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Shaping the real exchange rate of the ruble and its liaison with macroeconomic developments and budget indicators

Introduction

A number of organizations are now building their projected estimates of economic development prospects in order, firstly, to provide the public with an outlook for the development of the national economy, and, secondly, to identify the bottlenecks of development in order to have them dealt with in a timely manner. One traditional method which involves the building of scenarios with a significant number of exogenous indicators appears quite impressive on the surface because it makes it possible to build a variety of projections tailored to meet virtually any taste but is poorly tied up with reality. Conversely, the method whereby macroeconomic indicators are modeled in a comprehensive manner is more efficient in terms of strategy, albeit more difficult to apply.

The comprehensive approach to macroeconomic indicators calls for deriving mutually balanced macroeconomic indicators. The mutual balance can be achieved through combined consideration of the budget, balance of payments, real sector, including energy, banking system, and monetary, pricing and tax policies. This approach reduces the number of exogenous factors used for projection purposes through converting them into endogenous factors by appropriate methodological means.

Those factors which shape the indicators under a given development scenario are diverse during the projected period. The immediate future (2000-2002) is shaped, to a greater extent, by the impact of the already existing mechanisms and factors and reflects, to a greater extent, the current capabilities of the economy. The more distant future is also largely shaped by the already established production capacity, institutions and legislative environment; however, as we move away from the beginning of the projected period (2000), the range of measures which are to be implemented as part of the scenario (the mechanisms built in this scenario) as well as the potential capabilities of the economy and the energy sector become increasingly important.

Failure to take proper account of the above diversity of factors and forces in effect during the projected period results in the overestimation of the number of endogenous factors in that part of the scenario which describes the development of the economy and energy sector in the near-term perspective as compared with probable reality. This increases the range of indicators for longer-term segments of the projected period and complicates the adjustment of the scenario to the actual path of development.

The purpose of this study is relatively narrow and consists in establishing a pattern for the real exchange rate and evaluating its impact on both macroeconomic and budget indicators. The essential nature of this "narrow" subject does not need any specific justification.

Due to the reasons referred to above, the achievement of this purpose required a significant level of effort beyond the limits outlined by the title of this paper towards an analysis of the pattern of GDP, balance of payments, budget indicators, in particular capital outflow etc. Our desire to reduce the number of exogenous indicators to the maximum extent possible also required a more detailed analysis of the economic development pattern over recent years.

Our projection of the pattern of shaping the exchange rate and analysis of its impact on both macroeconomic and budget indicators is based on a model developed within the Economic Expert Group for 2000-2020 projection purposes. This model is focused on the recognition of linkages among the real exchange rate, budget, in particular budget deficit, foreign debt payments, outflow of capital from this country and GDP. Certain parameters of the model are evaluated in econometric terms (on the basis of either monthly or quarterly data for 1994-1999). The real exchange rate, GDP, budget deficit and capital outflow are perceived as endogenous indicators in this model.

Underlying assumptions used for modeling purposes

The purpose of our modeling consisted in a review of possible macroeconomic development options for the period up to 2020 under various assumptions as to the nature of change to economic (particularly financial) policy and external factors. Table 1 outlines the key exogenous and endogenous parameters used in our models:

Table 1. Key exogenous and endogenous parameters used for modeling purposes

<i>Key input parameters</i>	<i>Key output data</i>
Federal budget revenue	GDP growth rate
Government debt servicing schedule	Investments
Foreign and domestic borrowing scenarios	Capital outflow
World prices	Real exchange rate
Foreign investments	Non-interest expenditure
Imports covered by reserves	Government debt pattern

The rates of inflation in 2000 is modeled and then taken as benchmarks.

The key characteristic features (assumptions) which are common for all the scenarios (unless indicated otherwise) are as follows:

- The rate of upgrading production facilities, which is shown in our model by a gradual growth of the efficiency of new capital investments (through using state-of-the-art production technology and further technological progress) and labor productivity (through improved management), is expected to be moderately high.
- Annual inflation falls to 5% beginning from 2005.
- Federal budget revenue as a percentage of GDP grows to achieve 15% of GDP by the end of the period; in this respect, the ratio between Federal and territorial budget revenues is maintained.
- Russia does not receive any further financial credits from international lending organizations and foreign states; tied-up credits fall from \$2.5 billion in 2000 to zero after 2006. Beginning from 2001, the government borrows on foreign markers, where necessary, in order to maintain its non-interest

expenditure at a minimum level. Annual borrowings are limited to \$2 billion under the scenarios marked by the lack of reform and to \$4 billion under the scenarios marked by an improved investment environment.

- Soviet foreign debt is restructured (if envisaged by the scenario) for five years at 7%.
- World oil prices experience a certain fall from the current very high level as early as in 2000. Oil prices (Brent) stabilize at \$20 per barrel in 2001-2005 under the best-case scenario (\$16 per barrel under the worst-case scenario) and then grow slowly to achieve \$23 per barrel in 2020 under the best-case scenario (\$19 per barrel under the worst-case scenario).
- The existing foreign debt of corporate and banking sectors is repaid within six years and, beginning from 2002, the private sector resumes foreign borrowings (\$2-3 billion annually).
- The amount of cash denominated in foreign currencies which is available within the country remains unchanged.
- Investment risks increase by approximately 1.5 times as compared to the trend established by the scenario in those years when presidential elections are held.
- Gross international reserves are maintained at four months of import.

Description of the model for a long-term projection of the pattern of the real exchange rate of the ruble and its liaison with macroeconomic and budget indicators

The model available makes it possible to project key macroeconomic indicators up to 2020. The step of the model is one year. Due to the long term of the projection, the model assumes that the economy is in a state of balance and, accordingly, considers only balanced ratios among economic variables.

The detailed balance of payments component represents a key difference between the model in question and the majority of other macroeconomic models which are currently used for projecting the development pattern of the Russian economy. It takes account of the inflow of foreign capital and the outflow of Russian capital for the purpose of projecting both the real exchange rate and the total volume of investments in the Russian economy. A relatively small number of exogenous parameters can be viewed as another advantage of this model.

The model available is primarily focused on linkages among real macroeconomic indicators, namely the real GDP, the real exchange rate and the real non-interest expenditure of the Government. However, we used domestic price levels for calculating indicators expressed in nominal terms.

The domestic price growth pattern during 2000-2002 is calculated on the basis of an equation which links inflation to the money supply growth rate (established in exogenous terms) and the nominal exchange rate growth rate. The parameters of this linkage are evaluated in econometric terms on the basis of monthly data for 1996-1999. In addition, domestic price levels are linked to other variables of the model through an equation which shapes the real exchange rate. Subsequently, the rate of

inflation used for calculating indicators expressed in nominal terms is established as an assumption.

The model describes the essential linkages between GDP, the Federal budget, foreign and Russian capital flows which cross the Russian border, and the state of foreign trade.

The model consists of three major components:

- ❖ investment and GDP component
- ❖ balance of payments and exchange rate component
- ❖ Federal budget component

The external (exogenous) variables of the model are as follows:

- World prices for oil, gas, metals and fertilizers
- Growth of the world economy
- Investment risk level
- Tax burden (Federal budget revenue as % of GDP)
- Schedule of foreign debt payments by public and private sectors
- Attraction of new foreign borrowings by the private sector (the volume and terms of borrowing)
- Attraction of foreign borrowings by the public sector from ILOs and foreign governments (the volumes and terms of borrowing)
- Limits of borrowings on world capital markets
- Domestic borrowings by the Federal government
- Domestic price level
- Private sector bias towards consumption
- Federal government transfers
- State investments
- Increase in the amount of cash denominated in foreign currencies which is available within this country

Exogenous variables represent either expert estimates or projections of the IMF, the World Bank or the Russian Ministry of Finance.

The internal (endogenous) variables of the model are as follows:

- GDP
 - Exchange rate
 - Investments, including direct foreign investments
 - Export of goods (to both non-CIS and CIS countries), broken down by exports of crude oil, oil products, natural gas, metals and fertilizers
 - Import of goods
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- Export and import of services
 - Federal budget expenditure other than interest
 - Volumes and terms of Government borrowings on world capital markets
 - Outflow of Russian capital (except for cash denominated in foreign currencies) from this country
 - Government foreign debt payments (under forced restructuring scenarios)
 - Volume of government foreign debt.

GDP is calculated on the basis of a production function, i.e. it is shaped by projected production capital and labor levels (with account taken of their efficiency). The development pattern of efficient production capital is primarily shaped by investments and by production capacity utilization and depreciation rates. The production function parameters are expert estimates.

Investments may be financed by both Russian savings and foreign capital inflows. In this respect, a percentage of domestic savings is used for purchasing foreign assets.

The growth of foreign assets in banking and corporate sectors is calculated on the basis of their dependence on the consolidated budget deficit, domestic investment risks and domestic rates of interest on financial investments (in US dollar terms). The parameters of this dependence were evaluated in econometric terms on the basis of quarterly data for 1994-1999.

The established dependence of capital outflow on budget deficit makes it possible to evaluate the effect of writing off debt. The writing-off of debt is equivalent to budget surplus. It is only worth pointing out that consideration should be given to reducing the market rather than nominal value of debt in order to evaluate the impact of writing it off on the outflow of capital. The effect of writing such debt off will be relatively insignificant because the amounts of debt owed by the former Soviet Union are now quoted at some 15% of their nominal values.

The increase in the outflow of capital (given other equal conditions) during the first two quarters of 1996 was evaluated in order to measure the impact of investment risks. Our comparison of the minimum permissible internal yield rates of projects before and during the presidential race (15% and 25% per annum payable in currency, respectively) shows that spreads rose almost two-fold with respect to the LIBOR rate prior to the presidential election. Therefore, it can be concluded that real sector investment risks increased two-fold during the 1996 presidential election period.

The consolidated budget deficit increases the outflow of capital because the growth of government debt increases the likelihood of raising taxes and/or money issues. High interest rates help contain the outflow of capital. Investment risks provoke the transformation of domestic assets into foreign assets.

Negative public sector savings are primarily shaped by Federal budget deficit financing capacity (both external and internal) which are established largely in exogenous terms. The model calculates only Government borrowings on world capital markets. In our model, the Government borrows on world capital markets for the sole purpose of maintaining the minimum permissible level of non-interest expenditure. In this respect, it is limited by the borrowing limits established in exogenous terms. In

addition, the Government refuses from loans if the price of borrowing exceeds a certain value established in exogenous terms. In our model, the price of borrowings on international markets is calculated as a function of macroeconomic indicators and the value of debt burden, based on an assumption which was evaluated in econometric terms by IMF and World Bank officials according to the data on 863 funded loans included in the "emerging markets" category.

Private sector savings are contingent on the disposable income and consumption bias of the private sector. The value of this consumption bias is an expert estimate.

Therefore, in our model investments are derived by a residual method. In order to calculate the volume of investments, we subtract Russian investments in foreign assets from the total amount of domestic savings and foreign capital inflows.

Given the established level of GDP in real terms, a balanced real exchange rate is calculated in the balance of payments component. This balanced real exchange rate provides for the balance of payments, primarily through changes in import. Although the export of goods also depends on the real exchange rate, this is a relatively minor dependence due to the export structure which is primarily composed of raw products. It should be noted, that, contrary to the export of goods, in our model the export of services increases as and when the ruble gets stronger, which is connected with both the domestic price growth (including for foreign tourists) and the increase in the number of tourists. The export of services also grows as and when GDP grows in real terms.

The parameters of the dependencies of the export of services and the import of goods and services on the real exchange rate and GDP were evaluated in econometric terms on the basis of monthly or quarterly data for 1994-1999. The parameters of the dependence of the physical volumes of oil and gas exports on the real exchange rate were also evaluated in econometric terms on the basis of monthly data for 1993-1997.

Given other equal conditions, a deterioration of the balance of capital flows (increased outflow of Russian capital, decreased inflow of foreign capital, growth of foreign debt payments by public and private sectors) reduces the level of the real exchange rate and, accordingly, the level of import. Given other equal conditions, a growth of prices on world raw products markets strengthens the ruble.

The impact of GDP is less obvious. On the one hand, it is natural to expect that GDP growth will expand the mix of Russian exports and, consequently, increase the percentage of exports other than raw products. On the other hand, exports will not be particularly sensitive to economic growth in the years to come because at present the percentage of exports other than raw products in total exports is quite small. In addition, due to limited import replacement capacity, increased GDP (revenue) in the years to come will result in increased demand for import.

The GDP and exchange rate patterns represent the key projection indicators in our model. Taken together, these indicators shape the US dollar equivalent of GDP and, accordingly, the Government's foreign debt servicing capacity. In particular, our model makes it possible to calculate the level of Federal budget expenditure other than interest by a residual method using a given level of revenue and a given foreign debt servicing schedule, or the value of restructuring which is necessary for achieving the target level of non-interest expenditure.

Results of modeling economic development and shaping the real exchange rate

As is shown by our preliminary analysis, prices on world raw products markets, including oil and natural gas markets, capital outflow, budget deficit, interest rates, foreign debt payment terms, GDP pattern and other factors appear to be significant factors which shape the real exchange rate during the period of time under consideration. In addition, it was taken into account that Federal budget expenditure other than interest is now kept at a very low level which fails to provide acceptable living standards to major groups of the public.

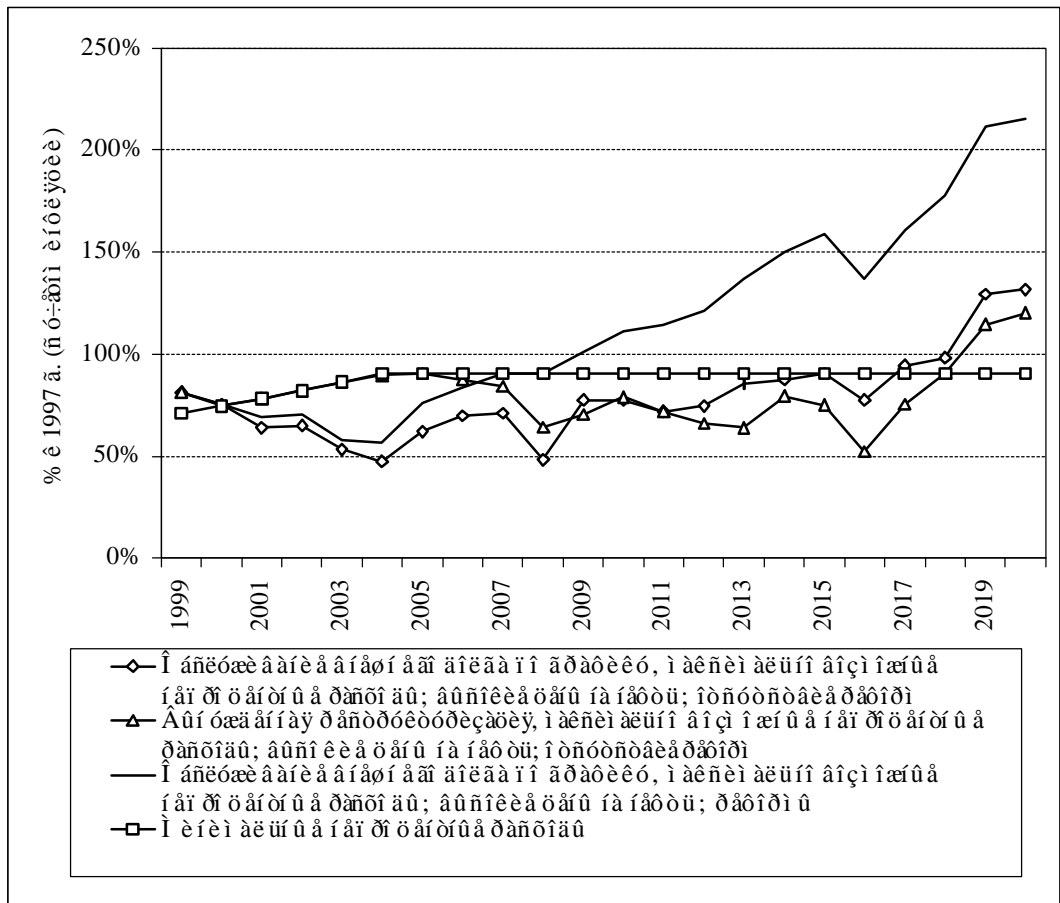
Based on the model described above, a series of calculations were made in order to answer the following questions:

- Under what conditions can foreign debt be serviced in accordance with the existing schedule?
- Under what conditions can Federal budget expenditure other than interest be increased without detriment to economic growth?
- Will the ruble be strengthened in the medium and longer-term perspective?

We considered three scenarios in order to answer the first question. All of them assumed the favorable developments on world markets of raw products and the servicing of debt in accordance with the existing schedule.

The first two scenarios did not call for any improvement of the investment environment in this country during the entire period under consideration. In choosing the volume of its non-interest expenditure, the Government was limited by the existing revenue, opportunities for borrowing on world capital markets and the need for government debt servicing and repayment. In this respect, the resources available after debt payments were made and non-interest expenditure was maintained at a minimum level were used for increasing non-interest expenditure under one option, and for repaying government debt under the other option. It should be noted that due to the shortage of budget resources and the large volume of debt liabilities, additional resources and, accordingly, differences between the scenarios emerge as late as following 2016. The conclusions outlined below apply to both scenarios. The results of non-interest expenditure calculations are shown in Chart 1.

Chart 1. Pattern of Federal budget expenditure other than interest under various scenarios



According to our calculations, without structural reform the servicing of foreign debt in full during the years to come can be exercised only through further reduction of non-interest expenditure. On average, non-interest expenditure in 2000-2008 would total a mere 62% of the 1997 level (with account taken of inflation). In our viewpoint, such austere policy which is expected to make life harder for vast groups of the public even as compared to 1999 (when Federal budget expenditure other than interest was about 81% of the 1997 level) would put this country on the brink of a social explosion and involve the risk of changing the domestic political system and threatening democratic political reform.

Another scenario under consideration (Chart 1) implied that, as a consequence of structural reform, real sector investment risks will fall approximately two-fold by 2020. Our calculations have shown that the late structural reform still does not make it possible to service the entire existing debt according to schedule without a significant reduction of non-interest expenditure in the years to come. On average, non-interest expenditure during 2000-2005 will total 68% of the 1997 level (with account taken of inflation), achieving their minimum value in 2003-2004 (57-58%).

Consequently, there is an inevitable conclusion that the burden of Federal government liabilities available at present is too excessive to sustain. Accordingly, **the Russian Federation really needs to restructure its foreign debt and/or have part of its debt written off even provided that high oil prices are maintained.** If no agreement is reached on restructuring/writing-off, increased social tension and/or default on foreign debt appear almost certain to come, followed by a sharp increase in all types of risk for both economic and political activities.

In accordance with our conclusion, we limited ourselves below to considering those scenarios which call for the restructuring or writing-off of foreign debt.

First of all, consideration was given to those scenarios which do not call for structural reform. These are classified as business as usual scenarios.

1. *Forced restructuring, high oil prices.* Budget resources are composed of revenue, net domestic borrowings and loans from foreign states. The Government makes all scheduled payments on the foreign debt of the Russian Federation, including payments on new borrowings in 2000-2020 and payments on that part of Soviet debt which is restructured in 2000-2020. In case that the resources available following such payments prove insufficient for funding minimum non-interest expenditure, the Government considers the possibility of borrowing on world capital markets. Amid the lack of reform, the volume of borrowings under the model is limited to \$2 billion. Borrowed loans are used for financing additional non-interest expenditure. All current-year payments on the debt of the former Soviet Union are rescheduled for five years at 7% per annum.

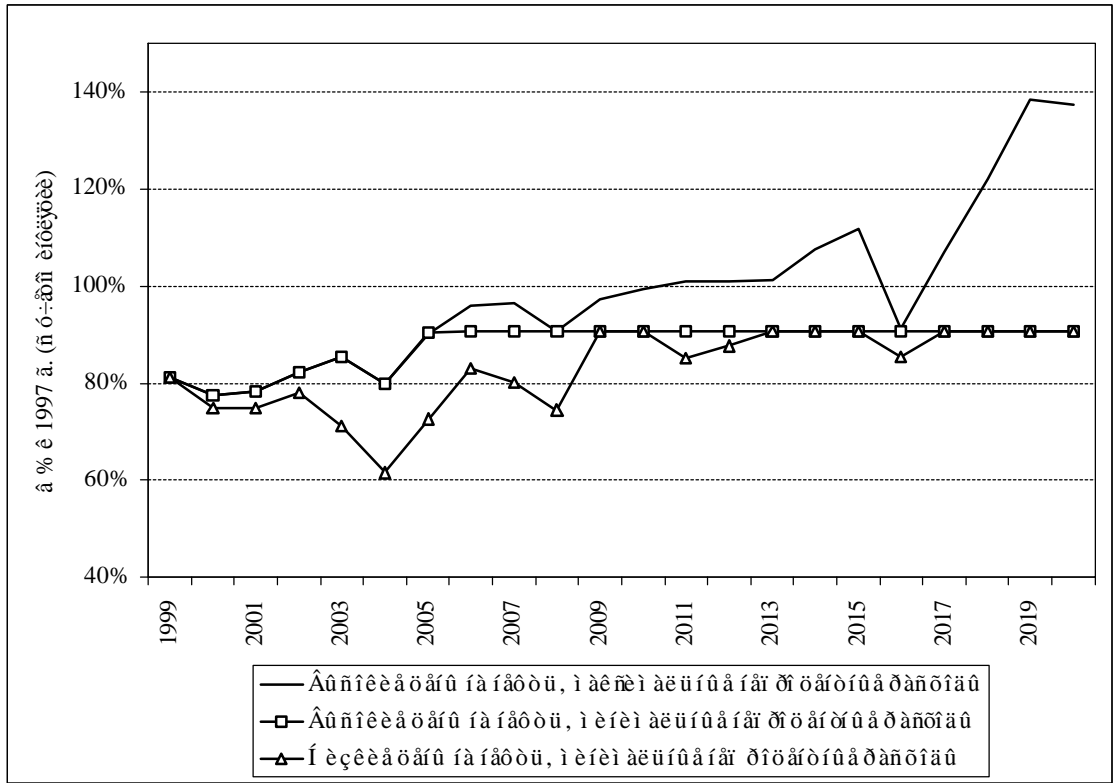
If the Government is able to finance its minimum non-interest expenditure and payments on the debt of the Russian Federation, then the remaining resources are used for payments on Soviet debt. In this respect, interest payments have priority over the repayment of principal. That part of payments on Soviet debt which still cannot be financed without a reduction of non-interest expenditure below its minimum permissible level is restructured according to the terms outlined above.

In case that budget resources are sufficient, the surplus is used for increasing non-interest expenditure over its minimum level in order to finance all foreign debt payments and minimum non-interest expenditure alike.

Our calculations have shown (see Chart 1) that forced restructuring amid the lack of economic reform does not resolve the problem of a shortage of budget resources. An attempt to maintain non-interest expenditure at a relatively high level in the years to come by means of restructuring gives rise to the accumulation of new debt. The commencement of a forced reduction of non-interest expenditure is postponed from 2001 to 2007. On average, annual non-interest expenditure in 2000-2016 under the restructuring scenario is only insignificantly higher than under the full servicing scenario (76% vs. 71% of the 1997 level in real terms).

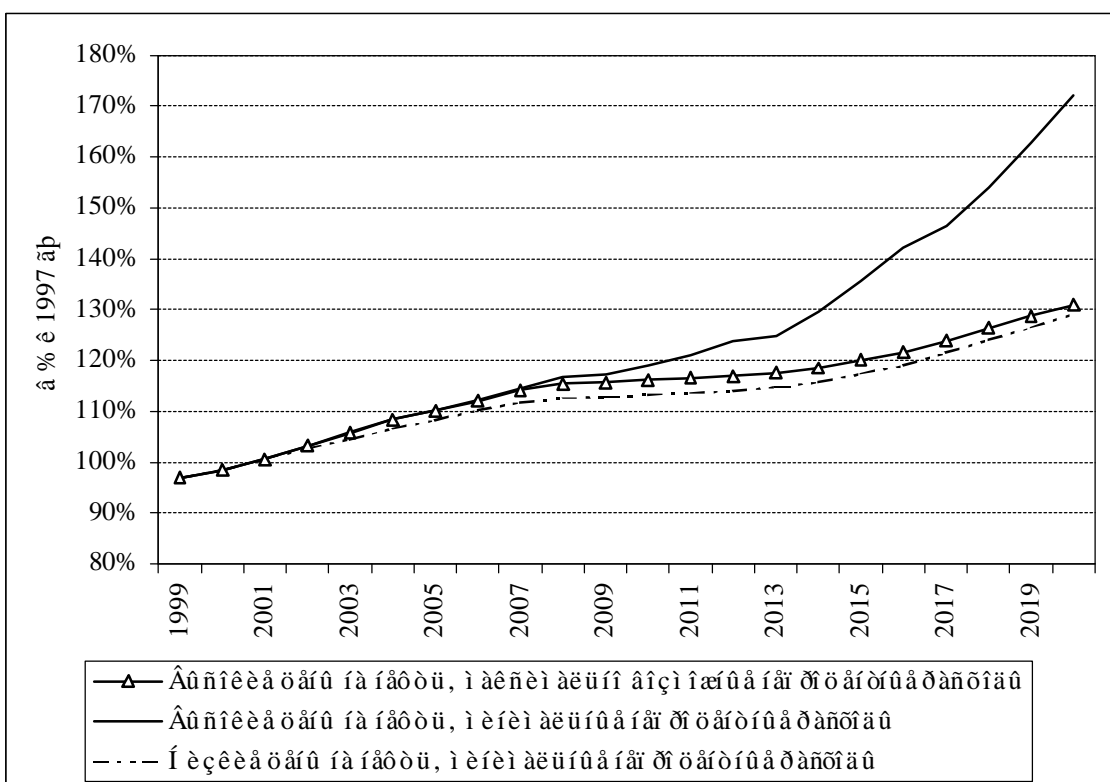
2. *Reduction of the Soviet foreign debt servicing schedule by 50%, maximum possible non-interest expenditure.* The results of calculations for the scenarios involving the writing-off of 50% of Soviet debt amid the lack of reform are outlined in Charts 2-5.

Chart 2. Federal budget expenditure other than interest amid the lack of reform and the reduction of the Soviet debt servicing schedule by 50%



This scenario provides for maintaining non-interest expenditure at a more acceptable level (86% of the 1997 level in 2006-2006, 94% in 2000-2016, followed by growth in the wake of 2016). However, due to the lack of structural reform and the relatively soft fiscal policy, neither stable economic growth nor any major strengthening of the ruble cannot be expected in the medium-term future.

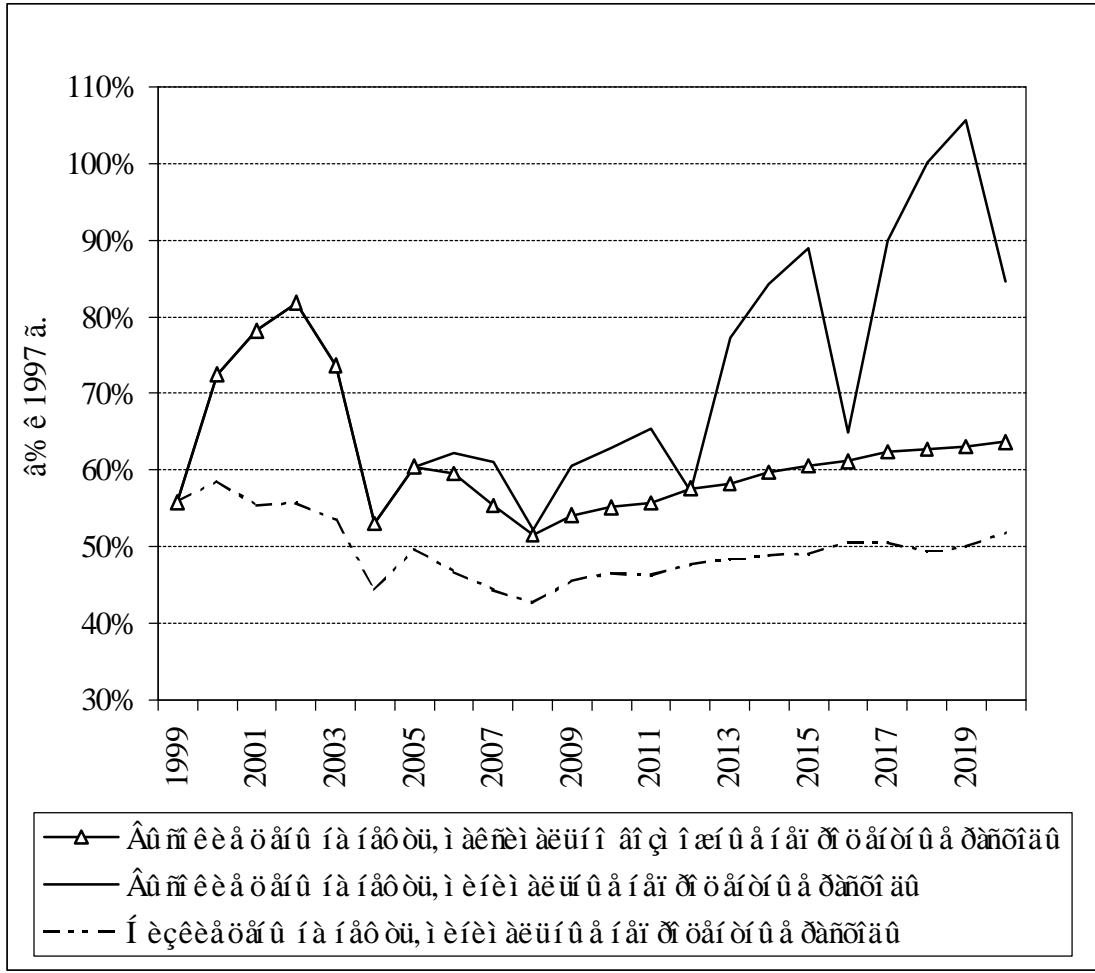
Chart 3. Real GDP in scenarios marked by the lack of reform and the reduction of the Soviet debt servicing schedule by 50%



As a result of a significant reduction of foreign debt due to writing-off, in 2000 there is a significant decrease of the outflow of Russian capital (from 14% of GDP in 1999 to 8% of GDP in 2000) and an increase in investments (from 10% of GDP in 1999 to 12% of GDP in 2000). The situation continues to improve during the period up to the next presidential election. On average, investments will total about 17% of GDP annually and GDP in real terms will be 2.4% annually in 2001-2003. Thanks to maintaining the outflow of capital at 8% of GDP and to favorable developments on world markets of raw products, in 2001-2003 the real exchange rate will total 78% of the 1997 level upon experiencing a major rise from 1999 (56% of the 1997 level).

However, the new presidential election will halt this inertia-based improvement. Beginning from 2004, capital outflow will begin rising again, the rate of growth will fall, the ruble will grow weaker, and investments will drop. On average, in 2000-2020 the annual growth rate will be a mere 1.4%, the real exchange rate will total 62% of the 1997 level, and investments will amount to 10% of GDP.

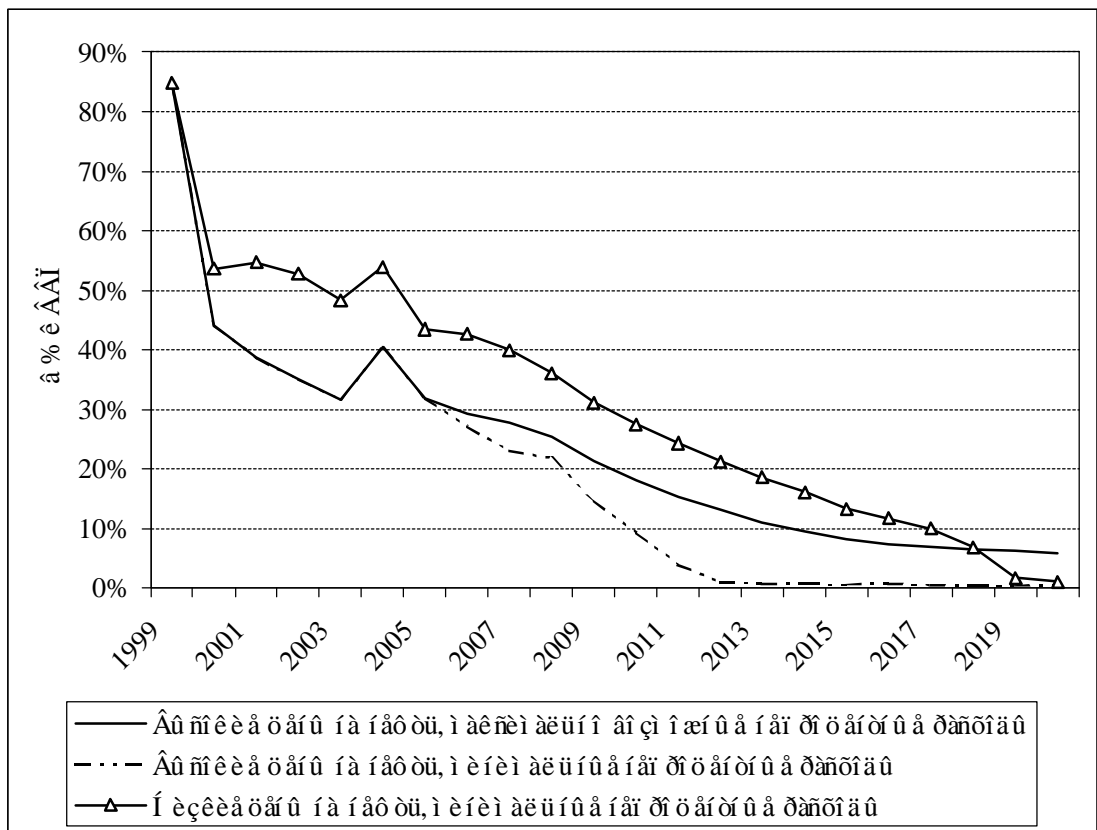
Chart 4. Pattern of the real exchange rate amid the lack of reform and the reduction of the Soviet debt servicing schedule by 50%



3. *Reduction of the Soviet foreign debt servicing schedule by 50%, high oil prices, minimum non-interest expenditure, use of additional budget resources for advance repayment of government debt.* This scenario calls for maintaining non-interest expenditure at the minimum permissible level and repaying government debt as soon as possible.

As a result, foreign debt turns out to be zero as early as by the end of 2014. By comparison, at that time the debt still totaled 9.4% of GDP in the previous scenario.

Chart 5. Government foreign debt amid the lack of reform and the reduction of the Soviet debt servicing schedule by 50%



In this scenario, an extremely austere budget policy contains the outflow of capital despite the lack of structural reform. As a result, the annual growth rate will total 2.8%, the real exchange rate will be 73% of the 1997 level, and investments will amount to 18% of GDP on average in 2000-2020. It should be noted that an annual growth of 5-6% will be achieved in 2018-2020.

4. *Reduction of the Soviet foreign debt servicing schedule by 50%, low oil prices, minimum non-interest expenditure, use of additional budget resources for advance repayment of government debt.*

In this scenario, foreign debt is not repaid before the end of the period under consideration.

The annual growth rate will total 1.4%, the real exchange rate will be 49% of the 1997 level, and investments will amount to 9% of GDP on average in 2000-2020. Therefore, the relatively favorable scenario outlined above becomes unworkable in case of a moderate fall of oil prices.

The scenarios which have been considered show that **stagnation, an extremely low level of investments, a high level of capital outflow and the lack of a significant strengthening of the ruble represent the most likely outcome of the lack of**

structural reform. It is only a combination of a variety of favorable external factors (significant debt writing-off, maintaining very high oil prices) with an extremely austere budget policy that may help avoid a catastrophe.

Therefore, business as usual scenarios cannot be deemed acceptable because they are associated with excessively high economic and political exposure.

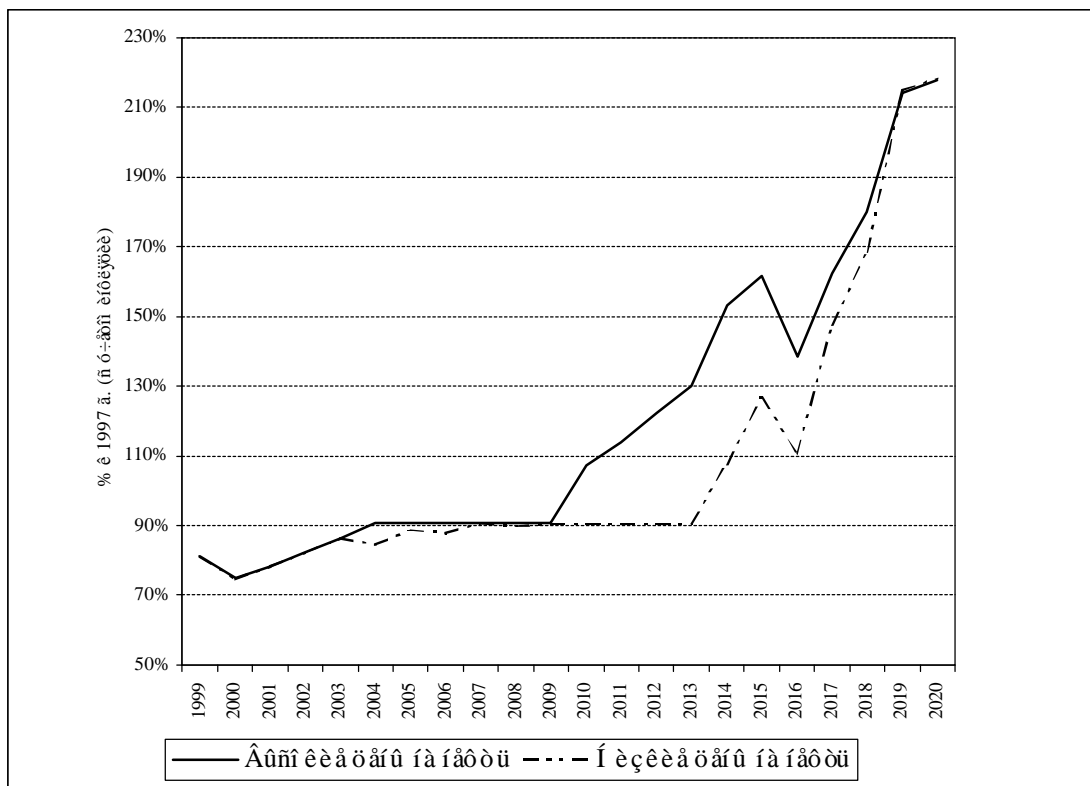
For that matter, consideration was given to those scenarios which call for a gradual reduction of investment risks by approximately two-fold before 2020.

5. *Forced restructuring, high oil prices, maximum possible non-interest expenditure.* This scenario (Charts 6-8) is characterized by a gradual reduction of capital outflow which transforms into capital repatriation, growth of investments, GDP growth and gradual increase in non-interest expenditure.

According to this scenario, in 2001-2009 Soviet debt will be restructured annually in order to maintain non-interest expenditure at a minimum permissible level. In this respect, non-interest expenditure gradually rise from 78% of the 1997 level in 2001 to 91% in 2004-2009. Then, increased budget resources make it possible to increase non-interest expenditure gradually without restructuring foreign debt. By 2020 non-interest expenditure exceed the 1997 level by as much as two times (in real terms).

Expanded budget capacity for increasing non-interest expenditure is explained by both increased GDP in real terms and the real strengthening of the ruble.

Chart 6. Federal budget expenditure other than interest amid the exercise of reform, forced restructuring, maximum possible non-interest expenditure

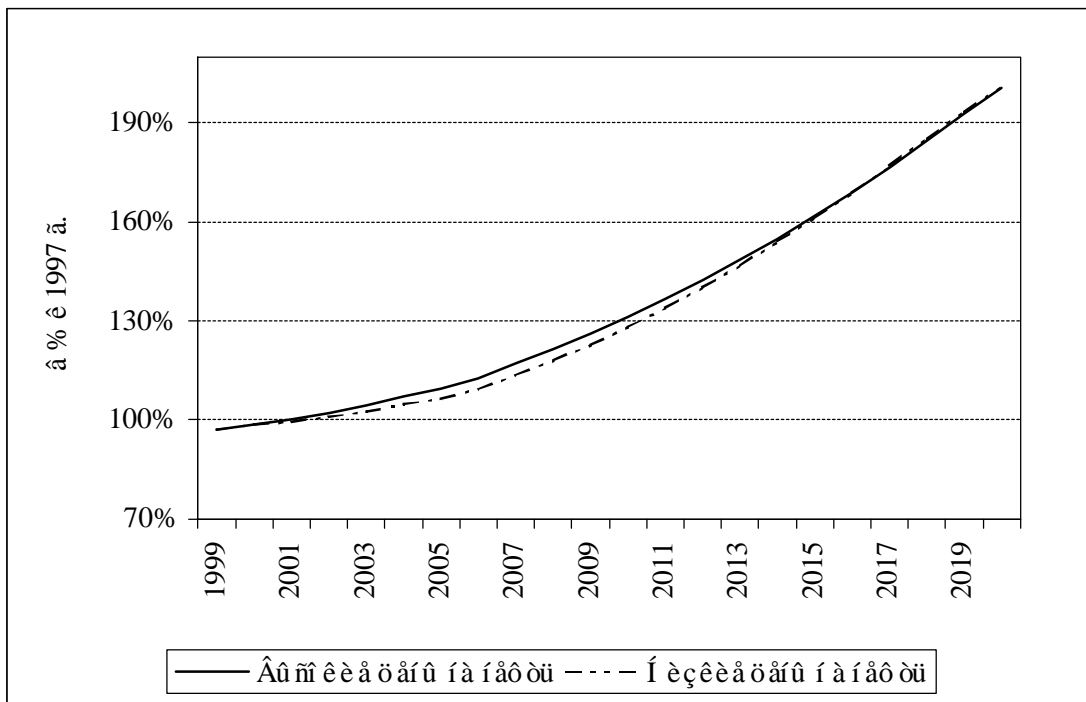


In 2000-2020 annual economic growth totals 3.5% on average, growing to 4-4.5% by the end of the period in question. In 2020 GDP in real terms exceeds the 1997 level by two times. The ruble experiences a stable rising trend, and in 2020 its real exchange rate exceeds the 1997 level by one-fourth (in 1999 it was 56% of the 1997 level). The outflow of Russian capital decreases gradually, and, beginning from 2008, capital is repatriated at 2-4% of GDP annually. Investments rise gradually and stabilize at about 30% of GDP following 2011.

6. *Forced restructuring, low oil prices.* A weaker strengthening of the ruble and a longer period of restructuring are the key differences between this scenario and the previous one.

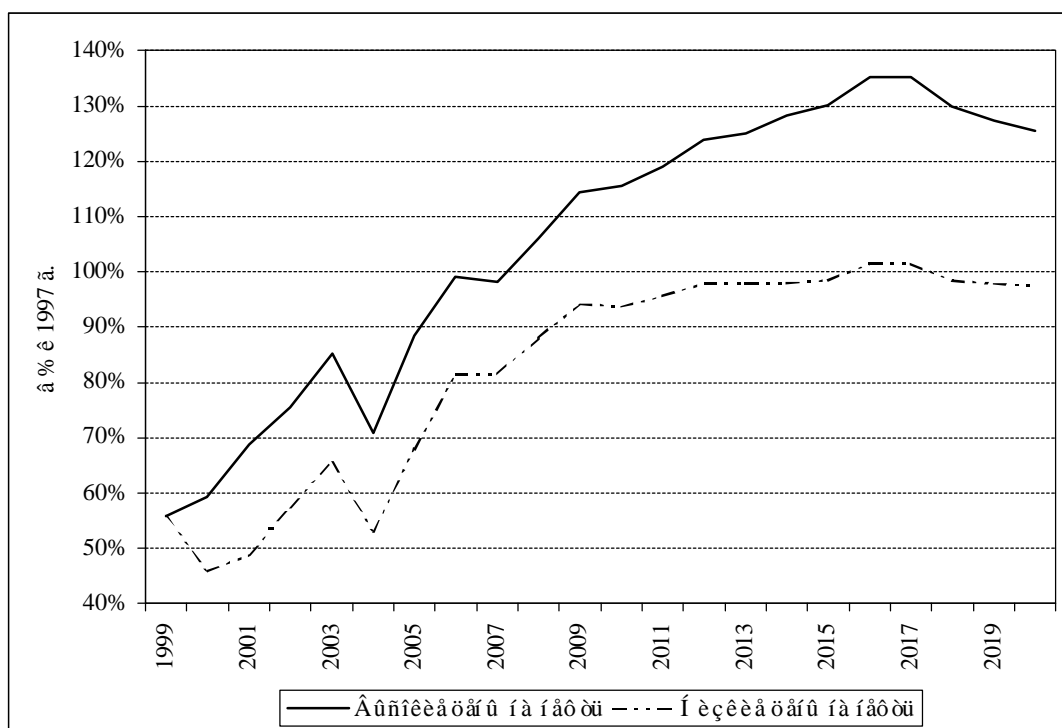
The forced restructuring of former Soviet debt which maintains non-interest expenditure at a minimum permissible level continues up to 2013. In this respect, non-interest expenditure rises gradually from 78% of the 1997 level in 2001 to 91% in 2007-2013. Then, increased budget resources make it possible to increase non-interest expenditure gradually without restructuring foreign debt. By 2020 non-interest expenditure achieves almost the same level as is indicated in the previous scenario.

Chart 7. Pattern of GDP in real terms amid the exercise of reform, forced restructuring of Soviet debt and maximum possible non-interest expenditure



The indicators of economic growth and investments are virtually the same as in the previous scenario. The strengthening of the ruble is less significant as compared to the previous scenario: by 2020 its real exchange rate gets back to the 1997 level.

Chart 8. Pattern of the real exchange rate amid the exercise of reform, forced restructuring of Soviet debt and maximum possible non-interest expenditure



7. *Reduction of the Soviet foreign debt servicing schedule by 30%, low oil prices, maximum possible non-interest expenditure.*

This scenario does not make it possible to maintain acceptable non-interest expenditure in 2003-2004. In case of implementing the scenario under consideration, non-interest expenditure will total 69% and 60% of the 1997 level in 2003 and 2004, respectively. Therefore, additional restructuring will be required during those years.

Conclusions

1. Our research has shown that projecting the pattern of the real exchange rate for 2000-2020 in liaison with the pattern of macroeconomic and budget indicators achieves one of the key methodological objectives inherent in the development of scenarios, i.e. to reduce the number of exogenous indicators to the maximum extent possible. The transformation of indicators which are usually presented as exogenous into endogenous indicators has made it possible to reduce the risk of using the results available.
2. Thanks to the use of methodological means, we managed to model the non-stationary development of key macroeconomic indicators which is usually not achieved without using econometric models. This non-stationary status is in greater compliance with the actual pattern of indicators.
3. It has been shown that the real exchange rate is one of the key indicators which shape the macroeconomic situation in this country. Above all, it shapes the tax burden for the country as a whole which is one of the critical factors in the

economy during the period under consideration. It has been shown that this factor is of key importance for the state of the budget and for the ability to finance social expenditure from the budget, which, in turn, largely shapes political stability in this country.

4. In its turn, the exchange rate pattern is significantly dependent on world prices for raw products and on the outflow of capital from this country.
5. It has been shown that an improved investment environment gives rise to a significant strengthening of the ruble and represents a key factor of such strengthening. In its turn, an improved investment environment is a function of the depth of structural reform in the economy. Therefore, such reform is an essential means of economic policy.
6. As is shown by the scenarios considered, structural reform is a factor which provides for economic growth and for the strengthening of the ruble even if external conditions are not too favorable. Amid the stable improvement of the investment environment, fiscal policy ceases to be the key factor of containing capital outflow, making it possible to increase non-interest expenditure without detriment to economic growth and to the real exchange rate.
7. It has been found that due to delayed structural reform in Russia it is impossible to service the foreign debt of this country in full without inadmissible economic and political exposure.
8. The restructuring of foreign debt amid reform makes it possible to take a path of development that would provide a sufficiently high rate of economic growth, increase Federal budget expenditure other than interest and strengthen the ruble.
9. If reform is delayed or proves to be insufficiently effective, the avoidance of an inadmissible fall in investments, increased outflow of capital etc. is only possible through an extremely austere budget policy and a combination of favorable external conditions such as writing off 50% of debt and high oil prices. However, the risk of a focus on implementing this scenario is too high.

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