RUSSIAN FISCAL FRAMEWORK: PAST, PRESENT AND FUTURE. DO WE NEED A CHANGE?

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This study examines Russian public finances system. It provides the description of the main fiscal reforms that were carried out by the Government from the moment of USSR dissolution and allowed to reduce nonrenewable resource dependency of the economy. The study presents the fiscal stabilization analysis. It conducts the fiscal impulse factor analysis as well as the estimation of the degree of the fiscal policy cyclicality for the period of 2000-13. The estimates show that in 2006-08 fiscal policy was procyclical, while over the remaining period it was stabilizing. The study also discusses the fiscal sustainability issues for the period till 2050 under two socio-economic scenarios. The size of necessary fiscal consolidation under the current fiscal strategy is calculated and alternative strategy is investigated.

1 Introduction

Russian public finances system is less than twenty years old. During this period economic conditions and the state of public finances changed substantially several times. As a result of macroeconomic conditions deterioration in 1998 Russian government had to declare itself insolvent. In the succeeding years the government gradually carried out public finances reforms. The following favourable external conditions of the 2000s on the one hand contributed to fiscal policy enhancement, on the other hand made it more dependent on external developments. In order to reduce nonrenewable resource dependency of the Russian economy the government worked out some general fiscal rules. As a result of this policy by the end of the 2000s the state of public finances improved substantially as the Russian government possessed sizeable reserves with small debt liabilities. Still under negative conditions of financial crisis the state of the Russian public finances took a turn for the worse. Thus it seems worthwhile to investigate the efficiency of the Russian fiscal policy by means of stabilizing function and fiscal sustainability analysis.

The remainder of this paper is organized as follows. The second section contains the main facts of the Russian public finances system including brief characteristic of the main fiscal reforms from the moment of USSR dissolution. The third section is devoted to fiscal stabilization analysis. It presents the fiscal impulse factor analysis as well as the estimation of the degree of the Russian fiscal policy cyclicality for the period of 2000-13. The fourth section discusses Russian fiscal sustainability in the medium and long run under two possible socio-economic scenarios. The size of necessary fiscal consolidation under current fiscal strategy is calculated and alternative strategy is investigated. The final section concludes.

2 The evolution of the Russian public finances system

USSR dissolution became a catalyst for moving from planned to market economy and for creating a new public finances system. However, during the 1990s because of a low level of public finances organization and tax discipline the government expenditures were under financed and the

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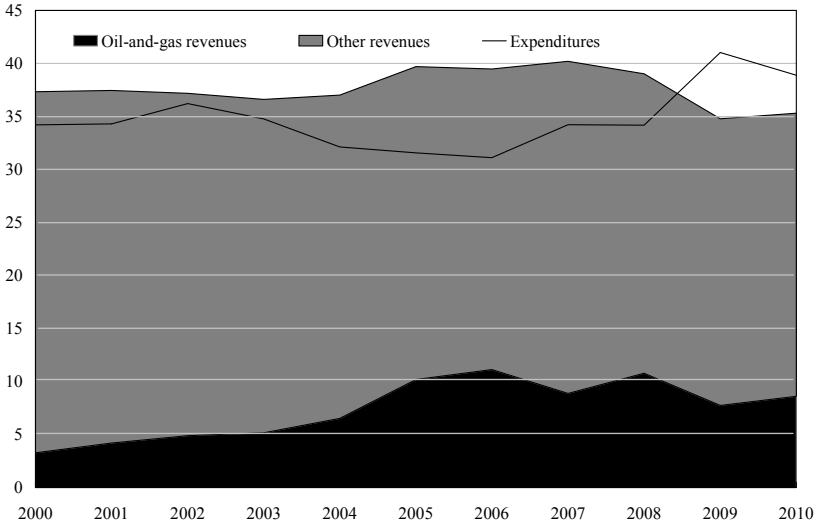
general budget deficit was from 6 to 10 per cent of GDP (MFR, 2008). This led to a significant increase in the public debt level and in 1998 as a consequence of deterioration of external conditions and considerable reduction of budget revenues resulted in the sovereign default. Until the 2000s under conditions of unstable macroeconomic situation accompanied by high inflation as well as the lack of proper budget legislation there was no opportunity to introduce the medium-term budget forecasting.

Figure 1

Dynamics of the Main General Budget Indicators and the Structure of the Revenues, 2000-10
(percent of GDP)



In the beginning of the 2000s reasonable steps to restore the macroeconomic stability were taken, the external government debt was restructured, required budget legislation was created. For example, in 2000 the Budget code of the Russian Federation was introduced. It allowed to set up the rules preventing excessive government spending, growing budget deficit and increasing public debt (MFR, 2008). At the same time as government continued to pursue a policy of annually balanced budget, the volume of expenditures highly depended as before on the volume of revenues, which in its part more and more depended on nonrenewable resources extraction and exportation revenues (see Figure 1). Presumably, the consequence of this was not just the growing dependence of fiscal policy effectiveness on highly volatile revenues but also facing the negative effects of the so-called Dutch disease.[1]

In 2004 the Russian government established Stabilization fund based on the rule of the base oil price (the revenues under the base oil price are used on spending, the difference is saved). Although at that time only oil revenues were related to nonrenewable resource revenues, it allowed to solve the denoted problems to a large extent as well as to contribute to the equal distribution of nonrenewable resource revenues.[2] Moreover accumulated funds allowed to pay off the most of the external public debt in advance making the level of the Russian public debt one of the lowest in the world.

From 2004 the Russian government also introduced the so-called performance budgeting, which allowed to raise substantially the budget expenditures effectiveness as well as to optimize the structure of budget institutions, especially on the regional level.

From 2007 the budget forecasting time-frame was extended from one to three years and in 2008 the budget strategy for fifteen years was worked out.

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[1] For details see, for instance, Kudrin (2007).

[2] For details relating to Stabilization fund see the Budget code of the Russian Federation, Chapter 13.1 (it lost validity from the beginning of 2008).

From 2008 in accordance with international experience a new conception of non-oil-and-gas budget balance was introduced. This conception brought in the following changes. New fiscal rules imply the separate treatment of oil-and-gas and non-oil-and-gas revenues of the federal budget. The concept of nonrenewable resources was widened to include the revenues from gas and oil products. The spending of the oil-and-gas revenues was to be realized through the mechanism of oil-and-gas transfer fixed as a percentage of GDP in the Budget code of the Russian Federation. The established annual value of the oil-and-gas transfer as well as the limit value of the non-oil-and-gas deficit was based on the estimated long run dynamics of budget indicators. The difference between these two values could be covered by borrowings and/or other sources. Also in accordance with the new concept the Stabilization fund was divided in two new funds: Reserved fund and National wealth fund. The task of the Reserved fund is to minimize the negative impact on the level of government spending of a possible sudden oil price fall while the aim of National wealth fund creation is to save up funds for future generations and to maintain the level of the pensions provisions.[3] New fiscal rules based on the long run socio-economic guiding lines were introduced to solve the problem of the Russian long-run fiscal sustainability. The period of 2008-10 was established as a transitional period (MFR, 2006).

At the end of 2009 because of the necessity to soften substantially current fiscal policy stance in order to cope with crisis consequences the use of fiscal rules was temporary stopped. From 2010 the Russian government has an intention to tighten gradually its fiscal policy in order to return after the transitional period to mentioned fiscal rules.[4]

It is important to note, that the financial crisis consequences revealed the benefits of using the fiscal rules on the nonrenewable resources revenues utilization. Under conditions of substantial decrease of the budget revenues, particularly of the oil-and-gas revenues, sovereign funds accumulated in 2004-08 allowed not just to maintain the level of the government expenditures but also to implement sizeable stimulative fiscal measures almost without the necessity to increase the level of public debt.

3 Fiscal stabilization

3.1 Theoretical aspects

The budget balance is one of the most appropriate indicators for measuring the macroeconomic effects of fiscal policy among those that can be calculated without the use of empirical estimation (Blanchard, 1990). A change in the budget balance, which is called fiscal impulse, is an important indicator to characterize stabilization function of the public finances (see, for instance, ECB, 2009).

The main components of the overall budget balance are cyclical and structural as well as net interest payments. As Russian budget revenues depend considerably on oil-and-gas proceeds, we examine separately oil-and-gas and non-oil-and-gas parts of the budget.

The net interest payments are the difference between interest earnings and interest expenditures. In the Russian general budget interest earnings can be defined as the sum of interest earnings on the Russian government credits and return on the budget funds, including the sovereign funds while interest expenditures are the funds used for debt service.

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[3] For details see the Budget code of the Russian Federation, chapter 13.2.

[4] Initially it was planned to return to the established fiscal rules in the beginning of 2013. In the second half of 2010 one-year extension (probably not the last one) was implemented.

The cyclical component of the non-oil-and-gas budget includes the elements of the budget that depend directly on the changes in economic activity. They raise (reduce) taxes and lower (increase) government expenditures at the time of economic upswing (downturn). In the Russian general budget this component comprises major budget revenues as well as a small part of budget expenditures, such as unemployment benefits.[5] We refer to the changes in the cyclical component of the non-oil-and-gas budget as automatic stabilizers.

The structural component of the non-oil-and-gas budget is the elements that depend not on the changes in economic activity but on the discrete government's decisions. The special part of this component is anti-crisis measures. In the Russian budget system the structural component of the non-oil-and-gas budget comprises all other non-oil-and-gas revenues and expenditures. We refer to the change in the structural component of the non-oil-and-gas budget as discretionary measures.

Although in theory the oil-and-gas budget should contain all revenues and expenditures related to the oil-and-gas sector, we follow the Budget code of Russian Federation defining it as the respective taxes on extracting activities and customs duty.[6] Their size depends on the resources production and export volume, the level of prices and changes in legislation. Production and export volumes as well as changes in legislation are taken to be the part that is under control of the authorities. Taking into account high correlation between oil and gas prices it is possible to divide the oil-and-gas revenues on structural and cyclical components by using the base oil price. Those revenues that are below the base oil price determine the structural component, while the revenues that result from the deviation from the base oil price show the cyclical component of the oil-and-gas revenues (as in Vladkova-Hollar and Zettelmeyer, 2008).

Therefore, fiscal impulse (*FI*) as the changes in overall general budget balance components (*OB*) can be calculated in the following way:

$$\begin{aligned} FI &= -\Delta OB = -(\Delta NINT + \Delta NOG + \Delta OG) = \\ &= -(\Delta NINT + \Delta NOG_C + \Delta NOG_S + \Delta OG_C + \Delta OG_S) \end{aligned} \tag{1}$$

where *NINT* is the net interest payments; *NOG* is the non-oil-and-gas primary balance; *OG* is the oil-and-gas revenues; NOG_C is the cyclical component of the non-oil-and-gas budget; NOG_S is the structural component of the non-oil-and-gas budget; OG_C is the cyclical component of the oil-and-gas revenues and OG_S is the structural component of the oil-and-gas revenues.[7]

3.2 Methodology

The cyclical and structural components of the non-oil-and-gas budget were calculated by using the methodology of Fedelino *et al.* (2009). The cyclical component was estimated as:

$$NOG_C = \sum_{i=1}^{N} T_i \varepsilon_{T_i} gap \qquad i=1\ldots N \tag{2}$$

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[5] As there is no available data on expenditures that depend on the changes in economic activities as well as because their share in the total expenditures is insignificant, we do not model them in this study.

[6] Although in theory several other earnings such as the part of profit taxes and excises are related to the oil-and-gas revenues, it is impossible to make such calculations because of the lack of the required data. The data on the volume of budget expenditures related to the oil-and-gas sector are also not available. Moreover these expenditures are insignificant. We therefore do not model them explicitly.

[7] Here and hereinafter the components of the fiscal impulse are in per cent of GDP.

where T_i is the nominal values of the general budget revenues that depend on the changes in economic activity; ε_{T_i} is the elasticity of the type of revenue *i* with respect to the output gap and *gap* is the output gap.[8] The output gap was estimated by Kalman filtering in the context of Quarterly projection model (QPM) of the Bank of Russia. The elasticity of the type *i* with respect to the output gap was calculated in the following way:

$$\varepsilon_{T_i} = \varepsilon_{T_i,TB_i} \cdot \varepsilon_{TB_i,y} \tag{3}$$

where ε_{T_i,TB_i} is the elasticity of the revenues with respect to the tax base and $\varepsilon_{TB_i,y}$ is the elasticity of the tax base with respect to the output gap.

The value of the elasticity of the revenues with respect to the tax base depends on the tax rate scale (in case of proportional taxation the elasticity is equal to 1; in case of progressive taxation is larger than 1; in case of regressive taxation is less than 1). Social taxes are the only one type of not proportional (regressive) revenues in the Russian budget system. Calculations were made for the period of 1999-2008 excepting the crisis years of 1998 and 2009. The values of nominal GDP and of its components were used as proxy variables for the tax bases.[9] Calculations showed the elasticity value of social taxes equal to 0.86. Other elasticity estimates were close to 1 (1.0-1.1) allowing us to set them equal to unity.

The elasticity of the tax base with respect to the output gap was estimated using the methodology of Girouard and André (2005). Using the data for the period of 2000-08 we estimate the elasticity of wages bill with respect to the output gap equal to 0.4 and the elasticity of the gross profit and total income with respect to the output gap equal to 1.73. The elasticity for GDP was set equal to 1.

The Vladkova-Hollar and Zettelmeyer (2008) methodology was also used to calculate the structural and the cyclical components of the oil-and-gas revenues. The structural component was defined as:

$$OG_S = OG\left(\frac{p^*}{p}\right)^{\gamma} \tag{4}$$

where p^* is the base oil price; p is the actual oil price and γ is the elasticity of the revenues with respect to the oil price.

Following standard practice, we assumed that commodity revenues are proportional to commodity prices and set γ=1.

Following Vladkova-Hollar and Zettelmeyer, we used predicted values as the base oil price. Because of the high volatility of the world oil price as well as for having the opportunity to use comparable values we took the values used in Federal budget laws on the forthcoming years ($p_t^* = E[p_{t+1}]_t$).

As the actual oil price we used the reported annual data on Urals brand oil price for the period of 2000-10 and applied the forecast of the Ministry of economic development of the Russian Federation prepared in January 2011 for the period of 2011-13.

Fiscal impulse components analysis also allows to assess the cyclicality of fiscal policy. Countercyclical or stabilizing fiscal policy requires government to tighten fiscal policy at the time

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[8] Positive output gap is defined as the volume of the actual output level above the potential.

[9] For details see Vasilieva *et al.* (2009).

of economic "overheating" and to ease it at the time of economic downturn. Discretionary measures can show the degree of fiscal policy rigidity while the change in output gap can be used as an indicator characterizing the phase of economic cycle (see, for instance, Abdih *et al.*, 2010, Villafuerte *et al.*, 2010).[10] Consequently, the degree of the fiscal policy cyclicality (k_C) can be calculated as the relation between the structural component of the non-oil-and-gas budget and the change in output gap:

$$k_C = -\Delta NOG_S / \Delta gap \quad (5)$$

Positive value of k_C indicates countercyclicality of the fiscal policy, negative value of k_C shows procyclicality of the fiscal policy and the value of k_C close to 0 means that fiscal policy is neutral.

3.3 Results and resume

Figures 2 and 3 present the Russian general budget balance components structure analysis and fiscal impulse structure analysis for 2000-13 (2000-10 is the reported data, 2011-13 are budget projections). The analysis allowed us to come to the following conclusions.

General budget balance is affected mainly by the structural components. The cyclical component of the oil-and-gas revenues, apart from the crisis year of 2009, had the significant positive impact on budget balance value as actual oil price usually exceeded the base oil price. On the contrary, the cyclical non-oil-and-gas component has relatively weak impact. Also it is necessary to underline the strong negative impact of the net interest payments in the first half of the 2000s as a result of large sovereign debt.

Main components affecting the fiscal impulse are discretionary measures and the changes in the cyclical component of the oil-and gas revenues. Automatic stabilizers are relatively small in Russia what can be explained by proportional taxation and relatively small size of the government. Over the reviewed period the increases of the budget balance value resulted mainly from the growth in the oil-and-gas revenues, while the decreases were the consequence of the discretionary measures. The only exception is substantial tightening of fiscal policy in 2004 resulted from the contraction of government expenditures. In 2008-10 discretionary policy was mainly determined by the anti-crisis measures. In the medium run the reversed situation is expected. The amount of the oil-and-gas revenues in per cent of GDP and their role in the budget balance dynamics is expected to decline while the planned fiscal policy tightening will take place by means of the discretionary measures.

The dynamics of net interest payments was mainly positive during the reviewed period. This was a result of the improvement in the Russian public finances from the early 2000s due to the contraction of the sovereign debt and the accumulation of the reserves mainly in the oil-and-gas funds. In the following years the need to finance the budget deficit will considerably reduce the reserves and increase the sovereign debt what will adversely affect the dynamics of the net interest payments.

Figures 2 and 3 show that financial crisis consequences forced to ease noticeably the fiscal policy and to abandon established fiscal rules. The return to these fiscal rules would take time and demand efforts from the authorities (for instance, to exit from the sizeable anti-crisis measures).

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[10] The level of output gap can also be used as the indicator of the economic cycle phase (see, for instance, Alberola and Montero, 2006), although we find the estimations of the direction of changes in output gap more reliable.

Figure 2

General Budget Balance Decomposition for 2000-13
(percent of GDP)

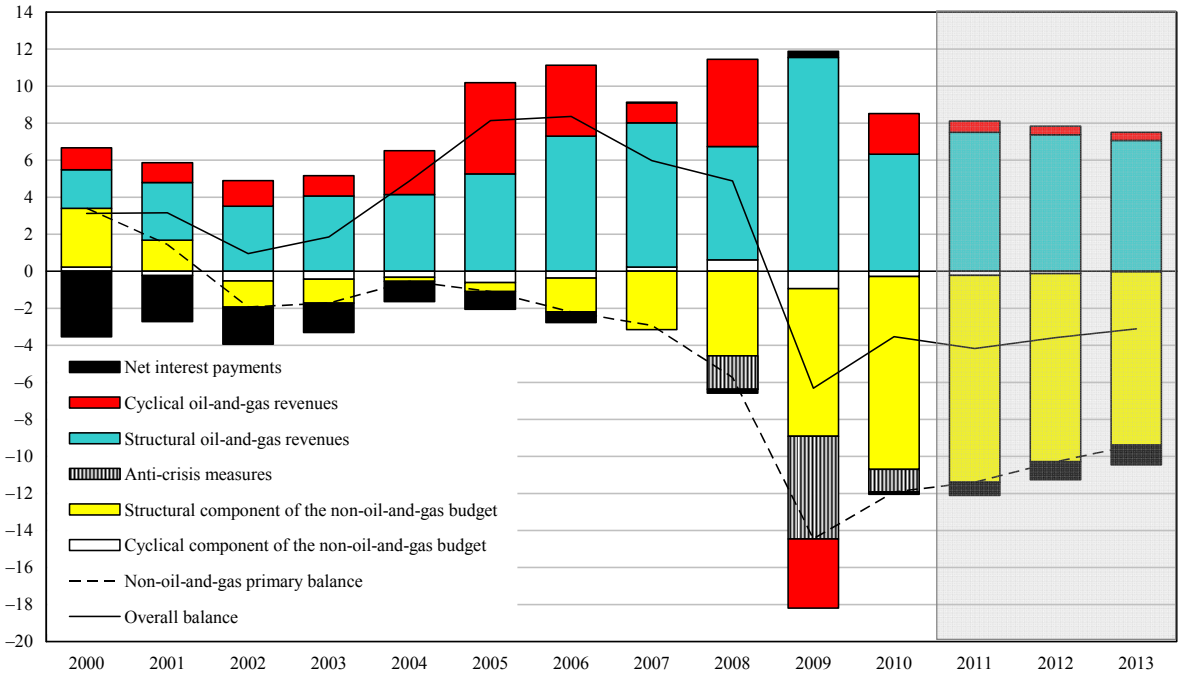
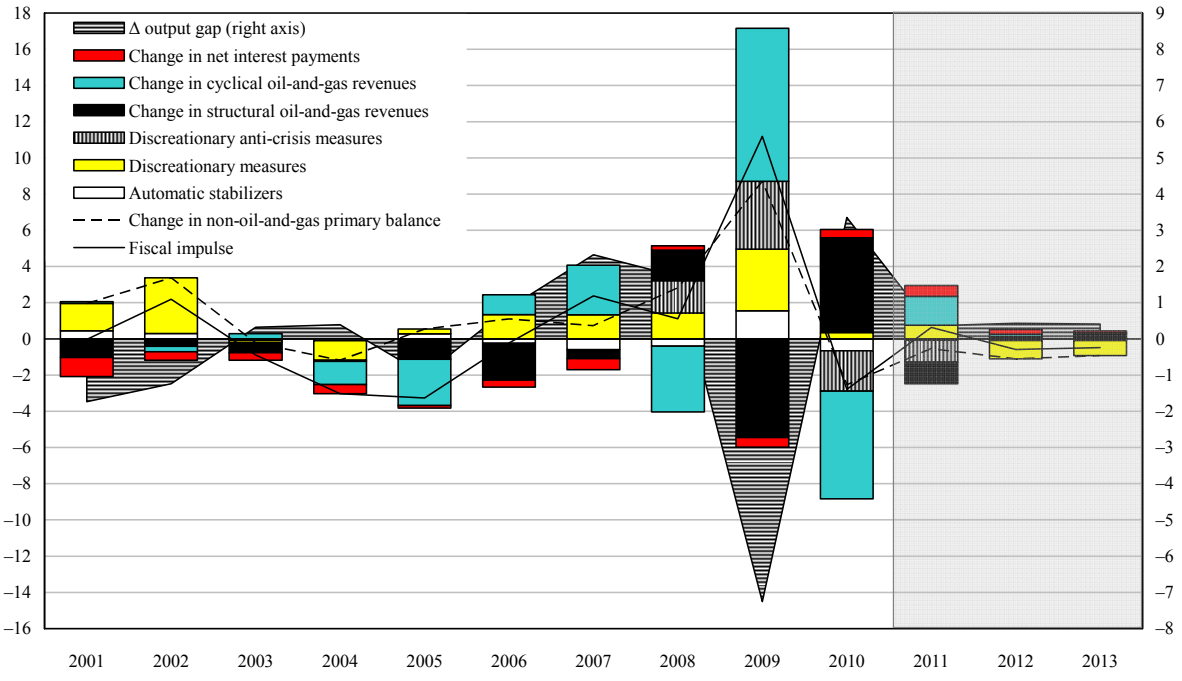


Figure 3

Fiscal Impulse Decomposition for 2001-13
(percent of GDP)



Also it is important to note that calculations show small decline of the budget balance value in 2011. However this is the result of the fact that in 2010 the actual value of the budget balance substantially exceeded its projection value, partly because of the more favourable economic conditions. Accordingly it is possible to assume that the government would revise the budget projections for 2011-13 towards lower budget deficit indicator.

Figure 4

Russian fiscal policy cyclicality in 2001-13

(percent of potential GDP)

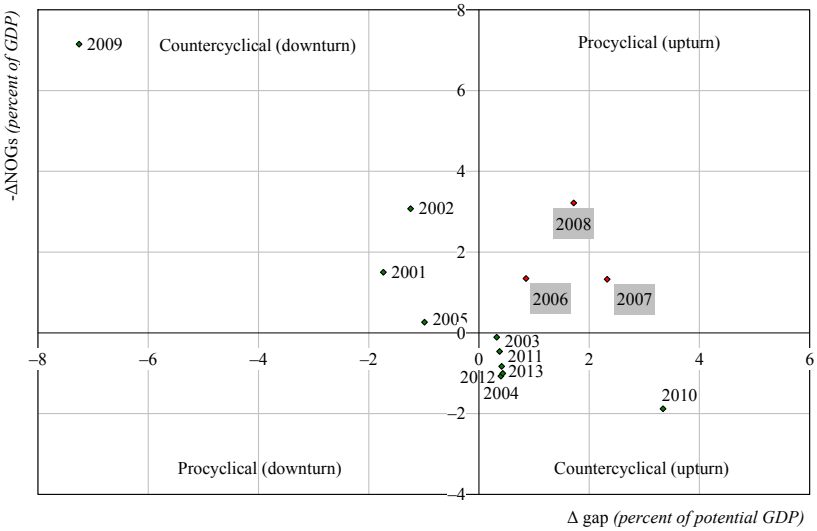


Figure 4 presents the estimation of the degree of the Russian fiscal policy cyclicality in 2001-13.

Calculations show that Russian fiscal policy was stabilizing in 2001-05. On the contrary, in 2006-08 it was procyclical as discretionary measures contributed to economic "overheating". In 2009 fiscal policy easing was justified and stemmed from the need to mitigate the impact of the financial crisis on the Russian economy. The countercyclical fiscal policy is expected to continue till 2013. As Russia is exiting from the crisis and switching to the sustainable development the government is expected to cut discretionary policy measures.

4 Fiscal sustainability

4.1 Theoretical aspects

Sustainability has become one of the most widely used aspects in the fiscal policy assessment. In general by sustainable fiscal policy is meant the policy that can be pursued without any negative impact on the consumption of future generations. Although there is no generally accepted definition of fiscal sustainability (see, for instance, definitions by FASAB, IPSASB, OECD etc.), usually sustainable fiscal policy is illustrated as a standard equation of intertemporal budget constraint (see, for instance, Krejdl, 2006). In the Russian case one part of this equation can be presented as the present value of future budget balances while another one as the difference between the values of government net worth on a given and initial moment of time:[11]

$$\sum_{t=1}^{T} \frac{OB_t}{(1+y)^t} = \frac{N_t}{(1+y)^t} - N_0 \qquad (6)$$

[11] We define government net worth as the difference between net overall reserves and net overall debt. The use of this indicator instead of the common indicator of public debt is explained by considerable reserves in national and foreign currency possessed by the Russian government that can be used on the deficit financing and should be taken into account.

where OB_t is general budget balance of the year t; y is the nominal GDP growth rate; N_0 is the government net worth on initial moment; N_t is the government net worth on a given moment t;[12] T is the projection horizon (in special case $T=\infty$).

Fiscal sustainability analysis implies invariability of the current legal and political framework, *i.e.*, current policies.[13]

The choice of the projection horizon depends on the aim, restrictions and the type of the economy. The longer the period, the more future events are captured, but the less precise and potentially less verifiable the assumptions become.[14] The uncertainty is perhaps particularly high in the case of the economy highly dependent on revenues from the nonrenewable resources.

The fiscal sustainability analysis can be carried out both for the case of the ability for the authorities to have negative value of the government net worth ($N_t<0$) and for the case of no such ability ($N_t=0$). The first case on the conditions that the projection horizon is finite and N_t is on the level of prudent indebtedness is explained by the fiscal policy expansion. The second case is the analogue of no Ponzi game condition.[15] Many regional unions and individual countries adopted the debt ceilings (see Topalova and Nyberg, 2010, p. 8). Although such values should be considered rather as possible reference points they can be used in the analysis as fiscal sustainability criterions.

In order to meet (6) governments develop special fiscal rules. Nowadays because of the negative impact of the financial crisis many countries had to stop for a while the use of these rules (for example, on a period till 2013 the member-countries of the European Economic and Monetary Union temporary stopped the use of Stability and Growth Pact regulations providing a reference value for the annual budget deficit and the national debt). Some countries have developed new fiscal rules or such process is under way (for details see, for instance, IMF, 2010, p. 50). These rules should provide guidance to fiscal policy making and set constraints during the consolidation path.

The main task of the fiscal sustainability analysis is to reveal the risks of the necessity of any major interventions in tax and spending patterns and to estimate the scale of such interventions. Special fiscal sustainability indicators are used for such purpose. Basing on the results obtained for the long run it is possible to determine the tasks of the fiscal policy for the short and medium run.

4.2 Methodology

4.2.1 Initial conditions and prerequisites

Although in accordance with the Russian legislation the oil-and-gas revenues are entirely collected on the federal level and the authorities of different levels of the Russian budget system are independent in the budgetary process decisions and are not responsible for each other's liabilities, we study fiscal sustainability problem for the Russian general budget. Potentially these results can be used for decision making on each level of the Russian budget system.

In this study we assume the invariability of current policies, including all the decisions that have already authorized. So, for the period till 2013 expenditures are assumed in accordance with the budget legislation. Moreover, to avoid any discontinuous hikes of the estimated indicators we assume transitional period of 2014-15, *i.e.*, the budget rules would be fully employed from 2016.

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[12] Here and hereinafter the indicators are in per cent of GDP.

[13] For a discussion of definition of the current policies see, for instance, Gokhale (2008).

[14] See Gokhale (2008) for a detailed discussion of the projection horizon choice problem.

[15] O'Connell and Zeldes (1988) proved that on an infinite time horizon none of a finite number of the rationally acting economic agents holds government bonds infinitely long.

The period until 2050 was chosen as the projection horizon. This is explained by the desire to consider the limited nature of the oil-and-gas resources. In accordance with the estimates of the Russian Ministry of finance the maintenance of current oil extraction level would lead to the exhaustion of its proved reserves approximately in 40 years (www.minfin.ru). However, as at present the annual growth of the resources reserves is comparable with the extraction volumes and in accordance with the Guidelines for the fiscal policy in 2011 and for 2012 and 2013 the same tendency is foreseen for the medium run, it is possible to assume that the current oil extraction level could be maintained after 2050 as well. Consequently, there is an uncertainty about the ability to extract oil after 2050, which increases with the projection horizon's extension. In any case, the period till 2050 can be considered as a good example to investigate any possible risks for the Russian long run fiscal sustainability. At the same time in this study we attempt to make rough estimates of the Russian fiscal sustainability after 2050 as well.

We examine two scenarios differed by initial conditions. Both scenarios are based on the variants of socio-economic development forecast prepared by the Russian Ministry of economic development in January 2011. The so-called resource-dependent scenario assumes the maintenance of the high dependency on the oil-and-gas extraction and exporting, while the so-called innovative scenario assumes the balanced development of the national economy sectors. Switching to the innovative scenario should allow to raise the growth rates of the main macroeconomic indicators. Under the innovative scenario the most part of the projection horizon is characterized by the real GDP annual growth of 4-5 per cent, while under alternative scenario by 3-4 per cent growth. Anyway the level of the prices for the oil and the gas as well as for other exported goods would continue to influence significantly the socio-economic development of Russia. Both scenarios assume the same level of oil prices and substantial oil price cyclical fluctuations every eight-ten years.

4.2.2 Main fiscal indicators calculation

When calculating the value of the government net worth it is important to determine which assets and liabilities should be taken into account. Economic theory allows to use all financial and non-financial assets held by the government to finance the budget deficit. But in practice non-negotiable financial assets and non-financial assets are difficult to value as well as to use for repaying debt.[16] That is why in the study for this purpose we use only liquid and negotiable financial assets.[17] Basing on this principle the net overall reserves are defined as the government funds in national and foreign currencies at the Bank of Russia and credit institutions with the deduction of the corresponding liabilities. Defining the net overall debt in a similar manner we do not include the value of the quasi-sovereign debt, *i.e.*, the debt of the corporations partly or fully owned by state. The net overall debt is defined as all government net liabilities. However, as according to the international rating agencies estimation the substantial part of the foreign countries debt to the Russian Federation is regarded as a bad debt, its value is taken with the conventional coefficient of 0.2.

The safe value of the Russian government net worth indicator was determined basing on the estimates for the public debt indicator made by IMF and the Russian Ministry of finance experts. IMF studies show that in the developing countries the effectiveness of fiscal policy as a countercyclical tool is smaller with the public debt above 25 per cent of GDP (IMF, 2003,

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[16] For a discussion of the government assets and liabilities that can be used for the public finance sustainability analyzing see Krejdl (2006).

[17] In accordance with the Russian Guidelines for the fiscal policy in 2011 and for 2012 and 2013, in the medium run revenues from the privatization would be an important source of the budget deficit financing. However, this should be rather considered as the exception to the rule.

IMF, 2008). Reinhart *et al.* (2003) found that a critical value of public debt for countries with a history of default is 15 per cent of GDP. In accordance with the estimates of the Russian Ministry of finance the critical value for the Russian public debt is 30-40 per cent of GDP (www.minfin.ru). Basing on these estimates we chose the level of (–)30 per cent of GDP as the safe level of the Russian government net worth indicator on the finite time horizon. Hence:

$$N_t \geq -30 \tag{7}$$

The change in the size of the sovereign funds (the Reserved fund and the National wealth fund) depends on the incoming and the outgoing cash flows. The incoming flows are the oil-and-gas revenues above the value of the oil-and-gas transfer as well as the return on the funds, which depends on the yield indicator. We assume that the yield of the funds in 2011 will remain on the level of 2010 (1.5 per cent for the Reserved fund and 2.5 per cent for the National wealth fund), then it will gradually increase by 2015 (up to 2.0 and 3.0 per cent correspondingly) and after that would not change any more. The reason why we expect the increase of the yield during the first half of the 2010s is the prospective creation of the Russian financial agency and the resulting increase in the financial investment efficiency (www.minfin.ru). The outgoing flow is the amount of funds needed to finance the oil-and-gas transfer in case the current amount of the oil-and-gas revenues is insufficient. The change in the size of the sovereign funds also results from the revaluation of the funds in accordance with the existing currency composition.

To forecast the general budget revenues we apply the spreadsheet-based methodology (see, for instance, Keene and Thomson, 2007). This methodology comprises the following phases: determining the nominal revenue for the last available year (2010); its adjusting by removing any known anomalies to establish the true underlying position; applying the forecast growth rates of relevant proxy variables[18] to forecast with the use of the elasticities if required (for the social taxes); adjusting the forecasts for anomalies such as tax policy changes, including any judgmental forecasting adjustments that may be considered appropriate. We do not assume any additional increases in tax collection for the medium and long run because of its uncertainty.

The value of the general budget expenditures is determined by the fiscal rules, *i.e.*, by the value of the revenues used on spending as well as the borrowings ability.

4.2.3 Main features of the current strategy

The current fiscal strategy is based on the fiscal rules stated in the Budget code of the Russian Federation. The use of these rules was temporary stopped. They are to be fully employed again from 2016.

In compliance with the current strategy of public finances total revenues of the Russian general budget (R_t) can be presented as the sum of total revenues of the regions and the extra-budgetary funds ($NOGR_t^{1-f}$), the non-oil-and-gas revenues of the federal budget ($NOGR_t^{f}$), the oil-and-gas revenues (MR_t) and the return on the sovereign funds (FR_t):

$$R_t = NOGR_t^{1-f} + NOGR_t^{f} + MR_t + FR_t \tag{8}$$

General budget total expenditures (E_t) are financed by the sum of total revenues of the regions and the extra-budgetary funds, the non-oil-and-gas revenues of the federal budget, the

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[18] We use the proxy variables from the forecast of the Russian Ministry of economic development made in January 2011. This forecast takes into account all prospective changes in Russian governmental policy.

oil-and-gas transfer[19] (Tr_t) as well as the internal and external borrowings on the federal level (B_t^f) and other levels of the budget system (B_t^{1-f}) within the limits fixed in the legislation:

$$E_t = NOGR_t^{1-f} + NOGR_t^f + Tr_t + B_t^f + B_t^{1-f} \quad (9)$$

In accordance with the Budget code of the Russian Federation the size of the oil-and-gas transfer is fixed as 3.7 percent of GDP ($Tr_t = 3.7$), while the size of the non-oil-and-gas deficit[20] is not allowed to be more than 4.7 percent of GDP ($NOGB_t = 4.7$). The difference between the values of these indicators can be covered by the borrowings. In this study we use two more prerequisites. The first one is the balanced budgets of the regions and the extra-budgetary funds at the expense of interbudget transfers from the federal level ($B_t^{1-f} = 0$). The second one is the maximum value of the non-oil-and-gas deficit ($B_t^f = B_t = 1{,}0$).[21]

We examine this strategy's conformance to (6)–(7).

4.2.4 Fiscal sustainability indicators

A good indicator of fiscal sustainability is one that sends clear and easily interpretable signals when current policy appears to be a rapidly growing debt-to-GDP ratio (Blanchard *et al.*, 1990) (in our case government net worth-to-GDP ratio) as well as allows to indicate the magnitude of the adjustment needed, *i.e.*, the gap between the sustainable level of the fiscal variable and its level under current policies.

The set of exploitable indicators depends on the current policies and the necessity to conform to the condition (7). As it was already mentioned above, the Russian budget can be divided on the oil-and-gas and the non-oil-and-gas parts. Spending of the oil-and-gas revenues is regulated by the value of the oil-and-gas transfer in per cent of GDP determined by the purpose of equal distribution of these revenues during the period of nonrenewable natural resources extraction (www.minfin.ru), in our case till 2050. The corresponding sustainability indicator, or the oil-and-gas gap (*OG_gap*), can be determined as the difference between the level of the oil-and-gas transfer allowed to reach this purpose (Tr^*) and the level stated in the legislation (Tr):

$$OG\_gap = Tr^* - Tr \quad (10)$$

The ability to spend the funds exceeding the value of the non-oil-and-gas revenues, *i.e.*, the net borrowings[22] in per cent of GDP, determines another part of the budget. Thus, the sustainability indicator for the non-oil-and-gas part of the budget, or the non-oil-and-gas gap (*NOG_gap*), can be determined as the difference between the sustained level of the net borrowings (B^*) allowing to conform to the condition (7) and the level according to the legislation and the prerequisites made above (B):

$$NOG\_gap = B^* - B \quad (11)$$

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[19] Oil-and-gas transfer represents the oil-and-gas revenues used on spending in the corresponding year.

[20] Non-oil-and-gas deficit is defined as non-oil-and-gas revenues minus total expenditures.

[21] It should be noted that these prerequisites are close to the facts. In accordance with the Guidelines for the fiscal policy in 2011 and for 2012 and 2013 the aggregate deficit of the regions and the extra-budgetary funds would decrease gradually from 0.6 per cent of GDP in 2011 to 0.2 per cent of GDP in 2013. In 2010 the corresponding indicator was positive (0.5 per cent of GDP).

[22] Here and thereafter we define the net borrowings as the funds above the oil-and-gas transfer value that can be used on non-oil-and-gas deficit financing.

To calculate the budget gap (*BUDG_gap*) we should sum up the oil-and-gas and non-oil-and-gas gaps:

$$BUDG\_gap = OG\_gap + NOG\_gap \quad (12)$$

The budget gap allows to assess the degree of the fiscal sustainability. Negative budget gap shows the necessity to adjust the current policies.

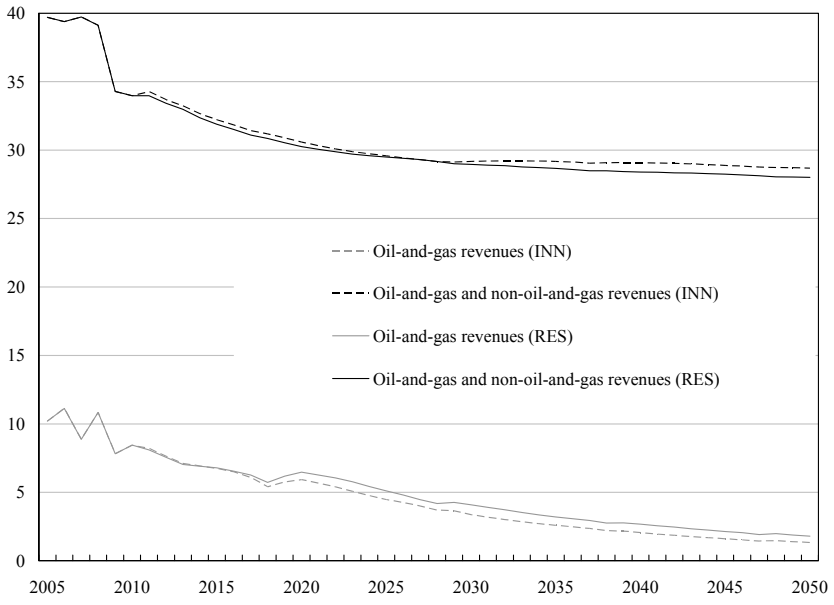
4.3 Results and estimates for the current strategy

4.3.1 General budget revenues forecast

Our estimates show that in the long run the value of the oil-and-gas revenues in per cent of GDP will go down, while the value of the non-oil-and-gas revenues in per cent of GDP should rise. But as the growth rate of the non-oil-and-gas revenues is smaller than the decline rate of the oil-and-gas revenues, the sum of both indicators would decrease. Figure 5 represents this dynamics. Depending on the scenario of socio-economic development the value of the oil-and-gas revenues could fall substantially from 8.6 per cent of GDP in 2010 to 1.3-1.8 per cent of GDP in 2050, the value of the non-oil-and-gas revenues would increase from 26.0 per cent of GDP in 2010[23] to 26.2-27.3 per cent of GDP in 2050 and the sum of both indicators could decline from 34.6 per cent of GDP in 2010 to 28.0-28.7 per cent of GDP in 2050. Thus, over the period of 2010-50 the overall decrease of the oil-and-gas revenues and of the sum of both indicators would amount to 6.8-7.3 and 5.9-6.6 percentage points of GDP correspondingly.

Figure 5

Dynamics of the General Budget Revenues in 2005-50 for Innovative (INN) and Resource-dependent (RES) Scenarios
(percent of GDP)



Considerable reduction in per cent of GDP of the oil-and-gas revenues, especially in 2010-20s, accounts for lower growth rates of the resources production and export volumes and the level of their prices in comparison with GDP growth rate as well as for national currency appreciation. The rise in per cent of GDP in the non-oil-and-gas revenues can be explained by the increase in the share of non-oil-and-gas GDP in total GDP value.

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[23] In accordance with the legislation in 2010-13 non-oil-and-gas revenues include the return on the sovereign funds.

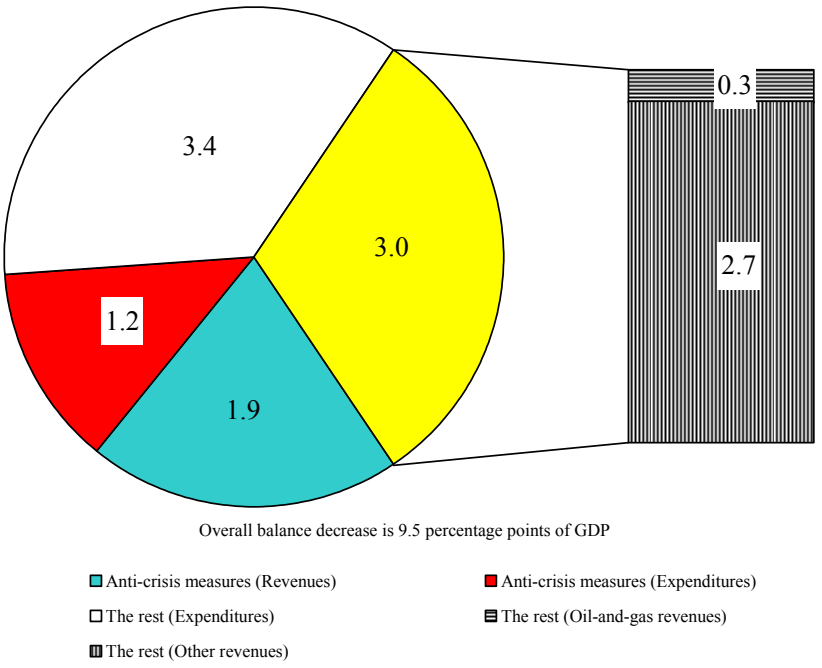
The return on the sovereign funds depends on the chosen strategy. It will be discussed later.

4.3.2 Deterioration during the financial crisis

During the financial crisis the budget balance indicator decreased substantially from the stable proficit to the sizeable deficit. It was the result of the direct financial crisis effects, including the deterioration of external conditions, as well as the changes in the fiscal policy. For example, the pension reform carried out in 2009-10 increased the level of budget spending approximately by 2.5 percentage points of GDP. Mainly, however, fiscal policy easing was the result of the sizeable fiscal stimulative measures implemented in 2008-10.[24] In accordance with the preliminary data, the general budget balance in 2010 in comparison with the pre-crisis year of 2007 decreased by 9.5 percentage points of GDP. Figure 6 shows the composition of the decrease.

Figure 6

Composition of General Budget Balance Decrease in 2007-10
(percent of GDP)



Although fiscal policy easing was justified, it led to the serious fall of the government net worth value. At the end of 2010 as a result of the budget deficit financing the government net worth value amounted to 1.3 per cent of GDP, while during the 2000s it increased gradually: became positive in 2006 and reached its peak of 12.8 per cent of GDP in 2008.

4.3.3 Estimates for the medium run

The medium-term period till 2015 presumably will be characterized by the transition to sustainable development and the return to the use of the fiscal rules stated in the legislation. This should be achieved by the substantial decrease of the budget expenditures from 38.9 per cent of GDP in 2010 to 31.9-32.0 per cent of GDP in 2015 depending on the scenario of socio-economic development as the result of the use of the program of budget spending efficiency increase (see Figure 7). Russia should return to the positive budget balance in 2015. According to the calculations the general budget balance will rise from (–)4.2 per cent of GDP in 2010 to 0.1-0.4 per cent of GDP in 2015, *i.e.*, by 4.3-4.6 percentage points of GDP. At the same time the

[24] For the comparative analysis of the size and the composition as well as the effect on GDP growth of the Russian fiscal stimulus see Ponomarenko and Vlasov (2010).

Figure 7

Dynamics of the General Budget Expenditures in 2005-50 for Innovative and Resource-dependent Scenarios Under the Current Strategy

(percent of GDP)

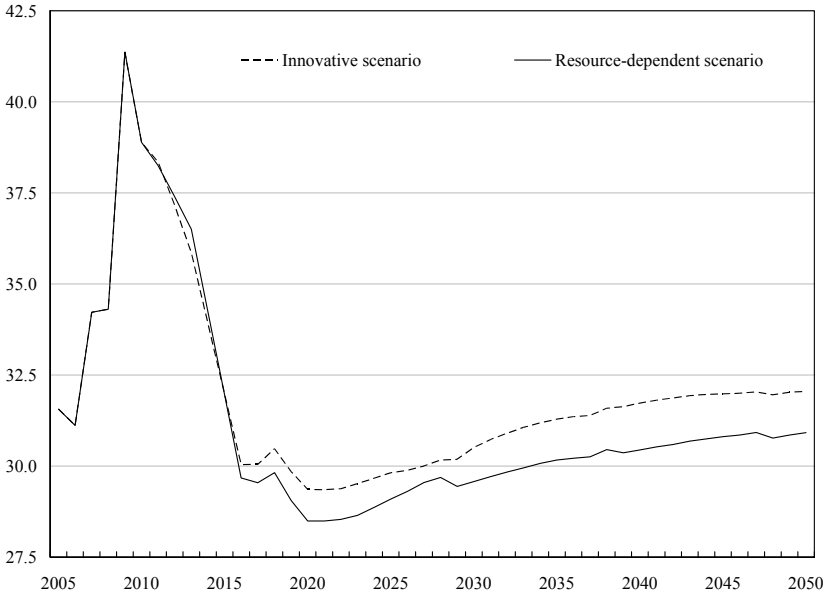
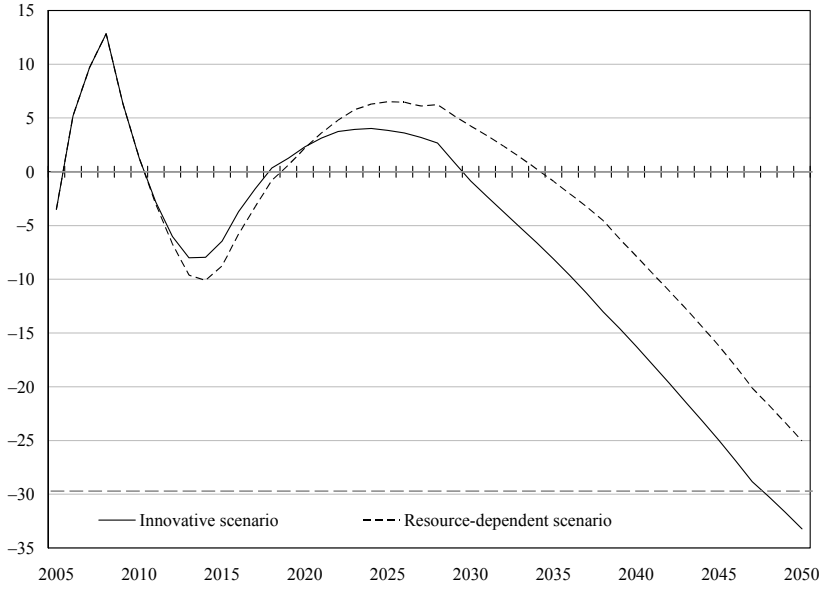


Figure 8

Dynamics of the Government Net Worth in 2005-50 for Innovative and Resource-dependent Scenarios Under the Current Strategy

(percent of GDP)



necessity to finance the budget deficit in the first half of the 2010s will further reduce the government reserves and increase the public debt. It would lead to the decrease of the government net worth down to negative values: from 1.3 per cent of GDP in 2010 till (–)6.5-(–)8.8 per cent of GDP in 2015 (see Figure 8). However, the condition (7) will not be violated. Moreover, the level of the public debt should remain one of the lowest in the world. Even taking into account the possible fiscal risks that would be covered in 4.3.5, it is possible to assert the high degree of the Russian fiscal sustainability and the low risk of the default in the medium run.

4.3.4 Estimates for the long run

In the long-term period, the Russian fiscal policy will presumably be based on the fiscal rules stated in the legislation. In accordance with these fiscal rules and the budget revenues forecast, general budget expenditures depending on the scenario will first decrease to 28.5-29.4 per cent of GDP and then gradually rise up to 30.9-32.0 per cent of GDP by the end of 2050 (see Figure 7).

Our calculations show that the level of the oil-and-gas transfer stated in the legislation will not allow to distribute equally on the projection horizon the oil-and-gas revenues. From 2028 under the innovative scenario and from 2033 under the resource-dependent scenario the government will have to spend the oil-and-gas funds in order to finance fully the oil-and-gas transfer. Depending on the scenario the funds will be fully depleted in 2038 or 2045. Therefore, from this period the government will have to use borrowings of more than 1.0 per cent of GDP to co-finance the non-oil-and-gas deficit. It would lead to the substantial decrease of the government net worth indicator. Under the fiscal rules at the end of 2050 the government net worth will amount to (–)33.2 per cent of GDP in case of the innovative scenario and (–)25.0 per cent of GDP in case of the alternative scenario (see Figure 8).

Thus, on the period till 2050 under the current fiscal rules the condition (7) is maintained in case of the resource-dependent scenario and the deviation is within the reasonable error in case of the innovative scenario. At the same time it should be noted that the value of the government net worth will admittedly continue to decrease after 2050 and will stabilize noticeably below (–)30 per cent of GDP. Moreover, additional fiscal risks should be taken into account. This allows to conclude that the levels of the oil-and-gas transfer and the net borrowings stated in the legislation have to be corrected in order to raise the Russian long run fiscal sustainability.

4.3.5 Additional fiscal risks

There are several fiscal risks that can deteriorate the Russian fiscal sustainability on the medium and long run and, therefore, should be taken into account. The main risks relate to the budget spending. They are caused by the necessity to maintain the fiscal policy efficiency under conditions of coming negative tendencies:

- Considerable increase in the social budget spending. The Russian government has the firm intention to meet fully its social obligations as well as to increase them annually by the rate of no less than the inflation rate. However, with the rate exceeding on average the nominal GDP growth rate (what is observed in the recent years) the social spending will rise as per cent of GDP as well. Moreover, additional risks will create the coming population ageing;
- Substantial increase in the interest expenditures as per cent of GDP and as the share of the overall budget expenditures. The main risk is related to the dynamics of this indicator in the long run, which will depend on the government policy and its ability to restrain the growth of the debt value;
- Rise in the spending related to natural disasters and extraordinary emergency situations. The recent climate developments in Russia allow to suggest that in the long run this part of the budget expenditures could rise greatly;
- Decrease in the budget spending efficiency or increase in the budget expenditures value. In the medium run and in the long run as well the government has the intention to reduce gradually the budget expenditures, mainly by increasing their efficiency (The program of budget spending efficiency increase on a period till 2012, 2010). However, if the steps that will be taken by the authorities do not bring the expected result, partly because of the risks mentioned above, partly because of the coming reforms,[25] the government will have to choose either to target the expenditures value at the expense of the efficiency decrease or to target the efficiency level by increasing the expenditures value. In the second case there will be an additional decline of the government net worth.

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[25] The reforms of the army and of the Ministry of Internal Affairs are planned on the following years. According to the preliminary estimates this would increase the level of the budget spending in comparison with 2010 approximately by 1.0 percentage point of GDP.

The main risk for the budget revenues value is related to the reduction of the prices on exported goods, mainly on oil. Although the government is trying to reduce such risk by using for the budget projections the conservative mineral resources price forecast, the effectiveness of the fiscal policy still highly depends on these revenues. At the same time on the long run as the share of the oil-and-gas GDP in total GDP value decreases this risk loses its significance.

Finally, it is important to emphasize the possibility of a new wake of the crisis. It is mostly dangerous in the short and medium run under the conditions of unsustainable development. This could lead to a new fall in the budget revenues and increase in the budget spending as well as the necessity to implement new fiscal stimulative measures.

4.4 Fiscal sustainability improvement

It is possible to increase the Russian fiscal sustainability both under the current strategy and by moving to alternative strategy. The degree of necessary adjustment can be estimated with the use of fiscal sustainability indicators.

4.4.1 Current strategy adjustment

In order to estimate the fiscal sustainability indicators under the current strategy it is necessary to determine the sustainable levels of the oil-and-gas transfer (*Tr**) and the net borrowings (*B**). For this purpose the following system of the equations based on (6), (8) and (9) under the condition (7) should be solved:

$$\begin{cases} \sum_{t=1}^{T} \frac{MR_t + FR_t - Tr_t - B_t}{(1+y)^t} = \frac{N_t}{(1+y)^t} - N_0 \\ Tr_1 = Tr_2 = \ldots = Tr_T = Tr^* \\ B_t = B_2 = \ldots = B_T = B^* \end{cases} \quad (13)$$

The results show that in order to distribute the oil-and-gas revenues equally during the period till 2050 the value of the oil-and-gas transfer should be set equal to 2.6 per cent of GDP under the innovative scenario ($Tr_{INN}^* = 2.6$) and 3.3 per cent of GDP under the resource-dependent scenario ($Tr_{RES}^* = 3.3$). Therefore, in comparison with the stated in the legislation ($Tr = 3.7$) the value of the oil-and-gas transfer should be decreased by 0.4-1.1 percentage points of GDP ($OG\_gap_{INN} = -1.1$; $OG\_gap_{RES} = -0.4$).

Since the condition (7) is the interval, it allows us to make several estimates for different possible values of the government net worth at the end of 2050. If the government wishes to expand at most its fiscal policy ($N_{2050} = -30$), than the level of the net borrowings could amount to 2.0 per cent of GDP under the innovative scenario ($B_{INN}^{-30*} = 2.0$) and 1.7 per cent of GDP under the alternative scenario ($B_{RES}^{-30*} = 1.7$). Hence, in comparison with the level determined basing on the current legislation and the above made suppositions ($B = 1.0$) net borrowings value can be increased by 0.7-1.1 percentage points of GDP ($NOG\_gap_{INN}^{-30} = 1.0$; $NOG\_gap_{RES}^{-30} = 0.7$).

According to these calculations the budget gap depending on the scenario amount to (–)0.1-0.3 per cent of GDP ($BUDG\_gap_{INN}^{-30} = -0.1$; $BUDG\_gap_{RES}^{-30} = 0.3$). However, as it was already mentioned in 4.3.4., since in this case the value of the government net worth will

admittedly continue to decrease after 2050 and will stabilize noticeably below (–)30 per cent of GDP, this fiscal rule should be corrected.

In case the government chooses the conservative aim for its fiscal policy ($N_{2050} = 0$), *i.e.*, the value of the government net worth by the end of 2050 will return approximately to those of 2010, it has to abstain completely from the net borrowings ($B^0_{INN}* = B^0_{RES}* = 0.0$; $NOG\_gap^0_{INN} = NOG\_gap^0_{RES} = -1.0$).

In this case depending on the scenario the budget gap amounts to 1.4-2.1 percentage points of GDP ($BUDG\_gap^0_{INN} = -2.1$; $BUDG\_gap^0_{RES} = -1.4$).

Figures 9 and 10 represent the dynamics of the general budget expenditures and the government net worth indicators for $N_{2050} = -30$ and $N_{2050} = 0$ for both scenarios of the socio-economic development.

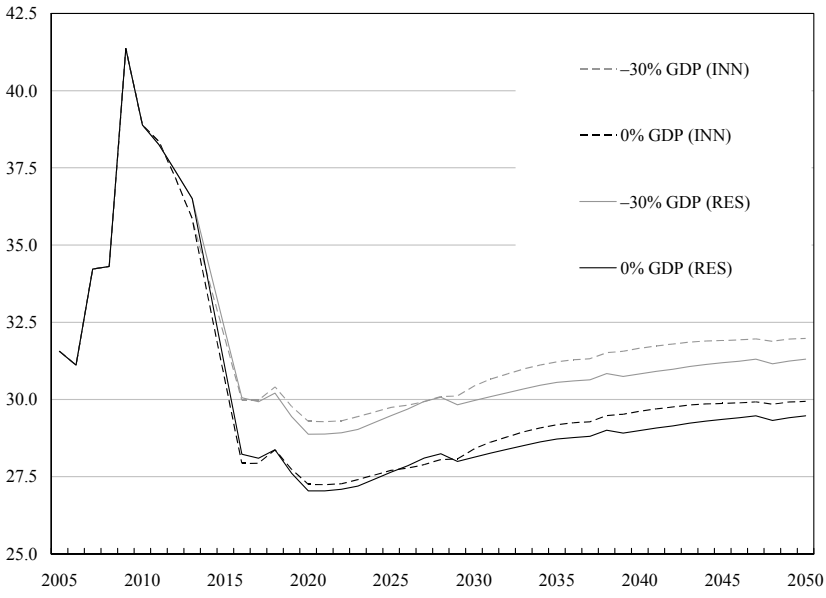
It is possible to surmise that the value of the net borrowings indicator allowing to stabilize in the long run the government net worth on the level above (–)30 per cent of GDP lies within range of those estimated for $N_{2050} = -30$ and $N_{2050} = 0$. At the same time it may be worthwhile to set the most rigid fiscal rule allowing also to take into account the possible fiscal risks covered in 4.3.5.

In the nearest future it seems also worthwhile to switch from the actual budget balancing to the structural budget balancing for the purpose of managing the non-oil-and-gas part of the budget. Targeting the structural budget balance value allows the government to respond automatically to the business cycle as well as to better control the value of the government net worth since it is assumed that in the long run the cyclical component stabilizes symmetrically over the business cycle. Hence, it contributes to the fiscal sustainability more than the current strategy.[26] It

Figure 9

Dynamics of the General Budget Expenditures in 2005-50 for Innovative (INN) and Resource-dependent (RES) Scenarios Under the Current Strategy Adjustment

(percent of GDP)

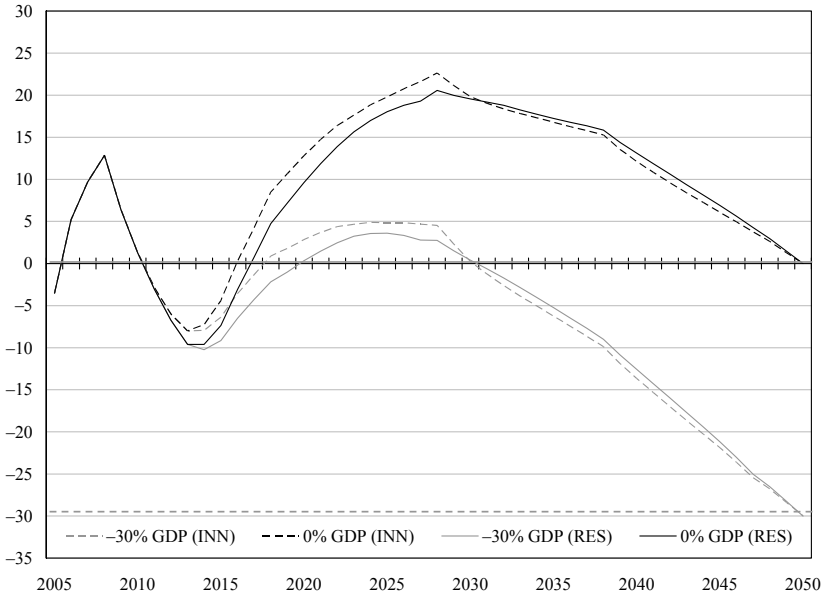


[26] In the post-crisis period several countries introduced structural balance rules. For example, in 2009 in addition to the restrictions imposed by the Stability and Growth Pact Germany adopted its own national rules that will be fully implemented from 2020 after the transitional period. In accordance with these rules the structural deficit is limited to maximum 0.35 per cent of GDP for the central government (Federation) and 0.0 per cent of GDP for the regions (Länder). This gives sufficient scope for automatic

(continues)

Figure 10

Dynamics of the Government Net Worth in 2005-50 for Innovative (INN) and Resource-dependent (RES) Scenarios Under the Current Strategy Adjustment
(percent of GDP)



is necessary to note that the estimates for the current strategy presented earlier in this section are relevant for the strategy based on the structural balance rules.

At the same time it is important to underline that in order to raise the quality of the non-oil-and-gas budget management it is necessary to fully disentangle the oil-and-gas part of the budget, *i.e.*, all the revenues and expenditures related to the oil-and-gas sector of the economy. Besides the taxes on extracting activities and customs duty it is necessary to take account of the respective part of the profit taxes, excises and dividends of the oil-and-gas corporations as well as the budget expenditures related to the oil-and-gas sector.

However, the methodology mentioned above is not suitable enough for the managing of the oil-and-gas part of the budget. The reason is that it does not pay enough attention to the problem of substantial oil-and-gas revenues decrease in the long run. As it was already mentioned in 4.3.1, because of the relatively lower growth rates of the indicators influencing the value of the oil-and-gas revenues in comparison with the GDP growth rate during the period of 2010-50 the oil-and-gas revenues would fall by 6.8-7.1 percentage points of GDP. Under this methodology it would lead to a similar decrease of the budget spending. Moreover, there is also a challenge of the long run base oil price estimation as well as its regular re-calculation as demonstrated by the Russian experience of 2004-07 and described in Section 2. Thus, for the equal distribution of the oil-and-gas revenues on the long run it is worthwhile to continue using the mechanism of the oil-and-gas transfer.

4.4.2 Alternative strategy assessment

We consider the strategy of "full conservation" as the alternative to the current strategy. It is based on the "bird-in-the-hand" rule, which recommends to target the non-oil-and-gas deficit equal to the real return on the assets accumulated in the sovereign funds by saving fully the oil-and-gas

stabilizers to take full effect and to meet 3.0 per cent deficit criterion in normal cyclical downturns. Also this should allow to decrease considerably the public debt value. With a nominal GDP growth of 3.0 per cent p.a. in the long run the value of the public debt will gradually decrease till 60 per cent of GDP by the end of 2020s, till 40 per cent of GDP by the end of 2040s and will be stabilized on the level below 20 per cent of GDP in the long run (Federal Ministry of Finance, 2009).

revenues. Thus, for the estimation we assume that the oil-and-gas transfer is equal to the return on the sovereign funds and there is no necessity for borrowings:

$$\begin{cases} NOGB_t = Tr_t = FR_t \\ B_t^f + B_t^{1-f} = 0 \end{cases} \quad (14)$$

Accordingly, the equation for the budget expenditures (9) can be determined in the following way:

$$E_t = NOGR_t^{1-f} + NOGR_t^f + FR_t \quad (15)$$

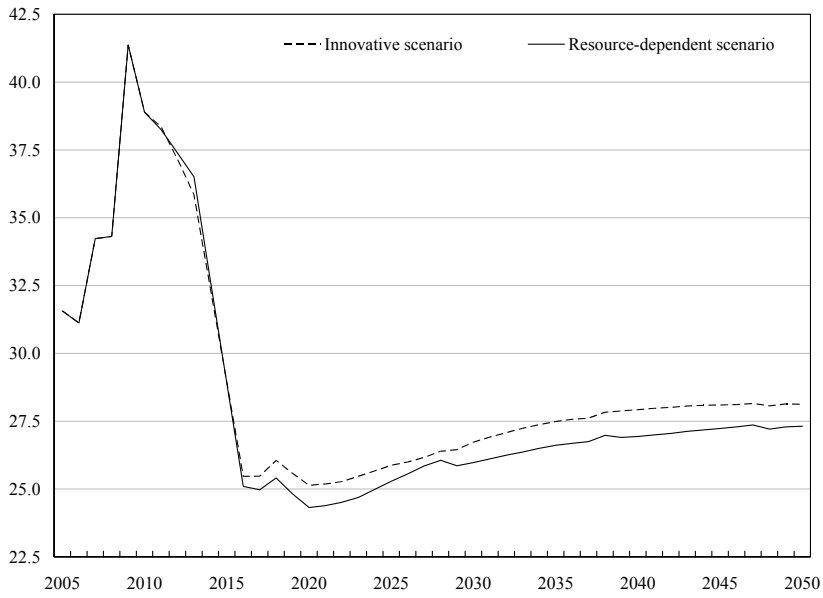
This strategy is an extreme way to deal with the uncertainty about the reserves of oil and gas, their future prices etc. It allows to maintain the long run fiscal sustainability by minimizing the influence on the budget expenditures value and economic development of the possible sudden oil and gas prices fall as well as the scarce resources exhaustion. At the same time the largest possible increase in the oil-and-gas funds allows to get the highest return on the sovereign funds. Since 2001 the "bird-in-the-hand" rule regulates the use of oil revenues in Norway (see, for instance, Bjerkholt and Niculescu, 2004).

According to the calculations this strategy allows to maintain the value of the government net worth highly positive as well as to get the return on the sovereign funds much higher than under the current strategy over the whole projection horizon.

Figure 11

Dynamics of the General Budget Expenditures in 2005-50 for Innovative and Resource-dependent Scenarios Under the "Bird-in-the-Hand" Rule

(percent of GDP)

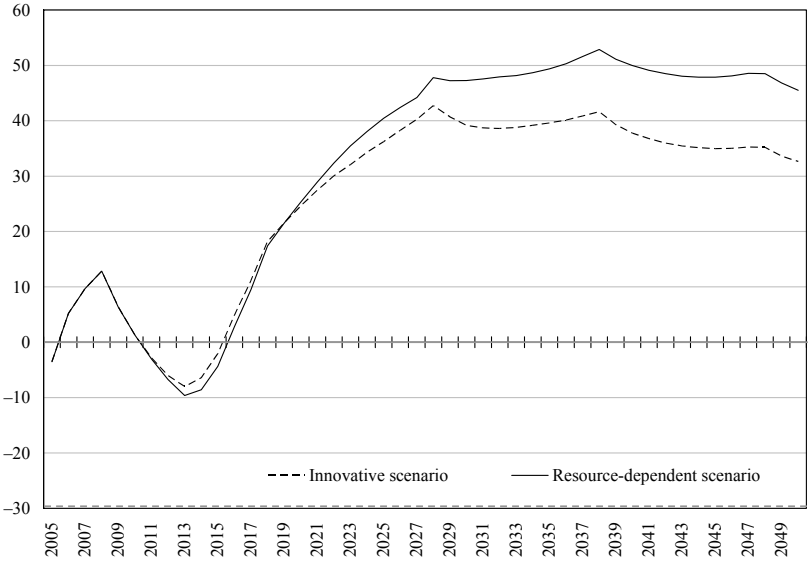


However, switching to this strategy on continuing basis could be found inexpediently. In contrast to Norway, where the size of the oil fund exceeds the GDP value and the return on the sovereign funds is significant (in accordance with the preliminary data for 2010 more than 10 per cent of GDP – www.nbim.no/en/), the size of both oil-and-gas funds in Russia and the annual return are relatively small. These indicators amounted to 7.8 and 0.3 percentage points of GDP at the end of 2010 and depending on the scenario of socio-economic development will not exceed 45-55 and 1.0-1.2 per cent of GDP correspondingly on a period till 2050. Moreover, after reaching its maximum value as per cent of GDP by the end of 2030s the size of the oil-and-gas funds will start

Figure 12

Dynamics of the Government Net Worth in 2005-50 for Innovative and Resource-dependent Scenarios Under the "Bird-in-the-Hand" Rule

(percent of GDP)



to decline as a result of the effect of GDP growth and by the end of the projection horizon will lose approximately 20 per cent of its peak. This tendency obviously will continue after 2050 as well, although the value of the indicator will remain positive. Figure 12 presents the dynamics of the government net worth while Figure 13 shows the government net worth decomposition and the return on the sovereign funds indicator for the innovative scenario.

Switching to the "bird-in-the-hand" rule will also require additional decrease in the budget expenditures value. Depending on the scenario the value of the spending indicator will amount to 25.1-25.5 per cent of GDP in 2016 and 27.3-28.1 per cent of GDP in 2050 (see Figure 11). Under the current strategy the negative budget gap amount to 3.7-4.6 percentage points of GDP in case of the innovative scenario and 3.5-4.6 percentage points of GDP in case of the resource-dependent scenario ($BUDG\_gap_{INN} = (-)3.7 - (-)4.6$; $BUDG\_gap_{RES} = (-)3.5 - (-)4.6$). The budget gaps estimated in section the 4.4.1. will increase correspondingly by 1.6-2.5 percentage points of GDP under the innovative scenario and by 2.0-3.1 percentage points of GDP under the alternative scenario. Moreover, the largest decline of the budget spending and the rise in the budget gap values is expected in the middle of 2010s demanding noticeably greater efforts from the government for the forthcoming budget balance value increase.

Thus, the appropriate way to raise the Russian long run fiscal sustainability is to toughen the current fiscal rules, while switching to the alternative strategy based on the "bird-in-the-hand" rule leads to the additional substantial decrease of the general budget expenditures because of the reduction of the oil-and-gas revenues use efficiency.

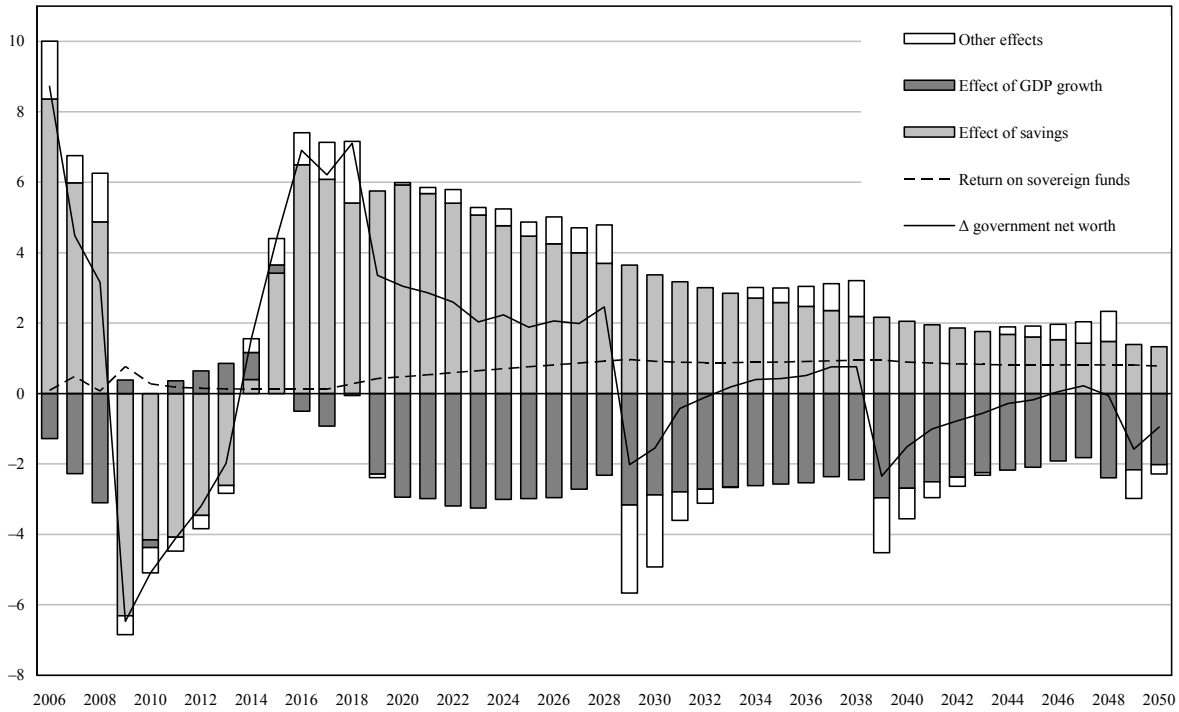
4.4.3 Fiscal consolidation measures

The results of the investigation show that in order to maintain the long run fiscal sustainability the government will have to increase considerably on the medium run the general budget balance. There are several examples in the international practice when the authorities were able to raise substantially the budget balance without a significant negative influence on the economic growth rate (for instance, in Denmark in 1983-86 the value of the primary budget

Figure 13

Government Net Worth Decomposition and Return on Sovereign Funds for 2006-50 Under the "Bird-in-the-Hand" Rule for Innovative Scenario

(percent of GDP)



balance was increased by more than 15 percentage points of GDP (see, for instance, CRFB, 2009; Lilico *et al.*, 2009). The Russian government has several sources of budget expenditures decrease as well as revenues increase. Among the spending measures the following should be noted as most effective:

- most full exit from the anti-crisis measures;
- considerable increase of the budget spending efficiency (for example, approximately by 30 per cent in the public health sector and roads construction, by about 15-20 per cent in defense industry) (www.minfin.ru, www.worldbank.org);
- substantial decrease of the government investment spending (approximately by 20 per cent in real terms on the medium run). This measure developed by the Russian Ministry of finance is explained by the weak effect on the economic growth (www.minfin.ru);
- pensionable age rise. In accordance with the Federal budget act for 2011-13 the interbudget transfer on deficit financing from the federal level to the Pension fund of the Russian Federation would amount to 1.8 per cent of GDP. Without a significant reform of the pension system this negative dynamics will remain and even deepen. According to the forecast of the Russian Ministry of economic development the gradual ageing of the population is predicted for the long run. It will lead to the decrease of the overall population, the able-bodied and the employed citizens (over the period of 2010-30 by 1.9, 12.9 and 9.2 per cent correspondingly). Therefore, the expenditures of the Russian Pension fund should rise while the revenues could fall. With all this going on, the balanced budget of the Pension fund should become one of the main tasks for the government on the medium run. In the absence thereof alternative measures the government

will have to raise the pensionable age even it is unpopular. In order to reduce the so-called political costs this measure should be implemented step-by-step.

There are also several revenue measures that can be implemented:

- Income legalization. According to the data of the Russian Federal state statistics service the share of the Russian shadow economy amounted to 17 per cent in 2007 (www.gks.ru);
- Improvement of the tax administration (on the medium run the evaluated effect is approximately 1 per cent of GDP) (www.minfin.ru);
- The highest possible domestic petroleum refining. It should raise the oil-and-gas revenues of the budget;
- Annual indexation of the social taxes regression thresholds. This should allow to maintain the fixed level of the effective tax rate (the tax proceeds to the tax base ratio) and so, avoid the increase in the extra-budgetary funds budget deficit;
- Annual indexation of the dues and fees rates (such as excises) by no less than inflation rate. It will raise the non-oil-and-gas revenues of the budget;
- Working out the program of budget revenues efficiency increase (by analogy with the corresponding program for the budget spending). This program should aim on finding the inefficient tax remissions as well as studying the possibilities to carry out the tax reforms (for example, moving from the property taxes to the real estate taxation);
- Tax rates increase. Although this measure is unpopular, it can substantially increase the budget revenues. Moreover, such step can be explained by the corresponding use of the tax stimulation at the time of financial crisis (the main measure was the decrease of the profit tax rate from 24 to 20 per cent in 2009 on continuing basis).

In addition to the listed above measures it seems possible to use the revenues from the privatization as the source of budget deficit financing. Furthermore, this usually raises the efficiency of the assets managing.

Thus, on the medium and long run the Russian government has enough opportunities for the decrease in the general budget expenditures and the increase in the revenues. Although there is no enough data to estimate the possible effect of every measure separately, the preliminary calculations show that the use of the most of them should allow to maintain the long run fiscal sustainability in Russia. It would most likely demand of a number of unpopular reforms as well. Also it is important to keep in mind the possible fiscal risks that could demand additional measures.

5 Resume

Since the USSR dissolution the Russian government carried out a number of fiscal reforms aimed at contributing to macroeconomic stability and fiscal sustainability increase. These included adoption of the new conception of the non-oil-and-gas budget balance in 2008 in order to reduce nonrenewable resource dependency of the economy as well as to cope with negative effects of the so-called Dutch disease. The negative crisis consequences of the late 2000s forced to stop temporary the use of the fiscal rules. However, in the medium run the government has an intention to return to these rules after the transitional period.

The fiscal stabilization analysis on the period till 2013 allows to come to the following conclusions. The general budget balance and the fiscal impulse are affected mainly by the structural components as well as by the cyclical oil-and-gas component, while the cyclical non-oil-and-gas component has relatively weak impact. The Russian fiscal policy was countercyclical, *i.e.*, stabilizing in 2001-05. On the contrary, in 2006-08 it was procyclical as

discretionary measures contributed to economic "overheating". In 2009 fiscal policy easing was justified and stemmed from the need to mitigate the impact of the financial crisis on the economy. The countercyclical fiscal policy is expected to continue till 2013. As Russia is exiting from the crisis and switching to sustainable development the government is expected to tighten fiscal policy by cutting the discretionary policy measures.

The fiscal sustainability analysis for the general budget on the period till 2050 draws the following main conclusions. In the long run the value of the oil-and-gas revenues in per cent of GDP will go down, the value of the non-oil-and-gas revenues in per cent of GDP should raise and the sum of both indicators would decrease. Under such conditions the fiscal rules stated in the legislation should allow after the necessary fiscal consolidation of the 2010s to raise gradually the budget expenditures in per cent of GDP in the long run. At the same time depending on the scenario of socio-economic development the value of the government net worth will decrease to (–)25.0-(–)33.2 per cent of GDP at the end of 2050. Since this value will admittedly continue to decrease after 2050 and will stabilize noticeably below (–)30 per cent of GDP as well as several additional fiscal risks in the medium and long run exist, the levels of the oil-and-gas transfer and the net borrowings stated in the legislation have to be corrected. The calculations show that depending on the scenario the level of the oil-and-gas transfer should be decreased by 0.4-1.1 percentage points of GDP. The value of the net borrowings can be increased by 0.7-1.1 percentage points of GDP in case the government wishes to expand at most its fiscal policy and to get the government net worth equal to (–)30 per cent of GDP by the end of 2050. On the contrary, if it chooses the conservative aim for the government net worth of 0 per cent of GDP at the end of 2050 it would have to abstain completely from the net borrowings, so, decrease them by 1.0 percentage points of GDP. It seems worthwhile to set the most rigid fiscal rules.

In the nearest future it seems also worthwhile to switch from the actual budget balancing to the structural budget balancing for the purpose of managing the non-oil-and-gas part of the budget. Targeting the structural budget balance value allows the government to respond automatically to the business cycle as well as to better control the value of the government net worth since it is assumed that in the long run the cyclical component stabilizes symmetrically over the business cycle. At the same time managing the oil-and-gas part of the budget via the mechanism of the oil-and-gas transfer may be more efficient as it contributes more to the equal distribution of the nonrenewable resource revenues.

Switching on continuing basis to the alternative strategy based on the "bird-in-the-hand" rule is inexpedient for the Russian case since it leads to the additional considerable decrease of the general budget expenditures because of the reduction of the oil-and-gas revenues use efficiency.

In the following years the Russian government will have to raise substantially the general budget balance. The preliminary calculations show that for this it has enough sources for the decrease in the general budget expenditures and the increase in the revenues. However, it would most likely demand of a number of unpopular reforms.

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