

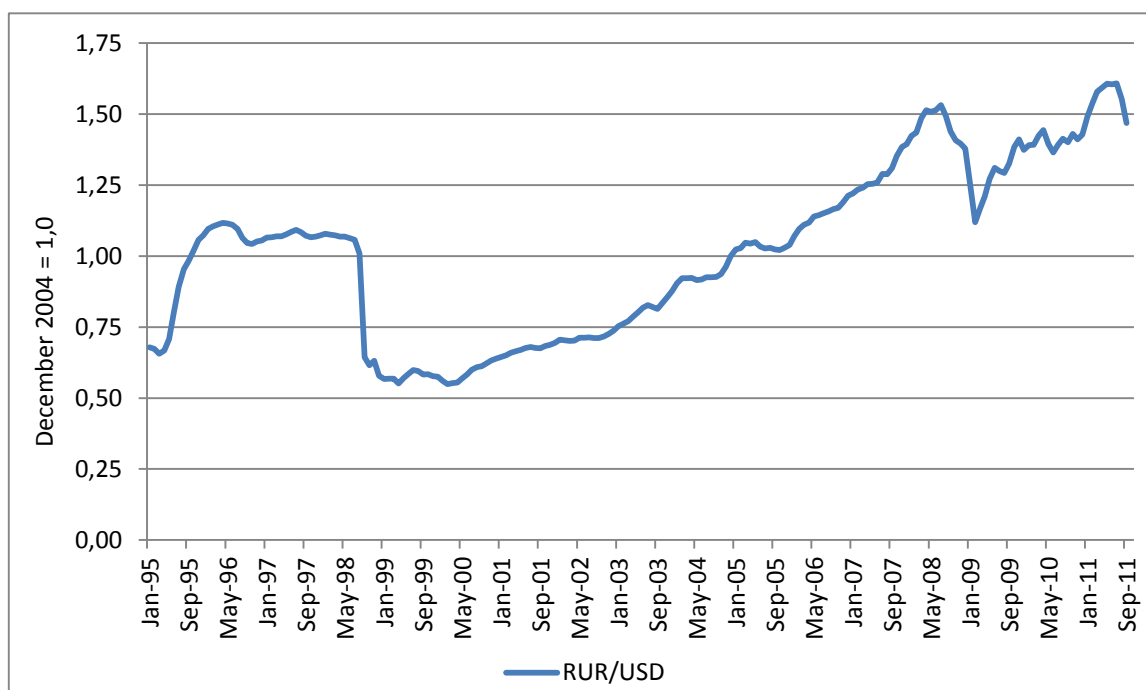
SOME QUANTITATIVE ESTIMATES OF THE INFLUENCE OF INSTITUTIONAL CONSTRAINTS ON ECONOMIC GROWTH IN RUSSIA

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In the 2000s, the Russian economy was steadily demonstrating an impressively high rate of growth. Economic growth coupled with the ruble's strengthening and the rising prices of Russia's export goods resulted in a significantly increased (to 2.4%) share of this country's GDP in gross world product (GWP). Russia's GDP per capita (based on purchasing power parity - PPP) rose from \$6,800 to \$15,800. Over the decade of 1998-2008, real GDP growth amounted to 94%, investments climbed by more than 200%, and real households' income – by 137%. The population's ruble-denominated banking deposits increased over the period of 2000-2009 by 21 times in spite of the fact that the real interest rates were persistently negative.

The rapid economic growth of the 2000s was produced by a combination of several factors. *Firstly*, the Russian economy, having overcome the consequences of the transformation-induced slump of the 1990s, managed to take full advantage of the fourfold depreciation of the ruble and the substantial resources associated with idle production capacities. The availability of idle capacities, employment growth and the ruble's depreciation endowed the national economy with competitive advantages in terms of the level of prices, serving as the principle factors that triggered economic growth in the early 2000s.

**Chart 1 –Real Ruble/USD Rate (Adjusted for Consumer Inflation in the Russia and USA),
December 2004 = 1**



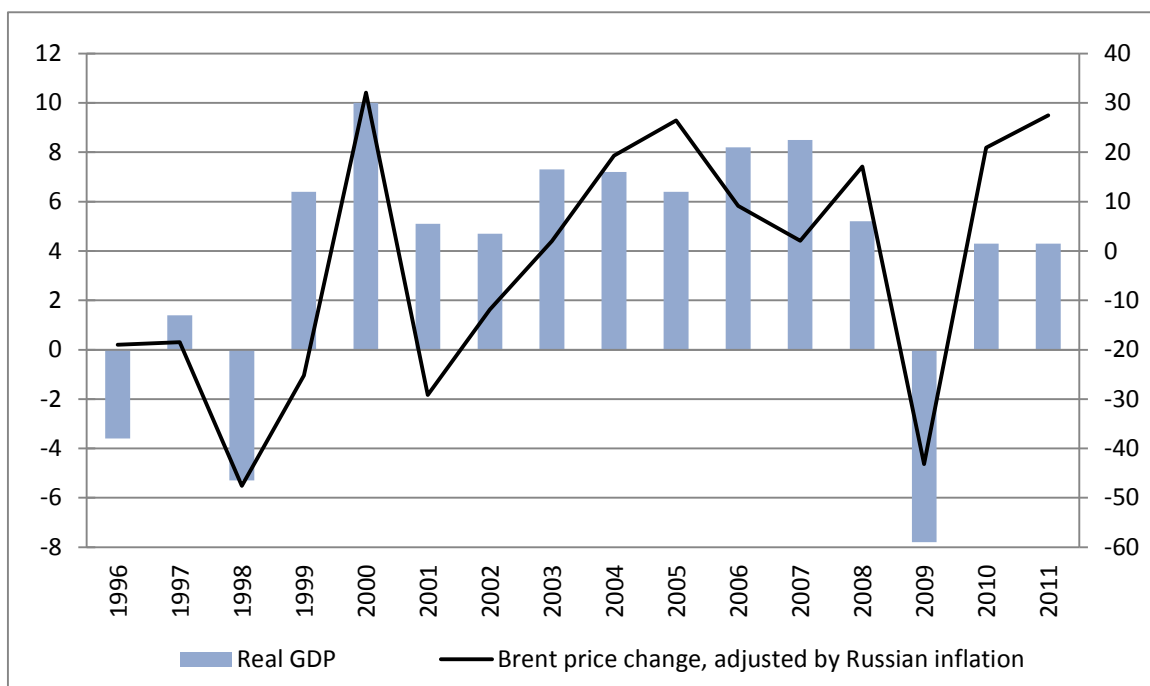
Source: Central Bank of RF; calculations by the IEP's Center for Structural Research

This chart demonstrates that the ruble/USD real rate had reached the 1998 level already by early 2005. The emergence of the euro as a new world currency and the computations of the bi-

currency basket had added little to the overall picture. In addition it should be noted that the ruble's depreciation in late 2008 – early 2009 still maintained its real exchange rate index at a level higher than its historic highs of the 1990s, thus depriving Russia's national economy from any tangible advantages in terms of prices.

Secondly, economic growth was being boosted by the increasing revenues generated by exports of natural resources against the backdrop of steadily rising prices of oil and other raw materials. It so happened that, by the moment when the potential created by the ruble's depreciation and the availability of idle capacities, economic growth had begun to be sustained by the stable upward trend displayed by prices of raw materials. The growth rate of domestic demand was so significant that, in addition to consumption, it also propped up investments – right up to 2009 the rate of real capital investment growth had never dropped below 10%. The capital investment sphere was 'overheated' even more than the consumer market – the investment deflator's value was above that of the personal consumption expenditure (PCE) deflator. As a result, the economic growth produced by the dramatically improved external situation occurred in conjunction with 'overheated' consumer and investment markets and increasing prices.

Chart 2 – Growth rate as % to the previous year: real GDP (left-hand scale) and average annual Brent price adjusted by the Russian inflation (right-hand scale)

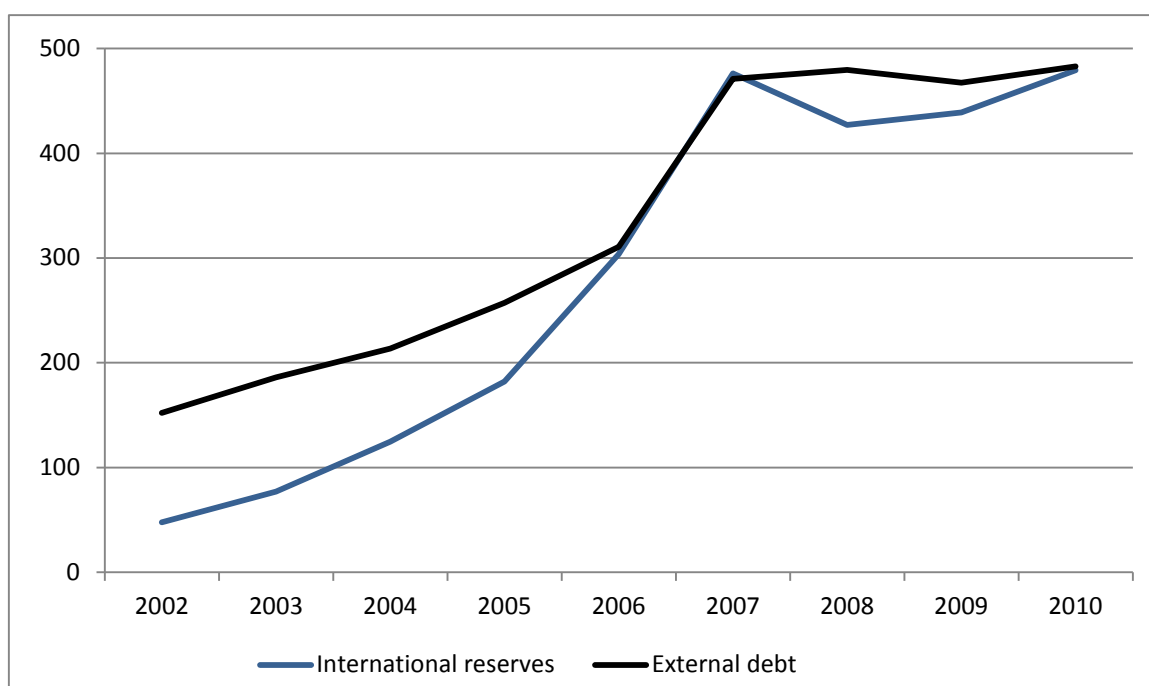


Source: Rosstat; calculations by the IEP's Center for Structural Research

Thirdly, economic growth was further boosted by the substantial foreign capital inflow. The rising prices of raw materials resulted in a fundamental improvement of all the key macroeconomic indicators that determine a country's systemic risks. These indicators include not only the rate of growth of the real level of macroindicators, but also the balance of payments and external debt. As a result, international capital markets opened to Russian corporations and banks, and the latter could take advantage of the rising international sovereign and private credit ratings in order to attract impressive volumes of external borrowings. An additional factor contributing to foreign capital inflow into Russia (that inflow being, however, short-term and in the form of portfolio investments) was stable trend of ruble appreciation.

However, it cannot be confidently argued that the improving macroeconomic indices and a very substantial positive balance of trade were the only factors that opened up free access to the world capital market for Russian companies and banks. As seen from Chart 3 below, the volume of Russia's aggregate external debt (government and private) was nearly identical to that of her international reserves (the country's gold and foreign currency reserves (GFCR) and Stabilization Fund). Remarkably, the highest approximation of these two indices could be observed during periods of external private debt's rapid growth, which confirms the hypothesis that government reserves serve as *hedge for private debt*. In this connection it should be remembered that a substantial part of Russia's external private debt (50-60%) was made up by the sums owed by companies and banks with state participation. In other words, international creditors effectively pooled government and private external debt on the assumption that government international reserves could be regarded as a liquid collateral that reliably secured their loans.

Chart 3 – External Debt and International Reserves of RF, end of year, bn USD



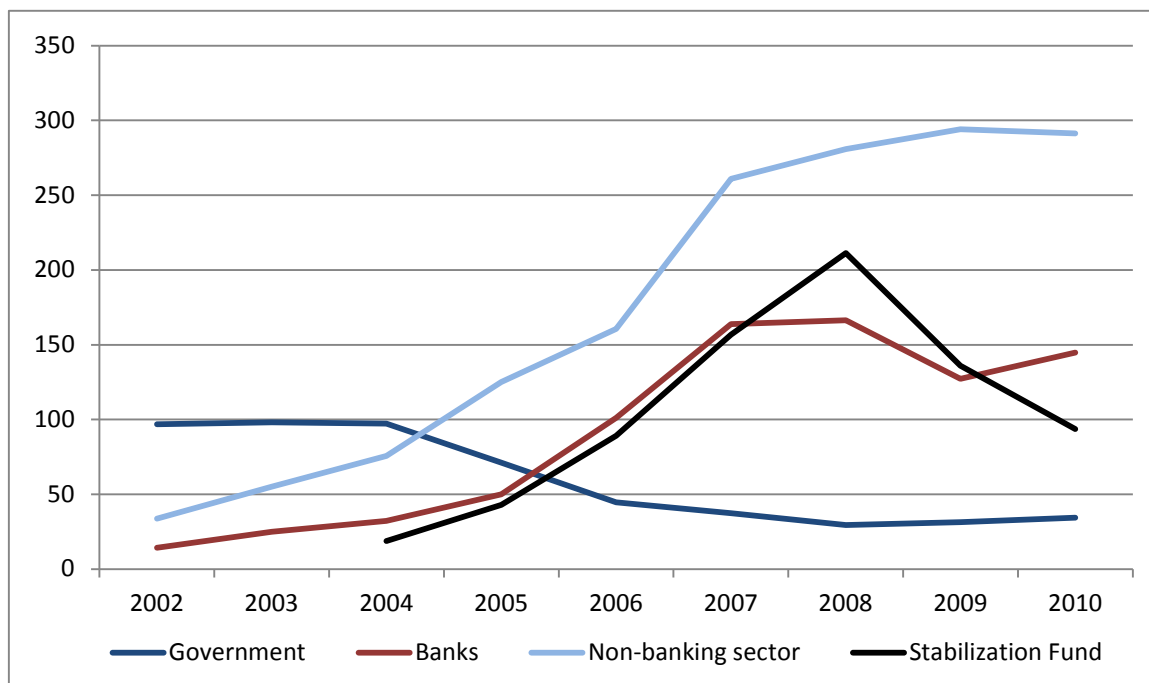
Source: Central Bank of RF, calculations by the IEP's Center for Structural Research

As was demonstrated by the events of 2008-2009, foreign creditors were right in this respect. The Russian government indeed provided the private sector (and first of all the banking sector) with impressive financial resources. However, the demand for foreign currencies was sustained not only by the need to service Russia's external private debt, but also by depreciation of the ruble. As a result, currency reserves during the crisis period shrank more than the volume of external debt. In 2008-2009, the non-financial sector restructured external debt, whereas the banking sector redeemed approximately 25% of its external debt. Thus, the difference between the volumes of international reserves and external debt in 2008-2009 was determined by the level of domestic demand for foreign currency during the period of the ruble's depreciation.

In this connection it is necessary to point out that Russia represents a rather rare exception in the world's economic history as a country that actually managed to liquidate its government debt by improving terms of trade (instead of writing off debts and altering its budgetary policy). The State attempted to sterilize the large-scale inflow of petrodollars by means of creating a stabilization fund

(replenished through levying additional taxes on exports of raw materials). However, the shrinkage of government external debt and the growth of the Stabilization Fund (to be placed abroad) was compensated for by a steady increase in the indebtedness of the banking and non-financial sectors.

Chart 4 – Institutional External Debt and the Stabilization Fund’s Volume (Later, the Aggregate Volume of the Reserve Fund and National Welfare Fund), bn. USD



Source: Central Bank of RF, calculations by the IEP's Center for Structural Research

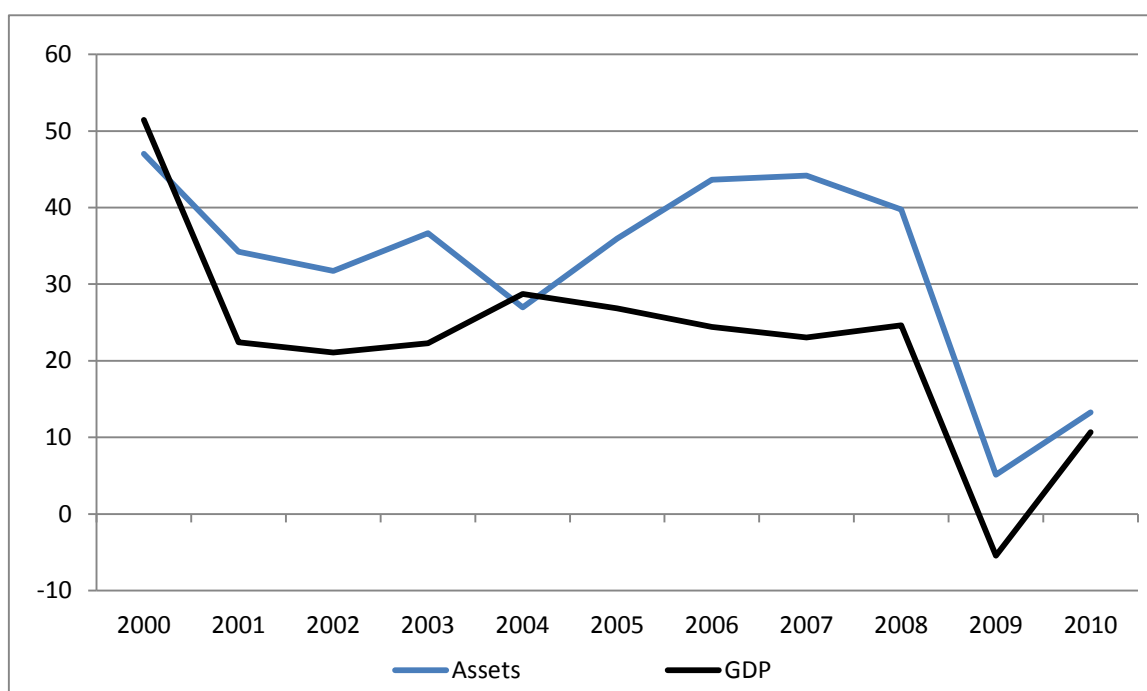
Fourthly, economic growth was sustained by intensified banks' crediting of the non-financial sector. The loans issued by banks, together with the proceeds from exports of raw materials, conduced to domestic demand's expansion. Thus, while in 2004-2005 the loans obtained from banks were responsible for 20% of domestic demand's expansion, later on, in 2007-2008, that figure rose to 34%. From the year 2005 onwards, the volume of banks' loans to the non-financial sector exceeded that of the businesses and population deposits. On the whole over the past decade, banks' loans to the non-financial sector rose from 17% to 45% of GDP.

As seen from Chart 5, the banking system's growth rate in 2006-2008 was noticeably above that of nominal GDP. However, that period also witnessed the following developments:

- Loans to deposit ratio of the non-financial sector amounted to 120%;
- The external private debt doubled (indebtedness to the banking system rose fourfold – from \$50bn to \$198bn);
- The banking system experienced three liquidity crises;
- Expanding demand objectively resulted in growth of imports and inflation;
- The share of investment in securities dropped from 15% to 6% of banking aggregate assets.

The aforesaid factors determined the emergence of some structural problems in the financial sector that significantly boosted the effect of the crisis phenomena in the Russian economy over the period of 2008-2009.

Chart 5 – Growth Rates of Nominal GDP and the Banking System’s Assets, as a Percentage of the Previous Year



Source: Central Bank of RF, calculations by the IEP's Center for Structural Research

Those same factors also determined the specificity and quality of economic growth in the 2000s. Against the backdrop of a sufficiently high growth rate displayed by the economy – 6.9% per annum on the average in 2000-2008 – the average rate of industrial production growth amounted to 5.7%, while that of real disposable incomes was on the average 10.8% per annum, or nearly twice as high as the rate of industrial growth. As a result, in 2005-2007 *the per annum growth rate of domestic demand in real terms was also nearly twice as high as that of domestic supplies* – 11.3% against 6.3%. This disproportion triggered rapid growth of prices and expansion of imports, which largely compensated for the rise in domestic demand. Growing demand coupled with the ruble’s appreciation promoted an inflow of short-term capital (within the structure of foreign investments, foreign direct investment (FDI) took up on the average only 24%), thus speeding up the ‘overheating’ mode.

In fact, over the past decade Russia developed a model of economic growth based on domestic demand expansion. It should be noted that this type of growth is rather widespread across the globe. However, the key issue that arises in this connection has to do with the efficiency of that type of growth model. It can be asked just how effectively this kind of economic growth promotes domestic output, ensures stability against external shocks, or is it fraught with financial instability, and so on. The last decade’s experience demonstrates that in Russia this growth model turned out to be unstable, conducive to continuation of inflationary pressure and increase in imports, and was very sensitive to external shocks. All this can be explained by the presence of institutional factors that determined the specific response of Russian enterprises to the growing domestic demand, which will be demonstrated later.

1. BASIC FEATURES OF RUSSIA'S MODEL OF ECONOMIC GROWTH – THE STRUCTURE OF COVERAGE OF DOMESTIC DEMAND EXPANSION

Domestic demand is defined as the value of goods and services consumed by a national economy's residents for consumption and accumulation over a given period of time. Domestic demand estimates can be derived as the aggregate value of produced goods and services less the value of those goods and services that have not been consumed in the domestic economy and instead have been exported abroad, plus the value of goods and services that have been imported and consumed in the domestic economy. In other words, domestic demand in year t [$D(t)$] is equal to gross domestic product [$GDP(t)$] less the value of goods and services produced for exports [$Exp(t)$], plus the value of imported goods and services [$Imp(t)$]:

$$D(t) = GDP(t) - Exp(t) + Imp(t)$$

Total (nominal) demand growth $dD(t+1)$ in year $(t+1)$ will be:

$$dD(t+1) = D(t+1) - D(t)$$

Nominal domestic demand growth may be determined by the following two factors:

- 1) the real growth in the physical volume of demand;
- 2) the change in the prices of goods and services absorbing demand.

In theory, only one of these two factors can make its effect be felt over a given period of time, for example the growth of prices alongside the unchanged physical volumes of production and consumption of goods and services. However, in actual practice one usually observes the presence of both these factors – changes of both the physical volumes and prices.

In this connection, it is very important to calculate the ratio describing the combined effect of both factors in response to changes in demand, or to break up the structure of nominal demand growth absorption into its composite elements. An analysis of its structure will essentially provide the answer to the questions as to the quality of the ongoing macroeconomic changes: what has been the economy's response to increasing effective demand? To what extent nominal demand expansion conduces to the growth of the volume of goods and services in real terms, and when does the economic system respond to that phenomenon only by rise in prices? The answer to that question not only describes the efficiency of the existing model of the economy as a whole, but also plays an important role in elaborating adequate quantitative estimates when developing economic strategy measures.

In order to break up demand growth into its composite elements, the following initial formula is applied:

$$D(t) = P(t) * Q(t), \text{ where}$$

$P(t)$ – level of prices of goods and services in year t ;

$Q(t)$ – physical volume of goods and services in year t .

Consequently, $dP(t+1)$ and $dQ(t+1)$ represent change in prices and change in the physical volume of goods and services in year $t+1$.

With the help of these symbols, the formula for calculating demand growth can be represented as follows:

$$\begin{aligned} dD(t+1) &= P(t+1) * Q(t+1) - P(t) * Q(t) = \\ &= (P(t) + dP(t+1)) * (Q(t) + dQ(t+1)) - P(t) * Q(t) \end{aligned}$$

Assuming that we compare data for two consecutive years – that is, demand growth is analyzed for year t+1 that follows the baseline year t, for simplicity's sake the years' numbers are omitted from the following formulae:

$$dD = (P + dP) * (Q + dQ) - P * Q = P * dQ + dP * Q + dP * dQ$$

Thus, total nominal demand growth can be represented as the sum of the following three components:

- the first element ($P * dQ$) reflects the absorption of demand growth by changes in the physical volume (dQ) of consumed goods and services, prices (P) remaining constant at the baseline year's level. In other words, if prices remained unchanged, and all demand in a given year were to be absorbed by the existing volume of goods and services priced at the baseline year's level, demand growth would have been absorbed only by their increasing physical volume;
- the second element ($dP * Q$) reflects demand growth absorption by changes in prices (dP), physical volume (Q) remaining constant at the baseline year's level. In other words, if the physical volume of consumed goods and services a given year were to remain unchanged, (nominal) demand growth would have been fully absorbed by changes in prices;
- and finally, the third element ($dP * dQ$) reflects demand growth absorption due to the simultaneous influence of both factors – changed prices (dP) and changed physical volume (dQ). In other words, in addition to the changed prices of the initial volume of goods and services (incorporated in the second element of the formula), a similar change in the prices of the goods and services that constitute the physical volume increment is taken into account.

This arbitrary breakup of nominal demand growth into three elements – growth produced 'only' by the increased physical volume; growth produced 'only' by the increased prices; and growth produced by the 'cumulative effect' of a simultaneous increase in prices and the physical volume – results in strictly correct calculations.

At the same time, in accordance with the purposes of analysis, in order to provide an answer to the question as to how the economy responds to increased effective demand, it is necessary to present total nominal demand growth as a sum of two addends – the result of the changed physical volume of consumed goods and services and the result of changes in their prices.

For this purpose, the value of the third addend in the aforesaid formula (describing the aggregate effect of growth of prices and growth of physical volume) is distributed proportionally between the first two addends (growth produced "only' by increased prices and growth produced 'only' by the physical volume).

In particular, $(P * dQ)_{corr}$, full effect of a change in the physical volume – that is, adjusted by the proportional share of the cumulative effect of changes in prices and physical volume – can be calculated in compliance with the following formula:

$$\begin{aligned} (P * dQ)_{corr} &= P * dQ + (dP * dQ) * (P * dQ / (P * dQ + dP * Q)) = \\ &= P * dQ * (1 + (dP * dQ) / (P * dQ + dP * Q)) \end{aligned}$$

Similarly, $(dP * Q)_{corr}$, the full effect of a change in prices – that is, adjusted by the proportional share of the cumulative effect of changes in prices and physical volume – can be estimated as follows:

$$\begin{aligned} (dP * Q)_{corr} &= dP * Q + (dP * dQ) * (dP * Q / (P * dQ + dP * Q)) = \\ &= dP * Q * (1 + (dP * dQ) / (P * dQ + dP * Q)) \end{aligned}$$

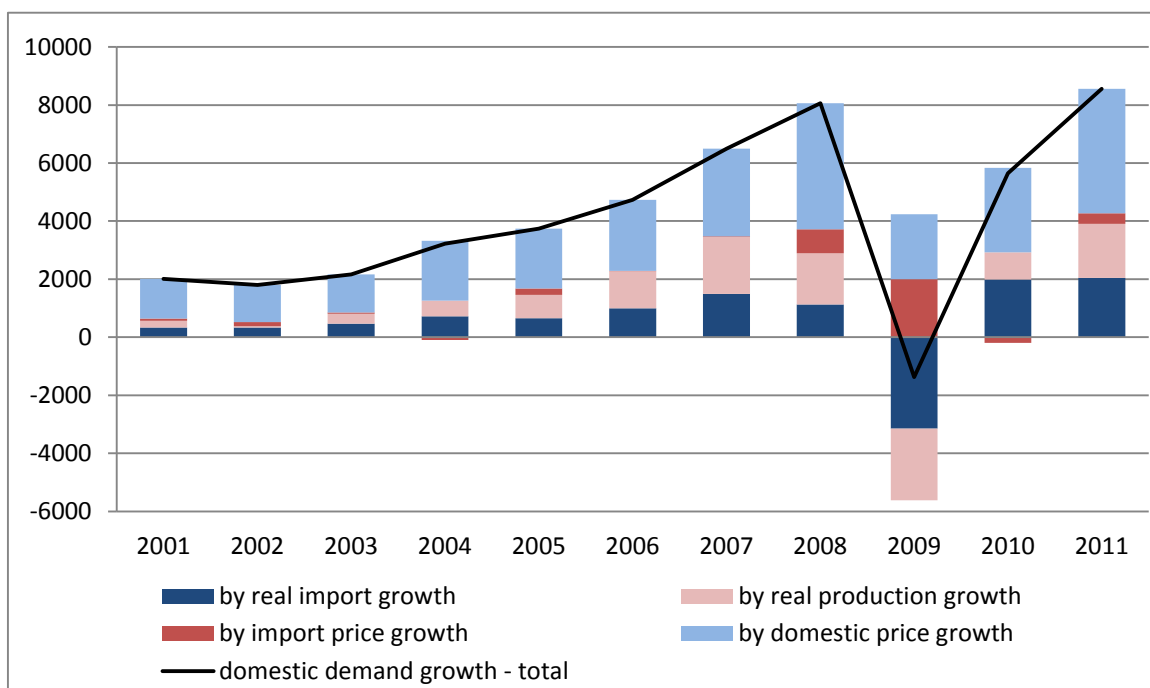
As a result, total demand growth can be presented as a sum of two factors:

$$\begin{aligned}
 dD &= (P * dQ)_{corr} + (dP * Q)_{corr} = \\
 &= P * dQ * (1 + (dP * dQ) / (P * dQ + dP * Q)) + \\
 &+ dP * Q * (1 + (dP * dQ) / (P * dQ + dP * Q))
 \end{aligned}$$

The first addend in this formula is a full estimate of demand growth produced by change in real volume, the second one is a full estimate of demand growth produced by change in prices.

In its turn, growth of demand for imports and growth of demand for domestically produced products can also be broken up into factors in a similar manner (the factors being real volume and prices). The results of calculations based on these formulae are shown in Chart 6 below (the data for 2011 are preliminary).

Chart 6 – Domestic Demand Growth Absorption in Russia, bn rubles

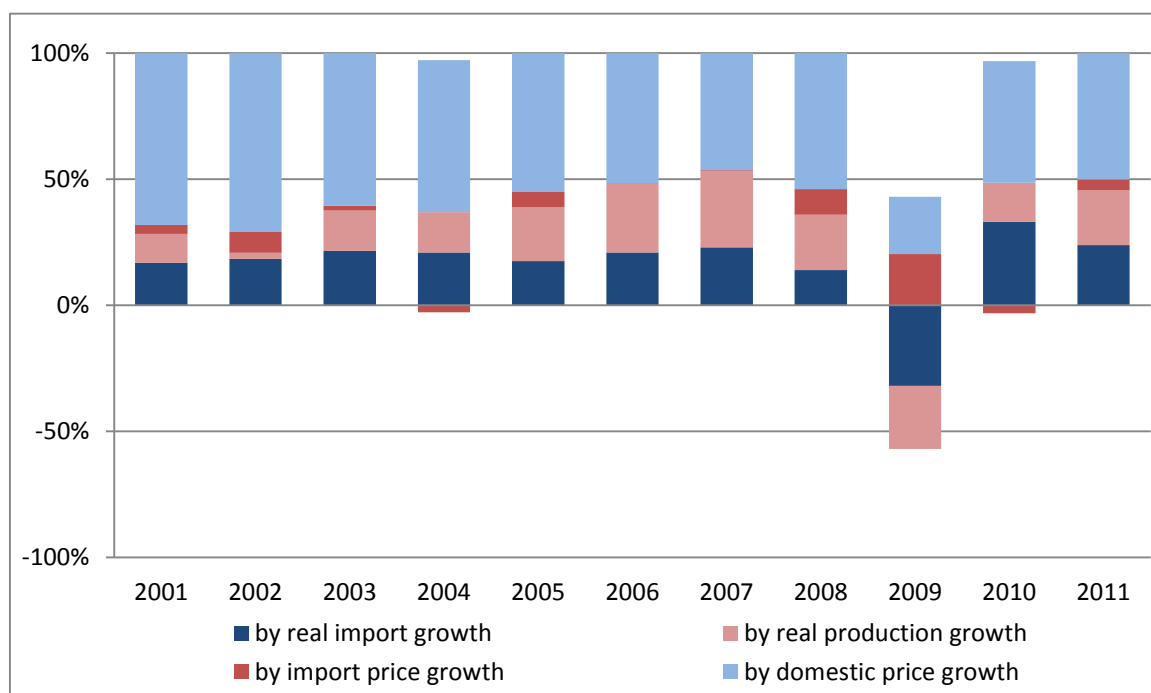


Source: Rosstat; calculations by the IEP's Center for Structural Research

In the crisis year 2009, Russia's nominal effective demand dropped by a total of Rb 1.4 trillion. In this connection, physical volume shrinkage in constant prices amounted to Rb 5.6 trillion (including decline by Rb 2.5 trillion in demand absorption by domestic production, and decline by Rb 3.1 trillion in absorption by imports). Growth of prices, on the contrary, caused an increase in demand absorption by Rb 4.2 trillion (including for domestic goods and services by Rb 2.2 trillion, and for imported ones – by Rb 2.0 trillion).

The structure of demand growth can also be presented relative to the total absolute change in demand (100%), as shown in Chart 7 below (the data for 2011 are preliminary).

Chart 7 – Structure of Domestic Demand Growth Absorption in Russia, %



Source: Rosstat; calculations by the IEP's Center for Structural Research

These calculations testify to the fact that in the pre-crisis period more than half of Russia's total per annum domestic demand growth was produced by rising prices of domestic goods and services. The share of that factor had a downward trend – from approximately 70% in the early 2000s to approximately 50% by 2007-2008.

In 2009, a dramatic leap of the mean per annum exchange rate triggered, on the one hand, a decline in real terms, of imports of goods and services, while on the other an extraordinary rise of their domestic prices. As a result, the share of import absorption by the rising prices of imports in nominal demand growth also surged – to above 20%. Simultaneously, the share of growth absorption by shrinkage of the physical volume of imports rose to an unprecedented level – 32%.

In 2010, total nominal demand growth amounted to Rb 5.6 trillion. At the same time, in contrast to the previous year's situation, there occurred a certain strengthening of the ruble. This was one of the reasons why the share of imports in the structure of domestic demand growth absorption by physical volume rose to Rb 2.0 trillion (33% of absolute change in growth) – significantly higher than that of the domestic production component, which amounted to Rb 0.9 trillion (15.5%). In this connection, the decline in domestic prices of imported goods and services resulted in a drop of effective demand growth by Rb 0.2 trillion (-3.2%), while the rising prices of domestically produced products, on the contrary, resulted in a compensation of the growth of prices of domestic goods and services by effective demand growth in the amount of Rb 2.9 trillion (or 48.3%).

In 2011, the share of growth in prices of domestically produced goods and services once again increased and, according to preliminary estimates, it will exceed 55% of the overall effective demand absorption structure.

The extent to which Russian enterprises are capable to respond to rising demand by production growth represents a key component in the estimation of the effectiveness of the growth model based on domestic demand expansion. Our analysis has demonstrated that, over the past decade, approximately 53-57 rubles out of every 100 rubles of domestic demand growth was absorbed by the

rising prices of goods and services, and 22-25 rubles was absorbed by imports. And only 1 out of 5 rubles of domestic demand growth was absorbed by the growth of output of Russian enterprises!

It appears that a more stable growth can be achieved on the basis of a higher level of investment activity, which is directly linked to the goal of Russian industry's modernization. However, the base medium-term forecast scenarios applied by the 'economic bloc' in the RF government and the RF Central Bank envisage no acceleration of the rate of investment growth. In the event of a real rise of investments in fixed assets by 5.0–6.0% per annum over the period of 2011–2013 it can be expected that Russia's real GDP growth will amount to approximately 4.0–4.5% per annum. That is stable growth, but its scale still does not provide for any qualitative changes in the Russian economy's structure or in the potential for its further development. (It would be worthwhile to remember in this connection that China's average per annum growth rate of GDP over the past decade has been 10.5%).

In Table 1 below we present the estimated real GDP growth under different scenarios depending on the dynamics of investments. Aggregate real GDP growth is estimated as a sum of the growth components determined by individual factors – changes in final consumption expenditures, gross capital formation and net exports. Both scenarios envisage similar growth rate for final consumption. Changes in net exports somewhat vary between the two because under the accelerated development scenario imports grow at a higher rate, including primarily imports of investment goods.

Table 1 – Real GDP Growth Rates, As a Percentage of the Previous Year

	2011	2012 (forecast)	2013 (forecast)	2014 (forecast)
Investment (inertia-based scenario)	8,0	5,5	6,0	6,0
GDP total	4,3	3,4	4,2	4,0
<i>contribution of factors:</i>				
Final consumption	3,8	2,0	3,2	3,1
Gross capital formation	4,8	1,6	1,4	1,4
Net exports	-4,3	-0,2	-0,4	-0,5
Investment (accelerated development scenario)	8,0	20,5	20,0	20,0
GDP total	4,3	6,0	7,1	7,3
<i>contribution of factors:</i>				
Final consumption	3,8	2,0	3,1	2,9
Gross capital formation	4,8	4,7	5,1	5,8
Net exports	-4,3	-0,8	-1,1	-1,4

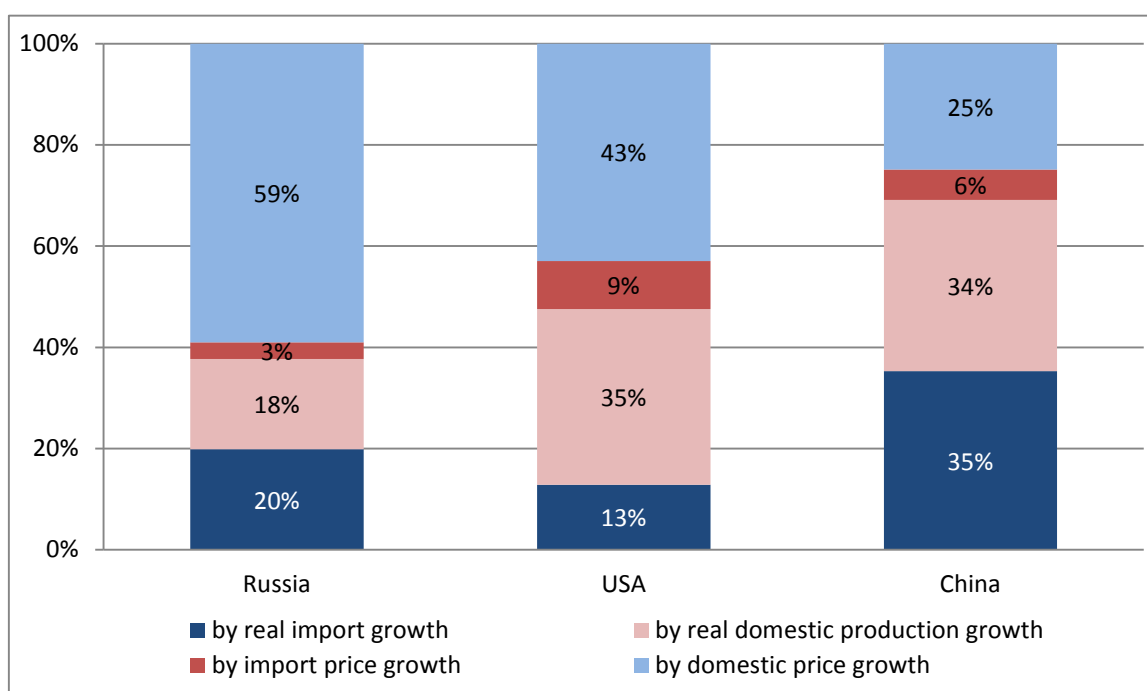
Source: Rosstat's data; calculations by the IEP's Center for Structural Research

These calculations demonstrate that, in order to achieve a sufficiently high rate of growth of the Russian economy (at least at the level of about 7% per annum, which may be regarded as a target for the period after 2013), the rate of real growth of investments in fixed assets in the nearest future must amount to approximately 20% per annum. Even given a cautious approach to forecasting the inflation rate, this will imply growth of the investment volume in nominal terms by nearly one-third per annum. It is noteworthy that, over the past decade, China has also been increasing its nominal volume of investments in fixed assets at a comparable rate of about 25% per annum. If a revival of the administrative command system in the Russian economy is by no means the principal vector of its development, much effort indeed will be needed in order to improve the business climate in this country on a broad scale, so as to ensure a tenfold rise (on 2010) in the volume of investment on the basis of domestic and external resources.

In this connection one may ask: which structure of the domestic demand absorption mechanism will be both stable and efficient? As demonstrated by the estimates cited above, the core feature of the economic growth model based on domestic demand expansion is the type of the structure of demand growth absorption. It is evident that the higher the share of domestic production of goods and services in that structure, the more stable is the development of the national economy. In addition, the rise in the physical volume of production in response to nominal demand growth is indicative of the high potential for regulating the economy through financial incentives and by improving in general the competitive environment and business climate.

Growth of the physical volume of imports in response to domestic demand expansion is a rather controversial factor, and so the estimates describing its influence on economic growth require some further elaboration. First of all, the share of imports that absorbs demand growth is important (its high level means that domestically produced products are being ousted from the market). However, the structure of imports is also important for a relevant analysis. Thus, imports of investment goods and intermediate consumption products directly stimulate domestic production. And the imported goods consumed in the phase of final demand, on the contrary, oust domestically produced products.

Chart 8 – Average Structure of Domestic Demand Growth Absorption in 2001-2007



Source: Rosstat, OECD, IMF; calculations by the IEP's Center for Structural Research

The following conclusions can be drawn from the data presented in Chart 8. First of all, the core indicator is the share of domestic production absorbing domestic demand growth. A three-country comparison has shown that goods and services producers in the USA and China respond in an approximately similar manner to nominal domestic demand expansion – 38% and 35% respectively of demand growth is absorbed by increasing production volume. It should be noted that the USA and China's indices are twice as high as Russia's, which is a direct indicator of the business climate and overall economic activity in those countries.

The situation with regard to physical volumes of imports is somewhat different. The share of imports in the USA is rather low, but the contribution of the factor of rising import prices is higher, which reflects the specific structure of imports where goods for final consumption play a dominating

role. China displays growth of imports of investment goods and intermediate consumption products. In addition, it should be noted that the rather high share of rising import prices is the result of the relatively low exchange rate of the yuan.

The comparison between these three countries has yielded the most illustrative results in regard of inflation. Chart 8 is yet another demonstration that inflation in Russia is linked to institutional factors. Price growth absorbed 60% of domestic demand expansion in Russia that occurred in 2001-2007 in response to rising oil prices, external borrowings and banks' credits. A similar index for USA is 47%, for China – 25%. Such figures can be explained not only (and possibly not so much) by the different responses of enterprises to the financial policies in these countries, but even more so by the parameters directly describing these financial policies. Thus, while the monetary policy in the USA aims at creating incentives, China regularly resorts to the introduction of certain constraints in order to prevent overheating of the financial sector (for example, the introduction of high required reserve ratios for banks, etc.). In all these instances the statistical data demonstrate that in China the share of inflation in domestic demand growth absorption is the lowest among the three countries.

2. THE QUANTITATIVE ESTIMATES OF THE IMPACT OF THE BUSINESS CLIMATE IMPROVEMENT FACTOR ON ECONOMIC GROWTH UNTIL 2020

The main problems that diminish the effectiveness and stability of the growth model based on domestic demand expansion that has emerged in Russia in the last ten years have to do with the structure of its absorption mechanism. As demonstrated earlier, 55% of nominal domestic demand growth is absorbed by growth of domestic prices, 25% - by growth in imports, and only 20% - by growth in the physical volume of goods and services production. In other words, more than half of nominal demand expansion (triggered, among other things, by the increasing volumes of banks' loans, proceeds from exports and budget expenditure) is absorbed by growth of prices in response to that expansion, and a quarter is absorbed by imports of goods. In such conditions, any attempts to bring down the inflation rate can be successful only if they involve measures designed to lower the rate of domestic demand growth, and ultimately – to slow down the rate of growth of the entire economy.

The stability of the structure of domestic demand growth absorption makes it possible to plot an inertia-based forecast of the Russian economy's development that does not envisage any changes in the existing growth model, as well as to produce quantitative estimates of a possible improvement of the business climate. Thus, an important component of Russia's economic policy should be a set of measures aiming at spurring and stimulating entrepreneurial activity across the country. These measures include changes in the business climate, struggle against corruption, consolidation of democratic values and development of political institutions, as well as promotion of high standards of entrepreneurial culture and business organization. The discussion of all those factors has been going on for a long time; in fact, if only part of the existing problems could be solved, the result would be both a higher growth rate of the national economy and a higher quality of that growth.

A key goal to be pursued whilst improving the business climate within the framework of the growth model based on domestic demand expansion is to increase the physical volume of production and bring down the growth rate of domestic prices. The three-country comparison (see above) demonstrates that developed economies display a more active production growth response than Russia does to a rise in effective demand.

The trend forecast applied as a basic scenario in our calculations shows that over the next decade, if the structure of domestic demand absorption remains unchanged, the situation with regard to sustaining the rate of economic growth will be continually deteriorating. Economic growth will be

coupled with inflation, while to maintain a constantly expanding domestic demand it will be necessary to attract bank loans and external borrowings.

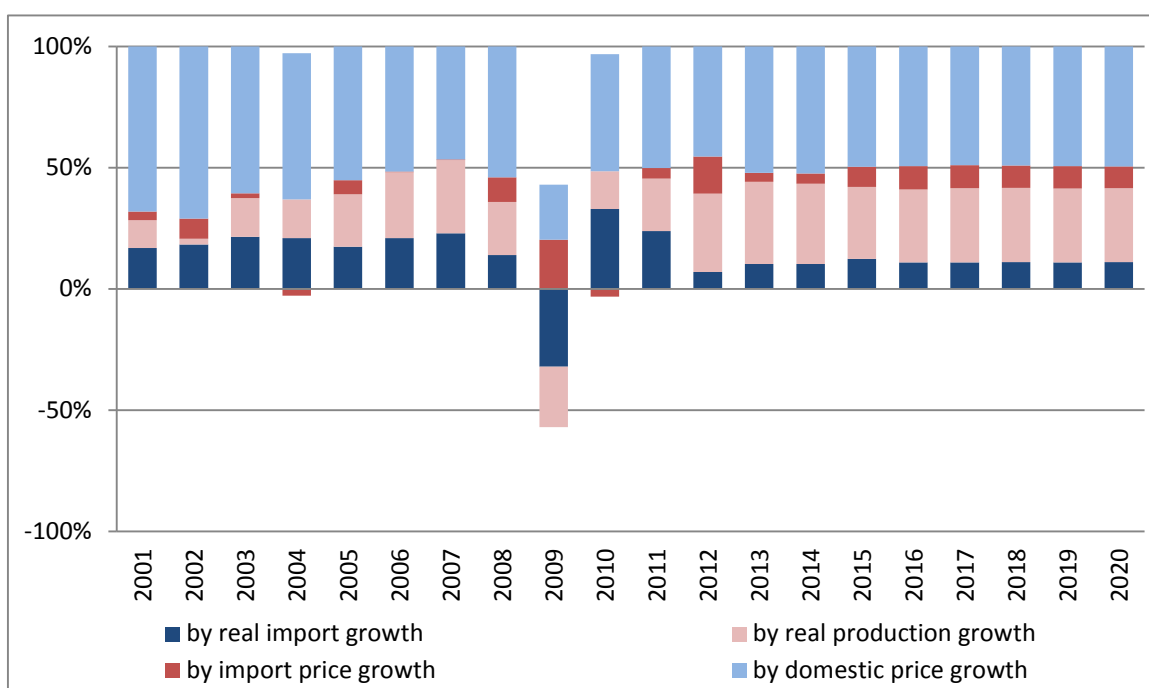
It has been calculated that an energetic implementation of institutional measures designed to create incentives for producers to respond to demand expansion by increasing their output in real terms may ensure, by 2020, a shrinkage of the share of prices in demand growth absorption to a level that represents the US average for periods of sufficiently stable growth – about 42-43%. This is higher than China’s per annum average (25%), but for the Russian economy in its current phase of development this may well be regarded as a respectable target. Simultaneously, the share of domestic output in domestic demand absorption must increase to 35-40% (from the current the level of 20%), thus making Russia’s real sector more responsive to demand fluctuations.

Thus, in the framework of our study of Russia’s economic growth model over the current decade the improvement of institutional factors may be limited to improving the structure of the mechanism whereby the economy responds to domestic demand growth. In particular, it is suggested that production volume will be increasing at a higher rate, and prices will be displaying a lower growth rate. The possible scenarios for improving the demand absorption structure are based on two different assumptions and are compared to a basic trend forecast.

The basic trend forecast implies that all the institutional constraints typical of the past decade will remain in place until 2020. In actual practice this will mean that the attempts to sustain economic growth by expanding domestic demand will induce growth of prices and imports in the same proportions as it happened in 2001-2011. As a result, the basic trend forecast has revealed the following figures:

- *GDP*: average per annum growth in real terms at a rate of 3.8%, to slow down by 2020;
- *average per annum level of consumer prices*: to increase by 6.5% per annum;
- *investment prices*: to increase on the average by 7.6% per annum;
- *investments*: to increase on the average by 5.0% per annum in real terms;
- *share of prices in demand growth absorption*: stable at 49-50% until 2020.

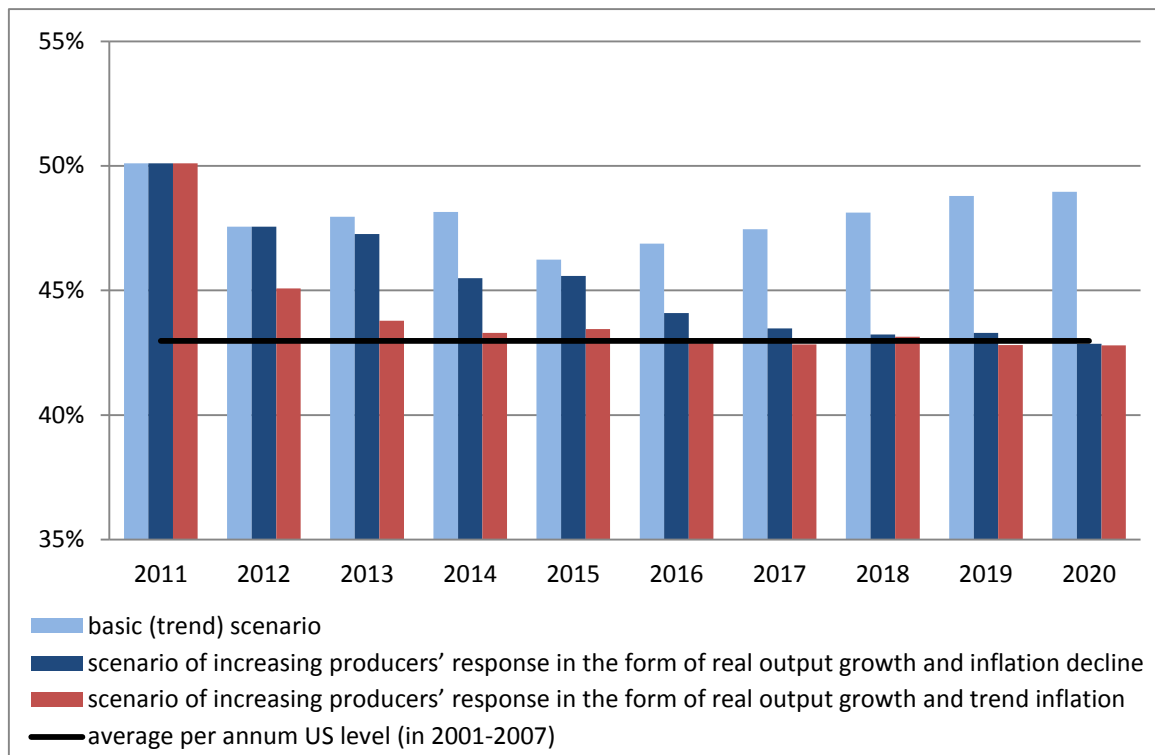
Chart 9 – Structure of Domestic Demand Growth Absorption in Russia, %



Source: calculations by the IEP’s Center for Structural Research

Two scenarios are set against the basic trend forecast. Both imply a significant improvement of the Russian economy's institutional parameters expressed in a qualitative improvement of the national economy's response to domestic demand expansion. To achieve comparability with the basic forecast, two scenarios are considered. The first one ('nominal') implies that nominal GDP will remain at the basic level, while the rates of real growth and inflation will change. Under the second scenario ('real'), the inflation rate will remain at the basic level, while changes will occur in the growth rates of both real and nominal GDP. Both scenarios envisage gradual improvement of the institutional environment to 'the US' level by 2020, when producers' response to domestic demand expansion will increase from 20% to 35% of output, while the share of price factors will drop from 55% in 2011 to 40% in 2020.

Chart 10 – Forecast-based Scenarios of the Share of Growth of Domestic Production Prices in Domestic Demand Growth Absorption in Russia in the Medium Term, %

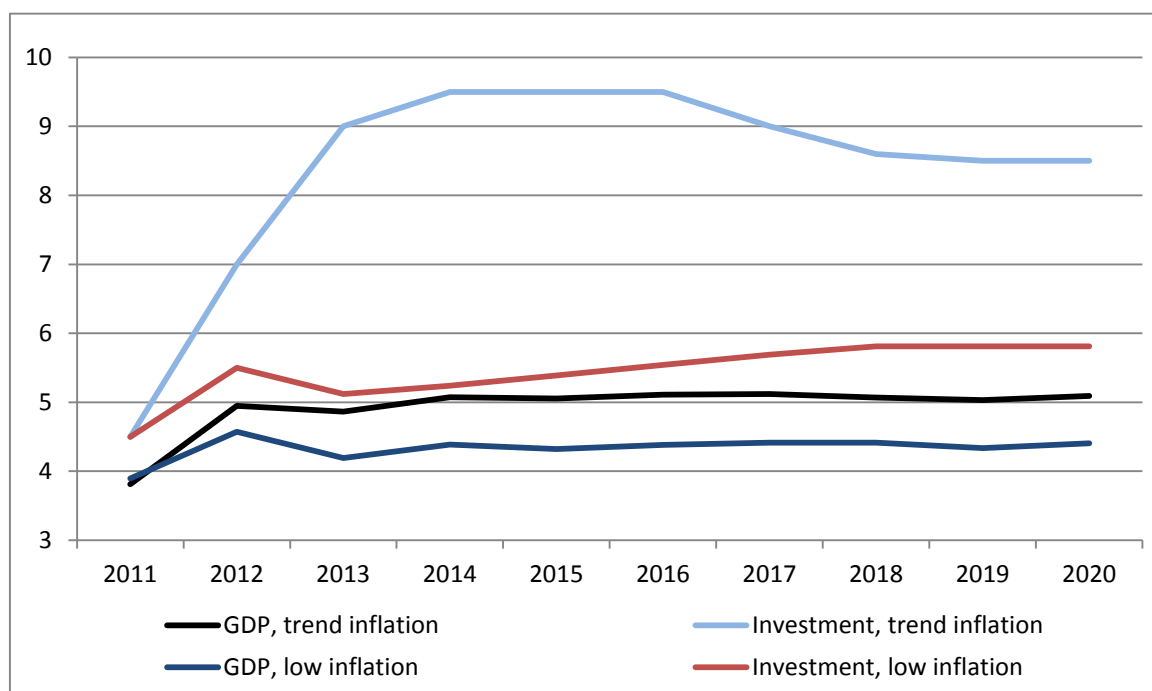


Source: Rosstat; Bureau of Economic Analysis, U.S. Department of Commerce; calculations by the IEP's Center for Structural Research (purple – 'nominal' scenario, green – 'real' scenario)

The results of calculations under the 'nominal' scenario implying preservation of the nominal GDP trend have revealed the following figures:

- *GDP*: average per annum growth in real terms at a rate of 4.4% (against 3.8% under the basic scenario);
- *investments*: to increase on the average by 5.6% per annum in real terms, the growth rate gradually increasing towards 2020;
- *average per annum level of consumer prices*: to increase by 6.1% per annum;
- *investment prices*: to increase on the average by 7.2% per annum;
- *share of prices in demand growth absorption*: gradually declines towards 2020 to the average per annum US level (in 2001-2007) – approximately 43%.

Chart 11 – Scenario-based Calculations of the Rate of Real GDP and Investment Growth, %



Note: comparison of 'nominal' (purple) and 'real' (green) scenarios

Source: calculations by the IEP's Center for Structural Research

The results of calculations under the 'real' scenario implying preservation of the inflation rate at the basic scenario level and growth of nominal GDP have revealed the following figures:

- *GDP*: average per annum growth in real terms at the rate of 5.0-5.1% (against 3.8% under the basic scenario);
- *investments*: to increase on the average by 9.0% per annum in real terms, the acceleration is determined by the necessity to expand production in response to domestic demand growth;
- *average per annum level of consumer prices*: to increase by 6.5% per annum, as in the basic scenario;
- *investment prices*: to increase on the average by 8.1% per annum;
- *share of prices in demand growth absorption*: declines to the average per annum US level (in 2001-2007) – approximately 43% - nearly immediately, in accordance with real investment growth.