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How to Measure a Genuine Consolidation Effort of the Government
A case of Slovakia

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The "Open Budget Initiative 2010" ranked Slovakia behind the neighbouring Czech Republic and Poland in the provision of satisfactory information on public finances. It was recommended that the relationships between revenues, expenditures and the macro-economic objectives of different governments be better explained. Therefore, the Institute for Financial Policy (IFP) will, also in the form of these policy briefs, try to provide various fiscal indicators for Slovak fiscal policy. This note focuses on the calculation of the consolidation effort.

This exercise aims to measure, as accurately as possible, the real effort of the government to consolidate or overspend. The public finance deficit is affected by many factors, some of which are beyond the control of economic policy-makers. This is why the European Commission[1], as well as the IFP, monitors the so-called consolidation effort which provides a better measure of the genuine government policy. Due to the data constraints, information is provided from 1995 onwards.

The most basic method of measuring the government's fiscal performance uses the officially reported **general government balance** under an internationally comparable methodology, such as ESA95. Nevertheless, this method of measuring the government's fiscal performance may not be sufficiently fair since the general government balance is affected by certain factors over which the government has no or limited control in a given period of time. An example of this would be an economic cycle. In the better part of it, high growth automatically (i.e. regardless of the economic policy) reduces the deficit through higher taxes resulting from higher profits and the wage bill in the private sector or through lower expenditure on unemployment benefits due to falling unemployment. These are the so-called **automatic stabilizers** which must be taken into account if we want to focus on an actual economic policy. **Debt service** represents another factor beyond the government's momentary control since it depends on the inherited stock of debt as well as on the prevailing global interest rates (hence, the primary structural deficit). It is also necessary to consider additional **one-off factors** through which governments improve or worsen their accounts and which are not related to their actual willingness to save or spend or which have neutral impact on net wealth[2]. The floods, the extraordinary transfers of the **central bank's profits** to the state budget, remission of other countries' debts, or the one-off income resulting from the **exit from the privately managed pension pillar**, represent the examples of what the Institute has long classified as "one-off effects".

Other factors that have to be taken into account include the **highway construction outside the general government balance** through fiscal gimmicks, such as **PPP** projects, or the State Road Company (**NDS**). As far as PPP projects are concerned, the main reason lies in the mismatch between the time when the decision is taken to use them and the time when they adversely affect the general government balance. Since, at the time of their repayment, PPP projects are beyond the government's control, it is reasonable to assume that they do not reflect the willingness to save or spend of the present government in office. The consolidation effort should take into account the investments

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[1] The European Commission also calculates the consolidation effort within the preventive arm of the Stability and Growth Pact. The aim is to assess whether a particular Member State is progressing towards the achievement of its medium-term budgetary objective at a sufficient pace. The Commission's approach to consolidation efforts is slightly different, since it only adjusts general government balance by deducting the cyclical component expressed through the output gap estimated using the unified methodology, and one-off measures identified by a Member State and approved by the European Commission.

[2] Property sell-offs such as privatisation are the usual suspects but privatisation proceeds are properly treated already by ESA95 methodology. Using the privatisation proceeds to repay the deficit also improves the deficit via lower debt service. But this does not have an impact on consolidation effort since the debt service is not taken into account.

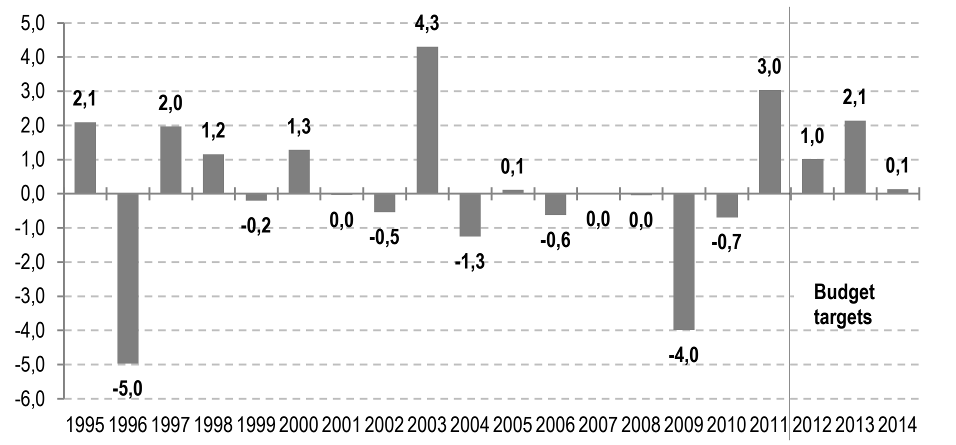
realized through PPP, as well as the annual maintenance. The funding of highway construction through the accumulation and repayment of debt in an entity formally outside the general government sector (NDS) indeed reflects the government's willingness to spend on highways. The State Road Company has been merely a vehicle to improve the fiscal figures in the past.

Another fiscal trick to improve the fiscal accounts on paper has been to **intentionally underfund certain public sectors formally outside the general government** (such as healthcare or railways). State Railways were forced to take out loans that they could not repay as the government had not paid the promised fees to subsidise the rail passenger transport. Hospitals have been exempt from bankruptcy laws so that they could incur unreasonable levels of debts. In addition, the later state transfers were labeled as "equity injections" instead of state loans. Hence, the annual indebtedness of these companies reflected government's real spending policies in these sectors. Unfortunately, Eurostat will likely not report these annual changes in debt properly, but rather combine them all into one year in 2011 (so as not to revise the past figures, not a very appealing argument indeed). Therefore, we subtract such a one-off adjustment to the deficit and spread it instead over the relevant years.

The consolidation effort is thus defined as a year-on-year change in the general government balance adjusted for the above mentioned factors (see the detailed methodology in Appendix 2 and 3).

A positive consolidation effort means that the government's intention has been to save. On the contrary, a negative consolidation effort means higher underlying deficit.

Slovak Consolidation Effort, 1995 - 2014 (ESA95, % of GDP, official methodology)



Note: 1 - positive values mean tightening, negative values mean loosening of the Slovak fiscal policy *Source: IFP*
2 - Appendix 3 contains detailed time series data used for calculation
3 - 2011 is an estimate while 2012-2014 was based on 2012 budget approved by the government

The figure suggests that the greatest savings were achieved in 2003 and 2011[3]. By definition, the consolidation effort – being a year-on-year change – depends on what the situation was a year ago. For instance, if the economic policy of 1996 was exceedingly expansionary, it was very easy to report positive consolidation effort the year after – simply by not repeating the fiscal binge. Therefore, it can be more informative to measure the consolidation effort in multiyear horizon. The government's term (usually 4 years in Slovakia) seems to be the obvious choice.

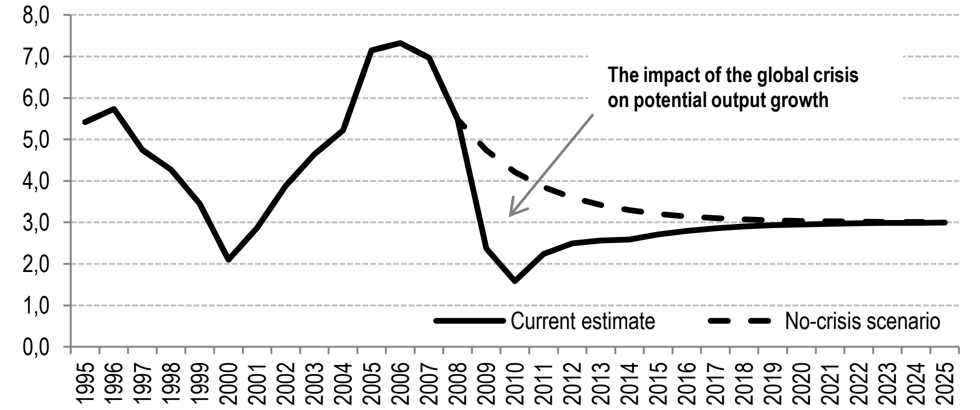
In an effort to improve the discussion about the fiscal policy in Slovakia, **IFP will publish the estimates of the consolidation effort on its web at least twice a year**, in Spring at the time of the publication of the Stability Programme and in Fall, as the budget is submitted to the government.

[3] 2011 figure is based on the latest estimate.

Appendix 1 – Experimental calculation of the consolidation effort in the context of current global crisis

Today's discussion often focuses whether the economies will go back to pre-crisis growth trajectory. The consensus view so far is that part of the pre-crisis growth was due to unsustainable factors and thus, the global crisis will likely mean a permanent gap between pre-crisis and post-crisis trajectories. This could be reflected in the assumption of a temporary decline in potential growth. The following figure represents the current view of the Slovak potential growth rate – a surprising sudden decline (after a rapid increase due to structural reforms and huge FDI inflows in 2003-2008).

The impact of the global crisis on potential output growth (%)



Source: IFP, Ministry of Finance

It might be tempting to suggest that pre-crisis growth was to a large extent of overheating nature. But there were few signs of overheating (such as unsustainable trade deficits, price increases of market services, too rapid wage growth due to labour shortages). The growth was fueled by huge capacity increases in auto and electronics sectors due to FDI inflows. True, one could regard the capital inflows as misplaced investments due to unrealistic assumptions about global growth. Yet, due to sizeable labour cost discount in EU and euro member Slovakia and the state-of-the-art form of the new plants, it is more reasonable to assume that the adjustment on the supply side is likely to happen in much more expensive regions with more outdated capital.

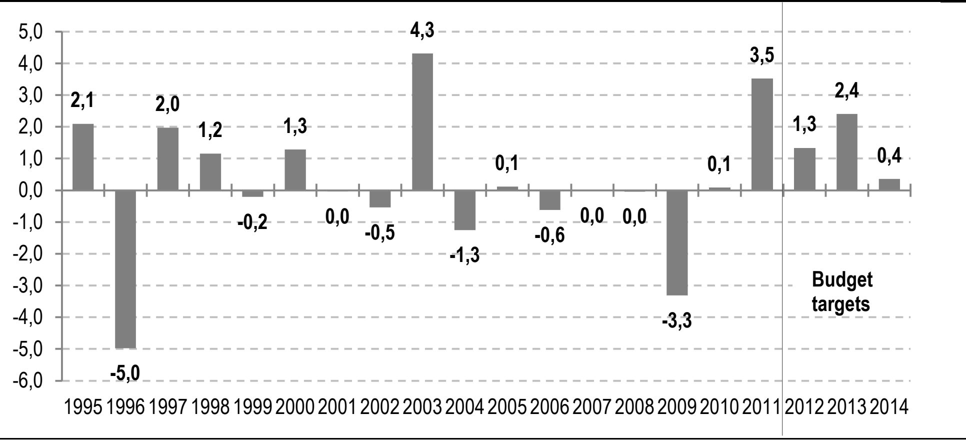
Experimental calculation takes into account a sudden unexpected drop in the potential growth rate when computing the consolidation effort.

Due to global crisis, the new plants ready to be put to work in 2009-2010 faced an unexpected halt. And thus 2009 government had to face a sudden drop in the potential output, which is over and above the usual domestic cycle[4]. This exercise tries to adjust for that, i.e., in simple terms, not to „punish" the government by interpreting this part of the revenue shortfall as a consequence of the government's own efforts.

Therefore, IFP presents this experimental calculation of the consolidation effort in the context of today's global crisis.

[4] One could argue that an alternative is to cyclically adjust Slovak growth considering also the global cycle, including global credit.

Consolidation effort during 1995 - 2014 (ESA95, % of GDP, experimental calculation)



Note: 1 – positive value represent the consolidation, negative values suggest loosening of the fiscal policy *Source: IFP*
2 – data used for the calculation can be found in the table at the end of the paper.

Appendix 2 – Methodology used to calculate the consolidation effort

In order to calculate the consolidation effort of the government, one needs to deduct the following from the officially reported general government balance under the ESA95 methodology:

- **Cyclical component of the general government balance** – reflects the effect of automatic stabilisers and expresses the response of the general government revenue and expenditure to changes in the output gap. The magnitude of the cyclical component depends on the size of the output gap and on the elasticities of the selected revenue and expenditure categories which react to the fluctuations in economic activity. In determining the degree of sensitivity of the general government balance to changes in the output gap the IFP follows the European Commission's estimates based on the OECD methodology[3]. After deducting the cyclical component, we are left with the structural component of the general government balance, which can be interpreted as the status of public budgets assuming the economy is functioning at its potential output level.
- **One-off and temporary government measures** – these have only a temporary impact on the balance and do not induce any lasting change in the country's fiscal position. The list of the one-off measures in Slovakia is included in the Appendix 3; only measures amounting to at least 0.05% of GDP in a given year were taken into account.
- **Costs associated with the implementation of the privately managed pension pillar** – a 2-pillar pension reform entails higher costs for the public finance in the short run at the benefit of fiscal savings in the longer run. Hence, cutting the size of the private pillar means automatically higher expenditures in the future.
- **Interest expenditures** – the amount of interest paid depends mainly on the amount of general government debt accumulated in the past and on the external factors, such as interest rates and the exchange rate. This means that the government has limited control over this item in the current year.
- **Highway construction outside the general government balance –** includes the impact of PPP projects and motorway construction through the State Road Company (NDS). In the case of PPP projects, there is usually a mismatch between the time when an investment takes place and when it negatively affects the general government balance through payments by a general government entity. What is key in terms of government control over this item is the time of the PPP decision and not the time of PPP payment. Therefore, the general government balance is adjusted for this impact at the time of the construction rather than at the time when PPP project is being repaid. PPP investment costs as well as the annual maintenance is added to the public expenditures. In the case of the NDS, one needs to add motorway construction through net loans of the entity despite the fact that this entity is formally classified outside the general government sector.
- **Experimental adjustment – the impact of the global crisis on the structural general government balance** – the economic crisis most likely suddenly and unexpectedly cut the rate of the Slovak potential output growth. Compared to a pre-crisis scenario, this likely resulted in a permanent loss of potential output which had a negative impact on fiscal accounts. Since it is a rather unique event in the Slovak economic development, deducting the impact of the crisis from the balance likely better reflects the true consolidation effort of the then government in office.

The consolidation effort is then calculated as a year-on-year change of thus adjusted general government balance.

However, in interpreting the results it is necessary to bear in mind certain **limitations** inherent in the method for calculating the consolidation effort and compiling the general government balance:

- the **output gap**, which is a non-measurable quantity that can be estimated using various approaches, plays a major role in the calculations;
- the impact of the output gap on public finances is estimated using the **estimated budgetary elasticity** (a combination of the elasticity of tax revenues and cyclical expenditure), which should correspond to long-term elasticity. If GDP structure changes over time, it also affects the tax and social security revenues since individual GDP components have a different degree of tax intensity (for example, exports exempt from VAT) and the budgetary elasticities therefore change. This means that the consolidation effort concept does not take into account the impact of short-term elasticity deviations from their long-term levels.
- The consolidation effort can be better interpreted over a longer time-span (multi-annual approach such as during a government's term) than within a single year only.

[3] Girouard, N., André, Ch.: Measuring cyclically-adjusted budget balances for OECD countries. OECD Economics department working papers, no. 434, 2005

Appendix 3 – One-off measures and calculation of the consolidation effort (data regularly updated on IFP web site)

One-off and temporary measures (ESA 95, % of GDP)

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011E	2012B	2013B	2014B
One-off and temporary measures:	**1.7**	**0.6**	**-1.2**	**0.2**	**0.1**	**0.1**	**-5.1**	**0.4**	**-1.4**	**-1.4**	**0.0**	**-0.5**	**-0.3**	**0.5**	**-0.4**	**-0.3**	**-0.6**	**0.3**	**0.1**	**0.0**	**0.0**
- stockpiling in excise taxes	-	-	-	-	-	-	-	-	-	-	-	0.3	-0.3	0.5	-0.3	-0.2	-	-	-	-	-
- exit from the fully-funded pension pillar	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.2	0.2	-	-	-	-	-
- personal income tax (temporary increase of basic tax allowance)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-0.3	-0.3	-	-	-	-
- tax on excess emission allowances	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	0.1	-	-
- tax amnesty	-	-	-	-	-	-	-	-	0.4	-	-	0.2	-	-	-	-	-	-	-	-	-
- VAT (accrual change due to EU membership)	-	-	-	-	-	-	-	-	-	-1.0	-	-	-	-	-	-	-	-	-	-	-
- revenues of Social Insurance Agency from debt bailout in healthcare	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-
- extraordinary profit from the central bank	1.4	0.2	0.3	0.2	0.1	3.4	0.4	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-
- voucher privatization revenues	-	0.3	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
- revenues from the sales of telecommunication licenses	-	-	-	-	-	-	-	-	0.3	-	-	-	-	-	-	-	-	0.1	-	-	-
- debt remission towards foreign countries	-	-	-	-	-	-	-	-	-2.0	-0.4	-	-0.9	-	-	-	-	-	-	-	-	-
- foreign debt repayment via goods	-	-	-	-	-	-	-	-	-0.2	-0.1	-	-	-0.1	-	-	-	-	-	-	-	-
- remission of receivables towards non-financial corporations	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-0.4	-	-0.1	-	-	-	-
- assumption of high-risk guarantee of National Property Fund	-	-	-	-	-	-	-	-	-	-	-	-	-0.1	-	-	-	-	-	-	-	-
- costs of bank bailout	-	-	-	-	-	-3.3	-5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
- costs of natural disasters (drought/floods)	-	-	-	-	-	-	-0.6	-	-	-	-	-	-	-	-	-	-0.2	-	-	-	-
- accrualisation of high-risk state guarantees	0.4	-	-1.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
- accrualisation of capital transfer to ZSR	-	-	-	-	-	-	-	-0.1	-	-	-	-	0.1	-	-	-	-	-	-	-	-

Note: (+) means improvement and (-) means worsening of the general government balance *Source: IFP*

Consolidation effort (ESA 95, % of GDP)

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011E	2012B	2013B	2014B
1. Net lending / net borrowing	**-6.1**	**-3.4**	**-9.9**	**-6.3**	**-5.3**	**-7.4**	**-12.3**	**-6.5**	**-8.2**	**-2.8**	**-2.4**	**-2.8**	**-3.2**	**-1.8**	**-2.1**	**-8.0**	**-7.7**	**-5.5**	**-4.6**	**-2.9**	**-2.8**
2. Cyclical component	-0.6	0.1	0.5	0.7	0.6	-0.3	-0.6	-0.4	-0.2	-0.1	-0.2	-0.4	0.0	0.7	1.1	-1.1	-0.4	-0.1	-0.3	-0.3	-0.1
3. One-off measures	1.7	0.6	-1.2	0.2	0.1	0.1	-5.1	0.4	-1.4	-1.4	0.0	-0.5	-0.3	0.5	-0.4	-0.3	-0.6	0.3	0.1	0.0	0.0
4. Implementation of the 2nd pillar of pension scheme	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.8	-1.2	-1.3	-1.2	-1.3	-1.2	-1.2	-1.3	-1.3	-1.4
5. Interest payments	-3.4	-2.4	-2.5	-2.4	-2.5	-3.4	-4.1	-4.0	-3.6	-2.5	-2.2	-1.7	-1.5	-1.4	-1.2	-1.4	-1.3	-1.6	-1.8	-2.0	-2.2
6. Highway construction outside the GG balance sheet	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.1	0.0	0.4	0.7	0.3	-0.1	-0.2	-0.2
- construction costs of PPP projects	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3	0.7	0.4	0.1	0.0	-
- availability payments for the PPP project less maintenance	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	0.0	-0.1	-0.2	-0.2
- new loans taken by the NDS	-	-	-	-	-	-	-	-	-	-	-	0.4	0.4	0.1	0.0	0.1	-	-	-	-	-
- repayment of principal by the NDS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-0.1	-0.1	-0.1	-0.1	-0.1	0.0	0.0
7. Intentional underfinancing of public sectors (railways, hospitals)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.4	-0.9	0.0	0.0	0.0
8. Adjusted balance (1-2-3-4-5-6-7)	**-3.8**	**-1.7**	**-6.7**	**-4.7**	**-3.6**	**-3.8**	**-2.5**	**-2.5**	**-3.1**	**1.2**	**0.0**	**0.1**	**-0.5**	**-0.5**	**-0.6**	**-4.6**	**-5.2**	**-2.2**	**-1.2**	**0.9**	**1.1**
Consolidation effort – official measure	**-**	**2.1**	**-5.0**	**2.0**	**1.2**	**-0.2**	**1.3**	**0.0**	**-0.5**	**4.3**	**-1.3**	**0.1**	**-0.6**	**0.0**	**0.0**	**-4.0**	**-0.7**	**3.0**	**1.0**	**2.1**	**0.1**
9. Impact of the global crisis on potential growth rate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.7	-1.4	-1.9	-2.3	-2.5	-2.7
10. Adjusted balance for global crisis (8-9)	**-3.8**	**-1.7**	**-6.7**	**-4.7**	**-3.6**	**-3.8**	**-2.5**	**-2.5**	**-3.1**	**1.2**	**0.0**	**0.1**	**-0.5**	**-0.5**	**-0.6**	**-3.9**	**-3.8**	**-0.3**	**1.1**	**3.5**	**3.8**
Consolidation effort – experimental calculation	**-**	**2.1**	**-5.0**	**2.0**	**1.2**	**-0.2**	**1.3**	**0.0**	**-0.5**	**4.3**	**-1.3**	**0.1**	**-0.6**	**0.0**	**0.0**	**-3.3**	**0.1**	**3.5**	**1.3**	**2.4**	**0.4**

Note: (+) means consolidation and (-) means loosening of fiscal policy *Source: IFP*