). This should translate on the one side into an increase in investment by firms ($\uparrow I$) and on the other side, assuming that household consumption depends positively on the stock of wealth, in an expansion of private consumption ($\uparrow C$). In symbols:

$$\uparrow M \Rightarrow \uparrow P_E \Rightarrow \uparrow_q, \uparrow W \Rightarrow \uparrow I, \uparrow C \Rightarrow Y$$

3. The domestic credit

This channel of transmission is strictly related to the assets of commercial banks and specifically to the financing granted to companies and to the securities portfolio. When determining the monetary policy changes in interest rates, commercial banks can find it profitable to reallocate part of their activities' bearing. In particular, it has been clarified how the monetary expansion made by the Central Bank has made commercial banks more liquid, increasing their reserves ($\uparrow R$). Among the various

ISSN 2239-8023
DOI 10.14612/CARBONARI_1_2014

methods through which the liquidity can be invested, one of the most important is the provision of credit to the private sector ($\uparrow L_P$). This is the mission of commercial banks, whose growth determines positive effects on business investment and on household consumption. In symbols:

$$\uparrow M \Rightarrow \uparrow R \Rightarrow \uparrow L_P \Rightarrow \uparrow I, \uparrow C \Rightarrow Y$$

In literature, the mechanism of transmission of bank credit refers to the so-called *credit view* that relies on the effects of imperfections in the capital market. In particular, this branch of the economic research focuses on the determination of loans granted by banks, which are viewed as non-perfect substitutes of the direct financing to businesses.

4. The exchange rate

Monetary policy exerts a strong impact on the exchange rate. In particular, it was seen how increasing the amount of currency in circulation would result in a reduction in the nominal interest rate. This leads to a negative differential between the domestic and the foreign interest rates ($i < i^*$, where i^* indicates the foreign nominal interest rate), and – in the presence of perfect capital mobility and perfect substitutability of financial assets – a depreciation of the nominal exchange ($\uparrow S$, which indicates the units on the national currency to buy one unit of the foreign currency) due to the simultaneous growth in the demand for foreign currency and in the supply of domestic currency in the forex markets. Assuming constant both the foreign and the domestic price level (as it is reasonable to believe in the short term), the depreciation of the nominal exchange rate results in a subsequent real depreciation ($\uparrow Q$) that, under the so-called Marshall-Lerner conditions, exerts a positive influence on the balance of payments ($\uparrow NX$) and therefore on aggregate income. In symbols:

ISSN 2239-8023
DOI 10.14612/CARBONARI_1_2014

$$\uparrow M \Rightarrow \downarrow i,\ i<i^* \Rightarrow \uparrow S,\ \uparrow Q \Rightarrow \uparrow NX \Rightarrow\ Y$$

It is worth noticing that, within each of the four transmission mechanisms presented, not a secondary role is played by the *expectations* on prices. In a context characterised by high uncertainty, operators make forecasts about the economic fundamentals considering the full range of information available. The expectations on prices and future rates affect the yield curve and may contribute to the growth of nominal variables, such as prices and rates. The more the Central Bank is able to influence the expectations of economic agents the more they can contribute to the stability of future prices.

Bibliography

BALASSA B. (1964), "The purchasing-power parity doctrine: A reappraisal", *The Journal of Political Economy*, Vol.72, pp. 584-596.

BERGIN P.R., FEENSTRA R.C. (2000), "Staggered price setting, translog preferences, and endogenous persistence", *Journal of Monetary Economics*, Vol. 45(3), pp 657-680.

CANZONERI M.B., HENDERSON D.W. (1991), *Monetary Policy in Interdependent Economies: A Game-Theoretic Approach*, MIT Press Books, The MIT Press.

CHRISTIANO L.J., EICHENBAUM M.S., EVANS C.L. (2001), "Nominal Rigidities and the Dynamic Effects of a Shock to Monetary Policy", *NBER working paper* no. 8403, July 2001.

HARROD R. (1939), *International Economics*, Chicago, University of Chicago Press.

MISHKIN F. (1995), "Symposium on the Monetary Transmission Mechanism", *The Journal of Economic Perspective*, Vol. 9, pp. 3-10.

RABIN A.A., JEAGER L.B. (1997), "The Monetary Transmission Mechanism", *The Eastern Economic Journal* , Vol. 23 n.3, pp. 293-9.

ISSN 2239-8023
DOI 10.14612/CARBONARI_1_2014

SAMUELSON P.A. (1964), "Theoretical notes on trade problems", *The Review of Economics and Statistics*, Vol. 46, pp.145-154.

ISSN 2239-8023
DOI 10.14612/CARBONARI_1_2014