

**AT THE ORIGINS OF THE FINANCIAL SYSTEM CRISIS. ANOTHER LOOK AT
THE FEDERAL RESERVE SYSTEM INTEREST RATE POLICY**

by Jan L. BEDNARCZYK

**Prof. Jan L. Bednarczyk, Ph. D. (Econ.)
Head of Department Economic Policy and Banking
K. Pulaski Technical University of Radom**

**Address: Chrobrego 31, 26-600 Radom, Poland
E-mail address: jan.bednarczyk@wp.pl
Telephone: +48 603946704, +48 483331405
Fax number: +48 48 3331405**

Jan L. Bednarczyk

AT THE ORIGINS OF THE FINANCIAL SYSTEM CRISIS. ANOTHER LOOK AT THE FEDERAL RESERVE SYSTEM INTEREST RATE POLICY

Abstract

Experiences of the American economy in the last ten years indicate significance of central bank interest rates as a tool to affect the economic situation. A transition to the cheap money policy effected in the years 2001-2003 was an important element of support for the economic recovery after bursting of the “internet bubble” at the beginning of 2000. A relatively rapid retreat from this policy since mid-2004 was a kind of shock for the American economy, a direct effect of which was a crisis in the financial market and entire economy. Attempts to overcome the crisis by returning to the policy of extremely cheap money may bring about only limited effects. Fiscal policy seems to be a more effective tool to support the recovery of economy.

JEL Classification: E43, E44, E58

1. Introduction

The financial crisis which started in the USA in mid-2007 is specific to some extent because in its first phase it affected the largest and theoretically the most shock-proof economy of the world. This situation is rather difficult because like in the period of the Great Crisis of 1929-1933, the slump was accompanied by the spectacular shrinking of capitalization of big corporations, announcing of their bankruptcy or a decision of taking them under state care. It must be mentioned that bankruptcies of great corporations happened in the periods of major slumps which took place in the last few decades. The bankruptcy of Enron at the end of 2001 can be quoted here as a relatively recent example. The difference between the current crisis and the previous ones lies in the scale of the observed phenomenon the essence of which, at least in the United States, was a threat to the continuous functioning of a great number of enterprises of key importance for the economy (in fact constituting its basic infrastructure), without which this economy practically cannot function.

The crisis started in the American financial factor, to be more precise, in the mortgage sector which traditionally reveals great sensitivity to changes in interest rates. Thus a question

arises: to what extent the crisis can be accounted for by the policy of interest rates implemented by the Federal Reserve System (FRS) and to what extent central banks can use this tool to alleviate its consequences. Such a question seems to be quite justified, the more so, that for almost two decades the policy of interest rates has played an important role in the economic policy of developed countries. These countries treated changes of the official short-term interest rates as the main instrument of shaping the price balance and thus creating conditions for stable economic growth (*one tool, one target policy*). The rise of the crisis definitely undermined the rationale of this policy. However, the question about the role of the interest rate policy in the course of the crisis is still open.

2. The FRS interest rate policy and financial crisis

The central bank interest rate policy belongs to these methods of economic policy which affect the real sector (non-financial enterprises, households) indirectly, i.e. by adjustment processes taking place in the banking sector and monetary market. Hence controversies arise about the causative role of the impulses of the interest rate policy which make some theoreticians of economics deny the role of the interest rate regulation as an effective tool of affecting the economic situation¹. Despite current controversies, central banks responsible for this part of the state's economic policy are very keen on using it for both attainment of its main goal, which is price stability and creation of favourable conditions for economic growth². Unquestionably, an intention to shape a short- and long-term price of money in economy is the basis of the central bank's active policy of interest rates. Regardless of the scale of the economy's reaction to a change in the so-called interest rates and the length of time delays which occur between the moment of making a decision about the interest rates and attainment of the expected change in the field of ultimate goals of economic policy, such a reaction occurs and is a sufficiently strong proof of the usefulness of interest rates as a stabilization policy tool³.

Another proof results from the impact of changes in official interest rates on expectations of economic subjects. This impact does not always seem to be in conformity with the expectations of authorities. It may have a direct character. In this case the policy of interest rates defines intentions of monetary authorities with respect to the desired trend of changes in economy, inducing market participants to follow the direction expected by authorities; for instance, reductions of interest rates can be understood by economic subjects

as an intention of authorities to boost economy and an encouragement to increase the scale of business activities.

A slightly different character of relationships between the decisions of authorities and decisions of market participants becomes clear in the case of indirect influence of changes in official interest rates on expectations and then decisions of economic subjects, which can be implemented by changes in real interest rates. In the event that reduced interest rates are accompanied by accelerated inflation (a significant fall of real interest rates), economic subjects, aware of the central bank's decision-making mechanisms and, in particular, having in mind its commitment to stable prices, can understand interest rate reductions not as an encouragement to increase the scale of business activities but as an important sign of growing uncertainty about the future conditions of economy. It can make them perceive the current decisions of the central bank as not credible enough and expect quick undertaking of opposite activities. It can result even in limiting the scale of conducted business activities.

A preliminary analysis of the FRS interest rate policy in the years 1990- 2008 reveals that this institution treats the interest rate regulation as both an important tool to shape the price of money in economy and a tool to shape expectations of economic subjects. The data included in Table 1 indicate that in the last 19 years one could distinguish five overlapping cycles of changes in nominal interest rates: three declining (downward) cycles and two rising (upward) cycles. A characteristic feature of these changes was a convergent duration (in years) of rising and declining cycles and parallel tendencies in changes in nominal and real interest rates; an increase in nominal interest rates was, as a rule, accompanied by an increase in real interest rates and the other way round. This fact may prove fairly strong credibility of the FRS policy and its appropriate understanding by markets.

However, what becomes clear is a fairly significant difference between the behaviour of interest rates in the course of the first two cycles and the subsequent three cycles, which symbolically began at the turn of the years 2000 and 2001, when the nominal interest rates reached local peaks. Namely, in the years 2001-2003, both nominal and real interest rates gradually fell to lower and lower levels until they reached the levels which had not been noted for years. At the same time nominal interest rates started to assume negative values. Economic subjects, particularly those operating in industries sensitive to the cost of money (including housing construction), with full conviction could understand the FRS policy as a permanent improvement of economic conditions and a unique chance to develop their activities. Indeed, to a large extent, thanks to this policy the American economy managed to get itself out of the crisis at the beginning of the year 2000 which was caused by bursting of

the “internet bubble” and in the years 2002-2003 it restored its former position of the leader of growth in the group of the biggest industrialized countries (except Great Britain). The driving force behind this growth were construction related industries.

Another relevant difference in the behaviour of the interest rates controlled by the FRS in the 2000s in comparison to the previous decade was a rapid retreat from the policy of cheap money implemented up to mid-2004. Starting with 30 July 2004, the FRS was consistently, although by small steps (always by 25 base points), raising the interest rate bringing it up to the level of 5.25 on 29 June 2006. In this way, within 3 years, the nominal interest rate on federal funds increased more than five times in comparison to the lowest level (1 per cent), which was noted in mid-2003. Such substantial fluctuations of the nominal interest rate were unprecedented not only in the 1990s but also in the distant past [Kosztowniak, 2007]. On the other hand, in the years 2003-2007 the real interest rate increased by 3 percentage points. Similar changes in real interest rates were noted in the 1990s, yet in that period the economic situation in the US was not so dependent on the situation in construction industry as in the years 2003-2007.

On the one hand, the cycle of increasing interest rates implemented by the FRS since 2004, contributed to moderating expectations of economic subjects concerning sustainable boost of the economic cycle based on the housing construction and, on the other hand, to systematic increase in mortgage costs which followed an increase in official interest rates. Their final effect proved itself disastrous for the whole economy. It turned out that the FRS, while trying to sustain economic boost at the beginning of the year 2000 by gradual transition from the policy of extremely cheap money and then withdrawal from this policy without considering its potential costs for market participants, became a source of a huge shock for the American economy which resulted in one of the deepest recessions in economy ever.

Table 1
Interest rates and economic growth in the United States in 1990-2008

	Years																			
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	
Average yearly federal funds rate ¹	7,5	5,5	3,5	3,0	4,0	5,7	5,4	5,4	5,1	5,1	5,9	3,8	1,5	1,1	1,6	3,3	4,8	4,7	2,2	
Federal funds rate tendencies	decline			rise								decline			rise				decline	
Index of consumer price growth	5,4	4,2	3,0	3,0	2,6	2,8	2,9	2,3	1,5	2,2	3,4	2,8	1,6	2,3	2,7	3,4	3,2	2,9	4,3	
Real federal funds rate ²	2,1	1,3	0,5	0,0	1,4	2,9	2,5	3,1	3,6	2,9	2,5	1,0	-0,1	-1,2	-1,1	-0,1	1,6	1,8	-2,1	
Real GDP rise index	1,8	-0,5	3,1	2,7	4,0	2,5	3,7	4,5	4,2	4,4	3,7	0,8	1,6	2,5	3,6	2,9	2,8	2,0	1,4	

1. Mean value of federal funds rates during the calendar year.
2. The difference between mean value of federal funds rates during the calendar year and retail price index for the same year.

Source: Author's own calculations on the basis of: OECD Economic Outlook, No. 84, November 2008 and FRB: Monetary Policy, Open Market Operations, Intended Federal Funds Rate, www.federalreserve.gov.

3. Interest rate as a tool of getting out of depression

The strategic basis of the FRS monetary policy in view of obvious symptoms of a crisis in the financial market was, on the one hand, safeguarding the banking sector's liquidity and, on the other hand, providing economy with money at the lowest cost. Unprecedented changes in the field of the refinancing policy enabling practically full coverage of the demand for cash (*primary credit loans, discount window credit, purchase highly rated commercial papers*) became a tool to sustain the banking sector's liquidity not only to commercial banks but also some non-banking financial institutions [Board of Governors, 2008; Bernanke, 2008; Board of Governors; Bernanke 2009]. Decisions concerning relaxation of the refinancing policy were, at the same time, accompanied by cuts in official interest rates as well as purchases of long-term bonds for the sum of 1.75 bln. dollars from the portfolios of key credit institutions, which was to result in stabilizing - at a low level - of the selected long-term market interest rates playing an important role, especially in sustaining the household demand (e.g. interest rates on mortgages) [Bernanke, 2009].

A direct result of the relaxed refinancing policy was the significant acceleration in money supply growth. It is proved by the data concerning changes in the so-called monetary base which between December 2007 and December 2008 increased by 78%. On the other hand, M_1 money supply increased by 11.5%, whereas M_2 money supply – by 7.2%.⁴ It is worth mentioning that such fast monetary expansion was accomplished in the situation of the American economy gradually entering the recession phase, when demand for transactions money resources is reduced; it can give rise to justified fears of a specific demand overhang being created, which in future can lead to rapid acceleration of inflation processes.

The FRS implemented policy of interest rates assumed an equally decisive character. The first reductions of interest rates were initiated in September 2007, that is almost instantly after the first symptoms of crisis had been revealed in the credit market. Then, in the course of 15 months (from December 2008), the FRS implemented 10 reductions of its basic rate, bringing it down to the level of 0 – 0.25 per cent, i.e. the lowest level ever.

In the context of the actions implemented by the American central bank, especially interest rate reductions, a question arises about their impact on the objectives the attainment of which they were to serve, that is their impact on sustaining activities of the real sphere. The answer to this question is really difficult if only on account of time delay, that is the time which passes between applying the measures of monetary policy and revealing of their full impact on the economic situation. It is also difficult to find a definite answer to the question to what extent the financial crisis which started in mid-2007 changed relationships between

official interest rates, short-term market rates and interest rates (real, long-term), which affect producers and consumers' economic decisions. Thus, to what extent has it modified the basic transmission mechanism of the interest rate impulse to economy.

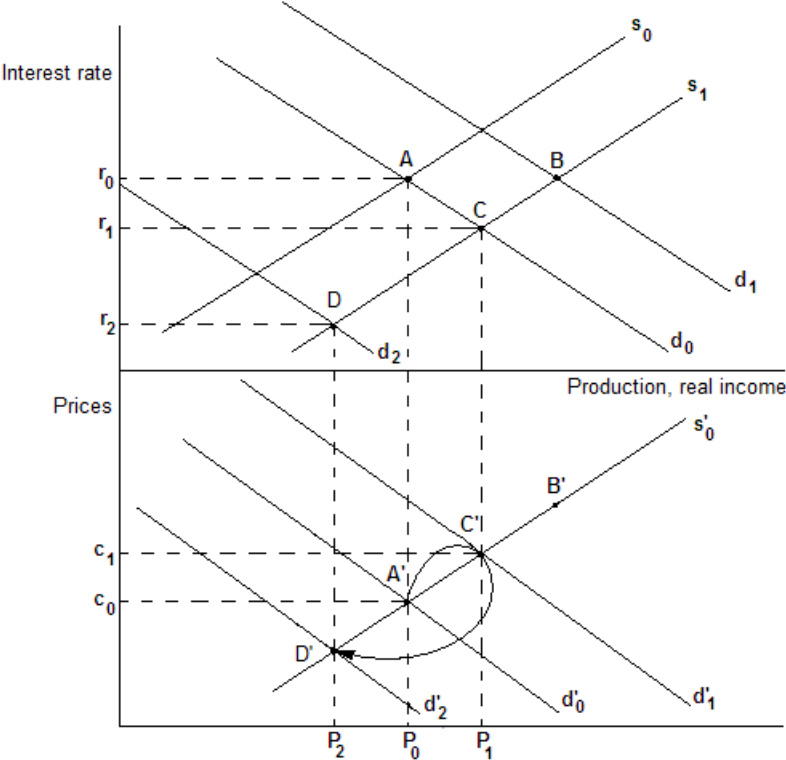
A crucial change that in 2008 was effected in financial markets and which, at least in the course of that year, had a substantial effect on the efficiency of the interest rate transmission mechanism was a further relaxation of interdependencies between changes in official interest rates and changes in short-term market rates. Such a tendency has already been observed in the US and EU markets. The financial crisis and, in particular, the hitherto unobserved problems with solvency of the big banks and financial institutions, caused its clear deepening. As a consequence, a sharp disparity between banks' refinancing costs in the central bank and the costs which they incur when they use funds from the inter-bank market treated by banks as one of the sources of financing, defining the marginal cost of obtaining capital⁵ and having an effect on conditions of financing by banks of clients from outside the banking sector.

Undoubtedly this situation weakened effectiveness of the accomplished interest rate reductions as well as effectiveness of the central bank's policy of refinancing the financial sector because a significant part of money resources injected into the banking sector lay in this sector mainly safeguarding its liquidity; however, it served financing of the real sphere to a limited degree (on account of the high cost of obtaining capital). Thus, a rather non-typical phenomenon of substantial accumulation of money in the financial channels of its circulation occurred. However, the accumulated money had only limited possibilities of entering the real sphere. This proves lower efficiency of the market signal transmission stimulated by changes in official interest rates and provokes a question about the similarity of the ensuing situation to the problems which are encountered by the interest rate policy in the circumstances characterizing the condition of the so called liquidity trap.

Figure 4 outlines an interpretation of processes occurring since mid-2007 in the markets of industrialised countries. The upper part of this drawing characterizes conditions of the equilibrium in the financial market, whereas the bottom one – the equilibrium in the market of goods and services. Let us assume that economic subjects are not free from the monetary deception, thus we can exclude neutrality of money. Suppose that the equilibrium in point A is characterized by an incomplete use of production capacity (too high unemployment) and other negative phenomena related to the entering of the recession phase by economy (limiting investments in fixed assets, limiting consumer expenditure, etc.). Central bank, not willing to allow excessive weakening of the economic situation, undertakes

activities aiming at more accessible money and reduction of its costs. These activities will cause a shift in the equilibrium in the financial market towards point B,

Fig.. 4. Reduction of interest rate as a tool to counteract deeper economic recession.



Source: author’s own development

which will be evoked by an increase in transactions demand for money. However, a part of an increase in the money resources will be used for a purchase of securities (bonds), which will entail an increase in their price and a decline of interest rates. An equilibrium in the financial market will head for point C, which corresponds to higher production levels and possibly higher prices (c_1).

An equilibrium in point C would be possible, however, only in the case of a quick reaction of the real sector to the interest rate reductions and improved access to sources of finance. If there is no such reaction or it is slow, then economic subjects can expect further “relaxation” of monetary policy which will be accompanied by further interest rate reductions. Predicting a possibility of higher prices of debenture, economic subjects will engage a major part of their money resources in purchase of these securities causing a further rise of their prices and further decline of their profitability rates⁶. At the same time more and more money

will leave the transactional sphere contributing to the stabilisation of interest rates at a low level.

From the point of view of shaping the equilibrium in this phase of the economic situation the behaviour of prices is crucial. If the decline of investment demand and demand for goods and services is significant, then it can be accompanied by a tendency to price stabilization or even decline, which actually took place in the US economy in the last months of 2008. Deflation tendencies which may occur can be dangerous enough to lead to an increase in real interest rates which would eliminate positive effects of a nominal interest rate reductions and could lead to deeper recession in the real sphere of economy. The economic equilibrium can head for the point which corresponds to a low production level and high unemployment at low interest rates and low inflation. Basically, it is a situation in which causative usefulness of the transmission mechanism of interest rate changes becomes highly problematic.

4. Summary

The above discussion about using interest rates as a tool affecting the economic situation leads to a reflection that despite controversies over effectiveness of the interest rate mechanisms in influencing real economic processes they are an economic parameter relevant enough to make central banks use it purposefully and with full awareness of the consequences which can arise as a result of wrong decisions in this respect. An example of erroneous interest policy seems to be the policy implemented by the American FRS during the latest cycle of raising these rates. Undoubtedly it contributed to the financial crisis which shook the foundations of American economy. In the meantime, attempts to use the interest rate mechanism to alleviate the consequences of the crisis seem to have little chance of success. The tools of direct impact on effective demand are more efficient in this respect.

NOTES

¹ A typical example of such an approach to the interest rate regulation were the ideas of the representatives of a monetary trend emphasising importance of the money supply regulation. Similar views are currently expressed by representatives of new classical economics and other trends in favour of neutrality of money in the short term.

² See: Objective of Monetary Policy. www.ebc.int.

³ See: .IMF. Global Financial Stability Report, October 2008, pp. 73-100.

⁴ Author's own calculations on the basis of: Federal Reserve Board. *Statistics: Releases and Historical Data*, www.federalreserve.gov

⁵ As of 11 Dec. 2008 the differences between the so-called effective interest rate on federal funds in the USA and the interest rate on 3-month deposits on the inter-bank market stood at 2.8 p.p., whereas the interest rate on short-term credits for the most credible borrowers (prime rate) exceeded effective interest rates on federal funds by 3.8p.p. See: Federal Reserve Board. *Statistics: Releases and Historical Data*, op. cit.

⁶ Actually, in 2008 and 2009, especially in the American market, one could observe an „escape” to treasury bonds, which caused an unprecedented rise in their prices, recognised by a part of analysts as another, dangerous „speculative bubble”.

BIBLIOGRAPHY

1. Bernanke B.S: *Federal Reserve Policies in the Financial Crisis*, Speech at the Greater Austin Chamber of Commerce, Austin, Texas, December 2008
2. Bernanke B.S. *Federal Reserve Policies to Ease Credit and Their Implications for the Fed's Balance Sheet*, Speech at the National Press Club Luncheon, National Press Club, Washington, D.C., February 18,2009, www.federalreserve.gov.
3. B. S. Bernanke. The Financial Crisis and Community Banking. Speech at the Independent Community Bankers of America`s National Convention and Techworld, Phoenix, Arizona, March 20, 2009.
4. Board of Governors of the Federal Reserve System, www.federalreserve.gov.
5. Board of Governors of the Federal Reserve System, *Monetary Policy Report to the Congress*, July 2008
6. Federal Reserve Board. *Statistics:Releases and Historical Data*, www.federalreserve.gov
7. FRB: Monetary Policy, Open Market Operations, Intended Federal Funds Rate, www.federalreserve.gov.
8. IMF, *Global Financial Stability Report*, October 2008
9. Kosztowniak A.: *Tendencje stóp procentowych na rynkach krajów uprzemysłowionych w latach 1960-2006 i ich interpretacja*, w: *Teoria i polityka stóp procentowych we współczesnej gospodarce* (Bednarczyk J.L. ed.), publication of the Technical University of Radom, Radom 2007
10. Objective of Monetary Policy, www.ebc.int.
11. OECD Economic Outlook, nr. 84, November 2008