

External Debt Problem and Global Financial Architecture

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Abstract

Liberalisation of the global financial market in 90-s last century and early in XXI has resulted in increasing dependence of many countries (both advanced and developing ones) on external financing and significant growth of the sovereign external debts that has become a real threat to the stable development of the world economy. The paper is focusing on the problem of growing external debt of many countries. It has an analysis of the methods aimed at settling and managing the external debt by the state authorities. I paid special attention to the problem of predicting the possibility of the sovereign external debt default. The author concludes that an aggravation of the global external debt problem may become one of the main triggers of a deep financial and economic crisis not only in separate countries or a group of related countries but on a global scale.

Keywords: external debt, debt securities, default, solvency criterion, regulation of external borrowings.

JEL Classification: F34

Introduction

Financial and economic globalisation has significantly increased the total amount of external debt of the different countries of the world. Over the past twenty years, the total amount of international debt market (including outstanding debt securities and syndicated loans) has increased by ten times and reached US\$ 28–29 bln. If we take into account non-market funds (including loans from international financial organizations, intergovernmental loans, bilateral loans from commercial financial and non-financial institutions, and so on), the total volume of global external debt, according to our estimations, based on the World Bank data for separate countries, early in 2016 amounted to approximately US\$ 73.7 tn. As a result, the ratio “global external debt/global GDP” has exceeded 100 per cent (100.3 per cent).

In the structure of gross external debt of the various countries of the world, the ratio between government and corporate borrowings is significantly different. According to the World Bank, in Singapore, for example, in 2016 there was no external government debt at all, in Luxembourg, the share of external

public debt amounted to a few tenths of a per cent only. At the same time, in such countries as Uruguay and Greece, the share of public external debt was around 60 per cent, while in Ecuador — 71 per cent.

Major Indicators of the External Debt Burden

There is no single “best” indicator for analysing general government debt (Bloch, Fall, 2015). When assessing the external debt sustainability of the country, various ratios are applied. For example:

- External debt/Exports of goods and services;
- Payments on external debt/GDP;
- Payments on external debt /Exports of goods and services;
- International reserves/External debt;
- External debt/Population;
- International reserves/Payments on external debt

The most popular indicator of the external debt sustainability of the country is the ratio of the gross external debt to GDP. By the recommendations of the IMF, the ratio of the gross external debt to GDP expressed as a percentage reflects a certain degree

of external debt risks of the various countries. If this ratio is less than 30 per cent, the degree of risk is low. From 30 to 50 per cent — it is an average risk of external debt. The high risk appears if this figure exceeds 50 per cent. In the different countries of the world, this ratio varies considerably.

Table 1 shows the ratio of gross external debt to GDP of the top ten countries leading regarding the value amount of external debt early in 2016.

The table shows that early in 2016 all the top ten countries were in the “high-risk” area. Please note that almost 97 per cent of the gross external debt of Luxembourg and almost 93 per cent of the gross external debt of Ireland fell on the corporate sector. Banks and companies from different countries actively register their subsidiaries and affiliates in Luxembourg and Ireland for the organisation of external debt financing and use tax benefits and favourable conditions for doing business in these countries.

If we take into account the debt counter-claims of different countries leading regarding the gross external debt, the situation is somewhat different. It is evident in the example of the euro area (see Table 2).

As can be seen from the table, some European countries are net lenders (Germany, Ireland and Luxembourg) and others are net borrowers (France, Italy, Greece, the Netherlands, Spain). Such division of the different countries of the world into the net lenders and net borrowers is a specific feature of the current structure of the global external debt. On the one hand, there are lending countries, including, for example, China, Japan, South Korea, Russia, Hong Kong, Israel, Norway, Singapore, South Africa, and on the other hand, there are borrowing countries: USA, Australia, Brazil, India, Mexico, the Philippines, Turkey, Kazakhstan, Ukraine, and others. There is a split between countries benefiting from debt assumption and those that must bear its costs (Steinbach, 2015). As a result, one of the major imbalances of the current global financial architecture (the so-called “external funding imbalance”) has formed (Reforming global financial architecture and the Russian financial market, 2016).

Very often to assess the external debt sustainability of the country the ratio “International reserves/ External debt” is used. This ratio also highly differs in various countries of the world. According to the World Bank data, in 2015, for example, it was 2.5 per cent in Japan, in the United States — 46.2 per

Table 1
The ratio of gross external debt and GDP, %

Country	Early in 2016
USA	98.7
United Kingdom	289.7
Germany	146.6
France	205.6
Luxembourg	6204.0
Japan	71.4
Italy	123.1
Netherlands	534.6
Spain	164.6
Ireland	1018.6

Source: calculated by the author by World Development Indicators. The World Bank Data. Available at: http://databank.worldbank.org/data/reports; http://databank.worldbank.org/data/views/reports/ReportWidgetCustom.aspx?Report_Name=Table-1-SDDS-new&Id=4f2f0c86 (accessed 28.05.2018).

Table 2
The ratio of net external debt and GDP in some euro area countries, III quarter 2016

Country	%
France	40.8
Germany	- 9.9
Italy	61.0
Greece	135.9
Netherlands	32.2
Spain	93.6
Ireland	-363.8
Luxembourg	-2303.1

Source: completed by the author by the Eurostat data. Available at: <http://ec.europa.eu/eurostat/data/database> (accessed: 22.05.2018).

cent and Russia — 64.5 per cent. About the degree of coverage of the gross external debt of the developed countries leading regarding the value amount of the gross external debt by their international reserves, except Japan, the average amount of the nine developed countries is only 2.1 per cent.

The problem of Growing External Debt

If any state faces difficulties in servicing its external debt, it means that the country is experiencing an external debt crisis. When a sovereign borrower

Table 3
Changes of the gross external debt in 2004–2015, \$ millions

Country	01.01.2005	01.01.2010	01.01.2014	01.01.2015	01.01.2016
USA	8361088	13661791	16487771	17258054	17710435
United Kingdom	6638694	9409468	9481342	9219399	8186626
Germany	2932992	5114139	5445610	5597022	4893111
France	2853237	5164310	5549883	5496291	4979756
Netherlands	2788548	2202080	4524147	4153963	3949045
Luxembourg	1070455	2086400	3585282	3330628	3747382
Japan	1557059	2551151	2818871	2726442	2945062
Italy	1649008	2424141	2618726	2459288	2256637
Spain	1235785	2531670	2252897	2064068	1972936
Ireland	1052284	2531162	2212660	1959963	2424379

Source: calculated by the author by World Development Indicators. World Bank Data, Retrieved from <http://databank.worldbank.org/data/reports>; http://databank.worldbank.org/data/views/reports/ReportWidgetCustom.aspx?Report_Name=Table-1-SDDS-new&Id=4f2f0c86.

makes a single default on the scheduled payments related to servicing its external debt, it is considered to be a technical default. If within a certain period (for example, 30 days), the indebted state does not repay its current debt, in this case, a sovereign default may occur, that is the indebted state is unable to carry out its external debt obligations to international lenders. According to C. Reinhart and K. Rogoff (2009), for the period from 1800 to 2009, 250 cases of sovereign external debt default were recorded in the world. Of these, 170 cases occurred after World War II. It means that sovereign external debt defaults occur more frequently. If in the XIX century and the first half of the XX century one sovereign default on average occurred once every two years, then the last 50 years it on average occurs every four months.

Until the early 80s of the last century, external debt problems periodically appeared in some countries due to the economic crisis and military actions (Zvonova, 2002). However, in the early 80s of the last century, when the difficulties with external debt service began to be experienced by not separate countries but groups of countries in specific regions of the world (especially in Africa and Latin America), the problem of the growing external debt and its impact on the economic development of separate countries and international economic relations in general, has become the focus of attention of economists and politicians. Debt

Table 4
The amount of the gross external debt, III quarter 2016, US\$ millions

Country	III quarter of 2016
USA	18,250,154 (II quarter, 2016)
United Kingdom	8,005,297
Germany	5,328,872
France	5,454,958
Netherlands	4,166,091
Luxembourg	3,899,871
Japan	3,646,241
Italy	2,389,868
Spain	2,109,948
Ireland	2,273,971

Source: calculated by the author by World Development Indicators. World Bank Data, Retrieved from <http://databank.worldbank.org/data/reports>; http://databank.worldbank.org/data/views/reports/ReportWidgetCustom.aspx?Report_Name=Table-1-SDDS-new&Id=4f2f0c86.

has come to be the central issue of international politics (Graeber, 2011).

Debt crises in Mexico in the early 90s of the last century, in the countries of Southeast Asia in 1997, in Russia in 1998, and in the Latin America countries at the turn of the twentieth and twenty-first

centuries, a significant recent increase of external debt of the US and some African countries, as well as the ongoing debt crisis in the euro area have put the problem of the rapid growth of external debt in the center of the most urgent global financial and economic problems, requiring an efficient solution (Debt. 13th BIS Annual Conference, 2015).

In the 80–90-s of XX century, sovereign debt crises were initially associated with the developing countries only, but at present, an urgent problem is the developed countries' debts. In recent years, the volume of external debt of the most major countries around the world has been steadily increasing. The massive increase in public borrowing in many advanced economies raises questions about the sustainability of public debt (Dembiermont, Scatigna, Szemere et al., 2015).

Table 3 shows the evolution of the amount of the gross external debt (public and private) of the top ten countries of the world leading regarding the value amount.

The table shows that in 11 years the amount of the gross external debt of the top ten countries has increased by almost 1.8 times (from US\$ 30 tn. in 2005 to US\$ 53 tn. in 2016). Among the top five countries, a minimum growth was in the UK (1.2 times), while the maximum was in the United States (2.1 times). In the case of the government sector, credit booms may affect the incentives of different interest groups to agree on policies for reform or fiscal stabilisation (Santos, 2015).

After the global financial and economic crisis of 2008–2009 among the top five countries, the volume of gross external debt has reduced in all countries except the United States. In the USA there was an increase of almost 30 per cent. However, as can be seen from Table 4, the external debt in 2016 increased in 9 out of 10 countries (excluding the UK). Active issuance by governments and non-financial corporations has lifted the share of domestically issued bonds, whereas more restrained activity by financial institutions has held back international issuance (Gruić, Schrimpf, 2014).

Please note a very high degree of concentration of the global gross external debt among the major developed countries of the world. The top ten countries account for about 87 per cent of the global gross external debt, and the top five countries account for 2/3.

If to take into account the sovereign external debt only, then the top ten countries leading regarding

Table 5
The amount of public external debt, III quarter 2016

Country	US\$ millions	% of gross external debt
USA	6288511 (II sq. 2016)	34.4
France	1566250	28.7
Germany	1466711	27.5
Japan	1225693	33.6
Italy	932095	39.0
United Kingdom	804979	10.0
Spain	626857	29.7
Canada	347729	19.9
Greece	297130	61.5
Netherlands	245179	5.9

Source: calculated by the author by World Development Indicators. World Bank Data, Retrieved from <http://databank.worldbank.org/data/reports>; http://databank.worldbank.org/data/views/reports/ReportWidgetCustom.aspx?Report_Name=Table-1-SDDS-new&Id=4f2f0c86.

the value amount of the external debt, in 2016 were as follows (see Table 5).

As the table shows, the share of public debt in the gross external debt of the top ten countries also strongly differs from 5.9 per cent in the Netherlands to 61.5 per cent in Greece.

The major debtor in the world is now the USA. According to the World Bank, at the beginning of 2015 the value of US external debt, reaching 22 per cent of world GDP, was more than three times higher than the gross external debt of 124 developing countries and countries with economies in transition and made more than 1/4 of the world's external debt. In the structure of the US external debt, the sovereign debt accounts for about 1/3.

As for the leading European countries, on the one hand, they are the largest lenders in the world and, on the other hand, have a large enough amount of own external debt, and the amount of that debt has been increasing in recent years, both in absolute terms and in relation to GDP. At the beginning of 2016, according to the World Bank data, the gross external debt of the Eurozone countries amounted to US\$ 15.1 tn. 3/4 of it was in the external corporate debt. Apart from Greece, Cyprus and Portugal, where the debt crisis was very heavy, in Italy, Spain,

Belgium and Ireland, there is quite a problematic situation with the external debt. And even such leaders of the eurozone as Germany and France were forced to increase the size of the external debt, to raise the necessary funds quickly and to support banks and companies in the midst of the global financial and economic crisis of 2008–2009.

Table 6 shows the structure of the sovereign external debt of the top ten countries leading regarding the value amount of the external debt.

The table above shows that in the structure of the sovereign external debt long-term debt obligations dominate, accounting on average for 87.2 per cent. The only exception is Japan, where the share of the long-term debt obligations accounts for just over half of the sovereign external debt. The dominance of the short-term debt obligations is considered undesirable for the country because it requires the reservation of a large amount of money to repay the external debt in the coming months or prompt refinancing of external debt in the current market conditions that may be unfavourable for the borrower.

In the structure of the long-term debt obligations, debt securities account for around 86 per cent. Exceptions are Spain, where the ratio between debt securities and loans is 3:1, and especially Greece, where more than 4/5 of the sovereign foreign debt falls not on debt securities, but various types of loans. In general, the dominance of debt securities in the structure of the sovereign external debt of the developed countries reflects the current market trend of sovereign external debt development. It is connected with a decrease in the proportion of different types of loans as illiquid instruments of debt financing and a corresponding increase in the share of sovereign debt securities that can be freely traded in the international stock market.

Developed countries try to regulate the growth of external debt by setting certain limits. For example, in the EU the maximum amount of sovereign debt (including external and internal) should not exceed 60 per cent of GDP. However, in spite of the limit, in the Eurozone, according to the Eurostat, the figure was an average of 90.8 per cent in early 2016, and the EU — 85.3 per cent. More than half of EU countries have the amount of sovereign debt exceeding 60 per cent of GDP. The particularly critical situation is in Greece that in the summer of 2015 was on the verge of sovereign default on external obligations to the ECB and the IMF. Only hard conditions of the

Table 6
The structure of the external sovereign debt, 01.01.2015

Country	The share of the long-term debt obligations, %	The share of debt securities in the long-term debt obligations, %
USA	89.2	97.4
Germany	93.5	94.1
France	86.8	96.0
Italy	91.3	94.7
Japan	51.2	96.0
United Kingdom	93.3	96.3
Spain	88.3	76.9
Greece	98.8	13.7
Canada	88.3	97.1
Netherlands	91.1	94.5

Source: calculated by the author by World Development Indicators. World Bank Data, Retrieved from <http://databank.worldbank.org/data/reports>; http://databank.worldbank.org/data/views/reports/ReportWidgetCustom.aspx?Report_Name=Table-1-SDDS-new&Id=4f2f0c86.

state budget stabilization coordinated with external lenders, including, inter alia, raising the retirement age and increase in taxation, made it possible for Greece to receive the first tranches of the external loans within the framework of the new (the third) package of financial assistance in amount of 86 bln. Euros.

Although the share of gross external debt of developing countries is less than 10 per cent of the global external debt, the pace of its growth over the past ten years (on average 11–12 per cent yearly) make the international financial and credit organisations worried about it. Table 7 reflects the dynamics of the external debt and the basic ratios of the debt sustainability of the developing countries and countries with economies in transition.

The table shows that for eight years, the gross external debt has increased by 2.34 times. The specific feature of the developing countries and countries with economies in transition is a large share the public external debt. The external corporate debt accounts for only 1/3 of the gross external debt amount. It is because international investors do

Table 7

Dynamics of the external debt and the main ratios of the debt sustainability of the developing countries and countries with economies in transition

Index	01.01.2006	01.01.2010	01.01.2011	01.01.2012	01.01.2013	01.01.2014
Gross external debt, US\$ bln.	2352.0	3629.6	4109.4	4571.5	5032.0	5506.3
Corporate external debt, US\$ bln.	567.2	1264.9	1348.1	1556.0	1716.9	1898.1
External debt/GDP, %	27.0	24.1	22.5	21.7	22.5	23.2
Payments on external debt/Exports, %	13.8	12.7	11.1	10.3	10.0	10.5
Short-term debt/Gross external debt, %	20.5	21.4	25.3	26.7	26.7	27.8
International reserves/External debt, %	73.9	117.8	120.5	118.7	112.9	111.3
External debt/Exports, %	80.9	85.4	77.5	71.3	74.5	79.0

Source: calculated by the author by World Development Indicators. World Bank Data, Retrieved from <http://databank.worldbank.org/data/reports>; http://databank.worldbank.org/data/views/reports/ReportWidgetCustom.aspx?Report_Name=Table-1-SDDS-new&Id=4f2f0c86.

not trust banks and companies from developing countries, preferring to deal with public debt. Please note, however, that the share of the external corporate debt tends to increase (for example, at the beginning of 2006 it accounted for the only ¼ of the gross external debt of the developing countries. The average level of the ratio “external debt/GDP” (23 per cent) indicates a relatively low external debt risk of the developing countries. However, this figure strongly differs by separate countries (for instance, in China — 9.5 per cent, and in Hungary — 170.8 per cent). The same is true with a ratio “international reserves/external debt”. Over the past five years, on average it is equal to 116 per cent. However, in China, the figure was 439.1 per cent, and in Ukraine — 12.7 per cent.

The analysis of the regional structure of external debt and the main ratios of the debt sustainability in developing countries and countries with economies in transition makes it possible to conclude that there are significant differences between separate regions. For example, European, East Asian and Latin American countries account for 80 per cent of the gross external debt of the developing countries, and

the remaining 20 per cent is divided between Africa, the Middle East and South Asia (Table 8).

The highest debt burden falls on European countries. Also, the European countries have the lowest ratio “international reserves/external debt” and the highest ratio “external debt/exports”. In East Asia, the highest ratio is “international reserves/external debt” (primarily due to the huge size of China’s international reserves). However, in the structure of the external debt of the East Asian countries, almost 52 per cent is short-term debt that increases the risk of refinancing of external debt of these countries as a result of adverse changes in the current situation in the international debt market.

The specific feature of the developing countries and countries with economies in transition, as well as of the developed countries, is a high degree of concentration of the external debt. The top ten countries account for almost 2/3 of the total external debt of the developing countries.

Methods of External Debt Settlement

In the history, the events of default of the developing countries on external debt took place many

Table 8

Regional structure of the external debt and the main ratios of the debt sustainability of the developing countries and countries with economies in transition, early in 2014

Index	Europe and Central Asia	East Asia and the Pacific	Latin America and the Caribbean	The Middle East and North Africa	South Asia	Sub-Saharan Africa
Gross external debt, US\$ bln.	1234.2	1672.9	1495.4	190.5	545.7	367.5
External debt/GDP, %	63.9	14.8	27.4	17.3	23.2	24.3
Payments on external debt/Exports, %	39.6	3.3	16.5	4.9	9.4	6.3
Short-term debt/Gross external debt, %	21.3	51.6	14.8	17.9	17.7	14.7
International reserves/External debt, %	25.5	259.7	48.8	152.0	58.4	36.6
External debt/Exports, %	153.4	46.8	127.2	55.2	96.5	78.5

Source: calculated by the author by World Development Indicators. World Bank Data, Retrieved from <http://databank.worldbank.org/data/reports>; http://databank.worldbank.org/data/views/reports/ReportWidgetCustom.aspx?Report_Name=Table-1-SDDS-new&Id=4f2f0c86.

times, and international lenders currently have a certain set of earlier tested methods and tools to settle external debt problems. For a long time, the main form of the debt settlement was a delay of payments. On the one hand, as a result of the achieved delay the country in debt received some breathing space, but on the other hand, in this case, the total debt burden increased due to the accrual of additional interest and it greatly complicated the solution of the problem of sovereign external debt of the country.

In this respect, the lending states together with the borrowing states and international financial and credit institutions (primarily the IMF) began to develop various options for restructuring sovereign external debt to reduce the total amount of the debt of the borrowing countries. Sovereign debt restructurings have returned as a key concern to governments and market participants (Das, Papaioannou, Trebesch, 2012). The restructuring of the intergovernmental foreign loans is carried out by the Paris Club. The Paris Club member countries have produced a coordinated policy of the inter-state settlement of the external debt. Depending on the level

of welfare of the borrowing countries (based on the level of income per capita) a long-term restructuring of the external debt (for a period of 10 to 40 years) is carried out with the possibility of a partial write-off (90 per cent of the outstanding debt).

In addition to debt restructuring, sovereign borrowers use various financial techniques to reduce the external debt burden. One of them is the repurchase of debt at a discount in the international debt securities market. The borrowing country should buy back its debt in the market if it is traded at a large discount.

In the last 25–30 years, new forms of settlement of the external sovereign debt have appeared in the market. One of them is a conversion of external debt in a certain type of assets held by the borrowing country. The most popular type of conversion was the exchange of debt for shares of the national companies. Along with the shares the external debt can be converted into debt denominated in the national currency, in exported goods and other national assets.

Another form of settlement of the sovereign external debt is securitisation. It means issuing sovereign debt securities to replace the existing

ones or instead of non-issue debt obligations of the borrowing country. The securitisation of external debt was used in the Eurozone for the settlement of the situation in Greece during the hard debt crisis. In 2012, the private creditors agreed to write off more than half of the nominal value of outstanding debt securities of Greece, and instead, several tranches of new sovereign bonds with maturities between 11 and 30 years and with different coupon rates were issued. All kinds of newly issued debt securities allowed Greece to securitise its debt obligations amounting to over 200 billion euro.

The Problem of External Debt Management

An aggravation of the problem of the globalisation of the external debt prevents the restoration of stability and achieving sustainable growth in the current global economy. Until significant pockets of private, external and public debt overhang further abate, the potential role of other headwinds to economic growth will be difficult to quantify (Lo, Rogoff, 2015). In this regard, at present various countries and groups of countries strengthen management of external borrowings at the national and regional levels. The critical point appears to be the institutions set up to handle potential problems, and these institutions are part of the question of distinguishing between what is a good sovereign and what is not (Flandreau, 2013).

National regulators from different countries began to actively collaborate to create a common international approach to financial supervision. The starting point was the G20 summit in Washington in 2008. From that moment, the attempts are made to reform the regulation of the international financial market in general and the international debt market in particular. New changes in regulation are primarily aimed at enhancing the transparency of financial transactions and increasing market efficiency.

Along with the control of sovereign debt at the international level, efforts are being made at the regional level too. For example, to address the sovereign debt problems of the euro area in June 2010 on a temporary basis an interstate regional body — the European Financial Stability Facility (EFSF) — was established in Luxembourg. It provided prompt financial assistance to Ireland, Portugal and Greece have issued bonds and other debt instruments in the international financial market under the sovereign guarantees of the Eurozone countries.

In October 2012 in Luxembourg, the European Stability Mechanism (ESM) started to operate. It was established as a permanent body to replace the EFSF to fulfil its functions. Both organisations have existed in parallel until June 2013, using common staff and common offices. On 1 July 2013, the EFSF finished participation in any new financial aid programs and was dealing with servicing and repayment of its debt obligations only.

At the national level regulation of sovereign debt can be carried out by various national institutions: ministry of finance, the central bank, as well as specialised organisations. In connection with the aggravation of the problem of the external debt growth in 90-s last century, various countries established specialised debt management offices. These offices were created either as separate and independent entities, either as a division of the national central bank or ministry of finance.

These organisations manage the public debt of the country as a whole, including both external and internal debt. Management of internal and external debt of the country from one central location makes it possible to minimise the cost of various types of loans. Under favourable market conditions, a specialised agency can quickly replace an expensive debt for a cheaper one, as well as to switch from external to domestic borrowing, and vice versa. Successful debt management requires close collaboration between different elements of the government concerned with external finance to have the key information necessary to make informed decisions on the access to and uses of external finance (Klein, 1994).

In addition, in a globalized world economy a division of the public debt into the external and internal is rather conditional, since in the government's debt structure of various countries of the world the share of market debt instruments is increasing in the form of a variety of debt securities that are publicly traded (Gruić, Wooldridge, 2012). In this regard, the sovereign debt securities repeatedly change the holders, and the holders may be both non-residents and residents. Besides that, the sovereign debt securities intended to be placed in the internal national markets, as a rule, can be purchased both by residents and non-residents, as well as the sovereign debt securities intended to be placed in the foreign market. The market practice shows that the final beneficiaries of the non-resident company can be individuals who are residents of the borrowing country, and the

final beneficiaries of the resident company can be non-residents.

As a part of the national regulation of sovereign debt, one of the main activities of the state authorities is to determine the limits of the new external borrowings. To control the growth of sovereign debt, it is important that the annual volume of new external borrowings does not exceed the amount of the annual payments on the current basic external debt. In practice, however, this ratio is not always observed in different countries, especially in a favourable situation in the international debt market. A more restrictive, practical, solvency criterion suggests that the debt to GDP ratio (or the ratio of debt to some other measure of the capacity to pay such as exports or government revenue) should not increase forever (Roubini, 2001).

The aim national regulation of sovereign debt is the formation of the optimal structure of the external debt. First of all, it concerns the maturity structure of external borrowings. The optimal strategy for sovereign debt is to avoid future payment peaks.

To comply with the safe level of the gross external debt, national regulators apply special measures in relation to national financial and non-financial institutions. For example, the central bank may introduce a mandatory norm that fixes the maximum size of debt obligations of the national commercial banks to the non-resident creditors. Likewise, the appropriate figures fixing external borrowings of financial organisations at an economically safe level (especially with a high equity proportion of the state) may be used.

Probably, shortly consolidation of efforts of international financial organisations and national authorities monitoring domestic financial markets, in the area of regulating transactions in the international debt market and tightening control over the external borrowings will continue. This may result in implementation of new methods and external borrowing management instruments at the international, regional and national levels, as well as the formation of new, more stringent regulations, standards and rules in the international debt market, as a result of the response of the participants to the demands of the official regulatory bodies in relation to the need to strengthen control in order to prevent a new global financial and economic crisis.

The rapid growth of the external debt burden of many countries (primarily developed countries) raises serious concerns regarding the possibility of

a new wave of global financial and economic crisis that can be triggered by a “chain reaction” of debt crises in separate countries. In the current financial and economic circumstances, many countries do not have a real ability to repay its debt and have to borrow more to maintain the existing amount of debt further. The aggregate debt service burden is an important link between financial and real developments; it has sizable negative effects on credit and expenditure growth (Juselius, Drehmann, 2015).

To solve the global debt problem, it is necessary that the main borrowing countries minimise the amount of new borrowings and provide the greatest possible growth of the national GDP. However, in practice, in the current global financial and economic situation, GDP growth is closely connected with the need for additional public spending that requires raising new funds and, as a consequence, increasing the size of the existing external debt.

The globalisation of the external debt problem has a wider sense than just a purely economic problem. It has a direct impact on the nature of the policy pursued by the borrowing countries. The growth of external debt makes the country more dependent on the major international lenders, as well as increasing the likelihood of non-payment in due time and, as a consequence, the failure to meet current financial obligations and the government inability to obtain new loans in the future from non-residents.

Is it Possible to Predict the Sovereign External Debt Default?

The question arises whether it is possible with a high degree of certainty to predict the sovereign default, based on some specific indicators or some sort of aggregate (or resulting) rate? Currently, there are two main methods of estimating the probability of sovereign default in the world: vector method and scalar method. The first method relates to determining the system of indicators, each of which is a kind of indicator of debt. The higher this figure is, the lower a country's ability to service its debt is, and, consequently, the higher the probability of sovereign default is. In the international practice, the most widely used debt indicators are such as external debt to annual GDP (critical level is 50 per cent); external debt to annual exports (critical level is 275 per cent); repayment and external debt service to annual exports (critical level is 30 per cent); external debt service to annual exports (critical level is 20

per cent); GDP per capita (critical level is US\$ 785 per year); and a number of other indicators. By the vector method, if these debt indicators exceed specified critical levels, then external debt policy is ineffective, and the probability of sovereign default is quite high.

In October 2012 in Luxembourg, the European Stability Mechanism (ESM) started to operate. It was established as a permanent body to replace the EFSF to fulfil its functions. Both organisations have existed in parallel until June 2013, using common staff and common offices. On 1 July 2013, the EFSF finished participation in any new financial aid programs and was dealing with servicing and repayment of its debt obligations only.

It is not so simple assessing of the probability of the sovereign default by the vector method, despite the visible simplicity of its essence. It is so because according to a number of some external debt indicators a country may exceed the critical level, but according to some others — no. In this case, there appears uncertainty that we cannot eliminate using this method. Furthermore, the critical levels of the external debt indicators are determined by the experts by common sense and empirical observations. All this creates big problems in estimating the probability of a sovereign default of a country. C. Reinhart and K. Rogoff (2009) present data on sovereign external debt defaults for the period from 1970 to 2008. They showed that only 16 per cent of the external debt exceeded 100 per cent of GDP of the country, more than half of defaults occurred when the debt level was below 60 per cent of GDP, and external debt defaults with a level less than 40 per cent of GDP account for almost 20 per cent of the total sovereign external debt defaults.

The scalar method is connected with an integrated assessment when many external debt indicators at the final stage of the analysis are summarised in the final assessment using various aggregation methods. However, as a rule, obtaining an integrated assessment is based not on real aggregating of the initial information but some basic statistical elements translated to an integrated probability of the sovereign debt default by a specific procedure. The scalar method is based on actuarial calculations (that is the assessment of the probability of default based on available statistical data on sovereign defaults) and calculations based on the market value of various financial assets (shares, bonds or derivatives). These calculations are used to determine the cur-

rent risk premium for investors and to predict the probability of the sovereign default.

However, calculations based on the market value of financial assets are more popular. In this case, the main market indicator of the sovereign default probability is a credit default swap. On the basis of the value of swaps covering the risk of default on government debt securities, we can estimate the probability of sovereign default. However, as CDS is widely used a market instrument for speculative purposes, its cost is quite volatile (especially in periods of instability in the world economy and global finance), and may not reflect the fundamental financial and economic indicators of the country. Also, CDS are focused only on sovereign euro bonds, while the estimation of the probability of sovereign default should take into consideration all external debt obligations of the country.

One way to assess the probability of sovereign default could also be sovereign credit ratings assigned by the various rating agencies (especially the “big three” international rating agencies). In this case, however, it should be borne in mind that sovereign credit ratings reflect personal opinions of experts from the rating agencies based, according to the rating agencies, on an independent analysis of the available information. Also, each rating agency uses its original method of evaluation of existing sovereign credit risk. Therefore, sovereign credit ratings assigned by different rating agencies can vary greatly by country.

Along with the methods mentioned above of evaluating the probability of sovereign defaults, alternative “technical” methods based on the use of historical data on sovereign debt default are also developing. One such method is proposed, for example, by E. Balatsky (2016). He describes a method of “restoring” the default function by historical external debt indicators of the countries that had faced default, in the year of sovereign default. The essence of the method is as follows. To identify a small number of key external debt indicators; to collect the numerical values of these indicators for a small group of countries that had faced sovereign default, in the year of default; to choose the specification of the function of the sovereign default probability and to assess the parameters of the function using a simple interpolation.

The author chose three external debt parameters (“external public debt/GDP”, “GDP/export” and “GDP/international reserves”), assuming that

the size of external public debt of the country, the value of its export operations and the amount of its accumulated international reserves are the main factors determining sovereign default. For analysis three Latin American countries (Ecuador, Argentina and Mexico) were selected, as well as two Asian countries (Thailand and South Korea) and Russia, which, according to the author, with a certain degree of conditionality can be attributed to the category of the Asian countries and was affected by the Asian crisis of 1997–1998.

As a result of the econometric analysis, the author concluded that if for Latin America the weight of debt was the critical factor, then for Asia in the first place was the export factor. Thus, countries in the appropriate regions existed under the very different models of sovereign default. In Latin American countries the problem of sovereign default was mainly caused by excessive borrowing, and in Asia and Russia debt problems were connected with the deterioration of the foreign trade situation. Therefore, the author highlights the regional default patterns that are different in the nature of origin and development. Latin American model of default can be conditionally named a debt model, and Asian model is a trade model.

Based on the study of elasticity of the probability of sovereign default depending on certain factors (for example, the volume of external debt), the author notes that each regional group of countries has significant national peculiarities regarding causes of sovereign default. For example, in Ecuador, it was a huge external debt, in Argentina — a fall in export earnings, in Mexico — a reduction of international reserves. Therefore, within the framework of a debt default model completely different aspects of the economic life of the country were limiting factors. Quite a different result was in Asia where a uniform model of default was seen — in all three states a trigger was the deterioration of the situation in the foreign markets. According to the author, in the debt model errors in borrowing have led to the excessive demands in respect of export activities and reserves,

while in the trade model a lack of export revenues triggers an increase of external debt and a reduction of international reserves. The “bottleneck” can be any of these three factors, depending on the configuration of the resources of the national economy. Not all crises are equal: they differ depending on whether the government faces insolvency, illiquidity, or various macroeconomic risks (Manasse, Roubini, 2009).

Another conclusion is that different groups of countries have quite different, sometimes disparate, vulnerability to default. This fact means that we should rethink the term “sovereign default”. Although it regards a particular country, however, in the context of the world events which may differ substantially in various periods. For example, during the Asian crisis defaults in different countries took place in a much more secure environment than in Latin America. Therefore, it is impossible to apply «default standards» of some groups of countries to the other groups. In other words, a wrong diagnosis of a problem is a bad starting point for remedies (Holmstrom, 2015).

Summary

Concluding the above mentioned, we should say that at present it is quite obvious that not just separate countries have significant debts as it was, for example, 30–35 years ago, but most of the world. The new realities are connected with large-scale debt obligations of many countries that have a significant impact on the formation of current global economic landscape and global financial architecture, as well as on the nature of relationships between the countries.

A problem to refinance external debt as a result of the refusal of creditors to provide new loans forces governments of the borrowing countries to cut public expenditures and can provoke serious social upheavals. As a result, the aggravation of the global external debt problem may become one of the main triggers of a deep financial and economic crisis not only in separate countries or a group of related countries but on a global scale.

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Проблема внешнего долга и мировая финансовая архитектура

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Аннотация. Либерализация мирового финансового рынка в 90-е гг. прошлого века и в начале XXI в. привела к усилению зависимости многих стран (как развитых, так и развивающихся) от внешнего финансирования и существенному росту суверенного внешнего долга, что создало реальную угрозу для стабильного развития мировой экономики. В статье рассматривается проблема растущего внешнего долга многих стран мира, анализируются методы решения данной проблемы и управления внешним долгом со стороны государственных органов. Особое внимание уделяется проблеме прогнозирования вероятности суверенного дефолта по внешнему долгу. В статье содержится вывод о том, что обострение проблемы глобального внешнего долга может стать одной из главных причин глубокого финансово-экономического кризиса не только в отдельных странах или группе связанных между собой стран, но и в глобальном масштабе.

Ключевые слова: внешний долг; долговые ценные бумаги; дефолт; критерии платежеспособности; регулирование внешних заимствований

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