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Budget consolidation: wishful thinking and harsh reality

- Annual budget figures and the objective of a balanced budget in the medium term, as set out in the EU's stability and growth pact (SGP), have become moving targets in recent years.
- The German government is sticking to its plan to achieve a balanced budget by 2006. To do so, though, it counts on overly optimistic growth assumptions – despite painful experience in the past. Furthermore, it builds its case on austerity measures that seem unrealistic in the political reality.
- In principle, lower government deficits can be achieved through stronger economic growth or structural savings. The simulations performed by DB Research in this publication make use of these adjustment levers.
- In our baseline scenario, Germany does not achieve a balanced budget until 2008. Only unrealistic assumptions lead to a balance by 2006 already.
- The "very restrictive policy" scenario shows that enormous saving measures are necessary if the goal is to be met under realistic growth assumptions by 2006.
- Alternatively, additional economic growth could come "out of the blue". With 3.6% annual GDP growth from 2004, the budget would also be in balance by 2006 given realistic structural measures.
- In a third scenario, "ride on the Laffer curve", we simulate an attempt to boost growth in Germany with expansionary, supply-side tax policy in the short term, which also improves the medium-term growth path and the scope for consolidation. This scenario requires several extreme assumptions to achieve budget balance in 2008.
- Empirical estimates of multiplier effects of fiscal measures show a broad spectrum, though there are some relatively reliable rules of thumb. The uncertainties result from the long controversy of whether fiscal measures tend to have more of a "Keynesian" effect (i.e. feed through to growth), or more of a "Ricardian" (growth-neutral) effect.

Stefan Bergheim, +49 69 910-31727 (stefan.bergheim@db.com)
Stefan Schneider, +49 69 910-31790 (stefan-b.schneider@db.com)

Editor
Stefan Schneider
Tel.: +49 69 910-31790
stefan-b.schneider@db.com

Publication Assistant
Pia Johnson
Tel.: +49 69 910-31777
pia.johnson@db.com

Deutsche Bank Research
Frankfurt am Main
Germany
Internet: www.dbresearch.com
E-mail: marketing.dbr@db.com
Fax: +49 69 910-31877

Managing Director
Norbert Walter

At 3.6% in 2002, Germany's general government deficit far exceeded the upper threshold of 3% of GDP set out in the European Union's stability and growth pact (SGP). As a consequence, the Economic and Financial Affairs Council (ECOFIN) launched an excessive deficit procedure in January. Moreover, the European Commission voiced considerable doubts over the deficit forecast for 2003 (2 ¾%) in Germany's stability programme and about its new objective of budget balance in 2006. In Germany's latest annual economic report the government has in fact reduced its growth forecast by half a percentage point to 1%. At the same time, the question marks hanging over various measures of the *Steuervergünstigungsabbaugesetz* (tax benefit reduction law), loom ever larger. Unperturbed, the federal government is sticking to its deficit forecast.

"Even on ... the reduced growth assumption of 1%, we should succeed, going on present knowledge, in keeping the deficit below 3%"

Wolfgang Clement, Germany's minister of economics and labour, on January 29, 2003

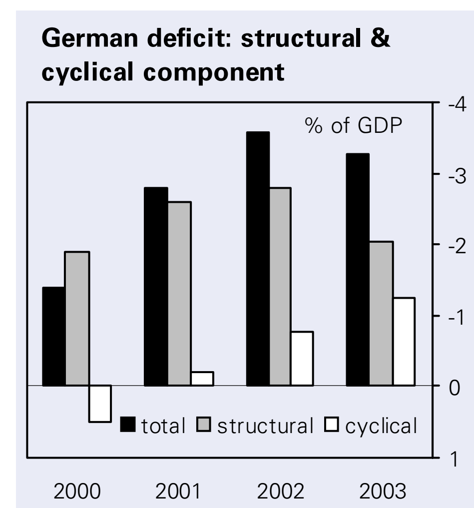
However, there are some very stable empirical relationships between economic growth and budget deficits which show that a decrease of one percentage point (pp) in GDP growth widens the deficit ratio by close to half a point. Below we apply such rules of thumb and elasticities to produce several scenarios for budget consolidation. The bottom line: a balanced budget in 2006 as announced in Germany's stability programme is out of reach under realistic assumptions. Even assuming favourable circumstances and resolute political action, a balanced budget will not be on the cards until 2008 at the earliest.

Balanced budget in 2006 not possible under realistic assumptions

Starting position: large structural deficit in 2002

Germany's general government deficit (all levels of government plus social security systems) came to 3.6% of GDP in 2002. Our calculations show that this overall deficit breaks down into a structural deficit of 2.8% and a cyclical component of 0.8%. The structural component is the part of the deficit which would remain if capacities were utilised at "the normal level", i. e. the part that does not depend on the current state of the business cycle. The German government puts its structural deficit for 2002 at 3% of GDP, and the European Commission uses by a similar figure.[1]

German deficit: structural & cyclical component



The explanation for the cyclical component (about 0.8% of GDP) is that the capacities of the German economy were underutilised by about 2% in 2002, i.e. there was an output gap of roughly 2% of GDP. It follows that expenditures on social welfare were higher, tax revenues lower and the deficit larger than at times of normal capacity utilisation. A rule of thumb says that an output gap of 1% triggers a cyclical deficit of 0.4% of GDP, spread more or less equally between revenues and expenditures.

The government's scenario

The German government – including the federal states and local authorities via the financial planning council and the national stability pact – plans to reduce the public sector deficit to 2.85% of GDP in 2003 and achieve a balanced budget by 2006. The annual economic report published in late January 2003 bases this scenario on a GDP growth rate of 1% in 2003 and an average of 2 ¼% for the years 2004-2006. This indicates that the output gap would close by 2006, so the cyclical component of the deficit would shrink to zero.

Germany's stability programme based on overly optimistic assumptions

[1] European Commission, Cyclical Adjustment of Budget Balances, Autumn 2002.

Germany's stability programme, updated in mid-December, also contains a timetable for the structural deficit.[2] From 3% in 2002, this component is to decrease by 1 pp both this year and next. In other words, a contractionary fiscal impulse of 1% of GDP would lie ahead not only in 2003 but also in 2004. There are no further plans for an improvement of the structural deficit in 2005 at present. This is mainly because of the scheduled tax cuts worth nearly EUR 20 bn net (0.8% of GDP) in 2005. This expansionary structural stimulus would still have to be neutralised by measures on the expenditure side, though, to avoid any net impact on the government deficit.

The government's scenario

	2001	2002	2003	2004	2005	2006
Real GDP, % yoy	0,6	0,2	1,0	2,25	2,25	2,25
Federal deficit, % of GDP	-2,8	-3,6	-2,85	-1,5	-1,0	0
Output gap, % of GDP	0	-1,25	-1,75	-1,25	-0,75	0
Structural deficit, % of GDP	-2,75	-3,0	-2,0	-1,0	-1,0	-0,5

Source: Stability Programme December 2002, Annual Economic Report, collated by DBR

Ways to lower deficits

More restrictive steps or stronger growth

There are two ways to lower government deficits: restrictive fiscal policy and strong economic growth. The first way, restrictive fiscal policy, leads to a lower structural deficit through an active reduction of state spending or an increase in revenues. If one disregards negative repercussions on economic growth, the deficit changes by the same amount as the structural change of expenditures and revenues.

As long as growth remains below potential, the cyclical deficit will widen

The second way to lower deficits is via stronger economic growth, which reduces the cyclical component. As a rule, a 1 pp increase in GDP growth reduces the government deficit by about 0.4 pp. A smaller cyclical component will only emerge, though, if actual GDP growth outstrips trend potential. At present, Germany's potential growth rate stands at 1 ½ - 1 ¾%, but this reading is fraught with uncertainty.[3] Just a few years ago, many observers still assumed a rate of over 2%, but meanwhile estimates of less than 1% are already on record.

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[2] http://www.bundesfinanzministerium.de/Anlage16210/German-stability-programme-December-2002-update.pdf

[3] Our estimates are based on those of the European Commission, see "Production Function Approach to Calculating Potential Growth and Output Gaps". Economic Papers No. 176, September 2002.

Excursus: Ricardo versus Keynes

For centuries, economists have argued over the degree – and even the direction – of the effects of fiscal measures. The two most prominent schools are linked with Ricardo and Keynes.

Ricardo: The government debts of today are the taxes of tomorrow

David Ricardo (1772-1828) put forth the idea that consumers are forward-looking enough to realise that higher government debt today is to be financed by higher taxes (or lower expenditures) in the future. After all, the government deficit cannot rise infinitely. In other words, the government faces an intertemporal budget constraint – and consumers are fully aware of this fact. It follows that they react to higher government debt today by saving more so they can pay it back through higher taxes in the future. They see government debt today as being equivalent to taxes tomorrow (Ricardian equivalence). Lower taxes or higher government spending today would thus have no impact on economic growth.

Keynes: The government can create growth through anti-cyclical fiscal policy

John Maynard Keynes (1883-1946) developed the idea that in times of heavily underutilised capacities, inflexible prices and considerable uncertainty among private economic agents the government itself should increase spending to secure full employment. Higher government expenditure would have significant effects on economic growth, especially if investment, consumption and employment are mutually reinforced by multiplier effects.

Empirical findings show great variance

The two hypotheses are very difficult to test empirically. Most studies show that an increase in government spending by 1% of GDP pushes GDP up by 0.6-1.4% in the first year.[4] The multipliers for tax reductions are lower: a decrease in the tax burden of 1% of GDP results in 0.3-0.8% higher GDP. The studies also show that the multipliers have tended to become smaller of late. Ricardian equivalence does not seem, therefore, to hold completely, but Keynesian effects are, in general, only moderate.

Prerequisites for the short-term effectiveness of expansionary fiscal policy

Some statements have found broad consensus. Expansionary policy is considered all the more effective,

- the more confidence consumers have in the government's fiscal situation. This confidence can hinge on the size of the initial deficit and on future fiscal challenges such as an ageing population. In other words, the more sustainable the budget situation, the more Keynesian the effects of expansionary policy.
- if the government is not bound by rules which limit the deficit (in the short and medium term), and consumers therefore do not have to expect current tax reductions to lead to countermeasures soon.
- if consumers have a short planning horizon, or pay little heed to the burden on future generations.
- the less the capacities are utilised, since in that case there are no inflation risks and private demand will not be crowded out by government demand. (Estimated output gap in Germany in 2002: 2% of GDP; 2003: 3%.)
- in relatively closed economies, since in that case less of the additional demand is satisfied by imports (Germany's import ratio: 32% of GDP).

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[4] Hemming, Kell, Mahfouz, "The Effectiveness of Fiscal Policy in Stimulating Economic Activity, A Review of the Literature", IMF Working Paper 02/208, December 2002.

- the less the exchange rate rises, since in that case exports could suffer.
- the less interest rates react to the higher growth and higher debt, and the less private investment responds to changes in interest rates. In a monetary union, the last two points are of only limited relevance.
- the less the private households' savings ratio changes, since more of the stimulus actually feeds through to demand.

Long-term effects are relevant for trend growth

These arguments refer explicitly to the cyclical growth effect of fiscal measures. However, taxes and levies also act on long-term trend growth. The supply of labour and capital may be influenced. And government investment may trigger positive externalities.

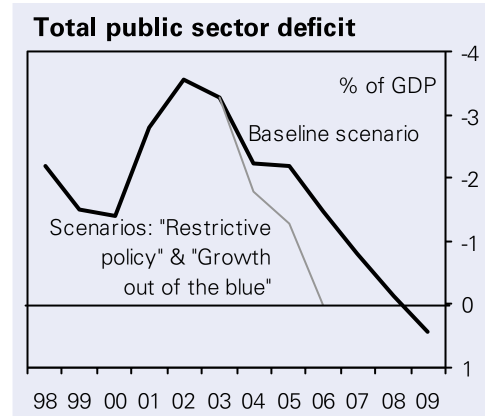
Meanwhile, in fact, more and more examples of expansionary fiscal contractions can be found, where restricitve fiscal measures actually lead to stronger GDP growth. This is especially the case if the contractions are of a significant, long-term nature (e.g. in Denmark and Ireland in the 1980s).[5]

DB Research's baseline scenario

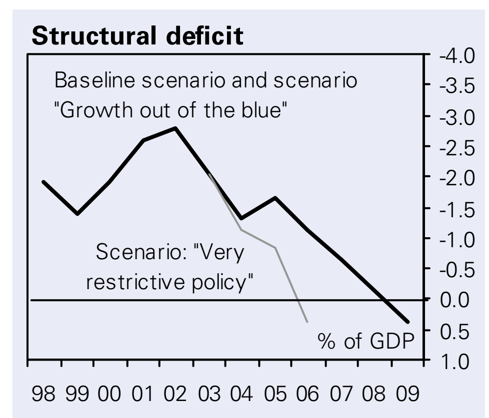
Two assumptions in the German government's scenario seem questionable. First, the assumption of 1% growth this year is very ambitious – even half this amount appears a stretch. This (and the prospective watering-down of the consolidation measures in the course of the legislative process) means that, for 2003, a deficit of less than 3% is virtually out of reach. Moreover, the narrowing of the output gap to zero by 2006, as the government forecasts, is very optimistic. Our baseline scenario works on the assumption of 2.4% average growth for 2004-2006, and the output gap not closing until 2008. Growth rates of this magnitude over at least a 3-year period were last seen from 1984 to 1990 and 1998 to 2000. The government's assumption of potential growth at 1 ¾ % is quite high, but is not completely unrealistic.

Second, the official timetable that foresees running down the structural deficits from 2004 is very ambitious. For the coming year, the tax benefit reduction legislation provides for a strong rise in tax revenues, though this will be almost neutralised by the next stage of the scheduled income tax cuts. Together with the already announced or resolved expenditure cuts this adds up to a contractionary structural impulse of roughly 0.3% of GDP in 2004. It is most questionable whether at the end of 2003 the government will launch further measures adding up to 0.7% of GDP in order to achieve the 1 pp overall decrease in the structural deficit it projects. Our baseline scenario is therefore based on the premise that the government will pass additional structural measures equivalent to about 0.5% of GDP for each of the coming years. This suggests that, in combination with the resolved tax changes (especially tax cuts in 2004 and 2005), the structural deficit would not disappear until 2008. In our baseline scenario, Germany would not post a balanced budget until 2008 – and only on the back of considerable efforts in the form of further restrictive measures every year.

Total public sector deficit



Structural deficit



[5] Ibid, p. 22.

Scenario 1: "Very restrictive policy"

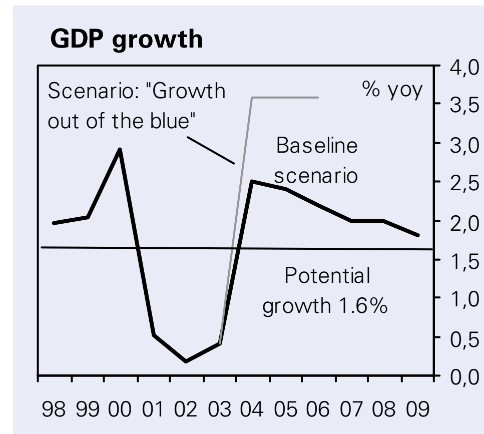
If 2006 is nevertheless to see a balanced budget given the economic growth assumed in the baseline scenario, the government will have to tighten the fiscal reins still further. Balance would only be possible if, in addition to the new austerity measures assumed in the baseline scenario (a cumulative 1 ¼% of GDP), the government were to resolve further measures worth 1 ½% of GDP. This means that all in all the government would have to push through new measures totalling 1% of GDP every year in order to offset 2003's structural deficit (2% of GDP), the agreed expansionary steps (½% of GDP) and the output gap which is still likely to exist in 2006.

Balancing the budget in 2006 will be even tougher if the short-term repercussions resulting from the additional constraints on economic growth and tax revenues are taken into consideration. In that case, further measures totalling nearly ½% of GDP would be needed. Taken together, the net consolidation measures would total 3.8% of GDP within four years.

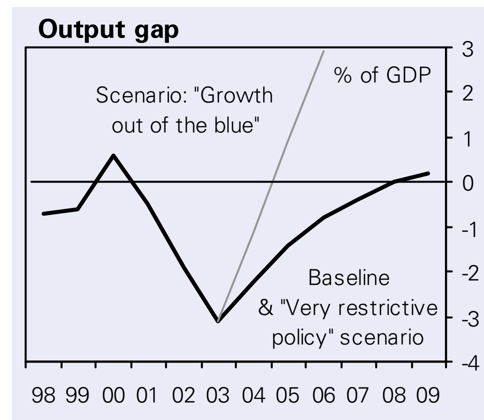
Scenario 2: "Growth out of the blue"

On a contrasting note, if the government does not want to further tighten the austerity measures assumed in the baseline scenario, only a steep rise in economic growth – like a „deus ex machina" – might save the day and balance the budget. To do so, annual GDP growth would have to jump to 3.6% starting in 2004 – i.e. surpass potential growth by 2 percentage points. In this case, production would exceed potential by nearly 3% in 2006. This would be the equivalent of the new economy with a built-in turbocharger – i.e. pie in the sky. The structural deficit would still exceed 1% of GDP in 2006, though.

GDP growth



Output gap



Budget consolidation 2006? - scenario analysis

	2002	2003	2004	2005	2006	2007	2008
DB Research baseline scenario							
Budget deficit, total, % GDP	-3.6	-3,3	-2,2	-2,2	-1,5	-0,8	-0,1
GDP growth, % yoy	0,2	0,4	2,5	2,4	2,2	2,0	2,0
Discretionary measures, % GDP	-0,4	0,9	0,7	-0,3	0,5	0,5	0,5
Output gap, % GDP	-1,9	-3,1	-2,2	-1,4	-0,8	-0,4	0,0
Scenario 1: "Very restrictive policy"							
Budget deficit, total, % GDP		-3,3	-2,0	-1,4	0,0		
GDP growth, % yoy			like baseline scenario				
Discretionary measures, % GDP		0,9	1,0	0,3	1,2		
Output gap, % GDP			like baseline scenario				
Scenario 2: "Growth out of the blue"							
Budget deficit, total, % GDP		-3,3	-1,8	-1,3	0,0		
GDP growth, % yoy		0,4	3,6	3,6	3,6		
Discretionary measures, % GDP			like baseline scenario				
Output gap, % GDP		-3,1	-1,1	0,9	2,9		
Scenario 3: "Ride on the laffer curve"							
Budget deficit, total, % GDP		-4,3	-4,1	-3,6	-2,4	-1,2	-0,1
GDP growth, % yoy		1,6	3,4	2,6	2,4	2,2	2,2
Discretionary measures, % GDP		-0,6	-0,5	0,1	0,9	0,9	0,9
Output gap, % GDP		-1,9	-0,1	0,5	0,8	0,9	1,0

Budget balance either in 2008 ...

... or, with enormous effort, in 2006 ...

... or through growth that comes out of the blue

Alternative path up to 2008

Scenario 3: “Ride on the Laffer curve“

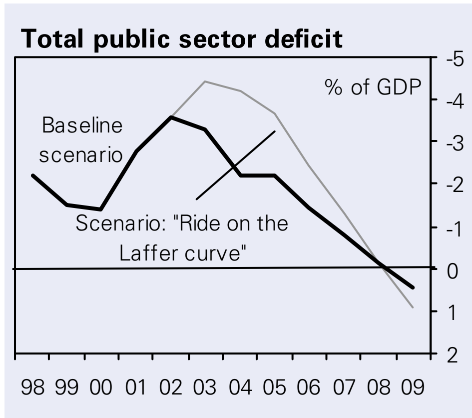
Some observers argue that overall it would be better in the current weak spell to pursue an expansionary, growth-oriented fiscal policy rather than respond to a cyclically induced widening of the deficit with further budget cutbacks. While such a policy would initially lead to an even higher deficit ratio, it is supposed to make it easier to achieve consolidation in the medium term thanks to the positive cyclical effect. If the expansionary stimulus does not come from an increase in state spending but rather from a reduction of income taxes, the result will be additional incentives for the supply of labour and investment which would raise potential growth in the medium term.

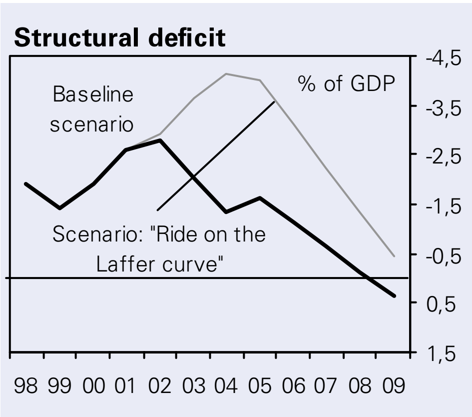
The minimum requirement in such a scenario should be that budget balance is not reached later than in the baseline scenario (2008). It is assumed that from 2005 a supply-side tax policy will lift the GDP growth rate to a level ½ pp above that of the baseline scenario. However, from the same date, expenditure cuts reduce the structural component of the deficit by close to 1 percentage points per year, which will have a dampening effect on economic growth, so the growth gap between the scenarios as a whole is less than ½ pp.

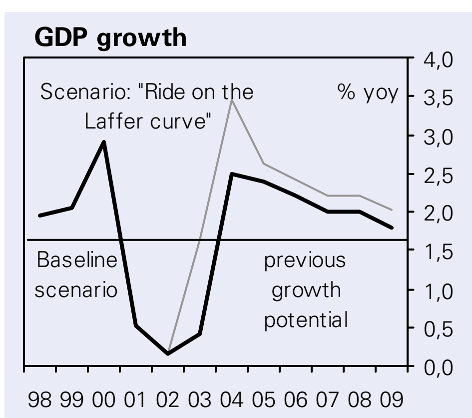
Crucially, not only is there no reduction of the structural deficit in 2003/04, but instead an expansionary stimulus (income tax cut) of roughly ½ pp. The deficit ratio would rise to just over 4% in both years. Under these assumptions, the short-term growth boost from the tax cut has to come to around ½ pp – or 1.2 pp in comparison with the baseline scenario, where growth is additionally subdued by the reduction of the structural deficit – in order for the budget to be balanced in 2008. For this to happen, a short-term tax multiplier (additional GDP growth due to a tax cut of 1% of GDP) of 0.8 is needed.

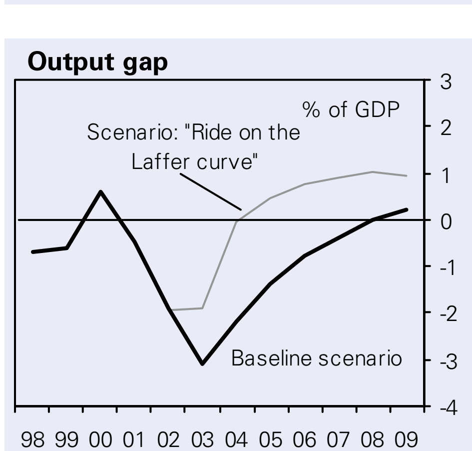
How realistic is this scenario? The tax multiplier of 0.8 assumed for 2003/04 sits at the upper end of empirical estimates (0.3-0.8). The tax cuts totalling 2% of GDP in 1999-2001, produced only moderate growth effects, indicating low multipliers. At the same time, the spending multiplier for the expenditure cutbacks effective from 2005 would have to be set at 0.7, i.e. at the lower end of the empirical estimates (0.6-1.4), to keep the growth losses in check. However, the average growth rate of 2.4% (2003-2008) required for a balanced budget still seems extremely ambitious. Even assuming very optimistically that potential growth may be raised by ½ pp to just over 2% within 2 years, German GDP would have to expand at a pace that outstrips potential for 5 years running. The result would be a roughly 1% over-utilisation of capacities in 2008. It is scarcely likely that this will happen without inflationary tensions even if further structural reforms are pushed through.

Stefan Bergheim, +49 69 910-31727 (stefan.bergheim@db.com)
Stefan Schneider, +49 69 910-31790 (stefan-b.schneider@db.com)









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