MUTUAL INFLUENCE BETWEEN MONETARY POLICY AND INVESTMENT

Valentin Mihai LEOVEANU[*]

Abstract

The study seeks to highlight monetary policy as a component of macroeconomic policies, the importance of investment on the economy and on economic growth, the correlation between investment and monetary policy in macroeconomic thinking, and the implications of the 2007-2010 financial crisis on the theory and practice of monetary policy. Following submission of theoretical and practical considerations concerning the influence of monetary policy on investment and vice versa, both at micro and macro levels, this paper tries to highlight the effects of monetary policy actions on global and local investment in terms of profitability, risk, liquidity and investment period.

Keywords: *macroeconomic policy of stabilization, macroeconomic models, transmission mechanism of monetary policy, monetary policy interest rate, global and local investments.*

1. Introduction

The primary role of investment in the national economy is to provide support for economic development, so that the volume of investments, their distribution in different economic fields and their efficiency determine the pace of economic growth. The investments represent a category of expenditure regarding the future development of an economy through a variety of effects, such as increasing fixed capital and working capital, increasing technical and economical efficiency of equipment, boosting productivity and increasing employment.

This paper aims to investigate to highlight monetary policy as a component of macroeconomic policies, the importance of investment on the economy and on economic growth, the correlation between investment and monetary policy in macroeconomic thinking, and the implications of the 2007-2010 financial crisis on the theory and practice of monetary policy.

Following the submission of theoretical and practical considerations concerning the influence of monetary policy on investment and vice versa, both at micro and macro levels, this paper tries to highlight the effects of monetary policy actions on global and local investment in terms of profitability, risk, liquidity and investment period.

The importance of this study is reflected by the survey that highlights the strengths and the weaknesses related to the monetary policy decisions in order to achieve financial stability and to put back the economy on a growth path. In accordance to this, the paper presents the evolution of investments in the world and in Romania in correlation with the monetary policy actions taken by the monetary authorities and ends with a summarized conclusions regarding the impact of monetary policy on global investment performance in the 2008-2014 and the monetary policy transmission mechanism and policy impulses to the Romanian economy.

2. Literature review

According to the classical theory of economic growth, it is considered that the factors determining the differences in the production potential of an economy belong to two large groups[1]: 1) labor productivity - how technology is allocate and how the activity is organized to increase the labor productivity, even with the same amount of capital and 2) capital productivity - how much capital goods are necessary to boost the productivity of capital, even with the same technology or organization.

The classical growth theory is based on the following considerations[2]: short-term, the investments affect current GDP by aggregate demand, while long-term the effects of investments conduct to the growth of potential GDP; short-term, savings reduce the consumption and the aggregate demand, which in turn determine the decline of current GDP, but in the long term, savings finance the investments ensuring potential GDP growth; the factors of production are subject to the occurrence of decreasing returns; long-term, technological advance is the main cause of growth, along with capital investments.

[*] PhD, MBA, Faculty of Administration and Business, University of Bucharest (e-mail: **valentine.leoveanu@faa.unibuc.ro**).

[1] Trehan B. (2005) Economic Analysis – Macroeconomics, University of California Berkeley, available at http://eml.berkeley.edu/~webfac/trehan/e100b_sp05/chap4.pdf

[2] Dinu M., Socol C. (2006) From Solow Model to Endogenous Economic Growth – Romania's Reinsertion into Civilization?, Revista Informatica Economică nr. 1 (37)/2006, p.122.

Analysing the interconnections between money and investments, the economic literature highlights three competing models that describe the economy at the macro level[3]. The models try to represent the economic structures that constrain monetary authority in choosing its monetary policy. The three models focus on inflation, unemployment, income distri-bution and growth, whereas monetary policy affects all of them. According to the Neoclassical model, long-term monetary policy can only affect inflation. According to Post-Keynesian model, monetary policy can affect inflation, unemployment, income distribution and growth. In the Neo-Keynesian model, monetary policy affects, too, inflation, unemployment and real wages, but uses a very different economic logic from the rest of the models.

In the paper named "The behavior of aggregate corporate investment"[4] made in 2014, the authors analyze the evolution of the company's total investments during 1952 -2010. Their conclusions express that business investment grow rapidly due to high profits and stocks profitability, but, unlike the standard predictions, are largely uncorrelated with changes in market volatility, interest rates or the risk of default of corporate bonds. At the same time, large investment expenditure predict continued growth of losses for the company concerned and are associated with lower returns on investments, that means too much investment growth coincides with bad news for investors. The analysis shows, too, that the decline in investments due to the financial crisis in 2008 was not unusual, given the drop in GDP and profits in late 2008.

3. The correlation between monetary policy and investment in economic theory and practice

As a function of public authority, the economic stabilization is intended to be achieved by fiscal policy and monetary policy and theoretical concepts are based on the British economist J.M. Keynes studies, showing that a capitalist economy with a decentralized market system can not automatically generate full employment and price stability, but requires deliberate policy of economic stabilization.

Monetary policy is an attribute of national sovereignty, a concept that expresses supremacy within the state and its independence relative to other powers. Within the state power is exercised by public authorities expressly invested by Constitution. Such a public authority is the central bank. In this respect, by the freedom to issue currency, the central bank provides one component of a country's national sovereignty. Waiving such right is both giving up on an attribute of national sovereignty, but also on an instrument of influencing the national economy through specific tools.

Given the economic situation and structure, monetary authorities may intervene on the increase or decrease of the money supply through the use of monetary policy instruments, resulting in two types of monetary policy:

m) expansionary monetary policy - the key issue to be solved is to combat unemployment and recession, so the tools used in the mechanism of intervention are buying treasury bonds, reducing the mandatory reserve rate and interest rate monetary policy. The expected effects are chained by increasing the money supply leading to lower market interest rates and, consequently, to increase private investment in the economy. As a result, aggregate demand increases leading to an increase in real GDP.

n) restrictive monetary policy - the key issue to be solved is inflation, so that the monetary authority sells treasury bonds, increased reserve requirements and interest rate monetary policy. Effects range from a decreasing of supply and continuous by an increase in the interest rate, a decrease of the level of investment which lowers aggregate demand and inflation.

As a general rule, the central bank can target either the price of money, ie interest rate, or the amount of money, but never both, unless the markets are not free and either price or the quantity are fixed by interest rate ceilings or limits on administered lending. Also, when chosen instrument is the interest rate, the central bank may be targeting primarly either only internal stability of currency price or external stability of currency price given by the exchange rate, but never both at once[5].

The effect of monetary policy measures on investment decisions of companies are considered to be the key element in the transmission mechanism of monetary policy. Monetary policy affects investment decisions, on the one hand, the cost of using the capital - a mechanism called interest rate channel, and, on the other hand, changes in companies' financial statements as a result of capital markets imperfections can influence the demand of fixed capital, which highlights balance sheet channel as part of the credit channel.

Interest rates on short-term are considered to be the determining factor of investments. In fact, these interest rates perform three distinct functions: 1. affects the present value of net benefits over time through the discount rate applied; 2. determine the financing cost of bank loans and the rate of return

[3] Palley T.I. (2007) *Macroeconomics and Monetary Policy: Competing Theoretical Frameworks,* New York: Eastern Economic Association, February 23-25, p.4-5.

[4] Kothari S.P., Lewellen J., Warner J.B. (2014) The Behavior of Aggregate Corporate Investment, MIT Sloan School Working Paper 5112-14, disponibil la http://ssrn.com/abstract=2511268

[5] Davies H, Green D. (2010) *Banking on the Future, The Fall and Rise of Central Banking*, Princeton: Princeton University Press, p.24.

demanded by shareholders and 3. has a strong influence on the economic climate, as regards both financial market and the real goods and services market.

Besides the short-term interest rates, there is a range of interest rates on different maturities that are configured according to the monetary policy interest rate and that affect debt management decisions. As aggregate demand is determined by long-term evolution of real interest rates, the term structure of interest rates has an important role in maintaining effective monetary policy starting from the policy interest rate. Indirect influence on the central bank's long-term interest rates stems from the fact that these rates are set by market participants as a weighted sum of the expected short-term interest rates in future rates over which the monetary authority acts directly. According to Fisher's equation, bond yields, as fixed income instruments on long-term, are determined by the component of compensation of inflation demanded by investors for holding long-term securities. This effect can be powered by the term structure of interest rates from the long term to the short term.

The influence of the interest rate channel on investments can be traced in the following manner. A reduction of policy interest rate lowers interest rates on short-term market, so it is expected to increase the investments. Whereas cumulative investments increase the capital stock and open the way to improve production conditions. Production capacity, productivity potential, cost efficiency and quality of production will rise to the extent that the investments were targeted and implemented. As a result, export competitiveness will increase, and consequently employment will increase.

As a component of GDP in aggregate demand, investments have an immediate impact thereof, so that an increase in investment increases GDP, other things being the same. Moreover, since income (GDP) is an important determinant of consumption, its growth will be followed by an increase in consumption, so that there is a positive feedback between consumption and income through investments.

Due to this mechanism, imports will increase and, as a result, the investments based on equipment, machinery and foreign technology will grow also. Thus, they produce an increase in the real interest rates which in turn depends on the deliberate choice of the central bank to increase or not the nominal money supply. Therefore, increasing the real interest rate is an inflection point leading to the compression of investment, which in turn hampers the GDP growth.

Regarding another component of the monetary policy transmission, namely the credit channel, it includes mechanisms by which imperfect financial markets amplify the effects of conventional interest rate. Thus, the cost of external funding is greater than the risk free interest rate, given the existence of information asymmetry which has two forms: adverse selection and moral hazard.

The credit channel implies that an important segment of companies rely on bank loan financing. If monetary policy measures end up restricting banks' ability to give loans, the financial costs of these borrowers will tend to increase, while demand for capital will decrease.

Since bank credit channel implies the existence of a bank as lender, the balance sheet channel means that the debtor's financial situation has an impact on risk premium rate of external finance.

Bank lending to companies, especially smaller ones, are often backed by assets, so a decline in asset prices may lead to difficulties in accessing loans because the low prices of assets reduced net assets of the company. This effect is called the "financial accelerator". Also, the financing of listed companies is easier to achieve when interest rates are low and asset prices are high, so there are favorable financial statements.

The company' capital investment decision may consist of a number of separate decisions, each relating to a project. A capital investment project is a set of assets that are contingent with each other and which are counted together. Assuming that a company consider making a new product, this will lead to a number of actions such as: the purchase of land, the construction achievement, the purchase of equipment necessary for production as well as the increase of working capital (inventories, receivables and cash customers) for operating activities.

Knowing that today's value of a company is the present value of all its future cash flows, it is necessary to understand where from these cash flows come. They come either from the exploitation of assets already in service (assets acquired as a result of any decisions of previous investments) or from future investment opportunities. Considering new investments, they are taking into account only incremental cash flows.

Future cash flows are discounted at a rate which is an assessment of the value of investors' uncertainty on the expected amounts and time of their achievement. Estimating the risk of these cash flows requires a sensitivity analysis about the revenue and expenditure changes in various economic conditions.

The risk of an investment project is reflected in the discount rate, which represents the rate of return required to compensate investors for the risk involved.

From the point of view of investors discount rate is the rate of return required. From the viewpoint of the company discount rate is the cost of capital, ie how much does the company bring additional funding to a monetary unit of new capital.

4. The effects of monetary policy actions on investment

Economic and financial crisis has reduced global potential GDP through two main channels: the restriction of investment and the increase of structural unemployment. First, during the most severe phase of the crisis, investment rates have decreased significantly and financing conditions as well as lending terms and the availability of credit experienced a major deterioration. Intensification of economic and political uncertainties and weak economic prospects have hampered the assessment of investment projects and reduced the expected rate of return on investment. Given the high indebtedness of non-financial corporations in some advanced countries, it becames necessary to reduce it.

IMF specialists presented in the 2015 "World Economic Outlook"[6] a comprehensive study that gives several relevant issues concerning the evolution of private investment in the world, such as:

- the strong contraction in private investment during the crisis and then the subsequent insufficient recovery were firstly a particularity of advanced economies. In this case, private investment fell by an average of 25% since the crisis began comparing the forecast before the crisis, and the return to the previous trend has been reduced. In contrast, private investment in emerging and developing economies slowed gradually, despite the increase during the early to mid-2000s;
- the decrease of investments in the advanced economies included most sectors, so although the contraction was sharper in the case of residential private investment (housing), the non-residential investment-type (business) have a much higher slump represented more than two thirds of the total reduction;
- the decline of overall economic activity following the crisis was the first constraint of business investment in advanced economies, which in turn depend on a number of factors among which the most important is the demand for goods;
- there is some evidence that a number of financial constraints and political uncertainties play an independent role in the investment slowdown in some economies, including the euro area economies with higher lending margins during the sovereign debt crisis in 2010-2011.

In the advanced economies the fixed investments have contracted sharply during the crisis and have not returned to the previous level. Globally, the return of the fixed investment was gradual, but not according to the 2004 and 2007 forecasts.

The private fixed investment also decreased gradually in the emerging markets and developing economies compared to the advanced economies. The slowdown followed a period of rapid growth from the mid-2000s economic boom. Private investment remains broadly in line with the forecasts made at the beginning of the year 2000. In contrast, the forecasts made in 2007 showed a slowdown in the trend. Factors that contributed to this development varied by region, but included falling commodity prices, the effects of contagion on falling demand and tighter financial conditions on internal and external financial markets.

The contraction of credit availability in recent banking crisis has played an important role in reducing fixed investment made by companies. In this regard, the economic branch dependent on banking system for their investments performed at a significantly lower level than the less financially dependent sectors during the banking crises.

By 2009, investments decreased by 50% comparing the previous forecast among the companies with financial dependence on banking sector - almost two times more than those from the less financially dependent. In 2009-2010, the difference between the two groups of companies is statistically significant, but in recent years this gap is reduced until in 2013 it is no longer obvious.

The "World Investment Report 2015"[7] (published in 2014), presented by specialists from the United Nations Conference on Trade and Development (UNCTAD) indicates the decline of global foreign direct investment (FDI) in 2014 with regional variations. While developed countries and economies in transition have experienced a significant decline, FDI inflows in developing economies remain at historically high levels, representing 55% of the total. Developing countries of Asia has experienced an increase of FDI flows while Latin America acquainted a decrease trend and Africa remained linear.

- FDI flows of developing countries fell by 28% to $ 499 billion. FDI inflows to the United States fell to $ 92 billion (40% of the level of 2013). FDI inflows fell in Europe, too, by 11% to $ 289 billion. In some European economies, FDI inflows declined as is the case in Ireland, Belgium, France and Spain, while they increased in the UK, Switzerland and Finland.
- UNCTAD experts believe that the volatility of the business environment in developed countries usually determines transnational companies (TNCs) to remain cautious regarding their investment plans in these countries. However, risk factors such as low level of predictability of global economic governance, a possible crisis of foreign debt expanded fiscal imbalances and financial distress in some developed countries, higher inflation and

[6] International Monetary Fund (2015) *World Economic Outlook, Uneven Growth. Short and Long Term Factors*, World Economic and Financial Surveys, Washington: IMF, April.

[7] United Nations Conference on Trade and Development (2015) *World Investment Report 2015*, Geneva: UNCTAD.

visible signs of overheating in major emerging economies may hinder the recovery of FDI flows in the current period. Typically, acquisitions and mergers are more sensitive to financial conditions than greenfield projects.

Regarding the influence of monetary policy on investments in Romania it is important to highlight some characteristics of Romanian banking sector:

a) the transmission mechanism to the economy is effective when the monetary policy interest rate changes are perceived as strong signals of monetary authority, the central bank;

b) in a highly dollarized financial system the central bank has only a limited control over the market interest rates in local currency, depending on the weight and private loans and deposits in foreign currency. According to the IMF, the factors of dollarization of the economy in Romania have been well documented and include the interest differential, the lack of yield curves in lei, the financing in euros from parent banks and the expectations regarding the adoption of the euro;

c) low development of financial markets, offering a reduced variety of investments, is an important source of dollarisation / euroisation, so a weak interbank market may lead to the persistence of excess liquidity. In turn, this reduces significantly the effectiveness of monetary policy interest rate. The excess of the liquidity in the banking sector is well-known and reappears periodically in Romania;

d) the fact that the stock market and the bond market are underdeveloped and investment opportunities in the long term are scarce conduct to a decreased ability to absorb liquidity in the absence of the existence of a variety of financial securities in order to determine an increased competition between financial products with tight margins of profit, and thus the interest rates in the market to be more responsive to changes in monetary policy;

e) the banks with vulnerable balance sheets may react to an expansive monetary policy by consolidation of their liquidity rather than through credit at lower interest rates. Banks that are more vulnerable financially can use the additional liquidity buffers to increase the liquidity and capital reserves. A change in policy rate may therefore have a very limited impact on market rates. Essentially, new loans are crowded by the presence of potential bad loans in the balance sheet. Romanian banking system has maintained solid capital reserves throughout the financial crisis, but bad loans have increased considerably in recent years.

5. Conclusions

The final conclusions related to this research related to the impact of monetary policy on global investment performance in the 2008-2014 period are presented below:

- the monetary policy measures taken by the central authorities at national level and at the system level (Eurosystem and FED) during and after the global financial crisis were aimed above all to save the financial mechanisms and institutions from an functional outbreak due to blockages that appears on different segments of financial markets - the lack of liquidity in the money markets or the imposibility of trading the so-called toxic assets on capital markets; after ensuring the relative liquidity of the markets, monetary authorities directed their actions to support the transmission mechanism of monetary policy to the real economy;
- following the financial crisis, the authorities in most countries have used monetary policy to stimulate aggregate demand firstly, by cutting quickly the policy rate and secondly, to focus on taking unconventional measures to support the functioning of financial markets, such as supply of liquidity to banks, expansion of the money supply through quantitative easing and by creating excess reserves and direct interventions on large segments of the credit markets;
- the decline of the cost of capital in post-crisis period was primarily driven by a collapse in demand for investment funds in advanced economies;
- as central bank interventions have become less effective, prolonged accommodative monetary policies produce different side effects, such as encouragement of risk-taking tendency, accumulating financial imbalances and distortions in pricing on the financial markets;
- a significant side-effect of the policy measures derived from the contagion effect of monetary policy worldwide. Persistently low interest rates in the major advanced economies have put an increasing pressure on exchange rates and destabilized capital flows in emerging market economies and more advanced small economies.

The conclusions highlighting the author's discussion of central bank monetary policy transmission mechanism and policy impulses to the Romanian economy are:

- there was no correlation between the volume of money in circulation and the level of nominal GDP, so that the needs of the economy are covered with the necessary money (NBR reports);
- a rising level of NPLs was recorded which entailed the granting of new loans;
- the credit channel transmission was slow and information asymmetry involved significant costs and demanded the creditworthiness of the borrowers;
- an essential issue for the Romanian economy - as it is revealed at the European and international level - is how the actions of economic policy switches between, on one hand, the budgetary, fiscal and income policies led by the government, and, on the other hand, the mopnetary policy led by central

bank; here the problem mainly rests on the political environment and Romanian politicians, who has often acted out of step with the monetary authorities and even contradictory at parliamentary and government level;

– adopting the euro as national currency continues to be an important issue for Romania; this objective requires giving up national currency and monetary policy, which implies: structural adjustments are possible to encumber the level of economic activity and employment in an economy characterized by limited flexibility; increase the risk of asymmetric shocks in the absence of synchronization of business cycles in Romania with the euro area;

– the need of Romanian economy to catch up with the developed countries of the EU justifies the question of compatibility with the convergence criteria for euro regarding the budget deficit within the limit 3% of national nominal GDP, and keeping the economy on an inflationary trend of 2% in the euro area; these conditions could be an impediment to the future development of Romanian economy. The need for an accelerated development - involving mobilization of intensive inputs that lead to the creation of new production capacity with new technologies, the emergence of new economy branches with leading role in the Romanian economy and the decline of the exceeded economic sectors, conduct to an objectively emergence of a structural inflation; as such, it is possible a compliance between an accelerated development of the new EU member with a government deficits exceeding 3% of GDP and an inflation around 2%?

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