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THE FEDERAL BUDGET DEBT BRAKE SINCE 2011

The real test is yet to come

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AT A GLANCE

– Looking back over the past few years, one might be forgiven for thinking that the federal government debt brake has been a great success. The net borrowing rules have been consistently overfulfilled, extremely rapid budget consolidation has occurred since 2010 and the debt brake model has been copied at European level in the shape of the European Fiscal Compact. But appearances can be deceptive.
– The extremely rapid consolidation and consistent overfulfilment of the debt brake rules are primarily due to the positive employment and income trends and low interest rates between 2011 and 2015. Even before the onset of the financial crisis – and well before the introduction of the debt brake – substantial progress had been made with regard to the consolidation of the federal budget, principally as a result of the favourable macroeconomic environment.
– A counterfactual simulation carried out by the IMK reveals that if the economy had done as badly post-2010 as the forecasts in 2009 and 2010 were still suggesting, the debt brake would very quickly have led to procyclical austerity measures that would have further weakened the economy. The ratio of government debt to GDP would be 8.5 % higher and the federal government budget would have 41 billion euros less to spend on public investment and services.
– Consequently, the real test of the debt brake in an unfavourable macroeconomic environment is yet to come. Policymakers would do well to modify the debt brake rules as soon as possible to prevent this instrument from turning into a boomerang during the next economic downturn.

Videostatement (in German)

Katja Rietzler

Schuldenbremse im Bundeshaushalt
https://youtu.be/QAbaCNE-oL4

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A "SUCCESFUL MODEL" UNDER MICROSCOPE

It is hard to overstate the political significance of Germany's supposedly successful debt brake model. The German debt brake provided the blueprint for the European Fiscal Compact's stricter fiscal rules and its ambition that limits on the public deficit should be enshrined in countries' constitutions (BMF 2012, p. 44). In keeping with the IMK's traditionally critical stance in this area **(Infobox 1)**, this report will eschew simplistic interpretations and seek to put the supposedly successful debt brake model under the microscope with specific reference to the federal government budget, as well as to quantify its success based on the empirical facts.

Since the debt brake was first applied to the federal budget in 2011, Germany's public finances have been in good health both in historical terms and compared to other countries. Last year, according to the national accounts definition, Germany achieved an overall budget surplus of 0.7 % of GDP.[1] Alongside Estonia and Luxembourg, this made it one of just three eurozone countries to record a positive overall fiscal balance. Germany was also among the few eurozone countries to fully comply with all of the EU's fiscal rules. Over the past few years, the different levels of government in Germany (federal, regional and local) have, as a whole, significantly diminished their deficits and have in fact been posting surpluses since 2014. Half of last year's overall budget surplus of 0.7 % of GDP can be attributed to the federal government which recorded a surplus of 10.7 billion euros (0.35 % of GDP) according to the national accounts definition. This meant that in 2015 there was no net new borrowing in the federal budget for the second time in a row. The last time this happened was in the 1970s.

The rapid consolidation of the federal budget coincided with the transition period before the debt brake fully came into effect, apparently causing some observers to think that there was a causal relationship between the two phenomena. According to the Federal Ministry of Finance (BMF) (2015a, p. 10), the fact that actual borrowing in the past few years and projected borrowing for this year and for the entire financial planning period are below the maximum permissible new borrowing limit is a sign that the debt brake is working and is indeed "putting the brakes on" new borrowing.

The federal budget, including the recorded off-budget entities, has stayed well within the limits established by the debt brake every single year since it was introduced. Over the same period, Germany performed very well compared to other countries in terms of growth and especially employment. This is often attributed to the "growth-oriented consolidation" strategy associated with the debt brake that supposedly demonstrates that budget consolidation is not only compatible with growth but can even be responsible for it (BMF 2014). The result is that strict compliance with – and indeed the consistent overfulfilment of – the debt brake in pursuit of the "schwarze Null" policy of a fully balanced budget became the trademark of Federal Minister of Finance Wolfgang Schäuble's "sound budgetary policy" (BMF 2016).

Following a brief summary of the key debt brake rules, the remainder of this report will begin by examining the overfulfilment of the debt brake rules that has repeatedly been cited as a key success driver. In doing so, we will focus on comparing budget planning and budget implementation. We will then present a detailed analysis of the consolidation of the federal budget over time, highlighting the key

1 The Federal Statistical Office published the national accounts for the second quarter on 24.8.2016. This is the only place in the report where this new data was used – all calculations and simulations are based on the data that was available in May 2016. The revisions of the GDP figures going back to 2012 that have been carried out in the meantime have no significant impact on the report's findings. As far as the public finance data itself is concerned, the analysis is in any case based on the financial statistic definitions used for the debt brake. These differ from those used in the national accounts particularly with regard to recorded transactions and recording dates.

role of various factors including the unexpectedly favourable employment and wage trends. Thereafter, a multiplier-based counterfactual simulation will be used to show what would have happened to the federal budget post-2010 under the debt brake regime if the rapid economic upturn of 2010 and 2011 – that the federal government failed to fully foresee – had not occurred and the economy had instead developed in line with the forecasts being employed at the time when the debt brake was adopted in the summer of 2009. Finally, we will draw a number of brief conclusions for economic and budgetary policy.

Infobox 1

Fundamental criticisms of the German debt brake

There are several criticisms that can be levelled at the federal government debt brake which was introduced in 2009. This section will concentrate on four of the main ones. The first is that, economically speaking, the constitutionally enshrined maximum net new structural borrowing target of 0.35 % of GDP for the federal government and the ban on net new structural borrowing for the Länder are completely arbitrary. Implicitly, assuming an average annual nominal GDP growth of 3 %, this would result in a long-term debt-to-GDP ratio of 11.7 % for Germany as a whole.

The suggestion that there is an upper limit for the debt-to-GDP ratio above which effects that are damaging to growth kick in has been strongly contested, not least since Reinhart and Rogoff's analysis (2010) was shown to contain serious errors (Herndon et al. 2013). Reinhart and Rogoff's study (2010) of the negative impacts of high government debt on economic growth was for many years used by governments all over the world to justify measures to reduce public debt, on the basis that growth would otherwise be impaired. Their panel study concluded that government debt has a harmful impact on economic activity once its level exceeds 90 % of GDP. However, Herndon et al. (2013) highlighted a number of serious errors in the calculations performed by Reinhart and Rogoff (2010) and, using the same data, found no correlation between high government debt and weak economic growth. In any case, the critical values cited in the empirical literature are above 85 % and in some cases even 95 %. They are most certainly not under 20 % (Cecchetti et al 2011, Baum et al. 2013) which is the level that would be needed for the implicit limit set by Germany's debt brake to be justified on the grounds of not impairing economic growth.

There is, however, a very real concern that the capital markets will in the long term lose an important source of stability and a key benchmark as a result of the debt brake's target of reducing the number of Federal bonds, traditionally the safest form of investment. There is no clear concept whatsoever of which investment types and which countries are supposed to absorb the traditionally high surplus savings of Germany's private sector, including private pensions; in effect the surpluses in Germany's private and public sectors equate to a persistent and unsustainable current account surplus (Lindner 2013). In any case it is unlikely to increase the stability of financial markets.

The second criticism is that by adopting the debt brake, budgetary policy is abandoning the Golden Rule, a widely accepted economic benchmark for government deficit levels. The use of the Golden Rule, also known as the pay-as-you-use principle, is warranted both from an economic growth perspective and in terms of intergenerational equity. It states that over the economic cycle, the level of new structural government borrowing should equal the level of (net) government investment. The idea behind it is that several generations should contribute to the financing of the government's capital stock, since future generations will benefit from the productive public investments made today.

It is true that the previous government debt rules set out in Germany's constitution (Basic Law) suffered from the flaw of failing to distinguish between gross and net investment, as well as not including all the economically relevant investment types. However, instead of trying to come up with a better definition or estimate for depreciation, not only has there been no attempt to engage in a much-needed discussion of this issue, but the recommendation of the German Council of Economic Experts (SVR 2007) was ignored, even though this body is itself not exactly a famous proponent of unlimited government debt. The low and on occasion even negative net investment levels of the past 15 years (Rietzler 2014) are another reason why it would have made sense to adopt a constitutional regulation that promoted public investment. Furthermore, recent experiences in the eurozone have shown that unless public investment is protected by strong regulation, it is particularly susceptible to budget cuts during consolidation phases (for more on this, see Truger 2015).

The third criticism is that the way the standard cyclical adjustment procedures work causes the debt brake to have a procyclical impact. The cyclical adjustment methods fundamentally underestimate the extent of cyclical fluctuations, resulting in a procyclical effect if they are employed as a basis for fiscal policy. Potential output is rapidly and dramatically

revised downwards during economic downturns and upwards during economic upturns, causing the cyclically induced part of the government budget balance to be underestimated. This leads to substantial parts of the deficit in a downturn and the surplus in an upturn being prematurely recorded as structural, even though their causes may in fact be purely cyclical in nature.[1] The upshot is a tendency to call for too much consolidation during a downturn and, conversely, too little during an upturn, thereby posing an unnecessary threat to stable economic development. It can in fact be demonstrated that much of Germany's overall "structural" consolidation has ultimately been motivated by cyclical factors (Truger 2014), while cyclical effects are also responsible for the "failure" of Europe's crisis countries to achieve the required level of structural consolidation.

The fourth criticism specifically concerns the lack of transparency and susceptibility to political manipulation that characterise the implementation of the cyclical adjustment procedure in the federal budget. Although the procedure is based on the method used by the European Commission, the exact details of its technical implementation are ultimately at the discretion of the Ministry of Finance. Since they have never yet been published in full, it is impossible to carry out an in-depth analysis of them (Truger and Will 2012a).

1 The European Commission, whose procedure provides the basis for the implementation of Germany's debt brake, has long since been forced to recognise that the consolidation effort estimates that it produces based on structural deficit changes significantly underestimate actual consolidation efforts. Consequently, it has now started to use other indicators as well (Carnot and de Castro 2015).

KEY COMPONENTS OF THE DEBT BRAKE

The mechanism known as the debt brake was incorporated into Germany's Basic Law in the summer of 2009. In essence, it consists of a structural component that only permits a very low level of structural borrowing – 0.35 % of GDP for the federal government and 0 % for the Länder –, plus a cyclical component that increases or decreases the leeway for additional borrowing over and above the structural component depending on the current economic situation, and an escape clause that allows the borrowing limit to be exceeded in exceptional emergency circumstances.

The cyclical adjustment procedure draws on the potential output estimate in the federal government's medium-term projection. Although the federal government essentially uses the same method as the European Commission (D'Auria et al. 2010), there are differences with regard to some of the details (Rietzler 2013). The cyclical component, i.e. the cyclically induced part of the overall figure in the budget, is calculated by multiplying the difference between GDP and potential output – known as the output gap – by the budget semi-elasticity of the relevant budget items. This cyclical component is then factored out of the various budget items.

Since cyclically sensitive tax revenue accounts for approximately 90 % of federal government income, government revenue is extremely susceptible to cyclical fluctuations. Cyclical factors have a far greater impact on government revenue than on government spending, since they only influence spending in connection with unemployment.

In addition to the cyclical component, "financial transactions" are also factored out of the key structural figures. These are transactions that do not affect capital formation such as the acquisition and disposal of holdings, privatisation proceeds or the granting/repayment of loans. These transactions do not alter the federal government's net assets, as clearly illustrated by the case of debt-financed loans granted by the government: although its borrowing does increase, this is balanced out by a corresponding rise in receivables.

Both positive and negative deviations from the net new borrowing limit established by the debt brake are recorded in a control account. This is intended to ensure that the debt brake is complied with not only when the budget is drawn up but also when it is implemented. The maximum permissible net new borrowing at the time the budget is drawn up, based on the new structural borrowing limit established by the debt brake – and adjusted for the cyclical component and the balance of financial transactions – is calculated and adjusted to take account of actual economic development at the end of the fiscal year. This figure is then compared against the actual net new borrowing figure and any deviations are posted to the control account. If the control account balance falls below minus 1 % of GDP, the federal government's scope for borrowing is already reduced. A negative balance in excess of minus 1.5 % of GDP is not permitted (Article 115 Act).

A transition period was established, allowing the federal government until 2016 and the Länder until 2020 to bring themselves into line with the structural borrowing limits. The fact that the transition period for the federal government expires with the 2016 federal budget makes this an appropriate time for the retrospective evaluation presented in this report.

WHY OVERFULFILMENT WASN´T AS IMPRESSIVE AS IT SEEMED

Since 2011, the federal government has not only complied with the debt brake rules but has in fact overfulfilled them by a considerable margin. Its aggregate net new borrowing over this period was 142.2 billion euros lower than the maximum permissible amount. This figure was calculated as the sum of the annual computations for the figures posted to the control account **(Table 1)** and equates to annual positive control account credits of well over 20 billion euros. **Table 1** provides a detailed breakdown of the underlying calculations.

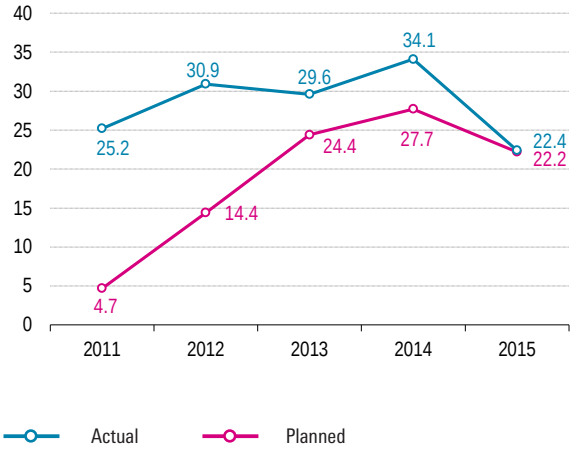
A comparison of the target figures and the actual figures achieved is extremely revealing. The actual budget balance was better than planned in every single year. **Figure 1** compares the planned and actual overfulfilment of the debt brake rules. During the first two years of the transition period, the budget still planned for a high level of net new borrowing and a relatively modest overfulfilment of the debt brake rules. The overfulfilment of the rules was largely delivered in the execution of the budget. From 2013 on, the targets became much more ambitious and the budgets actually planned for a significant overfulfilment of the debt brake rules. The outcome achieved in 2014 of a federal budget with no new borrowing was adopted as the new goal for the following years. Even though the debt brake still allows the federal government to take on new structural borrowing of up to 0.35 % of GDP (around 10 billion euros), the government has now set itself the goal of achieving a balanced budget under what has become known as the "black zero" policy (BMF 2016).

In terms of how the overfulfilment came about, it can be seen that it occurred without any additional consolidation measures in the execution of the budget. By way of example, **Figure 2** shows how the actual tax revenue and interest payment figures for the end of the fiscal year deviated from the forecasts in the budget. It can be seen that budgetary policy was substantially aided by unexpectedly high tax revenue and low interest payments in 2011 and 2012, the very same years in which the overfulfilment of the debt brake rules at the end of the fiscal year was especially pronounced. With the exception of 2013 – and despite additional spending and lower tax relief targets subsequently being set – budgetary policy continued to benefit from these unexpected bonuses. This allowed the Federal Minister of Finance to persist with his fully balanced budget policy without having to implement any particular cutbacks. On the contrary, as time went by, he was in fact able to substantially increase spending in a number of instances (support for municipal investments, flood relief fund, spending on refugees).

Another factor that should be taken into account is that the baseline figure established in 2010 for the structural deficit requiring consolidation was intentionally set at a level that made it easy for budgetary policy to comply with and overfulfill the debt brake rules. The government resorted to a number of unconventional and in some cases heavily criticised measures (Truger and Will 2012a; Deutsche Bundesbank 2011) in order to give itself extra leeway during the first years of the transition period, particularly with regard to the tax cuts called for by the FDP party in Germany's conservative-liberal coalition which, although they formed part of the coalition agreement, were subject to the availability of the necessary funds.

Figure 1

Overfulfilment of federal government debt brake rules
in bn euros



Source: BMF.

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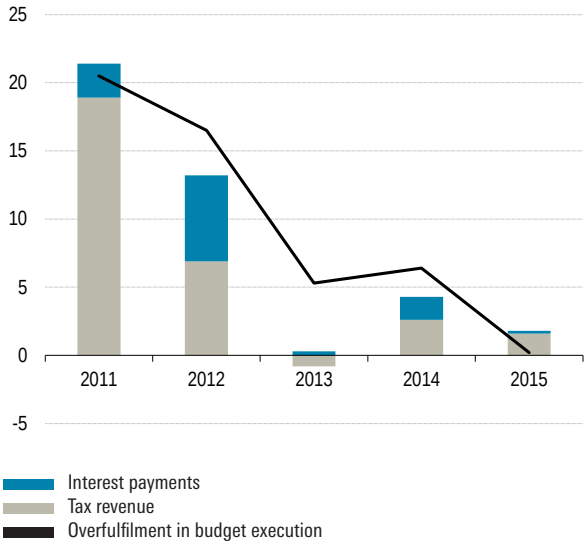
Figure 2

Overfulfilment of debt brake rules in budget execution
Contribution of interest payments and tax revenue in bn euros



Sources: BMF; Federal Budget Acts; IMK calculations.

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Control account of the federal government debt brake (in bn euros)

	2011		2012		2013		2014		2015	
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Target	Actual
1. Maximum permissible net structural borrowing (as % of GDP)	1.90		1.59		1.28		0.97		0.66	
2. Nominal GDP for year prior to year in which budget was drawn up	2397.1		2476.8		2592.6		2737.6		2809.5	
3. Maximum permissible net structural borrowing	45.6		39.4		33.2		26.6		18.6	
4. Net borrowing: (4a)-(4b)-(4c)	48.4	17.3	26.1	22.3	17.0	14.7	6.6	0.8	0.0	-4.5
4a. Net borrowing federal budget	48.4	17.3	26.1	22.5	17.1	22.1	6.5	0.0	0.0	0.0
4b. Fiscal balance Energy and Climate Fund	-	0.0	-	0.2	0.1	-0.1	-0.1	-0.1	0.0	1.9
4c. Fiscal balance flood victim fund	x	x	x	x	-	7.4	-	-0.7	-	-0.9
4d. Fiscal balance municipal investment promotion fund	x	x	x	x	x	x	x	x	-	3.5
5. Financial transactions balance	-5.0	2.0	4.3	-7.4	-5.2	-4.6	-2.9	-2.4	1.4	1.9
5a. Income	4.2	4.9	6.9	4.8	5.4	5.6	2.0	2.2	1.8	2.6
5aa. Federal budget	4.2	4.9	6.9	4.8	5.4	5.6	2.0	2.2	1.8	2.6
5ab. Energy and Climate Fund	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0
5ac. Flood victim fund	x	x	x	x	-	0.0	-	0.0	-	0.0
5b. Expenditure	9.3	2.8	2.7	12.2	10.5	10.2	4.9	4.6	0.5	0.7
5ba. Federal budget	9.3	2.8	2.7	12.2	10.5	10.2	4.9	4.6	0.5	0.7
5bb. Energy and Climate fund	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0
5bc. Flood victim fund	x	x	x	x	-	0.0	-	0.0	-	0.0
6. Cyclical components: Target:(6a)*(6c), Actual:[(6a)+(6b)]*(6c)	-2.5	1.1	-5.3	-6.4	-3.1	-6.5	-4.9	-5.9	-5.0	-1.2
6a. Nominal output gap (at time when budget drawn up)	-15.5		-33.3		-16.2		-23.2		-24.4	
6b. Correction for actual economic growth: [Actual (6ba)-Target(6ba)]%*(6bb)	x	22.1	x	-6.5	x	-18.1	x	-5.0	x	18.3
6ba. Nominal GDP vs previous year	3.0	3.9	2.4	2.2	2.8	2.2	3.5	3.4	3.2	3.8
6bb. Nominal GDP of previous year	x	2495.0	x	2609.9	x	2749.9	x	2820.8	x	2915.7
6c. Budget sensitivity/semi-elasticity (non-dimensional)	0.160		0.160		0.190		0.210		0.205	
7. Required reduction based on control account	-		-		-		-		-	
8. Maximum permissible borrowing: (3)-(5)-(6)-(7)	53.1	42.5	40.5	53.2	41.4	44.4	34.3	34.9	22.2	17.9
9. Net structural borrowing: (4)+(5)+(6)	40.9	20.4	25.0	8.5	8.8	3.6	-1.2	-7.5	-3.6	-3.8
as % of GDP	1.71	0.85	1.01	0.34	0.34	0.14	-0.04	-0.27	-0.13	-0.14
10. Control account debit(-)/credit(+): (8)-(4) or (3)-(9)	x	25.2	x	30.9	x	29.6	x	34.1	-	22.4
11. Previous year's control account balance	x	0.0	x	25.2	x	56.1	x	85.7	-	119.8
12. New control account balance: (10)+(11)	x	25.2	x	56.1	x	85.7	x	119.8	-	0.0[1]

1 The accumulated control account balance of 142.2 bn euros was cancelled when the transition period expired on 31.12.2015 .

Exact figures may differ due to rounding up/down.

Source: BMF.

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It was only in the 2011 budget that the government first adjusted its revenue projection and the full cyclical component and structural deficit calculations to reflect the improved macroeconomic situation – in other words, it did not adjust the relevant estimates for 2010. It seems that it was actually under no legal obligation to make this adjustment due to a legal loophole created by the fact that when the debt brake was adopted, nobody specified how, when and on the basis of which data the baseline structural deficit for 2010 should be established. This stratagem enabled the federal government not only to comply with the debt brake limit for 2011 but actually to remain almost 5 billion euros below it, creating further leeway for itself with regard to future planning.

Moreover, even though the new procedure was already fully available, the federal government chose to use the old EU cyclical adjustment procedure for the 2010 budget and the calculation of the baseline structural deficit. This gave it extra leeway when it came to setting the key benchmark figures for the 2012 federal budget, since it was only with the 2012 budget that it switched over to the new EU procedure for calculating the output gap. As a result, the projected negative output gap figure for 2011 rose from 0.6 % of GDP to 1.0 % of GDP, even though at the same time the GDP growth forecast for 2011 was increased from 1.8 % to 2.3 %. In other words, because of the change in procedure, the improved economic situation paradoxically led to a pronounced increase in the cyclically induced component of the permissible deficit. In its overview of the debt brake, the BMF (2015b, p. 19) sets out the reasons for its retrospective decision to cancel the accumulated control account balance on 31.12.2015. The justification for this was "in order to ensure that the accumulated positive entries posted to the control account during the transition period up to 2015 do not distort the function of the control account after the transition period is over" – a blatant admission that the overfulfilment was clearly not achieved without distortions.

To avoid any misunderstandings, the above observations are not intended to suggest that the federal government's budgetary policy was expansionary or even over-expansionary. Ultimately, it was in fact restrictive, even though there were good grounds for a more expansionary policy, both from a macroeconomic perspective and in terms of improving the supply of public goods and services. In particular, it would have been both desirable and possible to act sooner and do more to reduce the social expenditure burden on local authorities and to support local authority investment. All our analysis shows is that the compliance with and overfulfilment of the debt brake rules was not in fact a momentous achievement on the part of the government's budgetary policy – indeed, after the initial manipulation of the figures, it happened without them having to do almost anything at all.

SUCCESSFUL CONSOLIDATION THANKS TO FALLING INTEREST RATES AND POSITIVE EMPLOYMENT TRENDS

A sharp rise in the fiscal balance since 2010

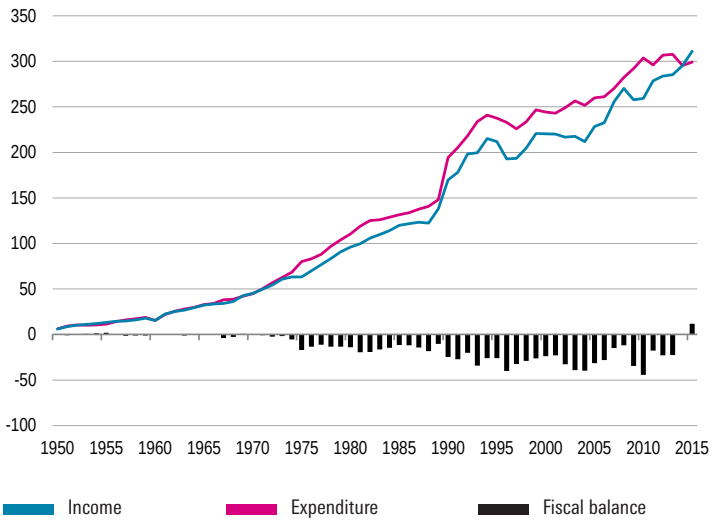
After posting a negative fiscal balance in the federal budget for every year between 1971 and 2014, the federal government was able to achieve significant consolidation of its finances within just a few years of the debt brake's adoption **(Figure 3)**. What were the factors that contributed to this successful consolidation? And what role did the debt brake play?

Since the debt brake placed mandatory limits on the net borrowing of the federal government and the off-budget entities created since the debt brake's introduction, the federal government's new borrowing fell rapidly from 44 billion euros during the eurozone crisis in 2010 to zero in 2014. The federal government's fiscal balance according to the national accounts definition has in fact risen from -44.4 billion euros to 11.8 billion euros, an increase of 56.2 billion euros or 2.1 % of GDP. While its income rose by an average of 3.7 % a year between 2010 and 2015, thanks in no small measure to a sharp rise in tax revenue (+4.5 %), its annual expenditure fell by an average of 0.3 %. This allowed the federal government to achieve a fiscal balance of almost zero by as early as 2014.

However, the unadjusted figures are of limited use for assessing the true nature of this consolidation. They tell us very little about whether the improvement in the fiscal balance was due to cyclical fac-

Figure 3

Federal government income, expenditure and fiscal balance (core budget)
in bn euros



Source: BMF.

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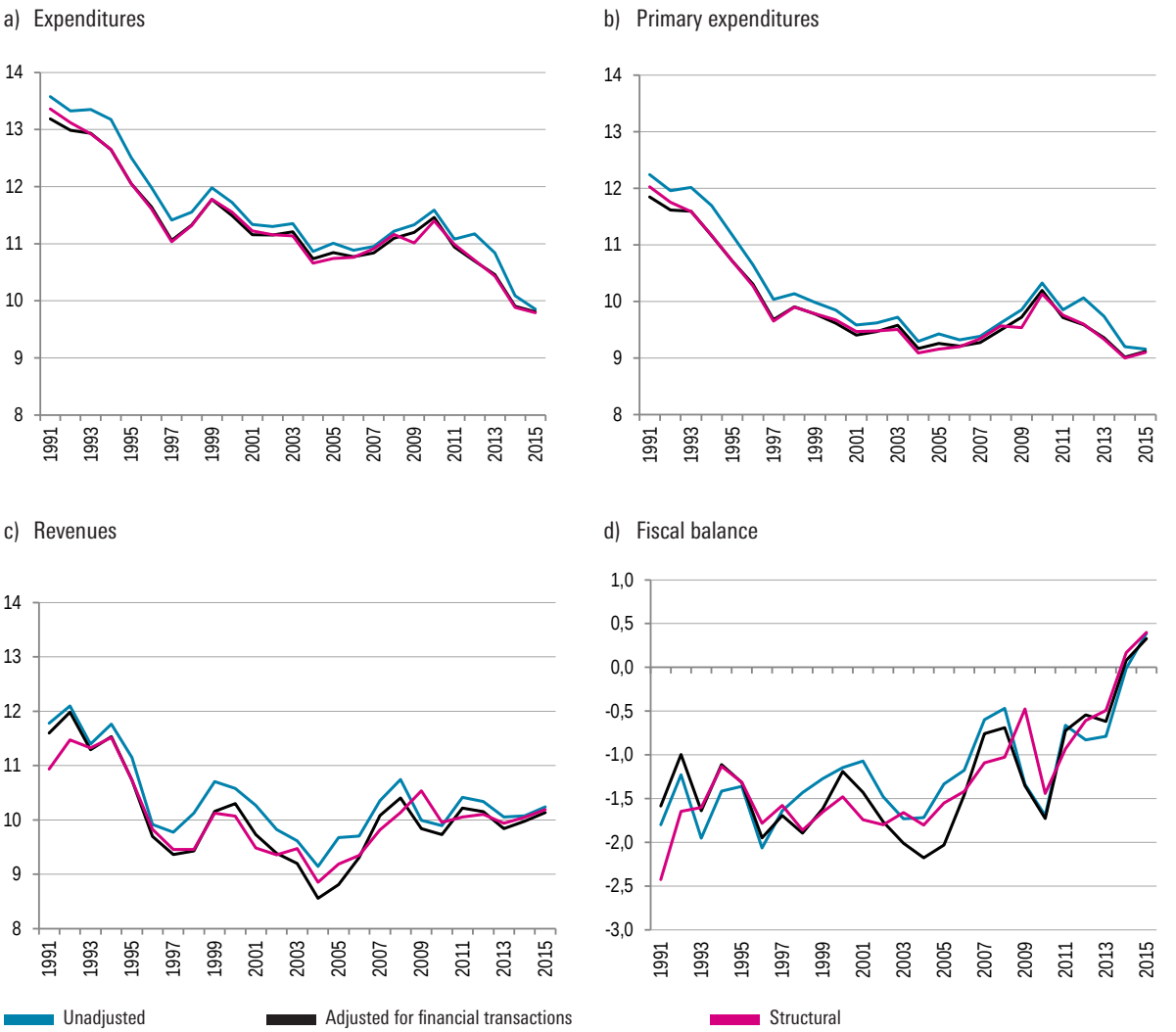
Federal budget components
as % of potential output



Sources: BMF; IMK calculations.

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tors or whether it constitutes a lasting "structural" improvement.

It is therefore necessary to carry out a cyclical adjustment, even though this is not without its problems, since the economic cycle as such is not observable and the different adjustment procedures are subject to major uncertainties. We will nonetheless begin by carrying out a cyclical adjustment, just like for the debt brake. We also factor out "financial transactions", again reflecting the debt brake procedure. The results should be interpreted with caution, however, and we will take another critical look at them later in this report.

Figure 4 shows the resulting time lines for the federal budget. Since the figures increase over time as a result of economic growth and inflation, they are easier to interpret when considered in relation to the figures for economic performance. Potential output has therefore been used here in order to prevent distortions, especially those caused by annual variation in GDP and in particular the sharp fall experienced in 2009.

Between 2010 and 2015, the structural fiscal balance underwent a rapid increase equivalent to 1.8 percent of potential output. **Figures 4a and 4b** show that the consolidation occurred mainly on the expenditure side – at one percent, primary expenditure adjusted for interest accounted for just over half of the total consolidation. Following a pronounced fall in 2010, there was a 0.4 percent rise in structural income relative to potential output over the following years. Thus, although its contribution to the consolidation process was significant, it was nonetheless considerably lower than the contribution made by the expenditure side.

Clear progress had already been made on consolidation before the financial crisis

The federal government's high budget deficits had been perceived as a problem for many years and repeated attempts at consolidation had already been undertaken. The federal government's public spending policy had thus been decidedly restrictive for quite some time. The 1.6 % average rise in annual spending since 1991 is significantly lower than the rise in both nominal GDP (+2.7 %) and government revenue (+2.3 %).

Between 1996 and 2004, however, this restrictive spending policy failed to bring about an improvement in the fiscal balance because the small increases in public spending were accompanied by equally small rises in government revenue. This was in large part due to a succession of sizable tax cuts, particularly under the red-green coalition (Truger 2009). It is therefore not surprising that the structural fiscal balance remained at more or less the same level relative to economic output during this period.

A turnaround in this trend occurred post-2004, with above-average increases in tax revenue making a key contribution to the sharp rise in (structural) income. Tax revenue was also boosted by the federal government's share of the 3 percent V.A.T. rise that was adopted in 2007. Meanwhile, the increases in government spending during this period were appreciably lower than the increases in government revenue, despite the fact that spending was growing faster than nominal GDP. Consequently, the structural fiscal balance improved from -1.8 % to -0.5 % of potential output. In other words, a balanced federal budget was already within touching distance even before the introduction of the debt brake. However, the combination of a sharp fall in tax revenue as a result of the financial crisis and the adoption of additional economic stimulus measures[2] would cause a hiatus in this substantial consolidation process that took place between 2004 and 2009, before the debt brake even existed.

Key factors in the consolidation achieved since 2010

Significant fall in interest payments

Around a quarter of the consolidation achieved since 2010 can be attributed to falling interest payments. The almost continuous decline in interest rates since the beginning of the 1990s accelerated following the onset of the financial crisis. This is not just a reflection of the ECB's expansionary monetary policy that is trying its hardest – without any fiscal policy support – to counteract Europe's macroeconomic weakness and the associated low inflation rate. Since the eurozone crisis began, Germany has also benefited massively from a "safe haven effect".

As a consequence, the returns on ten-year Federal bonds on the secondary market have fallen sharply and have even turned negative since the summer of 2016. The effective interest rate for the federal government has also fallen sharply, although it is still higher than the current rates of return on federal government securities as a result of the different issue dates and terms. Based on the figures in the national accounts, the effective interest rate for federal government borrowing is now more or less half that of the pre-crisis rate. This pronounced drop in interest rates means that the federal government is now paying 36.4 % or 12 billion euros less interest than in 2010. The impact of the recent slight reduction in federal government debt is negligible in this regard.

Favourable employment trend

The federal budget is also benefiting from the exceptionally favourable labour market trend in Germany. Following a steep and sustained fall in employment at the start of the last decade, a turnaround in the employment trend had already started to occur in the years leading up to the financial crisis. The number of jobs subject to social security contributions grew particularly strongly; indeed, they experienced only a slight decline even in the crisis year of 2009. In conjunction with the economic stimulus packages, the extension of the entitlement period for short-time working benefits helped to prevent redundancies and keep unemployment in check (Aricò and Stein 2012).

During the subsequent economic recovery phase, it was not long before new jobs started to be created again. The 1.9 % average growth rate for jobs subject to social security contributions since 2011 is even higher than during the period of strong economic growth that preceded the financial crisis. The growth in employment even continued – at only a marginally slower rate – while the economy was struggling in 2012 and 2013. There are some signs that employment has not been reacting as strongly to GDP trends since the financial crisis (Klinger and Weber 2015).

As a result of the dynamic employment trend, gross wages and salaries rose considerably faster post-2010 than before the crisis. In addition to its positive impact on the income side of the federal budget, the extremely favourable labour market situation also led to a sharp drop in spending and a substantial rise in revenue from contributions for the Federal Employment Agency. This in turn caused the federal government to significantly cut its transfers and payments to the Agency. From 2011 on, and without introducing any new payments to replace

2 The majority of the measures taken by the federal government to address the financial crisis do not show up in the federal budget, either because, as in the case of the bank bailout, they didn't affect the budget's cash position or because they were implemented through off-budget entities such as the "Investment and Amortisation Fund" (Investitions- und Tilgungsfonds).

it, the federal government was able to stop paying the Federal Employment Agency subsidy that had amounted to 5.2 billion euros in 2010. Between 2010 and 2013, the federal government reduced its financial contribution to employment promotion from 7.9 billion euros to zero. At the same time, however, the income side of the federal budget did lose the "integration contribution" (Eingliederungsbeitrag) that was latterly worth in the region of 4 billion euros. This contribution had formerly been paid by the Federal Employment Agency to the federal government to help with the funding of basic welfare benefits for long-term unemployed persons.

The high social security revenue resulting from the strong growth in wages and employment allowed the federal government to cut its transfers to other social security agencies, too. For instance, the federal subsidy for the compensation of crisis-induced revenue shortfalls in the statutory health insurance scheme was progressively reduced from 3.9 billion euros in 2010 to zero in 2012.

The results of an IMK simulation (Horn et al. 2016) show that, assuming the same GDP growth in both cases, a more domestically-oriented growth model with higher wage increases has a more positive impact on Germany's public finances than a more export-oriented model accompanied by wage restraint. And this greater emphasis on domestic growth is precisely what has been observed in Germany since the financial crisis. It is true that the simulation also indicates that, owing to the higher revenue from social security contributions, this benefits the social security agencies more than it does the different levels of government. In the case of government authorities, the positive impact on payroll tax and V.A.T. is to some extent counteracted by the negative impact on tax on profits. Nevertheless, the federal government still benefits indirectly from the rise in social security contributions, since this allows it to reduce the money it pays into the social security system.

Genuine consolidation, or just a favourable economic situation and one-off effects?

The official structural income, expenditure and fiscal balance figures seem to indicate that the federal government's finances have undergone a largely non-cyclical, structural improvement. However, the major uncertainties associated with the cyclical adjustment procedure mean that these figures should not be taken at face value. The way that the adjustment procedures define the cyclical and structural components frequently causes them to underestimate the cyclical effect, due to the strong influence of actual economic output on potential output estimates (Truger and Will 2012). Consequently, this section will analyse the plausibility of the figures cited above.

Between 2010 and 2015, the federal government's unadjusted fiscal balance rose by 56.1 billion euros. Of this total, 49.5 billion euros were recorded as structural consolidation and 0.9 billion euros were allocated to the financial transactions balance. Accordingly, just 5.7 billion euros were supposed to have been due to cyclical factors.

This figure seems surprisingly low, especially when it is broken down into its individual components. 4.2 billion euros are attributed to higher tax revenue and 1.1 billion euros to lower spending on unemployment.[3]

A cyclical improvement of just 4.2 billion euros for tax revenue is scarcely credible. Post-2010, structural tax revenue rises much more rapidly than potential output. Its ratio to potential output increases by 0.5 percentage points, which is equivalent to 12.3 billion euros. Meanwhile, the significant tax cuts implemented in 2009 and 2010 in order to stimulate the economy were not followed by any meaningful net tax rises that might have made the increase in structural tax revenue reported in the official figures appear somewhat more realistic. Calculations based on the tax law changes published in the BMF's financial reports from 2009 to 2017 show the tax burden for 2015 to be just 1.6 billion euros higher. While the different calculation dates and in some cases inaccurate underlying economic forecasts undoubtedly mean that this figure should be treated with due caution, it nonetheless serves to demonstrate that the standard cyclical adjustment procedure overestimates the structural increase in tax revenue. This is also indicated by the fact that the Working Party on Tax Revenue Estimates has repeatedly revised its tax revenue forecasts upwards (Rietzler et al. 2016).

The low estimate for the cyclical component of spending on unemployment is also surprising. The increased spending on unemployment as a result of the crisis was subsequently reduced when the economy and employment situation improved. This reduction in spending is quite clearly attributable to cyclical factors. Based on the financial statistics, a reduction in spending of 13 billion euros would appear to be far more plausible than the 1.1 billion euro figure calculated using the cyclical adjustment procedure. This would mean that the cyclical component was some 11.9 billion euros higher.

In accordance with the above, it would seem that the cyclical component has been underestimated and the degree of structural consolidation overestimated by around 23 billion euros. This is hardly surprising, given that the interpretation of effects that are actually cyclical as structural effects is an inevitable consequence of the cyclical adjustment method used **(Infobox 1)**. This is due to the fact that the potential output estimate is closely based on the most recent actual GDP figure. As a consequence, the economic recovery since 2010 has resulted in a

3 0.4 billion euros are a statistical remainder produced by the fact that part of the budget semi-elasticity cannot be allocated to either side of the budget and is therefore allocated directly to the fiscal balance.

tendency for the potential output figure to increase year on year: cyclical factors have been recast as structural factors.

If the overestimates of the structural impact of tax revenue and spending on unemployment are taken into account alongside the cyclical improvement in the fiscal balance, we are left with a structural improvement figure of just under 27 billion euros. Almost half of this is accounted for by lower interest payments. Our analysis therefore points to a figure just short of 15 billion euros for the structural improvement in the fiscal balance, rather than the 49.5 billion euros in the original calculations. This equates to a little less than 3 billion euros a year over a five-year period. Thus, instead of a very strong structural consolidation on the expenditure side, the overall picture is of a moderate structural and strong cyclical consolidation. On closer inspection, the apparently strong structural consolidation on the expenditure side is revealed to be no more than modest and is strongly reinforced by cyclical factors. On the income side, meanwhile, the moderate structural consolidation turns out to be entirely cyclical in nature.

THE FEDERAL GOVERNMENT FINANCES SINCE 2010 WITHOUT THE BENEFIT OF A FAVOURABLE ECONOMY – A COUNTERFACTURAL SIMULATION

The analysis presented above has repeatedly highlighted the fact that the unexpectedly strong economic upturn in 2010 and 2011, together with the resulting revenue windfall, was a key reason for the degree of consolidation achieved and the compliance with and overfulfilment of the debt brake rules. This section will seek to further substantiate this argument through a counterfactual simulation. Multiplier-based calculations[4] are used to simulate how certain key fiscal and macroeconomic indicators would have developed under the debt brake regime if the prevailing economic forecasts at the time when the debt brake was adopted in spring/summer 2009 had in fact turned out to be correct. The simulation is based on the Joint Economic Forecast's spring 2009 and spring 2010 GDP growth forecasts (Projektgruppe Gemeinschaftsdiagnose 2009 and 2010). In contrast to the actual growth that occurred in real GDP of 4.1 % in 2010 and 3.7 % in 2011, this forecast projected much lower growth of -0.5 % and 1.4 % respectively **(Table 2)**. The forecast inflation rate was 0.0 % for 2010 and 1.0 % for 2011. From 2012 on, the simulation uses the actual real GDP and inflation figures. These lower growth rate assumptions result in lower revenue and cyclically induced increases in spending, leading to a higher budget deficit. However, under the debt brake, the budget deficit may only be increased if the cyclical adjustment procedure signals a cyclical downturn as indicated by a growing negative output gap and results in a correspondingly larger cyclical component. Otherwise, the maximum permissible deficit would be exceeded and spending would have to be cut accordingly. When the multiplier is applied, however, these spending cuts lead to further reductions in GDP that in turn result in changes to the cyclical adjustment and the permissible deficit.

The simulation assumes a nominal GDP-elasticity of revenue of 1.1. It can be concluded from the current debt brake calculations that the federal government implicitly assumes a cyclical sensitivity value of 1.36 for federal tax revenue. Switzerland's Federal Finance Administration, on the other hand, assumes a revenue elasticity of 1.0 for the Swiss debt brake. However, this value was a controversial choice and there has been much discussion in Switzerland as to whether a value of 1.2 would in fact be more suitable (Colombier 2004). By opting for a value of 1.1 in our simulation we have therefore chosen to err on the side of caution. We do not assume separate elasticity of government expenditure in relation to GDP. Instead, we assume that since the economic downturn continues throughout the entire period

Table 2

Simulation assumptions

	Real GDP growth (%)		Inflation (%)	
	Actual	Simulation[1]	Actual	Simulation
2010	4.1	-0.5	0.8	0.0
2011	3.7	1.4	1.1	1.0
2012	0.4	0.4	1.6	1.6
2013	0.3	0.3	2.1	2.1
2014	1.6	1.6	1.7	1.7
2015	1.7	1.7	2.0	2.0
2016	1.4	1.4	0.5	0.5
Multiplier		1.0		
Revenue elasticity		1.1		
Lambda of mHP filter		100		

1 Figures exclude macroeconomic impacts of additional consolidation measures.

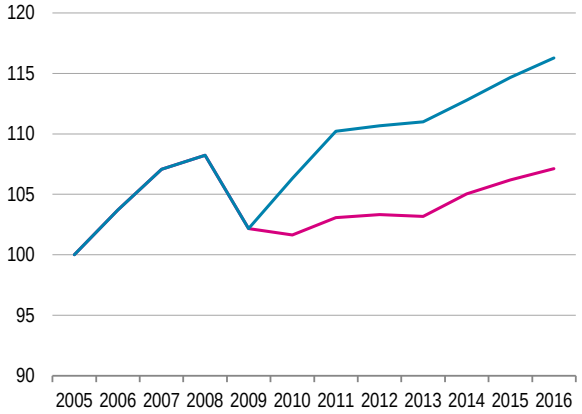
Sources: European Commission's AMECO database; Joint Economic Forecast Project Group (2009, 2010); IMK calculations (data for May 2016).

IMK

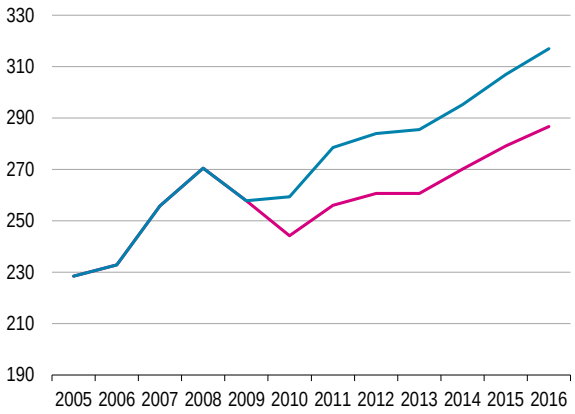
4 The fiscal multiplier describes the effect on GDP of discretionary fiscal measures and thus expresses an input-output relationship between these two variables. A positive (negative) multiplier of 1 means that the measure (e.g. an increase in spending or a tax cut) amounting to 1 % of GDP increases (reduces) GDP by 1 %.

Counterfactual simulation

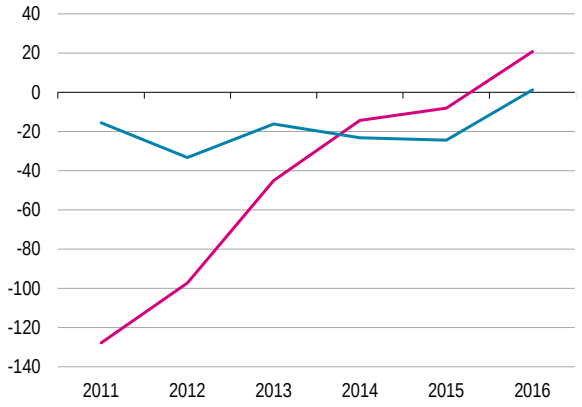
a) Real Gross Domestic Product
2005-2016 (2005=100)



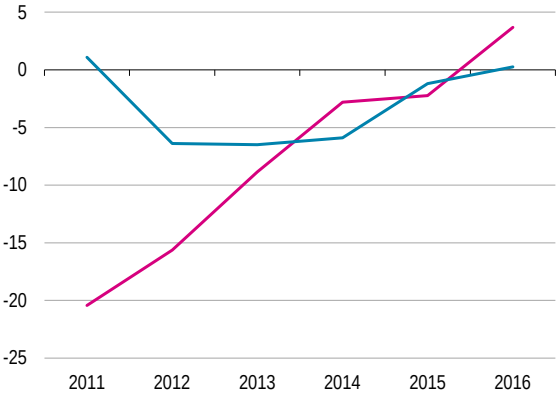
b) Nominal federal government revenue
in bn euros, 2005-2016



c) Nominal output gap
in bn euros, 2011-2016



d) Nominal cyclical component
in bn euros, 2011-2016



Actual values Simulation

Sources: BMF; AMECO-database of the EU-Commission; IMK calculations.

IMK

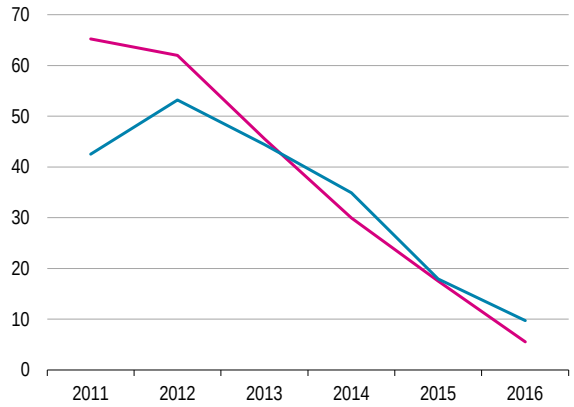
of the simulation, the reductions in social security spending that were implemented in reality would not have occurred.

We have chosen not to use the European Commission's complex cyclical adjustment procedure, especially since the federal government's concrete implementation of it has not yet been documented (Rietzler 2013). Instead, we have chosen to use the mHP filter that was developed by Switzerland's Federal Finance Administration and is used for the Swiss debt brake (Bruchez 2003). According to the calculations of the RWI (2010), the mHP filter is even less likely to have a procyclical impact than the European Commission procedure.[5] In order to allow the output gaps in our simulation to be compared with those of the federal government, we must also use the filter procedure to calculate an output gap based on the actual figures. This allows us to determine the changes in the output gap resulting from deviations of real GDP from the actual figures. The change in the output gap calculated in this way is then added to the output gap originally calculated by the federal government. In other words, the si-

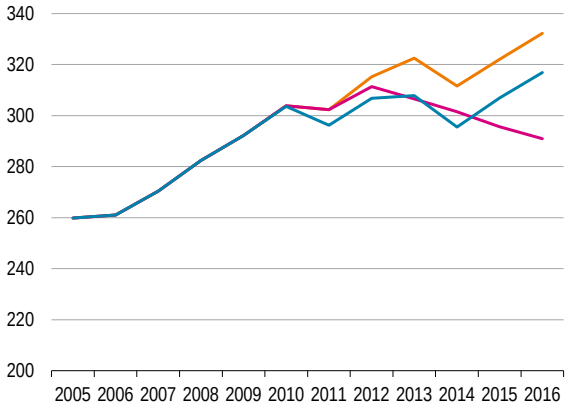
5 Truger and Will (2012b) carried out a similar – albeit prospective rather than retrospective – simulation using a variant of the European Commission's cyclical adjustment procedure. In terms of the endogeneity of the potential output calculations, their results were very similar to our own. This validates our decision to use the simpler mHP filter.

Counterfactual simulation

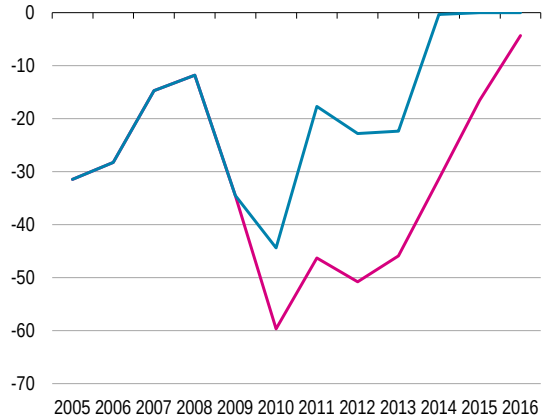
e) maximum acceptable borrowing of the federal government
in bn euros, 2011-2016



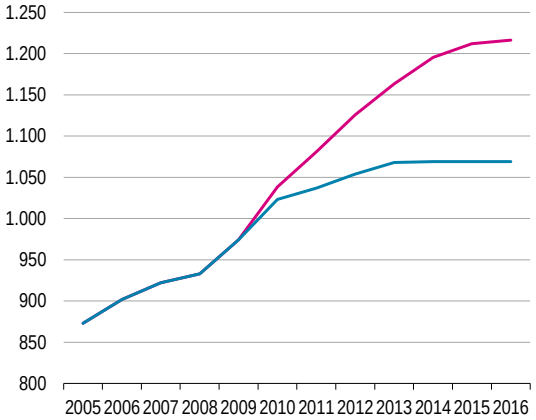
f) nominal federal budget
in bn euros, 2005-2016



g) nominal fiscal balance of the federal government
in bn euros, 2005-2016



h) nominal dept level of the federal government
in bn euros, 2005-2016



Actual values Simulation Unrestricted expenditures

Sources: BMF; AMECO-database of the EU-Commission; IMK calculations..

IMK

mulation only uses the mHP filter to adjust the output gap rather than to calculate a completely new output gap for our reference scenario, since to do so would mean it was no longer comparable with the one used by the federal government. Higher budget deficits lead to higher debt-to-GDP ratios, higher interest payments as determined by the average interest rate for the year in question, and thus also higher government expenditure.[6]

If spending cuts are included in the budget because there is a danger of failing to comply with the debt brake rules, the multiplier used in the simulation determines that these will have a negative impact on GDP. We use a value of 1 for the spending multiplier. This value is in line with the recent empirical literature on the fiscal multiplier and is in fact probably far too low for the deep recession followed by a period of economic weakness modelled in the simulation (Gechert 2015). Once again, we have consciously chosen to err on the side of caution in this instance. We have been similarly cautious in our decision to limit the analysis of the macroeconomic effects exclusively to the federal budget, even though it is highly likely that regional and local government would also be relatively quickly forced to adopt a restrictive fiscal policy course.

When the budget is executed, the negative impacts on GDP caused by the necessary consolidation once again result in lower revenue, higher interest payments and ultimately a correspondingly higher deficit. Just like in the real world, the difference between the projected growth rate at the

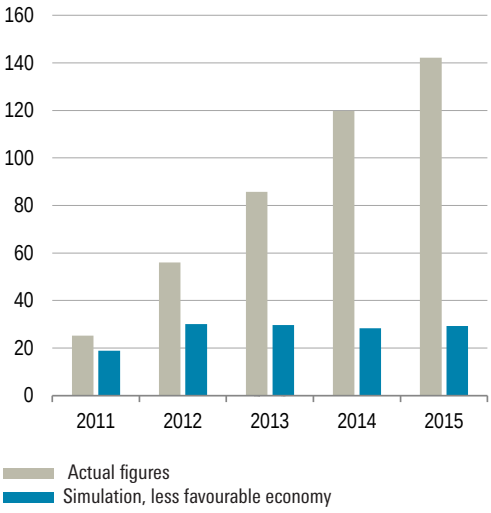
6 In order to keep things simple, we use the actual effective interest rates for each year, since these are exogenous.

point when the budget was drawn up and the actual growth rate is then calculated. The result, expressed in billions of euros, is subsequently multiplied by the budget semi-elasticity figure, allowing the control account balance for the simulation to be calculated. We use the same budget semi-elasticity figures that were used by the federal government for the individual years in question **(Table 1, row 6c)**.

Figures 5a-h and 6 illustrate the results of the simulation. Owing to the elasticity of revenue, the lower GDP values projected by the Joint Economic Forecast for 2010 and 2011 **(Figure 5a)** result in much lower revenue figures **(Figure 5b)**. Although this in turn leads to higher budget deficits **(Figure 5g)**, it is not yet problematic in 2011 because the lower GDP leads to an increase in the output gap figure **(Figure 5c)**, meaning that the maximum net borrowing limit stipulated by the debt brake is not exceeded **(Figure 5e)**.[7] The higher output gap translates into a higher cyclical component **(Figure 5d)**, i.e. a higher cyclically induced borrowing limit. By 2012, however, the flawed, procyclical method for calculating cyclical adjustments means that this effect is no longer strong enough to offset the cyclically induced loss of revenue, higher transfers to the social security system and (modest) rise in interest payments due to the growing level of debt **(Figure 5f)**. Ordinarily, expenditure would be expected to rise in line with the "unrestricted expenditure" curve that represents the expenditure in the reference scenario plus the full net transfers to the social security system (i.e. without any cuts) and the additional interest payments. However, this is where the debt brake kicks in, keeping spending at a lower level (shown in the simulation curve). Although cyclical reasons mean that expenditure is still higher than the actual expenditure in the reference scenario, it becomes necessary to cut the original spending figure if we work on the realistic assumption that priority would be given to the payment of interest and social security transfers. If the social security transfers were not paid, there would be a correspondingly negative impact on the social security system's budget, forcing it to implement restrictive measures. In order to comply with the debt brake, expenditure would have to be cut

Figure 6

Debt brake control account, 2011-2015
in bn euros



Sources: BMF; IMK calculations.

IMK

more and more as time went by compared to the "unrestricted" curve. From 2015 on, it would be significantly lower than the actual expenditure in the reference scenario, although by this point it includes about 15 billion euros worth of interest and additional transfers to the social security system. By 2016, the expenditure in the simulation is fully 41 billion euros lower than the "unrestricted expenditure" figure. In other words, in an unfavourable economic environment, by 2016 federal expenditure under the debt brake regime would have been 12 % lower than the unrestricted figure and 7.2 % lower than the spending target in the 2016 budget.

The multiplier effect means that the spending cuts would lead to further declines in GDP and government revenue. The effect on the economy would be calamitous: the spending cuts caused by the debt brake would result in a further 1.4 % reduction in growth, on top of the already disastrous GDP trend.

As has been mentioned previously, the reason lies in the debt brake's procyclical effect. The strength of this effect is demonstrated by the fact that although real GDP in 2014 is 6.9 % lower in the simulation than the actual figure because the economic recovery witnessed in reality fails to materialise in the simulation, the output gap in the simulation is nonetheless already higher than the actual output gap. Accordingly, when the cyclical component is calculated, the result is correspondingly small. From 2014 on, the maximum permissible net borrowing figure is therefore lower than the actual value.

In the simulation, the debt-to-GDP ratio for 2016 is around 8.5 percent higher than the actual value for this year **(Figure 5h)**. Lastly, no especially large surpluses are accumulated in the control account in the simulation **(Figure 6)**. The control account balance in

7 The adjustment path for the permissible structural deficit set out by the federal government in the 2011 federal budget – taking it from 2.2 % of GDP in 2010 to 0.35 % of GDP in 2016 – is left unchanged in the simulation. However, the initially very large output gap in 2010 results in a very high cyclical component in the simulation, giving a baseline structural deficit for 2010 that is much lower than the official figure of 2.2 % of GDP. If this lower figure had been used instead, the adjustment path would have been far more restrictive and the debt brake would have led to much more drastic cutbacks. Nevertheless, in order to ensure comparability and because the official baseline figure was in any case manipulated and thus more or less exogenously determined, we have not adjusted the official figure. Once again, we decided to err on the side of caution in the simulation as far as this assumption is concerned.

the simulation starts to shrink from 2013 on and the figure for 2015 is just 29.3 billion euros, compared to an actual value of 142.2 billion euros.

The simulation demonstrates the danger of adopting a procyclical fiscal policy during a medium-term downturn and shows that the downturn would have been needlessly prolonged by the German debt brake. In summary, if the prevailing economic projections in 2009 had come true, there would be little cause to celebrate the debt brake as a successful model today. In order to comply with the debt brake, it would have been necessary to implement politically sensitive spending cuts from 2012 on and these would in turn have significantly exacerbated the economic downturn. Some overfulfilment of the debt brake would still have occurred owing to the surplus that was initially present in the control account. By 2016, however, the control account would no longer be posting a surplus of any size. Moreover, these sobering conclusions apply equally to the German debt brake and to the Swiss debt brake, which much of the German debt brake was based on and which was also internationally acclaimed as a best practice. As with the German debt brake, the supposedly successful Swiss debt brake model only had to prove its worth at a time when the economic environment was largely favourable. Had the economic situation been less favourable, the Swiss debt brake would have rapidly turned into a dangerous brake on the economy **(Infobox 2)**.

Infobox 2

Striking parallels with the Swiss debt brake

The story of Germany's debt brake contains a number of striking parallels with the Swiss debt brake on which it was in fact largely based (see e.g. SVR 2007 on this latter point). Both were used as models for rule-based fiscal policy and the European Fiscal Compact. And both were introduced following periods of economic weakness in fiscally conservative or stability-oriented economies after a prolonged period of relatively high budget deficits and a significant rise in the debt-to-GDP ratio.

The Swiss debt brake was adopted into the constitution in 2001 after a referendum in which it was overwhelmingly endorsed by the electorate. It officially came into force in 2003. At the federal level, the Swiss mechanism is stricter than the German one, since it requires a balanced structural budget and, unlike its German counterpart, does not allow limited net structural borrowing of up to 0.35 % of GDP. While some details of its technical implementation may be different, the Swiss debt brake also strives to allow the automatic stabilisers to take full effect. However, its cyclical adjustment procedure is somewhat less complex, employing a simple filter method rather than the complicated procedure used by the European Commission.

The first striking similarity is that the Swiss debt brake was suspended in 2003, shortly after is introduction, due to an unexpected downturn and sharp fall in tax revenue. The underlying technical procedure was modified in order to temporarily provide greater leeway for the adjustment. This mirrors Germany's strategic use of the change in cyclical adjustment procedure and the "ski jump effect" (Truger and Will 2012a, p. 19) in order to ensure the highest possible baseline structural deficit in 2010, thereby also giving itself more leeway to adjust in the short term.

A further striking similarity is provided by the unexpectedly favourable economic and budgetary trends in Switzerland since 2004. The budgetary situation of the Swiss federal government's finances experienced a significant improvement in the first decade after the debt brake was introduced. Deficits had been regularly posted in the recessionary times of the 1990s, leading to the accumulation of relatively high levels of public debt by Swiss standards. Between 2003 and 2015, however, the federal government's debt ratio fell by almost ten points from 26.1 % of GDP to just 16.2 %. Furthermore, following the onset of the 2009 financial crisis, Swiss budgetary policy benefited from the structural surpluses that it had accumulated over the previous years which allowed it to respond to the crisis with increased spending in the framework of a discretionary expansionary policy. Nevertheless, it can be demonstrated that much of this success was due to the exceptionally favourable economic environment in the period after the debt brake was introduced (Truger and Will 2012b; Beljean and Geier 2013). This is especially true of both GDP growth and long-term interest rates – the two main drivers of the debt-to-GDP ratio.

As in Germany's case, it would therefore be wrong to attribute the positive development of Switzerland's public finances to its debt brake. Both countries' budgetary policies benefited from an unexpectedly strong upturn combined with various one-off factors. The federal budgets of both countries could thus be rapidly consolidated without the need for a particularly restrictive budgetary policy – in other words,

their debt brakes didn't actually need to be applied. In both cases, however, things would have been very different if the economy had failed to recover so strongly. Counterfactual simulations carried out by Paetz and Truger (2016) show that – especially owing to the endogeneity of the potential output calculations – in the event of a recession, Swiss budgetary policy would have had to respond procyclically in the medium term, thereby negatively counteracting the automatic stabilisers. If the macroeconomic environment had been less favourable, the Swiss debt brake would not have been such a success and neither it nor its German counterpart would have been acclaimed as a model for the rest of the world.

CONCLUSION: THE REAL TEST IS YET TO COME

The analysis presented above largely calls into question the success of the debt brake as a model for the federal budget. Budgetary policy was able to continually overfulfill the debt brake rules without having to do almost anything at all, primarily thanks to unexpectedly high tax revenue and low interest rates. Consequently, the rapid consolidation of the federal budget can be attributed almost entirely to an unexpectedly favourable economic environment, particularly as far as wages and employment are concerned. This resulted in extra tax revenue and a reduction in spending on cyclically induced transfers to the social security system.

Finally, the simulation demonstrates that in the absence of the favourable economic environment post-2010, the debt brake would have led to politically sensitive spending cuts that would have significantly exacerbated the slowdown in economic growth. Moreover, despite huge efforts to achieve consolidation, government debt would still have been considerably higher than its current level.

The obvious budgetary policy conclusions that follow from these findings are as follows:

Firstly, people were too quick to acclaim Germany's debt brake as a model for European fiscal policy. Germany's successful budget consolidation was a product of the relatively good economic environment and not of a restrictive budgetary policy that somehow stimulated growth. Instead of pontificating to the rest of Europe about how to manage budgetary policy, the federal government would have done well to show a bit more modesty. After all, its budgetary policy successes were not down to its superior strategy but were instead merely a product of one-off effects and an unexpectedly positive economic situation.

Secondly, budgetary policymakers need to understand that the debt brake has hitherto only been tested in a favourable macroeconomic environment. In other words, it has yet to show its mettle in the real test of a macroeconomic crisis. The findings of this report suggest that with its current budgetary policy and debt brake, Germany is ill-equipped to weather such a crisis. It would therefore be well-advised to prepare for a less favourable macroeconomic environment sooner rather than later and to consider making the relevant changes to the debt brake.

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