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ACTIVITY OF THE CENTRAL BANK IN THE CONDITIONS OF DISTURBANCES ON FINANCIAL MARKETS

1. Introduction

The mission of central banks is managing inflation expectations of all participants in the market. The strategy of performing that mission is autonomously specified by the central bank of each country or common currency area. The performance instruments are also selected in a variety of ways. Thus, the development of a common strategy of pursuing monetary policy by the central bank may be easily criticised. Nevertheless, there were such attempts, especially after 1990. A discussion on the activity of central banks, referred to in the literature as "rules versus discretions", began at that time. Certain conclusions were drawn from the discussion, namely that in their monetary policy central banks should:

a) apply the formerly announced rules of conduct,

b) apply the forward-looking principle, which means that the decisions of monetary authorities are connected with inflation and GDP forecasts and not with the current economic data,

c) care for the bank's reputation by applying the principles of clarity, independence and responsibility in monetary policy.

At the time when a financial crisis occurs, the activity of the central bank often needs to be non-standard.

The purpose of the present paper is the attempt to specify standard and non-standard actions of the central bank in the conditions of disturbances on financial markets.

In the relevant literature the notions of "financial crisis" and "banking crisis" are defined in a variety of ways. Undoubtedly, the notion of "financial crisis" is broader than "banking crisis," although some authors use the terms interchangeably. Therefore, the expression "disturbances on the financial markets" have been used

both in the title of the paper and in specifying the purpose of the paper, so that the above controversy is avoided.

In order to fulfil the purpose of the paper:

- firstly, the theory of financial crises will be briefly characterised;
- secondly, the common way of pursuing monetary policy, frequently named "orthodox", will be presented;
- thirdly, the concept of the actions of the central bank (standard and non-standard) in the conditions of disturbances on financial markets will be presented.

2. Theories of financial crises

It is normally assumed in the relevant literature that the financial crisis is composed of banking, currency and debt crises.

The three types of financial crises could be described in short as follows.

a) Banking crisis is a situation where a significant part of the banking sector loses its security. Symptoms of the crisis are the rise in doubtful receivables and occurrence of losses in the banking sector. The International Monetary Fund defines the banking crisis as a real and potential run on the banks or their bankruptcy, which cause suspension of payments by banks or demand help form the government on a large scale in order to avoid that ["Financial crises..." 1998, pp. 74-75].

b) Currency crisis is defined as a situation where, as a result of a speculation attack, the currency is strongly devalued or the currency's value is defended by using currency reserves or increasing the level of interest rates ["Financial crises..." 1998, pp. 74-75].

c) Debt crisis is a situation where the country does not service its government or/and private debt ["Financial crises..." 1998, pp. 74-75].

According to F.S. Mishkin, two approaches to perceiving financial crises have developed in the relevant literature:

1) narrow, created by monetarists,

2) broad, initiated by Ch. Kindleberger and H. Minsky.

Monetarists, above all M. Friedman and A. Schwartz, associate the financial crisis with banking panic. A considerable emphasis has been put on the fact that the banking panic causes disturbances in money supply, which in turn leads to the decrease in economic activity. Instances where in the face of a considerable fall in assets prices and increase in business entities' bankruptcy rate there are no premises for banking panic and decrease in money supply are not regarded as financial crisis by monetarists. The approach presented by monetarists focuses solely on the influence on money supply, disregarding other phenomena accompanying financial crises [Mishkin 1991, pp. 1-2; Iwanicz-Drozdowska 2002, p. 37].

The latter approach defines the notion of financial crisis in a broader sense. In this approach the financial crisis is a situation where one of the following factors, or their combination occurs: decrease in assets prices, bankruptcies of large financial and non-financial institutions, deflation or inflation decrease and disturbances on the foreign exchange market. Contrary to the monetarist convictions, more space for the state's interference, which ought to occur, is provided here, since all the enumerated events have a negative impact on the economic effectiveness (cf. [Mishkin 1991; Iwanicz-Drozdowska 2002]).

On the basis of the latter approach, F.S. Mishkin created a model of financial crisis, called the "triad model." The model, which accounts for the limited interference of the state, is based on three key notions:

- information asymmetry,
- negative selection,
- moral hazard.

Information asymmetry. This model assumes that the financial market transactions are concluded in the conditions of information asymmetry, i.e. the financially active party does not have all the information needed to make a proper decision. The party applying for financial resources has the information at its disposal.

Negative selection. Negative selection involves business entities engaging in investments with a large probability of losses, or, aware of the shortage of information, refraining from undertaking investments, even those of a minor risk. Such a situation on the market may occur that entities in a good condition do not apply for funds, considering the risk premium too low, whereas among entities applying for funds such ones remain that are characterised by aggravated risk, to which the demanded risk premium is attractive [Mishkin 1999, pp. 7-12].

It is worth emphasising here that high interest rates increase the probability of negative selection. Therefore, it is not surprising that central banks lower their interest rates in the conditions of disturbances on financial markets.

Moral hazard. Moral hazard occurs following the granting of financial resources. The party being a borrower may engage in undertakings undesirable from the lender's point of view (e.g. a bank), which increase the probability of financial troubles.

The Mishkin's triad model explains the occurrence of financial crises with the increasing scale of negative selection and moral hazard. It should be remembered, however, that everything begins with the information asymmetry.

A slightly different model of financial crisis is presented by H. Minsky. In this model, the path leading to the financial crisis is the following.

1. Changes caused by a variety of factors, e.g. crop failure or record-breaking harvest, unexpected financial success, political events, popularisation of an invention, etc. occur in the macroeconomic environment. That results in some branches of the

economy attracting more financial resources, as business entities investing in those branches expect larger profits than in other branches; all that leads to the boom.

2. The boom is driven by loan expansion, which leads to the increase of interest rates and prices with time.

3. Overheating of the economy is related to the speculation for a price rise, which restricts behaviours rationality and causes the occurrence of the assets price bubble.

4. Financial hiccup is a period between the overheating and breakdown of the economy; a part of the participants of the market becomes aware that sell-off of assets may take place, which causes the fall in prices.

5. The breakdown being a direct symptom of the financial crisis consists in the rapid fall in prices, and it may also lead to panic [Iwanicz-Drozdowska 2002, pp. 40-41].

The foregoing theory may be treated as a scenario of a rapid boom and bust cycle.

The above presented theories of the financial crisis formed in the 1990s and earlier have not lost their validity and may be used in the case of the current crisis of 2008-2009. The purpose of the paper is not the analysis of the theories of financial crises, but the activity of the central bank in such conditions in order to present the activity of the central bank in the conditions of disturbances on financial markets in the following point.

3. Common way of pursuing monetary policy and its modifications in the conditions of disturbances on financial markets

The monetary policy in the modern economy is conducted by central banks based on provisions arising from legal acts of the greatest significance, i.e. the Constitution and Acts. The objectives and responsibilities of the central bank are normally described as “price stabilisation” or “maintaining the purchasing power at a stable level.”

The most frequently applied strategy of reaching targets by central banks today is the strategy of direct inflation targeting (DIT), in which the inflation target aimed at by the given central bank in the average period, i.e. around 6-8 quarters, which means 2 years, is set as a point or a spread.

W.R. White noticed that the monetary policy is pursued in diverse manners in individual currency areas. Thus, the uniform description of the monetary policy for all countries is extremely difficult to construct, as it will become an easy subject to criticise. Furthermore, the manner of pursuing the monetary policy is in practice subject to endless evolution. Central banks **react to their own mistakes** [emphasis mine – M.N.], to the unexpected side effects of their previous actions and to new scientific research [White 2002].

Nevertheless, taking it all into consideration, W.R. White distinguishes five elements of the “orthodox,” that is, common way of pursuing the modern monetary policy:

1) the primary objective of the monetary policy should be maintaining inflation at a low positive level,

2) the basic instrument to reach the inflation target is the short-term interest rate, on which the central bank has a direct impact,

3) the inflation forecast, the course of which constitutes the basis for pursuing the interest rates policy of the central bank, is primarily concerned with the impact of the demand gap and unemployment gap on inflation,

4) assets prices play as a significant role in pursuing the monetary policy as they influence the demand gap and, subsequently, inflation,

5) pursuing the monetary policy according to the four principles mentioned above means the necessity to make the domestic currency exchange rate more flexible [White 2006].

As admitted by W.R. White himself, there are numerous arguments in favour of changing the so-defined manner of pursuing the monetary policy by central banks. The arguments are as follows:

- firstly, in the situation where the monetary policy concentrates exclusively on the prices stability, the central bank counteracts the procyclicity of the financial system in the process of accelerating the growth only to the extent to which it leads to the accumulation of the inflation pressure;
- secondly, the asymmetric reaction of the monetary policy to the later growth downturn (unless the decisions of the central bank are quickly reversed) may facilitate the occurrence of new types of inequalities;
- thirdly, if the effects of the beneficial supply shocks are additionally enhanced with mild loan conditions, such a monetary policy may in fact exhibit procyclic tendencies in the financial system;
- fourthly, pursuing a similar policy in successive financial cycles may allow to maintain the economic growth and prices stability for a longer period, but it may also considerably increase the risk of serious disturbances [White 2006].

4. Standard and non-standard actions of central banks in the conditions of disturbances on financial markets

The main principles of pursuing the monetary policy by central banks have been presented above and the arguments in favour of potential changes in the so-defined "orthodox" way pursuing the monetary policy have been indicated. The action of the central bank described in point 3 may be considered a standard one.

The discussion on the way in which central banks should shape the monetary policy in the conditions of disturbances on financial markets and in which they can prevent such disturbances will be presently described. The problem will be expanded below, as here the issue of the monetary policy based on the demand gap, and more specifically, on the impact of the demand gap on inflation will be recalled.

Permanent and temporary supply shocks have an impact on the potential production. Depending on the type of supply shock, the central bank undertakes relevant actions. In the case of the permanent supply shock the monetary policy of the central bank ought to depreciate the shock by changing the real interest rate, which is aimed at adapting the aggregated demand to the changed value of the aggregated supply. The positive or negative demand gap arising here must be eliminated by the central bank in such a way that the changed nominal short-term interest rates lead to the decrease of the current inflation to the direct inflation target of the central bank within the average period.

In the case of the temporary supply shock, the central bank will not depreciate the shock, since the adapting processes present in the economy will cause after some time, not longer than 6-8 quarters, that the current inflation (CPI) will return to the direct inflation targeting (DIT).

Hence the conclusion that, in the case of the temporary supply shock the central bank, in the author's opinion, should not intervene. The primary difficulty here is the assessment of how to distinguish the persistent permanent supply shock from the temporary supply shock. It can be argued that the essential problem is the change of the potential GDP. Therefore, the analysis of the substance of the potential GDP, its measurement, calculations of the deviation of the real GDP from the potential GDP will permit the right shaping and pursuing the monetary policy, since the sign of the demand gap will be properly determined and the direction of closing the gap will be known every time.

How should the problem be examined in the conditions of disturbances on financial markets? It seems that the following principles should be followed when shaping and pursuing the monetary policy in the conditions of the crisis on the markets:

1. The central bank is not exempt from fulfilling the assumed inflation target in the average period.

2. In the conditions of crisis the projections of inflation and GDP in the forecasting models may be more uncertain than in the prosperity phase, which should be taken into account when making decisions by the central bank.

3. In that situation the monetary policy may be pursued in a more stable or more iterative manner depending on the changing dynamics of macroeconomic phenomena. The tendency of the central bank's actions should be determined by the proper bias.

4. The changing GDP forecasts may repeatedly change the sign of the demand gap in short periods, which indicates that the monetary policy must still be forward-looking and not only respond to the current macroeconomic data.

5. The main "lodestar" of the monetary policy in the financial crisis phase should be the real interest rate. In the author's view, the real interest rate ought to be close to the direct inflation targeting (DIT). Thus, the central bank does not introduce other targets than DIT.

6. In a country like Poland, which intends to join the common currency area, in the phase of the crisis the monetary policy must fulfil all the objectives related to meeting the criteria of joining the area.

7. The labour market should be scrutinised and changes in the unemployment gap should be examined. The latter is taken into consideration in the risks balance of factors increasing and decreasing inflation and thus it influences the decisions of central banks.

Incorporating those principles in the actions of the central bank in the conditions of disturbances on financial markets forces central banks – including NBP – to undertake both standard and non-standard actions in their practice. The standard actions have been described above, although without indicating the following primary instruments of pursuing the monetary policy:

a) interest rates: reference, lombard, deposit, rediscount,

b) open market operations.

Currency interventions of the central bank may be also included in the instruments of pursuing the orthodox monetary policy, although a number of economists state that it is a non-standard instrument which counteracts disturbances on financial markets.

The following occurs in the first phase of the financial crisis in the banking sector:

- shortage of liquidity, that is financial resources for the loan activity, which most frequently results from the trust crisis on the interbank market and the lack of cash turnover on that market,
- shortage of the medium- and long-term loan money,
- diminished security of banks reflected in the lack of equity, which lowers the solvency ratio.

In such a situation the central bank attempts to help the sector of commercial banks by undertaking non-standard activities, such as:

a) repo operations which allow commercial banks to raise loans in the central banks on government securities pledge for the period of 6 months and longer,

b) FX Swap operations, also called currency swap, in which e.g. foreign currencies sought by customers on the loan market may be borrowed from the central bank on złotys pledge,

c) the prior NBP bond repurchase from commercial banks, which increased their liquidity by PLN 8.2 billion,

d) optional reduction of the statutory reserves rate, which would also result in the liquidity rise in the commercial banks sector.

Providing liquidity to commercial banks is certainly a non-standard activity of the central bank and in the relevant literature it is referred to as *quantitative easing*. Such actions ought to be undertaken extremely cautiously as “pushing” a too large amount of money to circulation may cause the depreciation of the domestic currency exchange rate in relation to foreign currencies today, and the inflation increase in the future.

It needs to be emphasised here that during the struggle with the financial crisis the government may also contribute to increasing liquidity in the banking sector by e.g. recapitalising commercial banks, repurchasing assets or shares of commercial banks, granting a guarantee to banks raising loans on the interbank market, etc.

5. Conclusions

One of the greatest challenges to the modern world of finance is ensuring security to financial systems, including banking ones, whereas in the case of its disruption – efficient application of the stability restoring instruments.

The paper has presented standard and non-standard activities of the central bank with non-standard actions analysed in the aspect of the central bank's activity in the conditions of disturbances on financial markets.

The analysis of the overall activity of the central bank in the conditions of disturbances on financial markets proves that in such conditions applying solely the standard actions will not restore financial stability, and thus the central bank will not achieve its constitutional objective to "care for the value of the domestic money" and "prices stability." In such circumstances it is necessary to undertake non-standard actions, most frequently called *quantitative easing*.

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