



The Impact of the Great Recession on Monetary and Fiscal Policy in Developed Market Economies

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Abstract

Background: With the occurrence of the crisis in 2007, which caused the largest economic contraction since the Great Depression in the thirties, it has become evident that the previous understanding of strategies, effects and roles of monetary and fiscal policy should be redefined. **Objectives:** The aim of this paper is to illustrate a possible expected change in monetary and fiscal policy in developed market economies that could occur as a consequence of the Great Recession. **Methods/Approach:** The paper provides a comparative analysis of various primary economic variables related to the developed OECD countries, as well as the empirical testing of the selected theoretical assumptions. **Results:** The changes in monetary policy refer to the question of raising target inflation, considering a possible use of aggregate price level targeting and paying attention to the role of central banks in suppressing the formation of an asset bubble. The success of fiscal policy in attaining stabilization depends on the size of possible fiscal measures and creation of automatic stabilizers. **Conclusions:** For the most part, monetary and fiscal policies will still stay unchanged, although some segments of these policies need to be improved.

Keywords: the Great Recession; monetary policy; fiscal policy; flexible inflation targeting; asset bubble; fiscal space; automatic stabilizers

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Introduction

The seventies and the beginning of the eighties of the 20th century were known for distinct shocks which resulted in double-digit inflation and unemployment. However, the period from the early eighties until the beginning of the global economic crisis in mid-2007 was characterised by the emergence of relatively reassuring economic trends including tendencies such as relatively low and stable inflation and the

absence of significant cyclical fluctuations, the merit for which most macroeconomists consider should be attributed to them.

The impression was that the mentioned consensus resulted in theoretical completion and practical confirmation of previous macroeconomic concepts, which is why many prominent economists, including Lucas and Bernanke, asserted that the cyclical trends of the economic growth are under control, and that the problem of depression prevention is solved. The confidence of macroeconomists was not undermined by occasional crises such as those in Japan in 1990, Mexico, Indonesia, Malaysia, Thailand and Korea in 1997, and Argentina in 2002.

However, after the great moderation, and with the outbreak of the crisis in August 2007, it became clear that it is necessary to redefine previous concepts, strategies, and effects, i.e. the role of monetary and fiscal policy in the upcoming period. That is, because it became evident that the confidence of the holders of these two policies and their ability to successfully manage them in the direction of achieving the desired goals of economic policy is seriously undermined.

Consequences of the Great Recession on the monetary policy strategy

The pre-crisis decades of the 20th century were characterized by the monetarists' consensus, based on former theoretical and empirical research, which included the establishment of an entire set of the basic scientific principles which the holders of monetary policy adhered to, and thereby explained the success of monetary policy managing. The key principles extracted from the literature are the following: inflation is always and everywhere the monetary phenomenon, the price stability has the important benefit, there is no long-term trade-off between inflation and unemployment, expectations have a crucial role in determining inflation and the impact of the transmission mechanism of monetary policy, real interest rates should rise in case of inflation increase (Taylor's rule), monetary policy is subjected to the problem of time inconsistency, the independence of the central bank helps further improvement of monetary policy efficiency, the strong nominal anchor is the prime factor for creating good monetary policy outcomes, financial disturbances play an important role in business cycles (Mishkin, 2007). On the other hand, a flexible inflation targeting which implies the central bank's obligation to stabilize the inflation around the targeting level, and output around the natural level, represent the most commonly accepted monetary policy strategic framework.

The last economic crisis of 2007 (the Great Recession) caused many conceptual dilemmas, the first being the assumption that individual segments on which the theory of monetary policy rested should be revised, while there were views that the monetary policy needs a complete review. The crisis indicated that macroeconomic policy must have more objectives and more instruments at its disposal, but conducting relevant research aimed at getting the exact answer to the question which instrument should be directed towards achieving specific economic policy goals requires time. If the effect of the crisis on the monetary policy strategy, i.e. on flexible inflation targeting, is minutely observed, three questions (possible modifications) are well marked as the most common topics for discussion in the academic community. The outcome of the named discussion will essentially determine the future development of this strategic framework.

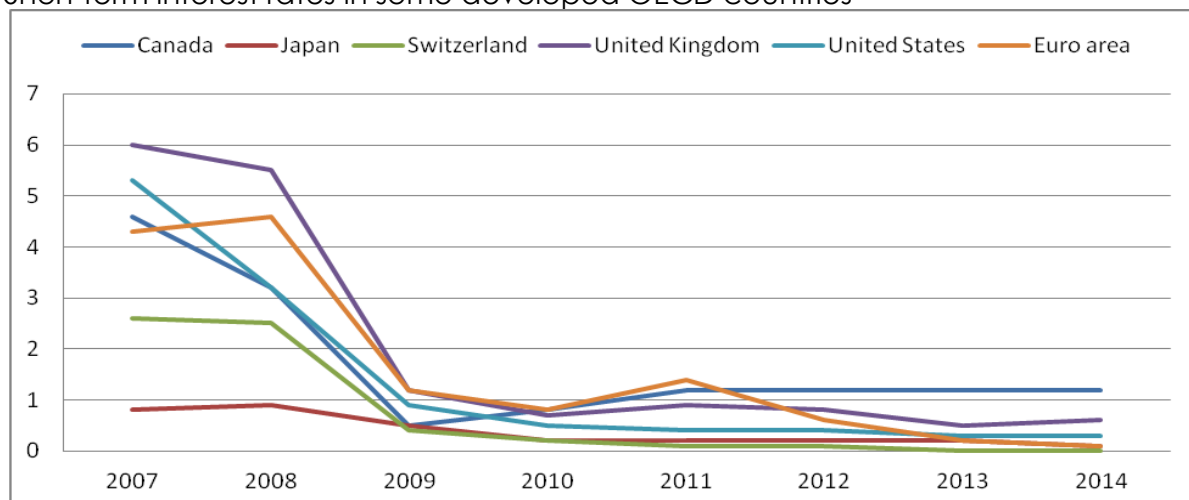
The first dilemma concerns the issue of central banks raising the inflation target level in order to improve its flexibility during the period of crisis. Proponents of increasing the inflation target from the usual value of 2% to the value of 4%,

advocate their position by the assumption that lowering interest rates would create conditions for an expansive monetary policy. Expansive monetary policy would be used as a reaction not only to financial, but to other shocks which may arise. The second reason is the fact that the zero lower bound problem would be decreased by the abovementioned, since the crisis has shown that this problem is significantly more serious than it used to be considered (Dell'Ariccia and Mauro, 2010). John William (2009) suggested in his recent studies that raising the inflation target from 2% to 4% on average, would increase the possibility of dealing with the zero lower bound problem, which causes considerable costs in terms of macroeconomic stabilization, while Akerlof, Dickens and Perry (1996) plead the need for a higher average inflation as the way for the increase of real wages flexibility.

The insistence on raising the inflation target in the developed market economies is justified by data presented in Figure 1. Data indicate the presence of the ZLB problem immediately after dealing with the negative consequences of the Great Recession. In fact, the analysis of a series of data leads to the conclusion that the developed economies (especially Switzerland, the EU, the US and the UK), starting in 2009, faced the impossibility of further lowering of interest rates, which quickly reached minimum levels, which further prevented the use of monetary policy for countercyclical purposes. This caused a significant increase in the cost of macroeconomic stabilization, which leads to the conclusion that raising the inflation target in a similar situation would be beneficial.

Figure 1

Short term interest rates in some developed OECD countries



Source: OECD Economic Outlook Database, September 2014.

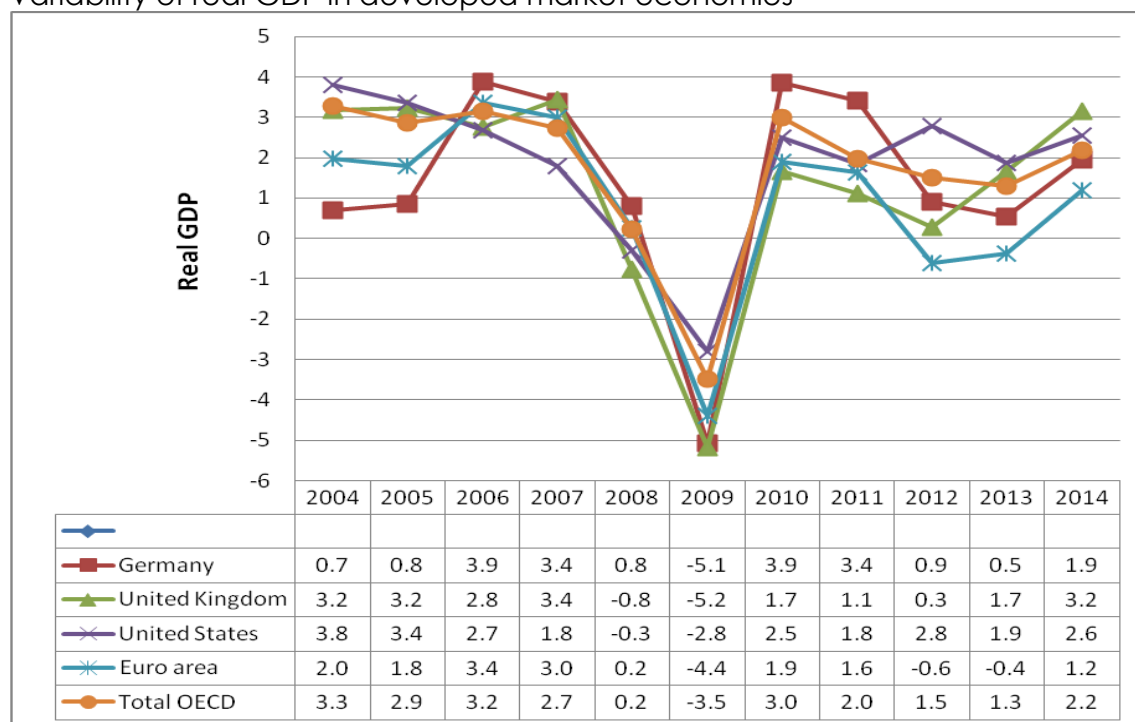
The second dilemma resulting from the economic crisis is more radical than the first one. It refers to the advice given by certain monetarists to take price-level targeting instead of inflation targeting as a target. Inflation expectations are considered to be reduced in that case, and they obtain the role of automatic stabilizers, which ultimately affects the stabilization of the inflation rate. The two modes mainly differ in the fact that in the aggregate price level mode the central bank agrees to make such adjustments in the price level of the planned dimensions in a given period, while in the inflation targeting mode the central bank responds to deviations of inflation from the targeted level, but does not respond to single changes in the price level. This, on the other hand, means that in the case of targeting the price level, the central bank must endeavour to correct targets overshooting in recent years, while in the inflation targeting it is not the case.

Proponents of the implementation of the aggregate price level targeting strategy refer to conclusions from the theoretic research realized in the late 90s and in the begging of 2000 (Ditmar, Gavin and Prescott (1999) and (2000); Vestin (2000) and (2006); Svensson (1999); Woodford (2002)) establishing that the selection of price levels as the monetary policy target results in less variation in output compared to the case of the inflation target. The implementation of this target is a sort of automatic stabilizer, as the negative shocks of aggregate demand have effects on expectations stabilization which stabilize the economy, a phenomenon which becomes more expressed as the shock is larger, as well as an effect on the zero lower bound problems. This means that the Great Recession, which made the zero lower bound problems more serious, suggests that the benefits from the implementation of the aggregate price level strategy are potentially greater than the costs which it generates.

The advantage of this strategy is higher when the intensity of the shock is stronger. Analyzing data on the variation of the output in developed market economies of OECD countries in the period of coping with the major economic crisis, as shown in Figure 2, leads to the conclusion that in the given context, the application of the aggregate price level targeting would give greater flexibility to monetary policy, and its countercyclical character would be more indicated, and the variability of the output lower.

Figure 2

Variability of real GDP in developed market economies



Source: OECD Economic Outlook Database, September 2014.

On the other hand, Duc and Clerc (2010, p. 4), notice that the effects on inflation expectations will depend on several factors: the first one is the time of the adoption of the strategy on the aggregate price level, the second is related to the level of the price index which is targeted and how quickly public expectations on deviations from targets are eliminated. Another objection to this strategy in the literature, which Woodford points out in particular, is that the acceptance of the strategy would underline the problem of time inconsistency even more. But, Weber notices (2010)

that whether the costs of moving to the price level target exceed the benefits of reducing the uncertainty of the long-term price level could not be claimed with certainty, so further research would be highly valuable in the attempt to provide the final answer.

The third dilemma, generated from the crisis refers to two issues. The first is related to the role of the asset price. The other has to do with the importance of financial stability for the entire monetary policy. The movement of the asset price has the impact on spending decisions of companies and households, making the so-called welfare effect and consequently influencing the price level.

Namely, during the pre-crisis period a consensus regarding the asset price existed, based on 3 principles, emphasizing a passive role of the central bank during the period of asset bubble formation, and encouraging the moral hazard at the same time:

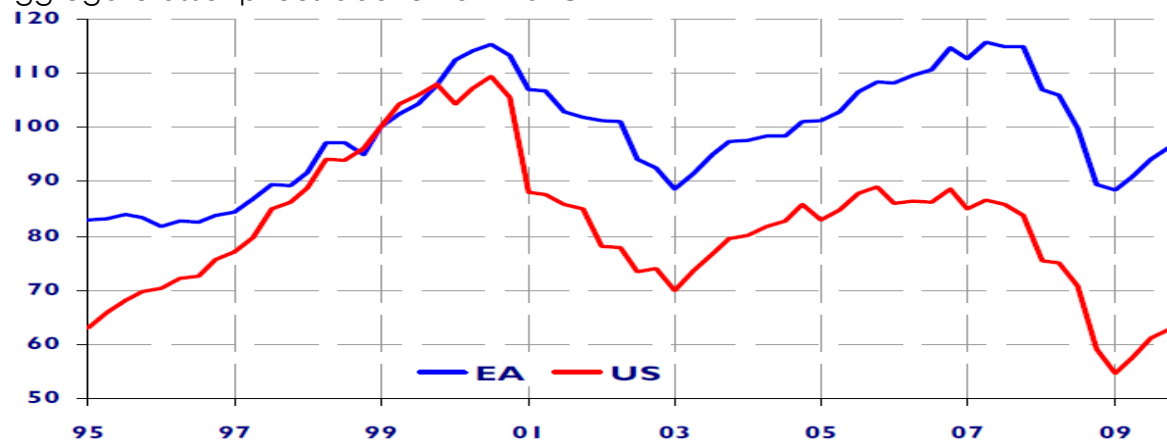
- The central bank should not target the asset price;
- The central bank should not prick the asset bubble;
- After the burst of a bubble the central bank should implement the strategy of injecting necessary liquidity, in order to avoid macroeconomic downfall (Issing, 2009, p. 46).

The justification for the mentioned consensus is connected with the opinion that the central bank will not notice the bubble formation in time. Even if the central bank succeeded in the market, the central bank would notice the bubble before, and would not allow the bubble's development which would influence its disappearance. The Federal Reserve System, for two years, firmly advocated the thesis that the central bank should implement a tougher monetary policy only in the case when the asset bubble incites the price growth, but not in cases of bubbles spreading out and an increased exposure of the financial system to an enlarged risk. Furthermore, it is assumed that, if the central bank succeeds in noticing an asset bubble in time, the instrument at its disposal is more than inefficient for that purpose, as the bubble mainly refers to certain segments of the asset market, while monetary policy influences the entire economic system. It means that the central bank could challenge the recession, the growth of budget deficit as well as the dramatic growth of public debt, in case of focusing on eliminating the asset bubble. Finally, empirical analyses during the eighties and the nineties confirm the success of reducing interest strategies with the aim of injecting liquidity needed in order to eliminate the consequences of the bubble burst (Noyer, 2011, pp. 5-8).

The public shared the opinion that an effective market will manage to absorb all relevant information, as a pillar for causing its reaction, but this assumption was evidently wrong. This is due to the fact that the situation in the period from the nineties up to 2007 implied a significantly synchronized formation of asset bubbles and other financial imbalances, in the USA and the EU, despite the fact that stable prices and economic activities occur at the same time, as shown in Figure 3.

Figure 3

Aggregate asset prices above nominal GDP



Source: Fahr, Motto, Rostagno, Smets and Tristani, 2010; p. 48.

Academics such as Mishkin (2011) make the difference between two types of asset bubbles, which cause different consequences to the industry. The first one, which refers to the credit bubble, may be very dangerous, as the crisis confirmed. A credit boom, which starts as a result of an expectation connected to economic prosperity, increases demand for some assets, hence affecting the price growth. The mentioned price growth encourages further crediting of the asset, increases demands and affects the price growth. It leads to the formation of the bubble, whose break initiates a spiral different than the previous one, jeopardizing the entire financial system. In contrast to the first, the second type of the bubble, which refers to the irrational exuberance bubble, and starts as a result of an overly optimistic expectation, is less dangerous for the financial and the economic system than the credit bubble.

Negative consequences of the crisis open the debate in literature about the role of the central bank – whether the central bank should concentrate on prevention of the bubble formation by implementing a stronger monetary policy, or on cleaning the consequences of the asset bubble break. The division on the two types of asset bubbles is important if we take into account the previously mentioned fact about the central bank's inability to notice the formation of the asset bubble in time, and represents the reason for giving priority to the role of the central bank in cleaning the consequences of the asset bubble break rather than the prevention of the bubble formation. However, recent research results in arguments against the so far dominant view that favours the "cleaning" compared to the "prevention", which suggests the formation of the credit bubble, making identifying the credit bubble easier to identify than the irrational bubble. White (2009, p. 8) notices that the point is not in causing bubble break by the central bank and in instigating recessionary movement, but in intensifying policies directed to restraining credit cycles, in order to mitigate the consequences of potential crisis. In order to increase inflation, his suggestion is not to change the policy direction as it would certainly be directed in that course, but only to highlight the importance of a stronger policy in such circumstances. The thing that would be beneficial in that case, and which represents an additional argument for the implementation of the mentioned policy, is the fact that, after the clearly expressed concern from the holders of monetary policy and their determination to act in order to eliminate the problem, the change in public's behaviour is expected, so the stabilization trend could be initiated.

Taking into consideration the justified suggestions occurring recently, which are connected with the central bank's obligation to prevent the asset bubble formation, the question is which policy would be the most relevant for that purpose. One of the possible answers could be found in the use of the so-called micro prudential supervisions directed to the limitation of credit bubbles including: capital and liquidate requests, fast corrective interventions, detailed monitoring procedures connected with risk management and so on. However, this kind of supervision is focused on individual institutions and cannot affect the macroeconomic risk elimination as a factor with the power of endangering the entire financial system. Parallel with that, it would be beneficial to establish macro prudential regulation and supervision, as an alternative regulation approach, which would be focused on actuality in the credit market. This would refer to the analysis of the role that the bank capital has in promoting financial stability, a lower Loan-to-Value Ratio, more provisions for repo placement in the period of credit expansions, and so forth. On the other hand, monetary policy can be used for eliminating the aforementioned balloon, due to the fact that through a "risk-taking channel" it can play a significant role in the creation of a property bubble, which was confirmed on the basis of numerous theoretical and empirical research studies. Low interest rate policies could influence the perception risk, i.e. the risk level in portfolios and asset prices. Namely, there are three possible effects by which the risk undertaking channel can be operational:

- Effects which act through the interest rate influence the estimation of the value, income and cash flows;
- Effects which act through relations between the market price and the targeted income's rate;
- Effects which act through aspects of communicational policy characteristics and the central bank's reaction function (Borio and Zhu, 2008, pp. 8-11).

Literature emphasizes many reasons why a low interest rate can influence the increase of the undertaking risk. Some authors prove that low interest rates can instigate asset managers towards seeking higher incomes in financial institutions, and thus towards undertaking more risks (Rhaguram, 2005, 2006). Additionally, it is emphasized that low interest rates increase net interest merge and the value of a financial institution, raising the capacity for increasing leverages and undertaking risk (Shin, Adrian and Song, 2009, pp. 4-8).

Taking into account the fact that recent research proves the existence of monetary policy channels for undertaking risks, the question is whether we should use instruments and measures of monetary policy in order to prevent credit bubbles formation, or for cleaning the consequences of bubble breaks. Besides the fact that the abovementioned macro prudential supervision is an instrument for the financial sector stabilization, Mishkin (2011, pp. 44-46) suggests the use of monetary policy for preventing the credit bubble formation (but not for the total asset bubble), as a macro prudential policy often does not correspond to the tasks for many reasons. One of the most pronounced reasons is the political pressure on macro prudential policy as it affects financial institutions directly, unlike the political influence on monetary policy which is less strong. Noyer notices (2011, p. 7) that the key lesson learned from the crisis is that monetary policy has to be followed by other policies with macro prudential nature, in order to decrease inefficiency and prevent the asset bubble formation.

Implementation of the monetary policy strategy aimed at preventing the credit bubble formation is not a simple task. This is due to the existence of some dangers which can affect its success. The most important one is the weakening of the

economic activity to a degree higher than the degree desired by momentary holders, which implies the existence of a trade-off between the wish to realize financial stability and efforts to realize price stability and output stability.

Based on interactions between the financial sector and the economy, it may be concluded that monetary policy and financial stabilization policy are connected, as the monetary policy can affect the financial stability, while realization of the financial stability also affects the monetary policy. Orphanides (2010, p. 23) concludes that the two goals regarding the price and the financial stability have the tendency to strengthen each other; with one being that the interest rate policy implemented by the central bank is insufficient to reduce risk in order to ensure the financial stability, and then it has to be amended by macro prudential measures. Conclusions of theoretical and empirical research related to possible changes in monetary policy after dealing with the effects of the Great Recession, are presented in Table 1.

Table 1

Possible changes in monetary policy after the Great Recession

Advantages	Disadvantages
Raising the inflation target	
<ul style="list-style-type: none"> ○ Increased scope for expansionary monetary policy ○ Decreased ZLB problem ○ Increased flexibility in real wages 	<ul style="list-style-type: none"> ○ Insignificant benefits because of rare shocks in aggregate demand ○ Increased inflationary expectations ○ Instability in inflationary expectations
Switching to target of the aggregate price level	
<ul style="list-style-type: none"> ○ Reduces inflationary expectations ○ Strategy gets the role of automatic stabilizer ○ Stabilization of the inflation rate ○ Smaller variations in output ○ Smaller ZLB problem 	<ul style="list-style-type: none"> ○ Pronounced time-inconsistency problem ○ Success depends on the ability to convince the public
The central bank should take care of asset prices and financial stability	
<ul style="list-style-type: none"> ○ The consequences of the crisis are alleviated in time ○ Application of the approach is an important indicator for changing the public behaviour ○ Possible stimulation of recessionary trends 	<ul style="list-style-type: none"> ○ Bubble cannot be detected in time ○ Inefficient instruments for bubble "bursting" ○ Possible stimulation of recessionary trends

Source: Author analysis

The impact of the Great Recession on fiscal policy

The economic crisis restored the central role of fiscal policy right after the recognition that monetary policy has reached its limit. That is why fiscal policy and its stimulators gained the importance. The crisis subverted some of the principles of monetary and fiscal policy, and opened the floor for debating the future principles based on which the policy will be determined by the holders.

In that sense, a thorough literature review concludes that different authors emphasize the importance of different elements of fiscal policy. Consequently, two groups of conclusions emerge. Romer (2011, pp. 2-8) formulated four lessons from the crisis:

1. The need to use fiscal instruments for short-term stabilization;
2. The existence of more effectiveness of fiscal policy than before the crisis;
3. The importance of fiscal space;

4. The importance of consideration of political economy.

The second group of conclusions is connected with conclusions made by Blanchard (2009) and Blanchard, Dell'Ariccia and Mauro (2010), highlighting the necessity of abstracting lessons:

1. The importance of fiscal space;
2. The importance of taxation structure;
3. The necessity of creating better automatic stabilizers.

By refining suggestions in literature, it is possible to reduce them to several key principles and lessons abstracted from the crisis, to be addressed, especially because they represent a change from the postulates on which rested the fiscal policy in the pre-crisis period characterized by widely accepted consensus. Unlike the dominant opinion under the frame of consensus in the macroeconomic theory before the crisis, which did not suggest the use of fiscal policy for stabilization purposes, the spreading of the Great Recession affected the return of the Keynesianism approach to fiscal policy. It became evident that monetary authorities are powerless in realization of the stabilization goal and in fight against insufficient aggregate demand, as it turned out that the zero lower bound problem is more serious than it used to be considered. Besides the use of interest rates, the need to use other alternatives, which monetary policy has at its disposal, almost disappeared. The fiscal policy instrument infringed itself as an unavoidable alternative. It caused a wide implementation of discretionary fiscal stimulators, making them an unavoidable instrument for short term economic stabilization when facing an inadequate demand.

Feldstein (2009, pp. 3-10), by emphasizing the fiscal policy revival in the after crisis period and by arguing its necessity for stabilization purposes, analyses different mechanisms for achieving the mentioned goals, which were used more or less in the USA starting from 2007. In that sense, he proves that by using different types of fiscal policy instruments, it is possible to influence stabilization goals. One of the ways, referring to tax policy, is to use one-time tax relief, as well as other measures resulting in the tax reduction, which otherwise increases aggregate demand. Also it is possible to use investment tax credits in order to encourage investments in business, as well as to introduce the tax changes on dividends and capital gain. Another way is to increase public spending, especially productive spending directed to the health care system, education, energetics, infrastructure and the help for vulnerable groups.

Some authors find fault with the orientation of fiscal policy towards the economic growth targeting, hoping to generate a wanted effect on employment. Instead of that, Tchernev (2011, pp. 10-22) suggests the use of an opposite approach for stabilization purposes, i.e. the use of direct demand targeting for workforce, not only in a crisis but in all phases of a business cycle, by repeated affirmation of public works, different employment programs, tax stimulations, etc. The argument for the abovementioned is the fact that the use of important fiscal stimulators aimed at economy stabilization did not result in the desired effect because of stagnation of the economy growth, the presence of a high rate of unemployment and the imparity of incomes, impoverishment and the pressure on the middle class. This leads to the conclusion that a review of the macroeconomic stabilization model, a change in the approach and concentration on the core of the problem personalized in unemployment are required.

The precondition for using fiscal stimulators and for the success of the abovementioned stabilization fiscal policy depends on fiscal space, which is defined by some authors as the difference between the current level of public debt and the

upper limit for indebtedting, while the IMF's Board for fiscal policy and development defines it as a difference between the current and the maximal level of demand which the state can afford without endangering its solvency. Thence was derived the conclusion that the importance of ensuring the existence of fiscal space is the one of the crucial lessons to be learned from the crisis. The argument for this claim is found in the fact that financial rescue, fiscal stimulators and lower incomes during the economic crisis resulted in the firmest possible correlation between the public debt and GDP as a deficit in developed economies during the last forty years.

Sufficient financial space is important for an aggressive response to the aggregate demand collapse which occurs in periods of crisis. Its importance is also derived from the fact that a high level of fiscal stimulators decreases the costs and negative effects of the economic crisis, while the absence of fiscal space limits the possibilities of using impetus, and disables the use of fiscal policy in achieving stabilization and countercyclical goals.

Bearing this in mind, fiscal policy holders have to be aware of the importance of creating fiscal space in the expansion phase, so the recession phase would offer more opportunities for facing the effects. In that sense, the lower public debt in the pre-crisis period compared to the former tax base gives larger fiscal capacity for financing stimulators, while the lower average fiscal deficit gives similar effects.

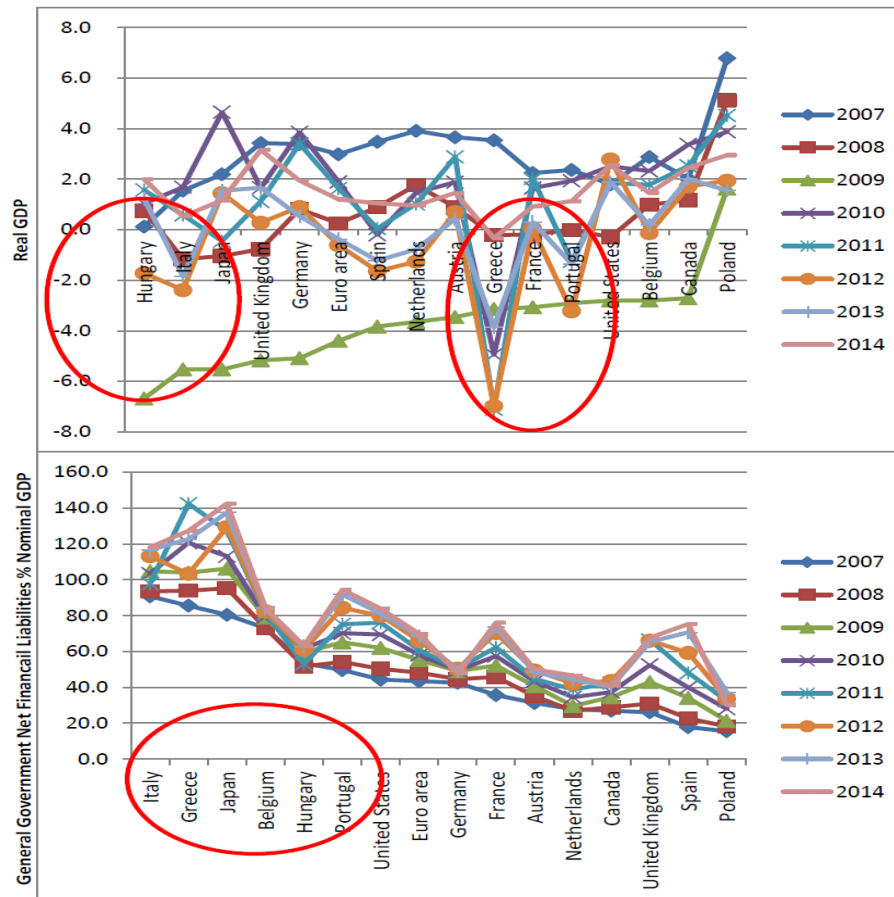
So we come to the key question for the fiscal policy creators on a critical level, which refers to the necessity of owning information regarding dangerous points for public debt sustainability, in order to in a timely manner undertake activities that divert the economy from achieving the potential borrowing limits. The second, but not less important, challenge is the situation when economy, because of the impact of various shocks, gets in the way of explosive indebtedting, which is why economy has to seek the possible options for returning fiscal sustainability. Both challenges will be smaller, as the timely commitment to the fiscal space issue is larger (Ostry, Ghosh, Kim and Qureshi, 2010, p. 16).

Modern empirical research confirms that the countries which used to have reasoned fiscal policy before the crisis and with adequate fiscal space managing have more possibilities for countercyclical acting during the crisis. On the other hand, the countries which misused fiscal space before the crisis will have to be exposed to a sanction consisting of the necessity to narrow their future fiscal space and to hinder the economic growth, which might lead to a new crisis.

Figure 4 confirms the abovementioned claims, and indicates that the events after the Great Recession are not a coincidence. This is because, based on the comparative analysis of data for selected OECD member countries from 2007 to 2014, one can easily conclude that the sharpest decline in the economic activity in the crisis years is noted in those states that have not in a quality way managed fiscal space prior to the onset of the crisis, during 2007 and 2008. For example, of all the OECD countries, countries with the lowest fiscal space before the crisis (Italy, Greece, Hungary, Portugal, etc.) based on the indicator General Government Net Financial Liabilities, are precisely those states where, due to the inability of the needed countercyclical functioning of the fiscal policy, the most pronounced decline in the economic activity was recorded during the crisis years.

Figure 4

The relationship between fiscal space and the fall in economic activity during the crisis in selected OECD countries



Source: OECD Economic Outlook Database, September 2014.

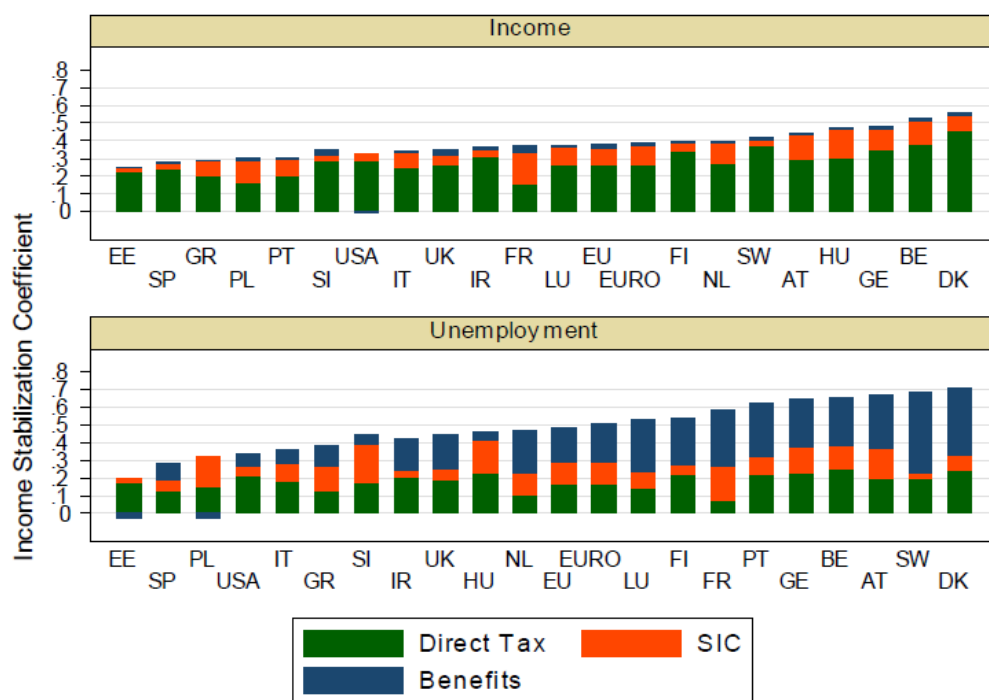
The world economic crisis resulted in the need for better automatic stabilizers because such measures of fiscal policy, which automatically react to changes in economic policy without a direct state influence, revitalize negative consequences of changes in demand or supply. The importance of automatic stabilizers becomes more evident in light of facing the crisis consequences. It becomes clear that discretionary measures of fiscal policy, aimed at economy stabilization, are faced with time delays which noticeably reduce their efficiency and timeliness, and they affect an increase of budget deficit, but it does not mean that they should be totally eliminated by other anti-cyclic policy measures. It is, actually, just one of the reasons which affect the necessity of improving mentioned stabilizers as they do not produce negative consequences on public finances qua discretionary measures of fiscal policy. They act automatically so political decision-making is not needed and there are internal and external time delays.

Modern research on the issue of automatic stabilizers resulting from the economic crisis confirmed once again their importance in mitigating negative effects of the economic contraction, i.e. the effects manifested at the labour market, disposable income and personal consumption. By using the micro simulation model, which explores effects of various shocks on disposable income of households, on 19 EU countries Dolls, Fuest and Peichl (2010) concluded that countries with stronger automatic stabilizers were relatively resistant during the crisis, while the ones with less

strong stabilizers faced with harder economic contractions and a higher level of unemployment. The named is shown in Figure 5:

Figure 5

Decomposition of the income stabilization coefficient



The need to foster automatic stabilizers does not exist only in developed countries, but also in those with lower incomes, the so-called developing countries. This is because empiric studies (Ilzetzki and Végh, 2008) confirm the frequency of pro-cyclic fiscal policies. Hence, fostering fiscal stabilizers would strengthen countercyclical measures.

Two types of stabilizers are noticed. The first type refers to the combination of public consumption and public income flexibility depending on the output size, for different programs of social insurance, as well as for the nature of the income tax. Their effect could be enhanced by increasing public consumption, more progressive taxation or stronger social insurance programs. However, the problem is that implementation of these stabilizers causes an increase of public consumption, and the reduction of economic efficiency. Further progression in income tax has limited influence on stabilizers, but it can undermine economic efficiency. Therefore, strengthening automatic stabilizers without increasing public spending is particularly challenging.

The second type of stabilizers is very interesting, as they do not refer to the public consumption increase as the abovementioned stabilizers, but can be implemented through the change of tax or public expense policies, or through the creation of fiscal rules. The conclusions made based on recent findings result in several recommended measures that should be considered, and which may result in realization of macroeconomic stabilization goals, without accompanying negative effects.

Baunsgaard and Symansky (2009, p. 18) recommend implementation of the following measures:

- Switching from tax deductions to uniform refundable tax credit for socially valued activities;

- Assessing the corporate income tax on the basis of estimated current income rather than last year's actual income;
- Developing alternative safety net mechanisms in countries without a comprehensive unemployment insurance (e.g., targeted cash transfer programs in emerging market economies and public works programs in low-income countries);
- Designing fiscal rules that would avoid the need for discretionary actions that would offset the automatic stabilizers (e.g., targeting the cyclically adjusted fiscal balance).

Also, Blanchard, Dell'Ariccia and Mauro (2010), as well as Baunsgaard and Symansky (2009) recommend, as a reaction to the crisis, a serious discussion about the approach in implementation of interim policies which refer to income (tax policy) and expenses (transfer public expenditures) as a response to macroeconomic movements. The mentioned approach includes an implementation of an interim tax policy, such as tax exemptions for households with low incomes, or policies aimed at companies as beneficiaries.

In relation to public expenditures, in order to avoid remuneration for the fiscal irresponsibility from previous years the following is recommended: potential implementation of interim transfers whose beneficiaries would be households with low incomes and limited liquidity, providing a more complete insurance in case of unemployment if the unemployment rate grows above a certain level, automatization of the transfer system from the central bank to federal units in case of serious recession, and so on.

Theoretical and empirical studies related to possible changes in fiscal policy after dealing with the effects of the Great Recession, are presented in Table 2.

Table 2

Possible changes in fiscal policy after the Great Recession

Advantages	Disadvantages
Stronger reliance on stabilizing fiscal policy	
<ul style="list-style-type: none"> ○ Powerful instrument for managing aggregate demand pressures ○ Open space for the implementation of the fiscal stimulus 	<ul style="list-style-type: none"> ○ Increased risk of tendencies to inflationary policies ○ The risk that instead of being countercyclical, fiscal policy causes creation of the cycles ○ Crowding out effect
The increased importance of fiscal space	
<ul style="list-style-type: none"> ○ Increased possibility of using anti-cyclical fiscal policy ○ Greater capacity for fiscal stimulus ○ Reduced cost of dealing with the crisis 	<ul style="list-style-type: none"> ○ Reduced possibility of discretionary policy in "normal conditions" ○ High opportunity cost
Greater importance of automatic stabilizers	
<ul style="list-style-type: none"> ○ Lack of the time inconsistency problem ○ No external and internal delays ○ Political decisions not required 	<ul style="list-style-type: none"> ○ Efficiency is reduced ○ Fluctuations are not removed, only reduced

Source: Author

Conclusion

Even the existing economic crisis seriously undermines confidence in monetary policy holders and requires a review of certain segments on which the monetary policy theory rested, although most parts of it will still remain unchanged. However, under the influence of contemporary post-crisis theoretical and empirical research, it

seems almost certain that there modifications of the strategic framework of monetary policy will be made. Raising the inflation target would certainly influence the increase of flexibility of monetary policy in the face of severe adverse shocks. In this way monetary policy, on one hand, would become an important instrument for the implementation of countercyclical policies, while on the other hand, it would reduce the scope of the ZLB problem, which is much stronger than it used to be considered to be before the crisis. Thereby, the costs of macroeconomic stabilization would be lower.

The probability that the strategy of flexible inflation targeting will be replaced by the strategy of aggregate price level targeting is lower. However, if it comes to that, there will be an open space for a more widespread application of discretionary monetary policy, which in this case would represent automatic stabilizers and in comparison to inflation targeting it would reduce the variation in output.

In the upcoming period, central banks will, instead of putting focus on cleaning the consequences of an asset bubble break, direct their activities on the bubble formation prevention. In that regard, a micro prudential supervision will be implemented aiming at the credit bubble limitation, macro prudential regulation and supervision which will monitor situation on the credit market, the so-called channel for undertaking risk of monetary policy.

The Great Recession changes basic principles on which fiscal policy rested in the pre-crisis period, returning it its central role as an economic policy instrument. It becomes evident that fiscal policy has to represent a crucial and unavoidable instrument for short-term economy stabilization while the economy is being faced with insufficient demand. This, on the other hand, means that it is expected that holders of fiscal policy in the future will be more likely to choose the application of discretionary fiscal policy than they used to be. But, the precondition of stabilization fiscal policy success, more than it used to be considered in the pre-crisis period, depends on the fiscal space size and on the ways of automatic stabilizers creation. Stabilizers may be twofold, from a combination of public consumption and public income flexibility depending on the output size, to a tax policy change and a fiscal rule creation.

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