*Aleksandra Praščević**

DOI:10.2298/EKA0817703OP

THE RETURN TO KEYNESIANISM IN OVERCOMING CYCLICAL FLUCTUATIONS?

ABSTRACT: *The problems faced by the American economy in the second half of 2007, which intensified in 2008, have once again asked economic science, and even more so economic policy, questions relating to business cycles – the reasons for cyclical fluctuations, the character of business cycles and, naturally, economic policy measures that can be implemented to alleviate and overcome an economic recession. Since the 1970s, business cycle theories have been intensively developed – ranging from monetary theories, developed within monetarism and the first phase of New Classical Macroeconomics, to the real business cycle theory of New Classical Macroeconomics. Consequently, the triggers for the beginning of a cycle can be monetary (monetary theories) or real in the form of technological shocks (real business cycles). In essence economic policy conducted since the 1970s, has rejected the Keynesian explanations of the functioning of the economic system, and thus the policy of aggregate demand management. However, the measures that are now being implemented in the USA point to a return to Keynesianism. This refers, above all, to attempts to compensate for the inefficiency of monetary policy with fiscal expansion. All three psychological propensities (propensity to consume, propensity to invest and liquidity preference) in Keynes's theory and applied in Keynesian economic policy, are still the significant determinants of monetary and fiscal policies. The return to Keynesianism points to the depth of the crisis faced by the USA, but also confirms the vitality of Keynesian economics and affirms the view that – although Keynes wished to present his theory as being "general" – it is actually the theory of economic depression.*

KEY WORDS: *cyclical fluctuations, recession, Keynesian economic policy*

JEL CLASSIFICATION: B20, B22

* Faculty of Economics, University of Belgrade

1. The Significance of Cyclical Fluctuations

The threat of recession, which was faced by the American economy in late 2007 and whose presence in early 2008 is almost certain, has brought once again the problem of cyclical fluctuations, especially economic contraction phases, into focus. Almost everyone is talking about a recession in the USA: from stock exchange experts, investors, bankers and economic policy makers to ordinary citizens – especially those who are unemployed and those who worry that they may join their ranks very soon. Concerns about the trends in the American economy are also present in other economies, caused by the fear that the American recession will spill over into other economies and that an economic slowdown in the USA, the first symptoms of which were the collapse of share prices, will cause an economic slowdown on a global level.

The occurrence of a recession in the US economy is still not definite, since its beginning has not yet been officially announced.[1] The reason lies in the method of dating its beginning or, to be more exact, the date on which the business cycle reaches its peak, as well as the fact that not enough time has elapsed for the relevant economic data to emerge, so that a recession can be stated with certainty.[2] The NBER is waiting until the data show that the decline is big enough that it can be regarded as a recession.[3] In any case, it is certain that the US economy, "at best, stopped to grow", as stated by Professor Robert Hall, Chairman of the NBER Committee. In order to announce the beginning of a recession, the economic indicators must unambiguously point to a shrinking economy, since data based only on a rise in unemployment or the collapse of stock prices are not sufficient.[4] It is necessary that the definition of recession is met: "A significant decline in

1 The National Bureau of Economic Research's Business Cycle Dating Committee is an unofficial arbitrator which determines the dates of the turning points in the business cycle and, thus, when a recession begins and ends. Founded 87 years ago, the NBER is a non-profit group comprised of 600 academic economists who determine the current phases of a business cycle by monitoring the data on economic trends, based on the so-called NBER method.

2 The NBER announced the peak of the cycle, reached in March 2001, on 26 November 2001, and the trough of the cycle, reached in November 2001, on 17 July 2003.

3 The identification of the beginning of a recession requires the monthly monitoring of macroeconomic data and since real GDP is available only on a quarterly basis, it is not primarily used by the NBER for this purpose. Thus, the NBER does not define recession in terms of two consecutive quarters of a decline in real GDP.

4 The 1987 example shows that, regardless of the collapse of the stock exchange, economic growth continued, so that the question as to the importance of the developments on the stock exchange for the beginning of a recession remains unsolved, since it is a fact that the response of the stock exchange is at times excessive and at times insufficient.

economic activity spread accross the economy, lasting more than a few months, normally visible in real GDP, real income, employment, industrial production, and wholesale-retail sales"[5]. In identifying a recession, the NBER relies on the movement of four economic variables: industrial production, employment, real sales and real income[6].

The survey of the movements in these four variables relative to the achievement of the peak (determined by the NBER) in the cycles from 1960 onward are given in Table 1.[7]

Table1. Peaks of the major indicators relative to the NBER's business-cycle peak date[8]

Business Cycle Peak	Industrial Production	Payroll Employment	Real Sales	Real Income
Apr. 1960	- 3	0	-3	+1, (+6)
Dec. 1969	-2, (-4)	+3	-2	+8
Nov. 1973	0	+11, (+8)	0	0
Jan. 1980	-7, (-10)	+2	-10	-1
Jul. 1990	+2	-1	+1	0
Mar. 2001	-6, (-9)	0, (-1)	-7 (-6)	no peak, (0)

Although economists need time to determine the date and announce the beginning of a recession in the USA, the very possibility of falling into a recession led to economic measures that would reverse these unfavourable economic trends, in addition to inevitable reconsideration of the previous policies. The most important question today is: what is the role of economic policy in the stabilization of cyclical fluctuations and whether the new measures in combatting a recession point to conceptual changes in the conduct of economic policy, or is it just reversion to the "lost art of economics"?

The recession in the United States, causing headaches to businesses and households, as well as to economic policy makers, provides academic economists with an

5 *Is U.S. in Recession? Discussions Begin*. (The NBER`s Recession Dating Procedure) – http://www.nber.org/cycles/recessions.html

6 Their values make up the Index of Coincident Economic Indicators.

7 The table shows the number of months when the variable reaches the peak, before the cycle peak (indicated by the minus sign), as well as the number of months the variable is lagging in reaching the cycle peak (indicated by the plus sign).

8 Source: NBER

opportunity to propose new approaches to a problem that has been considered many times. At the same time, this episode will create a basis for reviewing the theoretical assumptions that explain cyclical fluctuations, especially those of the currently dominant real business cycle schools (RBC).

2. The Duration and Sharpness of the Cycle – The Case of the US Economy

It has been almost generally accepted in macroeconomics that the contemporary cyclical fluctuations, which characterize economies, are milder in their intensity and shorter in their duration as compared to those occurring before the 1980s, especially before the Second World War[9]. The data on the cyclical movement of developed countries' economies point to a longer duration of the expansion phase and the shortening of the contraction phase (Table 2).

Table 2. Business cycles in the United States (expansions and contractions)[10]

	1. Expansion phase (months)	2. Contraction phase (months)	Cycle (months)	1./2.[11]
Average duration in the pre-World War II period (15 cycles)[12]	25	23	48	1.10
Average duration in the inter-war period (5 cycles)[13]	26	20	46	1.30
Average duration in the post-World War II period (10 cycles)[14]	57	10	67	5.50

9 The consensus on this issue has not been reached either. There are views that it is not the question of the 'weakening' of cyclical fluctuations, but that before World War II, the indicators of cyclical movements in the economic variables were based on inadequate data and that the cycle was not so 'sharp'.

10 Source: NBER.

11 The duration of the expansion phase relative to the duration of the contraction phase.

12 From December 1854 (trough) to December 1914 (trough).

13 From March 1919 (trough) to June 1938 (trough).

14 From October 1945 (trough) to November 2001 (trough).

The prolongation of the expansion phase and the shortening of the contraction phase were even more evident in the last two business cycles in the USA – from November 1982 to March 1991 and from March 1991 to November 2001 (Table 3).

The expansion phase during the period 1982-1990 was the second longest in American history at that time[15], but after only eight months of recession, it was followed by an expansion that was recorded as the longest in economic history – it lasted 120 months. From trough to trough, the business cycle, which began in March 1991 and lasted until November 2001, was the longest business cycle in US economic history.

Table 3. Business cycles in the USA (from 1982 to 2001)[16]

Trough	**Peak**	**Trough**	**1. Expansion phase (months)**	**2. Contraction phase (months)**	**Cycle (months)**	**1./2.**[17]
November 1982	July 1990	March 1991	92	8	100	11.5
March 1991	March 2001	November 2001	120	8	128	15.0

The 2001 recession was mild and atypical in many respects and something similar can also be said for the recovery that followed[18]. The 2001 recession was the mildest recession and can be classified as a "category I recession" (Nordhause, W. D., 2002). The length of expansion determines the length of recession – long expansions are accompanied by short and mild recessions since serious imbalances cannot be accumulated during the expansion phase, while short expansions often end in sharp recessions. The reasons often lie in an increase in energy prices (oil shocks) or inflation, which causes price distortions that are inevitably followed by a tight monetary policy, which contributes to a recession. The movements of the economic variables confirm these views – the decline in real GDP during the recessions which followed the longest expansions was below 1 per cent on average,

15 At that time, the first expansion was the one during the period from February 1961 to December 1969.

16 Source: NBER.

17 The duration of the expansion phase relative to the duration of the contraction phase.

18 It has been ascertained that the severity of recession determines the magnitude of recovery. Deep recessions are accompanied by significant recoveries, while mild recessions are accompanied by mild recoveries. (Kliesen, K. L. (2003), p. 23)

while the average decline in all other post-war recessions was 2.6 per cent. This can also be observed in the rate of unemployment – employment declined by 1.48 per cent on average, relative to the decline of 3.24 per cent in the other recessions or, in other words, the rate of unemployment increased by 2.53 per cent relative to the increase of 3.5 per cent.

The 2001 recession is regarded as the most atypical in American economic history. First of all, many were surprised when the NBER announced[19] that the expansion reached its peak in March 2001 and that since then the economy had been in a recession. Until the terrorist attacks of September 11, it was not thought that the economy was in recession. Among other things, these attacks caused a change in the view of the state of the American economy, although it was already in decline since March (Table 4).

Table 4. Recession probabilities according to blue chip forecasters.[20]

Question Posed: Has the U.S. Slipped into a Recession? (per cent)		
Date	**Yes**	**No**
September 10, 2001	13	87
September 19, 2001	82	18

The nature of the 2001 recession is also reflected in the fact that the level of output in the trough was relatively high, so that the GDP gap was small; this gap was smaller only during the 1954 recession. This also accounts for an extremely small rise in unemployment, so that the rate of unemployment in the fourth quarter of 2001 was 5.6 per cent, which is close to the value of NAIRU[21] and is estimated at 5.5 per cent for the US economy[22].

No other economic issue has been devoted so much attention as the issue of business cycles (Kyun, K., 1988)[23]. Until the early 1970s, macroeconomic thought was dominated by the Keynesian view on insufficient aggregate demand as the reason for the beginning of a recession, and on the stabilization effects of fiscal

19 On 26 November 2001, the NBER announced that the business cycle reached its peak in March 2001.

20 Kliesen, K. L. (2003), p. 27

21 Non-Accelerating Rate of Unemployment

22 For the explanation of this recession it is important to point out that it was preceded by the peak of the previous cycle, which was characterized by an extremely high level of output and low rate of unemployment.

23 Kyun, K. (1988), p. 1

policy in solving the problem of a recession. The period until the early 1970s was known as the period of "fiscal revolution in America", whose most striking episode was the successful Kennedy-Johnson tax cuts of 1964-65. During the 1970s, after the victory of monetarism over Keynesian economics, the idea about the stabilization effects of fiscal policy was abandoned and macroeconomics began to be dominated by the views that monetary impulses are crucial for the start of a cycle. Monetary impulses were later replaced by real shocks in the form of significant fluctuations in the rate of technological progress, which also exert influence on economic growth and cyclical fluctuations, thus integrating both growth theories and fluctuation theories (Kydland, F.E. and Presscot, E.C. (1982), Nelson, C. and Plosser, C. I. (1982), Long, J. B. and Plosser, C. I. (1983)).

3. Characteristics of US Economic Contraction (2008)

As is usual when the period of economic expansion is unusually long, there were views among economists during the boom of the 1990s that this might be the beginning of a «new economics», based on innovations in information technology, and that serious recessions would remain only the examples from economic history (Sorensen, P.B. and Whitta-Jacobson, H. J., 2005)[24]. However, just as optimism during the 1990s proved to be incorrect, the same thing happened in late 2007, when the American economy was faced with a slowdown and the threat of recession.[25] Naturally, such developments posed the question as to the origins of these unfavourable trends and whether the economic policy, primarily monetary, had failed.

In contrast to the 2001 recession, which represented a surprise, most are expecting that the US economy will be in a recession in 2008. One of the forecasting indicators suggested a recession had already occured in 2007.[26]

24 Sorensen, P.B. and Whitta-Jacobson, H. (2005), p. 403

25 Based on data from the "Monetary Policy Reports to the Congress" (July 18, 2007: February 27, 2008, Washington, D.C., Board of Governors of the Federal Reserve System) and Release Schedule of the Bureau of Economic Analysis, U.S. Department of Commerce

26 It was the Kasriel Recession Warning Indicator (KRWI) which, when applied to economic trends, has correctly predicted every recession since the 1960s. At the end of 2007, there was talk about the 65.6 per cent probability that the US economy would slip into a recession in 2008 (U.S. Economic & Interest Rate Outlook, Probing the Probabilities of a 2008 Recession, December 21, 2007).

An analysis of cyclical fluctuations requires the monthly monitoring of the indicators of overall economic activity, specifically: employment in the overall economy[27], disposable personal income, volume of sales of the manufacturing and trade sectors and industrial production[28]. The possibility of a recession was indicated just by movements in the labour markets – rates of unemployment, number of part time workers, number of discouraged workers, regular hours of work, as well as overtime worked. Such movements are shown by major indicators of labour market activity in the monthly data, as well as in quarterly data in the second part of 2007, continuing in 2008 (Table 5).

The unemployment rate rose to 5,5 per cent in May 2008, compared to 4,5 per cent a year earlier. At the same time the number of job losses rose by 907,000, and the number of part-time workers for economic reasons also rose by 764,000 to 5,23 million in May 2008. These numbers should be added to the number of discouraged workers (400,000 in May 2008) who are not currently looking for work because they believe there are no available jobs for them.

Table 5. Major indicators of labour market activity (seasonally adjusted) – in thousands[29]

Category	**Quarterly averages**		**Monthly data**			
	IV 2007	I 2008	**May 2007**	Mar. 2008	Apr. 2008	**May 2008**
Civilian labour force	153,667	153,661	**152,776**	153,784	153,957	**154,534**
Employment	146,291	146,070	**145,913**	145,969	146,331	**146,046**
Unemployment	7,375	7, 591	**6,863**	7,815	7,626	**8,487**
Not in labour force	79,270	79,146	**78,704**	79,211	79,241	**78,872**
Unemployment rates (all workers)	4,8	4,9	**4,5**	5,1	5,0	**5,5**
Persons who currently want a job	/	/	**4,958**	4,730	4,755	**4,766**

27 The rate of unemployment during the past 6 American recessions (without taking into account the 2001 one) increased by 1.1 per cent on average.

28 Industrial production during the last 6 American recessions (without taking the last 2001 recession into account) declined by 4.6 per cent on average.

29 Source: According to the Employment Situation Summary – Bureau of Labour Statistics, United States Department of Labour, June 2008, www.bls.gov

Job losers and persons who completed temporary jobs	/	/	**3,375**	4,154	4,014	**4,282**
Part time workers for economic reasons	/	/	**4,469**	4,914	5,220	**5,233**
Discouraged workers over job prospects	/	/	**368**	/	/	**400**
	Hours of work					
Total private	33,8	33,7	**33.8**	p 33,8	p 33.7	**p 33,7**
Manufacturing	41,2	41,1	**41.1**	41,2	p 41,0	**p 41,0**
Overtime	4,1	4,0	**4.1**	4,0	4,0	**p 3,8**

Consumption, an important component of aggregate demand, is showing a significant cyclical movement. Fluctuations in the level of consumption are closely linked to movements in the level of disposable personal income. Movements in their values in late 2007 and early 2008 reinforce concern that a recession has occured (Table 6), since real personal consumption expenditures (PCE) stagnated or increased only slightly.

Table 6. Personal income and outlays – per cent change from preceding month[30]

Category	2007 Sept.	2007 Oct.	2007 Nov.	2007 Dec.	2008 Jan.	2008 Feb.	2008 Mar.	2008 Apr.
Personal income (current dollars)	0,4	0,2	0,3	0,5	0,2	0,5	0,4	0,2
Disposable personal income:								
Current dollars	0,4	0,2	0,3	0,5	0,4	0,5	0,3	0,2
Chained (2000) dollars	0,1	-0,1	-0,4	0,2	0,1	0,4	0,0	0,0
Personal consumption expenditures:								
Current dollars	0,5	0,3	0,9	0,2	0,4	0,1	0,4	0,2
Chained (2000) dollars	0,2	0,0	0,2	-0,1	0,2	-0,1	0,1	0,0

30 Source: According to the National Economic Accounts, 2008, www.bea.gov

Table 7. Real Gross Domestic Product and related measures: per cent change from the preceding period[31]

Category	2005	2006	2007	2007				2008
				I	II	III	IV	I
GDP	**3,1**	**2,9**	**2,2**	**0,6**	**3,8**	**4,9**	**0,6**	**0,9**
Personal consumption expenditures (PCE)	**3,2**	**3,1**	**2,9**	**3,7**	**1,4**	**2,8**	**2,3**	**1,0**
Durable goods	***4,9***	***3,8***	***4,7***	***8,8***	***1,7***	***4,5***	***2,0***	***-6,2***
Nondurable goods	3,6	3,6	2,4	3,0	-0,5	2,2	1,2	-0,3
Services	2,7	2,7	2,8	3,1	2,3	2,8	2,8	3,0
Gross private domestic investment	**5,6**	**2,7**	**-4,9**	**-8,2**	**4,6**	**5,0**	**-14,6**	**-6,5**
Fixed investment	6,9	2,4	-2,9	-4,4	3,2	-0,7	-4,0	-7,8
Non-residential	7,1	6,6	4,7	2,1	11,0	9,3	6,0	-0,2
Structures	0,5	8,4	12,9	6,4	26,2	16,4	12,4	1,1
Equipment and software	9,6	5,9	1,3	0,3	4,7	6,2	3,1	- 0,9
Residential	***6,6***	***-4,6***	***-17,0***	***-16,3***	***-11,8***	***-20,5***	***-25,2***	***-25,5***
Net exports of goods and services								
Exports	6,9	8,4	8,1	1,1	7,5	19,1	6,5	2,8
Imports	5,9	5,9	1,9	3,9	-2,7	4,4	-1,4	-2,6
Government consumption expenditures and gross investment	**0,7**	**1,8**	**2,0**	**-0,5**	**4,1**	**3,8**	**2,0**	**2,0**

Even more striking are the movements in the expenditure components, which confirm that which business cycle analysis shows. Namely, the consumption of durable goods responds significantly to the cycle (it is possible to postpone the purchase of these goods), while the consumption of nondurable consumer goods and expenditure earmarked for services are not very dependent on the cycle.

31 Source: According to the National Economic Accounts, May 2008, www.bea.gov

Just the differences in the movement of the aggregate consumption components exert influence on the cycle amplitude, smoothing cyclical fluctuations in total consumption. The decrease in personal consumption expenditures was primarily due to a drop in demand for durable and nondurable goods, while at the same time there was an increase in the purchases of services (Table 7).

However, the smaller increase in personal consumption in 2007 was not so dramatic as the forecast that personal consumption will continue to follow a downward path in 2008 (Table 7). The reasons lie in the lessening of the purchasing power of consumers, tightening of credit terms by banks, as well as the declines in house prices and subsequent equity, which also reduced household wealth. One cannot count on the lagged effects of the increases in household wealth in 2005 and 2006 any more, while the growth in real disposable personal income was insignificant in the second half of 2007. The increase of purchasing power in nominal terms was eroded by an increase in energy prices, so that real wages in many sectors declined (manufacturing, retail trade). The value of household wealth also declined, which will generate an adverse effect on consumption in the future, since net worth exerts influence on consumption, allbeit with a certain delay.

Apart from the pattern of consumption, movements in the level of personal savings are also important: in January they amounted to negative 6.2 billion dollars. This indicates that personal outlays[32] are higher than disposable personal income, so that expenditures are financed by borrowing[33], the sale of property, or use of savings.

Such trends exert an even greater influence on increasing pessimism about future consumption, which also entails a decrease in investment, thus reinforcing recessionary pressures. At the same time, negative personal savings do not provide the scope for fiscal policy to make up for insufficient aggregate personal consumption by increasing government expenditure, which could aggravate the problem of the federal budget deficit. The federal budget deficit – coupled with the negative values of personal savings – would exert upward pressure on interest rates, while at the same time fuelling inflationary pressures.

32 Apart from personal consumption, personal outlays also include personal transfer payments (which increased to $44.6 billion in January 2008), as well as the interest payable on the earlier borrowing by individuals.

33 Including borrowing financed through credit cards and home equity loans.

Investment is an important component of aggregate demand, recording even more significant cyclical fluctuations than personal consumption. The most dramatic movement is the path of the gross private domestic investment, especially those referring to residential investment. It decresed in 2007, and in the first quarter of 2008 (-17,0 per cent, -25,5 per cent, respectively). Thus, fixed investment started to decrease due to the sharp decrease of residential investment, while the expenditures on non-residential construction and investment in equipment and software continued to increase at the relatively modest rate of 4,7 per cent at annual level in 2007, although they showed a decrease (-0,2 per cent) in the first quarter of 2008. However, due to the worsening outlook for sales and the generation of profits in the future, as well as the tighter credit terms, there is an apparent decline in real outlays on equipment other than high-tech and transportation in the last quarter of 2007, which continued into 2008. Just this record of investment in equipment confirms the views of those who argue a recession has occured.[34] Throughout 2007, real non-farm inventory investment remained at the modest level of 10 billion dollars (annual rate). It did not increase significantly at the end of 2007 because businesses responded immediately at the first signs of decreased demand by reducing their output.

Table 8. Corporate profits: level[35]

Category	Billions of dollars							
				Seasonally adjusted at annual rates				
	2005	2006	2007	2007				2008
				I	II	III	IV	I
Corporate profits with inventory valuation and capital consumption adjustments	**1,372.8**	**1,553.7**	**1,595.2**	**1,547.7**	**1,642.4**	**1,621.9**	**1,569.0**	**1,574.2**
Net cash flow with inventory valuation and capital consumption adjustments	**1,235.4**	**1,290.9**	**1,255.1**	**1,251.5**	**1,288.9**	**1,267.8**	**1,212.1**	**1,241.7**
Net cash flow	**1,271.6**	**1,327.2**	**1,301.2**	**1,291.7**	**1,343.6**	**1,288.1**	**1,281.5**	**1,340.3**

34 Investment in equipment responds first to the cyclical contraction of economic activity, while expenditures on non-residential construction do not respond right away.

35 Source: According to the National Economic Accounts, May 2008, www.bea.gov

Table 8a. Corporate profits: per cent change[36]

Category	Percent change from preceding period						
	2006	2007	Quaterly rates				Quarter one year ago
			2007			2008	2008
			II	III	IV	I	I
Corporate profits with inventory valuation and capital consumption adjustments	**13,2**	**2,7**	**6,1**	**- 1,2**	**- 3,3**	**0,3**	**1,7**
Net cash flow with inventory valuation and capital consumption adjustments	**4,5**	**- 2,8**	**3,0**	**- 1,6**	**- 4,4**	**2,4**	**- 0,8**
Net cash flow	**4,4**	**- 2,0**	**4,0**	**- 4,1**	**- 0,5**	**4,6**	**3,8**

Movements of corporate profits also indicate the recession. The corporate profits from current production had moderate increase in 2007 of only 2,7 per cent compared with increase of 13,2 per cent in 2006 (Tables 8a, 8b). The internal funds available to corporations for investment (net cash flow with inventory valuation and capital consumption adjustments) followed a similar path. Cash flow recorded a decrease in 2007 of 2,8 per cent compared with an increase of 4,5 per cent in 2006.

The share of the profits of the non-financial sector in real GDP continued to decline after reaching a peak in the third quarter of 2006[37]. At the same time, earnings per share of financial firms were negative, while the earnings per share of non-financial firms increased by about 13 per cent.

Negative economic trends affected most economic activities but, naturally, some of them were hit harder than others. Which activities were hardest hit are shown by the data on the movement and patterns of investment, production and employment.

36 Source: According to the National Economic Accounts, May 2008, www.bea.gov

37 The peak in 2006 was almost equal to that in 1997.

One of the sectors that was hardest hit is the constuction industry. Substantial contraction in housing activity has been recorded since 2006, being reflected in a rise in unemployment in residential construction jobs.[38] In December alone, employment in construction fell by 49,000 jobs, while since September 2006 it has declined by 236,000. Such trends are certainly the result of the collapse of the mortgage loan market.

A decline was also recorded in manufacturing employment, which continued to decline in December 2007 (a fall of 31,000 jobs in December 2007),[39] so that the total reduction in factory employment amounted to 212,000 jobs during 2007. Employment was also reduced in the retail trade, as well as in the information industry.

A rise in employment was recorded in the professional and technical services[40] (in 2007 it totalled 322,000 jobs), health care industry (381,000) and food services (304,000).

It is important to consider the significance of one more factor exerting influence on the US economic trend – an increase in energy prices, primarily the price of crude oil. The total world demand for crude oil increased by 5.5 million barrels per day. Most of that is accounted for by an increased demand in non-OECD economies, including 2.0 million barrels by China alone. This inevitably brought about an increase in the price of crude oil. Apart from the latter, an increase in energy and electricity prices also continued, resulting in an increase in consumer energy prices of 41 per cent relative to non-energy prices. At the same time, the share of energy expenditures in total consumer purchases increased to 6 per cent in 2007. This actually decreased the portion of disposable income for the purchases of other goods and services, which is another factor that caused a slowdown in consumption.

Apart from the increase in the price of crude oil caused by increased demand, it is important to point to other geo-political factors – instability in the Middle East and Nigeria, as well as the weakening of the dollar, which was intensified by the

38 During 2004-2006, employment in residential construction increased significantly. The construction industry reached a high point in September 2006.

39 The automobile industry, wood products, electrical equipment and textile industry also accounted for this decline.

40 This includes employment in the architectural and engineering services, management and technical consulting services, administrative and support services.

deterioration of economic conditions in the United States, and the responses of the US monetary and fiscal authorities.

The only indicator that continued to increase at a rate, as in the previous period during 2007, is the real exports of goods and services. Export expansion is generated by the fast economic growth of the US foreign trade partners[41], but also by the weakening of the dollar that made American goods cheaper relative to those of other countries. Apart from the increase in exports, the increase in real imports slowed to the annual rate of only 1.9 per cent during 2007. Thus, during 2007, the external sector provided significant support to economic activity in the USA, such that it contributed to a rise in GDP of nearly 1 per cent (0,91 per cent).

Apart from the favourable effects of net export increases, one can also observe a rise in import price inflation during 2007 of about 8.5 per cent due to an increase in the price of crude oil, a significant increase in the prices of food commodities, and the weakness of the dollar.

The mentioned indicators point to the key problems faced by the American economy. The greatest concern in the USA is about the level of consumption, since consumption is holding up the economy. However, concern is also caused by instability on the financial markets, as well as the general pessimism felt by the American people regarding future economic trends, which may result in an even deeper recession.

4. Causes of the Economic Contraction in the USA (2008)

The shift in trends in the US economy, recorded in mid-2007, is linked to and coincides in large measure with the turbulence in the financial markets, while the effects on the financial sector are indisputable. The blame for the beginning of the economic contraction in the USA is often attributed to the collapse of mortgage loans, which was preceded by sharp increases in subprime mortgage loan delinquencies, caused by an unsustainable boom in the housing market. Amongst the measures devised to end the recession in 2001, the Fed reduced

41 During 2007, the rise in real GDP of OECD countries (without the United States) was equal to 2.7 per cent, while the rise in real GDP in the emerging market economies was even more impressive: from 8 per cent to 11 per cent. The European Union remained the most significant destination for US exports of goods and services, but a significant increase in exports to India, China and the Middle East was also recorded.

interest rates, which in mid-2001 reached a record low level of 2 per cent, thus encouraging the refinancing of mortgage loans. This affected households in several ways. First of all, it brought about an additional increase in the demand for housing, especially for larger homes, which resulted in a boom in the housing market, characterized by a dramatic increase in prices. This market was also characterized by significant speculative behaviour – many home buyers expected that prices would also continue to increase in the future. On the other hand, cheaper credit, due to lower interest rates, resulted in a higher disposable income which enabled an increase in personal consumption, while the larger homes purchased by households facilitated the provision of home equity loans.

The housing financial crisis is reflected in the dramatic decline in prices which began in 2006. In October 2007, home prices fell by 6,7 per cent for the 10th consecutive month, recording their largest drop since April 1991 (6,3 per cent)[42]. It is expected that these prices will continue to decline by up to 15 per cent in 2008 in order to overcome the accumulated imbalance. At the same time, residential construction recorded a significant decline (Table 7).

The imbalance problem on the housing market will be solved by the action of supply and demand, which will deflate the asset bubble. The revival of the real estate market, an extremely important market for the overall economy, may be induced by the Fed's interest rate reductions. Real estate contributes 10 per cent of the total US output. This significance is also shown by the fact that in the second half of 2007, a decline in residential investment reduced the annual growth rate of real GDP by more than 1 percentage point. At the same time, Fed implemented a set of measures devised to facilitate the repayment of housing loans by home owners, while at the same time taking the necessary steps to preclude risky behaviour in the future.

A loss of confidence, the result of instability in the financial markets, decreased investors' appetites to take risks, coincided with decreasing liquidity in the financial markets throughout the world, but especially in the American markets. At the same time, banks also became concerned about the recovery of their loans, and were forced to take a large volume of dubious assets onto their balance sheets. Banks became more conservative with respect to supplying credit to households and companies. Among other things, this was contributed to by unfavourable trends in the mortgage market, since 60 per cent of bank loans comprise housing

42 According to the index of prices of existing single family homes in 10 metropolitan areas.

loans. The tightening of credit terms by banks was justified by uncertainty over the future economic situation, as well as decreased tolerance towards risk.

Financial instability influenced the spread of risk in the credit markets, coupled with the fluctuations in equity prices. In addition to the imposition of tighter credit terms for households and companies, decreases in capital expenditures and consumer outlays resulted in a decline in aggregate demand and an economic slowdown.

5. Monetary Policy and the Attempts to Overcome Economic Contraction

The determination of the short and long-term effects of money on real variables on one side and prices on the other, has a significant place in monetary economics and business-cycle theories. As the source of business-cycle fluctuations, money is one of the most significant components of monetarism (M. Friedman and Schwartz, A. 1963) – changes in the money growth rate precedes the changes in real economic activity (the largest correlation is between GDP and M2).

The aims of central banks' monetary policies are, first of all, price stability and a decrease in the deviation of income from its natural level. The priority given to these aims was changed, depending on the dominant economic theory and the relevant central bank. Unless the central banker has only a single goal, he has to balance the competing objectives – low inflation and output stability. Monetary policy makers must also select the policy instrument that should be used (the rate of interest or money supply) and decide between discretionary policy and simple rules.

The Keynesian view of money and its non-neutrality allowed for the influence of money on real output, while the transmission mechanism was pointing to the need for monetary policy based on the target interest rate. The use of the interest rate in the attempts to conduct a contracyclical monetary policy, which is currently the Fed's monetary policy, is based on the correlations between real GDP and various interest rates – correlations are smaller for longer-term rates. It is also important that low interest rates precede output and that a rise in output is followed by a higher interest rate (Walsh, C. E., 2003).

For price movements it is very important that aggregate supply shocks cause prices to move contracyclically, and that aggregate demand shocks cause prices to be procyclical. Supply shocks are more important for long-run business cycle fluctuations (long-run behaviour of output and prices), while demand shocks are more important for short-run fluctuations (Kydland, F. E. and Prescott, E. C., 1990). This is the core argument of real business cycle theory.

However, the trends in the American economy since mid-2007, as well as the Fed's policy, follow – to a much greater extent – the monetarist argument that money causes cyclical movements or, in other words, the Keynesian recommendation to use the federal funds rate[43] as the key policy instrument (Bernanke, B. S. and Mihov, I., 1998) in order to increase the aggregate demand in the USA.

Since the late 1980s, the Fed has been directly targetting the funds rate, thus allowing complete transparency as to how the Fed conducts monetary policy[44]. The Fed's choice of monetary policy measures, to halt unfavourable economic trends, is directly derived from the aims and responsibilities stipulated by its founding document – price stability and full employment. Although the Fed's monetary policy has undergone different phases in which priority was given once to price stability and once to income stability at full employment[45], it can be observed that, regardless of the influence of monetarist theory and policy, the Fed has not abandoned the essentially Keynesian idea that it is possible to encourage economic activity – to increase investment, production and employment by monetary policy whenever the economy is not caught in a liquidity trap.

Consider the Fed's monetary policy during 2007 and in early 2008. It started with the relatively promising forecasts in early 2007, when indicators suggested that the housing market problems were having little effect on the broader economy; net

43 The overnight rate in the interbank market for reserves.

44 Since 1994, the Federal Open Market Committee has been publishing its decisions relating to the monetary policy, that is, changes in the target rate.

45 When the Federal Reserve started in 1914, the gold standard was expected to stabilize the price level, after the experience of the Great Depression and Second World War, policy makers altered priorities in favour of economic stabilization as a primary goal of monetary policy. When inflationary forces grew during the 1970s, the Fed increased attention to price stability to be the primary long-run objective of monetary policy. The turning point in conducting monetary policy was in 1979 with Paul Volcker as the Chairman of the Federal Reserve Board. In the period 1979–1982, the Fed made attention to its monetary targets – the Fed was required to establish the targets for several different money stocks with the key objective to avoid inflation. In the 1990s, monetary policy was conducted with the view on the importance of price stability as a healthy climate for sustainable economic growth. The rejection of the monetarist requirement for targetting the monetary aggregates (M1, M2, and M3) is derived from the non-existence of any such long-term statistical relationship between nominal GDP and any monetary aggregate (M1, M2, M3), so that interest rate targetting won.

exports which, inter alia, were boosted by the weak dollar, supported economic growth, although, due to a high resource utilization there was concern over the level of inflation. As the weakness in the housing sector increased, the FOMC announced that future monetary policy should take into account both inflation and economic growth. However, at the meeting held in early August 2007, the FOMC decided not to lower the federal funds rate from its 5,25 per cent, bearing in mind the impact of continuing significant global economic growth and believing the high resource utilization in the US economy was the possible cause of inflationary pressure.

Subsequent events in the American economy pointed to a rapid deterioration of the situation: financial conditions were aggravated due to concerns about liquidity; with liquidity in short-term funding markets notably deteriorating. Simultaneously the rise in employment was slowing, while inflation remained a potential threat.

The Federal Reserve opted for a variety of policy responses. One of the first measures was to facilitate the functioning of short-term funding markets by changes in discount window policies. From September 2007, the FOMC started with the lowering of the target for the federal funds rate, so that by April 2008 this was reduced to 2.00 per cent (the rate was reduced to 4.75 per cent in September, 4.5 per cent in October, 4.25 per cent in December, 3.5 per cent in January, 3.0 per cent in February, 2.25 per cent in March, and 2.00 per cent in April).

Apart from lowering the federal funds rate, the Fed implemented other measures, of which the increase in communication with the public deserves analysis. Although the Fed's operations were already fully transparent, it was decided to inform the public more fully about the broader economic projections and the measures being implemented by the Fed. These reports would provide both businesses and the general population with the relevant information, so that their behaviour could be made as flexible and as rational as possible in order to avoid rigidities. The New Keynesian business cycle theories focus on rigidities, both real and nominal, as the most important sources of cyclical fluctuations (Greenwald, B. and Stiglitz, J. E., 1993).

Parallel to the deteriorating economic indicators despite the lowering of the federal funds rate, the Fed continued to monitor closely inflationary movements. Concerns about inflation were caused by an increase in energy costs, which pushed up the prices of consumer goods, as well as by the weakening of the dollar. At the same time, there was considerable uncertainty regarding the inflation outlook.

Hence the effects of the implemented monetary policy measures on inflation have remained a dominant restraint on further lowering of the federal funds rate.

In order to improve the functioning of the American and foreign financial markets, the Fed established the temporary Term Auction Facility (TAF) to provide funding to certain depository institutions. The Fed also established a foreign exchange swap line with the European Central Bank and Swiss National Bank.

Given the monetary policy measures with which the Fed tried to halt, and possibly reverse the negative economic trends, a question increasingly asked is did the Fed use the wrong instruments? Criticism is levelled in several directions. It is argued that the Fed responded too late in lowering the federal funds rate sufficiently because they waited until the housing market adversely affected the overall economy instead of cutting immediately at the first signs. Interest rate reduction measures started only in September. Thus, from October to December, the federal funds rate was 4,5 per cent, which is essentially at the level of a neutral real interest rate. The neutrality of monetary policy is consistent with constant inflation over a medium term. Aggregate demand is encouraged only by lowering the federal funds rate below the neutral level, although this can also generate a rise in inflation. The Fed's justification for such a delayed response was that – due to high capacity utilization and a low rate of unemployment in the first half of 2007 – there was concern over the rate of inflation.

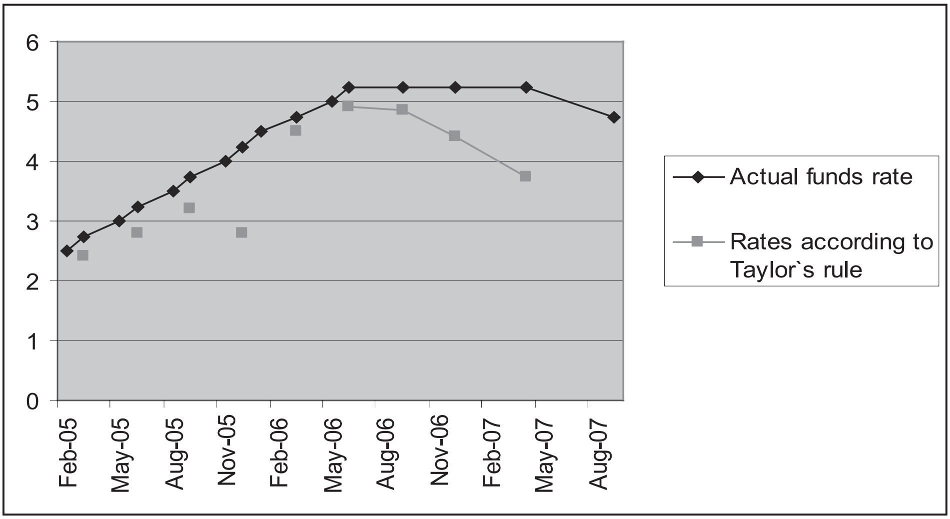
One of the best known models of the Fed's "reaction function" (Taylor's rule) confirms that monetary policy has been too restrictive since autumn 2005, and especially so since 2006. It can be seen that the gap between actual funds rate and predicted rate (according to Taylor's rule) became significant from autumn 2006 onwards. According to Taylor's rule the real federal funds rate reacts to the deviations of inflation from an inflation target and to the deviations of real output from its long-run potential level [46] (Taylor, J. B.,1993) .

$$i_t=\pi_t+r^*+0{,}5(\pi_t-\pi^*)+0{,}5(y_t)$$

i – federal funds rate, r^*-equilibrium real federal funds rate, π - average contemporary inflation rate, π^* - target inflation rate, y – output gap

46 According to Taylor's rule, the weights the FED gave to the deviations of inflation and output were equal to 0.5, which is not the case in practice, because the weights attached to the occurrence of inflation and the occurrence of income deviation are not always equal. The estimates of Taylor's rule indicate that Taylor's rule fits well into monetary policy during the Greenspan period, while during the Volcker period the funds rate was higher than recommended in order to reduce inflation. (John P. Judd and Glenn D. Rudebusch, 1998).

Figure 1. Actual Federal funds rate and according to Taylor`s rule[47]



Criticism also comes from monetarist considerations. Blame for the current economic downturn is attributed to monetary policy aimed at overcoming the 2001 recession, which was especially damaging from 2003 to June 2004 (Table 9). During this period lax monetary policy encouraged various types of risky behaviour. The consequences of such behaviour include the current credit crunch and lack of liquidity.

Apart from fighting against insufficient liquidity, the Fed is waging a much more difficult battle against the lack of confidence in the future of the economy, which discourages investors from investing and the general population from spending and hence deepens the recession. Therefore, an appropriate fiscal stimulus has been added to an expansive monetary policy.

47 Source: Federal Reserve Board, Bloomberg, CBO and GEAM (Healey, W. et al , 2007, P. 2)

Table 9. Federal funds rate (2001-04)[48]

Date	Level (per cent)
3-Jan-01	6
31-Jan-01	5.5
20-Mar-01	5
18-Apr-01	4.5
15-May-01	4
27-Jun-01	3.75
21-Aug-01	3.5
17-Sep-01	3
2-Oct-01	2.5
6-Nov-01	2
11-Dec-01	1.75
6-Nov-02	1.25
25-Jun-03	1
30-Jun-04	1.25
10-Aug-04	1.5
21-Sep-04	1.75
10-Nov-04	2
14-Dec-04	2.25

6. The Results of Fiscal Policy in Overcoming Economic Contraction

Since September 2007, the Fed has been conducting monetary policy with the aim of stimulating the economy. However, the results are not promising – industrial output fell by 0,5 per cent in February and the capacity utilization rate slowed to 80,9 per cent from 81,5 per cent in January. However, the beneficial effects of the Fed's cut in short-term rates will take at least six months to impact the economy.

Macroeconomists have long been debating the role of fiscal policy in the stabilization of economic trends. There is no doubt that fiscal policy exerts an influence on aggregate demand, the distribution of wealth as well as the ability of the economy to produce goods and services. However, there is no consensus as to whether fiscal policy has the ability to stabilize economic activity or even if it should be used for this purpose. In Keynesian economics, fiscal policy is

48 Source: Federal Reserve Bulletin, http://www.federalreserve.gov/fomc/fundsrate.htm.

paramount because monetary policy is inefficient in economic stabilization due to a liquidity trap. In monetarist theory and economic policy it is argued that the economy returns quickly to a state of full employment, so that changes in fiscal policy have little potential to stabilize the economy. Hence monetarists favour monetary policies (Friedman, M. and Meiselman, D. 1963). The history of fiscal policy implementation in the USA can be divided into four episodes: significant use of the fiscal policy during the Keynesian era (1936 – 1966), the fall of the fiscal policy stabilization (1967 – 1977), the crowding out effects of stabilization policy (1981 – 2001) and the new era (since 2001) (Blinder, A. S., 2006).

In combating a recession, fiscal policy anticipates an increase in government expenditures, assuming inflation is not a more significant threat. These expenditures compensate for falls in household consumption, and business investment caused by general pessimism. This is the key measure of the Keynesian contracyclical fiscal policy. The fiscal policy measures being implemented in the USA, are following these recommendations exactly.[49]

The current fiscal package designed to stimulate the US economy represents classic countercyclical fiscal-policy action in the Keynesian tradition. First of all, it is big enough to influence on the economy – its value is estimated at over 152 billion dollars. In addition, the package covers both households and businesses. The idea behind the implemented measures is to leave to American workers and business a larger amount of money at their disposal, so that it can be used for consumption (households) or investment (businesses). The aim is to increase the disposable incomes of American workers and businesses so that they can be used for consumption (households) or investment (businesses). The intention is to increase aggregate demand, which is currently constrained by the aggravated economic conditions.

The household-oriented measures include the tax rebates to approximately 128 million American households – the minimum amount is $300 per person or $600 per couple. The qualification for receiving these tax rebates is an adjusted gross income of less than $75,000 per single person and $150,000 for married couples. Families with children receive an additional $300 per child. Such a tax incentive is granted if the minimum earned income is $3,000. This income bracket also includes all recipients of Social Security and veterans' rebates. In order to ensure the efficiency of fiscal policy, rebates should reach the greatest

49 Based on data from the Description of the "Economic Stimulus Act of 2008" (January 28, 2008), Joint Committee on Taxation

possible number of the population, specifically including those households which will spend this additional disposable money quickly, thus immediately increasing aggregate consumption and encouraging both production and investment. Thus, these measures will provide support primarily to the middle classes. Keynesian ideas about the marginal propensity to consume being the major determinant of the level of aggregate consumption, and differences in the degree of the marginal propensity to consume among the various classes is well known. Thus we observe a return to Keynesian recommendations for income redistribution through appropriate fiscal policy. Such government action has been criticized frequently by monetarists, who question its long-term effectiveness.

The effects of these measures on the level of consumption depend on whether the changes in the tax burden are temporary or permanent, a permanent reduction obviously having a greater impact (Friedman's permanent income). At the same time, due to a decrease in tax revenues and an increase in the budget deficit, one might expect an increase in the public savings rate,, because a reduction in the current tax burden will not be perceived as an increase in disposable income, but as an increase in future taxes (Ricardo-Barro theorem). However, such arguments are generally not applicable to states of below full employment in the economy, because in that case one can expect a more significant effect on consumption. Therefore, the effects of the measures implemented in the USA will be significantly dependent on future movements in the rate of employment. Apart from the measures devised for households, the package provides tax incentives for businesses to invest. During recessions, investment in equipment is often hit hardest. According to the proposed measures, American businesses are allowed to buy new equipment and to deduct an additional 50 per cent of the cost of their investment in 2008. This means that purchases of equipment and software this year will reduce companies' taxes by a significant amount. In turn, this will encourage them to invest and create new jobs. It is hoped that small businesses especially will be encouraged to make significant investment incentives in 2008.

There is no consensus on the likely effects of these stimuli. Some consider them to be inefficient, because they will help only those who have already decided to invest. They will not promote much new investments, due to market signals of a reduction in consumption and investors' pessimism regarding future economic trends. Therefore, many recommend that the fiscal package should be supplemented with direct government investment. It is proposed to encourage economic growth by directly financing infrastructure projects (the construction of roads, bridges and the like).[50] This would increase current employment and boost the economy for the future. Thus Keynesian fiscal incentives would be supplemented with a major program of public works. These proposals have not yet been adopted by the Bush administration, which is trying other measures before resorting to the most drastic, ie massive government direct investment. That such recommendations are even under consideration emphasises the seriousness of the situation.

Table 10. Government consumption expenditures and gross investment – per cent change from preceding period[51]

Category	2005	2006	2007	2007				2008
				I	II	III	IV	I
Government consumption expenditures and gross investment	**0,7**	**1,8**	**2,0**	**-0,5**	**4,1**	**3,8**	**2,0**	**2,0**
Federal	1,5	2,2	1,7	-6,3	6,0	7,1	0,4	4,4
National defense	1,5	1,9	2,8	-10,8	8,5	10,1	-0,5	5,6
Non-defense	1,3	2,8	-0,4	3,8	0,9	1,1	2,8	1,8
State and local	0,3	1,6	2,2	3,0	3,0	1,9	2,8	0,6

Apart from the proposed measures, which should directly pump money into the economy through aggregate demand, the government is also taking the steps to help home owners after the collapse of the mortgage market.

Fiscal expansion through increasing government consumption and gross investment is evident in 2007, and in the first quarter of 2008 (Table 10).

In the fiscal year 2007, the federal government deficit was $162 billion, equal to 1,25 per cent of nominal GDP. The budget deficit continued to grow during the first four months of the fiscal year 2008. The reasons for the increased deficit are a decline in revenues, caused by the economic slowdown and an increase in

50 There is a large number of the ready infrastructure project proposals in the states, so that their realization could begin within 30-90 days should the federal government provide the appropriate funds for their financing.

51 Source: According to the National Economic Accounts, May 2008, www.bea.gov

expenditure. The current fiscal policy measures to revive economic activity (to administer an "injection into the shoulder" of the American economy), of which the most significant is the Economic Stimulus Act of 2008 proposed by President Bush, will further increase the federal budget deficit.

According to the data, real federal expenditures on consumption and gross investment were increased at an annual rate of 3.5 per cent on average during 2007. Over the same period, federal debt increased by about 5 per cent[52], while the ratio of federal debt held by the public to nominal GDP remained at about 36.5 per cent, similar to previous years. Total net national savings remained at about 1,5 per cent of nominal GDP during 2007. This very low figure, typical since the late 1990s, implies slower capital growth and the continuation of significant foreign borrowing.

7. Conclusion

Although a recession in the American economy has not yet been officially announced, the government and Federal Reserve have been implementing measures that suggest they believe the problems faced are serious, deep seated and not transient. The measures being taken indicate a return to Keynesian economic policy. Several key Keynesian ideas concerning the smoothing of the business cycle have been revived. This entailed abandonment of the view that recession is natural if preceded by economic expansion based on monetary expansion (Austrian School). The latter assume(s) recessions are natural processes that adjust capital to consumer preferences, through liquidation and restructuring, coupled with an inevitable rise in unemployment. Instead the Keynesian arguments were accepted, namely that the business cycle is generated by changes in the expectations and fluctuations of consumer outlays (i.e. variations in disposable wealth) such that the economy is unable to ensure full employment. Three psychological propensities are linked to this – the propensity to consume, the propensity to invest and the preference for liquidity – the theory itself falls into the category of psychological cycles, because of the "uncontrollable and disobedient psychology of business people in the economy of capitalist individualism". This being determined by the waves of systematic and cumulative optimism and pessimism.

The contracyclical policy being implemented follows all elements of Keynesian theory from insistence of on an expansive monetary policy (based on targeted

52 Relative to the increase of 4 per cent in 2006.

interest rates) to resorting to fiscal policy, since monetary policy alone is not efficient. The aim of fiscal policy is to influence the level of aggregate demand (through the marginal propensity to consume and invest), while simultaneously surmounting the problem of an absolute liquidity preference.

Given the Keynesian origin of the implemented measures is clear, the outcomes can be predicted. Despite inherent uncertainty, the crucial macroeconomic variables will return to their long-term levels, although the unemployment rate will remain high, even in 2010. The inflation rate is certain to increase as a consequence of the Federal Reserve's dual mandate. In addition to the problems of unemployment and inflation, the current fiscal authorities will leave the budget deficit to their successors. Arguably the current fiscal expansion is due in part to the fact the present administration will not have to deal with the consequences. This is covered in the theory of political macroeconomic cycles by the models in which public debt is a strategic variable, and those dealing with the intergenerational redistribution of tax burden. Certainly, the current fiscal authorities have avoided the mistakes made in 1992, when they failed to respond rapidly enough to the downturn.

LITERATURE

Auerbach, A. J. (2006), "American Fiscal Policy in the Post-War Era: An Interpretive History", in Kopcke, R. W., Tootell, G. M. B. and Triest, R. K. (editors), *The Macroeconomics of Fiscal Policy*, MIT Press, Cambridge Massachusetts, pp 77-100

Bernanke, B. S. and Mihov, I. (1998), "Measuring Monetary Policy", *Quarterly Journal of Economics*, 113 (3), pp. 869-902.

Blinder, A. S. (1998), *Central Banking in Theory and Practice*, MIT Press, Cambridge, Massachusetts

Blinder, A. S. (2006), "The Case Against the Case Against Discretionary Fiscal Policy", in Kopcke, R. W., Tootell, G. M. B. and Triest, R. K. (editors) (2006), *The Macroeconomics of Fiscal Policy*, MIT Press, Cambridge Massachusetts, Pp 25-61

Friedman, M. and Meiselman, D. (1963), "The Relative Stability on Monetary Velocity and the Investment Multiplier in the United States: 1897 – 1958", in *Stabilization Policies*, Englewood Clifs: Prentice Hall, Pp 165 – 268

Greenwald, B. and Stiglitz, J. E. (1993), "Financial Market Imperfections and Business Cycles", *Qauterly Journals of Economics*, Vol. 108, Pp 77-114

Greenwald, B. and Stiglitz, J. E. (1993), "New and Old Keynesians", *Journal of Economic Perspectives*, Vol. 7, Pp 23-44

Healey, W., Sinha, C. and Xu, J. (2007), "A Framework for U.S. Monetary Policy – The Taylor Rule", *White Paper Series*, GE Asset Management, http://www.geam.com

Judd , J. P. and Rudebusch, G. D. (1998), "Taylor`s Rule and the Fed: 1970-1997", *Federal Reserve Bank of San Francisco Economic Review*, Number 3, sf.frb.org

Kliesen, K. L. (2003), "The 2001 Recession: How Was It Different and What Developments May Have Caused It? ", *Federal Reserve Bank of St. Louis Review*, Sep/Oct 2003, Pp. 23 - 37

Kydlend, F. E. and Presscot, E. C. (1982), "Time to Build and Agregate Fluctuations", *Econometrica*, Vol. 50, pp. 1345-1370.

Kyun, K. (1988), *Equilibrium Business Cycle Theory in Historical Perspective*, CUP, Cambridge

Long, J. B. and Plosser, C. I. (1983), "Real Business Cycle", *Journal of Political Economy*, Vol. 91, Pp. 39-69

Nelson, C. and Plosser, C. I. (1982), "Trends and Random Walks in Macroeconomic Time Series: Some Evidence and Implications", *Journal of Monetary Economics*, Vol. 10, 139-162

Nordhaus, W. D. (2002), "The Mildest Recession: Output, Profits, and Stock Prices as the U.S. Emerges From the 2001 Recession", *NBER Working Paper 8938*, http://papers.nber.org/W8938

Sorensen, P. B. and Whitta-Jacobson, H. J. (2005), *Introducing Advanced Macroeconomics: Growth and Business Cycles*, McGraw Hill

Taylor, J. B. (1993), "Discretion Versus Policy Rules in Practice", *Carnegie-Rochester Conferences Series on Public Policy*, Vol. 39., pp 195.-214.

"Probing the Probabilities of a 2008 Recession", (December 21, 2007), *U.S. Economic & Interest Rate Outlook,*

Walsh, C. E. (2003), *Monetary Theory and Policy*, MIT Press, Cambridge, Massachussets

Wood, J. H. (2005), *A History of Central Banking in Great Britain and United States*, CUP, Cambridge

"Monetary Policy Report to the Congress" (July 18, 2007), Washington, D. C., Board of Governors of the Federal Reserve System

"Monetary Policy Report to the Congress" (February 27, 2008), Washington, D. C., Board of Governors of the Federal Reserve System

Description of the "Economic Stimulus Act of 2008" (January 28, 2008), Joint Committee on Taxation

"Is U.S. in Recession? Discussions Begin", (The NBER`s Recession Dating Procedure) – http://www.nber.org/cycles/recessions.html

http://www.nber.org/cycles.html

http://www.whitehouse.gov/news

http://www.bea.gov

http://www.federalreserve.gov/fomc/fundsrate.htm