Brics' Foreign Debt Burden and its Impact on Core Institutional Basis

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Abstract: Creation of a multipolar international economy and economic relations is accompanied by shifting gravity centers of international finances, redistribution of positions on the global market for financial services in favor of large emerging countries and countries with transitional economies. This post crisis period triggered serious problems related to international capital inflows and outflows at the BRICS states. This is all due to a slow recovery of developed countries; a high probability of a full-scale debt crisis in some E.U. states; mounting uncertainties following financial reforms in some states, etc. But raising debt as an important way to finance speedy economic growth and import of technologies to the BRICS countries make their financial systems more vulnerable to exogenous stresses and shocks, which result in an unreasonable firming of national currencies. In our research, we have identified the risks and misbalances of global development, which affect BRICS, evaluated the influence of foreign debt and singled out the key growth trends. We have revealed the importance of the New Development Bank development, which will help solve urgent problems of its participants connected with their growing role in international economic relations: the creation of a regional financing mechanism as well as a core institutional basis to represent BRICS' interests in the global financial structure and to become the missing link in interaction with global financial institutions.

INTRODUCTION

Debt policies have become a pressing problem for the international economy in the last several decades, causing concern both in developed and emerging countries because of the uncontrollable trend for growth of all types of debt, both domestic and foreign, including state debt, corporate debt and the debt on the consumer credit market. This is why conditions for creation of a necessary level of state guarantees for the national economy are needed since there is no global management regulator in managing state debt. While forming the system of global management, introduction of a transitory state management, which would factor in the new conditions of a significant decrease of possibilities of state protectionism for the market, is needed. The importance of foreign state debt in its turn increases in conditions of globalization of the international economy and development of international economic relations.

The global economy increases the importance of debt policies and helps cement state guarantees for the national economy, changes the very concept of foreign state debt, which can no longer be regarded the way it was seen in the period of state protectionist policies, when all types of debt, including state foreign debt, were insignificant. In conditions of the current debt economy, all types of debt are significant in most of international countries and state foreign debt demonstrates urgency of the problem (Kraay, 2006).

The vagueness of the 'foreign state debt' concept in researches Mildner D. (1993) means that interpretation of the economic content of the concept is ambiguous. In particular, the issues of reasons behind a detailed consideration of the foreign debt structure, including corporate and state debt, should be discussed in more detail (Stahl, 2013).

The reason for the state debt appearance roots in the government's internal and foreign policy, which fails to provide for a balanced income and spending of the budget. At the same time, we cannot single out a country, which never encountered the problem at one time or another in its history.

According to Feld (2013) state debt is an inseparable part of most financial systems. In particular, borrowing policies to finance budget spending is widely used in international practice. Consequently, state debt is a normal phenomenon in the financial balance of any civilized country.

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From an economic point of view, state debt is debt of the government authorities, which appears as a result of forming additional financial resources of a country allocated, among others, to solve contradictions between economic and social needs of the society through borrowing funds from households, government institutions and foreign states (Nowak-Far, 2017). In its turn, from a material point of view, state debt represents total unredeemed liabilities of a country and their unredeemed interest.

The current stage of international financial system development is conspicuous for its globalism. The point of view, which states that ignoring and/or underestimating of the macroeconomic fallout of systemic risks made a significant contribution to the development of financial and economic crisis of 2007-2009, is wide-spread now. An adhoc group, which included specialists from the IMF, the Bank for International Settlements (BIS) and the Financial Stability Board (FSB) suggested the following definition of systemic risk. This is a risk of disruption of financial services, which leads, first, to a meltdown of the whole financial system or its elements, secondly, to serious negative consequences for the producing economy. This economic approach makes comprehensive monitoring of interrelation of various spheres of BRICS' economies the key goal of scientific research, which covers:

a)   identification of risks and misbalances of global development, countering the threats, which are of mutual importance and is a platform for aligning economic policies and working out common approaches towards internationally acceptable rules, technologies and methods.

b)   identification of common trends, weak and strong points in economic development of countries under analysis.

Concept Headings

Various theoretical approaches to assessment of the state debt role are used in international economy. Thus, by raising additional financial resources through increasing debt the government receives new possibilities for economic growth and closing the development gap with developed states. Budget deficit financing with the help of boosting state debt is a realistic alternative to the tax burden. At that, debt financing has a lesser political price compared with tax increases. State debt can perform the role of a financial mechanism, which speeds up economic development by replacing tax payments.

At the same time, foreign state debt represents borrowings raised mostly from foreign governments (legal entities and international associations), on which state financial liabilities, making part of a global government debt system, arise, according to Christian (2016). They are based on the debt position of a state in a national economy.

At that, the government by its status is a party representing a borrower or debtor. In its turn, the state borrows money from taxpayers when collecting taxes at the same time shifting the functions of a debtor on them the same like non-resident creditors. Tax credits of the government, according to Cerra (2008), is its domestic debt, which it repays in the form of budget spending to support and develop of the whole system of social protection for people, including public education and public healthcare, science, defense, social security, pensions, etc.

This means that foreign state borrowing can only be justified by budget deficits, when budget spending does not cover the needs of social security protection. Consequently, the economy is able of liquidating budget deficits, helping the government avoid foreign borrowing through an additional monetary emission, budget spending reduction, tax and payments increases, widening the subject of taxation (sales revenue, income, net profit, property, etc.).

At the same time, the choice of such instruments is controversial from the point of view of regulating the size of government foreign debt. In particular, economic discussions have been held since the time of John Keynes, who believed that the fiscal policy of a state, which creates the possibility of credits to the government through tax borrowing, a powerful instrument of national economy management, demand stimulation (Avramovic, 1964). His scientific works point to the possibility of accumulating domestic state debt to provide for high budget spending and his theory did not mention the issue of foreign state debt on purpose. According to John Keynes, the government can resort to foreign borrowing for the sake of supporting budget spending, but this task is also equal to a skillful fiscal policy (Brauers, 2009). By pursuing a skillful fiscal policy of raising/lowering taxes depending on the overheating (recession) of the national economy, the government thus manages its domestic debt, which in this way does not require any special

attention, is not a current macroeconomic variable, the same as foreign state debt.

Reinhart, C. M. and Rogoff, K. S. (2004) considered the choice of corresponding instruments to form the optimal budget and taxation policy from the point of view of the national economy growth. They singled out two types of economic subjects' behavior – a 'saving' behavior and a 'spending' behavior. At that, tax reduction by the government at the expense of state debt growth leads to capital spending in the short term. At the same time, a higher economic activity is compensated by the very system of 'spending' economy in the long-term, i.e. the size of state debt is an insignificant macroeconomic factor in a 'spending' economy (Phillips, 1991). Thus, the state debt, being a significant macroeconomic variable, according to Carvalho (2016), is capable of exerting influence on the economy. For this, it takes abandoning the system of 'spending' economy, where highly profitable 'saving' economic subjects cannot find a use for themselves as

economic growth agents since they only have a stabilizing function in relation to capital size fluctuations. But state debt inevitably acquires great significance in a 'spending' economy, because it is not compensated or poorly compensated by growth. Consequently, the very existence of a large state debt testifies to the fact that the economy with such a burden experiences ample problems of implementing its long-term growth possibilities regardless of the type (spending or saving). Such a conclusion is confirmed by works of Nobel Economics Laureate Paul Samuelson (Josef, 2016). A large amount of state debt has a negative impact on the efficiency of economic activities, leads to shrinking consumption because of the need to service foreign debt and reduces the country's economic growth potential through replacement of private capital and forcing the government to raise taxes.

The development of various international crises of a few recent decades demonstrated that reaction of the
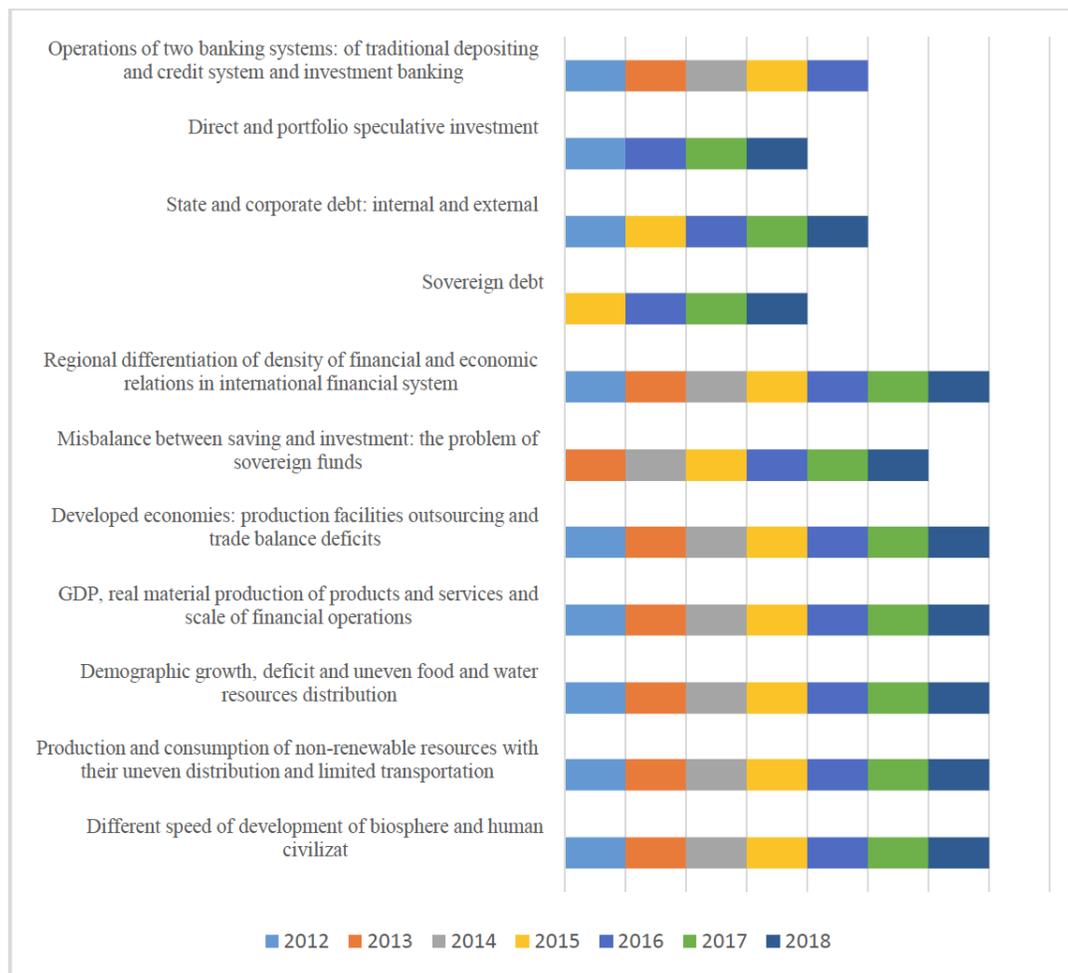
Figure 1: Current systemic and global misbalances in BRICS countries (was prepared basing on report by Goldman Sachs Group https://www.goldmansachs.com/worldwide/russia).

state and government regulating institutions was quicker than in the 1980s and 1990s. The latest systemic crisis demonstrates how destructive and global the ensuing crises of emerging economies can be, how costly they are and how much time they require to recover (Figure **1**).

We should note that a system of misbalances, both global and internal, persists and branches out into the BRICS states. This is a natural process, which accompanies recovery of international economy as a unified balanced economic space.

Historically, financial globalization in the pre-crisis period allowed the governments of many countries to raise excessive debt from the international capital markets. This resulted in state debts overshooting the maximum allowable limits in the period of debt settlement after the sovereign debt crisis of the end of the 1970s – start of 1980s. Some segments of the international capital markets ceased functioning normally during the global financial crisis, investor appetite towards sovereign risk shrank. This was reflected in wider interest rate spreads and growing risk premiums on borrowings of some countries. Anti-crisis measures required more debt from the governments of primarily developed states. As a result, according to experts, sovereign debt problems will only mount in the next few years. Before the crisis, banks of developed countries, first of all, of the U.S. and E.C. pursued active debt policies to manage capital and liquidity and to raise long-term capital. The development of the global financial crisis made raising liabilities to fund active operations impossible. After the Lehman Brothers bankruptcy the volume of the international debt market halved. Credit spreads on junior and non-collateralized banking bonds widened strongly. Since the interbank and money markets virtually stalled, banks, depending on the wholesale markets for financing of their operational activities failed to meet their liabilities. In such conditions many governments launched various support programs for the national and even sometimes international banks boosting sovereign debt to preserve systemically important banks and prevent banking panic. Capital injections and replenishment of the banks' resource base via bond issues guaranteed by the government were most popular in the developed and developing states.

The key factor for the state debt growth during the crisis were:

a) Higher state debt yields. Theoretically, sovereign debt was seen as risk-free and it yield a starting rate of the yield/risk curve on the national market before the crisis of this debt at the end of the 1970s – start of 1980s. State liabilities turned into a risky asset during the crisis, while in the post-crisis period risk premiums started to grow thanks to unclear economic recovery prospects. Higher sovereign yields boost debt financing costs for any private company automatically. This may mean tightening the debt noose for the budget of issuing states.

b) The anti-crisis measures aimed at supporting the banking sector. State debt issuance to support banks triggered sovereign debt growth. Though it helped maintain national banking systems at the peak of the crisis, banks faced more expensive wholesale financing on the capital markets as early as in the medium term. Growing costs to service the resource base along with a slack demand for new banking credit translate into lower margins of the banking business. This may again undermine its ability to raise financing from the market, lower its crediting potential, which will make recovery after the crisis slower.

c) Higher budget spending to stimulate economic growth. Budget investment and other non-interest spending growth helped economic growth to recover. But since budget interventions were derived from higher state debt, this may cap economic growth for a long time. When emergency measures to cut state debt bring no tangible results and the debt burden becomes crippling for the country-debtor, a delay in restricting debt inevitably leads to a lower wellbeing of the nation, a fall of per capita income and investment and a large-scale redistribution of resources in the country. Creditors also incur significant losses. If official bodies of crediting countries held liabilities of a debtor country in their portfolios, its failure то repay the debt means direct losses of tax-payers from creditor states. In this case the failure to fulfill sovereign debt obligations may trigger a new round of a global financial crisis.

Statistical Methodology

In our research, we, via structuring and systematizing statistical information with the help of the key methods of statistical analysis, will analyze the impact of a state debt to corporate debt ratio among the countries constituting the BRICS. It is important to

note that the financial quarterly foreign debt data of the World Bank by the groups General government, Central Bank deposit-taking corporations (except the Central Bank), other sectors, were taken as the basis.

We should note the importance for a scientific research of the ratio between the debt burden as a share of the government sector over the corporate sector under the formula (1):

$$X_i^k = \frac{a_i^k}{b_i^k} \tag{1}$$

where a_i^k is the sum of state debt, including General government, Central bank;

b_i^k is the sum of corporate debt, including deposit-taking corporations, except the Central bank, other sectors;

i is the number of included quarters of a corresponding year from 2015Q1 to 2016Q3;

k is the number of a country making the BRICS (1-China, 2 – Brasil, 3 - India, 4 – Russia, 5 - South Africa);

The calculated empirical data with the use of formula (1) are reflected in the summary Table **1** by country. When using the correlation analysis method,

which allows us to assess the character and scale of interrelation between the chosen characteristics, the simple linear Pearson correlation was chosen as a measure of interrelation between the series (Arrow, 1974). The x and y relation is linear, if a straight line drawn through the central part of a cluster of points produces the best approximation of the correlation. According to the data in Table **1**, we are performed the analysis of the indicators among the BRICS countries.

At that, we should note that the determination coefficient of paired regression coincides with the square of the correlation coefficient r (for linear regression). In its turn, the assessment of the quality of the mathematic model (the function equation) shows the value of the determination coefficient for the linear regression, or a square of the correlation index $\rho_{xy}^2 = \sqrt{1 - \frac{\sigma_{OCT}^2}{\sigma_y^2}}$ for the nonlinear regression. Analysis of correlation dependence of the share of state debt to corporate debt in the BRICS countries was done by constructing a matrix of the correlation coefficients for the period under research (Table **2**)

Based on the correlation data from Table **2** we can formulate the following statement. There is a general trend for all BRICS countries state debt to corporate ratios and the presence for them of general links in the parameters under study, because the most part of correlation coefficients between the figures of absolute

Table 1:   The Share of the Ratio of State Debt to Corporate Debt by the BRICS Countries

Period Quarter	China	Brasil	India	Russia	South Africa
015Q1	0,11	0,78	0,23	0,18	0,80
2015Q2	0,11	0,82	0,23	0,20	0,83
2015Q3	0,12	0,67	0,23	0,18	0,78
2015Q4	0,15	0,70	0,23	0,18	0,68
2016Q1	0,20	0,73	0,24	0,19	0,76
2016Q2	0,20	0,79	0,25	0,21	0,84
2016Q3	0,19	0,77	0,25	0,25	0,88

Table 2:   The Correlation Matrix by the BRICS Countries

BRICS members	China	Brasil	India	Russia	South Africa
China	1				
Brasil	0,03249	1			
India	0,819784	0,310494	1		
Russia	0,597053	0,409482	0,866702	1	
South Africa	0,179119	0,663387	0,533799	0,752999	1
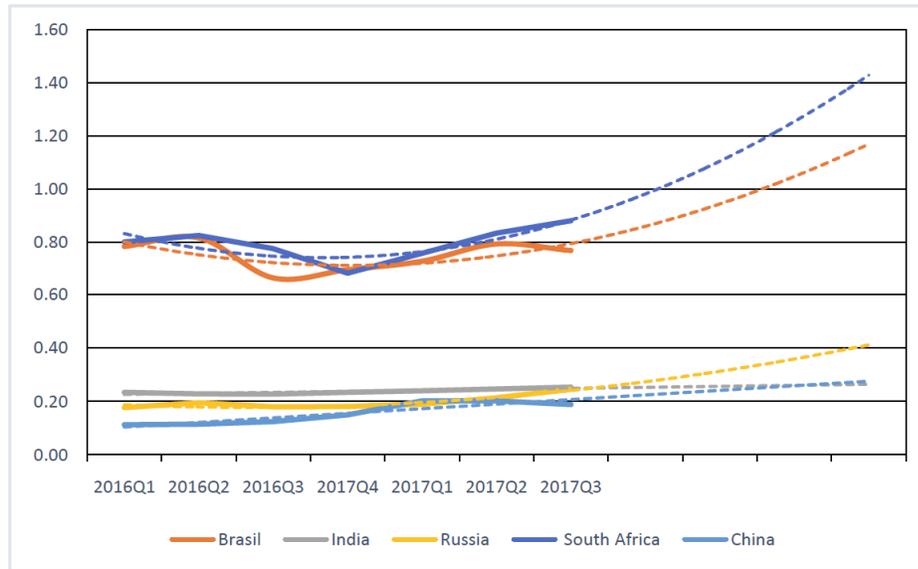
Figure 2: The forecast of foreign debt changes for the BRICS states.

Table 3:   *The* **Obtained Data for the** *BRICS Countries* **Forecasts Data**

BRICS members	Trend	R Square
Brasil	$y = 0,0095x^2 - 0,0768x + 0,2011$	0,414
India	$y = 0,0038x + 0,2223$	0,7494
Russia	$y = 0,0034x^2 - 0,0179x + 0,2011$	0,8787
South Africa	$y = 0,0127x^2 - 0,0935x + 0,914$	0,6573
China	$y = 0,0172x + 0,0868$	0,8288

values is above 0.5. At that, we should single out one country, The People's Republic of China, because its correlation coefficients with the countries of Brazil and South Africa are close to 0, which allows us to come to a conclusion of its independent state debt management policy. The following research is aimed at creating a mid-term forecast for the BRICS countries (Figure **2**, Table **3**).

We should note that while determining correlation between the numeric parameters of foreign debt sizes among the BRICS countries we have formulated the following statements:

a)   all BRICS states have demonstrated a sustainable trend to raising the state debt share in the overall volume of foreign debt taking a forecast to the third quarter of 2018 into consideration;

b)   A fall of the corporate debt share in the overall amount of foreign debt at quite a speed is typical

of Brazil and South Africa. This is an additional proof of a higher state control over the foreign debt structure trend;

c)   Such countries as India, China and Russia continue to increase the share of state debt in total foreign debt at a moderate speed.

Our research allows us to formulate the following statement. Sovereign debt growth while managing the fallout from the crisis in many countries resurrected the interest of creditor and debtor states to the SDRM idea, reignited discussion of the sovereign debt restructuring problem (Srinivasan, 2003). At that, it was presupposed initially that SDRM should outline a legal framework for negotiations between the creditors and sovereign debtors. We can single out the following features of the SDRM mechanism:

a)   approval by an overwhelming majority of shareholders of a state debt restructuring agreement (or the share of registered creditor

demands amounts to no less than 75% of the total amount of demands). After this sovereign debt restructuring will cover all claims of creditors in the SDRM system. Minority creditor dissenters would not be able to block it;

b)   creditors will not apply destructive legal actions to the debtor country during the whole period of sovereign debt restructuring;

c)   debtor countries guarantee to hold open negotiations and will not apply measures capable of hurting the economies of creditor states;

d)   creditors undertake the obligation not to extend the restructuring terms on new private debt of debtor countries. This is a way to ensure that sovereign debt restructuring will not curb economic activities in debtor countries, etc.

Foreign currency-denominated debt on the whole is liberalized in many states (including Russia), but some states with developing markets still use capital restrictions to protect national economies from massive inflows/outflows of speculative capital. For example, Argentine limited foreign currency debt by setting a minimal period of keeping money in the country and interest-free reserve requirements in the 2000s. India traditionally maintains capital restrictions and stimulates an inflow of direct foreign investment while limiting external debt, including short-term borrowing. The government of Brazil introduced a 2% tax on foreign capital investment in financial assets to curb portfolio investment during the crisis.

Hypothesis

The international macroeconomic policy theory for overcoming crises of the last few decades states the notion of viable debt – the size of the debt, which allows the debtor country to meet its current and future debt servicing liabilities fully, without turning for a further debt relief or restructuring, without accumulation of excessive volumes of such debt. At that, economic growth of the country is at an acceptable level. Sticking to mid-term planning of development scenarios is of utmost importance in our research of characteristics and degree of foreign debt burden influence on a country's economy. The approach to such a scenario is formulated in the plane of numerical estimates, which take expectations of economic variables and other factors into consideration to determine conditions at

which the debt burden and other indicators would stabilize at acceptable levels. We are talking of the following statement: market indicators' ratio to the country's GDP influence the ratio of state debt to GDP. We have assessed the factors, which exclude the influence on the value of the end figure, except one.

When calculating a debt to the country's GDP ratio, we have formulated the following hypothesis: the influence of the factors we have discovered on the change of the foreign debt to GDP ratio of each of the BRICS states under consideration.

To reveal the degree of influence of the factors we used the equation of linear multiple regression (5), defined by the following functional dependence (factors for the research proposed by the authors):

$$y_k = \beta_{0k} + \beta_{1k}x_1 + \beta_{2k}x_2 + \beta_{3k}x_3 + \beta_{4k}x_4 + \beta_{5k}x_5 + \varepsilon_k \qquad (5)$$

where y_k - the state debt to GDP ratio;

x_1 - industrial production growth rates;

x_2 - the ratio of exports to GDP;

x_3 - the ratio of imports to GDP;

x_4 - inflation;

x_5 - unemployment;

β_{ik} - unknown parameters;

ε_k - random disturbances (deviation of theoretical values from practical values);

$i = \overline{0,5}, k = \overline{1,5}$ (the BRICS states: China, India, Brazil, Russia, and South Africa).

It should be noted that the problem of endogeneity of unknown variables can arise, which characterizes the reverse effect of economic indicators, which does not exclude the assertion about the level of their mutual influence.

The basic data to confirm our hypothesis are in Schedule A. The empirical ratio data we have received on the correlations, which satisfy the linear regression equation for each state, which comprises the BRICS for the period of 2008-2017, are reflected in Schedule B. Based on the processed data on dependence of state debt on the following factors: industrial production growth, the ratio of exports to GDP, the ratio of imports

to GDP, inflation in the country, unemployment in the country, for each BRICS country is characterized by a linear equation of the type:

$$y_1 = 7,83 - 0,31x_1 - 174,8x_2 + 280,94x_3 + 2,99x_4 - 1,06x_5$$
for China;

$$y_2 = 32,57 - 0,64x_1 - 116x_2 + 151,02x_3 + 0,42x_4 - 3,74x_5$$
for Brazil;

$$y_3 = 100,4 - 0,86x_1 - 760,33x_2 + 337,93x_3 + 1,76x_4 - 2,2x_5$$
for India;

$$y_4 = 11,85 - 0,12x_1 + 77,78x_2 - 146,39x_3 + 0,24x_4 - 0,19x_5$$
for Russia;

$$y_5 = 13,81 - 0,11x_1 + 264,29x_2 + 350,73x_3 - 3,21x_4 + 0,79x_5$$
for S. America.

The descriptive characteristics of functional dependence in the equations are characterized by qualitative changes in the countries of Brazil and South Africa. The dependence we have studied between the variable (the size of state debt as related to the size of GDP of a country) and the influence on it of other factors. The values of determination coefficients close to 1 and F – statistics (a critical value of Fisher distribution amounted to 5,117355, and this is a lesser value compared with values of other factors we received in our calculations) point to this.

For the countries of Russia, India and China the equations of descriptive characteristics of functional relationship can be considered insignificant from the point of view of consistent description of dependence on the influence of the factors under consideration (Chen, 1997).

Thus, we can formulate the following proof of our hypothesis. The factor of industrial production growth rate influences the size of state debt in all the BRICS states, consequently, when industrial production grows

in a country, foreign debt falls, because stable negative values of coefficient β_{1k} on the countries under research were received.

A further check of significance of the linear multiple regression coefficients we have received on the basis of t-Stat and P-value (t Stat parameters define the coefficients as significant, if they are no less than 2 in absolute value; parameters P-value, which do not exceed 0.05, also point to significance of the variables) demonstrated the following results. The most significant factors, which influence the size of state debt for China is the volume of exports, for Brazil production output growth and the unemployment level, for India and Russia production output growth, while for South Africa the level of unemployment (Table **4**).

Thus, the regressive and variance analyses of financial indicators' ratios for the BRICS states we have undertaken allowed us to reveal two market indicators, which have a significant influence on the size of state debt: industrial production growth and unemployment in the country.

The research we have undertaken allowed us to formulate the following statements:

a)   for all the countries of the BRICS' group an assumption of direct influence of industrial production growth on state debt size was proved – industrial production growth entails a falling state debt. The factor is most significant for Russia and India compared with the other factors (the values of tStat vary from -2.4 and -2.3 consequently, P-value 0,05).

b)   for the countries of Brazil and South Africa an assumption of significance of the unemployment factor from the point of view of its influence on the state debt size was proved. At that, this parameter is more significant for South Africa

Table 4: The Final Values of the Regressive Analysis by Country

BRICS members	Regression Statistics	R Square	F
China	$y_1 = -20,56 + 212,3x_3$	0,541627	8,271394
India	$y_3 = 95,15 - 250,55x_1$	0,443276	5,573551
Brasil	$y_2 = 44,79 - 0,72x1 + 2,59x_5$	0,903317	28,02916
Russia	$y_4 = 9,53 - 0,2x_1$	0,437252	5,438962
South Africa	$y_5 = -10038 + 5,64x_5$	0,724494	18,40783

than other factors, because tStat values amounted to 4.3, while P-value 0,004.

c)   for China, import volumes is the most significant factor (when assessing the impact of individual parameters), which is proved by the value of tStat=2,9, P-value=0,02.

Our research demonstrated that the BRICS states experienced in the last few years – through foreign trade and capital movement channels – a strengthening impact of the disturbances of the developing states, especially in the E.U. countries. Mounting sovereign debt and concerns about fiscal consolidation in the short-term and long-term prospects in the developed states create a shaky environment for global growth. Besides, a proactive position of the central banks to stabilize national economies caused excessive liquidity. It flows into the states with developing economies triggering strong volatility of capital flows and commodity prices. This makes the sales of BRICS states' goods to developed economies, which account for about half of their exports, difficult and curb an inflow of direct investment. High inflation rates force the authorities of China and India to rein in economic growth. Nevertheless, the BRICS states still develop at much higher rates than the U.S. and the states comprising the E.C. Members of this union contribute heavily to the post-crisis recovery and boost their positions in the international economy.

At that, the core of BRICS' growing influence in the world is, first of all, their political clout stemming from participation of two of its participants in the U.N. Security Council as permanent members (Russia and China) as well as the fact that all the BRICS members are powerful participants of leading international organizations and clubs (the U.N., the Group of Twenty, the Group of Eight, the Non-Aligned Movement, The 77 Group), as well as regional organizations. Russia is a participant of the Commonwealth of Independent States, the Collective Security Treaty Organization, the Eurasian Economic Community; Russia and China are in the Shanghai Cooperation Organization, the Asia-Pacific Economic Cooperation, Brazil participates in the Union of South American Nations, the Mercosur; South Africa is a member of the African Union, the Union of South American Nations; India is in the South Asian Association for Regional Cooperation.

Secondly, the spreading economic power of the member states, their important role in the resource provision for the humankind, a colossal territorial, demographic, production and technological potential, and the last but not the least, expansion of their footprint.

At the same time, creation of a community, where interaction of the member states and coordination of their policies will be of a flexible and – what is most important – a practical character with a focus on a common cause and search for a common opinion with a possibly variable membership depending on the area of cooperation is still a realistic scenario for BRICS. The rising economic importance of the emerging economies was not fully reflected in management of such international institutions as the IMF and the World Bank, etc.

Hence the demand of a wider representation of such states in leading international financial organizations, including their management, which would take into account the current economic and political realities. This is a key issue for the BRICS states. Coordination of their macroeconomic policies and further work with developed states to create stability and predictability on the global financial markets to advance towards a gradual reform of multilateral institutions is necessary. From the point of view of BRICS, cementing financial monitoring and oversight cooperation as well as assistance in a stable development of global financial markets and systems are of great importance. Solution of the aforementioned problems are mainly possible through the Group of Twenty, which has become the main venue for discussion of pressing global economic and financial issues. This means that expansion of cooperation in the Group of Twenty as a center of a crisis response to financial and currency shocks of a global scale and as a reform instrument for the economic architecture of the world have become an important goal of the BRICS states. To facilitate further propelling of the world economy towards sustainable and balanced growth, Russia, Brazil, China, India and South Africa want to transfer to mutual settlements in national currencies, not the U.S. dollars, soon. The first step was done in 2012 – banks of the five countries signed an agreement on lending in the currencies of their states and an agreement to accept letters of credit in the framework of banking cooperation. So far, Russia only makes settlements in the national currency with China. Agreements with India cover trade payments, but soon they will also cover investment. It will take synchronizing trade and banking legislations at least. It took Russia and China three years to do it. The

measures will boost the role of the national currencies in settlements between the BRICS states. Chances of a large-scale foreign currency turnover with Brazil and South Africa are small because of an insignificant trade turnover. The future of the settlements in the national currencies depend on whether standard raw materials contracts denominated in BRICS currencies appear.

DISCUSSION

Different macroeconomic indicators can be used, when compiling foreign debt stabilization programmers as economic guidance in the budget policy of international countries. At that based on introduced methods, one should take into account the influence of various factors, which have an impact on the characteristics and structure of foreign debt as well as ways and methods of its management via:

a) the order of use when forming the budget deficit volume of a country with the help of criteria of its balance, investment spending, etc.

b) sticking to parity of budget income and spending taking into account a cap on budget deficit depending of its ratio with GDP, structuring income and spending articles for budgets of all levels.

c) the equality of the size of state borrowing and capital investment in accordance with the 'golden rule' principle for the current account (Kosov, 2017).

d) setting the boundaries of gross and net state debt by limiting the ratio of total (net) liabilities to GDP, forming a certain volume of money to be put into non-budget reserve funds, as well as setting the upper foreign debt limit in absolute figures during a financial (calendar year) or a ceiling of the debt to GDP ratio (Akhmadeev, 2017).

e) curtailing payments when servicing state debt, while taking into account the ratio of such payments to incoming revenues from export operations (the acceptable size varies in a 20% – 25% range) (Osipov, 2017).

We should note a special role performed by the management order of foreign debt composition when introducing the indicative figures. We are talking about supporting a foreign debt structure that will be acceptable for a country from the point of view of existing interest, the payment period and the foreign currency structure.

According to Allen, R.C. (2001), although the best foreign debt composition is individual for each country, international countries single out general principles of foreign debt management. In particular, debts are accounted for at commercial principles only after a maximal use of privileged (concessional) loans; repayment dates must be as close as possible to the dates of income receipt from investment projects inside the country; the use of the method of foreign currency minimization when the rate of the national currency is unstable, etc.

According to Hjertholm (2003), the possibility that unforeseen expenses would appear, in particular, natural resources depletion, social security spending growth, a decrease in the number of employable population when creating the reserve funds of the country, migration, etc should be taken into consideration. In this case, the minimal size of the reserves is to be adjusted by the sum of accumulated reserves in relation to deduction from profits into non-budget funds. For example, for the United States, the volume of accumulated reserves with pension funds must amount to no less than 100-150% of the sum deducted for social needs (Tversky, 1981). In New Zealand, a mid-term programme to reduce the volume of state foreign debt by 20% and to support the size of state industries at a corresponding level was accepted (Lopez, 2004).

According to Ravallion (2004), Osipov (2016), Gryzunova (2018), a strict sticking to financial rules in the country requires established support measures, including the legal basis, the implementation procedure (or at least, the mechanisms to push forward agreements) and independent control. At the same time, violation of budget and taxation policy rules entails introduction of fines, which can be of legal, financial sanctions character, a public statement on undermined trust towards the violating country. At that, adoption of financial rules is linked to the order of setting a lower interest rate for the country (recipient). Such measures, of course, can improve the safety margin for the whole financial system of a state.

CONCLUSION

Debt management of international countries roots as a rule on a great reserve of produced capital, a developed system of economic and financial markets.

The largest developed countries are at the same time the largest creditors and debtors in the international economy. At that, the character and specifics of foreign debt management in these countries is based on the following condition. State debt is fully securitized, i.e. there are no borrowings received from other creditors, including from international financial organizations (which is typical of emerging countries) in its structure. State debt of developed countries is in fact a portfolio of issued and serviced debt securities with various durations, accessible for both residents and non-residents. In its turn, a wide number of operations can be applied to them depending on the goal, taking into account the current market situation. This is why the character of foreign debt management for developed countries is a way of regulating debt securities emission, which ensures the needs of budget financing with cheaper funding in the long term and attaining the risk and cost targets. The debt restructuring mechanisms are not used thanks to a virtual absence of non-payments on the government liabilities, excluding an early redemption of debt through the purchase of securities on the open market.

However, government debt servicing means a corresponding burden on the budget, which is a significant factor in all the processes of social and economic dynamics in the country. This is why one should understand the conditions, factors and consequences of state borrowing, their influence on the country's economy on different stages of its social and economic development clearly. Additional financial resources for the budget, which can be allocated for pressing matters of social and economic development are formed as a result of state borrowing (Kemal, 2001). Since maturity dates of the debt can be quite long, this process entails in its turn the need of working out and implementing a long-term monetary and credit policy. Depending on the quality, scale and duration of debt instruments, which were issued at different dates, a positive as well as negative influence of a state debt increase on the dynamics of social and economic processes is possible. Consequently, it is important that a state finance manager have a methodology to analyze the interrelation of state debt liabilities forming and servicing on the one hand, and factors, which set the dynamics of social and economic development, on the other.

From the point of view of the balance of interest when carrying out the budget, debt and monetary and credit policies, debt managers, aides on budget and credit policies and the country's central bank

management should have similar understanding of the goals of debt management, budget, debt and monetary and credit policies, because the different policy instruments that they use are mutually dependent.

At the same time the problems of state debt management are often caused by the absence of a strategy of prudent or safe debt management and deficiencies of poor macroeconomic regulation, as well as the absence of due cooperation between state bodies, which make decisions on state debt and control this sphere. Consequently, a further improvement of quantitative risk assessment methods based on achievements of the economic science and mathematics is becoming a hot reserve for improvement of foreign state debt management efficiency.

The current financial and foreign currency policies of the countries demand that economic development become closer while actions, including those in financial regulation and control are coordinated. Prudential efforts of the BRICS central banks aimed at stabilizing of the national banking systems and boosting the purchasing power of the national currencies can stimulate their internal and external demand. To this end, the following instruments should be applied:

a)   limits on investment positions of financial instruments;

b)   strict requirements to credits denominated in a foreign reserve currency (of the non-BRICS states) compared with the credits denominated in the national currencies of the BRICS states;

c)   more strict foreign currency risk norms compared with international standards (Morozova, 2018);

d)   introduction of tough limits on gaps in the currencies of assets and liabilities or their duration;

e)   higher capital and capital adequacy requirements compared with international standards;

f)   additional reserve requirements against possible losses on credits and equivalent assets; the use of countercyclical regulation measures.

As the world is recovering from the fallout of the global financial crisis, misbalance management is of

utmost importance for the BRICS states to ensure their financial stability.

This is why national regulators (the central banks) of BRICS keeping in mind the priority of economic development should establish the maximum allowed financial indicators for the target period:

a)   surplus (deficit) for the current and capital operations for the balance of payments;

b)   sovereign debt, internal and external, taking into account the currencies, duration and payment schedules;

c)   taxation of private capital exports and imports of speculative capital;

d)   tax and other indirect economic restrictions on foreign currency operations;

e)   forecast of a real exchange rate;

f)   correlation rate between the real exchange rate and foreign capital inflow.

To ensure stability of BRICS financial systems monitoring should be established over:

a)   global misbalances triggered by the lack of financial balance in the macroeconomic policies of governments.

b)   systemic misbalances triggered by the lack of balance in the national financial system.

Mounting systemic misbalances cause the risks of financial intermediation distortion, lower competition on the banking products markets, restricts crediting for companies, increase glitches in the payment systems. Systemic misbalances for the BRICS states are dynamics of cumulative assets and liabilities of financial intermediaries, including currency and maturity of operations, the size of own capital and its adequacy, the share of financial participation of global intermediaries on the national market and the national banking sector debt burden, including foreign debt, the volume and structure of financial products and services, concentration of credit risk and interrelation of market segments.

Cooperation of the BRICS' central banks to form a cash-free payment system via their existing National Development Bank is of a significant practical interest. A united BRICS processing network will help the national currencies expand in the framework of integration strategies. Integration of payment systems of mutual payments will have an impact on the share of the currencies in the transactions, because the use of plastic cards is considered very convenient, especially when purchasing goods and services with an immediate payment. Thus the development of financial relations on the basis of interstate bank NDB will facilitate stimulation of interaction mechanisms, which include primarily financial instruments supporting trade relations of partner states. Besides, the development of payments in the national currencies will make the transactions cheaper and faster and will eliminate additional foreign currency risks of trade counteragents.

Schedule A. Input Data to Support the Hypothesis on BRICS Countries

BRICS members	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Industrial production growth, %										
China	22,9	13,4	9,3	9,9	11,0	13,0	7,9	7,7	7,3	7,0
India	7,5	8,5	4,8	9,3	9,7	4,8	0,6	0,9	3,8	2,8
Brasil	3,2	4,9	4,3	-5,5	11,5	4,0	-0,3	3,0	-1,5	-5,0
Russia	4,8	7,4	3,5	-13,1	8,3	5,0	2,6	0,1	0,6	-3,5
South Africa	7,1	4,4	1,0	-7,2	3,0	2,5	0,1	0,9	2,0	1,7
Exports to GDP ratio, %										
China	27,73	27,87	31,75	24,13	26,84	27,17	22,04	24,72	21,66	19,95
India	8,39	9,72	14,1	13,3	13,82	16,55	18,19	18,19	16,09	13,17
Brasil	10,53	9,98	11,96	9,56	9,66	10,17	10,0	11,05	10,03	10,51
Russia	32,08	27,35	28,40	24,83	27,06	27,69	27,02	24,96	24,20	27,33
South Africa	19,49	20,71	31,24	23,42	23,56	24,38	23,92	26,90	27,11	26,82

Imports to GDP ratio, %										
China	23,29	22,26	19,12	22,57	24,91	24,91	22,02	21,80	17,45	14,02
India	12,45	16,30	24,41	21,69	21,92	26,59	25,86	27,43	23,09	19,80
Brasil	7,13	6,63	10,46	7,98	8,69	8,98	9,20	10,94	10,21	9,68
Russia	17,32	17,19	18,18	15,70	16,81	17,18	17,18	14,91	14,97	15,96
South Africa	20,29	21,52	32,87	23,24	22,52	23,79	26,25	29,05	28,99	27,36
State debt to GDP ratio, %										
China	16,2	19,6	17	17,7	43,5	38,5	26,1	22,4	14,9	16,7
India	75,4	72,7	73,1	69,4	50,6	50,5	51,7	51,4	51,7	51,7
Brasil	66,7	65,2	63,6	68,1	54,7	54,2	58,8	56,7	58,9	67,3
Russia	9	8,5	7,9	11	7,9	8,3	8	8,1	10,4	13,5
South Africa	31,4	27,4	26,8	30,9	33,4	38,6	42,3	46,1	44,8	45,4

Schedule B. Analytical Calculations the Hypothesis on BRICS Countries

China		**t Stat**	**P-value**
Determination coefficient, R^2	0,668164413		
Value of Fisher function, F	1,208124336		
Free variable β_{0k}	7,834861066	0,178921	0,869401
Industrial production growth, β_{1k}	-0,31400902	-0,1343	0,901668
Exports to GDP ratio, β_{2k}	-174,803939	-0,84951	0,458014
Imports to GDP ratio, β_{3k}	280,9447469	1,616475	0,204412
Inflation, β_{4k}	2,986519786	0,906933	0,431302
Unemployment, β_{5k}	-1,05764136	-0,22225	0,838393
Brasil			
Determination coefficient, R^2	0,942438604		
Value of Fisher function, F	9,823652698		
Free variable β_{0k}	32,56847487	2,934449	0,060782
Industrial production growth, β_{1k}	-0,641014	-3,85949	0,030743
Exports to GDP ratio, β_{2k}	-116,002535	-0,43522	0,692813
Imports to GDP ratio, β_{3k}	151,0151572	0,721735	0,522624
Inflation, β_{4k}	0,416278361	0,825179	0,469765
Unemployment, β_{5k}	3,736139112	2,62059	0,078961
India			
Determination coefficient, R^2	0,669187412		
Value of Fisher function, F	1,213715747		
Free variable β_{0k}	100,3953009	2,3771	0,097874
Industrial production growth, β_{1k}	-0,86454412	-0,31035	0,776607
Exports to GDP ratio, β_{2k}	-760,332555	-1,41592	0,251764
Imports to GDP ratio, β_{3k}	337,9266967	1,141273	0,336606

Inflation, β_{4k}	1,760264001	0,522529	0,637435
Unemployment, β_{5k}	-2,19631399	-0,45149	0,682276
Russia			
Determination coefficient, R^2	0,781894359		
Value of Fisher function, F	2,15096048		
Free variable β_{0k}	11,84568606	0,791139	0,486641
Industrial production growth, β_{1k}	-0,11861556	-0,77278	0,495953
Exports to GDP ratio, β_{2k}	77,77752734	0,688315	0,540704
Imports to GDP ratio, β_{3k}	-146,391872	-1,13185	0,339993
Inflation, β_{4k}	0,236069222	0,961556	0,407206
Unemployment, β_{5k}	-0,19114421	-0,32114	0,769178
South Africa			
Determination coefficient, R^2	0,945705084		
Value of Fisher function, F	10,45075835		
Free variable β_{0k}	13,80872409	0,158582	0,884072
Industrial production growth, β_{1k}	-0,10614898	-0,26625	0,807299
Exports to GDP ratio, β_{2k}	-264,287042	-2,11563	0,124699
Imports to GDP ratio, β_{3k}	350,7315258	3,355887	0,043867
Inflation, β_{4k}	-3,20500191	-1,36368	0,265977
Unemployment, β_{5k}	0,795523297	0,205735	0,850168

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