Bank of Russia

The Central Bank of the Russian Federation

Influence of financial sector development on economic growth and its volatility

Analytical Note No. 8 / July 2017

A developed financial sector can contribute to the long-term potential for economic growth but, as the experience of the 2007–2009 crisis showed, if the financial sector grows faster than the real sector, there are higher risks of bubbles emerging and greater vulnerability to shocks.

The objective of this study is to determine the optimal level of financing sector development for the Russian economy, where we still have potential for growth or, on the contrary, are close to the limit for safe development.

The results of the study prove that the Russian market will be approaching the optimal development level in the long term; the maximum potential lies in the corporate bonds and real sector crediting segments. Well-balanced development of all segments will mitigate issue volatility and raise somewhat the potential growth level.

Structural changes in the financial sector might contribute to the long-term potential for economic growth and its sustainability. A more developed financial intermediation sector can be more effective in transforming savings into investments, re-distributing risks among economic agents and facilitating exchange of economic information.

Nevertheless, as the 2007–2009 global crisis showed, an excessive buildup of the financial sector (significantly ahead of the real economy's development) can also pose certain threats, such as emergence of 'bubbles', systematic underestimation of risks, increased fragility of the financial system and its vulnerability to shocks. Financial instability stemming from the above has a negative effect on economic activity.

Considerable empirical confirmation of the non-linear effect of financial development on economic growth has been obtained in recent years (see Arcant et al., 2015; Law, Singh, 2014; Cecchetti, Kharroubi, 2012; Sahay et al., 2015 etc.). For instance, according to various studies, the threshold level for the ratio of private sector credits to GDP beyond which negative macroeconomic effects appear is within 90–100%.

In continuing the examination of the non-linear effect of financial development on macroeconomic dynamics, we have applied the methodology developed by other authors not to a single but to several segments of the financial system at the same time. We examined three segments of the private sector debt market: the domestic bank credit market, domestic corporate bond market and foreign corporate debt market. Based on econometric models of panel data for 63 countries by five-year periods from 1980 to 2014, we estimated the threshold levels of those financial market segments beyond which their buildup would have a negative impact on key macroeconomic indicators. Optimized macroeconomic indicators included, along with long-term GDP growth rates, the volatility of those rates. We thus estimated the parameters of the private sector debt market at which a reasonable trade-off is achieved between the goals of boosting economic growth and ensuring its stability.

The predictive calculations have shown that, in the long run (through 2035), Russia has the potential to reach an optimal combination of financial market parameters and this potential will be realized subject to favourable institutional changes, maintenance of control over inflation and further diversification of the economy.

The greatest positive macroeconomic effect is expected from expansion of the domestic corporate bond segment. Increasing depth of this market since the latest pre-crisis (2014) level of 6% of GDP to an optimal 22% of GDP secures an additional +0.5 p.p. of long-term GDP growth rate and a 0.1 p.p. reduction in GDP growth rate volatility. According to our forecasts, in certain macroeconomic scenarios, the growth potential of the domestic corporate bond market can be realized within the next ten years. This will require maintaining the current positive macroeconomic trends (inflation control, progressive growth of welfare) and progress in the development of financial institutions (in this case, approximated by that of the financial freedom index).

According to our estimates, Russia has a remarkable potential for expanding the domestic private sector credit market (from 59% of GDP just before the latest crisis to an optimal 96%). Since Russia is still substantially far from the optimum, such expansion will be safe in terms of risks for macroeconomic stability (of course, unless it becomes 'explosive'). Growing availability of credits on the domestic market will help smooth of the issue dynamics (a1.3 p.p. decline in GDP volatility) and somewhat escalate long-term GDP growth rates (by 0.3 p.p.). The weaker stimulating effect of bank credits compared to corporate bonds on long-term economic growth can be explained by the shorter terms of such credits. As a consequence, bank credits have less potential for use as instruments for financing capital investments.

Increasing depth of the Russian credit market is expected to continue in the forecast period, though it is unlikely to reach its optimal level through 2035. One possible constraint is a moderate level of concentration in the Russian banking sector. This limits the capacity of Russian banks to maintain a high leverage level, use economies of scale and capitalize on attracting funds from minority investors.

As for the foreign corporate debt, the current situation is close to optimal. Raising the foreign private debt indicator from the latest pre-crisis level of 12% of GDP to the optimal 15% could secure additional abatement of economic growth rate volatility by 0.3 p.p. (the positive effect from increased diversification of companies' sources for raising funds). Yet the long-term economic growth rates themselves will go down by 0.2 p.p. (the negative effect from loss of resident's income due to accelerated increase in foreign debt interest repayment). Overall, according to our estimates, the Russian economy has maximised the advantages of foreign corporate borrowings and a further significant buildup of such borrowings poses risks for macroeconomic stability. Nevertheless, long-term Russian economic development scenarios project growth of the foreign debt load above the optimal level, which might result in a decline in economic growth dynamics and sustainability. In order to avoid this, the state might have to exert efforts to restrain the escalation of foreign debt (by creating more favourable conditions for domestic corporate borrowings).

If the segments of the private sector debt market develop to their optimal levels, the long-term growth rates of the Russian economy may go up by 0.6 p.p., while the volatility of those rates might go down by 1.7 p.p. (Table 1).

Table 1 – Optimal and actual parameters of financial sector development

	Average, (2010-2014)	Latest pre-crisis value (2014)	Optimal value (model)	Effect from financial development (optimal value minus the latest pre-crisis value)	
				GDP growth rates, p.p.	GDP growth rates volatility, p.p.
Private sector bank credits, % of GDP	49.1	58.9	95.8	0.3	–1.3
Domestic corporate bonds, % of GDP	6.3	5.9	22.0	0.5	–0.1
Foreign corporate debt, % of GDP	12.9	12.2	14.9	–0.2	–0.3

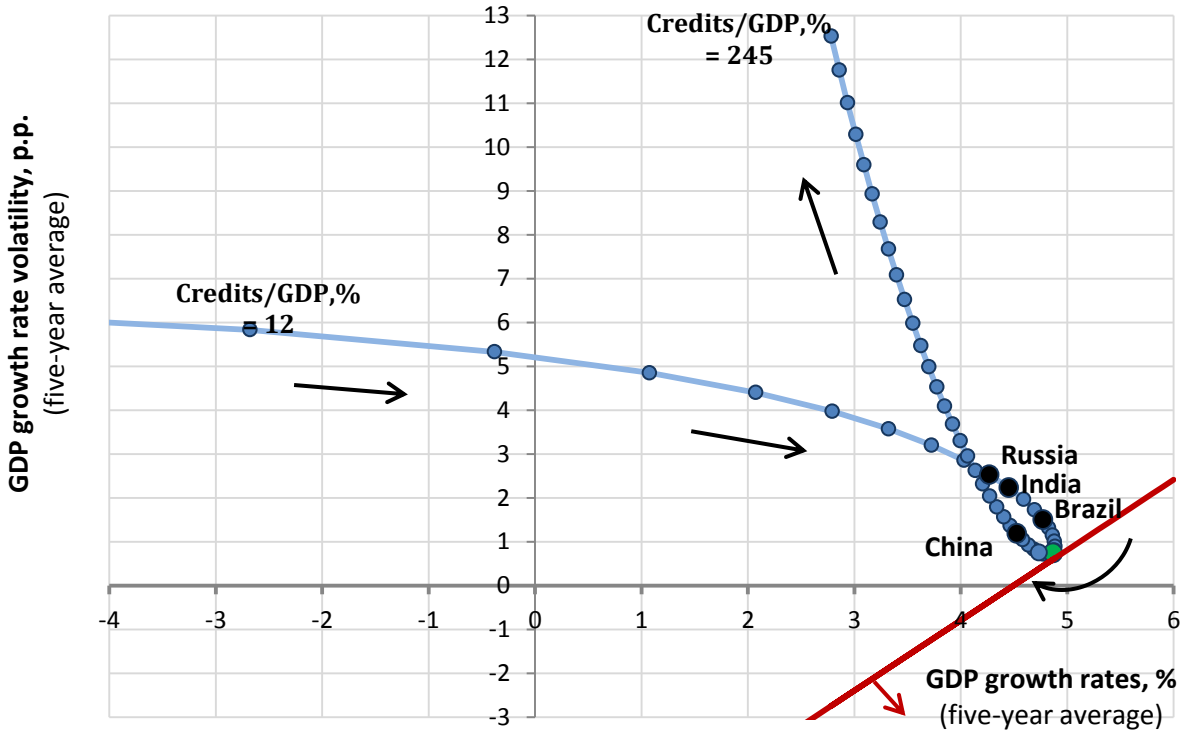
Note: the estimates disregard the potential effects from displacement / complementation between various financial market segments

What is the optimum for the financial market

We reckon that the optimum point for each of the financial market segments under consideration is a segment depth value at which the maximum possible value is achieved for the 'targeted regulator's function'. The latter is calculated as the difference between normalised model values of GDP growth rates and GDP growth rate volatility (those values are normalised by standard deviations on a sampling of countries).

Other BRIC countries outstrip Russia in the depth of their domestic private sector bank credit market. That said, India and Brazil have not reached the optimum point yet but are closer to it than Russia, while China has already passed that point.

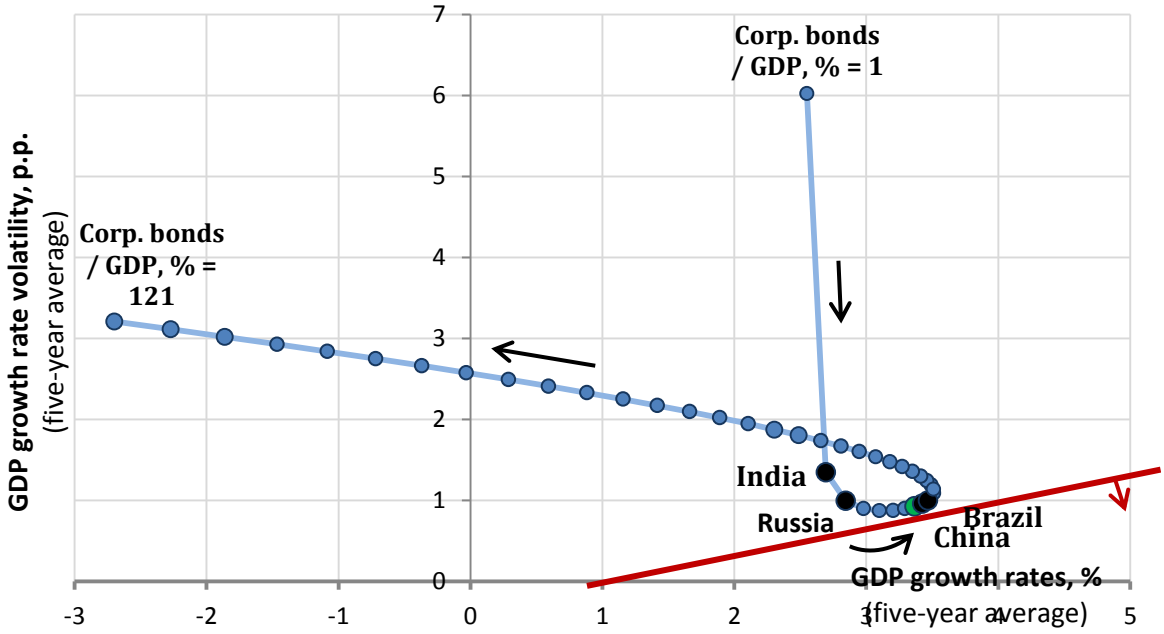
Figure 1 – Trade-off between economic growth rates and their volatility depending on credit market depth



Source: calculations by the Macroeconomic Analysis and Short-Term Forecasting Centre

Among the BRIC countries, India is behind Russia in terms of the development depth of the domestic corporate bonds market. Brazil and China are ahead of Russia and are approaching the optimal level.

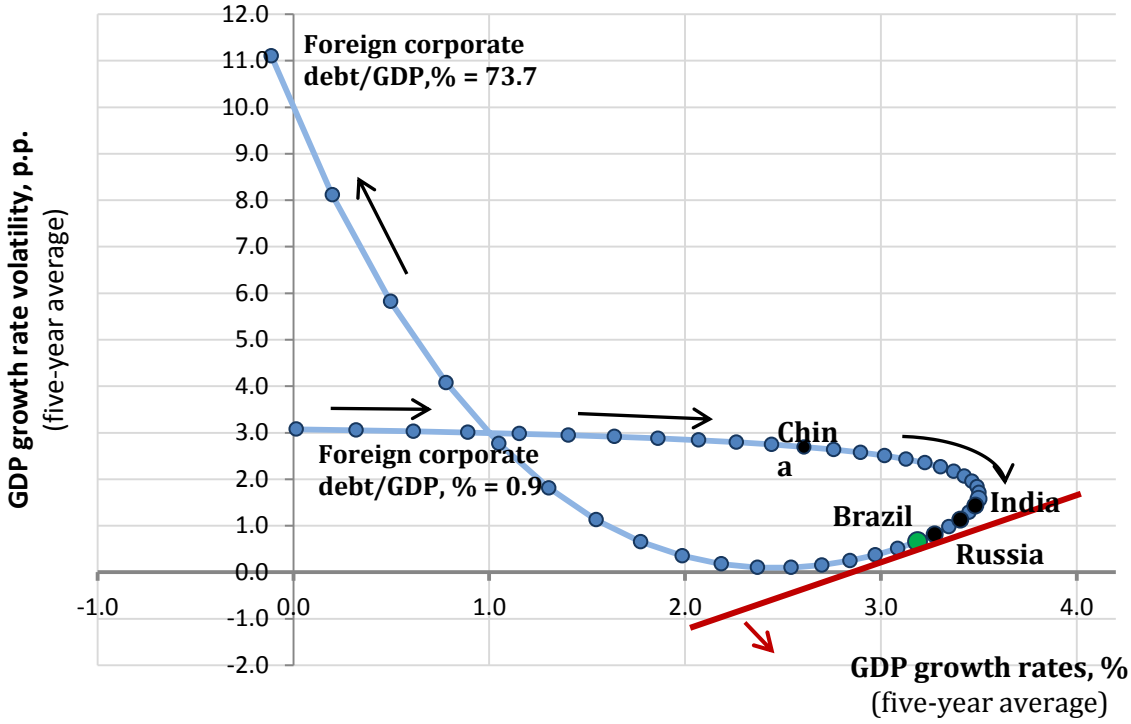
Figure 2 – Trade-off between economic growth rates and their volatility depending on domestic corporate bond market depth



Source: calculations by the Macroeconomic Analysis and Short-Term Forecasting Centre

As for the foreign private debt vs GDP ratio, Russia is ahead of the other BRIC countries and closer to the optimum point.

Figure 3 – Trade-off between economic growth rates and their volatility depending on the size of the foreign corporate debt



Source: calculations by the Macroeconomic Analysis and Short-Term Forecasting Centre

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