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MONETARY POLICY

UNCONVENTIONAL APPROACHES

Speculative Attack · Eurozone Crisis · Unemployment · Inflation

Foreword by MUGUR ISĂRESCU, NBR Governor

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PROFIT

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1. Introduction

Several years have already passed since monetary policy rates have neared zero in many advanced countries, namely since these economies fell into the liquidity trap. In order to help them exit this trap, central banks have increased the base money several times since the crisis outbreak, without however solving the problem. This rekindles the practical and academic interest in two important issues. The first one refers to the relation between money and inflation, as well as between money and asset prices. The second one concerns monetary policy effectiveness when the policy rate equals zero.

In the past, there was a strong positive correlation between the average long-term growth of base money and inflation. This correlation, along with the liquidity trap, poses difficult questions for both the public and central banks in advanced countries as well as in some emerging economies that depend on the former in various ways, including in Romania.

On the one hand, the delay in the economy's firm response to the quantitative easing laid down in theory raises the question whether monetary policy can actually generate, within a predictable time frame, the inflation necessary for the economies to exit the liquidity trap.

On the other hand, the strong relation between money and inflation raises the question whether monetary easing has not already gone too far in practice and could lead, in time, to hard-to-control inflation levels, which could also affect other countries, not only those where base money has increased dramatically.

Finally, should the central bank not counter the surges in asset prices given that they may lead to financial crises so severe that they can push the economy into the liquidity trap, thus putting high pressure on monetary policy to act *ex post*? Or, perhaps, would it be better to target moderate and stable inflation rather than low and stable inflation?

2. Some clarifications

All schools of thought agree that, when the short-term interest rate is equal or close to zero, central banks cannot further fully accommodate large deflationary shocks by reducing their policy interest rates. In contrast, the effects of money growth on output and inflation depend on aggregate demand factors taken into account by different approaches.

Where aggregate demand depends solely on current interest rate and incomes, as the Keynesists thought, the growth of money in circulation has no effect on output and inflation whatsoever. When prices go down, money injections in commercial banks cannot push the nominal rate below zero, and the real interest rate goes up. For this reason, monetary policy cannot foster economic growth.

The neo-classicists, such as Pigou, Patinkin and Metzler, argued that real money supply rises if prices fall (the Pigou effect), which would entail the rise in consumption and aggregate demand, thus helping the economy exit the liquidity trap. However, in the case of Japan, the drop in prices concurrently with the flat consumption indicates that the Pigou effect lacks impetus[1]. On the contrary, the decline in prices pushes real debt higher, as Fisher (1932, 1933) suggested, which becomes "the root of all the evils" (Fisher, 1933, p. 39), causing the economy to plunge even more deeply into recession.

Nowadays it is widely acknowledged that aggregate demand depends not only on the current interest rate set by the central bank, but also on the anticipated paths of inflation and interest rates, as implied by dynamic stochastic general equilibrium (DSGE) models. Thus, aggregate demand depends, in the end, on long-term interest rates too. Given this dependence (causal linking), money supply growth could be effective in helping the economy exit the liquidity trap.

[1] Another reason why the real balance effect (as the Pigou effect is also known) would lack impetus is the Ricardo-Barro equivalence. When the government allows budget deficit to widen, the aggregate demand remains unchanged if the private sector responds by increasing their level of savings. The dispute over the effects of the Ricardian equivalence is still ongoing and produces mixed results. One of the recent approaches to this equivalence and its related effects on the liquidity trap is that of Eggertsson and Krugman (2011). They derived a theoretical conclusion based on their New-Keynesian model involving debtors and creditors stating that the Ricardian equivalence "breaks down" because some agents are debt-constrained, and that "Keynesian-type multipliers, in which current consumption depends on current income, re-emerge".

In DSGE models, where the utility function is assumed separable[2], real money is absent both on the demand and on the supply side of the economy. Monetary policy affects the economy via the real interest rate. The central bank controls the real interest rate by controlling the short-term nominal interest rate. Hence, the central bank can affect real output. In these models, the interest rate is the primary channel whereby output is affected through both investment and consumption.

However, if utility is not separable, the real quantity of money affects demand and supply alike. In this case, changes in the real quantity of money alter the marginal utility of consumption, so that the absence of money constitutes a special case of New Keynesian general equilibrium models (Walsh, 2003, p. 250). Separable utility models are easier to construct and hence more frequently employed. The conclusions based on these models remain however valid since, as McCallum and Nelson (1999) and Woodford (2001) pointed out, the effects that arise from assuming separability do not differ much from the effects obtained with nonseparability loss. In addition, in the New-Keynesian models with separable utility, the quantity of money appears in the intratemporal optimality condition[3]. This means that even in these models there is a clear relation between money and the interest rate, if the latter is seen as a proxy for the opportunity cost of holding money.

Thus, based on DSGE models with separable utility, it is equally possible for the central bank to set the nominal interest rate and derive the nominal quantity of money or, the other way round, to start by setting the nominal quantity of money and to derive the nominal rate of interest, output gap and obviously inflation. Consequently, when the economy is in a liquidity trap, monetary policy will foster aggregate demand if it succeeds in altering the anticipations on the path of future short-term interest rates or on future money supply.

In his cash-in-advance model, Krugman (1998) chose to underline directly the role of money supply in formulating the necessary condition for inflation expectations to emerge when the economy is in a liquidity trap. The condition is that the central bank should convincingly commit

[2] See Chapter 5 in Walsh (2003) for a more in-depth approach to the standard framework of dynamic stochastic general equilibrium models.

[3] This condition requires that the "marginal rate of substitution between money and consumption be equal to the opportunity cost of holding money" (Walsh, p. 234).

itself to increasing money supply in the future so as to enable a production boom and accommodate moderate inflation once the deflationary shock has faded away. In Krugman's words (1998, p. 139), "monetary policy will in fact be effective if the central bank can credibly promise to be irresponsible, to seek a higher future price level".

Eggertsson and Woodford (2003) chose to highlight directly the interest rate role and came to a similar conclusion: policy success depends on the central bank's credible commitment to maintain the nominal interest rates at low levels (zero) for a certain period after the deflationary shock has faded away, irrespective of the future price level. To a similar conclusion came Werning (2012). Using a continuous-time version of the New-Keynesian model, he concluded that, "surprisingly", both deflation and recession "are exacerbated with greater price flexibility".

When an economy enters a liquidity trap, a central bank commitment seems to have two stages. In the first one, the central bank has to be credible with respect to its commitment to transforming deflationary expectations in inflationary expectations. This will cause the drop in real rates even though nominal interest rates can no longer decrease. Then, following the dissipation of deflationary pressures, the commitment to cut nominal interest rates translates into lower real interest rates, which foster demand. The clearer is a central bank in communicating this to the general public, the more efficient are its actions towards the end of reflating the economy.

While the theoretical solution of reflating the economy by shifting from deflation to inflation expectations is elegant, its putting into practice may prove difficult. Factors like the frequency of deflationary shocks, past practices of central banks, and the lack of incentives for keeping promises could possibly render inflationary commitments problematic (Eggertsson, 2008). Regarding the first factor, it is clear that the frequency of deflationary shocks decreased over time. For instance, in the US, the period from 1921 to 1955, i.e. spanning 35 years, saw 13 years when prices dropped or remained unchanged. By contrast, during 1956–2011, in 56 years' time, prices fell only once, namely in 2009. The credibility of reflationary commitments is hard to build as deflationary shocks are seldom manifest.

Second, even the practice of central banks in developed countries to observe a Taylor rule in normal times might be a problem, making the

quantitative easing ineffective (Eggertsson and Woodford, 2003). The problem emerges when, after a period of a successful reflating policy, the general public anticipates an interest rate rise, that is "as soon as inflationary pressures in excess of an implicit inflation target emerge" (Eggertsson, 2008). The same ineffectiveness emerges if the public expects money supply to stabilise at a quasi-constant level as soon as deflationary pressures dissipate (Krugman, 1998).

Third, it is widely known that the most credible reflating policies rely on incentives. For instance, issuing public debt is such a policy, as it creates incentives for governments to increase inflation (Calvo, 1991). In Calvo's words, "a larger nominal debt requires, other things being equal, raising more distorting taxes. This gives the future government greater incentives to use inflation instead of distorting taxes, which explains the ex post positive association between nominal public debt and inflation". The incentive argument works for both indebtedness in national currency and foreign currency (Eggertsson, 2008). Where public debt is issued in the national currency, failure to reflate the economy calls for higher taxes (which may prove costly in both political and public terms) in order to cover the additional real debt generated by deflation. Moreover, incentives emerge if, as Jeanne and Svensson (2004) pointed out, the government accumulates nominal debt (or the central bank prints money) to purchase foreign currency. In this case, if the inflation objective is missed, the currency appreciation in real terms will lead to balance sheet losses.

3. Monetary policy has remained the only hope

The advanced economies currently facing the deflation spectrum have resorted to both quantitative easing and public debt rise. In order to resume economic growth, the government strategy has two major objectives: (i) the alleviation of the effects generated by lower private cash flows via public deficit widening and (ii) the substitution of public credit for private deleveraging until the stabilisation of the credit system. Japan has embarked upon this process more than a decade and a half ago and has not completed it yet.

The question is: will the US, the UK and the euro area be more successful after increasing the base money several times since the financial crisis outbreak? Certain advanced countries under the threat

Lucian Croitoru conducts in-depth syntheses depicting Romania's path across time, during these hectic years marked by successive sweeping changes. At the same time, the author makes point-by-point analyses as well, which reveal a sophisticated economics thinker. A remarkable paper on monetary policy [...] therefore every respected analyst should take it into consideration.

MUGUR ISĂRESCU

This book emerged from the author's preoccupation with certain aspects of monetary policy that were seldom a topic of discussion prior to the crisis outbreak in July 2007. The paper includes a succession of individual studies about: (1) inflation and the liquidity trap; (2) the Eurozone and its difficulties; (3) the speculative attack on the leu and the central bank's reputation; (4) the unemployment rate and monetary policy.

Most of these aspects are approached out of the practical need to change some points of view — considered faultless until recently — and refer both to the Romanian economy, and to the global economy.

Looking back to the crisis that changed the human society, we will find in these pages some answers to the questions regarding the conduct of monetary policy.

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