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The German 'debt brake' – a shining example for European fiscal policy?

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The German 'debt brake' – a shining example for European fiscal policy?*

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Abstract : Many observers consider the German `debt brake´ beyond criticism. In the current crisis, many European countries have difficulties refinancing their budgets, while the German treasury´s funding conditions are most favourable. The 'fiscal compact's' call for the introduction of German-style `debt brakes´ in the constitutions of other countries in order to rebuild their credibility on financial markets therefore might seem reasonable. However, there are several reasons to doubt the underlying (macro-) economic reasoning. Two specific problems of the German debt brake are analysed in greater detail: Firstly, the German rule is neither simple nor transparent. The calculation of structural deficits is a complex matter highly sensitive to specification and therefore open to political manipulation. Secondly, the debt brake will ultimately have a pro-cyclical effect because of the way the commonly used cyclical adjustment method works. This will, as a result, destabilise the economy. The German debt brake can therefore hardly serve as a good example for other countries.

JEL classification : H12, H39, H50, H6,

Keywords : Germany, debt brake, Euro zone, Euro crisis, sovereign debt

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Henner Will died in a traffic accident on 18 November 2011, shortly after the calculations and a preliminary German version of this paper had been completed.

1. Introduction

When most EU governments pledged at the end of 2011 to introduce stricter limits on public debt and deficits, where possible incorporating them into the Constitution, this resulted primarily from an acute sense of panic in the face of the continuing escalation of the Euro crisis. For the first time, even the bonds of hitherto unaffected countries had come under pressure in the financial markets. But the fact that European governments resorted to the German approach of constitutionally fixed debt brakes certainly also has something to do with the allegedly easily demonstrable success of the German example. Germany incorporated the debt brake into its Constitution back in the summer of 2009, just before the onset of the Euro crisis. In 2010, the federal government introduced a sizeable package of cuts for the following years in order to steadily reduce the structural deficit in the transition phase to the target figure of 0.35 % of Gross Domestic Product (GDP) permissible from 2016 onwards. The federal budget for 2011 was already drawn up to comply with the new transitional regulations. The results appear impressive: The federal government claims that it has clearly over-fulfilled the requirements, and the entire government budget deficit for 2011 was only 0.8 % of GDP. Therefore, it might seem logical to regard the German debt brake as a tried and tested instrument of a successful and solid fiscal policy and declare it a shining example to all of Europe. The inclusion in Germany's 'Basic Law', or Constitution, of stringent limits on sovereign debt, it is argued, enhances the country's credibility on the financial markets, leading to lower risk premiums and, hence, easier public sector financing (see Heinemann et al., 2011). This logic suggests that exporting the German debt brake or similar fiscal rules to the eurozone countries currently in crisis would be a major contribution to solving the euro crisis (see also GD 2011, p. 51).

In contrast to the views just sketched, we consider that logic and the economic policy currently implemented at the European level to be fundamentally flawed and believe that it would jeopardise the survival of the euro for three major reasons. First, it is misleadingly reductive in tracing the cause of the euro crisis back to unstable fiscal policy in the countries currently experiencing difficulties. Second, it almost completely ignores the effect of imbalances in foreign trade and the responsibility of the eurozone countries that are (still) currently strong in economic terms. Third, it remains bizarrely attached to the long-discredited assumption that financial markets are rational (for all three points see Horn et al. 2010; IMK/OFCE/WIFO, 2011, 2012). We also believe that a debt brake is not, in principle, a rational (macro-) economic tool for limiting sovereign debt (see e.g. Horn et al. 2008).

In this paper, however, we do not intend to broaden this fundamental criticism but, instead, to

look in greater depth at two key aspects of it: Firstly the problem of intransparency and openness to manipulation of the notion of a structural deficit and secondly that of an inherent tendency towards pro-cyclical fiscal policies. Assuming that financial markets are even partly rational in economic terms, these problems raise serious doubts about the claimed ability of the German debt brake to boost confidence and bring stability to market expectations. The existing economic literature on fiscal rules suggests that certain 'quality requirements' go hand in hand with sound and adequate rules. A rule should, by these criteria, be simple and transparent (see Kopits/Symanski, 1998). The assumption is clear: the primary aim of a rule is to protect electorates and financial markets against what may sometimes be self-serving behaviour on the part of politicians. If, however, neither electorates nor markets are able to understand the rule, then that rule does not seem particularly useful. As we shall set out in this paper, the rule currently being applied by the German government is neither simple nor transparent. Calculating structural deficits is a highly complex process, and since the German government withheld important information, there was a period when not even experts were able to replicate the government's calculations. Such calculations are also extremely sensitive to changing specifications, so outcomes are open to political manipulation. The inherently pro-cyclical nature of the German rule, and the concomitant risk of a policy that will exacerbate a crisis, are unlikely to secure the long-term confidence of the financial markets.

The paper is structured as follows. Section 2 begins with a short account of the debt brake and some of the principal conceptual problems of a debt brake from fiscal policy and macroeconomic points of view. Sections 3, 4 and 5 comprise the technical detailed analysis and use the authors' own simulations to demonstrate that the methodology used by the government of the Federal Republic (the *Bund*) on the basis of the European Commission's cyclical adjustment method is very much open to manipulation and will produce pro-cyclical outcomes. Section 3 shows the enormous scope for interpretation opened up by the method. Section 4 then provides an overview of how the German government has actually been using the resulting margins to give itself budgetary leeway in the transitional period up to 2016. Section 5 illustrates in detail the problem of the pro-cyclical susceptibility to revision of the European Commission's method. A dynamic simulation provides the first explicit illustration of the budget balancing method for two economic scenarios explicitly linked to the authors' own tax revenue estimates, to demonstrate the impact of the debt brake on budget targets during the transitional period up to 2016. It shows that the margins that appear currently to exist will be progressively eroded by a (not too large) downturn in the economy. Ultimately, further discretionary consolidation measures beyond the government's plan to cut spending

and raise taxes – its so called Future Package – will then be required to meet the targets set out under the debt brake. Finally, section 6 draws some economic policy conclusions.

2. Introduction to the debt brake and its fundamental problems

2.1. The key characteristics of Germany's debt brake

The debt brake written into Germany's Constitution in 2009 is essentially comprised of three elements. The **structural component** imposes strict limits on structural government deficits – 0.35% of GDP for the federal level (the *Bund*) and 0.0% for the federal states (the *Länder*). The **cyclical component** increases or decreases these limits in accordance with the country's economic situation. An **exception clause**, finally, permits the rules to be broken in exceptional circumstances. The *Bund* also has an 'adjustment account', which ensures the debt brake applies not only when the country's budget is drawn up but also when it is implemented. Transitional periods for complying with these limits on structural deficits are written into the constitution: 2016 for the *Bund* and 2020 for the *Länder*. The legislation also provides for consolidation aid for five *Länder* (Berlin, Bremen, Saarland, Saxony-Anhalt, and Schleswig-Holstein) under strict conditions. The debt brake targets, in fact, even go a little further than is necessary to enable Germany to meet its medium-term national budget targets: under the preventive arm of the European Stability and Growth Pact, Germany is allowed a structural deficit equivalent to 0.5% of GDP.

2.2. Fundamental problems with the debt brake from a fiscal policy and macroeconomic perspective

We cannot go into the details of Germany's fiscal policy before the introduction of the debt brake. It is sufficient to say that this policy has been traditionally pro-cyclical for more than 30 years and that between 2000 and the crisis in 2008/2009, its dangerous mix of continual tax cuts and the rigid pursuit of a balanced budget caused severe damage to growth and employment, substantially widened existing inequalities in the income distribution, and weakened the country's public finances (Hein and Truger, 2005, 2007; Jacoby and Truger, 2002; Truger, 2004, 2009, 2010). There was, therefore, good reason for a change of course. However, the change of course represented by the debt brake can be criticised on at least five grounds.

Firstly, the capping – now anchored in the German Constitution – of structural government net borrowing at 0.35% of GDP for the *Bund* and the banning of all structural deficits by the *Länder* is, economically speaking, completely arbitrary. It means that with an average annual

growth in nominal GDP of 3%, the national debt-to-GDP ratio will converge to just 11.7% in the long run. We do not contest that there are arguments for some ceiling on the debt ratio, but – if anything – recent empirical research indicates that the critical threshold beyond which a government deficit might harm growth is 80% or even 90%.[1] We fear that by imposing artificial limits on what is traditionally the safest form of financial investment, the debt brake will instead deprive capital markets of a crucial stability factor and a vital benchmark. It is unclear into which forms of investment, and to which countries, the traditionally high excess savings of the German private sector (including the assets of private pension schemes) will be diverted in the future, but it is likely that this measure will render the financial markets considerably less stable in the long term.

Secondly, by using a debt brake, Germany's fiscal policy is ignoring a broadly accepted economic yardstick for the scale of national deficits – the 'Golden Rule' – and thus turning its back on 60 years of theoretical common sense. This Golden Rule, or the 'pay-as-you-use' principle, is a growth-oriented rule for government deficits that permits structural deficits beyond the cycle equivalent to net public investment. The idea behind the rule is to involve several generations in financing public capital accumulation, since future generations will benefit in terms of greater prosperity from the productive investments made now (see Musgrave, 1959). It is true that the old rules governing borrowing by both the *Bund* and the *Länder* in the German constitution were imperfect: they were unable to distinguish between gross and net investment and, moreover, they failed to include all forms of economically relevant investment. However, there was no discussion around a more workable definition or an estimate of depreciation – just as there was not with the Maastricht criteria or the European Stability and Growth Pact – and the government ignored recommendations made by the Council of Economic Experts (SVR 2007), a body not exactly known to endorse runaway sovereign debt. Moreover, the lamentable trend in net public investment both in absolute terms and relative to GDP shows the urgency of writing into the country's constitution a rule to promote public investment. Net government investment has almost continuously fallen in Germany over the last 30 years – in recent years the public capital stock has, in effect, been shrinking (Figure 1).

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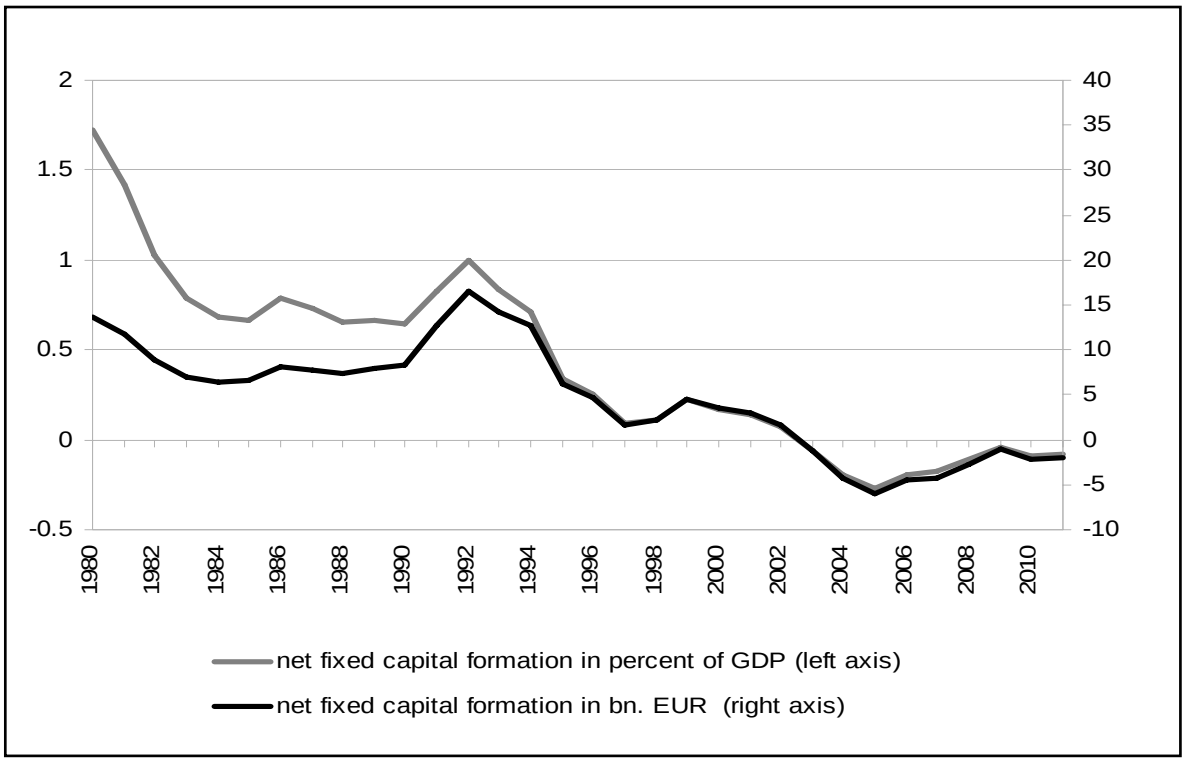
[1] See for example Caner et al. (2011); Cecchetti et al. (2011); Checherita and Rother (2010); Manmohan et al. (2010); Ostry et al. (2010); Reinhart and Rogoff (2010).

Figure 1: government net investment in billion EUR and in % of GDP, Germany (1980-2011)



Source: AMECO (spring 2012)

Thirdly, possibly the most serious problem associated with the debt brake is that it was introduced at a time when public budgets were markedly underfinanced in structural terms, as they have for many years come under repeated strain from tax cuts. The long-term tax reductions adopted in the wake of the global economic and financial crisis and Germany's 'Growth Acceleration Act' were in the dimension of almost EUR 30 billion a year (Truger and Teichmann, 2011). Where governments are expected to balance their budgets in structural terms – or to come very close to doing so – on a given date without already having closed the revenue gap, their budget policy faces years of stringent pressure on spending. In macroeconomic terms, this is an extremely risky course of action with potentially negative impact on growth and employment as adjustments are made, particularly against the backdrop of the precarious economic situation in the Eurozone as a whole, and it will unquestionably go hand in hand with substantial cuts in the provision of public goods, services and welfare. And if this then leads (as it almost inevitably will) to the necessary public investment being scrapped or cut in future years, the much-vaunted principle of 'generational fairness' will be greatly damaged. Moreover, substantial spending cuts are difficult to justify with the argument that expenditure policy in the past has been wasteful: On the contrary, the debt brake affects German public sector budgets after a period of extremely moderate expenditure

growth (Truger and Teichmann, 2011). The decision to implement the debt brake and couple it with generous, long-term tax relief was, therefore, worse than negligent in terms both of economic impact and of national policy.

Fourthly, the impact of the debt brake is also, of course, critically dependent on its precise technical design and on how the underlying cyclical adjustment method and the applicable budget sensitivities are selected. Although the *Bund* has already opted for the method used by the European Commission as part of its own monitoring of member states' budgets, the decision as to the details of implementation is taken by the Ministries for Finance and Economics, so the mechanism is anything but transparent and is open to manipulation. As far as the *Länder* are concerned, for many of them detailed implementation is still an open question. And since, under Article 109 of the constitution, there is considerable scope for local input, Germany could by 2020 have no fewer than 17 different debt brakes, one for the *Bund* and one for each of the *Länder*, all with widely differing designs and effects.

Fifthly, and finally, the debt brake will ultimately have a pro-cyclical effect because of the way the commonly used cyclical adjustment method works and will, as a result, destabilise economic development. During times of downturn, too much consolidation will be required while, conversely, too little will be required during periods of recovery.

The last two areas of criticism will be explored in greater detail in this paper.

3. Vulnerability to manipulation in theory: the problem of determining structural deficits

3.1. Introduction to determining structural deficits

The debt brake is supposed to let public sector budgets breathe with the economy; in other words, the automatic stabilisers are supposed to operate freely. A calculation therefore needs to be made as to which changes in the deficit can be attributed solely to cyclical factors and, hence, the automatic stabilisers, and which part of the deficit is structural and must, therefore, be capped under the debt brake. When a cyclical adjustment method is used, this usually determines the notional economic situation (potential or trend output). The mismatch between this notional situation and the actual situation is known as the 'output gap'. Where this is positive, the state of the economy dictates that surpluses are achieved, but where it is negative, economic deficits are permitted. The calculation of the scale of the permissible deficit or surplus is then based on the product of the output gap and the so called 'budget sensitivity'. The latter reflects the impact of changes in the economic cycle on the government

budget and is calculated empirically (see Girouard and André, 2005). The structural deficit is then determined after deducting the previously calculated cyclical deficit.

Germany's Ministry of Finance employs the following formula in calculating the structural deficit under the debt brake:

$$d_t^{STRUK} = \frac{E_t(Y_t) - A_t}{Y_t^{POT}} - (\varepsilon_E + \varepsilon_A)\frac{Y_t - Y_t^{POT}}{Y_t^{POT}} \quad (1)$$

The structural deficit d_t^{STRUK} as a percentage of potential nominal GDP (Y_t^{POT}) is, therefore, the total deficit (revenue minus expenditure: $E_t(Y)_t - A_t$) set against potential nominal GDP minus the cyclical deficit, which in turn is the product of the sum of the semi-elasticity of revenue (ε_E) and the semi-elasticity of expenditure (ε_A) of the automatic stabilisers (budget sensitivity) and of the nominal output gap $(Y_t - Y_t^{POT})/Y_t^{POT}$.

However, there are many possible ways of calculating output gap and budget sensitivity, and these produce radically divergent results in terms of calculating the structural deficit and, hence, determining budgetary policy. Determining potential output has already proved both difficult and unreliable (Horn et al., 2007). As well as univariate methods, such as the Hodrick-Prescott filter – proposed by the German Council of Economic Experts – and the modified Hodrick-Prescott filter, which is used in Switzerland (Bruchez, 2003), a wide range of diverse multivariate estimation methods are also available, such as the one used by the European Commission.

3.2. The European Commission's method for determining potential

Germany's legislation implementing the debt brake – the Article 115 Act – has opted "by means of a statutory instrument and without the consent of the *Bundesrat*, [to] stipulate the details of the procedure for determining the cyclical component in conformity with the cyclical adjustment method applied within the framework of the European Stability and Growth Pact. The procedure shall be reviewed and developed further on a regular basis taking the current state of knowledge into account."[2]

The European Commission estimates potential output by means of a Cobb-Douglas-production function. This is derived from potential labour input (the product of the working age population, the participation rate and per capita hours of work minus structural unemployment), capital input (the product of the gross fixed investment in relation to

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[2] Para. 5(4) of Article 115 of the law of 10 August, 2009 (German Federal Gazette (BGBl.) I, pp.2702 and 2704)

potential output and potential output minus a constant depreciation) and total factor productivity or TFP (in the former method, this was expressed as a Solow residual with Hodrick-Prescott filtering, while in the new process, it is expressed as Kalman-filtered capacity utilisation) (see D'Auria et al., 2010). The individual elements can be portrayed formally as follows:

$$Y_t^{POT} = (L_t^{POT})^{\alpha} (K_t)^{1-\alpha} TFP_t \tag{2}$$

$$L_t^{POT} = \left(BEA_t \frac{E_t + U_t}{BEA_t (1 - NAWRU_t)} \right) \frac{H_t}{E_t} \tag{3}$$

$$K_t = \frac{I_t}{Y_t^{POT}} Y_t^{POT} + (1 - \delta_t) K_t \tag{4}$$

with Y^{POT} as the potential output, L^{POT} as the labour potential, K as capital accumulation, TFP as the total factor productivity, BEA as working age population, E as employees, U as the unemployed, (E+U)/BEA as the participation rate, NAWRU as the non-accelerating wage rate of unemployment, H/E as per capita hours of work, I/Y^{POT} as gross fixed investment in relation to potential output, and δ as the rate of depreciation.

The estimate of potential output is a medium-term projection based on short-term forecasts (one to two years). All the elements in the formulae used are forecast separately: demographic trends, the participation rate, structural unemployment, per capita hours of work, the investment ratio, the rate of depreciation (usually a constant), and the TFP, either as a filtered Solow residual or as Kalman-filtered capacity utilisation. The model solution is derived using statistical software. The estimate is calculated for all EU Member States using semi-standardised specifications but with different details. The specifications are normally adjusted every six months.

3.3. The 'current state of knowledge' allows for substantial margins of interpretation[3]

The formulation "in conformity with" used in the Article 115 Act suggests at first glance that the German government is applying the European Commission's method very precisely. Comparison with the "current state of knowledge" shows that the government has in fact left itself a generous margin for interpretation. However, even if it were to comply to the letter with the European Commission method, this would not shed much light on what is actually happening: in 2010, the Commission itself amended its calculation method twice in twelve months (Table 1). First, in its spring forecast, it outlined a modified method (III – new TFP,

[3] The analysis below is based on calculations similar to those already outlined in Horn et al. (2011).

spring), which identifies total factor productivity as less sensitive to cyclical factors than under the old method (I – old TFP, spring). However, in its autumn forecast, the European Commission made a further modification to the new method (IV – new TFP, autumn), in which the variables represented by the participation rate and per capita hours of work were adjusted. Despite this, it also reflected the old method in its autumn modifications (II – old TFP, autumn). This means that for 2010, a key year in terms of determining the adjustment path to the final structural deficit target in 2016, there were no fewer than four different EU methods for cyclical adjustment. Accordingly, for any given budget sensitivity, four cyclical components and correspondingly four structural deficits could be calculated, each with a markedly different impact on budget policy.

Table 1: Descriptions of the EU Commission methods 2010

EU Commission Methods		
No.	***Description***	***changes from I***
I	***old method, spring version***	–
II	***old method, autumn version***	***Per-capita-working hours with slightly descreasing trend, slight decrease in participation***
III	***new method, spring version***	***Exogenous estimation of total factor productivity***
IV	***new method, autumn version***	***Exogenous estimation of total factor productivity; Per-capita-working hours with slightly descreasing trend, slight decrease in participation (changes from II and III combined)***

Source: EU Commission

The impact of these four different methods of calculation should not be underestimated. With actual federal net borrowing of EUR 44.8 billion, and assuming a budget sensitivity of 0.248, the 2010 structural component ranges from EUR 19 billion to EUR 35 billion, depending on the method and the version applied (Table 3, reference scenarios).

The output gap and cyclical component values calculated by the German government in formulating its 2011 budget do not match any of these values, even though the assumptions relating to growth were compatible with those of the European Commission. Without providing detailed data concerning its assumptions, the German government announced an output gap for 2011 of -0.6% of GDP (using the old EU method) and a cyclical component of

EUR -2.5 billion. These figures were, thus, outside the range of estimates produced by the four versions of the European Commission method, showing that the government did not slavishly apply any version of the European Commission method(s).

In fact, there is considerably greater scope for further modification. The Joint Economic Forecast in autumn 2010 did exactly that, making explicit reference to the European Commission method, though unfortunately not applying it transparently (GD, 2010, p.44). Although the Joint Economic Forecast results cannot be reproduced because some data have been withheld, the changes that have been published can be interpreted as in line with the "current state of knowledge". Thus, we introduce similar modifications and the estimates calculated for output gap and structural deficit can be regarded as permissible under the German debt brake. Table 2 contains details of the modifications, while Table 3a reproduces the output gaps and Table 3b the structural deficits. First, the data for the four reference ranges from Table 1 are listed, with a distinction made between two different datasets (spring and autumn). Then each reference is modified in accordance with the changes in Table 2 and the new calculation – again, differentiated according to dataset – is presented. This produces a total of eight modifications, four calculation methods and two datasets (4 x 2 x 8), or 64 different figures for output gap and structural deficit. To these must be added the eight unmodified reference ranges (4 x 2 = 8), resulting in a total of 72 different structural deficits. Figure 2, finally, illustrates the distribution of the structural deficits. These calculations show that, assuming the budget balance to be EUR -44.8 billion in 2010, the structural component of the balance ranges from EUR -44 billion to EUR -13 billion, with a mean of EUR -30 billion. Obviously, this is anything but a precise method.

Table 2: Sensitivity analysis based on variations of joint forecast, autumn 2010 („state of scientific knowledge“)

No.	*description*	*Further changes from I*
V	*population growth*	*Annual decrease of 0.4 % from 2009 onwards*
VI	*participation rate*	*Annual increase by +0.4 % from 2009 onwards*
VIIa	*Working hours per capita*	*Annual decrease of 0.4 % from 2009 onwards*
VIIb	*Working hours per capita*	*constant 2008 value (1426 hours) from 2011 onwards*
VIII	*„structural“ unemployment*	*Hodrick-Prescott-Filter of unemployment rate*
IXa	*Investment ratio (2009)*	*Constant from 2009 onwards*
IXb	*Investment ratio (2011)*	*Constant from 2011 onwards*
X	*Total factor productivity*	*Annual increase by +0.4 % from 2009 onwards*
XI	*Sum of potential increasing effects*	*VI + VIIb + X*
XII	*Sum of potential increasing effects*	*V + VIIa + VIII + IXa*

Source: Authors’ calculations of the basis of data from the Joint Economic Forecast Project Group’s autumn 2010 forecast

Table 3a:Output gap estimates for 2010 in % of potential GDP

I - Old TFP Spring	*II - Old TFP Autumn*	*III -New TFP Spring*	*IV – New TFP Autumn*
Reference, Spring data			
-2.65	***-2.40***	***-3.86***	***-3.62***
Reference, autumn data			
-1.47	***-1.34***	***-1.82***	***-1.69***
Modification V, Spring data			
-2.65	***-2.4***	***-3.86***	***-3.62***
Modification V autumn data			
-1.21	***-1.08***	***-1.57***	***-1.44***
Modification VIa Spring data			
-2.65	***-2.66***	***-3.86***	***-3.87***
Modification VIa autumn data			
-1.47	***-1.48***	***-1.82***	***-1.83***
Modification VIb Spring data			
-2.37	***-2.36***	***-3.59***	***-3.58***
Modification VIb autumn data			
-1.12	***-1.11***	***-1.48***	***-1.47***
Modification VII Spring data			
-2.52	***-2.26***	***-3.74***	***-3.48***
Modification VII autumn data			
-1.56	***-1.44***	***-1.92***	***-1.8***
Modification VIII – Spring data			
-2.12	***-1.87***	***-3.34***	***-3.09***
Modification VIII autumn data			
-0.57	***-0.44***	***-0.93***	***-0.8***
Modification IX Spring data			
-2.65	***-2.4***	***-3.86***	***-3.62***
Modification IX autumn data			
-1,47	***-1,34***	***-1,82***	***-1,69***
Modification X Spring data			
-1,84	***-1,83***	***-3,06***	***-3,05***
Modification X autumn data			
0,04	***0,04***	***-0,32***	***-0,32***
Modification XI Spring data			
-3,52	***-3,28***	***-4,74***	***-4,49***
Modification XI autumn data			
-1,94	***-1,81***	***-2,61***	***-2,48***

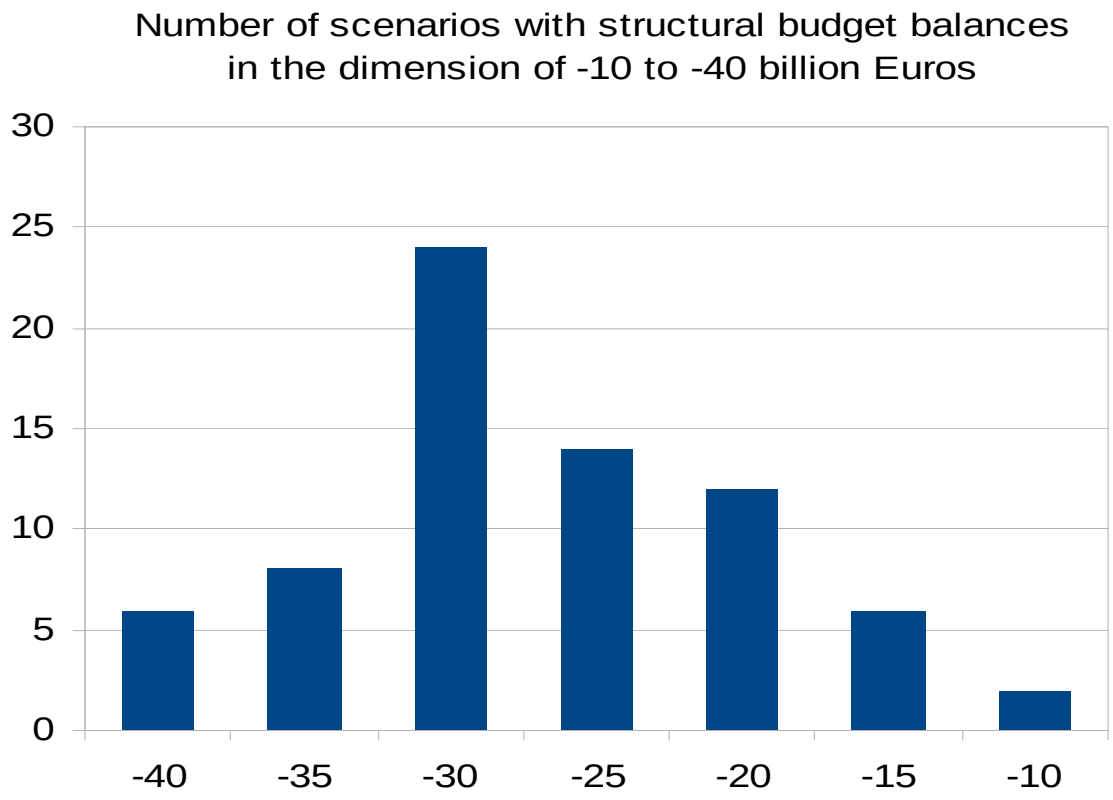
Source: EU Commission, authors' calculations of the basis of data from the Joint Economic Forecast Project Group's autumn forecast

Table 3b: Structural budget balance in 2010 in % of GDP

I – Old TFP Spring	*II - Old TFP Autumn*	*III – New TFP Spring*	*IV - New TFP Autumn*
Reference, Spring data			
-27.1	*-28.8*	*-19.1*	*-20.7*
Referenz. Autumn data			
-34.8	*-35.6*	*-32.5*	*-33.4*
Modification V Spring data			
-27.1	*-28.8*	*-19.1*	*-20.7*
Modification V Autumn data			
-36.4	*-37.2*	*-34.1*	*-35.0*
Modification VIa Spring data			
-27.1	*-27.1*	*-19.1*	*-19.1*
Modification VIa Autumn data			
-34.8	*-34.7*	*-32.5*	*-32.5*
Modification VIb Spring data			
-29.0	*-29.0*	*-20.9*	*-21.0*
Modification VIb Autumn data			
-37.0	*-37.0*	*-34.7*	*-34.8*
Modification VII Spring data			
-28.0	*-29.7*	*-19.9*	*-21.7*
Modification VII Autumn data			
-34.2	*-35.0*	*-31.9*	*-32.6*
Modification VIII Spring data			
-30.6	*-32.2*	*-22.6*	*-24.3*
Modification Autumn data			
-40.4	*-41.3*	*-38.2*	*-39.0*
Modification IX Spring data			
-27.1	*-28.8*	*-19.1*	*-20.7*
Modification IX Autumn data			
-34.8	*-35.6*	*-32.5*	*-33.4*
Modification X Spring data			
-32.4	*-32.5*	*-24.4*	*-24.5*
Modification X Autumn data			
-44.2	*-44.2*	*-42.0*	*-42.0*
Modification XI Spring data			
-21.4	*-23.0*	*-13.2*	*-14.9*
Modification XI Autumn data			
-31.7	*-32.6*	*-27.4*	*-28.2*

Source: EU Commission, authors' calculations of the basis of data from the Joint Economic Forecast Project Group's autumn forecast

Figure 2: Histogram of estimated structural budget balances for 2010



Source: EU Commission, authors' calculations of the basis of data from the Joint Economic Forecast Project Group's autumn forecast

4. Vulnerability to manipulation in practice: the Federal German government's use of margins

As the discussion above has demonstrated, there is broad scope for judgement in the loosely defined framework for how 'the' European Commission method may be interpreted. When contextualised against the impact of individual modifications, this can be instrumentalised for political ends without the need for justification by reference to the legislation. For example, the method can be selected, or modified at intervals, so as to expand budgetary margins at a given time. During the 2011 budget process, this gave rise to accusations from various quarters that the German government was 'playing tricks' with the debt brake. In fact, the procedure followed by the government appears to have been entirely correct from a formal legal perspective; what the accusers were objecting to was the lack of clarity and scope for manipulation that automatically resulted from the method.

From a transparency and credibility perspective, however, the government's failure to clarify the specific cyclical adjustment method it was using was highly problematic. The original

justification for the draft budget and funding plan contained graphic representations showing the permissible structural deficits and cyclical components calculated for 2011 and subsequent years of the transition period on the basis of the 2010 structural deficit as a starting point. However, there were no concrete data relating to the method used; not even the term 'budget sensitivity' featured, let alone explanations of how it was determined. The government belatedly, and at the urging of some of the MPs on the Budget Committee, provided some additional information, yet even here – as Section 2 makes clear – the information was decidedly thin on detail.

The conversion of the funding to the German Labour Agency (*Bundesagentur für Arbeit*), from a loan to a direct, non-repayable grant in 2010 was a deliberate manipulation to widen the budgetary scope, originally with the aim of implementing as fully as possible the tax cuts set out in the coalition agreement. A loan would have been deficit-irrelevant under the debt brake, since the payment to the agency would have been offset by a corresponding asset – the claim on the agency. However, converting that loan into a grant increased the actual 2010 deficit and, hence, also increased the structural deficit for the year. This structural deficit was then used to calculate the permissible deficit for each year in the transitional period, during which the deficit must be reduced by equal stages of one sixth of the initial value each year until, in 2016, the deficit has been reduced to the permissible maximum of 0.35% of GDP (around EUR 10 billion). This adroit increase in the base value for the deficit increased the starting point for this chain of reductions, also allowing higher permissible structural deficits during the transitional period (something referred to by some critics as the 'ski jump effect'). Meanwhile, the higher 2010 deficit then disappeared automatically in 2011 because of the way the funding was designed and without any real measures to balance the budget being necessary.

The margins created by this manipulation have now all but disappeared for two reasons. First, favourable employment trends mean that the *Bundesagentur für Arbeit*'s funding requirement has fallen from more than EUR 16 billion to just EUR 6.9 billion. Second, the government has designed its measures to reflect budget sensitivities very consistently by setting a higher value of 0.248 for 2010, which also included that part of the cyclical components accounted for by the *Bundesagentur für Arbeit*, whereas for subsequent years, the value was a lower 0.16, which related solely to the budget of the *Bund*. The resulting higher cyclical component for 2010 reduced the initial structural deficit by just over EUR 4 billion, so the residual higher base value is minimal. Moreover, the government reduced that higher base value by using the permissible – but unconventional – statistical device of recording one-off revenue from

auctions of mobile telephony licences (over EUR 4 billion) as a "structural deficit reduction". This, at least, was not a repeat of the 'ski jump effect', although this does not change the fact that the German government originally tried to use exactly that device and other accounting tricks to create budgetary margins for its planned fiscal policy.

In fact, the 'ski jump effect' did then operate in another context. In its 2011 budget, the government set its tax revenue estimates and the overarching calculation of cyclical components and structural deficits against the upturn in the economy – but not the corresponding estimates for 2010. In strict legal terms, it was not required to, but this is a loophole in the rules, which omit to specify how, when, and on the basis of precisely which data the initial structural deficit for 2010 is determined. This trick enabled the government not just to comply fully with the debt brake in its 2011 targets but actually to overshoot it by just under EUR 5 billion.

One further curious fact was that, by its own admission, the government had used the old EU method for its 2011 budget calculations, since – it claimed – it was unable to move to the new method for technical reasons. That is more than improbable, given that the new method had been in the public domain since spring 2010, and once the European Commission had put the details online, moving over to the autumn version of it would have taken a few hours or one working day at most. Following identification of the basic parameters for the 2012 national budget, the government then gained further room for manoeuvre by belatedly moving its calculation of the output gap to the new EU method, resulting in an increase in the estimated negative output gap for 2011 from 0.6% of GDP to 1.0% of GDP, even though at the same time the 2011 GDP growth forecast was itself increased from 1.8% to 2.3%. This switch of method meant, paradoxically, that the upturn in the economy produced a marked increase in that part of the deficit permissible on cyclical grounds.

Overall, then, the past conduct of the German government clearly confirms suspicions that using such a technically complex method virtually inevitably produces a lack of transparency and scope for manipulation. Although the Ministry of Finance (BMF) eventually published its data and results following persistent criticism in spring 2011[4], it still falls well short of achieving the transparency demonstrated by the European Commission, which publishes the entire scheme for its calculations, including datasets, online. As far as exploiting the 'ski jump effect' is concerned, the government failed to make a retrospective correction, despite

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4 http://www.bundesfinanzministerium.de/nn_4322/DE/Wirtschaft__und__Verwaltung/Finanz__und__Wirtschaftspolitik/Wirtschaftspolitik/1103311a7001.html?__nnn=true

massive protests by influential institutions including the Council of Economic Experts and the *Bundesbank (see SVR, 2010; Deutsche Bundesbank, 2011)*, an apparently justifiable decision, given the associated negative macroeconomic and public finance effects (IMK/OFCE/WIFO, 2011 and 2012), although not exactly a model of transparent and credible implementation of fiscal rules.

5. The risk of pro-cyclical policy

5.1. The underlying problem of all deficit rules: budget deficits are endogenous and mostly immune to political control

The debt brake sets a ceiling on structural deficits of 0.35% for the *Bund* and of 0.0% for the *Länder*. As in the Stability and Growth Pact, these ceilings are tied to binding targets for deficits as a percentage of economic output. This can be summarised in the following simple mathematical formula:

$$Deficit_t = \frac{E_t(Y_t) - A_t}{Y_t} = t\arg et \quad deficit = const. \tag{5}$$

We shall, for the moment, leave aside the question of whether this target deficit is a general one or a structural one – that is, whether it has been adjusted for cyclical factors or not. What is more important is the functional dependence of revenue (E) on economic output (Y), while expenditure (A) is less markedly dependent and, therefore, not portrayed as functionally dependent.

During an economic upturn (when Y increases), there are two main effects. First, the denominator of the fraction rises and so the deficit falls automatically when revenue and expenditure reach a certain level. Second, however, state revenue in particular rises, so when expenditure reaches a certain level, the deficit also falls in absolute terms as expressed in the numerator. Both effects reduce or increase the actual deficit in an upturn and a downturn respectively. If a government aims to reach its target deficit in each period, this means that during an upturn, expenditure may also rise, whereas it has to be cut during a downturn. This runs counter to the fundamental aim of a fiscal rule, which is to avoid pro-cyclical growth in expenditure. Moreover, estimates for both GDP and revenue are usually beset with uncertainty, with the result that it is very difficult to ensure compliance with the rule even when managing the current year's budget. And even when the budget calculations are complete, there are still often major revisions of the data – such as the GDP figure – which bring further ex-post uncertainty. If the German debt brake calculations use potential, rather

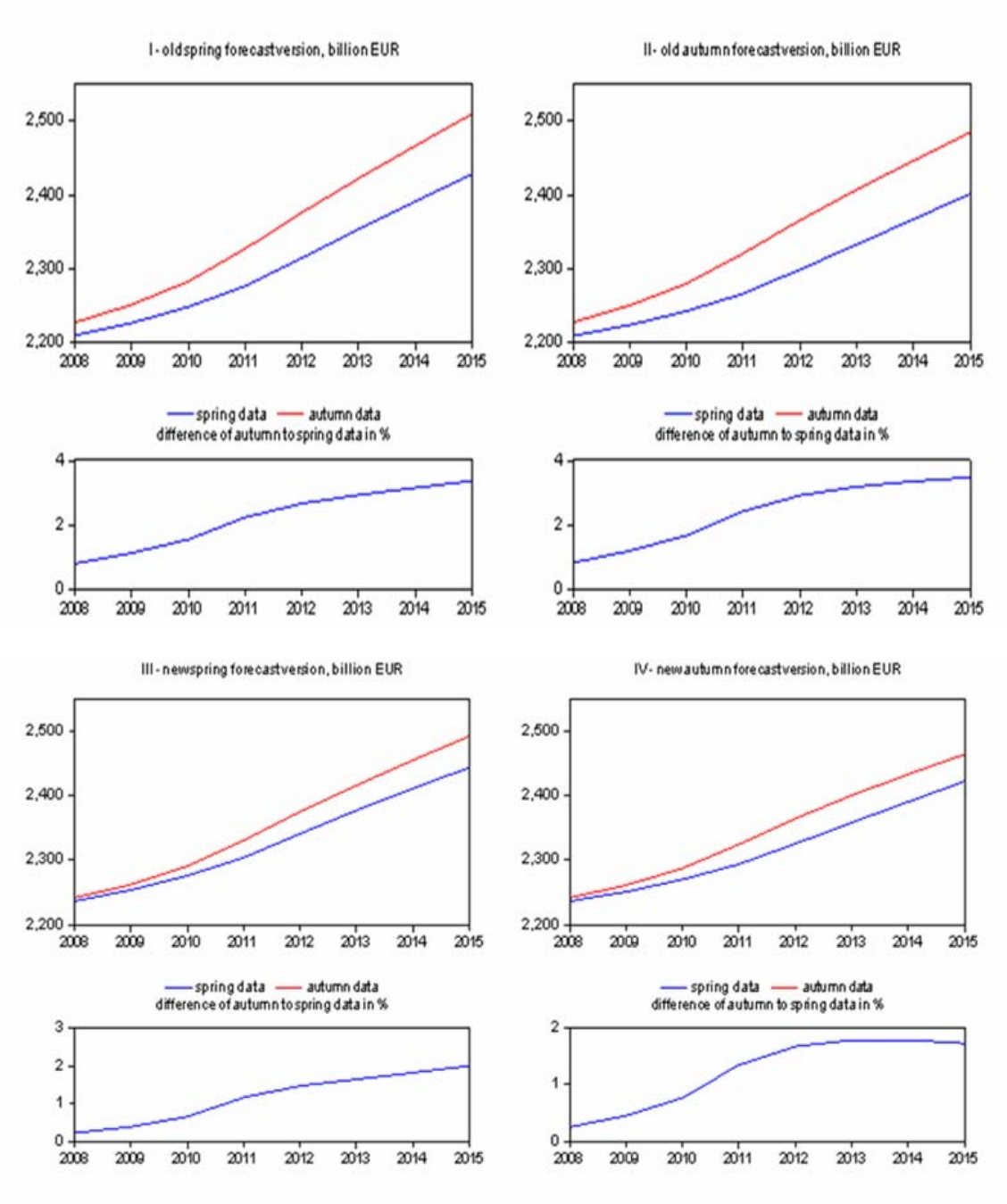
than actual, GDP data to determine the target deficit, then this reduces the problem of the pro-cyclical nature of the tool but does not, as the next section explains, do away with it completely (for a fuller account see Anderson and Minarik, 2006).

5.2. The issue of the marked susceptibility to revisions of 'potential output'

The method used by the German government is not only highly imprecise and open to manipulation, but its use also tends by nature to produce a pro-cyclical fiscal policy that confounds the automatic stabilisers. In an upturn, the permissible deficit tends to be too large, causing additional overheating in the economy; in a downturn, deficit values are too small, placing a further brake on economic growth.

The pro-cyclical nature of the method is particularly well illustrated by the figures for 2010. There are two different datasets, those for the European Commission's spring and autumn 2010 forecasts respectively. The data vary markedly between the Commission's spring 2010 forecast and its autumn 2010 forecast, when the economic situation and outlook improved substantially: for example, the forecast for real GDP in 2010 was revised upwards by EUR 60.8 billion, while that for 2011 was also revised upwards, by EUR 75.5 billion (index values at constant prices). The modified database leads in all four versions of the EU Commission's method to a significant increase of between 2% and 4% in potential output, as Table 4 illustrates. Figure 3 shows the effect of the modification of the database for the four different versions of the EU Commissions' method over the whole time horizon from 2008 to 2015.

Figure 3: Effect of a change of data on potential output for the four different versions of the EU Commission's method



Source: EU Commission, authors' own calculations

Table 4: Pro-cyclical revision and weakening of the automatic stabilisers

Source: EU Commission, authors' own calculations

A revision of the GDP forecast of € 46.9 bn (2.4% nominal growth) in 2010 and € 73.1 bn (cumulated 3.4% nominal growth) in 2011 leads to…						
		a change in potential GDP in bn. €	**a change in output gap in bn. €**	**a change in the cyclical budget deficit in bn. €**	**a change in the cyclical budget deficit at constant potential GDP in bn. €**[4]	**pro-cyclical deviation due to endogenous potential GDP revision in bn. €**
I Old spring forecast version	*2010*	17.4	29.5	7.3	14.8	7.5
	2011	45.1	27.9	4.5	13.9	9.4
II Old autumn forecast version[1]	*2010*	20.5	26.4	6.6	14.8	8.2
	2011	49.7	23.3	3.7	13.8	10.1
III New spring forecast version[2]	*2010*	-5	51.9	12.9	15	2.1
	2011	18.1	55	8.8	14.1	5.3
IV New autumn forecast version[3]	*2010*	-1.9	48.8	12.1	15	2.9
	2011	22.8	50.3	8	14	6

[1] changes in hours p.c. worked, participation rate

[2] changes in TFP

[3] changes in hours p.c. worked, participation rate and TFP

[4] product of percentage-point revision, budget sensitivity and potential GDP with spring data, at constant prices

The method that is adopted has a substantial and quantifiable impact on the estimate for nominal GDP and potential output. The method that is least affected by cyclical factors is the spring version of the new method: in this version, the EUR 46.9 billion increase in the GDP forecast in 2010 and the EUR 73.1 billion increase for 2011 produce changes in the estimated potential of EUR -5 billion and EUR 18 billion respectively. The autumn version of the old method is, by contrast, the one most affected by cyclical factors: EUR 20.5 billion and EUR 49.7 billion respectively – that is, more than 50% and more than 70% of the increase in GDP respectively – are added to potential, meaning that potential itself rises markedly because the economy is doing better.

The extent to which potential is reliant on cyclical factors is, however, not merely an

academic detail but is of direct practical relevance for Germany's budget policy in the context of the debt brake: on the basis of the new potential values, and in combination with the new GDP values, output gap values must be recalculated which, when multiplied by the relevant budget sensitivity figure (0.248 in 2010 and 0.16 in 2011), produce a further change in the cyclical components. This change ranges from EUR 6.6 billion (2010) to EUR 3.7 billion (2011) in the autumn version of the old method and from EUR 12.9 billion (2010) to EUR 8.8 billion (2011) in the spring version of the new method. Hence, the forecast economic upturn produces radically different reductions in the permitted cyclical deficit, depending on the version used.

The cyclically determined figure for budget consolidation derived in this way does not, however, equate with the actual cyclically determined impact of the higher growth forecast on public budgets, which depends directly on the forecast growth in actual GDP against constant potential and is, therefore, markedly higher. In a period of economic recovery, this results in the cyclically determined budget consolidation varying according to the method and version used; fiscal policy prevents the automatic stabilisers from having their full effect and, for this reason, is too expansive in pro-cyclical terms or conversely, in a downturn, produces an excessively contractionary pro-cyclical effect.

In the simulations we have carried out, the effect is of a very significant magnitude. In the case of the pro-cyclical autumn version of the old method, the *Bund* would have excessive margins for 2010 and 2011 of EUR 17 billion, while in the case of the least pro-cyclical spring version of the new method, the margins would still be just under EUR 7.5 billion. This picture is reversed in the case of a downturn: in such a situation, the budget would have too little economic room for manoeuvre and this would pro-cyclically strengthen the downturn, with the automatic stabilisers weakened by between 15% and 70%, depending on the version.

5.3. Simulating a future economic downturn[5]

The issue of the impact of such a debt brake on the future of federal budget policy becomes particularly significant in the event that Germany undergoes another period of weak economic growth, which is currently far from unlikely. To the best of the authors' knowledge, there are no ex-ante simulations of the impact such a scenario would have within the framework of a debt brake. The only simulations are at the European level and have been carried out in

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5 The following analysis is based on calculations carried out as part of the IMK's estimate of tax revenues in May 2011: Truger et al., (2011).

conjunction with simulations of the issue of estimating potential output (D'Auria 2010). It is incomprehensible that such research has been neglected in Germany when a constitutional rule is being introduced. From an economic perspective, it is particularly vital during a period of economic crisis that the automatic stabilisers can function appropriately, not least because it is otherwise impossible to take discretionary measures without invoking the 'exception clause'.

The structural deficit for 2011 is markedly below the maximum permissible deficit under the government's deficit reduction course, but, as shown before, this can be attributed to two main factors. First, the German government has so far benefited from favourable economic growth conditions arising from the pro-cyclical bias in the cyclical adjustment process. Second, the initial deficit set out in the deficit reduction plan in spring 2010 was determined on the basis of a modest economic outlook and the old TFP method, which was very high at 2.2% (the 'ski jump effect' as explained). Since then, the German government has not needed to make use of the credit line that would be permitted and, in fact, the resulting margins have widened consistently. Were there to be a further economic downturn, however, these positive trends could easily be reversed, as the simulation will demonstrate.

The simulation can be divided into various stages. First, the macroeconomic framework for a further downturn (IMK risk scenario) compared to a reference scenario (IMK baseline scenario) was established, followed by a fiscal estimate, producing a required net borrowing value for the country's medium-term budgetary planning against a backdrop of otherwise identical expenditure and revenue conditions. Then the cyclical components according to the debt brake procedure were calculated dynamically, using the changing supporting periods, so that the cyclical elements could be deducted from the total deficit.

Table 5: Basic parameters for tax revenue estimates

(annual growth in %)

	2011		2012		2013		2014		2015	
	IMK Baseline	**IMK Risk**	**IMK Baseline**	**IMK Risk**	**IMK Baseline**	**IMK Risk**	**IMK Baseline**	**IMK Risk**	**IMK Baseline**	**IMK Risk**
Nominal GDP	3.8	3.8	3.2	2.4	3.2	1.3	3.2	1.8	3.2	3
Real GDP	2.7	2.7	1.7	1	1.5	0	1.5	0.5	1.5	1.5
Gross wage bill	2.8	2.8	3.3	3	3	2	2.5	1.8	2.5	1.8
Profits and Capital	8.2	8.2	4.8	1.8	5	0.8	5	2	5	4
Modified domestic	2.7	2.7	2	1.9	2	1.3	1.9	1.4	1.9	1.7

Source: IMK fiscal estimates (Truger et al. 2011)

Table 5 reproduces the assumptions relating to the risk scenario for the overall economic parameters by comparison with the basis scenario. It is assumed that, after a marked decline in economic performance in 2012, there will be a similarly marked slump beginning in the same year, culminating in a period of stagnation in 2013 and 2014 and further growth in real GDP only from 2015, as set out in the reference scenario. According to past experience the central economic parameters were modified: the most responsive factor is income from profits, while the gross wage bill is a lagging indicator and declines markedly less. Modified domestic use also lags and reacts less sharply, although its weakening effect is determined by the decline in consumer spending. By contrast, it is assumed that government spending and public investment are not adjusted – an optimistic assumption, given past experience.

Table 6 reproduces the fiscal revenue estimates generated by the Federal Ministry of Finance (BMF) and the IMK baseline and risk scenarios. In the interests of simplification, the risk scenario provides details of only the most important taxes shared by all levels of government (tax on personal and corporate income, value added tax) and business tax: in the case of purely federal taxes (mostly indirect taxes) and local tax (excluding business tax) a 0.5 elasticity compared with nominal GDP has been assumed. Import duty figures assume a slight fall on the basis of an expected fall in imports.

Table 6: Outcome of tax revenue estimates for the Federal level in EUR billion

	Federal total tax revenue		
	IMK baseline	IMK risk	Federal ministy of Finance
	May 2011 estimations		
2010	226	226	226
2011	234	234	237
2012	244	241	247
2013	256	247	255
2014	265	252	265
2015	275	258	274

Source: Working Group on Tax Estimates; IMK tax revenue estimates

As expected, this produces a significant drop in revenue for the *Bund* by comparison with the baseline scenario. In the first year of lower economic growth – 2012 – the drop in revenue is relatively modest, at EUR 3.3 billion, but then, as a result of a severe slump in the economy, it rises rapidly to EUR 13.5 billion in 2014 and EUR 17.0 billion in 2015. By 2015, the cumulative loss of revenue compared with the baseline scenario totals EUR 42.6 billion. This would dramatically worsen prospects for the *Bund*.

The basic parameters used by the German government to draw up the country's budget and finance trends to 2015 and the calculations for debt brake targets produce an annual margin of about EUR 10 billion for the period from 2012 to 2014. On the basis of an assumed rise in expenditure and as yet inadequately quantified budget-balancing measures, the margin in 2015 falls to just under EUR 9 billion (Figure 4). It is important to stress that the resulting margins have not been 'created' by, for example, particular additional discretionary budget consolidation measures by the government but, as already indicated, are the result particularly of an upturn in the economy and the legitimate exploitation of the scope for manipulation – the 'ski jump effect' and the change of method for calculating TFP. The resulting margins have led to radically differing proposals for fiscal policy. In some cases, there have been calls for additional tax cuts, while the opposition SPD in the *Bundestag*, the German Federal Audit Office (*Bundesrechnungshof*), and the *Bundesbank* have all called for the margins to be scrapped by means of a retrospective recalculation of the basic deficit and/or for the government to revert to the old EU method.

A different recommendation would be to use the margins as a buffer against the possible threat of a medium-term economic downturn – a strategy that the federal government by now seems to endorse. The justification for this can be illustrated perfectly by using the impact on the federal budget of the assumed risk scenario: this needs to take into account not only of the effects on the country's tax revenues of the assumed weakening in economic growth outlined above but also of the complex repercussions of economic development on the permissible deficits under the debt brake.

In order to include these effects, we adopted the following methodology. First, baseline scenario calculations were made for potential output, output gap and cyclical components for the years 2012 to 2015, based as closely as possible on published BMF data.[6] Then, using the same method, we made the same calculations for the risk scenario. This assumes that when it draws up its budget, the German government knows the likely economic trends for the year for which it is drawing up a budget and for the following year, in accordance with the rules set out in the risk scenario. The result is that the economic outlook worsens steadily compared with the baseline scenario and the estimates for potential output, the output gap and cyclical components are adjusted year by year. For the purposes of simplification, we have excluded possible forecasting errors and, hence, necessary posting to the control account.

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[6] The BMF publishes only time series, which do not enable meaningful conclusions to be drawn about the specifications. It is also unclear which values were generated during the estimating process and which were exogenous and added subsequently. The series published since the spring of 2011 represent progress compared with the BMF's approach in 2009 and 2010, when not even data series were published. It is unclear, however, why the BMF persists in refusing to publish the data and specifications on which its forecasts are based, as the European Commission does, and so make it possible to scrutinise its forecasts rigorously.

Table 7: Basic parameters for calculating potential output and changes compared with the EU method

	EC	**Base-line**	**Risk**	**EC**	**Base-line**	**Risk**	**EC**	**Base-line**	**Risk**	**EC**	**Base-line**	**Risk**	**EC**	**Base-line**	**Risk**	**EC**	**Base-line**	**Risk**
	Hours per capita			Real GDP			Real investment			Harmonized u-nemployement			Labor force			Population wor-king age		
2010	1.5	2.1	2.1	3.7	3.6	3.6	6.0	6.0	6.0	7.3	7.7	7.3	0.3	0.5	0.5	-0.2	-0.4	-0.4
2011	0.2	0.2	0.2	2.3	2.7	2.7	6.0	8.7	8.7	6.7	7.0	6.7	0.7	1.2	-0.2	0.2	-0.1	-0.1
2012	-0.1	-0.4	-0.6	2.0	1.7	1.0	5.0	4.4	0.4	6.3	6.5	6.3	0.4	0.3	-0.5	0.1	-0.2	-0.2
2013			-0.4			0.0			-1.4			6.6			-0.7	-0.2	-0.3	-0.3
2014			-0.2			0.5			2.2			6.9			0.1	-0.3	-0.4	-0.4
2015			0.4			1.5			1.2			6.8			0.1	-0.4	-0.5	-0.5

Source: European Commission, BMF, IMK tax revenue estimates

Table 7 illustrates the basic parameters used by IMK to calculate potential output under the baseline and risk scenarios compared with the values used by the European Commission. An effort has been made under the IMK forecast to adhere as closely as possible to the BMF estimates, although they cannot, unfortunately, be reproduced entirely. Software for the European Commission method may be downloaded from the internet.[7]

To simulate the budget formulation process, each calculation period has been extended by one interval: in 2011, it covers the period up to 2012 for budget year 2012 and makes medium-term estimates up to 2015, while for budget year 2013, it covers the period up to 2013 and makes estimates up to 2016, and so on.

In addition to the discrepancies and extensions of the dataset noted in Table 7, we have assumed 5% depreciation in capital accumulation from 2013 and updated growth in the total factor productivity figure of 0.8%. The demographic forecasts underlying the EU's approach and the BMF data also throw up marked discrepancies. To emulate the BMF data more closely, we have used its suggested update figures, even though it is not entirely clear how far these take account of growth in the working age population resulting from a higher retirement age. NAIRU and the total factor productivity estimate were factored in exogenously in order to modify the estimate as little as possible.

In the baseline scenario, the IMK estimate differs only slightly from the BMF figures, with

[7] All specifications and data can be found at http://circa.europa.eu/Public/irc/ecfin/outgaps/library

potential output calculated at just 0.01% below the corresponding BMF figure (EUR 2 billion lower at 2000 prices). In the risk scenario, however, there is a substantial adjustment to potential output compared with the European Commission's and the BMF's estimates: for 2015, it is some 2.7% lower than the Commission's and BMF's potential figures. The main reason for this is the slump in investments and lower real growth in GDP.

The question then is how these cyclically determined revisions to potential output, output gap and cyclical components affect the budget when combined with the cyclically determined drop in tax revenue linked to the risk scenario. The answer is illustrated in Figure 4. Assuming that the budget balancing measures announced in the German government's 'Future Package' are implemented and financial transactions are not adjusted, the debt brake would give the Federal Republic a margin of EUR 16 billion in 2012, just over EUR 14 billion in 2013 and 2014, and just over EUR 9 billion in 2015. Under the IMK baseline scenario, this margin would, in fact, be even slightly higher.

In the risk scenario, by contrast, lower revenue and revisions have greater impact: the pro-cyclical downward revision of potential does not increase the negative cyclical components proportionally to the actual scale of the economic downturn. In conjunction with the budget sensitivity figure, which is set too low for periods of marked economic upturn or downturn, the fiscal policy margin arising from the debt brake declines markedly stage by stage. Under the new EU method, the deficit target under the debt brake of EUR 10 billion in 2015 would be overshot by EUR 1.9 billion, while in the case of the much more pro-cyclical former EU method, which we have not illustrated in Figure 4, the overshoot would rise to EUR 6.5 billion. In both cases, weaker economic growth would reduce the safety margin for the deficit target under the debt brake and, ultimately, result in its being exceeded. The government would then have to act pro-cyclically by making further cuts beyond those already set out in the 'Future Package'. This is also clearly illustrated in Figure 4: the structural deficits assumed in the IMK risk scenario for 2015 (here, the new TFP method) exceed the deficit reduction course targets. If there were also to be tax cuts – as might be the case from 2013 onwards – then the discretionary adjustments and cuts would have to be correspondingly greater. Given the gathering economic gloom, that would be a serious mistake. The fact that the most recent tax revenue estimate (May 2012) still assumes a modest increase in revenue for the medium term is based on the assumption of prompt economic recovery in 2013. Were this not to materialise, or if the downturn in the following year were to be more marked than assumed, then revenue would rapidly drop.

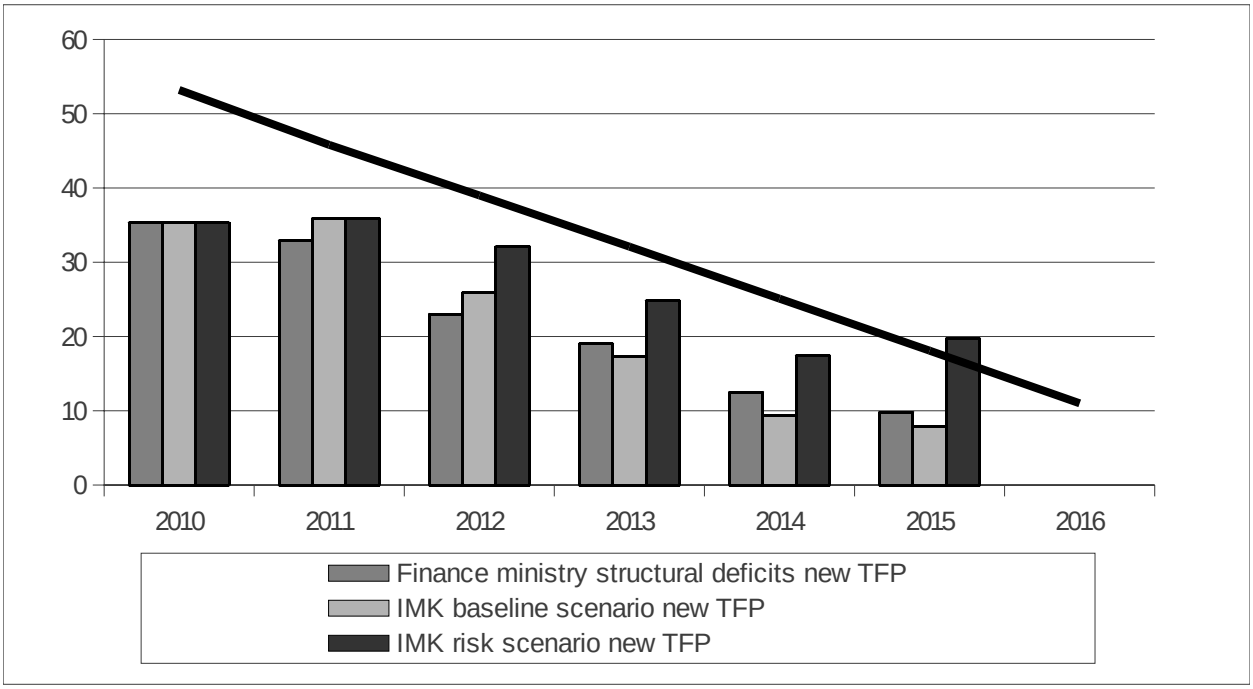


Figure 4: Structural deficits and the deficit reduction course

Source: BMF, AK tax revenue estimates, IMK tax revenue estimates

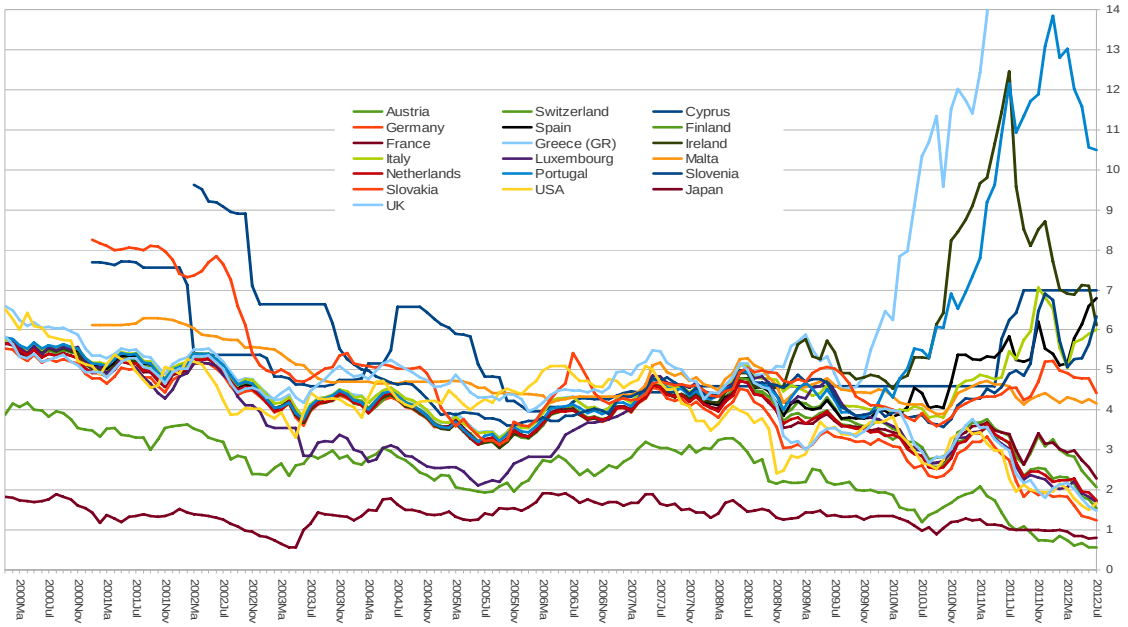
6. Conclusions for European fiscal policy

This paper has considered in concrete terms the effect of the German federal government's detailed debt brake, to show that the method chosen for calculating the structural deficit is extremely complex and, for that reason alone, highly opaque and open to manipulation. The German government has actually exacerbated the resulting lack of transparency by failing to provide proper information and has used the existing scope for intervention in a technically adroit way to broaden its margins in budgetary terms. Its satisfaction with this outcome may, however, be short-lived, because on the basis of the pro-cyclical approach stipulated in the technical procedure, the margins would rapidly disappear again if there were to be a major economic downturn – and this would be a certainty if combined with further tax cuts. In the worst case, Germany's fiscal policy would then become even more restrictive right in the midst of a Europe-wide economic crisis. It is less than clear how a rule of this kind and the German government's initial concrete application of it will seriously boost the confidence of the financial markets in Germany's fiscal policy.

In fact, taking a closer look at the movement of government bond yields over time shows that financial markets don't seem to be too impressed by the German debt brake (see Figure 5). Whereas there have certainly been growing risk premiums for most of the Euro area countries' government bond yields as compared to the German benchmark since the onset of

the crisis, the same is true as compared to the government bond yields of countries obviously not involved in the Euro crisis as for example the U.S., the U.K., Japan and Switzerland. The Swiss example in a longer term perspective is especially telling: As far back as in 2003, the Swiss introduced a constitutional debt brake at the federal level. From 2003 to 2010 the Swiss public debt ratio fell by 15 percentage points – mainly because of favourable economic trends (just as in the recent German case) – from around 55 % to 40 % of GDP, whereas over the same period in Germany it rose by 20 percentage points from a good 60 % to over 80 % of GDP. However, the difference in yields between Swiss and German government bonds seems to have remained completely unaffected. Therefore, the whole premise of the European fiscal compact as a means to restore credibility and to reduce risk premiums on the financial markets becomes seriously undermined.

Figure 5: 10 years government bond yields in %, Euro area countries and selected other countries (1/2000 – 7/2012)



Source: ECB; SNB.

What else follows from the recent experience with the German debt brake as just analysed? First, it must be stressed that the debt brake is far from being a well tested economic instrument. On the contrary, Germany and its debt brake are currently in the middle of a major fiscal policy experiment and the outcome is far from certain. The successes noted for the time being are mainly due to an unexpectedly strong and lasting economic recovery and

the technically successful manipulation of figures by the federal government, whereas the real test under more severe economic conditions lies ahead. Second, the manipulations by the federal government to circumvent the debt brake – as beneficial as they were from a macroeconomic point of view, because they allowed the upturn to gather momentum – morally discredit any emphatic calls by the German government for stricter consolidation policies elsewhere in Europe.

Thus on closer analysis the shining example loses all its lustre. It was obviously a serious mistake to accept a debt brake so similar to the German model so quickly at the European level. Given these basic errors, which are hard to reverse, and faced with the difficulties and problems of the German example, European fiscal policy should instead go its own way and investigate thoroughly all the ways in which it can be reshaped.

References

Anderson, B., J. J. Minarik (2006): "Design Choices for Fiscal Policy Rules." O*ECD Journal on Budgeting* 5, 4: 159-208.

Bruchez, P. - A. (2003): "A Modification of the HP Filter Aiming at Reducing the End-Point Bias," *Swiss Financial Administration, Working Paper* ÖT/2003/3, Bern.

Caner, M., T. Grennes, F. Koehler-Geib (2011): "Finding the Tipping-Point – When Sovereign Debt Turns bad." *World Bank Policy Research Paper* no. 5391.

Cecchetti, S.G., M. S. Mohanty, F. Zampolli (2011): "The real effects of debt." *BIS Working Paper*.

Checherita, C., P. Rother (2010): "The Impact of High and Growing Debt on Economic Growth. An Empirical Investigation for the Euro Area." *ECB Working Paper* no. 1237, Frankfurt.

D'Auria, F., C. Denis, K. Havik, K. McMorrow, C. Planas, R. Raciborski, R. Röger, A. Rossi, (2010): "The Production Function Methodology for Calculating Potential Growth Rates and Output Gaps." *European Commission, Economic Papers* no. 420, Brussels.

Deutsche Bundesbank (2011): „Anforderungen an die Konjunkturbereinigung im Rahmen der neuen Schuldenregel." M*onthly Report*, January 2011: 59-64.

GD [Projektgruppe Gemeinschaftsdiagnose: project group joint forecast] (2010): „Herbstgutachten. Deutschland im Aufschwung. Wirtschaftspolitik vor wichtigen Entscheidungen." Munich.

GD [Projektgruppe Gemeinschaftsdiagnose: project group joint forecast] (2010): „Herbstgutachten. Europäische Schuldenkrise belastet deutsche Konjunktur." Munich.

Girouard, N., C. André (2005) "Measuring Cyclically-Adjusted Budget Balances for OECD Countries." *OECD Working Paper* no. 434, Paris.

Hein, E., A. Truger (2005): "What Ever Happened to Germany? Is the Decline of the Former European Key Currency Country Caused by Structural Sclerosis or by Macroeconomic Mismanagement?" *International Review of Applied Economics* 19 (2005): 3-28.

Hein, E., A. Truger (2007): "Germany's post-2000 stagnation in the European context – a lesson in macroeconomic mismanagement", in *Aspects of Modern Monetary and Macroeconomic Policies,* Arestis, P., E. Hein, E. Le Heron (eds.), Basingstoke, Palgrave Macmillan: 223-247.

Heinemann, F., M.D. Moessinger, S. Osterloh (2011): „Nationale Fiskalregeln – Ein Instrument zur Vorbeugung von Vertrauenskrisen? Summary of a research study by the Centre for Economic Research Mannheim." M*onthly Report of the Germany Ministry of Finance (BMF*), August: 58-66.

Horn, G., C. Logeay, S. Tober (2007): "Estimating Germany's Potential Output", *IMK Working Paper* no. 2/2007, Duesseldorf.

Horn, G., T. Niechoj, C. Proaño, A. Truger, D. Vesper, R. Zwiener (2008): „Die Schuldenbremse – eine Wachstumsbremse?" *IMK Report* no. 29.

Horn, G., T. Niechoj, S. Tober, T. van Treeck, A. Truger (2010): „Reforming the European Stability and Growth Pact: Public Debt is Not the Only Factor, Private Debt Counts as Well" *IMK Report*, Nr. 51e, July.

Horn, G., F. Lindner, T. Niechoj, S. Sturn, S. Tober, A. Truger, H. Will (2011): „Herausforderungen für die Wirtschaftspolitik 2011." *IMK Report*, no. 59.

IMF [International Monetary Fund] (2011): "Modernizing the Framework for Fiscal Policy and Public Debt Sustainability Analysis." *IMF Policy Papers*, Washington.

IMK, OFCE, WIFO (2011): "The euro area at the crossroads: First joint analysis of the Macro Group." *IMK Report* no. 61e, April.

IMK, OFCE, WIFO (2012): "Fiscal Pact Deepens Euro Area Crisis. Joint analysis of the Macro Group. *IMK Report* no. 71e, March.

Jacoby, W., A. Truger (2002): "Tax Reforms and „Modell Deutschland" – Lessons from four Years of Red-Green Tax Policy", *Working Paper on Political Economy of International Finance* No 3, Institute of European Studies, University of California, Berkeley, December.

Kopits, G., S. Symansky (1998): "Fiscal Policy Rules." *IMF Occasional Paper* no. 162, Washington.

Kumar, M. S., J. Woo (2010): "Public Debt and Growth." *IMF Working Paper* no. 10/174, Washington.

Musgrave, R.A. (1959): "The Theory of Public Finance. A Study in Public Economy." New York et al.: McGraw-Hill.

Ostry, J. D., A. R. Ghosh, J. I. Kim, M. S. Qureshi (2010): "Fiscal Space." *IMF Staff Position Note* 10/11, Washington.

Reinhart, C. M., K. S. Rogoff (2010): "Growth in a Time of Debt." *NBER Working Paper* no. 15639, Washington.

SVR [Sachverständigenrat zur Begutachtung der gesamtwirtschaftlichen Entwicklung, German Council of Economic Experts] (2007): „Staatsverschuldung wirksam begrenzen. Study on behalf of the Federal Minister for Economics and Technology." Wiesbaden.

SVR (2010): „Chancen für einen stabilen Aufschwung." *Annual report* 2010/2011, Wiesbaden.

Truger, A. (2004): „Rot-grüne Steuerreformen, Finanzpolitik und makroökonomische Performance – was ist schief gelaufen?" in *Finanzpolitik in der Kontroverse*, Hein, E., Heise, A. und Truger, A. (eds.), Marburg, Metropolis. 169-208.

Truger, A. (2009): „Ökonomische und soziale Kosten von Steuersenkungen." Prokla 154 (39, 1): 27-46.

Truger, A. (2010): „Schwerer Rückfall in alte Obsessionen – Zur aktuellen deutschen Finanzpolitik" *Intervention. European Journal of Economics and Economic Policies* 7, 1: 11-24.

Truger, A., D. Teichmann (2011): „Zur Reform des Einkommensteuertarifs. Ein Reader der Parlamentarischen Linken in der SPD-Bundestagsfraktion." Berlin / Düsseldorf.

Truger, A., H. Will (2011): „Eine Finanzpolitik im Interesse der nächsten Generationen Schuldenbremse weiterentwickeln: Konjunkturpolitische Handlungsfähigkeit und öffentliche Investitionen stärken" *IMK Study* No. 24, Düsseldorf.

Truger, A., H. Will, D. Teichmann (2011): „IMK Steuerschätzung 2011-2015. Kräftige Mehreinnahmen: kein Grund für finanzpolitischen Übermut." *IMK Report* no. 62.

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