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Monetary policy of the Federal Reserve System from the perspective of *exit strategies*[1]

Abstract

Central banks, after the experience of the global financial crisis, are now starting the implementation of the *exit strategies*, which are the process of normalization of monetary policy. The pace of monetary policy normalization process depends on the market reaction to central bank's decisions and macroeconomic conditions, in which they will be implemented. The main aim of the study is to present the principles of the *exit strategy* of the Federal Reserve System (Fed), on the background of the changes that have occurred in the United States within the monetary policy during the global financial crisis.

Keywords: *exit strategy*, monetary policy normalization process, global financial crisis, Federal Reserve Bank, non-standard monetary policy.
JEL Classification: E52, E58, G01.

Introduction

Central banks of the largest countries in the world are now starting the implementation of the *exit strategies*, which are the process of normalization of monetary policy. Nowadays, the primary objective of central banks' activities is to restore monetary policy to framework before the crisis. At the same time, central banks are faced with the challenges of the need to absorb the liquidity, provided to commercial banks during the crisis, in order to prevent inflation and support economic recovery. The pace of monetary policy normalization process depends on

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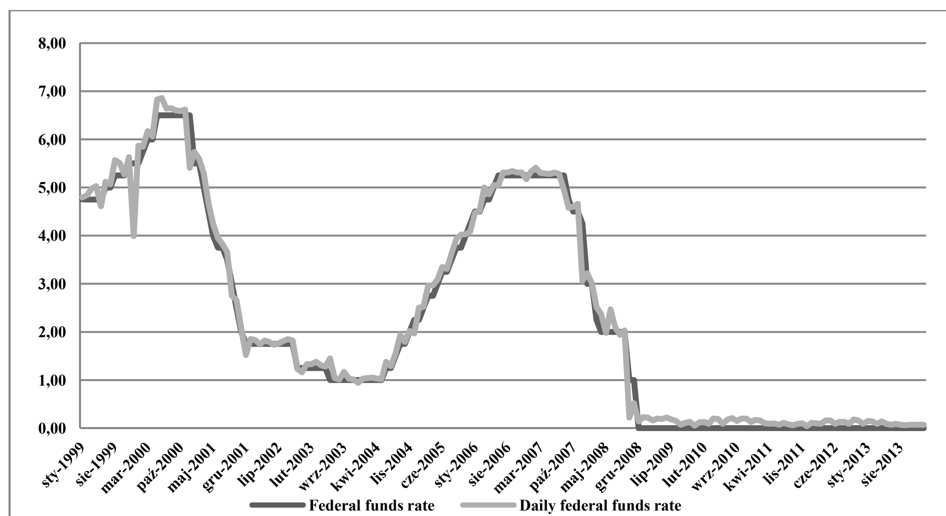
the market reaction to the central bank's decisions and macroeconomic conditions, in which they will be implemented. Therefore the process of monetary policy normalization is extremely difficult and complicated.

Especially that non-standard and unconventional monetary policy, implemented during the global financial crisis has never been implemented in any country on such a large scale [Chari 2010]. The main aim of the study is to present the principles of the *exit strategy* of the American central bank – the Federal Reserve System (Fed), on the background of the changes that have occurred in the United States within the monetary policy during the global financial crisis. The study used the following research methods: literature studies, document analysis method, synthesis method and cause and effect method.

1. Preface to the discussion

During the global financial crisis, non-standard and unconventional monetary policy of the Federal Reserve System was aimed to increase the liquidity of the banking sector, reducing the cost of lending, preventing the loss of liquidity of the banking institutions, which might lead to their insolvency or even bankruptcy. From the macroeconomic point of view, monetary policy focused on supporting the economy and counteracting recession. The first instrument implemented by the Fed immediately after the outbreak of the financial crisis was the Zero-bound interest rate policy. At that time Federal Reserve System was the first central bank in the world, which decided about rapid and significant reduction of main interest rates [www3]. In December 2008 Federal Open Market Committee (FOMC) from the Federal Reserve Board lowered the base rate – federal funds rate, to the level of 0,00%-0,25%. Federal funds rate has never been reduced below 1% so far. These activities were associated with rapidly worsening problems of liquidity on the interbank market and the perspectives of recession of the American economy. Figure 1 shows the changes of the basic interest rate of the American central bank: the federal funds rate and the daily federal funds rate in the years of 1999-2014.

Figure 1. Federal funds rate and the daily federal funds rate in the United States in the years of 1999-2014 (in percent)



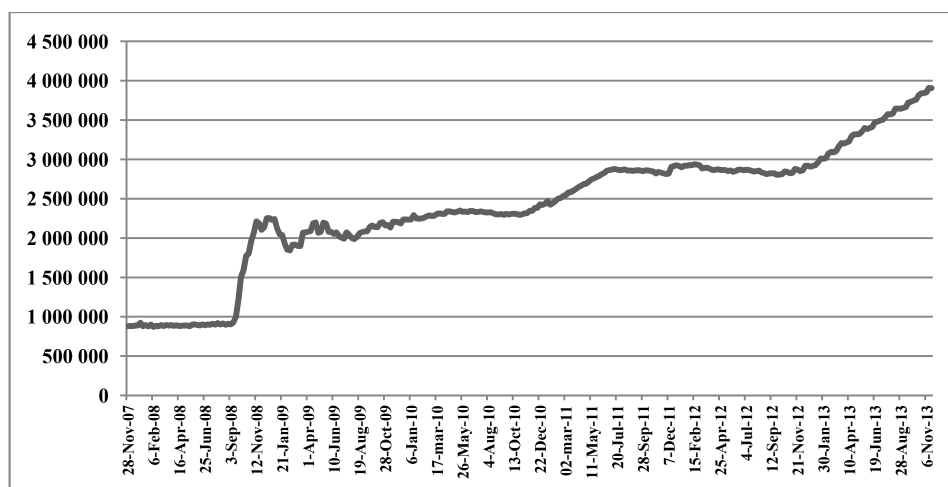
Source: based on Federal Reserve System data: [www7; www8].

In addition to lowering main interest rates, there were made changes in the existing FED's instrumentation. Since October 2008, there have been implemented the interest rate of funds, transferred from depository institutions to the central bank. Central bank paid interests not only for the amount of the *required reserves*, but also for additional funds – *excess reserves*, held in accounts in the monetary authority [*Domestic Open Market Operations During 2009*, 2010, p. 4]. In December 2008 interest rate was set at the level of 25 basis points.

During the spread of the global financial crisis, decision on decreasing the base interest rate to almost zero-bound level, was not the only one non-standard Fed's initiative. Central bank of the United States during the global financial crisis implemented *Quantitative Easing Policy* (QE), by special asset purchase programs in three phases. Although Quantitative Easing policy was also used in other countries (such as in the UK), the scale of its use in the United States was the largest in the world. The result of unconventional assets purchase from commercial banks was "swelling" the Fed's balance sheet. Changes in the balance sheet of the central bank concerned both the size and the structure of assets and liabilities of the monetary authority. After implementation of *Quantitative Easing* in the United States, the total assets of the central bank in 2010 reached the level close to 2.5 trillion USD, while before the crisis it was below 1 trillion USD [Lenza, Pill and Reichlin 2010, p. 25]. The portfolio of Treasury securities in the Fed's assets increased by 300 billion USD and amounted to 777 billion USD (at the end of 2009). In August 2013, Fed's total assets reached 3.5 trillion

USD (Figure 2), which accounted for approximately 21% of the nominal GDP of the United States. Historically, the size of the central bank's assets stood at approximately 6% of GDP (just before the outbreak of the global financial crisis – August 16, 2008, it was 6.2% of GDP) [Kliesen 2013]. The biggest impact on the increase of the total assets was the appearance of *Mortgage-Backed Securities* (MBS) in the balance sheet. They are securities, which collateral are mortgage claims. Their value reached approximately 1 trillion USD, which indicates how important for the American central bank was financing the real estate market.

Figure 2. Total assets of Federal Reserve System in the years of 2007-2013 (in mln USD)



Source: based on Federal Reserve System data: [www5].

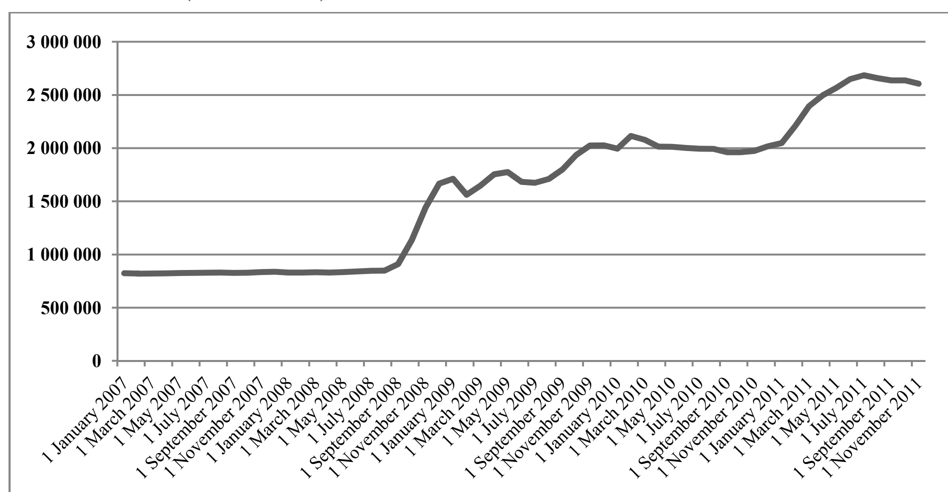
For decades, the assets of American central bank consisted almost exclusively of Treasury securities. However, since the end of 2007 this structure underwent significant transformations. There was a decline in the share of Treasury securities in relation to other financial assets. Four main categories began dominate in the bank's assets:

– short-term loan programs, ensuring the liquidity of financial institutions, such as: banks, investment funds, brokerage houses;
– targeted credit programs, including loans for non-financial institutions, against credit markets dysfunctions;
– Treasury and Government-Sponsored Enterprises securities;
– emergency loans, protecting against financial institutions' bankruptcy.

Asset purchase programs, carried out by the central bank of the United States, were financed with reserve money. In this case, non-standard monetary policy instruments, by influencing on the size of central bank reserves, may also affect monetary base (M0) and the money supply. Figure 3 shows the develop-

ment of the monetary base in the United States during the banking sector instability of XXI century. Since the outbreak of the global financial crisis (since September 2008), there was observed a significant increase in the monetary base, the money directly issued by the central bank. Therefore, Quantitative Easing policy causes the increase of bank reserves, and equally increase of monetary base. American monetary base in the period of 2007-2011 increased more than tripled (from the level of 824.4 billion USD to 2.61 trillion USD).

Figure 3. The size of monetary base in the United States during the global financial crisis (in mln USD)



Source: based on: Economic Research Federal Reserve Bank of St. Louis data: [www9].

2. *Exit strategies* of Federal Reserve System

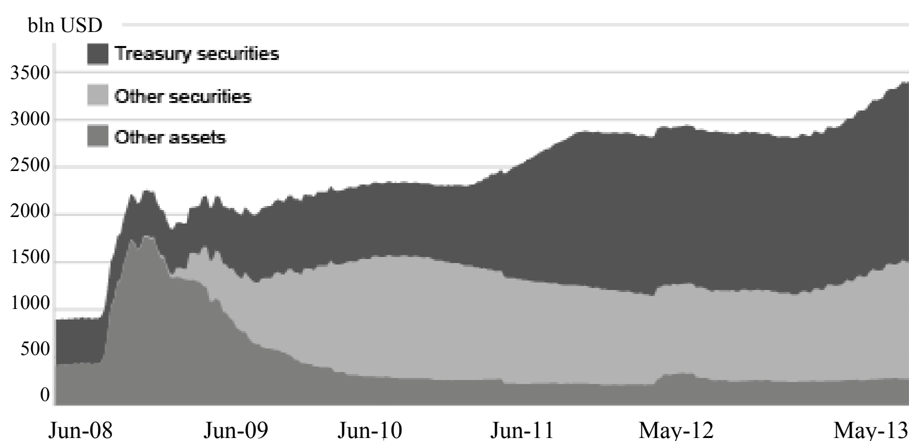
Since the beginning of the global financial crisis in September 2008 the Federal Reserve System has supported the economy and financial markets, by maintaining interest rates at almost zero-bound level and carrying out extraordinary asset purchases, in order to affect the long-term market interest rates. However, at the end of 2013 American central bank decided about the completion of the asset purchase programs, due to the fact that returned positive economic growth of the United States. So that the Fed began to implement the long-awaited *exit strategies*, which are the process of normalization of monetary policy [www4].

In June 2011 Federal Open Market Committee (FOMC) has published the *Exit strategy Principles* [www6]. After that, in June 19, 2013 Ben Bernanke at a press conference once again presented a detailed process of *exit strategies* [Transcript of Chairman Bernanke's Press Conference, 2013]. It was determined that in the context of the normalization of monetary policy the Fed will occur:

- gradually restoration of the amount of main interest rates to pre-crisis levels,
- changes in the size and structure of the central bank's balance sheet as a result of withdrawal from the asset purchase programs, implemented under unconventional *Quantitative Easing* policy and special loan programs for banks, to re-start the flow of credit.

In *Exit strategy Principles* assumed that in order to achieve the above objectives, the process of monetary policy normalization will be followed in five stages. In the first stage, there will be a reduction or total withdrawal of the central bank from asset purchase programs (end of 2013–half of 2014). So far, the Federal Reserve System has purchased 45 billion USD of Treasury securities and 40 billion USD of Mortgage-Backed Securities (MBS) each month. In the initial phase, the Fed decided to reduce the value of monthly purchases of up to approximately 25 billion USD of Treasury securities and 20 billion USD of MBSs. During this period the size of central bank's balance sheet will continue to grow, but at a much slower pace (compare Figure 4). It is also assumed that if the American economy will continue the economic growth, the value of additional assets purchases will be reduced until the complete withdrawal this instrument from Fed's policy. Some economists believe that the full completion of the assets purchase by the Fed means a explicit tightening of the monetary policy of the United States, which will have further consequences in future standardization activities. However, others think that this should be understood only as the end of the process of *Quantitative Easing* of monetary policy of the United States – as one of the instrument of the central bank.

Figure 4. The size and structure of the assets of the Federal Reserve System in the years of 2008-2013 (in bln USD)



Source: Federal Reserve Board, Haver Analytics, T. Rowe Price: [www1].

The second stage of *exit strategies* has been planned for mid-2014. It was concerned the completion of reinvesting capital of the Federal Reserve System, generated from the maturity of the held securities (mainly MBSs) and rolling process of Treasuries. Cessation of reinvesting capital from matured securities seeks to begin to decrease of Fed's balance sheet. Thus, it will conducive to achieve one of the main *exit strategies*' objective – the return the central bank's balance sheet to pre-crisis size.

The third stage will involve changes in the *Interest Rate Guidance* – end of 2014–beginning of 2015. However, according to the June 2011 *Exit strategy Principles*, the Federal Reserve System will make changes in the *Interest Rate Guidance* only when it cessation of reinvesting incomes from the matured securities in its assets. When *Exit strategy Principles* was formed, *Interest Rate Guidance* was not defined in relation to macroeconomic conditions. In December 2012 American central bank reformulated *Interest Rate Guidance*, indicating that it expects to maintain the base rate – the Fed funds in the range of 0.00%-0.25% until achieving the following macroeconomic objectives:

– the unemployment rate falls below 6.5%,
– inflation in the horizon of 12-24 months will amount to no more than 2.5%,
– long-term inflation expectations will not change.

Macroeconomic forecasts for the economy of the United States indicate that the unemployment rate falls below 6.5% at the beginning of 2015. However, if this objective would be achieved in the fourth quarter of 2014, *Interest Rate Guidance* will be changed by the end of 2014. This illustrates that the Fed intends to withdraw the Zero-bound interest rate policy and start raising interest rates in the nearby term.

The fourth stage, scheduled for the end of 2014–beginning of 2015, will include conducting open market operations (*reverse repo*) by the Fed and accepting term-deposits in place of reserve money. The unconventional expansion of central bank balance sheet over the last six years, from the level of less than 1 trillion USD (in 2008) to the value of 3.5 trillion USD (in 2013) was financed from reserve money of monetary authority. Excess liquidity, that was formed on the interbank market, has caused the reduction of FED's control over interest rates, which are the main instrument of monetary policy tightening. According to the *Exit strategy Principles*, these operations will be implemented in the same time as the change of *Interest Rate Guidance*.

Finally, fifth stage (first half of 2015) will be included the increases of short-term interest rates. In the previous cycles of monetary tightening, the Fed used the base rate as the main instrument of monetary policy. After the global financial crisis, due to the unconventional volume of liquidity, provided to the banking sector, the Federal Reserve System will focus on increasing the level of

interest rates, in order to tighten monetary policy. It is expected that these increases will be gradual. It was planned that by the end of 2015 the federal funds rate will increase to approximately 1.0%. The American central bank emphasizes the fact that this policy reflects "balanced approach", which is consistent with the Fed's long-term objectives – which are maximizing employment and maintaining the inflation rate at the level of 2% [Grostal, Niedźwiedzińska and Stawasz 2012]. At the same time, higher interest rates should affect increase of profitability of money market investors, as well as higher interest rates paid by borrowers. So if the limit level of the unemployment rate of 6.5% will be achieved in the fourth quarter of 2014, it will impact on decisions of the central bank to start the policy of increases of interest rate, next to a broader assessment of the flexibility of the labor market and inflation risk [www1].

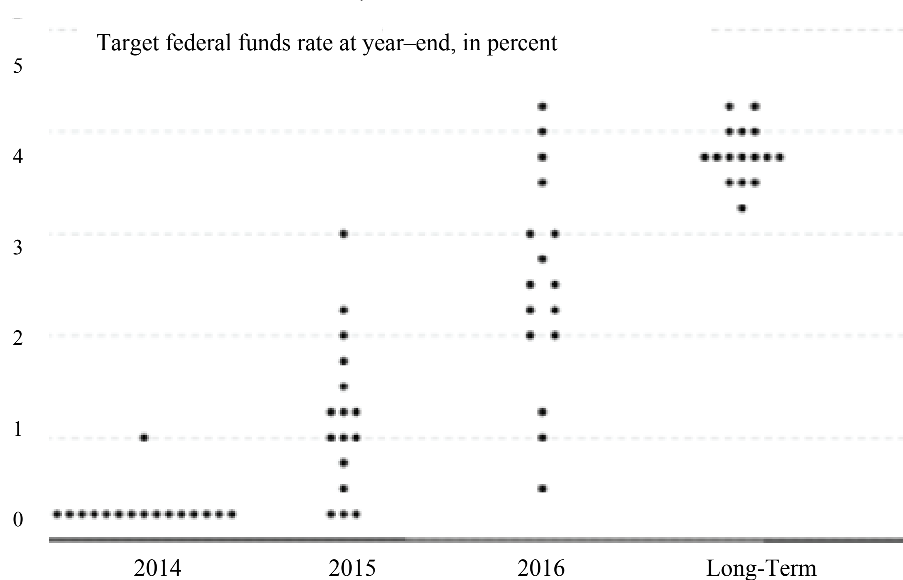
3. Perspectives

Taking into account the current position of the Federal Reserve System, it may be conclude that the central bank is ready to effectively and timely implement *exit strategies*. They are directly related to the form of balance sheet management of the central bank. To some extent, reserves, held by the Fed, will decrease when financial conditions will improve, which at the same time will cause that banks will be able to meet their liquidity needs on the market – outside the central bank. Janet Yellen of the Federal Reserve System, indicates that the process of increasing the level of interest rates can start within 6 months after the end of *Quantitative Easing* policy. This means that it is real that growths may take place from April 2015. On the other hand, lower-than-expected economic growth in 2014 (at level of approximately 2%) may result that this decision would be delayed. Although conditions on the American labor market have improved, the growth of wage has still remained weak.

According to Fed's Summary of Economic Projections (SEP), the base interest rate at the end of 2015 would be at the level of 1% (see Figure 5) [Alexander 2014, p. 2-4]. The outlook for 2016 is particularly interesting. The range of forecasts of Federal Open Market Committee (FOMC) members ranges from 0.5%-4.25%. This indicates that even the Fed's members are very undecided, what kind of policy the central bank should carry on in 2016. Nevertheless, as many as 13 of the 16 members indicate that the federal fund rate should be above 2%, so that in the coming years the Fed intends to continue the policy of increases in interest rates. In turn, long-term forecast indicates that the FOMC has a strong belief that short-term interest rates should rise to 3.25%-4.25%, with a median of the level of 3.75%. So it is likely the fact that the policy of increase of interest rate will be implemented by the Fed in the coming years. Despite this, the full process of mone-

tary policy normalization requires a number of years before the policy's framework will return to pre-crisis condition.

Figure 5. Forecasts of the amount of the basic interest rate of the Federal Reserve System



Source: Federal Reserve, TD Economics. Forecast by Federal Reserve; C. Alexander [2014, p. 2].

Conclusions

Time and pace of the monetary policy normalization of the United States depends largely on the condition of the American economy. This refers to instruments, aiming at both changes in the Fed's balance sheet, as well as increases of interest rates. The implementation of *exit strategies* also depends on the market reaction to the occurred changes. If the market reaction to increases of interest rates will be toned down, the volume and pace of increases of main interest rates will be high. However, if the market will react strongly to even minor increases of interest rates, the process of increasing of the federal funds rate will be gradual. At the same time, the central bank's balance sheet does not begin to decrease until the time, when interest rate does not start to increase [www2].

Summarizing the above considerations, it should be clearly stated that assuming the continuation of the positive growth of the US economy, the Federal Reserve System should start implementing the *exit strategy*. This will cause the return to standard monetary policy, without the need for unconventional instruments, which have a strong impact on the balance of the central bank.

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[www6] http://www.federalreserve.gov/monetarypolicy/files/fomcminutes20110622.pdf (access: 11 August 2014).

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[www8] http://www.newyorkfed.org/markets/statistics/dlyrates/fedrate.html (access: 3 February 2014).

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