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Sergey Vlasov

Russian fiscal framework: Past,  
present and future.  
Do we need a change?



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# Contents

Abstract .....	4
1 Introduction .....	5
2 Evolution of the Russian public finance system.....	5
3 Fiscal stabilization .....	7
3.1 Theoretical considerations .....	7
3.2 Methodology.....	8
3.3 Results and summary .....	10
4 Fiscal sustainability .....	13
4.1 Theoretical considerations .....	13
4.2 Methodology.....	14
4.2.1 Initial conditions and prerequisites.....	14
4.2.2 Main fiscal indicators .....	15
4.2.3 Main features of current strategy.....	16
4.2.4 Fiscal sustainability indicators .....	17
4.3. Results and estimates for current strategy .....	17
4.3.1 Forecasted general budget revenues .....	17
4.3.2 Deterioration during the financial crisis .....	18
4.3.3 Estimates for the medium run .....	19
4.3.4 Estimates for the long run .....	20
4.3.5 Additional fiscal risks .....	21
4.4 Improving fiscal sustainability .....	22
4.4.1 Current strategy adjustment .....	22
4.4.2 Alternative strategy assessment .....	25
4.4.3 Fiscal consolidation measures .....	28
5 Concluding remarks.....	30
References .....	32

Sergey Vlasov<sup>1</sup>

## Russian fiscal framework: Past, present and future. Do we need a change?

### Abstract

This study examines the Russian public finance system. It provides a description of the main fiscal reforms introduced by the Government from the moment of dissolution of the USSR, which enabled a reduction in the economy's dependency on nonrenewable resources. In scrutinizing the fiscal stabilization, we conduct a fiscal impulse factor analysis and estimate the degree of the fiscal-policy cyclicity in the period 2000-2013. The estimates show fiscal policy was procyclical in 2006-2008 and stabilizing during the rest of the period. The study also discusses fiscal sustainability issues for the period up to 2050 under two socio-economic scenarios. The size of the necessary fiscal consolidation under the current fiscal strategy is calculated and an alternative strategy is investigated.

Keywords: fiscal framework, fiscal policy, fiscal sustainability, Russia

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The views expressed in this paper are those of the author and do not necessarily reflect those of the Bank of Russia.

# 1 Introduction

The Russian public finance system is less than twenty years old. During this period economic conditions and the state of public finances has been substantially revamped several times. As a result of a deterioration of the economic situation in 1998, Russian government had to declare itself insolvent. In the succeeding years the government gradually carried out public finance reforms. The favorable external conditions that followed in the 2000s contributed to fiscal policy enhancement while at the same time rendering the economy more dependent on external developments. In order to reduce the economy's dependency on nonrenewable resources, the Russian government drafted a set of general fiscal rules. Partly as a consequence of this, the state of public finances improved substantially by the end of the 2000s, as the Russian government possessed sizeable reserves and was not burdened by a large debt. However, the financial crisis left the Russian public finances in a worsened state. For this reason it seems worthwhile to investigate the efficiency of Russian fiscal policy by means of a stabilizing function and fiscal sustainability analysis.

The remainder of the paper is organized as follows. The second section contains the main facts of the Russian public finance system, including a brief characterization of the main fiscal reforms from the moment of USSR dissolution. The third section is devoted to fiscal stabilization analysis. It presents a fiscal impulse factor analysis as well as an estimation of the degree of procyclicality of Russian fiscal policy in 2000-2013. 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 the current fiscal strategy is calculated and an alternative strategy is investigated. The final section concludes.

# 2 Evolution of the Russian public finance system

USSR dissolution proved to be a catalyst for moving from planned to market economy and for creating a new public finance system. However, during the 1990s, because of a poorly designed public finance system and a lack of tax discipline, government expenditures were underfinanced and the general budget deficit amounted to 6 to 10 per cent of GDP (MFR, 2008). This led to a significant increase in the public debt, and in 1998 a deterioration of external conditions and a notable reduction in budget revenues resulted in a sovereign default. At the same time, it is important to note that even as recently as 1997 the level of public debt was not extremely high (slightly over 50 per cent of GDP), albeit it was clearly on unsustainable path. Until the 2000s, an unstable economic situation accompanied by high inflation and a lack of proper budget legislation made it virtually impossible to introduce medium-term budget forecasting.

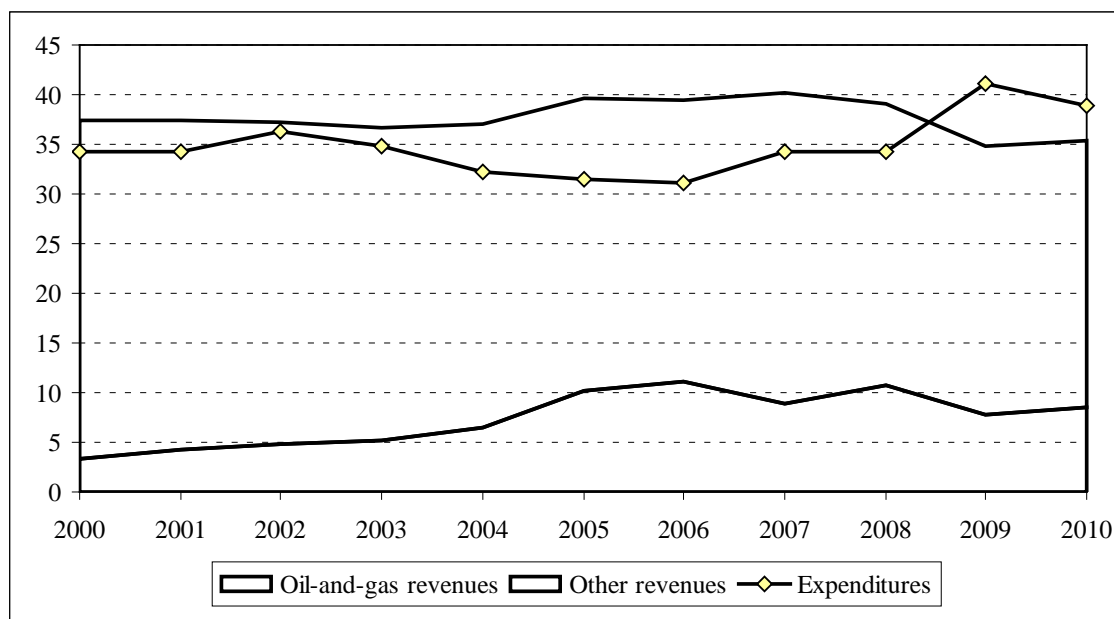
In the beginning of the 2000s reasonable steps were taken to restore economic stability. The external government debt was restructured and the required budget legislation was put in place. For example, in 2000 the Budget code of the Russian Federation was introduced. It allowed for the establishment of rules for preventing excessive government spending and excessive growth of the budget deficit and debt (MFR, 2008). While the government continued to pursue a policy of annually balanced budget, the volume of expenditures continued to be highly dependent on the amount of revenue, which in turn depended increasingly on nonrenewable resource extraction and export revenues (see Figure 1). Presumably, the consequence of this was not just a growing dependence of fiscal policy effectiveness on highly volatile revenues but also facing the negative effects of the so-called Dutch disease.<sup>2</sup>

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<sup>2</sup> For details see, for instance, Kudrin (2007).

In 2004 the Russian government established a stabilization fund based on the base price of oil (revenues from the base oil price are used for spending, the rest is saved). Although at that time only oil revenues were related to nonrenewable resource revenues, this made it easier to tackle the above problems and contributed to a more equal distribution of nonrenewable resource revenues.<sup>3</sup> Moreover the accumulated funds enabled advance repayment of the bulk of the external public debt and made the Russian public debt one of the lowest in the world.

Figure 1 Dynamics of key general budget indicators and structure of revenues in 2000-2010 (% of GDP)



From 2004, the Russian government also introduced the so-called performance budgeting, which enabled it to substantially improve the effectiveness of budget expenditures and to optimize the structure of state institutions, especially on the regional level (for details see, for instance, Belyanova *et al.*, 2007).

From 2007, the budget forecasting time-frame was extended from one to three years and in 2008 a 15-year budget strategy was worked out.

From 2008, in accord with international experience, a new concept was introduced: the non-oil-and-gas budget balance. With this new concept came 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 broadened to include the revenues from gas and oil products. The spending of oil-and-gas revenue was to be realized through the mechanism of the 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 on 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 borrowing and other sources. Also in accord with the new concept, the Stabilization fund was divided into two new funds: Reserve fund and National wealth fund. The task of the Reserve fund is to minimize the negative impact on the level of government spending of a possible sudden drop in oil prices and the aim of the National wealth fund is to gather

<sup>3</sup> For details relating to Stabilization fund, see the Budget code of the Russian Federation, chapter 13.1 (no longer valid from the start of 2008).

funds for future generations and to maintain the level of pension provision.<sup>4</sup> New fiscal rules based on the long run socio-economic guidelines were introduced to solve the problem of Russian long-run fiscal sustainability. The period 2008-2010 was established as a transitional period (MFR, 2006).

At the end of 2009, because of the need to soften substantially the fiscal policy stance in order to cope with the consequences of the crisis, the fiscal rules were temporary shelved. Starting in 2010, the Russian government has been aiming to gradually tightening its fiscal policy in order to be able to adhere to the fiscal rules at a later stage.<sup>5</sup>

It is important to note that the financial crisis has revealed the usefulness of the fiscal rules for the utilization of revenues from nonrenewable resources. In spite of a substantial decrease in budget revenues, particularly oil-and-gas revenues, the sovereign funds accumulated in 2004-2008 allowed not only for maintaining the level of government expenditures but also for implementation of sizeable stimulative fiscal measures without an increase in the public debt.

## 3 Fiscal stabilization

### 3.1 Theoretical considerations

The budget balance is one of the best indicators of the macroeconomic effects of fiscal policy that can be calculated without empirical estimation (Blanchard, 1990). A change in the budget balance, i.e. a fiscal impulse, is an important indicator of the stabilization function of public finances (see, for instance, ECB, 2009).

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

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 Russian government credits and returns on budget funds including the sovereign funds, and interest expenditures are the funds used for debt service.

The cyclical component of the non-oil-and-gas budget includes the elements of the budget that depend directly on changes in economic activity. They raise (reduce) taxes and lower (increase) government expenditures during economic upswings (downswings). In the Russian general budget this component comprises major budget revenues as well as a small part of budget expenditures, such as unemployment benefits.<sup>6</sup> We refer to 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 part that does not depend on changes in economic activity but rather on discrete government 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 changes in the structural component of the non-oil-and-gas budget as discretionary measures.

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<sup>4</sup> For details see the Budget code of the Russian Federation, chapter 13.2.

<sup>5</sup> Initially it was planned to return to the established fiscal rules at the start of 2013. In the second half of 2010 a one-year extension (probably not the last one) was implemented.

<sup>6</sup> 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.

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 in defining it as the respective taxes on extracting activities and customs duty.<sup>7</sup> Their size depends on production of resources and export volume, the level of prices and changes in legislation. Production and export volumes as well as changes in legislation are considered the part that is under the control of the authorities. Taking into account the high correlation between oil and gas prices, it is possible to divide the oil-and-gas revenues into 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 derive from the base oil price determine the cyclical component of oil-and-gas revenues (as in Vladkova-Hollar and Zettelmeyer, 2008).

Therefore, the fiscal impulse ( $FI$ ), i.e. the change in overall general budget balance components ( $OB$ ), can be calculated as

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

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.<sup>8</sup>

## 3.2 Methodology

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

$$NOG_C = \sum_{i=1}^N T_i \varepsilon_{T_i} gap \quad i=1 \dots N \quad (2),$$

where the  $T_i$  are the nominal values of general budget revenue that depend on changes in economic activity;  $\varepsilon_{T_i}$  is the elasticity of type  $i$  revenue with respect to the output gap and  $gap$  is the output gap<sup>9</sup>;

The output gap was estimated via Kalman filtering in the context of the Quarterly projection model (QPM) of the Bank of Russia.

The elasticity of type  $i$  revenue with respect to the output gap was calculated as follows:

$$\varepsilon_{T_i} = \varepsilon_{T_i, TB_i} \cdot \varepsilon_{TB_i, y} \quad (3),$$

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

<sup>7</sup> 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 a lack of data. Nor is there data on the volume of budget expenditures related to the oil-and-gas sector. Moreover, these expenditures are insignificant, and so we do not model them explicitly.

<sup>8</sup> Here and hereinafter the components of the fiscal impulse are in per cent of GDP.

<sup>9</sup> Positive output gap is defined as actual output volume above potential volume.



The value of the elasticity of revenue with respect to the tax base depends on the tax table (for proportional taxation, the elasticity is equal to 1; for progressive taxation, greater than 1; for regressive taxation, less than 1). Social taxes are the only non-proportional (regressive) revenues in the Russian budget. The calculations were done for the period 1999-2008, excluding the crisis years, 1998 and 2009. The values of nominal GDP and its components were used as proxies for the tax bases.<sup>10</sup> The calculations produced an elasticity 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 2000-2008, we estimate the elasticity of the wage bill with respect to the output gap at 0.4 and the elasticity of the gross profit and total income with respect to the output gap at 1.73. The elasticity for GDP was set equal to 1.

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

$$OG_s = OG \cdot (p^* / p)^\gamma \quad (4),$$

where  $p^*$  is the base oil price;  $p$  is the actual oil price and  $\gamma$  is the elasticity of revenue with respect to the oil price.

Following standard practice we assumed that commodity revenues are proportional to commodity prices and set  $\gamma=1$ . The fact that production and export volumes of oil are almost flat year-on-year partly supports this assumption.

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 allowing for comparison, we use the values in the Federal budget laws for 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 2000-2010 and applied the forecast of the Ministry of economic development of the Russian Federation prepared in January 2011 for the period 2011-2013.

Fiscal impulse components analysis also allows for assessment of the procyclicality of fiscal policy. Countercyclical or stabilizing fiscal policy requires government to tighten fiscal policy at times of economic “overheating” and to ease it at times 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 of the phase of the economic cycle (see, for instance, Abdih *et al.*, 2010, Villafuerte *et al.*, 2010).<sup>11</sup> Consequently, the degree of the fiscal policy procyclicality ( $k_c$ ) can be calculated as the relation between the structural component of the non-oil-and-gas budget and the change in output gap:

$$k_c = -\Delta NOG_s / \Delta gap \quad (5).$$

Correspondingly, in order to compute the degree of fiscal policy procyclicality for the given period, we should find the relation between the cumulative change in the structural component of the non-oil-and-gas budget and the cumulative change in the output gap. A positive value of  $k_c$  indicates countercyclicality of fiscal policy, a negative value indicates procyclicality, and a value close to 0 indicates neutrality.

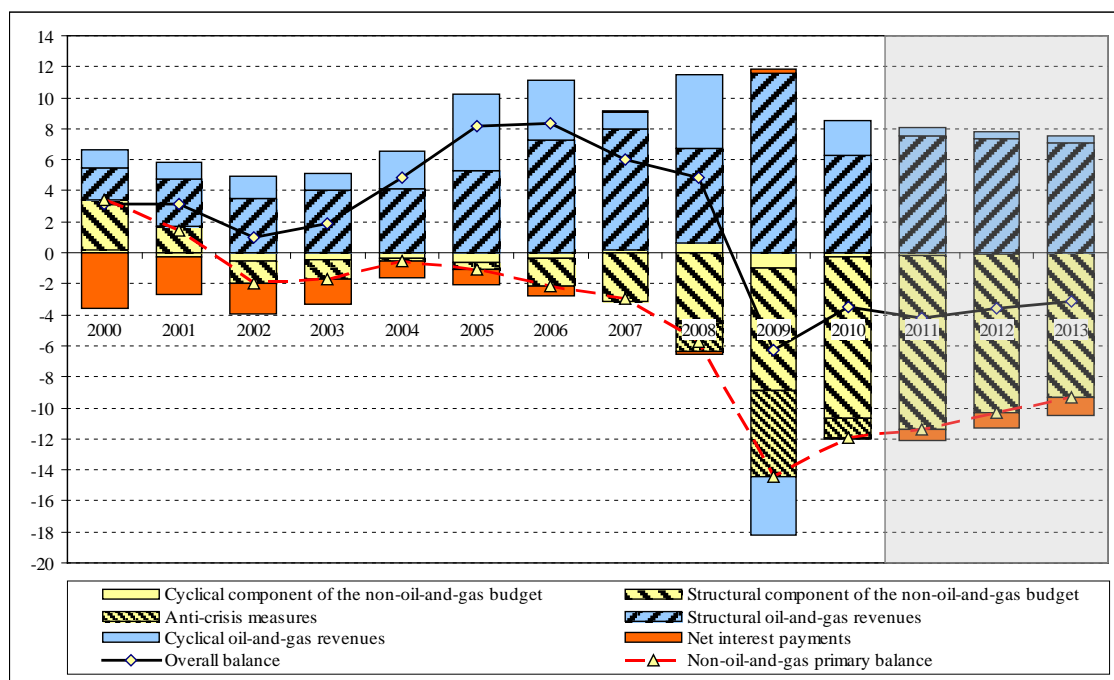
<sup>10</sup> For details see Vasilieva *et al.* (2009).

<sup>11</sup> The output gap can also be used as an indicator of economic cycle phase (see, for instance, Alberola, Montero, 2006), although we find estimations of the direction of changes in output gap more reliable.

### 3.3 Results and summary

Figures 2 and 3 present the Russian general budget balance components structure analysis and fiscal impulse structure analysis for 2000-2013 (2000-2010 is reported data, 2011-2013 budget projections). The analysis allowed us to come to the following conclusions.

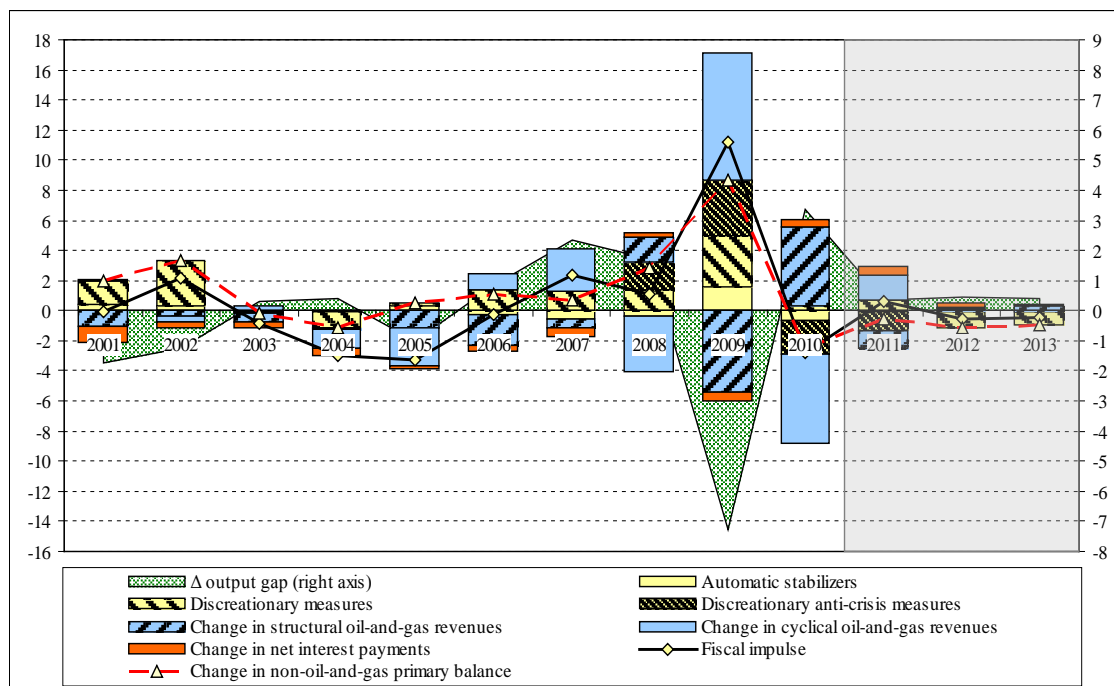
Figure 2 General budget balance decomposition for 2000-2013 (% of GDP)



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 a 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. It is worth underlining the strong negative impact of net interest payments in the first half of the 2000s, a result of large sovereign debt.

The main components affecting the fiscal impulse are discretionary measures and changes in the procyclical component of oil-and gas revenues. Automatic stabilizers are relatively unimportant in Russia, which can be explained by proportional taxation and the relatively small size of the government. Over the reviewed period the increases in the budget balance resulted mainly from the growth in oil-and-gas revenues, while the decreases were the consequence of the discretionary measures. The only exception is a substantial tightening of fiscal policy in 2004 due to a contraction of government expenditures. In 2008-2010 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.

Figure 3 Fiscal impulse decomposition for 2001-2013 (% of GDP)

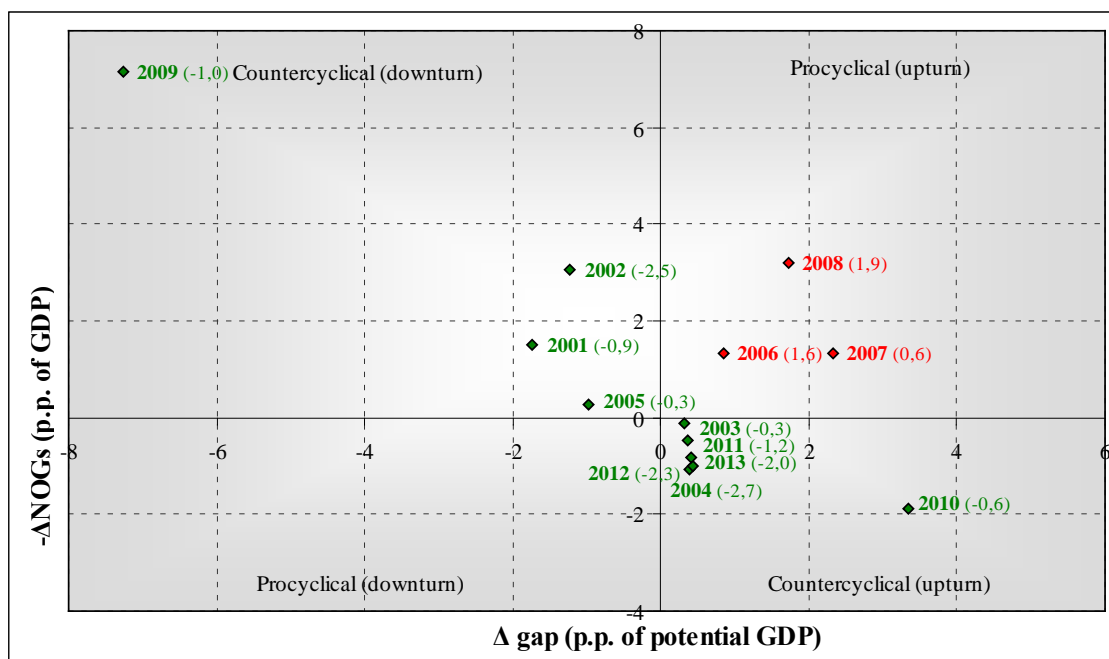


The dynamics of net interest payments were generally positive during the reviewed period. This was a result of an improvement in Russian public finances from the early 2000s, due to the contraction of sovereign debt and accumulation of reserves, mainly in the oil-and-gas funds. In the following years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

Figures 2 and 3 show that the financial crisis forced a notable easing of fiscal policy and abandonment of the established fiscal rules. A return to the fiscal rules would take time and would require efforts from the authorities (for instance, to exit from the sizeable anti-crisis measures).

Also it is important to note that estimations point to a small decline in the budget balance in 2011. However this is due to the fact that in 2010 the actual budget balance substantially exceeded its projected value, partly because of the more favourable economic conditions. Accordingly, one might assume that the government would revise the budget projections for 2011-2013 towards a lower budget deficit.

Figure 4 presents the estimation of the degree of procyclicality of Russian fiscal policy in 2001-2013.

Figure 4 Russian fiscal policy procyclicality in 2001-2013 (estimates of  $k_C$  in brackets)

Calculations show that Russian fiscal policy was stabilizing in 2001-2005. On the contrary, in 2006-2008 it was procyclical, as discretionary measures contributed to economic “overheating”. In 2009 fiscal 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. Because Russia is exiting from the crisis and switching to sustainable development, the government is expected to reduce its discretionary policy measures.

These estimates of fiscal policy procyclicality can be compared with those available for developing countries. We consider both the period of economic upturn (2003-2008) and economic downturn (2009) and use the estimates of Villafuerte *et al.* (2010) for the following countries: Bolivia, Chile, Ecuador, Mexico, Peru, Trinidad and Tobago and Venezuela. The degrees of procyclicality for the period of economic upturn are 1.1 for Russia and 0.8 for the sample of countries on average. Only Ecuador and Trinidad and Tobago had more procyclical policies than Russia (coefficients 1.5 and 2.2 respectively) and only Bolivia had a countercyclical fiscal policy close to neutral (coefficient  $-0.1$ ). In contrast, during the economic downturn the average degrees of procyclicality for Russia and for the sample of countries are  $-1$  and  $-0.1$  respectively, with only Bolivia having more countercyclical fiscal policy than Russia (coefficient  $-1.1$ ). This allows us to conclude that Russian fiscal policy can be described as relatively more procyclical in the period of economic upturn and more countercyclical in the period of economic downturn. This seems to be explained by national peculiarities, in particular by Russia’s greater dependence on natural resource production. In any case, further investigation seems worthwhile.

## 4 Fiscal sustainability

### 4.1 Theoretical considerations

Sustainability has become one of the main considerations in fiscal policy assessment. In general, sustainable fiscal policy refers to 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 expressed as a standard intertemporal budget constraint (see, for instance, Krejdl, 2006). In the Russian case, one side of the constraint can be written as the present value of future budget balances and the other as the difference between government net worth at a given time versus the initial time<sup>12</sup>:

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

where  $OB_t$  is general budget balance for year  $t$ ;  $y$  is the nominal GDP growth rate;  $N_0$  is the government net worth at the initial time;  $N_t$  is the government net worth at a given time  $t$ <sup>13</sup>;  $T$  is the projection horizon (special case:  $T=\infty$ ).

Fiscal sustainability analysis implies a continuance of the current legal and political framework, i.e. current policies.<sup>14</sup>

The choice of the projection horizon depends on the aim, the 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.<sup>15</sup> The uncertainty is perhaps particularly high in the case of an economy highly dependent on revenue from nonrenewable resources.

The fiscal sustainability analysis can be carried out for both the case in which government net worth can be negative ( $N_t < 0$ ) and where it cannot be negative ( $N_t = 0$ ). The first case, which depends on the conditions that the projection horizon is finite and  $N_t$  is at a level of prudent indebtedness, is explained by the fiscal policy expansion. The second case is the analogue of the no-Ponzi game condition<sup>16</sup>. Many regional unions and individual countries have adopted debt ceilings (see Topalova and Nyberg, 2010). Although the ceilings should be considered rather as possible reference points, they can be used in the analysis as fiscal sustainability criterions.

In order to observe equation (6), governments develop special fiscal rules. Nowadays, because of the negative impact of the financial crisis, many countries had to temporarily suspend the application of these rules (for example, the member-countries of the European Economic and Monetary Union have shelved until 2013 the Stability and Growth Pact reference values for annual budget deficits and national debt). Some countries have developed or are developing new fiscal

<sup>12</sup> 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 the abundant reserves in national and foreign currency possessed by the Russian government, which can be used for deficit financing and should be taken into account.

<sup>13</sup> Here and hereinafter the indicators are in per cent of GDP.

<sup>14</sup> For a discussion of definition of the current policies see, for instance, Gokhale (2008).

<sup>15</sup> See Gokhale (2008) for a detailed discussion of the projection horizon choice problem.

<sup>16</sup> O'Connell and Zeldes (1988) proved that with an infinite time horizon none of a finite number of the rationally acting economic agents holds government bonds infinitely long.

rules (for details see, for instance, IMF, 2010, P. 50). These rules should provide guidance for fiscal policies and constraints for the consolidation path.

The main task of fiscal sustainability analysis is to reveal the risks of the necessity of major interventions in tax and spending patterns and to estimate the scale of such interventions. Special fiscal sustainability indicators are used for this purpose. Based on the results for the long run, one can determine the tasks of 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 oil-and-gas revenues are collected entirely at the federal level, and the authorities at different levels of the Russian budget system are independent in the budgetary process and are not responsible for each other's liabilities, we study the 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 a continuance of current policies, including all decisions already made. Thus, for the period to 2013, expenditures are assumed to be in accordance with the budget legislation. Moreover, to avoid any discontinuous jumps in the indicators, we assume a transitional period of 2014-2015, i.e. the budget rules would be fully employed from 2016.

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, maintenance of the current oil extraction level would lead to exhaustion of its proven reserves in about 40 years.<sup>17</sup> However, as at present the annual growth of resources reserves is comparable with the extraction volumes and, in accordance with the Guidelines for fiscal policy in 2011, 2012 and 2013, the same tendency is foreseen for the medium run, we assume that the current oil extraction level can be maintained after 2050 as well. Consequently, there is some uncertainty about the ability to extract oil after 2050, which increases with the length of the projection horizon. In any case, the period to 2050 can be considered a good period for investigating the possible risks to Russia's long run fiscal sustainability. At the same time, we attempt to make rough estimates of Russia's fiscal sustainability after 2050 as well.

We examine two scenarios that differ in their initial conditions. Both scenarios are based on variants of the 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 tight dependency on oil-and-gas extraction and exports, while the so-called innovative scenario assumes the balanced development of the national economy sectors. Switching to the innovative scenario should allow us to raise the growth rates of the main macroeconomic indicators. Under the innovative scenario most of the projection horizon is characterized by real GDP annual growth of 4-5 per cent; under the alternative scenario by 3-4 per cent growth. In any case, the level of prices for oil and 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.

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<sup>17</sup> See [www.minfin.ru/ru/official/index.php?pg4=133&id4=3363](http://www.minfin.ru/ru/official/index.php?pg4=133&id4=3363) (in Russian).

#### 4.2.2 Main fiscal indicators

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 us 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 or to use for repaying debt.<sup>18</sup> That is why we use here only liquid and negotiable financial assets.<sup>19</sup> Based on this principle, the net overall reserves are defined as government funds in national and foreign currencies at the Bank of Russia and credit institutions minus 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 corporations partly or fully owned by state. The net overall debt is defined as all government net liabilities. However, a substantial part of foreign countries' debt to the Russian Federation is regarded as bad debt. Using the composition of the debt by country and the probability of repayment according to international rating agency ratings of solvency, the coefficient was estimated at 0.2.

The safe value of the Russian government net worth indicator was determined based on estimates of the public debt indicator made by IMF and Russian Ministry of Finance experts. IMF studies show that in the developing countries the effectiveness of fiscal policy as a countercyclical tool is less with the public debt above 25 per cent of GDP (IMF, 2003, 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 estimates by the Russian Ministry of Finance the critical value for the Russian public debt is 30-40 per cent of GDP.<sup>20</sup> Based 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:

$$N_t \geq -30 \quad (7).$$

The change in the size of sovereign funds (Reserve Fund and 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 Reserve Fund and 2.5 per cent for the National Wealth Fund), and that it will then gradually increase by 2015 (up to 2.0 and 3.0 per cent respectively) and after that it would not change. The reason we expect the increase in 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.<sup>21</sup> 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 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, Thomson, 2007). This methodology comprises the following phases: determining the nominal revenue for the last available year (2010); adjusting it by removing any known anomalies, to establish the true underlying position; applying the forecast growth rates of

<sup>18</sup> For a discussion of government assets and liabilities that can be used in the context of public finance sustainability analysis see Krejdl (2006).

<sup>19</sup> In accordance with the Russian Guidelines for the fiscal policy in 2011, 2012 and 2013, in the medium run revenues from privatization will be an important source of budget deficit financing. However, this should be rather considered as an exception to the rule.

<sup>20</sup> See [www.minfin.ru/ru/press/interview/printable.php?id4=9691](http://www.minfin.ru/ru/press/interview/printable.php?id4=9691) and [www.minfin.ru/ru/press/interview/index.php?id4=8794](http://www.minfin.ru/ru/press/interview/index.php?id4=8794) (in Russian).

<sup>21</sup> See [www.minfin.ru/ru/press/speech/index.php?id4=9185](http://www.minfin.ru/ru/press/speech/index.php?id4=9185) (in Russian).

relevant proxy variables<sup>22</sup> to forecast, using elasticities if necessary (for 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 the uncertainty involved.

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

### 4.2.3 Main features of current strategy

The current fiscal strategy is based on the fiscal rules stated in the Budget code of the Russian Federation. The application of these rules was temporarily suspended. 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 earned by sovereign funds ( $FR_t$ ):

$$R_t = NOGR_t^{1-f} + NOGR_t^f + MR_t + FR_t \quad (8).$$

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 oil-and-gas transfer<sup>23</sup> ( $Tr_t$ ), as well as 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<sup>24</sup> is not allowed to exceed 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 balanced budgets for the regions and 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 ( $B_t^f = B_t = 1,0$ ).<sup>25</sup>

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

<sup>22</sup> 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.

<sup>23</sup> Oil-and-gas transfer represents the oil-and-gas revenues used on spending in the corresponding year.

<sup>24</sup> Non-oil-and-gas deficit is defined as non-oil-and-gas revenues minus total expenditures.

<sup>25</sup> It should be noted that these prerequisites are close to the actuality. In accordance with the Guidelines for the fiscal policy in 2011, 2012 and 2013, the aggregate deficit of the regions and the extra-budgetary funds is to 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).



#### 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 resulting in a rapidly growing debt-to-GDP ratio (Blanchard *et al.*, 1990) (in our case, government net worth-to-GDP ratio) and allows one 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 current policies and the necessity to conform to condition (7). As mentioned above, the Russian budget can be divided into oil-and-gas and non-oil-and-gas parts. Spending of 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<sup>26</sup>, 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 achieve this purpose (*Tr\**) and the level stated in the legislation (*Tr*):

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

The possibility of spending funds in excess of the value of non-oil-and-gas revenues, i.e. the net borrowings<sup>27</sup> 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\**) consistent with condition (7) and the level according to the legislation and prerequisites cited above (*B*):

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

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 us to assess the degree of fiscal sustainability. A negative budget gap indicates the necessity to adjust the current policies.

### 4.3 Results and estimates for current strategy

#### 4.3.1 Forecasted general budget revenues

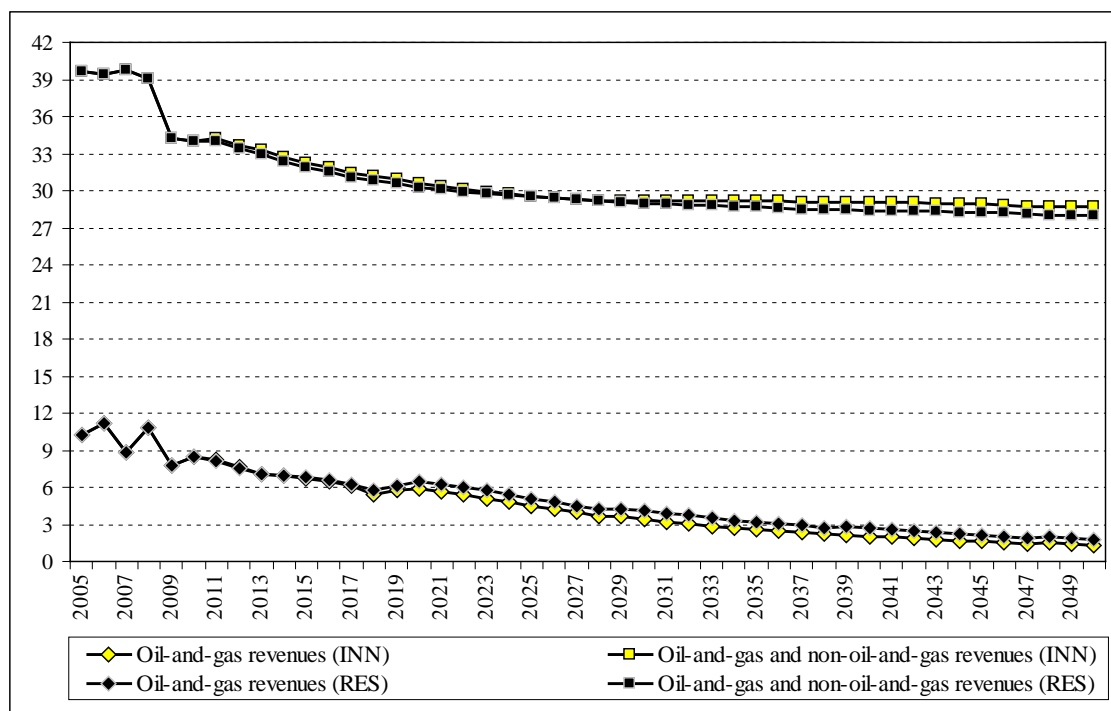
Our estimates show that in the long run oil-and-gas revenues as a per cent of GDP will decline, while the non-oil-and-gas revenues should rise relative to GDP. But as the growth rate of non-oil-and-gas revenues is lower than the rate of decline in oil-and-gas revenues, the sum of the two indicators will decrease. Figure 5 represents this dynamics. Depending on the scenario of socio-economic development, 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 non-oil-and-gas revenues should increase

<sup>26</sup> See [www.minfin.ru/ru/official/index.php?pg4=133&id4=3363](http://www.minfin.ru/ru/official/index.php?pg4=133&id4=3363) (in Russian).

<sup>27</sup> Here and hereinafter we define the net borrowings as the funds above the oil-and-gas transfer value that can be used for non-oil-and-gas deficit financing.

from 26.0 per cent of GDP in 2010<sup>28</sup> to 26.2-27.3 per cent of GDP in 2050, and the sum of the two 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 2010-2050, the overall decrease in oil-and-gas revenues and in the sum of the two indicators would amount to 6.8-7.3 and 5.9-6.6 p.p. of GDP respectively.

Figure 5 Dynamics of general budget revenues in 2005-2050, for innovative (INN) and resource dependent (RES) scenarios (% of GDP)



A considerable reduction in oil-and-gas revenues relative to GDP, especially in 2010-2020s, accounts for the lower growth rates of resource production and export volumes and the level of their prices in comparison with the GDP growth rate as well as for the appreciation of the national currency. The rise in non-oil-and-gas revenues relative to GDP can be explained by the increase in the share of non-oil-and-gas GDP in total GDP.

The return earned by the sovereign funds depends on the chosen strategy. This will be discussed later.

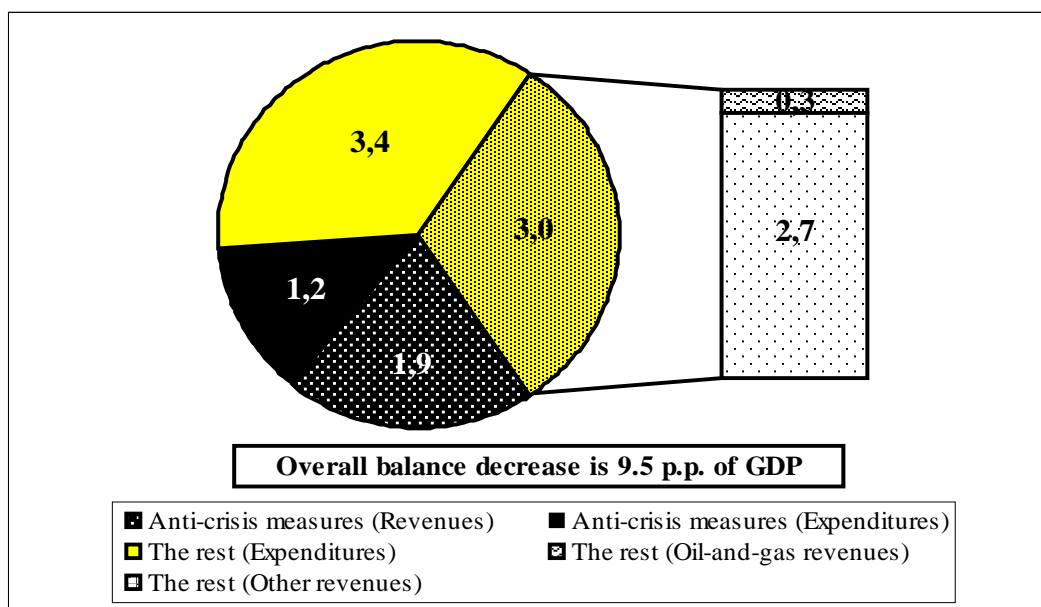
#### 4.3.2 Deterioration during the financial crisis

During the financial crisis the budget balance indicator decreased substantially from stable deficit to sizeable deficit. This was the result of the direct financial crisis effects, including the deterioration of external conditions, as well as the changes in fiscal policy. For example, the pension reform carried out in 2009-2010 increased the level of budget spending by approximately 2.5 p.p. of GDP. Mainly, however, fiscal policy easing was the result of the sizeable fiscal stimulative measures

<sup>28</sup> In accordance with the legislation in 2010-2013 non-oil-and-gas revenues include the return earned by sovereign funds.

implemented in 2008-2010.<sup>29</sup> In accordance with preliminary data, the general budget balance in 2010 in comparison with the pre-crisis year of 2007 decreased by 9.5 p.p. of GDP. Figure 6 shows the composition of the decrease.

Figure 6 Composition of general budget balance decrease in 2007-2010 (% of GDP)



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

#### 4.3.3 Estimates for the medium run

The medium-term period to 2015 presumably will be characterized by the transition to sustainable development and return to the legislated fiscal rules. This should be achieved via a substantial decrease in 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 socio-economic scenario resulting from the program for increasing budget spending efficiency (see Figure 7). Russia should return to a 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 p.p. of GDP. At the same time the need to finance the budget deficit in the first half of the 2010s will further reduce government reserves and increase the public debt. It would lead to a decrease in government net worth into negative values: from 1.3 per cent of GDP in 2010 to (-)6.5-(-)8.8 per cent of GDP in 2015 (see Figure 8). However, condition (7) will not be violated. Moreover, the public debt should remain one of the lowest in the world. Even taking into account the possible fiscal risks that will be discussed in

<sup>29</sup> For a 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).

4.3.5., it is possible to assert the high degree of Russian fiscal sustainability and the low risk of default in the medium run.

#### 4.3.4 Estimates for the long run

Over the long-term Russian fiscal policy will presumably be based on the fiscal rules stated in the legislation. In accordance with these and with 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 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 cannot be distributed equally over the projection horizon for 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, during 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. This would lead to a substantial decrease in 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).

Figure 7 Dynamics of general budget expenditures in 2005-2050 for innovative and resource dependent scenarios under current strategy (% of GDP)

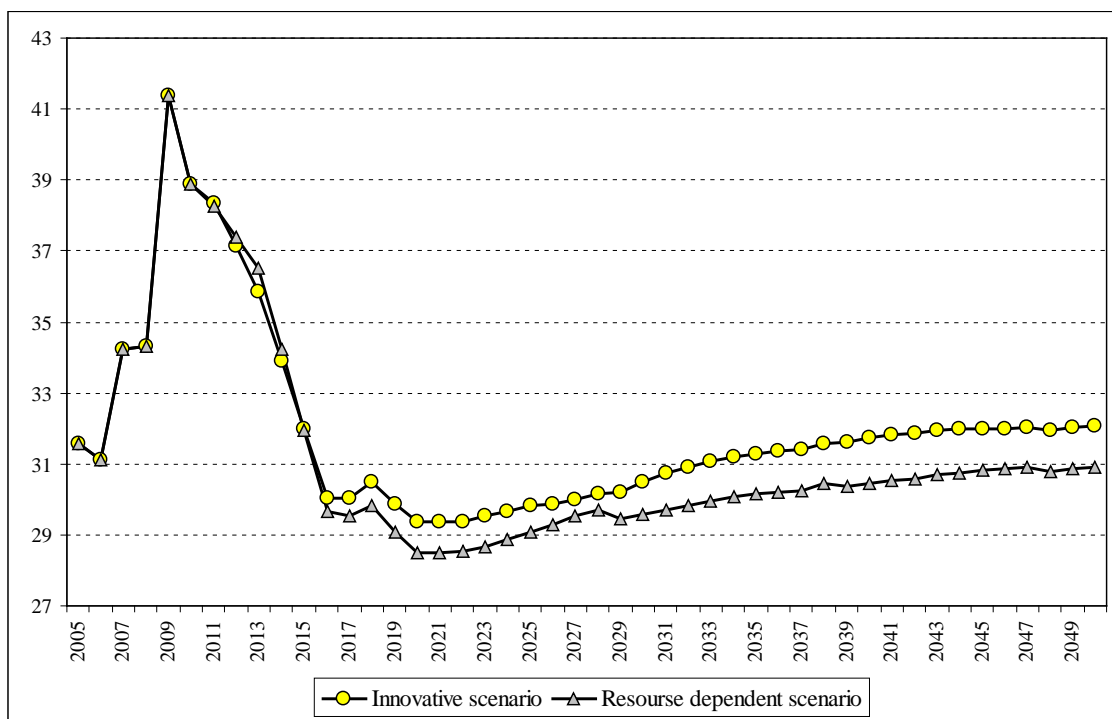
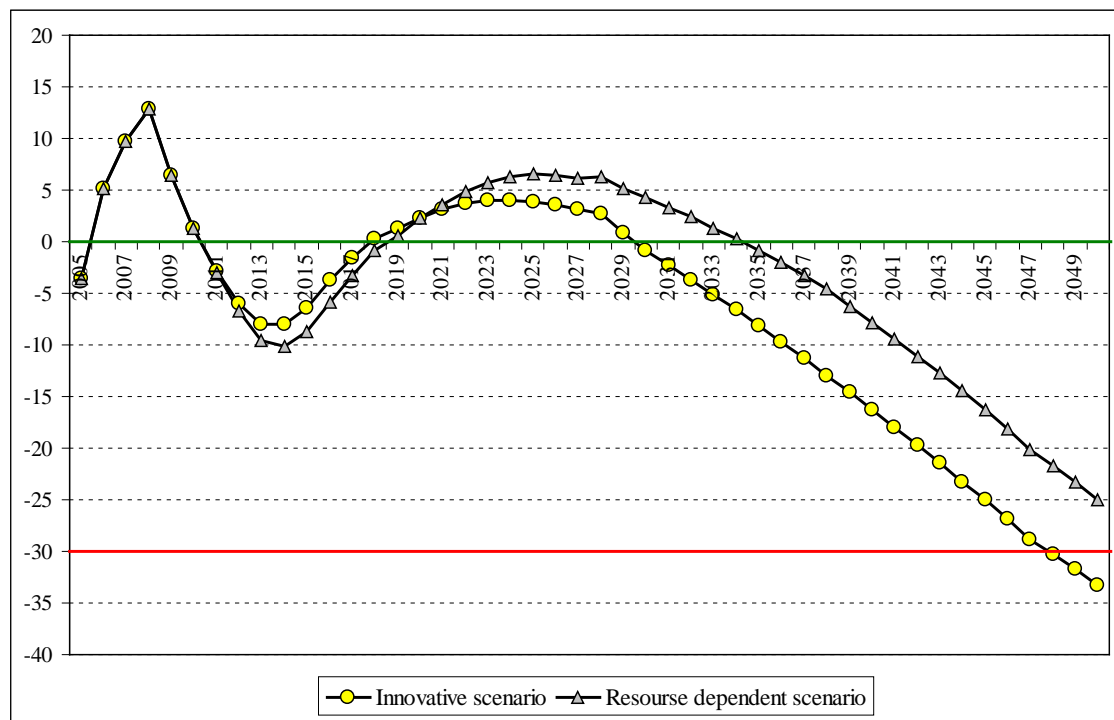


Figure 8 Dynamics of government net worth in 2005-2050 for innovative and resource dependent scenarios under current strategy (% of GDP)



Thus, for the period to 2050 under the current fiscal rules, 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 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 us to conclude that the levels of the oil-and-gas transfer and 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 pose a threat to Russia's fiscal sustainability in the medium and long run and which thus should be taken into account. The main risks relate to budgetary spending. They are caused by the need to maintain fiscal policy efficiency under the coming negative tendencies:

- Considerable increase in social budget spending. The Russian government has the firm intention to meet fully its social obligations as well as to increase them annually at a rate at least matching the inflation rate. However, with the rate exceeding on average the nominal GDP growth rate (as per recent years) social spending will also rise relative to GDP. Moreover, additional risks will stem from the coming population ageing;
- Substantial increase in interest expenditures as a per cent of GDP and as a share of overall budget expenditures. The main risk is related to the dynamics of this

indicator in the long run, which will depend on the government's policies and its ability to restrain the growth of the debt;

- Rise in spending related to natural disasters and extraordinary emergency situations. The recent climate developments in Russia suggest that in the long run this part of budget expenditures could rise greatly;
- Decrease in budget spending efficiency or increase in budget expenditures. In the medium run and in the long run as well, the government intends to reduce gradually the budget expenditures, mainly by increasing their efficiency (The program for budget spending efficiency up to 2012, 2010). However, if the steps that are taken by the authorities do not bring the expected result, partly because of the risks mentioned above, partly because of the coming reforms<sup>30</sup>, the government will have to choose between targeting the expenditures at the expense of a loss in efficiency or targeting the efficiency by increasing the expenditures. In the second case there would be an additional decline in government net worth.

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

Finally, it is important to emphasize the possibility of a new crisis situation. This applies mainly to the short and medium run under conditions of unsustainable development and could lead to another fall in budget revenues and an increase in budget spending as well as a need to implement new fiscal stimulative measures.

## 4.4 Improving fiscal sustainability

It is possible to increase Russia's fiscal sustainability both under the current strategy and by moving to an alternative strategy. The degree of necessary adjustment can be estimated with the aid 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 condition (7) should be solved:

$$\left\{ \begin{array}{l} \sum_{t=1}^T \frac{MR_t + FR_t - Tr_t - B_t}{(1+y)^t} = \frac{N_t}{(1+y)^t} - N_0, \\ Tr_1 = Tr_2 = \dots = Tr_T = Tr^*, \\ B_t = B_2 = \dots = B_T = B^* \end{array} \right. \quad (13).$$

<sup>30</sup> Reforms of the army and the Ministry of Internal Affairs are planned for the coming years. According to preliminary estimates, these will increase the level of the budget spending in comparison with 2010 by about 1.0 p.p. of GDP.

Since condition (7) is the interval, it allows us to make several estimates of government net worth as at the end of 2050. The government may choose expansive ( $N_{2050} = -30$ ) or conservative ( $N_{2050} = 0$ ) fiscal policy. Table 1 represents the corresponding estimations for both the innovative and resource dependent scenarios.

According to our calculations, the value of the oil-and-gas transfer should be lowered in comparison with those stated in the legislation by 0.4-1.1 p.p. of GDP, while the net borrowings can be either increased by 0.7-1.0 p.p. of GDP or decreased by 1.0 p.p. of GDP. Therefore, the budget gap is either close to 0 or substantially below 0.

Table 1 Fiscal sustainability indicators under current strategy adjustment (% of GDP)

	Innovative scenario		Resource dependent scenario	
	$N_{2050}=-30$	$N_{2050}=0$	$N_{2050}=-30$	$N_{2050}=0$
B	1.0			
B*	2.0	0.0	1.7	0.0
NOG_gap	1.0	-1.0	0.7	-1.0
Tr	3.7			
Tr*	2.6		3.3	
OG_gap	-1.1		-0.4	
BUDG_gap	-0.1	-2.1	0.3	-1.4

It is possible to surmise that the value of the net borrowings indicator that allow for stabilizing in the long run the government net worth at a 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 us also to take into account the possible fiscal risks covered in 4.3.5.

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 socio-economic development.

In the near future it seems also worthwhile to switch from actual budget balancing to structural budget balancing for the purpose of managing the non-oil-and-gas part of the budget. Targeting the structural budget balance allows the government to respond automatically to the business cycle as well as to better control the government's net worth, since it is assumed that in the long run the cyclical component stabilizes symmetrically over the business cycle. Hence, it contributes to fiscal sustainability more than does the current strategy.<sup>31</sup> It is necessary to note that

<sup>31</sup> 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 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).

the estimates for the current strategy presented earlier in this section are relevant for the strategy based on the structural balance rules.

Figure 9 The dynamics of general budget expenditures in 2005-2050 for innovative (INN) and resource dependent (RES) scenarios under current strategy adjustment (% of GDP)

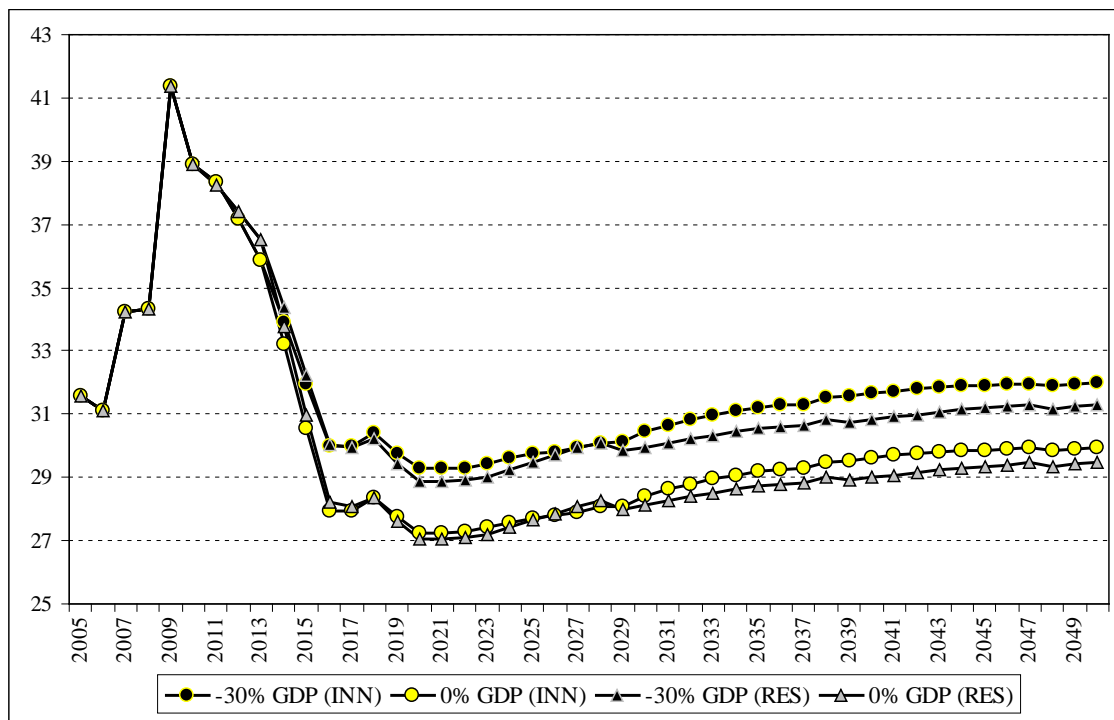
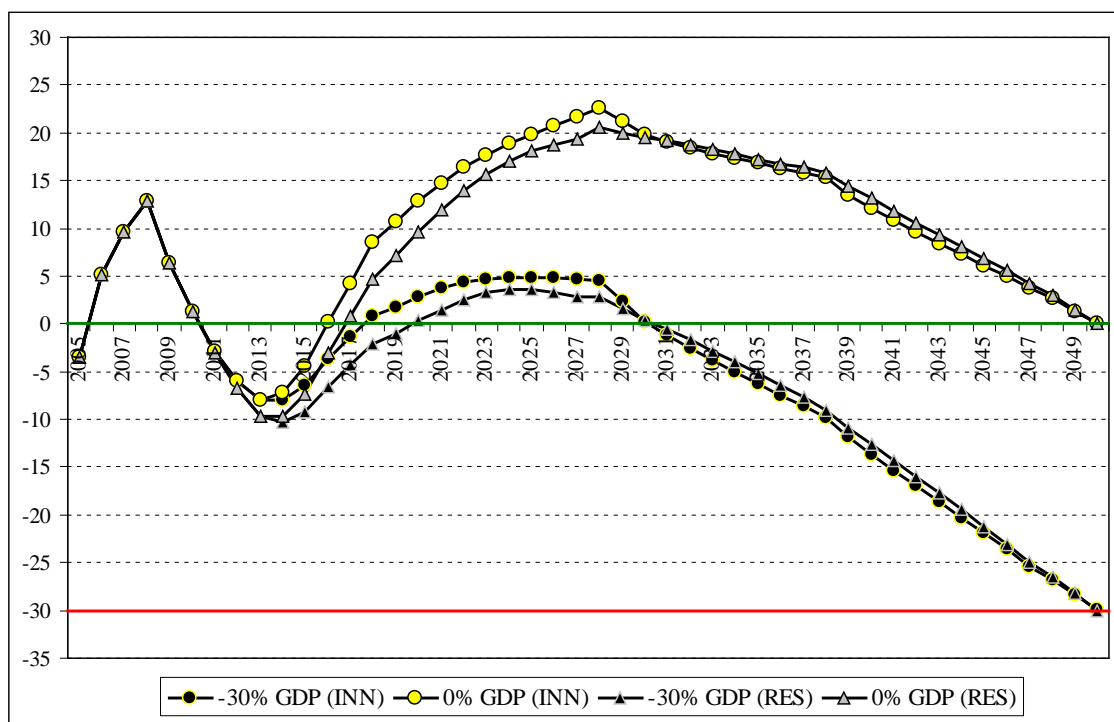


Figure 10 Dynamics of government net worth in 2005-2050 for innovative (INN) and resource dependent (RES) scenarios under current strategy adjustment (% of GDP)





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 for managing the oil-and-gas part of the budget. The reason is that it does not pay enough attention to the problem of the substantial decrease in oil-and-gas revenues in the long run. As already mentioned in 4.3.1., because of the relatively lower growth rates of the indicators influencing oil-and-gas revenues in comparison with GDP growth during the period of 2010-2050, the oil-and-gas revenues would fall by 6.8-7.1 p.p. of GDP. Under this methodology, this would lead to a similar decrease in budget spending. Moreover, there is also the challenge of long run base oil price estimation as well as its regular re-calculation, as demonstrated by the Russian experience of 2004-2007 and described in section 2. Thus, for the equal distribution of oil-and-gas revenues over 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 aiming at a 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 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 need 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 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 for maintaining long run fiscal sustainability by minimizing the influence on budget expenditures and economic development of a possible sudden fall in oil and gas prices as well as exhaustion of scarce resources. At the same time the largest possible increase in the oil-and-gas funds allows the highest returns for the sovereign funds. Since 2001 the “bird-in-the-hand” rule is applied to the use of oil revenues in Norway (see, for instance, Bjerkholt and Niculescu, 2004).

According to the calculations, this strategy allows for maintaining a highly positive government net worth as well as returns for sovereign funds much higher than under the current strategy over the whole projection horizon.

However, switching to this strategy on a continuing basis could be inexpedient. In contrast to Norway, where the size of the oil fund exceeds GDP and the returns earned by sovereign funds are significant (in accordance with the preliminary data for 2010 more than 10 per cent of GDP<sup>32</sup>), the

<sup>32</sup> Source: [www.nbim.no/en/Investments/Market-Value/key-figures](http://www.nbim.no/en/Investments/Market-Value/key-figures)

size of both the oil-and-gas funds in Russia and the annual return are relatively small. These indicators amounted to 7.8 and 0.3 p.p. of GDP at the end of 2010 and, depending on the scenario for socio-economic development, will not exceed 45-55 and 1.0-1.2 per cent of GDP respectively over the period to 2050. Moreover, after reaching its maximum value as a per cent of GDP by the end of 2030s, the size of the oil-and-gas funds will start to decline as a result of the effect of GDP growth and by the end of the projection horizon will have fallen by 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 government net worth while Figure 13 shows the government net worth decomposition and the indicator of return earned by sovereign funds for the innovative scenario.

Figure 11 Dynamics of general budget expenditures in 2005-2050 for innovative and resource dependent scenarios under "bird-in-the-hand" rule (% of GDP)

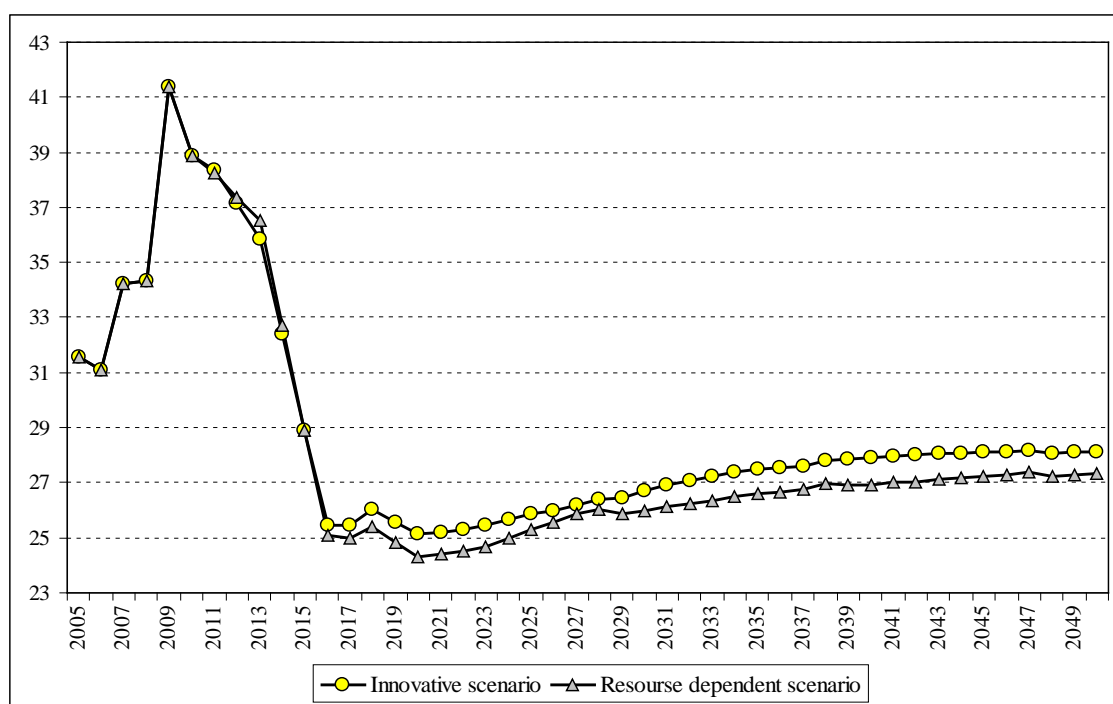


Figure 12 Dynamics of government net worth in 2005-2050 for innovative and resource dependent scenarios under "bird-in-the-hand" rule (% of GDP)

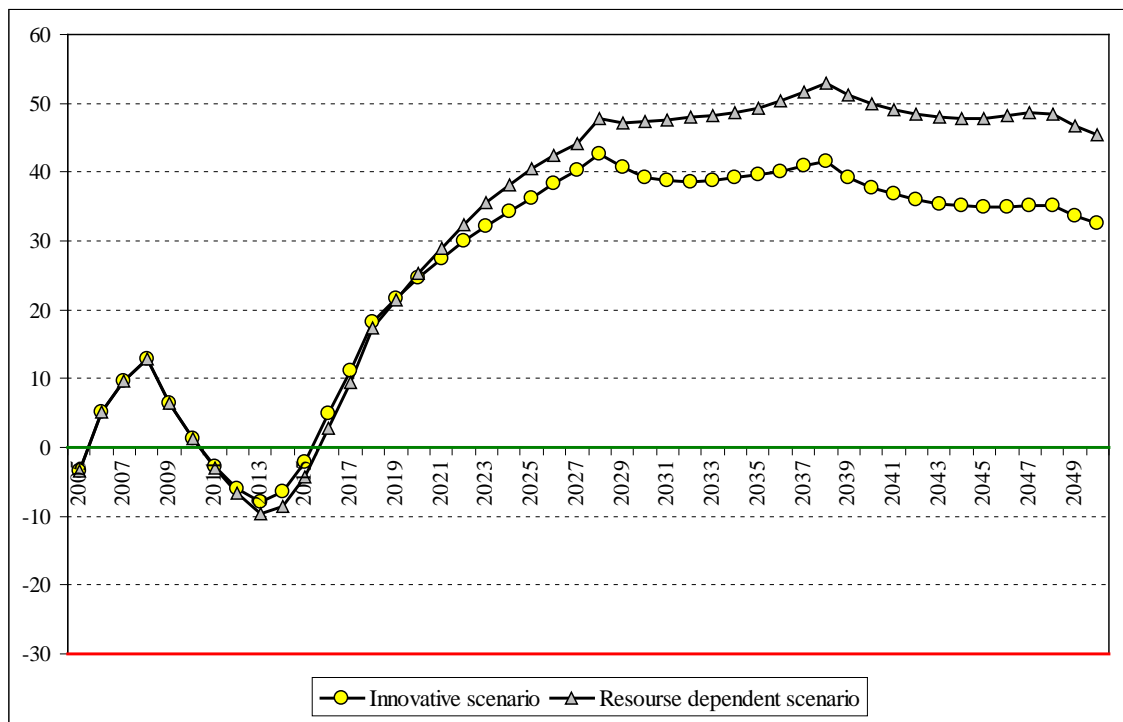
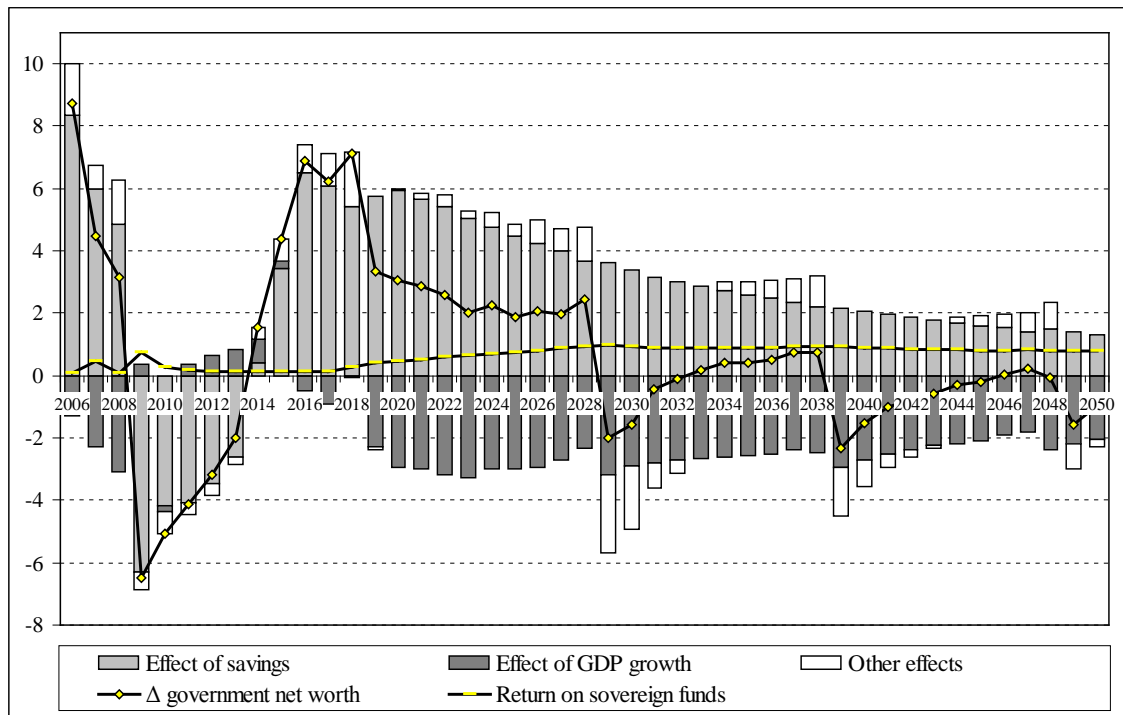


Figure 13 Government net worth decomposition and return earned by sovereign funds in 2006-2050 under "bird-in-the-hand" rule for innovative scenario (% of GDP)



Switching to the “bird-in-the-hand” rule will also require an additional decrease in budget expenditures. 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 amounts to 3.7-4.6 p.p. of GDP in case of the innovative scenario and 3.5-4.6 p.p. 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 p.p. of GDP under the innovative scenario and by 2.0-3.1 p.p. 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 increase in the budget balance.

Thus, the appropriate way to improve Russia’s long run fiscal sustainability is to toughen the current fiscal rules, whereas switching to the alternative strategy based on the “bird-in-the-hand” rule leads to an additional substantial decrease in general budget expenditures because of the reduction of the efficiency of oil-and-gas revenues.

#### 4.4.3 Fiscal consolidation measures

The results of the investigation show that in order to maintain long run fiscal sustainability the government will have to increase considerably in the medium run the general budget balance. There are several international examples of the authorities being able to raise substantially the budget balance without a significant negative influence on economic growth (for instance, in Denmark in 1983-86 the primary budget balance was increased by more than 15 p.p. of GDP (see, for instance, CRFB, 2009; Lilico *et al.*, 2009). The Russian government has several means of cutting budget expenditures and increasing revenues. Among the spending measures the following would seem to be the most effective:

- Full exit from the anti-crisis measures;
- Considerable increase in 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)<sup>33</sup>;
- Substantial decrease in 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<sup>34</sup>;
- Retirement age rise. In accordance with the Federal budget act for 2011-2013 the interbudget transfer of 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, a gradual ageing of the population is predicted for the long run. This will lead to a decrease in the total population, in the able-bodied and in the employed citizens (over the period of 2010-2030 by 1.9, 12.9 and 9.2 per cent respectively). Therefore, the expenditures of the Russian Pension fund should rise while the revenues could fall. In this context, the balanced budget of the Pension fund should become one of

<sup>33</sup> See [www.minfin.ru/ru/press/interview/printable.php?id4=9691](http://www.minfin.ru/ru/press/interview/printable.php?id4=9691) (in Russian).

<sup>34</sup> See [www.minfin.ru/ru/press/interview/printable.php?id4=10027](http://www.minfin.ru/ru/press/interview/printable.php?id4=10027) (in Russian).

the main tasks for the government in the medium run. In the absence of alternative measures, the government will have to raise the retirement age even though this is unpopular. In order to reduce the so-called political costs, this should be implemented step-by-step.

There are also several revenue measures that can be implemented:

- Income legalization. According to data from the Russian Federal state statistics service, the share of the Russian shadow economy amounted to 16 per cent in 2010<sup>35</sup>;
- Improvement of tax administration (in the medium run, the estimated effect is approximately 1 per cent of GDP)<sup>36</sup>;
- Maximal domestic petroleum refining, which should raise oil-and-gas revenues of the budget;
- Annual indexation of the social taxes regression thresholds. This should allow for maintaining the fixed level of the effective tax rate (ratio of tax proceeds to tax base) and thus avoid an increase in the extra-budgetary funds budget deficit;
- Annual indexation of dues and fees (such as excises) by no less than inflation rate, which will increase 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 at finding the inefficient tax remissions as well as studying the possibilities to carry out tax reforms (for example, moving from the property to 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 a continuing basis).

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

Thus, in the medium and long run, the Russian government has enough opportunities to reduce the general budget expenditures and increase the revenues. Although there is not enough data to estimate the possible effect of every measure separately, preliminary calculations show that the use of the most of them should enable the maintenance of long run fiscal sustainability in Russia. This would most likely demand a number of unpopular reforms as well. Also it is important to keep in mind the possible fiscal risks that could demand additional measures.

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<sup>35</sup> See [www.rg.ru/2011/04/12/seraia-ekonomika.html](http://www.rg.ru/2011/04/12/seraia-ekonomika.html) (in Russian).

<sup>36</sup> See [www.minfin.ru/ru/press/interview/printable.php?id4=10027](http://www.minfin.ru/ru/press/interview/printable.php?id4=10027) (in Russian).

## 5 Concluding remarks

Since the dissolution of the USSR the Russian government has carried out a number of fiscal reforms aimed at contributing to macroeconomic stability and greater fiscal sustainability. 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 a temporary halt in the application of the fiscal rules. However, in the medium run the government intends to return to these rules after the transitional period.

The fiscal stabilization analysis of the period to 2013 allows 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 a relatively weak impact. Russian fiscal policy was countercyclical, i.e. stabilizing, in 2001-2005. On the contrary, in 2006-2008 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 reducing the discretionary policy measures. In comparison with a number of developing countries, Russian fiscal policy can be described as relatively more procyclical in the period of economic upturn and more countercyclical in the period of downturn.

The fiscal sustainability analysis for the general budget for the period to 2050 comes to the following main conclusions. In the long run the value of 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 rise and the sum of the two indicators should decrease. Under such conditions the fiscal rules stated in the legislation should allow, after the necessary fiscal consolidation of the 2010s, a gradual rise in budget expenditures in per cent of GDP in the long run. At the same time, depending on the scenario of socio-economic development, government net worth will decrease to between –25.0 and –33.2 per cent of GDP at the end of 2050. Since this value will admittedly continue to decrease after 2050 and will stabilize notably below –30 per cent of GDP and due to several additional fiscal risks in the medium and long run, 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 oil-and-gas transfer should be decreased by 0.4-1.1 p.p. of GDP. The value of the net borrowings can be increased by 0.7-1.1 p.p. of GDP in case the government wishes to expand at most its fiscal policy and to get the government net worth to –30 per cent of GDP by the end of 2050. On the contrary, if it chooses the conservative aim of government net worth of 0 per cent of GDP at the end of 2050, it would have to abstain completely from net borrowing and so to decrease them by 1.0 p.p. of GDP. It seems worthwhile to set the most rigid fiscal rules.

In the near future it seems also worthwhile to switch from actual budget balancing to 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 government’s 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 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 an additional considerable decrease in general budget expenditures because of the efficiency reduction in the use of oil-and-gas revenues.

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

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