10 Insolvency risk of a country – the case of Greece implications for European Union Member States

Introduction

Economic and fiscal turbulence that caused the crisis of 2007 make the majority of European Union (EU) Member States reflect on EU economic condition and become the turning point of the way the economic management system is effectively perceived.

The poor state of public finances in EU Member States, imperfections of the institutional system, as well as insufficient structural reforms and obvious lack of procedures in terms of potential removal of excessively indebted country from the EU – have a negative effect on economic stability of EU Member States.

The most important sources generating the risk of preserving long-term economic stagnation of EU Member States are: violating the convergence criteria and lack of effective regulatory mechanisms, e.g. related to respecting fiscal discipline, which result in a growing debt that is not paid by some countries. The case of Greece is an example of such debt.

The aim of this work is:

1. The analysis of fiscal and monetary situation in EU Member States.

2. Insolvency of a country – the case of Greece.

3. The ramifications of risk to EU Member States and the world economy related to potential Greece exit from eurozone.

This work shows the study results in a range of the examined topic that uses the terms of Excessive Imbalance Procedure for Greece.

1. Fiscal and monetary situation in EU Member States

The fiscal situation in most EU Member States is unfavourable. It is due to the following reasons: implications of the 2007 crisis, violating the convergence criteria and fiscal discipline, problems with the liquidity of international financial markets, depreciation of euro currency, increasing unemployment in EU Member States, slow increase in productivity in the majority of EU economies, growing indebtedness of public finance sector, problems with retirement schemes – in particular with correlation between their effectiveness and unemployment and low rate of natural increase.

According to M. Gasz,[1] great majority of EU Member States has problems with high negative balance of budget deficit or/and high level of public debt in relation to GDP – Table 1, and relatively only a small number of countries meet the convergence criteria.

The persisting high level of deficit and public finance sector debt of EU Member States results in the lack of fiscal stability.

According to M. Klimowicz, high level of public debt in EU Member States has become a threat for its stability. Public debt, which was supposed to be – according to Keynesian theory – a remedy for all ills of recession, when handled by politicians, led to the collapse of public finances. Stability and Growth Pact did not help as it did not prevent the situation of eurozone public finances, particularly in Greece, Portugal, Ireland, Spain and Italy.

Data related to public finances in EU Member States clearly show that the main culprit of the deteriorating condition of public finance sector in these countries was the financial crisis. As a result of crisis phenomena, financial surplus, still occurring in 2007 in many EU Member States, changed in 2008 into excessive deficits. This led to the initiation

[1] K. Gasz, *Mechanizmy przeciwdziałania kryzysowi zadłużenia w strefie euro*, in: *Nierówności społeczne a wzrost gospodarczy*, 30, Uniwersytet Rzeszowski, Rzeszów 2013, p. 63.

Table 1

Map of public debt and budged deficit in EU Member States in years 2007–2015

Country/	Public debt									Budget deficit (% GDP)								
Indicator/Period	2007	2008	2009	2010	2011	2012	2013	2014	2015*	2007	2008	2009	2010	2011	2012	2013	2014	2015*
UE-28	+59.0	+62.5	+74.8	+80.0	+82.5	+83.4	+87.9	+90.4	+95.9	–0.9	–2.4	–6.9	–6.5	–4.5	–4.6	–4.7	–4.5	–4.0
Zone countries	+66.3	+70.1	+79.9	+85.3	+87.2	+86.7	+90.6	+92.1	+94.1	–0.7	–2.1	–6.4	–6.2	–4.1	–4.9	–5.0	–5.0	–5.0
Austria [AT]	+60.2	+63.8	+69.5	+71.9	+72.2	+71.5	+71.0	+72.4	+73.9	–0.9	–0.9	–4.1	–4.5	–2.6	–2.6	–1.5	–2.0	–1.8
Belgium [BE]	+84.1	+89.3	+95.8	+96.0	+98.0	+90.8	+92.8	+99.6	+100.0	–0.1	–1.0	–5.6	–3.8	–3.7	–4.1	–2.6	–3.0	–2.8
Bulgaria [BG]	+17.2	+13.7	+14.6	+16.3	+16.3	+17.6	+18.5	+19.7	+21.8	+1.1	+1.7	–4.7	–3.8	+2.7	–0.8	–0.3	–0.1	–0.2
Croatia [HR]							+67.1	+69.8	+72.1							–6.1	–5.0	–4.5
Cyprus [CY]	+58.8	+48.9	+58.5	+61.5	+71.8	+70.8	+73.7	+76.7	+76.9	+3.5	+0.9	–6.1	–5.3	–6.3	–6.4	–5.4	–5.0	–4.9
Czech Republic [CZ]	+27.9	+28.7	+34.4	+38.1	+41.2	+43.9	+44.9	+46.9	+46.9	–0.7	–2.7	–5.8	–5.2	–3.1	–4.4	–2.5	–2.3	–2.0
Denmark [DK]	+27.0	+33.0	+40.7	+42.8	+46.4	+45.6	+44.5	+45.2	+45.9	+4.8	+3.3	–2.8	–5.2	–1.8	–4.1	–0.6	–0.4	–0.1
Estonia [EE]	+3.7	+4.5	+7.2	+6.7	+6.0	+6.5	+7.8	+7.8	+8.1	+2.4	–2.9	–2.0	+0.2	+1.0	–0.2	–0.2	–0.5	–0.9
Finland [FI]	+35.2	+33.9	+43.5	+48.4	+48.6	+49.7	+50.1	+50.2	+51.8	+5.3	+4.3	–2.5	–2.5	–0.5	–1.8	–2.1	–2.5	–2.0
France [FR]	+64.2	+68.2	+79.2	+82.3	+85.8	+88.6	+90.6	+93.3	+94.6	–2.7	–3.3	–7.5	–7.1	–5.2	–4.9	–4.3	–3.0	–3.2
Greece [GR]	+107.4	+113.0	+129.4	+145.0	+165.3	+170.8	+176.5	+175.6	+180.5	–6.5	–9.8	–15.6	–10.3	–9.1	–8.9	–12.7	–13.1	–13.0
Spain [ES]	+36.3	+40.2	+53.9	+61.2	+68.5	+70.8	+73.4	+79.8	+82.2	+1.9	–4.5	–11.2	–9.3	–8.5	–10.6	–7.1	–7.9	–8.1
Netherlands [NL]	+45.3	+58.5	+60.8	+62.9	+65.2	+64.3	+62.8	+65.6	+66.0	+0.2	+0.5	–5.6	–5.1	–4.7	–4.1	–2.5	–2.3	–2.0
Ireland [IE]	+24.8	+44.2	+65.1	+92.5	+108.2	+110.9	+121.8	+120.4	+119.9	+0.1	–7.3	–14.0	–31.2	–13.1	–8.2	–7.2	–7.8	–7.0
Lithuania [LT]	+16.8	+15.5	+29.4	+38.0	+38.5	+40.4	+40.9	+41.9	+43.1	–1.0	–3.3	–9.2	–8.4	–5.5	–3.2	–3.5	–3.1	–3.9
Luxembourg [LU]	+6.7	+13.7	+14.8	+19.1	+18.2	+19.6	+17.9	+18.9	+18.9	+3.7	+3.0	–0.8	–0.9	–0.6	–0.6	+0.1	+0.3	+0.1
Latvia [LV]								+78.6	+80.1								–2.9	–3.0
Malta [MT]	+62.3	+62.3	+68.1	+69.4	+72.0	+71.6	+74.6	+75.8	+76.2	–2.4	–4.6	–3.8	–3.7	–2.7	–3.3	–2.8	–2.8	–3.0
Germany [DE]	+65.2	+66.7	+74.4	+83.0	+81.2	+80.8	+79.6	+82.1	+82.9	+0.2	–0.1	–3.2	–4.3	–1.0	+0.1	0	+0.2	+1.0
Poland [PL]	+45.0	+47.0	+50.9	+54.8	+56.3	+55.0	+53.7	+52.1	+52.5	–1.9	–3.7	–7.2	–7.9	–5.0	–3.9	–2.6	–2.2	–2.0
Portugal [PT]	+68.3	+71.6	+83.1	+93.3	+107.8	+110.7	+112.8	+110.7	+112.1	–3.1	–3.6	–10.2	–9.8	–4.2	–6.4	–4.9	–4.9	–5.4
Romania [RO]	+12.8	+13.4	+23.6	+30.5	+33.3	+34.6	+34.6	+36.0	+36.6	–2.6	–5.7	–8.6	–7.3	–5.2	–5.0	–4.3	–3.7	–3.9
Slovakia [SK]	+29.6	+27.9	+35.6	+41.1	+43.3	+42.7	+44.6	+43.8	+44.2	–1.8	–2.1	–8.0	–7.7	–4.8	–4.1	–4.8	–4.9	–5.2
Slovenia [SI]	+23.1	+21.9	+35.3	+38.8	+47.6	+49.8	+50.7	+49.9	+50.0	0.0	–1.9	–6.1	–6.0	–6.4	–6.9	–7.0	–6.8	–6.8
Sweden [SE]	+40.2	+38.8	+42.6	+39.4	+36.2	+36.6	40.6	+43.9	+44.8	+3.5	+2.2	–1.2	–1.0	+0.3	–0.2	+0.1	+0.1	+1.0
Hungary [HU]	+67.1	+73.0	+79.8	+81.4	+80.6	+78.5	+78.0	+78.0	+78.8	–5.0	–3.7	–4.4	–3.8	–4.3	–2.0	+3.3	+2.9	+2.0
Great Britain [UK]	+44.0	+52.0	+67.1	+78.4	+81.8	+85.8	+90.6	+89.4	+89.9	–2.7	–5.0	–11.3	–10.4	–8.3	–6.1	–8.0	–8.0	–8.0
Italy [IT]	+103.1	+105.7	+116.0	+118.6	+120.1	+123.9	+121.8	+124.8	+129.0	–1.6	–2.7	–5.4	–4.6	–3.9	–3.9	–3.8	–3.9	–4.0

* Prognosis.

\+ Grey colour indicates values exceeding the reference value of an indicator in the given year.

Source: own study on the basis of Eurostat 2015 and Trading Economics 2015.

of as many as 18 procedures showing excessive level of deficit in 2009, 10 of which concerned eurozone Member States.[2]

Unfavourable image of fiscal and monetary situation of EU Member States was completed by Greece, encompassing all faults and economic problems of countries within the EU.

European leaders are trying to save EU's financial stability with many methods, which is proven by recent negotiations with Greece and the adopted understanding. These seem, however, to be only short-term actions, postponing the moment of another escalation of problems related to paying off the debts of Greece or another country.

During the analysed period of years 2007–2014 (Table 1), as many as 22 EU Member States recorded the total number of 216 cases of exceeded indicator of public debt and budget deficit.

Public debt in eurozone increased from 66.3% in 2007 to 92.1% in 2014.

In the years 2007–2014, public debt continued to be above the reference value in: Austria Belgium, Croatia, Cyprus, France, Greece, Spain, the Netherlands, Ireland, Latvia, Malta, Germany, Hungary, Great Britain and Italy.

At the end of 2014 the highest value of public debt was noted in: Greece 175.6%, Italy 124.8%, and Ireland 120.4%.

Prognoses concerning this indicator for 2015 also do not look promising, as 27 cases of such violations are planned in 20 EU's economies.

The most favourable level of public debt in 2014 was recorded in Estonia 7.8%, Luxembourg 18.9% and Bulgaria 19.7%.

In the years 2007–2014, 10 Member States improved the condition of their public finances. However, still as many as 13 EU economies exceeded the 3% threshold of deficit in relation to GDP.

This deficit in eurozone increased from 0.7% GDP in 2007 to 5.0% in 2014. In 2014 the greatest budget shortfall was recorded in Greece,

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[2] M. Klimowicz, *Niewypłacalność państw strefy euro. Procesy integracyjne i dezintegracyjne w Europie*, eds. A. Pacześniak, M. Klimowicz, OTO, Wrocław 2014. p. 272.

where the deficit amounted to 13.1% GDP. Great Britain placed right after Greece with 8.0% deficit and Spain with 7.9% deficit.

The greatest budget surplus was recorded in Hungary: 2.9% GDP, Luxembourg 0.3% and Germany 0.2%.[3]

Even though austerity measures are implemented on a large scale throughout EU and Excessive Deficit Procedures are implemented in a growing number of Member States, budget deficit and public debt remain a significant risk of insolvency for many countries.

Currently, the following countries are subject to Excessive Deficit Procedure: Croatia, Malta, Cyprus, Portugal, Slovenia, France, Ireland, Greece, Spain and Great Britain. Lithuania, Romania, Slovakia and Italy are next on the list. Thus, the fiscal situation in the majority of EU Member States is very difficult.

The problem of fiscal imbalance can be observed throughout the whole analysed period of 2007–2015. As a consequence, in the near future other EU Member States may join Greece that has been fighting over-indebtedness for many years. The risk of such scenario is very real.

2. Insolvency of a country – the case of Greece

A country's insolvency means the impossibility to pay off the charges resulting from public debt.

Public debt is the result of:[4]

- persistent budget deficit
- increased government spending,
- consciously implemented policy of keeping public deficit as a measure of state intervention or the policy of keeping public income on the same level as expenditures, which are not covered by income.
- government falling into the trap of indebtedness.

[3] Own calculations based on Trading Economics 2015.

[4] *Ibidem*, p. 260.

Budget deficit usually means the necessity to be funded, which entails the inevitability of making national economy indebted. There are four ways national economy may be indebted.

First, a state may get indebted to its citizens, second, it may get a loan abroad, third, the sector of state-owned enterprises may get a loan from capital markets, and finally, the given country's private households may get indebted.

Public debt itself is not a problem, what is more, it can be assumed in advance as part of the financial plan. The problem starts when it occurs during the implementation of budget assumptions, as a result of mistakes or very unfavourable economic situation. Consequences of losing financial liquidity or of insolvency depend to great extent on who provides credit to budget shortfall.[5]

As the risk of insolvency of state economies has a major influence on the world economy, the International Monetary Fund (IMF) introduced an early warning system (EWS) in 2005 to monitor the risk of a given country's insolvency. Out of 50 different factors determining basic features of economic system, its debt level, financial liquidity and political stabilisation, IMF chose factors that enabled to predict the occurrence of insolvency to the biggest extent:[6]

- total external debt as a percent of GDP,
- short-term indebtedness in relation to foreign-exchange reserves,
- government debt in relation to budget income,
- factual dynamics of GDP,
- inflation,
- profitability of treasury bonds,
- exchange rate (currency overevaluation),
- exchange rate (volatility),
- the necessity of external financing in relation to foreign-exchange reserves (threshold value – 1.3),
- number of years until the next presidential election.

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[5] *Ibidem*, p. 261.

[6] N. Roubini, P. Manasse, *Rules of Thumb for Sovereign Debt Crises*, IMF Working Paper 2005, pp. 98–102.

The starting criterion is the ratio of the total value of debt to Gross Domestic Product (GDP). If it exceeds 50% GDP, the risk of a country's bankruptcy increases fivefold. If you add inflation level, it can be concluded with great probability that those countries which have problems with public debt (above 50% GDP) and high inflation (above 10.5%) are very likely to have difficulty paying off external debt as well.[7]

The other group of risk are countries, whose liabilities are not big in relation to GDP (debt up to 50% GDP). They are characterised with an accumulated effect of three factors: short-term debt exceeding 130% of foreign-exchange reserves, pegged currency (low volatility), political uncertainty (e.g. forthcoming elections). According to the study commissioned by IMF, meeting these three criteria gives 41% of certainty that the country will become insolvent and plunge into crisis.[8]

Application of insolvency pattern according to IMF for Greece is presented in Table 2.

Table 2

The level of Greek insolvency according to IMF pattern in 2015

Indicator	Value
(1) total external debt as a percent of GDP	175%
(2) short-term indebtedness in relation to foreign-exchange reserves	180%*
(3) government debt in relation to budget income	–13.1*
(4) factual dynamics of GDP	–2.5%*
(5) inflation YoY	–1.4%
(6) profitability of treasury bonds	12%
(7) exchange rate – overevaluation	–
(8) exchange rate – volatility	–
(9) external financing in relation to foreign-exchange reserves	225%*
(10) number of years until the next presidential election	4

* Prognosis.

Source: own study on the basis of 2015 Eurostat data and Trading Economics 2015.

[7] *Ibidem*.

[8] *Ibidem*.

The values of indicators in Table 2 indicate clearly that – according to IMF's early warning system monitoring the risk of a given country's insolvency, Greece is a completely insolvent and greatly indebted country. The following indicators are worth special attention: (1) total external debt as a percent of GDP on the level of 175% (in excess of 125% of EWS's threshold values), (2) short-term indebtedness in relation to foreign-exchange reserves on the level of 180% ((in excess of 50% of EWS's threshold values) and (9) external financing in relation to foreign-exchange reserves, reaching as much as 225%. In particular, these factors indicate the lack of financial resources in the state budget and banks to pay off Greece's liabilities in due time. It shows not only the lack of liquidity, but more importantly the country's great indebtedness.

To prove the foregoing evidence, in relation to Greece, the analysis of Macroeconomic Imbalance Procedure – *MIP*[9] accepted by the EU has been developed.

Preventive measures, within accepted procedure, have been applied on the basis of the referential measures that are specified in the following table. These are 11 economical, financial, and structural measures (Table 3).

This Scoreboard constitutes the basis for the development of annual Alert Mechanism Report by the Council which purpose is to identify early breaches of macroeconomic balance in the Member States.[10]

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[9] *Macroeconomic Imbalance Procedure (MIP)* is a surveillance mechanism, whose aim is to identify and correct potential excessive macroeconomic imbalances early on. The main task of MIP is a preventive and systematic evaluation of the balance of individual Member States' economies, which, in case of detected problems, would allow to identify the danger and adopt proper measures. This procedure aims at preventing, identifying and correcting macroeconomic imbalances and deviations from the required level of competitiveness. It is the first pillar of surveillance system whose essence is to create a mechanism of identifying and early warning in relation to the threats to economic stability. Prevention is done on the basis of referential measuring instruments that constitute the scoreboard of economic, financial and structural indicators. The implications that have been described should be treated universally, i.e. they will apply to the same extent to every other eurozone or EU Member State that will potentially be in the same situation as Greece.

[10] M. Wajda, *Procedura nierównowagi makroekonomicznej – rozwiązanie wzmacniające czy nadmiernie regulujące funkcjonowanie gospodarek Unii Europejskiej*, "Przegląd Zachodniopomorski", Szczecin2013, pp. 318–322.

Table 3

Scoreboard – a list of measures applied to monitor alert mechanism

Imbalance	Measure	Threshold
External	[CAB] Current Account Balance (3-year average, as % of GDP)	allowable trading brand within: –4% to + 6%
	[NIIP] Net International Investment Position (as % of GDP)	allowable value: –35%
	[REER] Real Effective Exchange Rate	allowable value ±5% for euro-zone Member States and ±11% for remaining states
	[EMS] Export Market Shares (5-year change)	allowable value: –6%
	[ULC] Unit Labour Costs (3-year change)	allowable value +9% for euro-zone Member States and +12% for remaining states
Internal	[HPI] House Prices Index (YOY change)	allowable value: +6%
	[PSCF] Private Sector Credit Flow (as % of GDP)	allowable value: +14%
	[PSD] Private Sector Debt (as % of GDP)	allowable value: 133%
	[GGSD] Gross Government Sector Debt (as % of GDP)	allowable value: 60%
	[UR] Unemployment Rate (3-year average)	allowable value: 10%
	[TFSL] Total Financial Sector Liabilities (YOY change)	allowable value: 16.5%

Source: D. Graj, *Zakłócenia równowagi makroekonomicznej w UE a intensywność zjawisk kryzysowych*, Kwartalnik Naukowy Uczelni Vistula, Warszawa 2014, pp. 6–7.

Table 4 and 5 shows, on the basis of own studies, moulding the measures that form *Scoreboard* for Greece from the point of MIP establishment.

Table 4

Scoreboard for Greece in the years 2011–2014

CAB	NIIP	REER	EMS	ULC	HPI	PSCF	PSD	GGSD	UR	TFSL
2011										
–10,4	–84,5	1,8	–19,1	4,1	–7,3	–3,6	129,2	171,3	13,4	–3,4
2012										
–7,5	–109,1	–5,0	–26,9	–7,0	–12,5	–6,4	129,4	156,9	18,4	–3,3
2013										
–3,8	–119,3	–4,5	–27,3	–13,2	–8,9	–5,1	129,3	174,9	23,3	–16,8
2014										
–4,8	–109,1	–4,5	–26,1	–11,1	–8,0	–5,3	120,1	176,0	24,8	–15,1

Exceeding the threshold.

Source: own study on the basis of www.stat.gov.pl; Trading Economics 2015; IMF Report March 2015.

Table 5
Full list of *Scoreboard infringements for Greece*
within the years 2011–2014

CAB	NIIP	REER	EMS	ULC	HPI	PSCF	PSD	GGSD	UR	TFSL	Total
3	4	0	4	0	0	0	0	4	4	0	19

Source: own study on the basis of Table 4.

Since establishment of early alert mechanism in the form of MIP by the Member States, there were 19 cases of infringements of accepted prudence thresholds in the range of *Scoreboard* (Table 5). In case of CAB (except the year 2013), NIIP, EMS, GGSD and UR an adverse trend was observed practically within the entire period that was subject to the analysis.

Threshold values were not exceeded in case of REER, ULC, PSCF, PSD, and TFSL.

In 2014 a deficit in CAB occurred in Greece; a balance and GDP relationship exceeded allowable threshold and equalled –4.8%. Within covered period, it was variable from the lowest value –3.8 % in 2013 to the highest –10.4% in 2011.

In 2014 NIIP was also disadvantageous and equalled –109.1%.

An adverse value of this measure was shaping within the entire analysed period and its value was the lowest in 2011 (–84.5%) and the highest in 2013 (–119.3%); thus in 2014 Greece was one of the most net indebted countries in the EU.[11]

EMS measure in Greece was also adversely shaped within the entire period. Its lowest value, in 2011, equalled –19.1% while its highest value, in 2013, was –27.3%.

Similarly, ULC, HPI, GGSD and UR measures within covered period indicated adverse tendency, accordingly showing constant infringement in relation to MIP. In 2014, the level of those measures equalled –11.1%, –8.0%, 176.0% and 24.8%, appropriately.[12]

[11] Own calculations on the basis of Trading Economics 2015.
[12] *Ibidem*.

In 2014, prudence thresholds for REER, PSCF, PSD and TFSL, as well as in the entire period under analysis (which was mentioned earlier) were not exceeded in Greece.

On the basis of the current analysis, the biggest problems related to maintenance of Greece stability were associated with CAB, NIIP, EMS, GGSD, and UR measures. All these are kept below both assumed thresholds and referential MIP, as a consequence, constituting a real risk of deepening the problems related to Greece solvency.

Current account balance, as a total measure for settlement with foreign countries, which occurs from the recent operations has been disadvantageous for this country. It means that part of goods or services was purchased on credit, thus showing a measure how indebted the country is in relation to foreign countries within certain period and determining the rate of external debt.

Similarly, NIIP measure is adversely shaped and it proves Greece enormous dependency on foreign countries. At the end of the year 2014, this measure was almost 3-fold exceeded above the allowable threshold determined in MIP. As per M. Janicka[13] – it must be remembered that excessive dependency of the national economy on the foreign capital may cause decrease in the country's external security which manifests, specifically, in illiquidity.

Increasing volume of financial resources may cause an anxiety related to national economy stability, including financial system, against volatile sentiment of foreign investors in case of deterioration of economical situation in the country where the investments were made. In case of the Member States, there is no possibility to return to limits imposed onto financial flows (with certain exceptions) as this would mean that those countries lost their freedom of managing the level of their openness in case of excessive increase in in-flow or out-flow volume of capital.[14]

It is necessary to bear in mind that an excessive (uncontrolled) increase of foreign capital and dependency of the country receiving this

[13] M. Janicka, *Ocena stabilności zewnętrznej Polski w latach 2000-2012*, in: *Biznes międzynarodowy w gospodarce globalnej*, Warszawa 2014, pp. 676–677.

[14] *Ibidem*, p. 677.

capital make a significant risk as its external and internal security diminish due to its lowered resistance to absorption of financial crises, exchange fluctuations, and loss of liquidity.

Excessive mobility of capital may cause also some negative consequences to real and financial areas of the economy. These correspond to increase in exchange fluctuation and its impact onto foreign trade competitiveness, price stability, and costs related to external debt servicing. Except that, in-flow of foreign capital may weaken monetary policy as it corresponds to a risk of credit booms, economic bubbles, and hazards related to sudden out-flow of the capital, that is an effect of infecting and limiting liquidity. Considering above stated, the countries take actions to limit excessive flow of capital by means of macroeconomic policy, macro-prudence policy, and foreign exchange limits.[15]

Adverse shape of EMS proves bad relation between import and export and it directly corresponds with NIIP measure.

GGSD, that is public debt, includes nominal debt of public financial entities. In Greece – at the end of the year 2014 – the knock threshold was exceeded by more than 2.5 times. It is rather dangerous tendency which simply leads to the country increasing debt.

At the end of the year 2014 UR in Greece was also exceeded, similarly to GGSD, more than 2.5 times. From financial point of view, it is an adverse phenomenon that proves – on the one hand – deterioration of the economy structure and – on the other hand – increases expenses related to, for example, payment of unemployment benefits thus, as a consequence, burdens public revenues and may lead to public debt.

Economic problems of Greece could be expected based on social policy of subsequent governments, but the most visible warning sign was the financial crisis that affected not only Greece, but also Ireland, Portugal and Spain. These countries, unlike Greece, took advantage of the help offered by European and international institutions and decided to introduce painful reforms, thus creating for themselves an opportunity to bounce back from economic bottom.

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[15] NBP (2012), *Przepływ kapitału w krajach rozwijających się w latach 2000–2011,* www.nbp.pl/publikacje/przeplywy/przeplywy.pdf (accessed 1.06.2015).

Athens, however did not learn that lesson and decided to follow the same path, condemning the country to progressive economic decline.

Greek party Syriza won the last parliamentary elections – as a result of public dissatisfaction with austerity policy implemented by the previous government. However, current situation showed that fulfilling populist promises of Alexis Tsipras' government may be impossible. Also Greece's credibility became doubtful, after its subsequent governments got the country indebted to maintain the citizens' standard of living, rather than to introduce reforms that could lay the foundations of solid economic growth. Alexis Tsipras rejects the terms of reimbursement and still wants to borrow money, but at the same time declines to admit that Greece's problems are of internal nature.

Alexis Tsipras' government has been negotiating for months with creditors, the so-called Troika: European Commission (EC), the International Monetary Fund (IMF), and the European Central Bank (ECB) on reforms, upon which unblocking the last tranche of help for Greece amounting to EUR 7.2 billion was dependent. Without this money, Athens will be unable to fulfil their commitments to IMF. Greece's outstanding instalment of EUR 2.0 billion is the highest arrears in the history of IMF and signifies the country's formal insolvency in relation to this institution, whose head office is in Washington. Greece became the first developed country in history, which is unable to pay off the loan taken from IMF. Commentators point out that Greece, whose economy has shrunk by more than 25% since 2009, has joined Zimbabwe, Sudan and Somalia, which also have outstanding debts with IMF.

In the years 2010–2014 Greece received EUR 240 billion from EU and IMF as part of two aid programmes that saved the country from bankruptcy (thus increasing Greece's debt to EUR 320 billion). Greece's biggest creditor is Germany, which lent it EUR 57.23 billion; France comes next with EUR 42.98 billion; then Italy – EUR 37.76 billion and finally Spain – EUR 25.1 billion.[16]

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[16] Based on the European Commission in 2014.

Even those countries that granted credit to Greece, are under no illusion as to its long-term ability to pay the debt off. Its full management would require great primary surpluses of the budget, i.e. surpluses before paying off credit interests. This would make Greece get stuck in economic depression for a long time. A sensible solution in this situation is the declaration of insolvency towards a part of the creditors. These cannot be private investors in possession of Greek bonds, as Athens will need their investments in the future. Thus the only option is remaining indebted to the IMF and the European Central Bank.

The economic and financial situation of Greece is terrible. The debt is 175% GDP, the interest rate of 10-year-long bonds is 12% and the unemployment is as high as 26%.

The loss of tax income in Greece was over EUR 1 billion in January, and during the first six months of 2015, the shortfall is 23% in relation to the plans. Greek budget has a small current surplus amounting to 1.2 billion Euro as of the end of February, but it is still lower than assumed. Throughout the six months of 2015, Greek people have withdrawn 20% of bank deposits.

Currently, eurozone countries have agreed on beginning negotiations on a new programme of aid for Greece. In return, the country will have to introduce difficult reforms and give EUR 50 billion in assets to a special fund. Money obtained as a result of privatisation of this property will be used for paying off the debt, investments and recapitalisation of banks – which currently need a capital injection of EUR 25 billion.[17]

Total value of the new aid programme for Greece is to be between EUR 82 and 86 billion (which will increase the country's total indebtedness to EUR 410 billion). It must be borne in mind that in spite of it all, there is still great risk connected with realisation of Gre-Exit scenario in the future, unless Greece introduces reforms enforced by the EU in an effective manner (VAT increase, retirement and public administration reforms).

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[17] *Ibidem*.

A significant risk for fulfilment of this goal is Greek society that may not endure further restrictions. Greece will have to continue the "belt tightening" policy. Raising taxes with simultaneous decrease of retirement benefits will further reduce internal demand, which is necessary for Greece not to go into even greater recession than now.

Current agreements made in Brussels implementing new aid programme for Greece will not probably solve the problem of Greek economy's slow catastrophe, but only prolong its "slow agony".

3. The ramifications of risk to EU Member States and the world economy related to potential Greece exit from eurozone

The problems of Greece's insolvency clearly show that the EU has not developed a single and reliable procedure to be implemented in case of an excessive indebtedness of a Member State, nor a hypothetical scenario of this country leaving the eurozone (if it belongs there), and later the EU.

The Excessive Imbalance Procedure adopted by the EU[18] is, in fact, only a measuring instrument of such changes. It does not provide any emergency plan in case of problems with paying off debts, nor with mitigation of risk, shall such reimbursement be lacking. Negotiations with Greece only confirm this fact.

Hence, it is of great importance that the EU commences work on this subject. Its success, but more importantly the speed of its implementation will determine the EU's survival and future.

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[18] *Macroeconomic Imbalance Procedure (MIP)* is a surveillance mechanism, whose aim is to identify and correct potential excessive macroeconomic imbalances early on. The main task of MIP is a preventive and systematic evaluation of the balance of individual Member States' economies, which, in case of detected problems, would allow to identify the danger and adopt proper measures. This procedure aims at preventing, identifying and correcting macroeconomic imbalances and deviations from the required level of competitiveness. It is the first pillar of surveillance system whose essence is to create a mechanism of identifying and early warning in relation to the threats to economic stability. Prevention is done on the basis of referential measuring instruments that constitute the scoreboard of economic, financial and structural indicators.

Greece's potential exit from eurozone[19] – and in the most pessimistic scenario – the country's leaving the EU, will cause significant consequences, both in the EU itself and around the world.

In the event of Greece's leaving the EU – on the global level – China will become greatly interested in providing capital to Greece in exchange for tightening trade cooperation.

Russia would probably lift the sanctions immediately in order to extend its zones of influence and encourage other countries to leave the EU. Moreover, Kremlin might also try to weaken the energy union through strengthening relations with Athens – if the Greek government joined the team of "Turkish Stream" pipeline advocates. Implementing common energy projects would, in longer perspective, entail enlargement of Russia's political influence in the region of Black Sea.

If the relationship between Athens and Moscow became closer, other countries in favour of energetic cooperation with Russia, like Hungary, might, theoretically, follow Greece's lead. What is more, Gre-Exit might discourage the EU from extending with other countries, e.g. those from the Balkan region. Brussels has stopped extension in this direction until 2020 and Moscow has already attempted to strengthen its influence in that part of the continent.

Potential Gre-Exit would be such shock that its implications would not only be of economic nature. The country would remain within NATO, but it would become this member of the Pact that could no longer be relied on. Greece might turn towards Russia. Especially as there are a lot of russophiles within the Greek government.

Greece is today a very important member of NATO, due to its geopolitical localisation. Its strategic localisation was of key importance to NATO during the cold war, when the country was a bastion used for fighting against communism and Arabic nationalism. Greek bases still serve as a part of NATO's military structure. For instance, they were used during Lebanon bombing in 2011.

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[19] The implications that have been described should be treated universally, i.e. they will apply to the same extent to every other eurozone or EU Member State that will potentially be in the same situation as Greece.

Greece's exit from the EU structures could destabilise the whole region of the Mediterranean. Greek anxiety might spread to the neighbours and destabilise the situation in the Balkans. The situation might also get complicated in the Mediterranean Sea. Greece is a key element of the "jigsaw" in the affair around Cyprus, divided with a wall into a Greek and Turkish part. With Greece weakened, Turkey – which claims rights to the whole island – might go on the offensive. Especially as gas fields have been discovered near Cyprus.

Finally, Greece secures the EU's south-east border. Its weakening might make the EU border full of holes and open the way for a bigger number of terrorists from Muslim countries.[20]

From the geopolitical point of view, Gre-Exit would have disastrous consequences. Greece has been taking part in many strategic economic and political projects of the EU, which would get much weaker if the country decided to exit. One of the examples is Greece's meaning in managing the current immigration crisis. Another example is the importance of the "Greek passage" for the European energy policy – Greece is a key country for the realisation of TAP pipeline, i.e. the EU's flag project.

Greek bankruptcy will signify a strong crisis impulse for the world's economy indicating economic recession on the scale that could be compared to the situation when Lehman Brothers bank went bankrupt.

Short term reaction of international markets to Greece's bankruptcy will surely be taking advantage of euro's depreciation against the dollar and yen. The Swiss National Bank's declaration of keeping the franc's fixed exchange rate of 1.2 euro is of great significance for financial markets, because investors know how to act should euro weaken. It means that in a short-run, a huge amount of speculative money can be traded with while hoping that Switzerland will give up and loosen the exchange rate. Setting the value of the currency in the right way will give those people who exchange the franc in advance at the fixed rate the opportunity to earn a lot of euros. However, it requires a skilful depreciation of

[20] http://biznes.onet.pl/grexitu-na-razie-nie-bedzie-europa-uniknie-straszliwych-konsekwencji/ey24gt (accessed 1.06.2015).

euro against the dollar to such an extent that it would not be economically viable for Switzerland to keep the artificial exchange rate at the level of 1.2, as the country might be surprises by a relatively expensive dollar. This is a perfect opportunity for speculators. Also the pound may play some role in the process of euro depreciation, since London's City currency brokers have very large stocks of this currency.

Since the crisis began, resources have provided opportunities for all kinds of speculations, which is best shown by the changing prices of crude oil. It will surely become more expensive, because investment brokers expecting depreciation of the euro they own, will advice their clients to purchase contracts for oil (and other resources) supplies for long term future. They will always be able to sell them, hoping for price increase with the instability of euro to dollar and other key currencies exchange rate, as well as low supply of gold, which will record further growth if Greece goes bankrupt.

Resources will definitely be a perfect investment. The same goes for contracts for products sold on food exchange. For an average citizen it means higher prices at petrol stations and groceries shops, and for the state it means higher inflation, only partially compensated with increased tax revenues. Depending on how fast the markets will return to balance, i.e. the amount of time and scope of escape from the euro, one may prepare for a longer period of increased inflation. This, of course, is based on the assumption that the European Central Bank will not be prone to excessive intervention, which cannot be expected, as the main players on the financial market will not agree with such situation. Hence, the bank's policy will become an additional factor complicating the game of markets, making it impossible to burden the EU's citizens with the cost of Greece's bankruptcy (Greek exit from the eurozone would entail the cost of USD 8–12 thousand per one citizen).

ECB's power should not be underestimated – it's well aimed interventions and their scale may cause a lot of turbulence in strategies adopted by investment speculators. For sure, however, it will be possible to record euro's depreciation against the dollar and Swiss franc, whose current rate will simply be impossible to defend. In practice, the 1.2 parity can be expected to change by approximately 20–30%.

The consequences of Greece going bankrupt will also be visible on global capital market. A correction of the speculative value is obvious – it is already happening, as the decrease trend is unequivocal all over the world. However, there is doubt about maintaining the value of brands owned by the biggest corporations. The share of Brands' value in big corporations' pricing sometimes exceeds their book value and *know-how* (e.g. Coca-Cola). The burst of Brand bubble is a natural stage of envisaged crisis.

If nothing else, the money withdrawn from financial exchanges and markets will feed the banking sector on stable investments, public bonds and chosen corporations that guarantee value increase. The situation of prices on real estate market will also be of importance. In the event of prolonging crisis, preparing a few minor speculative bubbles may be a tempting alternative for speculators having nothing to do.[21]

From the EU's point of view – Gre-Exit will be a real catastrophe. More than anything else, it would become clear that belonging to eurozone is not permanent and that it may be quit.

Greece's bankruptcy will entail financial loss of approximately EUR 260 billion for the eurozone states, not to mention the exposition of private sector in Greek investments (more than EUR 130 billion).[22]

For Greece, Gre-Exit will mean total collapse and paralysis of banking system, paying salaries and pensions will be interrupted, a part of companies will go bankrupt, the country will become economically isolated and lose business credibility.

Due to increased risk in the Euroland resulting from Gre-Exit, loans taken by eurozone governments would become more expensive. The most unstable countries would pay the highest price. For instance Italy. But, what is interesting, even the profitability of solid German bonds would soar.

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[21] https://obserwatorpolityczny.pl/?p=300 (accessed 1.06.2015).

[22] Own calculations.

Contrary to appearances, parties considered populist would not become less popular, as the blame for Gre-Exit and leading the country to bankruptcy would be down to Western creditors. So, the removal of Greece from the eurozone would give impetus to anti-European policy. The probability of Great Britain's exit from the EU might rise.

Leaving the eurozone by one Member State would also put the slogan of "European solidarity" that has been promoted for a few years to question. What is worse, in case of Gre-Exit, anti-EU attitude could become more popular – the more so as Greek politicians are increasingly more prone to link the current economic crisis with political pressures from the Member States, insisting on reforms and reimbursement made by the government in Athens.

Commercial implications would also be less significant. Cyprus, whose 19% of export targets Greece and Malta (3.3%) would lose the most. In case of other EU Member States, export to Greece does not exceed 2% of the total. Even if the import would be so expensive for Greece that it would melt down by 50%, for the biggest economies like Germany, France or Italy – it would only mean a decrease in external demand by 0.3–0.5% in comparison to prognoses of Gre-Exit. It would entail a loss for their economies on the level of 0.2–0.3%.[23]

Gre-Exit would not be significant to external banks as well. The banks of Germany, Great Britain and USA are the most susceptible, but they still have little Greek assets. The option of Gre-Exit has been known for a long time, and the willingness to invest in Greece dropped even more after elections in January. Currently, the Greek debt is owned by institutions like EBC or the International Monetary Fund, and not private banks.

Whereas in Greece itself, banks cut off from capital will freeze or take over the remains of clients' deposits in the event of Gre-Exit. This will only be the beginning of Greek banking sector's problems.

The panic will immediately spread to other EU Member States – to PIIGS countries in the first place (Greece, Spain, Portugal, Ireland, Italy).

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[23] The Global Competitivenes Report 2010–2014.

First of all, the situation of Italy, Spain, Ireland or Portugal is not much better than in Greece. Resigning from the common currency and cutting off from the debt by one country will create a precedence that will quickly find followers in other countries. The capital will immediately start to move away from the banking sector in endangered countries to Germany, Austria, Luxembourg or the Netherlands. Switzerland will probably introduce capital control to stop transfers directed at the franc.

Second, the banks in Germany, France, Italy and Spain will eventually be forced to show the losses resulting from the deductions on the Greek debt. In order to prevent the threat of cascade bankruptcy, ECB may start an unprecedented print of extra money and concentrate bad debts, imposing their burden on tax payers by way of future inflation.

Greek insolvency and exit from the eurozone would probably cause a domino effect across the EU. As investors would stop believing that the Eurogroup protects its members, they would start selling their securities, in the first place: Spanish, Italian, Portuguese and Irish, which would potentially threaten with further declarations of insolvency. Banks and countries all over the world owning deposits in euro would suffer substantial losses.

In case the scenario and risk of Gre-Exit became real – first with Greece and then with other deeply indebted countries – the eurozone in the shape we know would cease to exist. Countries with stable finances like Germany, Austria, the Netherlands, Finland, Luxembourg and Estonia would form a new block of common currency, whereas southern countries would go back to their national currencies.

Such situation would mean an economic catastrophe for bankrupted Europe: from the dissolution of some of the EU structures, through "burying" the savings located in retirement funds, to a Cyprus-like situation of a part of deposits located in banks that suffer more due to the crisis.[24]

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[24] http://independenttrader.pl (accessed 1.06.2015).

Conclusions

The fiscal and budget policy so far implemented by the EU is makeshift, chaotic and inconsistent. Directing fiscal surveillance in the form of Excessive Deficit Procedure on nominal and structural balance of public finance sector turned out to be insufficient to ensure macroeconomic safety of the whole European Union.

Providing loans for Euroland states with weak fiscal discipline and gloomy prospects of economic growth cause further indebtedness of these countries and increased tension in financial markets, and as a result act against the EU's permanent stability, putting it at risk of Exit.

Current agreements made in Brussels implementing new aid programme for Greece will not probably solve the problem of Greek economy's slow catastrophe, but only prolong its "slow agony".

The problem of fiscal imbalance can be observed throughout the whole analysed period of 2007–2015. As a consequence, in the near future other EU Member States may join Greece that has been fighting over-indebtedness for many years. The risk of such scenario is very plausible, so it is necessary that the EU prepares a procedure of removing countries.

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