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Sustainability of Belgian Public Finance: Challenges and Vulnerabilities

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Bas van Aarle^a and Jozef Konings^b

Abstract

This paper analyses Belgian fiscal sustainability using both a retrospective and a prospective view. In the retrospective part, empirical tests on Belgian government solvency during the period 1980-2010 are carried out. In the prospective part a scenario analysis of budgetary adjustment in the short and medium run under alternative hypotheses is undertaken.

JEL Codes: F31, F41, G15

Keywords: Belgium, euro area, fiscal policy, policy rules, fiscal sustainability

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Introduction

The collapse of Lehman Brothers and the global banking crisis and worldwide recession that emerged during the Fall of 2008, triggered a massive response of policy makers. Central Banks provided the required liquidity to restore confidence and governments throughout the world implemented fiscal stimuli in a (more or less) coordinated fashion¹. Three years later, however, the banking crisis turned into a (looming) sovereign debt crisis in several OECD countries. Apart from prominent cases like Greece, Portugal and Ireland, also Belgium has been a few times in the interest of financial markets, even if so far no downgrading has taken place. Two factors that often have been cited are the political uncertainty, associated with a two-year political stalemate surrounding the attempts to realise a broad institutional overhaul of the fiscal institutions, and a relatively high debt level at the onset of the recent fiscal deterioration in the aftermath of the global financial crises of 2008-2010. On the positive side, it is noted the economic slowdown affected Belgium –e.g. witnessed in terms of unemployment effects- to a lesser extent than some other euro area countries and also short and medium term growth potential of the Belgian economy appears to be less affected than e.g. Greece by the debt problems.

Speculation in global markets about the Belgian case is not only evidenced by the evaluations from the rating agencies but also by a small but persistent risk premium on Belgian bonds relative to German bonds since 2009. Recently this spread has been increasing, although not in the same proportion as countries like Italy and Spain, which also have witnessed sharply increasing debt levels in the last few years.²

This paper analyses Belgian fiscal sustainability using both a retrospective and a prospective view. In the retrospective part in section 2, empirical tests on Belgian government solvency during the period 1980-2010 are carried out, using standard unit root and co-integration tests. In the prospective part in section 3, a scenario analysis of budgetary adjustment in the short and medium run under alternative hypotheses is undertaken. To this end, we introduce a stylized model of public finances, which allows us to assess the long run impact of changes in the macroeconomic environment, such as changes in growth rates, interest rates and the primary balance on the evolution of public finances. Public finances in Belgium are facing many challenges, but we will focus on two key challenges. The first concerns the budgetary costs of ageing, the second is the financial sector support, i.e. bailing out the banking sector. A novelty of our approach is that we introduce a risk premium that depends on the level of debt, which implies that the debt dynamics becomes quadratic in the level of debt. In addition, budgetary costs of ageing and financial sector support is explicitly taken into consideration. The conclusion summarises the main results and policy implications.

2 Retrospective Testing of Budgetary sustainability in Belgium: What do Unit Root and Co-integration Tests Tell?

In order to understand current public finances and challenges, it is also necessary to first scrutinize the main fiscal developments in the recent and more distinct past. Figure 1 summarizes the main budgetary and macroeconomic trends that are observed during the period from 1980 to 2010. All data are from the EU's AMECO database.

¹ E.g. the European recovery program and the various G20 summits.

² See e.g. Arghyroua and Kontonikas (2011) on this speculation in bond markets.

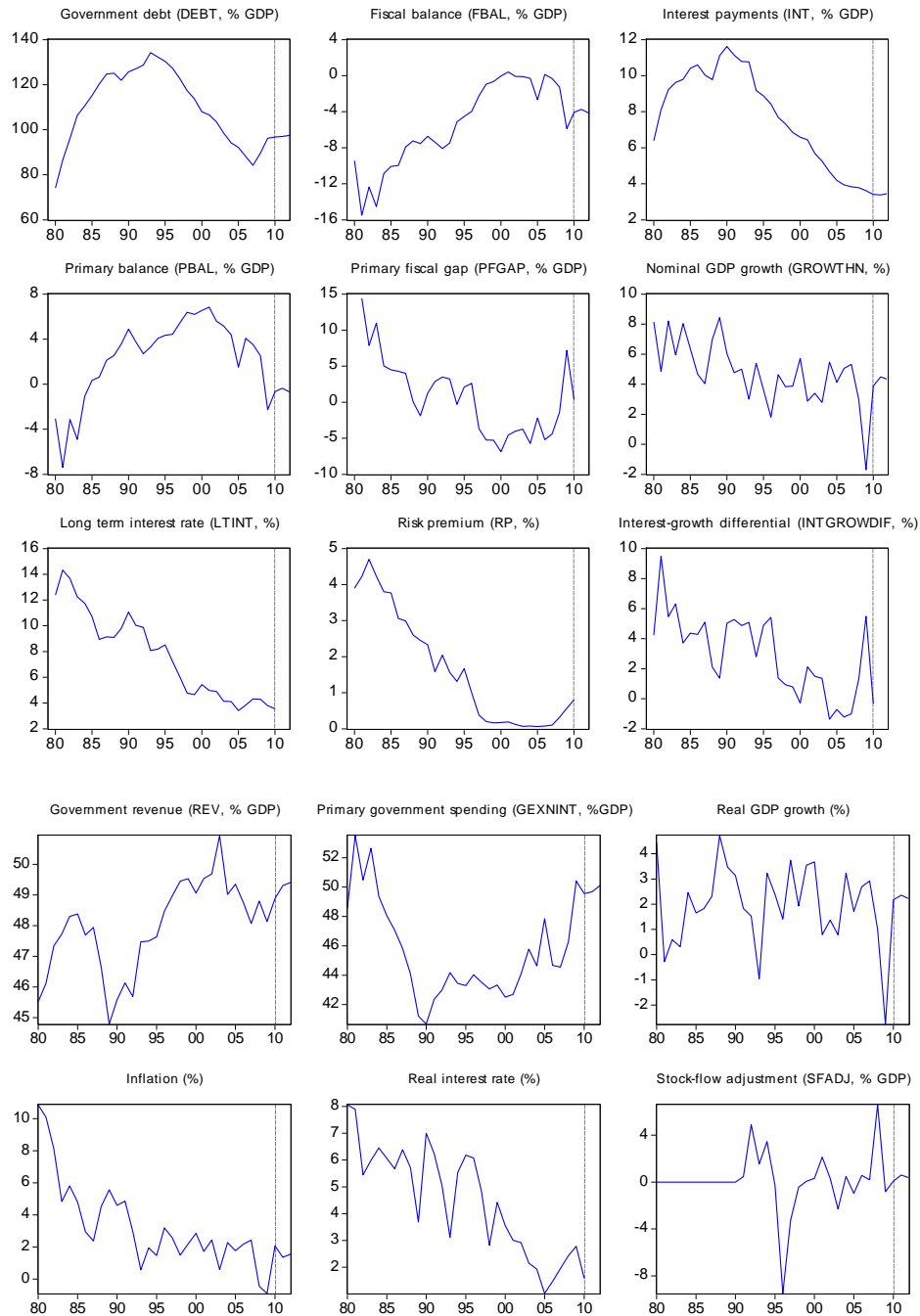


Figure 1 Fiscal and macro-economic variables, Belgium, 1980-2012.
Source: AMECO (Data for 2011-2012 concern projections)

The general picture on sustainability of Belgian public finances is relatively mixed: a relatively high level of debt is still present despite the substantial fiscal restructuring during the period 1990-2005. The recent global economic and financial turmoil has had also substantial impacts on the Belgian economy and public finances and a significant number of challenges and vulnerabilities remain in the short and longer run. These are both on the growth front as on public finances themselves, think e.g. about the budgetary costs from ageing and from support interventions in the financial sector. Clearly it is very difficult to assess how sustainable public finances are currently and what the most likely budgetary scenarios in the near and less near future are.

Unsustainable public finance viz. government insolvency implies the violation of the inter-temporal budget constraint and the no-Ponzi game condition. Following Bohn's seminal work (Bohn, 1995), empirical studies on government solvency have focused on estimating stationarity of fiscal balances and on finding co-integration between debt and the primary fiscal balance. Other studies such as Afonso (2005) apply the test on

co-integration between government revenues and government expenditures in order to examine the sustainability hypothesis. A general drawback of this literature is the lack of power of conventional stationarity and co-integration tests in short time series.

In this section we apply these econometric tests on government solvency from the literature to the Belgian case. For a first impression, we start with the results from unit root tests on government gross debt, (primary) fiscal balances, government spending and government revenue, the primary fiscal gap.

Table 1: Unit root tests

	Deterministics	ADF	PP
Government gross debt	None	-0.44 (0.51)	0.14 (0.72)
	Intercept	-1.47 (0.54)	-2.18 (0.22)
	Intercept and trend	-2.50 (0.32)	-3.77 (0.04)
Fiscal balance	None	-1.25 (0.19)	-1.22 (0.20)
	Intercept	-1.35 (0.59)	-1.24 (0.64)
	Intercept and trend	-2.03 (0.56)	-2.19 (0.48)
Primary balance	None	-1.35 (0.16)	-1.35 (0.16)
	Intercept	-1.81 (0.37)	-1.71 (0.42)
	Intercept and trend	-1.17 (0.90)	-0.67 (0.97)
Δ Primary balance	None	-7.82 (0.00)	-7.32 (0.00)
	Intercept	-7.76 (0.00)	-7.28 (0.00)
	Intercept and trend	-10.56 (0.00)	-21.25 (0.00)
Prim. government spending	None	-0.02 (0.67)	-0.00 (0.67)
	Intercept	-1.61 (0.47)	-1.52 (0.51)
	Intercept and trend	-1.27 (0.88)	-1.09 (0.91)
Government revenue	None	0.66 (0.85)	0.65 (0.85)
	Intercept	-2.08 (0.26)	-2.18 (0.22)
	Intercept and trend	-2.15 (0.50)	-2.39 (0.38)
Primary fiscal gap	None	-3.21 (0.00)	-3.13 (0.01)
	Intercept	-3.08 (0.05)	-2.91 (0.09)
	Intercept and trend	-2.87 (0.19)	-2.82 (0.22)

Note: Augmented Dickey-Fuller and Phillips-Perron unit root tests.
Sample: 1980-2010, test statistic and p-value (in parenthesis)

Government debt, total fiscal deficit, primary fiscal deficit, government spending and government revenues are all non-stationary in the sample period from 1980 to 2010. The change in the primary fiscal balance is found stationary during this period, whereas the primary fiscal gap is on the borderline between stationarity and non-stationarity. The non-stationarity of government debt and especially the (primary) fiscal balance is an indication that intertemporal solvency was not fully ensured in Belgium during this period.

If the expected real interest rate net of real growth is constant, intertemporal solvency holds if the stock of debt and the primary deficit are co-integrated, as shown by Trehan and Walsh (1991). To test for co-integration between debt and primary deficit we applied both the Johanson procedure –results provided in Table 2- and the Engle-Granger single equation co-integration tests for equations with different deterministic components -results provided in Table 3-.

Table 2: Johanson test on co-integration between primary deficit and government debt

Selected (0.05 level*) Number of Co-integrating Relations by Model

Data Trend:	None	None	Linear	Linear	Quadratic
Test Type	No Intercept	Intercept	Intercept	Intercept	Intercept
	No Trend	No Trend	No Trend	Trend	Trend
Trace	1	1	2	1	2
Max-Eig	1	1	2	1	2

*Critical values based on MacKinnon-Haug-Michelis (1999)

Table 3: Engle-Granger test on co-integration between primary deficit and government debt

Co-integrating equation deterministics: C

Automatic lags specification based on Schwarz criterion (maxlag=4)

Dependent	ADF tau-statistic	Prob.*	PP z-statistic	Prob.*
Government debt	-5.69	0.000	-5.75	0.000
Primary balance	-5.73	0.000	-5.83	0.000

Co-integrating equation deterministics: C TREND

Automatic lags specification based on Schwarz criterion (maxlag=4)

Dependent	tau-statistic	Prob.*	z-statistic	Prob.*
Government debt	-4.62	0.001	-4.59	0.001
Primary balance	-4.68	0.004	-4.65	0.004

*MacKinnon (1996) p-values.

The Johansen tests suggest that co-integration relations between the primary budget balance and the stock of debt are present. The Engle-Granger approach finds the errors of the estimated single-equations are stationary in both cases, confirming the presence of co-integration. A strict interpretation of these tests, suggest therefore that solvency of public finance was ensured during the sample period.

These co-integration tests on government solvency, however, do not generalize to the case where the (expected, net of real growth) real rate of interest is allowed to vary, a caveat stressed by Trehan and Walsh (1991). A test as above on budget sustainability that rests on the implicit assumption of a constant expected real interest rate may therefore be not very powerful. Trehan and Walsh (1991) suggest as an alternative to test for stationarity of the inclusive-of-interest deficit – the fiscal budget balance - is a sufficient condition for inter-temporal budget balance to hold, as long as the expected real rate of interest is positive.

Another prerequisite for a sustained budget is that revenues and expenditures move in parallel in the long-run. Only deviations of revenues from expenditures that are not mean-reverting violate restrictions on a sustainable budget balance. Consequently, if the budget process is balanced in the long-run, we expect revenues and expenditures being co-integrated.

Table 1 provided unit root tests of total expenditures (excluding interest payments) and total revenue. Both variables are non-stationary so that we indeed need to check whether a stationary linear combination between expenditures and revenues exist. Table 4 reports results of Johanson's co-integration test and Table 5 outcomes of the Engle-Granger co-integration test.

Table 4: Johanson test on co-integration between revenues and expenditures

Selected (0.05 level*) Number of Co-integrating Relations by Model

Data Trend:	None	None	Linear	Linear	Quadratic
Test Type	No Intercept	Intercept	Intercept	Intercept	Intercept
	No Trend	No Trend	No Trend	Trend	Trend
Trace	0	0	0	0	0
Max-Eig	0	0	0	0	0

*Critical values based on MacKinnon-Haug-Michelis (1999)

Table 5: Engle-Granger test on co-integration between revenues and spending

Co-integrating equation deterministics: C

Automatic lags specification based on Schwarz criterion (maxlag=4)

Dependent	tau-statistic	Prob.*	z-statistic	Prob.*
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Government spending	-5.20	0.000	-5.19	0.000
Government revenues	-5.56	0.000	-5.61	0.000

Co-integrating equation deterministics: C TREND
Automatic lags specification based on Schwarz criterion (maxlag=4)

Dependent	tau-statistic	Prob.*	z-statistic	Prob.*
Government spending	-5.19	0.001	-5.18	0.000
Government revenues	-5.64	0.000	-5.66	0.000

*MacKinnon (1996) p-values.

The co-integration tests do not confirm each other fully: the Johansen-test rejects the presence of co-integration, while the Engle-Granger approach does not reject co-integration. The last approach is implicitly based on a large sample assumption, so that one might attach a stronger weight to the first approach here that casts doubts on the co-integration between revenues and spending.

Taken together, the unit-root tests and co-integration analysis do not provide a perfectly clear picture on solvency of Belgian public finances since 1980: this probably reflects also the marked differences in the first half of the sample when public finances were clearly on an unsustainable path and the second half when fiscal consolidation reduced government debt and deficits significantly. This makes it even more interesting to also assess the possible budgetary adjustment in the near and longer term.

3 A forward-looking approach to fiscal sustainability in Belgium: Simulating a number of scenarios for 2011-2030.

Fiscal sustainability can not only be defined in terms of observed behaviour of fiscal deficits, debt, expenditures and revenues in the past, but also in terms of a forward-looking approach by considering alternative scenarios for the near future and beyond and assess their implications in term of budgetary sustainability. In this section, we analyse a number of budgetary scenarios that could be relevant from the perspective of sustainability of Belgian public finances. Our analysis refers to the Belgian consolidated government and we refrain from a more detailed, decentralised analysis of the public finances of federal government and social security (s.c. entity I) and regional and local governments (s.c. entity II), notwithstanding the considerable number of important and interesting issues that can be raised in this respect.

We set out a baseline scenario for the period 2011-2030 (representing essentially a ‘status quo’ situation) and analyse the consequences for budgetary sustainability in case of changes in crucial factors. In the first case, we consider the effects of a small change in the interest rate since this variable is one of the crucial driving forces in the dynamics of the debt to GDP ratio, viz. debt sustainability. A higher interest rate not only implies a higher interest burden from the outstanding debt, but we also consider the possibility that a higher debt stock induces an increasing risk premium on government debt, reinforcing therefore the instability from higher interest rates. In the second case, we analyse the effects of a change in the growth rate, another crucial factor since it implies a larger income base to finance government spending, deficits and debt. While the interest rate is a destabilising factor in debt to GDP dynamics, economic growth is a stabilising factor. In the third case, we consider the effects from a change in the primary fiscal balance that would match the temporary budgetary saving measures that seek to bring back the Belgian budgetary deficit inline with the requirements of the Maastricht Treaty. The fourth case combines the first three cases into ‘best’ vs. ‘worst’ case scenarios. In the fifth and sixth cases, the budgetary consequences of ageing and financial sector bailouts are assessed, respectively.

Underlying our analysis is a small simulation model that can be summarised by the following equations:

$\left(\frac{B}{Y}\right)_t = (1 - gr_t^n) \left(\frac{B}{Y}\right)_{t-1} - \left(\frac{D}{Y}\right)_t + sfadj_t$	(1)
$\left(\frac{D}{Y}\right)_t = \left(\frac{T}{Y}\right)_t - \left(\frac{G}{Y}\right)_t$	(2)

$\left(\frac{G}{Y}\right)_t = \left(\frac{G^P}{Y}\right)_t + int_t + age_t$	(3)
$\left(\frac{D^P}{Y}\right)_t = \left(\frac{T}{Y}\right)_t - \left(\frac{G^P}{Y}\right)_t - age_t$	(4)
$int_t = i_t \left(\frac{B}{Y}\right)_t$	(5)
$i_t = r_t + \pi_t + rp_t$	(6)
$rp_t = \alpha \left(\frac{B}{Y}\right)_t$	(7)
$gr_t^n = gr_t^r + \pi_t$	(8)
$pfgap_t = (i_t - gr_t^n) \left(\frac{B}{Y}\right)_{t-1} - \left(\frac{D^P}{Y}\right)_t$	(9)

Table 1
A small model of the Belgian public finances

Eq.(1) determines the dynamics of the debt-to-GDP ratio, B/Y , as a result of the deficit to GDP ratio, D/Y , the GDP growth rate, gr , and a stock-flow adjustment, $sfdj$. The deficit, eq.(2), equals revenues to GDP minus expenditures to GDP. Total expenditures in (3) consist of primary expenditures, G^P/Y , interest expenditures (in % of GDP), int , and expenditures that are related to ageing, age (in % of GDP). Eq.(4) defines the primary fiscal balance by taking out the interest payments –defined in eq.(5)- from the total deficit. The nominal interest rate in (6) is defined as the sum of the real interest rate, r , (expected) inflation, π , and a risk premium, rp .

We assume in (7) that the risk premium depends on the level of debt. A simple regression of the Belgian long-term interest rate differential w.r.t. Germany on the level of debt, suggests a value of 0.007 for α . The risk-premium implies that the debt-dynamics become quadratic in the debt level, since (1)-(7) imply:

$$\left(\frac{B}{Y}\right)_t = (1 - gr_t^n + r_t + \pi_t) \left(\frac{B}{Y}\right)_{t-1} + \alpha \left(\frac{B}{Y}\right)_{t-1}^2 - \left(\frac{T}{Y}\right)_t + \left(\frac{G^P}{Y}\right)_t + age_t.$$

This non-linearity extends therefore the standard approach to analyze government debt dynamics that ignores a link between risk premia and the debt level, $\alpha = 0$. In that case the interest rate-growth differential is constant and this constant determines the stability of debt dynamics entirely³. If $\alpha > 0$, the interest rate growth differential is no longer constant due to a changing risk premium that depends on the debt level. α measures the strength of the non-linearity in the debt dynamics: a higher value α of makes the debt dynamics increasingly non-linear and unstable.

The risk-premium-debt relation could reflect in a stylized way the possible credit-rating down-grading by rating agencies when debt increases and doubts arise if long-run fiscal sustainability is guaranteed. In fact, the rating agencies Standard and Poor's, Fitch and Moody's have repeatedly assessed a possible downgrading of Belgium in the last two years, referring to political uncertainty but also to the debt level. Whether or not this would be justified, such downgradings would increase the risk-premium on Belgian debt and increase the borrowing costs, basically along the lines of (7).

Nominal growth in (8) equals real growth plus inflation. Finally, eq.(9) gives the primary fiscal gap, a positive gap indicates that the current primary balance is not sufficient to stabilize debt at the current level so that debt will continue to grow. Our model deals with the general government fiscal variables and is therefore not further worked out into federal, regional, local government and social security. Even if there is currently much debate about reforming the entire structure of government, our analysis ignores these complicated matters.

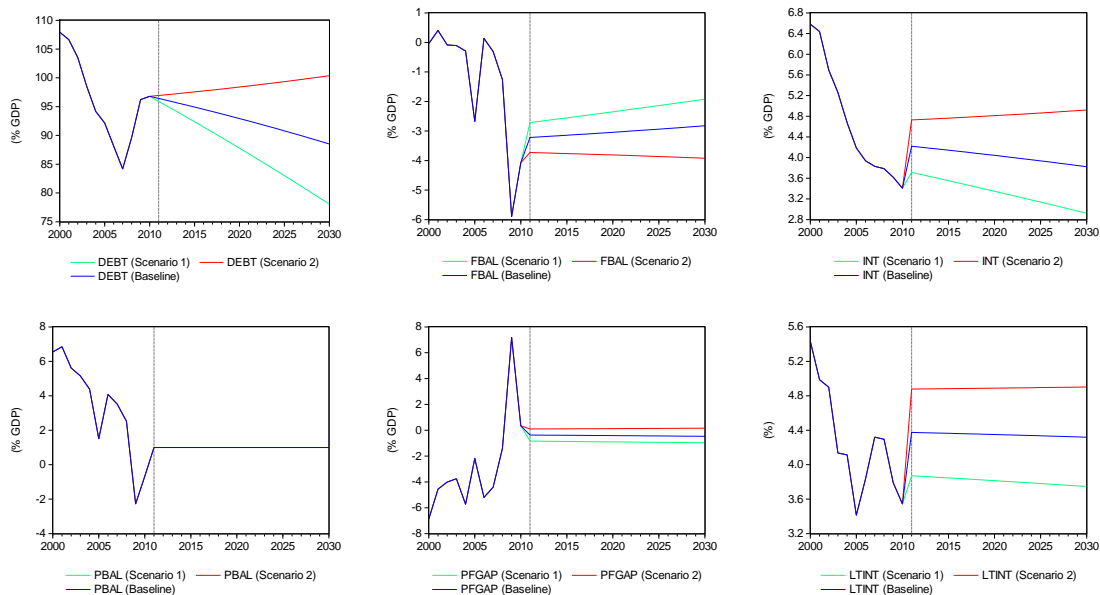
³ The debt-dynamics equation reduces to a standard linear difference equation in debt in case we assume that $\alpha = 0$ and that the real growth rate, the real interest rate, the inflation rate, the revenue to GDP ratio, the primary government spending to GDP and the aging-costs are exogenous. In that case, debt dynamics are stable (unstable) in case growth exceeds (is lower than) the interest rate.

To simulate our simple model of the Belgian public finances for the period 2011-2030 and compare alternative scenarios, we need to choose a baseline scenario for the exogenous variables in the model that reflects essentially a ‘status quo’ situation. While this baseline scenario should not be considered necessarily as the most realistic scenario, we give it a number of features that could be a useful benchmark. We assume a real growth rate of 1.7%, an inflation rate of 2% and a real interest rate of 1.7%. These values are based on the historical averages during the period 1980-2010. Primary government expenditures and government revenues are set to 49% and 50% of GDP close to their 2009-2010 values- and implying a (structural) primary balance of 1%, close to the official Belgian objective of its Stability Program 2011-2014. In the period 2000-2007 Belgium managed to generate primary surpluses of the order of 1% and more, after 2007 the primary balance deteriorate to around -1%. Clearly, it is not certain that after the financial crisis and economic slowdown of 2008-2010 such a positive primary balance can be regained even if large priority is given to improve the primary balance. Simulating the model with these baseline assumptions result in the adjustment of public finances shown in Figure 2 by blue lines.

The baseline scenario yields a practically flat profile of public finances during the period 2010-2030: government debt decreases somewhat from its starting value of 97% of GDP to 91% by 2030 while the total deficit is practically constant at the 3% deficit target of the Maastricht Treaty. This results from a baseline where growth equals the interest rate so that debt dynamics are borderline stable, combined with a small primary surplus. A slightly negative primary fiscal balance gap indicates throughout the period public finances are sustainable. Clearly this baseline scenario implies sustainable public finances even if the fiscal consolidation can be hardly considered ambitious and not compatible with the European Stability and Growth criteria to reach a 60% debt ratio in the longer term. This baseline scenario is moreover vulnerable to a number of potential challenges as we will analyse in the following alternative scenarios.

I Effects of interest rate changes

With higher debt levels, public finances become more sensitive to interest rate changes due to their impact on interest burdens and thereby on the fiscal balance. In our simple simulation model there is also an additional non-linear mechanism that enters into force: with increasing debt also the risk premium starts to increase, adding an additional interest burden.



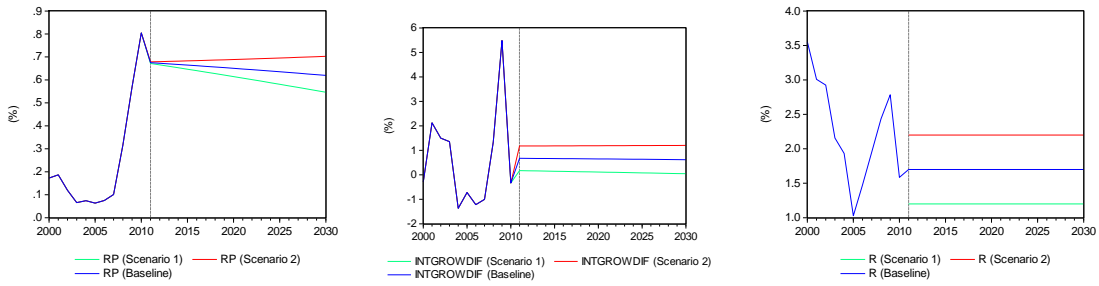


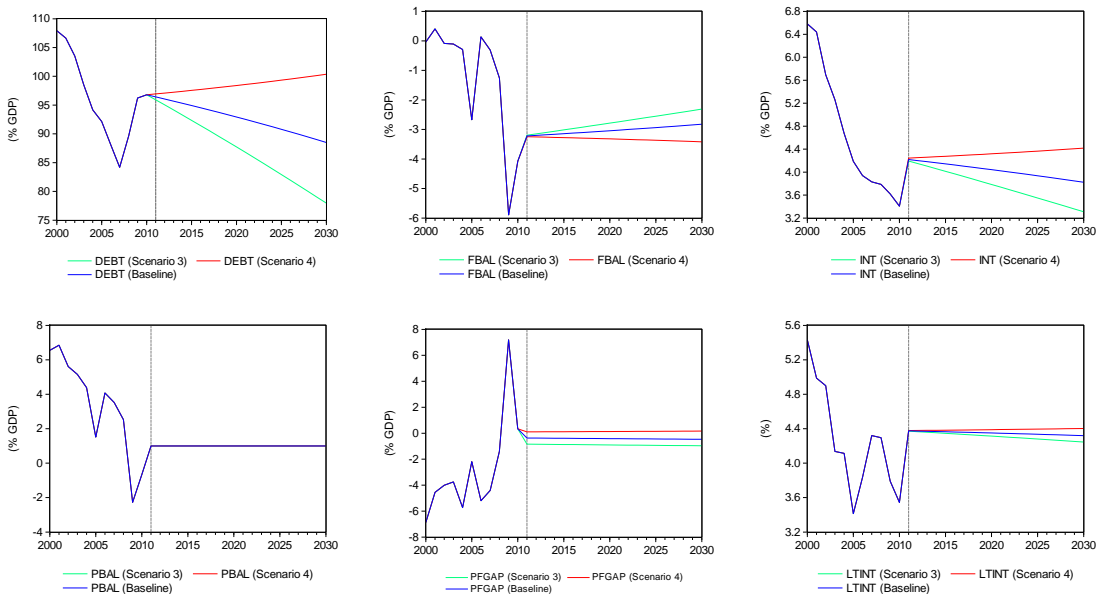
Figure 2

Baseline scenario Belgian public finances 2011-2030 (blue lines), 0.5% decrease in the interest rate of 0.5% (Scenario 1, green lines) vs 0.5% increase in the interest rate (Scenario 2, red lines).⁴

Scenario 1 (2) analyses the effects of a 0.5% decrease (increase) in the real interest rate – 1.2% (2.2%) instead of the 1.7% of the baseline- on the fiscal variables. These scenario, -displayed in Figure 2 by green (red) lines- illustrates the relatively high sensitivity of the Belgian budgetary variables to small changes in the interest rates. This results of course from the relatively high initial level of debt of close to 100% of GDP. Compared to the baseline, interest rate increases imply of course that fiscal sustainability deteriorates compared to the baseline, especially in the long run. This effect is reinforced to a small extent also by the non-linearity in the risk premium.

II Effects of growth rate changes

Scenario 3 (4) concerns an improvement (reduction) of the growth rate of 0.5% compared to the baseline. This small but sustained changes in the growth path have strong effects on public finances. Debt dynamics get on declining path and all fiscal variables improve. The positive fiscal dynamics of the period 2000-2007 are basically returning. In the medium and long-run, fulfilling the fiscal convergence criteria of the Stability and Growth Pact is practically restored as Figure 3 shows.



⁴ In the figures the following abbreviations are used DEBT: debt to GDP ratio, FBAL: fiscal balance to GDP ratio, PBAL: primary fiscal balance to GDP ratio, GEX: government spending to GDP ratio, INT: interest payments to GDP ratio, LTINT: long-term interest rate on government bonds, RP: risk premium on government bonds, GROWTHN: nominal growth rate GDP, INTGROWDIF: interest rate-growth rate differential, PFGAP: primary fiscal balance gap to GDP ratio, AGE: ageing costs variable, GEXNINT: primary government expenditures to GDP ratio, REV: government revenues to GDP ratio, GROWTHR: real GDP growth rate, INFL: inflation rate, R: real interest rate, SFADJ: stock-flow adjustment.

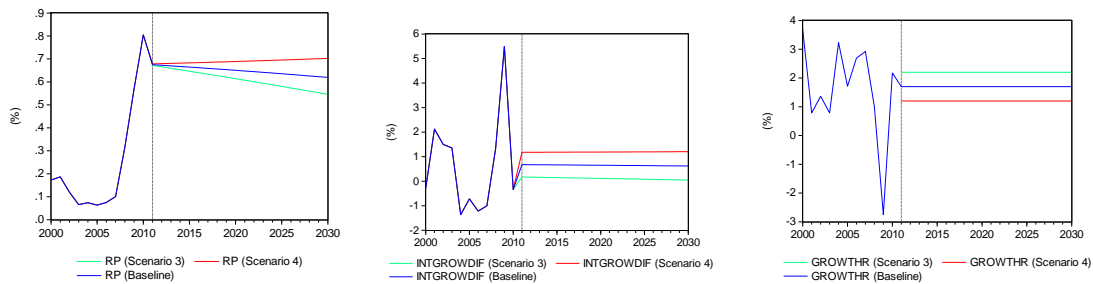


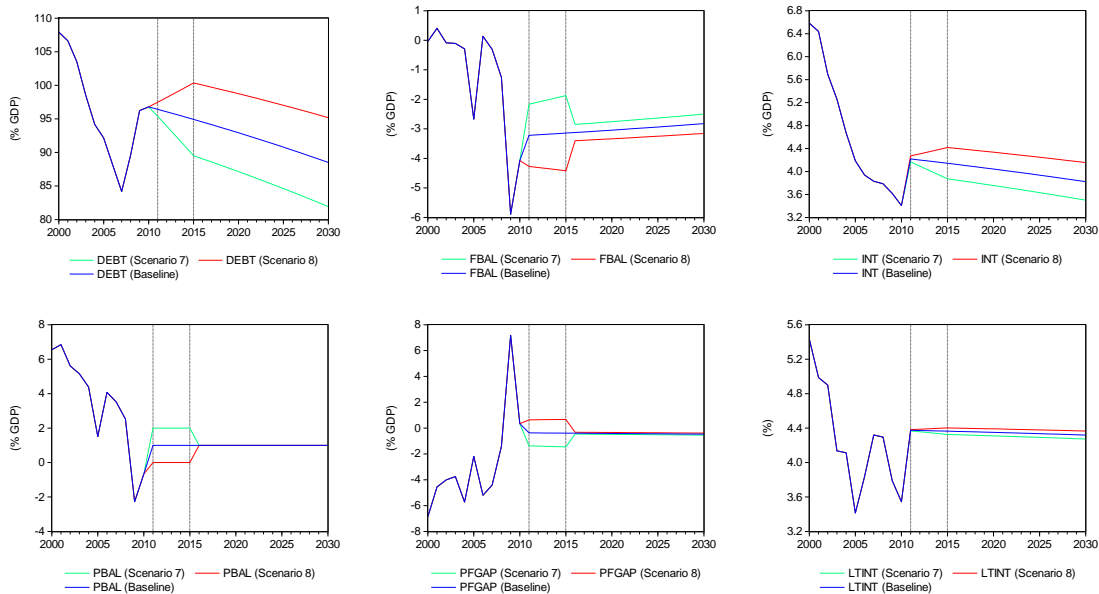
Figure 3

Baseline scenario Belgian public finances 2011-2030 (blue lines), 0.5% increase in the real GDP growth rate of 0.5% (Scenario 3, green lines) vs 0.5% decrease in the real GDP growth rate (Scenario 4, red lines).

The impact of growth changes on debt dynamics is similar (but opposite) to those of interest rate changes (but not identical because of the slightly different risk premium dynamics).

III Primary fiscal balance adjustments

While interest and growth rates are essentially outside the control of the fiscal authorities, adjusting the primary fiscal balance is the crucial factor to control the sustainability of public finances in the long run. Scenario 7 considers a temporary fiscal consolidation (expansion) effort that reduces (increases) primary government spending⁵ during the period 2011-2015 by 2% of GDP. During this period, therefore a primary surplus of 2% is achieved (in the baseline the primary balance was set to 1%), after 2015 the baseline situation is restored. The consequences of this consolidation effort can be found in Figure 5. In the alternative Scenario 8, a temporary budgetary deterioration of the same magnitude is considered. This would imply a temporary primary fiscal balance of 0% during the period 2011-2015.



⁵ Alternatively, these scenario results from a reduction viz. increase in government revenues by 1% during the period 2011-2015. Given that in our simple framework spending or revenue changes do not affect (long-run) economic growth (reflecting e.g. a long-run Ricardian equivalence setting with basically zero fiscal multipliers) these spending and revenue measures are de facto equivalent in terms of their fiscal consequences.

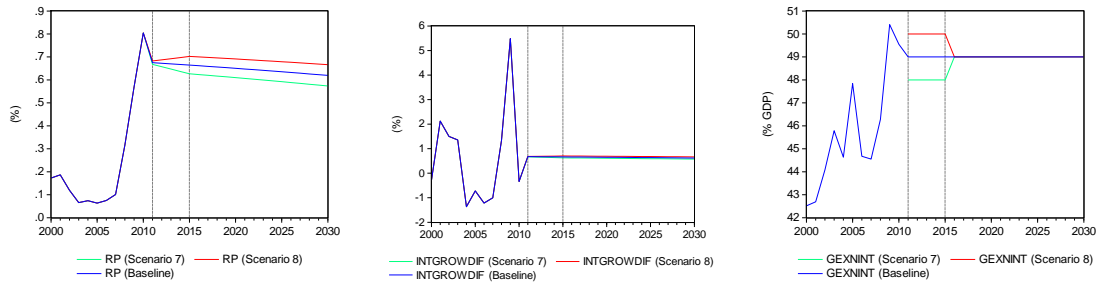


Figure 4

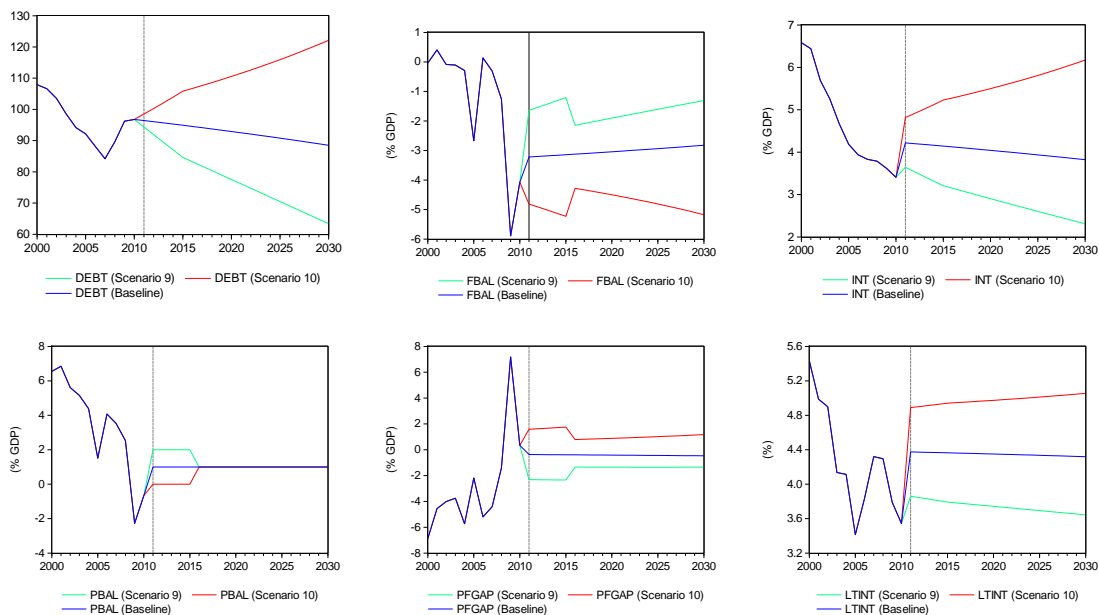
Baseline scenario Belgian public finances 2011-2030 (blue lines), a fiscal consolidation effort of 1% of GDP during 2011-2015, (Scenario 7, green lines) vs a fiscal spending deterioration of 1% of GDP during 2011-2015 (Scenario 8, red lines).

This fiscal consolidation package –which would roughly go in the direction of the official plan laid out in the Belgian Stability Program 2011-2014⁶ which aims to reach budget balance by 2015 but is based on more optimistic growth and real interest rate assumptions than ours- results in a reduction in government debt, total deficit, the risk premium and therefore the interest rate, and the total interest burden. When the consolidation effort is discontinued after 2015, the basics of the adjustments in the baseline of course resurface. A significant level shift in debt and interest payments, risk premium and fiscal balance result in other words from the temporary spending measures.

IV ‘Best’ and ‘worst’ case scenarios

Potential risks/positive challenges lay also in situations where several factors change at the same time. It is obviously very difficult to put any probability on such cases where more factors change for the worse/for the good. If they all change in a negative direction in a sort of “worst case” scenario, adequate and swift adjustment is needed to counteract the negative dynamics that occur without action. In an opposite “best case” scenario, favourable dynamics of public finance result in the short and especially longer term.

Figure 5 analyses such a ‘worst case’ vs ‘best case’ scenario. In the ‘worst case’ scenario, the previous cases with interest rate increases (Scenario 2), decline in economic growth (Scenario 4) and a fiscal slippage in the short-run (Scenario 8) are combined. In the ‘best case’ scenario the opposite scenarios (1, 3 and 7) are combined.



⁶ Retrieved from the European Union’s website

http://ec.europa.eu/economy_finance/sgp/pdf/20_scps/2011/01_programme/be_2011-04-15_sp_nl.pdf

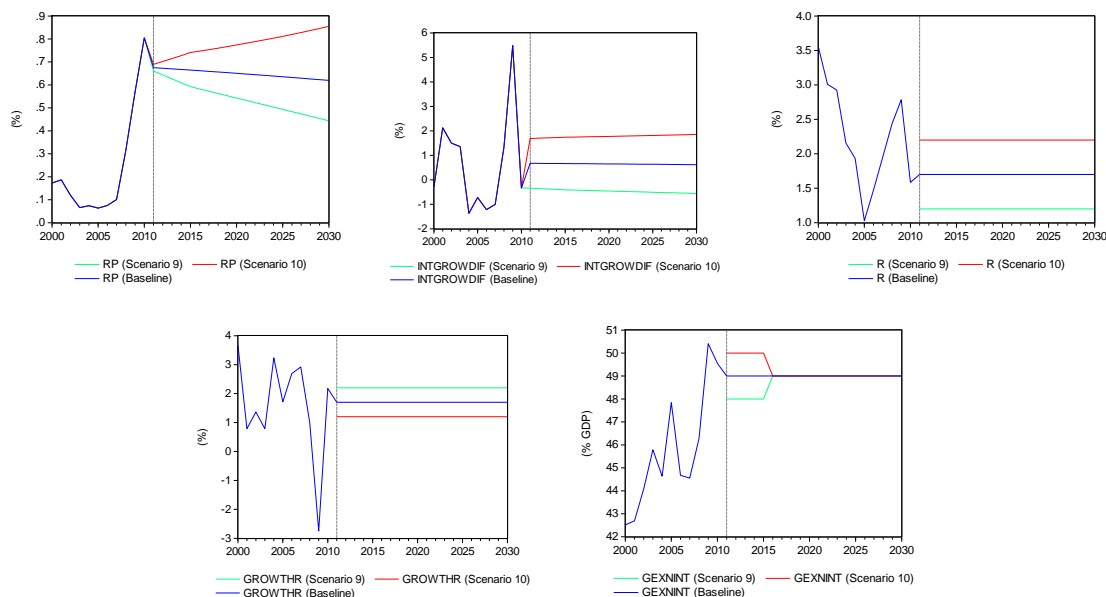
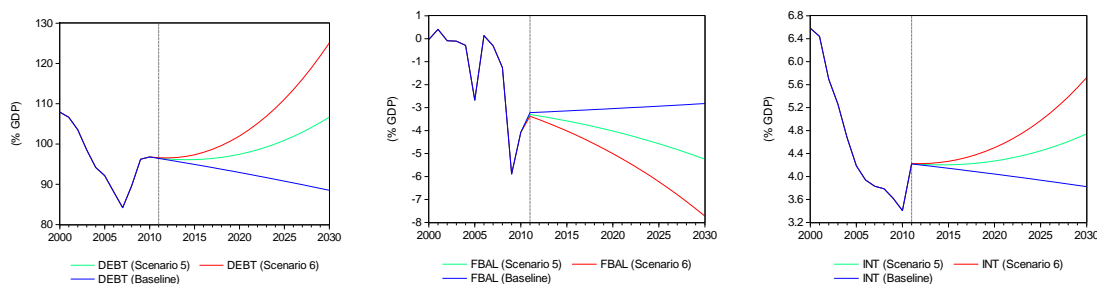


Figure 5
 Baseline scenario Belgian public finances 2011-2030 (blue lines), “best case” scenario –high growth, low interest rate, fiscal consolidation 2011-2015- (Scenario 9, green lines) vs “worst case” scenario –low growth, high interest rate, fiscal slippage 2011-2015- (Scenario 10, red lines).

The results show quite clearly how the effects accumulate to a very substantial fiscal alleviation in the short and particular longer term under a ‘best-case’ scenario –the 60% debt criterion of the Maastricht Treaty is even met eventually-, whereas the ‘worst-case’ implies an practically unsustainable fiscal adjustment path in the long-run and the need to undertake corrective action to avoid such a scenario from unrolling itself.

V Budgetary costs of ageing

Estimates from e.g. the OECD suggest that a country like Belgium may face ageing costs in the order of 0.1% each year cumulatively during the period 2010-2030 and even beyond.⁷ Taken together this implies a significant cumulative costs from ageing in the order of 3% of GDP. In the baseline and other scenarios so far we ignored these additional budgetary costs –or maybe better, we assumed implicitly that these costs were matched by equivalent reductions in other non-ageing related budgetary expenditures. Scenario 5 and 6 introduces extra government spending relating to ageing: Scenario 5 considers relatively contained budgetary costs from ageing, 0.075% cumulative each year during the period 2011-2030, Scenario 6 assumes substantial budgetary costs, 0.15% cumulative each year during the period 2011-2030. Figure 6 displays the effects of these ageing cost scenarios.



⁷ This scenario is also considered by the High Council of Finance (2009). Standard and Poor’s (2010) use a value of 0.3% for the annual ageing costs. This assumption leads to a rather dramatic deterioration of Belgian fiscal variables and seems a bit unrealistic.

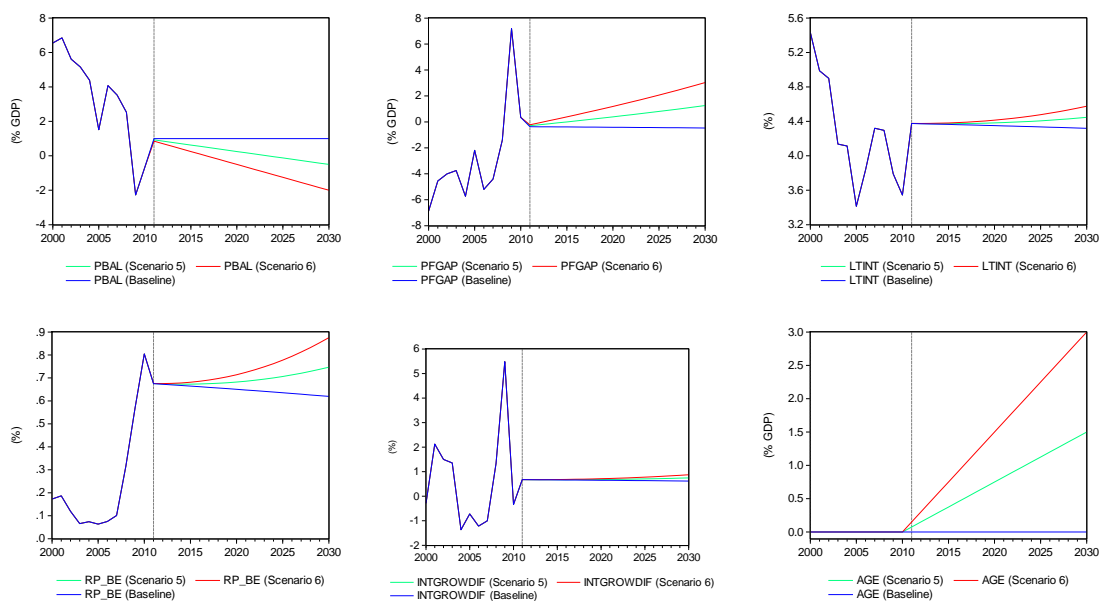


Figure 6

Baseline scenario Belgian public finances 2011-2030 (blue lines), 0.075% annual increase in ageing costs (Scenario 5, green lines) vs 0.15% annual increase in ageing costs (Scenario 6, red lines).

Over time the costs associated with ageing are clearly eating into the public finances: increasing government spending, deficits and debt result in particular towards the second half of the period. Without being accompanied by fiscal consolidation, ageing, in other words can markedly deteriorate the fiscal situation.

VI Budgetary costs of financial sector support

Directly in the aftermath of the Lehmann collapse and the resulting global financial turmoil, the Belgian government was forced in 2008 to carry out substantial support interventions to the Belgian system banks (Fortis, Dexia, ING and KBC) to stock up their capital. More recently in October 2011, renewed support was required to avoid a collapse of Dexia. Part of the bank was acquired by the state for an amount of 4bn euro. (In addition, a state guarantee of up to 54bn euro on bad loans was provided, clearly a much larger potential risk in the long-run). To finance this intervention, of course, additional borrowing by the government is needed. While gross government debt increases to the full amount of this operation -due to what is technically a stock-flow adjustment-, net debt of course would only increase to the extent that the participation would turn out to be loss-making, or in the worst case worthless when Dexia would still go bankrupt. In a very positive scenario, the bank would recover quickly and the State would as a sole proprietor now, benefit from considerable profits and valuation gains.

In the final analysis displayed in Figure 7 we want to assess the budgetary impact of such an operation to safeguard the financial system. In Scenario 11 a one-time positive stock-flow of the size of 1.1% of GDP in 2011 is carried out that measures the budgetary impact of the support operation and acquiring of a part of Dexia. In Scenario 12 a much larger one-time positive stock-flow adjustment of 7.1% of GDP is carried out -reflecting a very negative scenario where not only the budgetary costs of acquiring Dexia are counted (1.1% of GDP as in Scenario 11) but also a cost of 6% of GDP that would be incurred if 40% of the loan guarantees provided by the Belgian State on bad loans -as part of the Dexia deal- would indeed be invoked (here assumed immediately in 2011, in practice this could also be (much) later, for the sake of the argument this assumption is not too crucial).

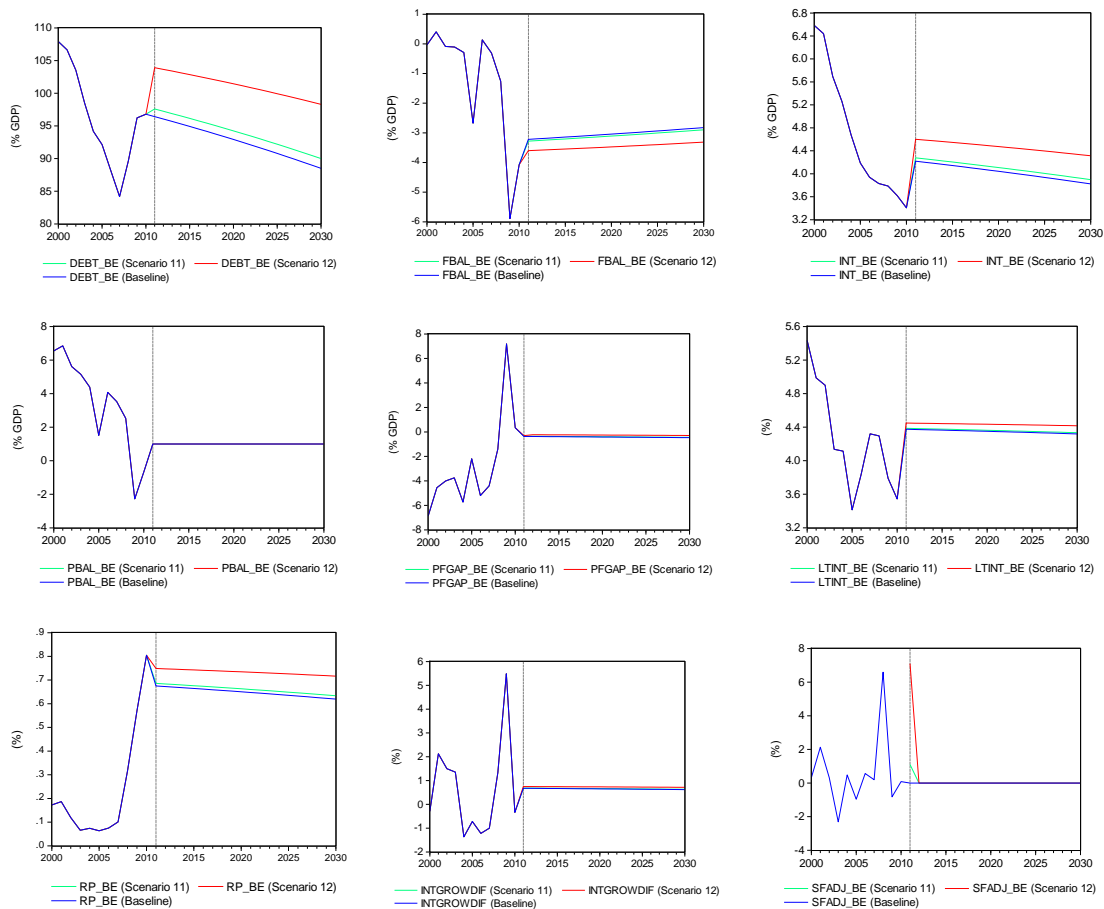


Figure 7

Baseline scenario Belgian public finances 2011-2030 (blue lines), 1.1% of GDP budgetary costs of financial sector/Dexia bail-out (Scenario 5, green lines) vs 7.1% budgetary costs of financial sector/Dexia bail-out (Scenario 6, red lines).

The budgetary effects of this intervention are not negligible, especially in the extended Dexia bail-out variant. In addition to the initial stock-flow adjustment that puts public debt on a higher level, the financial market interventions affects public finances through their effects on interest payments, including an effect on the risk premium, and thereby deteriorating fiscal balance and debt. This case makes clear that even a one-time fiscal intervention, in the form here of a one-time injection in the form of financial sector support, may have longer-term fiscal consequences, through debt accumulation, interest costs –including risk-premium effects. The effects increase when the ‘recovery rate’ of these support interventions declines.

Conclusions

Small permanent –or even temporary- changes in crucial factors to the deficit –interest rate (including risk premium assessments in international bond markets), economic growth, budgetary costs of ageing or costs of safeguarding the financial system e.g- can have significant influence on the course of public finance. Belgium is clearly finding itself on a crossroad currently: embarking upon a path of fiscal consolidation vs a status quo or fiscal slippage that would turn out to be harmful in the longer term. The political indecisiveness is a major risk that no clear vision and strategy emerges on budgetary adjustment in the near and longer term. Taken together with a high initial debt level, this constitutes risks in terms of budgetary sustainability in the longer run.

A retrospective analysis on budgetary sustainability in Belgium during the period 1980-2010, using conventional sustainability tests is not 100% conclusive. It suggests that public finances have been probably borderline stable. A result of two conflicting periods, the first part 1980-1995 displayed fiscal unsustainability, the second part 1996-2009 fiscal sustainability. The global financial crisis and economic slowdown of 2009-2010 again tended to move public finance on the brink of fiscal sustainability and points to need for fiscal vigilance in the near and medium term.

The prospective simulations using a simple model of the Belgian public finances provide a number of clear results and policy implications. A first result is the importance of the interest vs growth factor for the dynamics of the fiscal variables in the longer run: a small reduction in interest rate or a small improvement of growth delivers important gains in limiting/preventing the “debt snowball”. Given that interest rates and economic growth are only very indirectly under control of policymakers, fiscal prudence requires to be very cautious regarding projections on interest rates and growth, and considering the possibility that interest rates could get higher than projected and growth rates lower than projected. The non-linearity in the risk-premium-debt relation that we introduced as a sort of disciplining device by financial markets, leads to additional instability in the “debt snowball”. We implied a relatively modest non-linearity in our simulations, clearly if this mechanism is stronger, additional instability is introduced in public finances.

Clearly also small changes in spending and revenues, drive dynamics of fiscal balance and debt dynamics. We illustrated this with the effects of a temporary primary balance adjustment. Front-loaded budgetary efforts that seek to address fiscal sustainability already in the near future, -like the significant fiscal consolidation program planned for the period 2011-2015 that was analysed-, can certainly contribute to regaining fiscal sustainability.

Potential risks/positive challenges lay in situations where several factors change at the same time. If they change in a negative direction in a sort of “worst case” scenario, adequate and swift adjustment is needed to counteract the negative dynamics that occur without action. In an opposite “best case” scenario, favourable dynamics of public finance result in the short and especially longer term.

Ageing costs constitute another clear risk to the medium and long-run sustainability of public finance. To the extent that politicians would underestimate the budgetary costs of ageing, there remains a serious threat to fiscal sustainability in Belgium. Finally, one-time financial sector support measures –while potentially necessary to keep floating a financial system in turbulence- are not likely to be budgetary neutral and risk to generate longer term budgetary effects through their effects on interest burden and risk premia, as bond markets may perceive a larger risk.

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