Central government's debt brake: options for stability-oriented further development

Fiscal rules are designed to ensure sound government finances. They require that budget priorities be set and allow only limited deferral of financial burdens to the future. From the Bundesbank's perspective, binding fiscal rules are indispensable for both the euro area and Germany. This is because sound government finances protect stability-oriented monetary policy. Furthermore, they preserve fiscal policymakers' capacity to act – even in times of crisis. For example, the debt brake helped put government finances in a favourable starting position prior to the coronavirus crisis.

There are currently plans to enshrine a debt-financed special fund for the German armed forces outside the scope of the debt brake in the country's Basic Law. As this will require a broad parliamentary majority to pass, it is unlikely to set a precedent of weakening the binding effect of the debt brake. Measures that bend the rules of the debt brake are more problematic in this regard. For instance, during the coronavirus crisis the Federal Government used the escape clause to provide advance funding on a substantial scale to future government projects with no direct connection to the pandemic. The Federal Government announced that compliance with the standard limit under the debt brake would resume from 2023. Additionally, it has resolved to carry out a review of the cyclical adjustment procedure used in the context of the debt brake.

A specific change to the cyclical adjustment procedure is proposed in this article. Under this proposal, budgetary policy has more time to adjust in the event of revisions to expected economic developments and tax revenue forecast errors. This would make it easier to stabilise budgetary policy and avoid procyclical stimuli.

Various adjustments to the debt brake are also discussed in this article. They have been selected such that the debt brake continues to ensure sound government finances and the framework is compatible with European fiscal rules. In contrast to the increasingly flexible manner in which the debt brake is being used, such reforms could reinforce its binding effect. Specifically, budgetary developments could be stabilised by recording interest expenditure on an accruals basis. In addition, credit balances on the control account resulting from not borrowing up to the borrowing limit could be netted against emergency loans. A more radical move would be to raise the standard borrowing limit under the debt brake from 0.35% of gross domestic product (GDP) up to the medium-term budgetary objectives set out under European rules, according to which countries may have a structural general government deficit ratio of 0.5%, rising to a figure of 1% if they have debt-to-GDP ratios of under 60%. Investment could be prioritised over consumption expenditure by means of a "capped golden rule". It would be important to link this rule to net investment and maintain caps on new borrowing that are compatible with stability. It would also appear fitting with stability-oriented policy to cancel repayment obligations from earlier crises once the debt ratio is back below the 60% mark and is expected to remain so in future fiscal plans. In principle, it would be consistent to include Germany's shares in EU deficits in the debt brake in future.

Safeguard debt brake, make use of room for improvement

Debt brake contributed to sound government finances

The debt brake has contributed to sound government finances over the past decade. In response to the global financial crisis, central and state governments agreed in early 2009 to write it into Germany's Basic Law.[1] It replaced an investment-linked borrowing limit, which had failed to effectively keep the debt ratio under control. By contrast, the debt brake proved successful. The debt ratio fell considerably once central government's debt brake had entered into force. Germany also complied with the European rule of keeping the structural budgetary position close to balance. It was in no small part thanks to the debt brake that the central government budget was in a favourable starting position prior to the coronavirus crisis. Fiscal policy was thus able to play a major stabilising role during the crisis and keep the economic damage inflicted by the pandemic to a minimum. Trust in Germany's public finances was at no point jeopardised.

Federal Government embraced debt brake

The Federal Government has embraced the debt brake. It is planning to resume compliance with the standard borrowing limit from next year, with structural[2] net borrowing then being once again limited to 0.35% of GDP. However, the Federal Government is adopting various measures to create a considerable amount of additional room in the budget, which will enable it de facto to borrow above the standard limit, taking out sizeable loans to finance its projects over the next few years.

Use of escape clause appears somewhat incompatible with intention of debt brake

Amongst other things, the Federal Government is planning to take on new debt to cover areas of defence spending where there is considerable catching-up to do. To this end, it wishes to enshrine a new special fund for Germany's armed forces in the Basic Law, to which debt brake requirements shall not apply. This will require support from a major part of the opposition. This major hurdle is likely to prevent the special fund from setting a precedent of weakening the binding effect of the debt brake on a lasting basis. Other measures are more problematic in this regard. For example, the Federal Government used the escape clause to enable it, in the coming years, to borrow in order to finance extensive measures not serving directly to overcome the acute crisis situation.[3] In connection with this, some in the opposition have asked the Federal Constitutional Court to review the second supplementary central government budget for 2021. Furthermore, the Federal Government wishes to amend the repayment schedules already arranged for emergency loans.[4] Rather than starting in this legislative period, repayments would then be put off until far into the next legislative period.[5]

Debt brake alone will no longer reliably ensure compliance with EU rules

All in all, central government intends to spend around 5% of GDP outside the debt brake framework by these means in the coming years. In the case of a drawdown of this additional scope for borrowing, the debt brake alone will no longer be able to ensure compliance with the EU rules on structural balances.

If fiscal rules are to ensure sound government finances, they have to tie in with specific requirements. Their binding effect is weakened if

1 For the fundamentals, see Deutsche Bundesbank (2011) and Federal Ministry of Finance (2022).
2 Structural components in central government's debt brake are adjusted for financial asset acquisitions and cyclical effects.
3 To this end, amongst other things, special funds that are pre-funded using emergency borrowing from the central government budget were retroactively exempted from the constraints imposed by the debt brake. For detailed explanations of these measures, see Deutsche Bundesbank (2022).
4 Under the Basic Law, decisions on emergency borrowing must be combined with a repayment schedule.
5 It was also announced in the coalition agreement that more investment would take place via the balance sheets of public entities. These are outside the scope of the debt brake. Financial transactions, which likewise do not count towards the debt brake, could if necessary be used to strengthen enterprises' capital base. However, the latest budget plans do not contain any such transactions that would run counter to the debt brake. In any event, the European fiscal rules cover investment by public entities where, as a general rule, from an economic perspective the investment belongs to the general government sector. For information on the requirements for outsourcing central government investment from the government sector, see Deutsche Bundesbank (2021a), p. 69, and Independent Advisory Board to the Stability Council (2021), pp. 27 f.

Stability-preserving adjustments to basic rules possible and acceptable

they are circumvented or applied with excessive flexibility. But this does not mean that the debt brake cannot be reformed. Changes to the basic rules make sense where there is significant room for improvement. In this respect, it is understandable, for example, that the Federal Government wishes to review the cyclical adjustment procedure used in the context of the debt brake. From the Bundesbank's perspective, it is important that any changes to the basic rules be made transparently and in a manner that maintains stability. With this in mind, this article first presents a proposal for amending the cyclical adjustment procedure, before discussing various ways in which other parts of the debt brake could be enhanced.

Amend the cyclical adjustment procedure: respond to revised assessments with a delay

Cyclical adjustment procedure maps cyclical budget fluctuations

The cyclical adjustment procedure is used to estimate how economic activity influences the central government budget. Under the debt brake, higher levels of new borrowing are permitted when the economic situation puts pressure on the budget, whereas a scenario in which the economic situation eases said pressure lowers the permissible new borrowing amount. The debt brake therefore takes into account the fact that revenue and expenditure "breathe" over the economic cycle: for example, taxes rise and spending on unemployment falls during upswings and do the opposite during downswings. This breathing mechanism automatically stabilises aggregate economic activity. Budgetary policy can follow a steadier course if cyclical fluctuations are allowed to affect the budget, as measures then do not need to be implemented to offset the fluctuations.

Symmetry requirement intended to prevent sustained rise in debt

The standard limit for net borrowing by central government under the debt brake is a structural value of 0.35% of GDP. This limit thus specifies a path for government debt that cyclical adjustment is not permitted to systematically alter. The cyclical impact on the budget therefore needs be taken into account symmetrically, which means that higher new borrowing during periods of weak cyclical conditions has to be offset by lower new borrowing when the economy is stronger. As a result, cyclical adjustment has no longer-term impact on the debt path. This symmetry requirement is enshrined in the Basic Law.

Criticism of debt brake: unexpected developments lead to erratic fiscal policy

Major revisions to estimates of aggregate potential output in the context of cyclical adjustment or taxes pose a significant challenge to the debt brake because they can lead to erratic fiscal policy.[6] If, for example, expected GDP growth is revised downwards, central government's cyclical adjustment procedure usually registers this as cyclical only to a certain extent. The procedure interprets a large part as an overestimation of potential output.[7] This usually means that cyclically adjusted taxes are revised downwards and structural net borrowing is revised upwards accordingly. To the extent that the standard limit of the debt brake would be exceeded as a result, this then needs to be offset in the next budget plan. An additional problem is posed by profit-related taxes, in particular. Revenue collected from profit-related taxes fluctuates to some extent as it moves in line with economic activity, and it often differs fairly substantially from expectations. For example, tax prepayments are adjusted in relation to the relevant macroeconomic variables in very different ways, and they vary over time. For this reason, cyclical adjustment procedures based on potential output classify the sometimes strong fluctuations in revenue from profit-related taxes as largely structural. In response to positive swings, the rules permit fis-

6 For more details on how different cyclical adjustment procedures handle revisions to estimates, see Deutsche Bundesbank (2017), pp. 42 ff.
7 If the potential output path is reassessed after GDP figures are revised, this is not necessarily due to a technical problem with the procedure. Rather, it is probably often for economic reasons that new information influences how both the cyclical position and the level and course of the potential output path are assessed.

cal policy to become more expansionary, whereas it becomes accordingly tighter in response to negative ones. There is thus a risk of the budgetary stance becoming volatile and potentially procyclical.

Safety margins or reserves can stabilise fiscal policy

The Bundesbank has already presented proposals in the past as to how to address these issues with cyclical adjustment and erratic tax developments. For example, safety buffers can be maintained in a targeted manner that would serve as a shock absorber in the event of the assessment of the structural budgetary position being downgraded.[8] However, this tends to make budgetary policy more ambitious than intended by the debt brake. Existing reserves are also often not set aside as buffers to cover such unexpected developments. Instead, they are fully allocated. While central government keeps fiscal policy steady partly through careful budget planning, this makes planning opaque and difficult to understand. A rule-based approach would therefore be preferable.

Reform proposal reduces sudden changes to budget

This article outlines a proposal to build on the current cyclical adjustment procedure that would involve a delayed response to revisions to the cyclically adjusted tax level. If the (expected) level is revised downwards, fiscal policy only has to gradually adapt to the tighter fiscal framework, and if it is revised upwards, it is able to make use of the larger fiscal framework only gradually. In this way, sudden changes to the budget following unexpected developments can be avoided.

Challenge for general government fiscal surveillance

The cyclical adjustment procedure would thus deviate from the procedure underpinning the EU rules. It is possible under EU rules to adjust with a certain delay to unexpected negative developments. However, such adjustments could adversely affect the ability of national rules to safeguard compliance with EU rules. If the procedure were reformed in this manner, it would be even more important for the Stability Council to take action in the event of foreseeable non-compliance with EU rules (see also pp. 62 f.).

Section breakdown

The section on cyclical adjustment is structured as follows: first, the reform proposal is set out, after which it is compared with the existing approach with regard to consistent budget planning, countercyclical impact and symmetry of cyclical components.

Description of the reform proposal

So far, budget planning has had to be fully adjusted on an ongoing basis

A budget for year t first appears four years earlier in the medium-term fiscal plan (i.e. in year t-4). In the year prior to the fiscal year (t-1), the draft budget is usually approved in spring and the budget plan in autumn. Planning is based on a current, newly estimated cyclical adjustment and a current tax estimate. Revisions to estimates therefore change the possible expenditure framework. Ultimately, the plan has be based on the latest assessments.

Cyclical component consists of two parts: …

The reform proposal discussed in this article adds an error component to the existing procedure for cyclical adjustment (see also the model calculation and methodological notes on pp. 53 and 55). Under the proposal, the cyclical component for a fiscal year consists of two parts. Together, they produce the cyclical scope for borrowing:

… standard cyclical component and …

– Standard cyclical component: This reflects the economic assessment at the current point in time. It corresponds to the cyclical component that central government currently uses in the budget planning phase.

… error component

– Error component: Revisions to cyclically adjusted taxes are factored into this component in a graduated manner (here and below:

8 For information on safety margins, see Deutsche Bundesbank (2011), p. 32, with more detail provided in Kremer and Stegarescu (2009). For information on reserves from previous surpluses, see Deutsche Bundesbank (2018).

Cyclical component in the fiscal and budgetary plans under the reform proposal: a model calculation

The table below shows, by way of illustration, the cyclical components under the reform proposal for the 2006 fiscal year. The medium-term fiscal plan from 2002 contained the first planning for 2006. This means that the first time it would have been possible to determine a cyclical component for 2006 would be for the 2002 fiscal plan (in May 2002).

The estimates for taxes in 2006 (item 1) were revised downwards significantly over time.[1] The reform proposal takes into account the revisions to the official tax estimates excluding legislative changes implemented in the meantime (see p. 55 for sources and methodology).

The cyclical component (item 2) consists of two parts:

– The standard cyclical component (item 2.1): this undergoes much less revision over time than taxes.

– The error component (item 2.2): the downward revision of the tax estimates given little change to the standard cyclical component leads to an increasing error component. Of the revision of adjusted taxes, 25% is taken into account in May 2003 versus May 2002, 50% in May 2004 versus 2003, 75% in May 2005 versus 2004 and 100% in November 2005 versus May 2005. The error component allows us to budget for high cyclical debt (cyclical component) for the 2006 fiscal year in the budget plan from November 2005.

Cyclically adjusted taxes are calculated by deducting the cyclical component from taxes:

– The adjusted taxes estimated for 2006 (item 3) first have to be revised downwards from plan to plan. The unchanged figure from May 2005 is then budgeted in the plan. The error component considerably reduces the revisions to adjusted taxes compared with unadjusted taxes.

– In addition, the revisions to adjusted taxes are much smaller than under the current procedure (item 4), as that only deducts the standard cyclical component. The heavier revisions make it harder to make stable plans, as these have to be compensated for elsewhere in each case (if there are no available buffers or similar).

1 The result was then, in turn, much more favourable than the regular estimate for the budget plan (of November 2005).

Example of cyclical adjustment in the planning process*

€ billion

Item		Planning for 2006 from …				Budget plan Nov. 2005
		May 2002	May 2003	May 2004	May 2005	
1	Taxes	231.3	210.7	195.9	186.3	185.6
2	Cyclical component	– 0.2	– 6.2	– 13.6	– 20.2	– 20.9
2.1	Standard component[1]	– 0.2	– 1.3	– 1.3	1.1	0.5
2.2	Error component (s.1+s.2)	/	– 4.9	– 12.3	– 21.3	– 21.4
s.1	from new error	/	– 19.5*¼	– 14.8*½	– 12.0*¾	– 0.1*1
s.2	from earlier errors	/	/	– 4.9	– 12.3	– 21.3
3	Adjusted taxes (1–2)	231.5	216.9	209.5	206.5	206.5
4	Memo item: Adjusted taxes using current procedure (1–2.1)	231.5	212.0	197.2	185.2	185.1

* The most up-to-date official tax estimate (e.g. 2002 fiscal plan: tax estimate from May 2002) at the time of planning is shown here. All estimates starting from May 2003 are adjusted for the effect of changes in tax law that were adopted after May 2002.
1 See p. 55 for the methodology.
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excluding interim changes in tax law[9]). Revising cyclically adjusted taxes downwards from a previous estimate increases the error component, allowing for more borrowing. Upward revisions cause the error component and the scope for borrowing to decrease. Graduating the extent to which revisions are factored into the component accounts for the time between the date of revision and the fiscal year concerned: the closer the date of revision is to the fiscal year, the more it is factored in. This means that revision is excused to a greater extent and does not have to be compensated for in planning.

Error component collects forecast errors vis-à-vis previous planning

Specifically, calculation of the error component for year t starts with the fiscal planning four years before this fiscal year. This is the first year in which a plan for t is prepared. It is based on the tax estimate from May of year t-4. From that point onwards, the revisions to cyclically adjusted taxes for this fiscal year t are factored into the error component proportionally as follows:

Revisions to the estimate

- from May of year t-3 versus May t-4: 25% is taken into account;
- from May of year t-2 versus May t-3: 50%;
- from May of year t-1 versus May t-2: 75%;
- for the final budget plan (November of year t-1) versus May t-1: 100%.

When the budget for year t is approved, the cyclical scope for borrowing is the product of the standard cyclical component updated to this point in time plus the updated error component.

Tax deviations from plan considered cyclical during budget execution

In the next year's budget accounting, the cyclically adjusted tax figure is frozen at the level calculated during planning. This means that all deviations from the cyclically adjusted taxes estimated in the budget plan that are not based on changes in tax law are considered to be cyclical. The level of structural net borrowing realised thus remains unaffected by unexpected developments of this nature during budget execution.[10]

Reform objective: facilitate stable budgetary policy

Reform proposal reduces sudden changes to budget

The reform proposal makes budget planning more robust to forecast errors. Unlike in the current procedure, a sudden downward revision of the cyclically adjusted tax level widens the scope for borrowing temporarily. This buys more time to adapt the budget to unexpected events. By the same token, the reform proposal also ensures that an unexpected upward revision of the cyclically adjusted tax level does not widen the scope for borrowing immediately, but with a delay. It is important that sudden downward and upward revisions of cyclically adjusted taxes balance each other out over time. Otherwise structural debt may rise by a greater amount than permitted under the debt brake. Measures to prevent this are described in the section entitled "Safeguard symmetry" (pp. 57 ff.).

Simulation of forecast revisions

A simulation (see the chart on p. 56) shows that the reform proposal is indeed better suited to keeping budget planning and budgetary policy stable than the current procedure.[11] To determine this, both procedures were applied

9 The procedure focuses on unexpected developments. If tax law changes are adopted between two tax estimates, the associated revision is not unexpected and is not taken into account in the error component. If the actual effects of the change in law deviate from the estimated effect, this deviation is reflected in the actual outcome. Assuming realistic estimates of the effect of the change in law, this deviation is unexpected. It is therefore included in the error component in budget accounting.
10 With regard to execution of the budget, this corresponds to the central government procedure for federal states receiving consolidation assistance.
11 Under the assumption that provisions are not made elsewhere in the budget. This means that reserves can be allocated for balancing out unexpected developments or policymakers can carefully single out other budgetary approaches.

Methodological notes

Data

The calculations are based on the official tax estimates for central government. The data are taken from press releases issued by the Federal Ministry of Finance. Information on the relevant tax estimates and changes to tax law were used. The Federal Government's forecasts of gross domestic product (GDP) released in April and October of a given year were used to determine cyclical components and cyclical position.

Cyclical position

Cyclical fluctuations in real GDP are estimated using a Hodrick-Prescott filter (HP filter) with a smoothing parameter of 100. The HP filter is used for practical reasons: real-time estimates using central government's production function approach are available only as from 2011. The output gaps derived from this do not differ materially from the GDP trend deviations used here. In other words, an analysis using the central government approach for the years from 2011 onwards arrives at similar results.

Cyclical component of central government taxes

Given a real GDP trend deviation of 1%, the cyclical component of taxes is estimated at 1.37% of tax revenue. Central government currently uses this elasticity for the cyclical adjustment of taxes.[1]

Cyclical component of central government labour market expenditure

Central government's cyclical adjustment also assumes cyclical components for its labour market expenditure. These are small, however, and would be the same in the reform proposal. They are therefore disregarded in this analysis.

Central government budget preparation only considered in stylised form

For the budgets, the following is assumed in the calculations for the sake of simplicity:

– The draft budgets of specific years are each based on the Federal Government's tax estimate and GDP estimate from spring of the previous year.

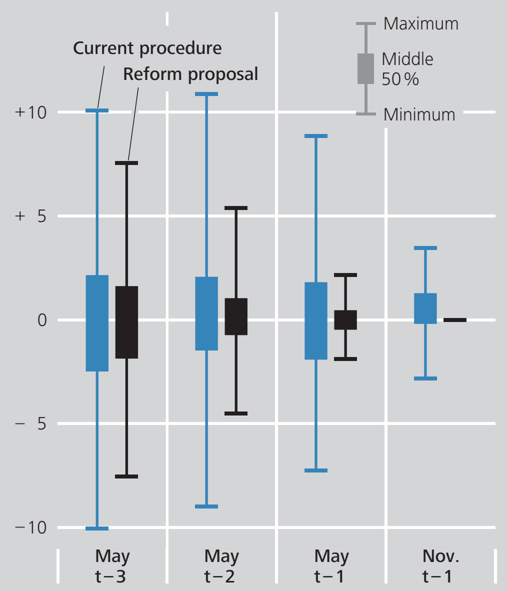
– The budget plans are based on the Federal Government's tax estimate and GDP estimate from autumn of the previous year.

This means that time lags owing to federal elections or adjustments in supplementary budgets are disregarded. Equally, discretionary add-ons to or deductions from the tax estimate which are occasionally observed in the budget plans are not considered. Furthermore, to simplify matters, it is assumed that no revenue effects stemming from legal changes – whether relating to taxes or in the form of global items – are planned in (although appropriations for this can at least close gaps during budget preparation relatively easily).

1 See Mourre et al. (2019) for the elasticities underlying the cyclical adjustment of the EU and of central government.

Revision of adjusted taxes in budget planning*

%



* The distribution shows budget planning for the period from 2002 to 2021. Revisions are recorded as the percentage by which cyclically adjusted taxes (excluding changes in tax law) deviate from the comparison estimation. The right-hand box plot shows the distribution of revisions from November t-1 compared with May t-1. The other box plots refer to the revision compared with May of the respective previous year.

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to budget planning for the period from 2002 to 2021, retrospectively and stylised in real time. The chart shows how the expected cyclically adjusted tax level in the planning years differs at various estimation points prior to the respective fiscal years (for methodological notes, see p. 55).

Reform proposal cuts down revisions and makes budget planning easier

The simulation shows that cyclically adjusted taxes undergo much more revision between two planning periods under the current procedure than with the reform proposal. Revisions for the budget plan (i.e. between May t-1 and November t-1), too, are extensive at times under the current procedure (see the right-hand box plot in the chart above). In the case of a downward revision without provisions elsewhere, the government has to find compensation at short notice. However, this is not necessary with the reform proposal: the error component widens the scope for cyclically induced borrowing. Between May t-1 and May t-2 (second box plot from right), too, revisions are much lower under the reform proposal. The differences are smaller for revisions dating further back because the supplementary error component attributes less weight to revisions in earlier planning years. In such cases, however, fiscal policymakers also have a number of years (until year t) to gradually compensate for the unexpected development.

Reform objective: facilitate countercyclical budgetary stance

Cyclical adjustment procedure should let automatic stabilisers take effect

The aim of cyclical adjustment is for the debt limit to expand when the economy is in poor shape and tighten in good times. This is designed to mitigate cyclical fluctuations by way of deficits in a downturn and surpluses in an upturn.

Reform proposal strengthens automatic stabilisers for procyclical tax revisions

The reform proposal has a beneficial effect in this respect in situations where cyclical adjustment results in a more countercyclical development of the scope for borrowing. This is the case if revisions of cyclically adjusted taxes tend to be procyclical, as the reform proposal then widens the cyclically permitted scope for borrowing in a downturn and restricts it in an upturn (compared with the current procedure). The benefits can be seen particularly clearly in a sharper downturn in which potential output and cyclically adjusted taxes are revised downwards. Under the current procedure, such cases require a correction in the next budget. Under the reform proposal, by contrast, the adjustment can be stretched over a number of years. Simulations using historical data show that the reform proposal would have been better suited to stabilising the economy than the current procedure (see pp. 58 ff.).

Safeguard symmetry

Cyclical influences on government budget must be symmetrical

It is imperative that cyclically permissible borrowing does not lead to a systematic build-up of debt. Germany's Basic Law stipulates that cyclical debt in a downturn has to be offset by cyclical surpluses in an upturn.

Reform proposal requires unbiased estimates for symmetrical cyclical components

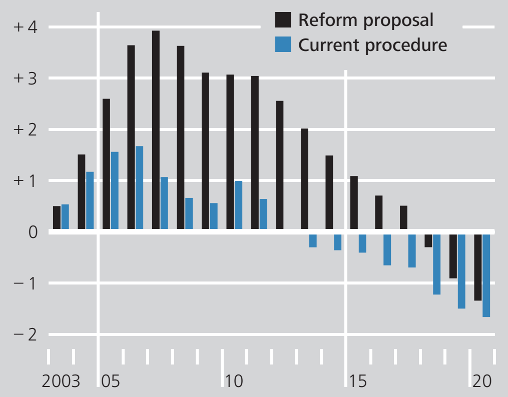
To ensure that the cyclical components are offset over time in the reform procedure, it is not just the standard cyclical components (and with them the estimated output gaps) that need to be symmetrical over time. The supplementary error components also have to be symmetrical. This tends to be the case when upward and downward revisions of the cyclically adjusted tax estimates (excluding changes to tax law) balance out over time. Studies indicate that tax estimates in Germany are unbiased over a longer period of time,[12] meaning that forecast errors balance each other out on average. This is likely due in part to the fact that these estimates factor in independent specialist expertise. Tax estimates are prepared by an independent group of tax estimators (Working Party on Tax Revenue Estimates). They are based on the Federal Government's macroeconomic projection which, for some years now, has been validated by the Joint Economic Forecast. The Federal Ministry of Finance estimates the effects of changes in tax law. This area is not checked as thoroughly. It is therefore possible that there is a certain political interest in exploiting discretionary scope in some years. It would therefore be worth considering having an independent body conduct a plausibility check on the estimated impact of legislative changes.[13]

Reform proposal permits higher debt for interim period

However, irrespective of independent checks, there are always times when cyclically adjusted taxes are repeatedly over or underestimated. The chart above shows the cyclically induced debt permitted under both procedures over time. The figures contained in the chart are stylised accumulated fiscal balances calculated using the procedures (see the box on pp. 58 ff.). In the model calculation, up to 2006 the re-

Accumulated debt*

As a percentage of GDP



* The chart shows stylised accumulated fiscal balances calculated using the procedures; see p.58. Positive values denote a predominance of cyclical debt.

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form proposal results in much higher debt than the current procedure. This is due to pronounced downward revisions of cyclically adjusted tax estimates which permit higher debt via the error component. At its peak, debt amounts to almost 4% of GDP under the reform procedure; that is just over 3 percentage points more than in the current procedure. After that, surpluses dominate in both procedures. As a result, debt comes back down and, ultimately, the accounts are in credit in both procedures.

Secure symmetry, at least through documentation

If government finances are sound overall, temporary debt of just over 4% of GDP does not pose a risk to stability. However, it appears worthwhile to document the cyclically induced surpluses and deficits of a procedure. A rule could be adopted stipulating that gradual correction is required if debt surpasses a certain threshold. It might also be worth giving thought to additionally posting the cyclical components to the control account and significantly upping the threshold there.

12 See, inter alia, Büttner and Kauder (2015).
13 Some changes in tax law cannot be reliably quantified. This is often the case for anticipated additional revenue from stepping up efforts to combat tax fraud or amnesties. Forecast errors for such measures should therefore not be included in the error component and excused accordingly.

Simulations of the countercyclical effect of the reform proposal

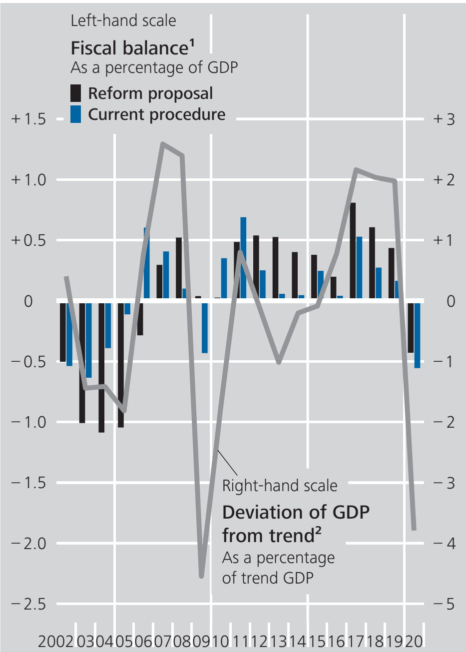
This box contains a stylised depiction of the surpluses or deficits that are calculated using the current and reformed procedures for the years 2002 to 2020. The sole focus is on the effect of differences in the procedures. No consideration is given to scope for borrowing under the standard limit, for example, or any other budgetary developments.

The analysis is based on budget outturns. To this end, the following is assumed:

– In the budget plans for a fiscal year, the cyclical borrowing potential (deficits or surpluses) is budgeted in each case according to the respective procedure. The reform procedure differs from the current one in that it also includes the error component (see p. 55 for the calculation method for the cyclical component).

– In the budget execution phase, tax revenue forecast errors as against the plan feed through in full to the budget outturn under both procedures. For example, if taxes develop less favourably than estimated in the budget plan, the budget outturn is accordingly less favourable.[1]

Fiscal balance and cyclical position



1 Stylised surpluses or deficits calculated using the procedures. 2 Estimated from today's perspective using a Hodrick-Prescott filter.

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The chart on this page shows the deficits and surpluses calculated under these assumptions using the current and reformed procedures. It also depicts a current estimate of the trend deviation of real GDP as an indicator of the cyclical position. Compared with the current procedure, deficits and surpluses fluctuate more strongly on average under the reform procedure:

– In particular, this is evident in the higher deficits in the cyclically weak years of 2003 to 2005 as well as in the higher

1 The reform procedure explicitly exculpates these forecast errors in the budget implementation phase (and adds an error component as part of the cyclical component). The current procedure is treated similarly here in this respect. In actual fact, the methodology under the current procedure is more complex. For supplementary budgets (with scope for borrowing expanded to a limited extent for forecast errors) and in the Federal Government's budget account, the cyclical component is updated using a simplified procedure (see Federal Ministry of Finance (2022), p. 22). The deviations from the standard limit remaining after this are then recorded in the control account. However, this technical budgetary accounting plays no significant role in the present analysis of the countercyclical budgetary stance. At most, differences may arise if higher negative control account balances lead to a need for adjustment or very high unexpected deficits occur during budget implementation. Under the current procedure, action is taken against this. It is likely that the stabilising properties in the economic cycle would then tend to be even less favourable.

surpluses in the cyclically strong years of 2017 to 2019.

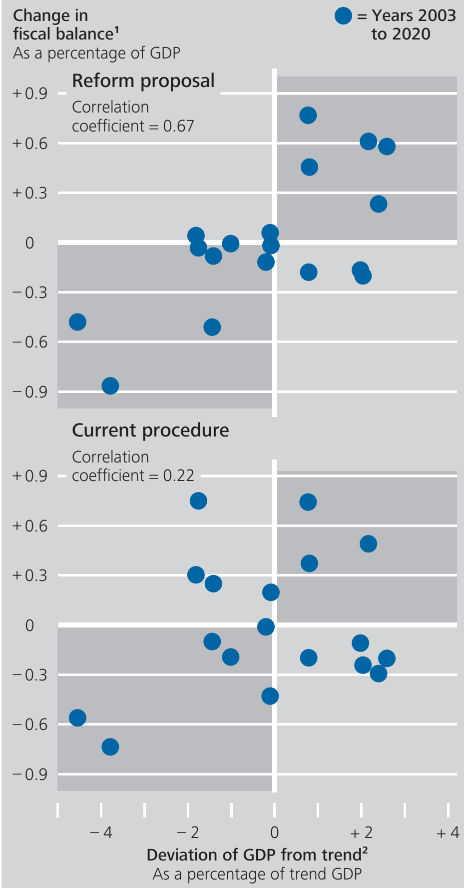
– Under the reform procedure, there are no deficits in the crisis years of 2009 and 2010. This is because the error component was strongly positive the year before, in 2008 (owing to positive unexpected developments in preceding years). However, the reform procedure allows for the balance to deteriorate in 2009 to a similar extent as the current procedure. In years of crisis such as this, use would probably have been made of emergency borrowing in any case.

– In the period from 2011 to 2015, the reform proposal generates higher surpluses than the current procedure. Cyclical fluctuations in GDP were not especially large, though the labour market developed favourably. Tax developments were better than expected. During these years, budgetary policy was not experiencing adjustment pressure, but rather had more scope on the whole.[2]

The effect of government finances on cyclical developments is often measured by how the fiscal balance (deficit or surplus) changes compared with the previous year. The change in the unadjusted fiscal balance encompasses both the automatic stabilisers and the fiscal stance above and beyond that.

The chart on this page depicts scatter plots for the current and reformed procedures. Each one compares the changes in the fiscal balance yielded by the procedures with the cyclical position (estimated from today's perspective). In this stylised depiction, a procedure has a countercyclical effect if the change in the fiscal balance is positively correlated with the cyclical position. In other words, this is the case if an increasing surplus is recorded in a good cyclical position (overutilisation). The above chart indicates procyclical developments in certain years for both the reform proposal and the current procedure (the upper-left and lower-right quadrants in each scatter plot). Overall, however, the reform proposal is more countercyclical and thus more cyclically appropriate than the current procedure.

Change in fiscal balance and cyclical position*



* Dots in the dark (light) quadrants represent a countercyclical (procyclical) relationship. **1** Stylised fiscal balances calculated using the procedures; see p. 58. **2** Estimated from today's perspective using a Hodrick-Prescott filter.
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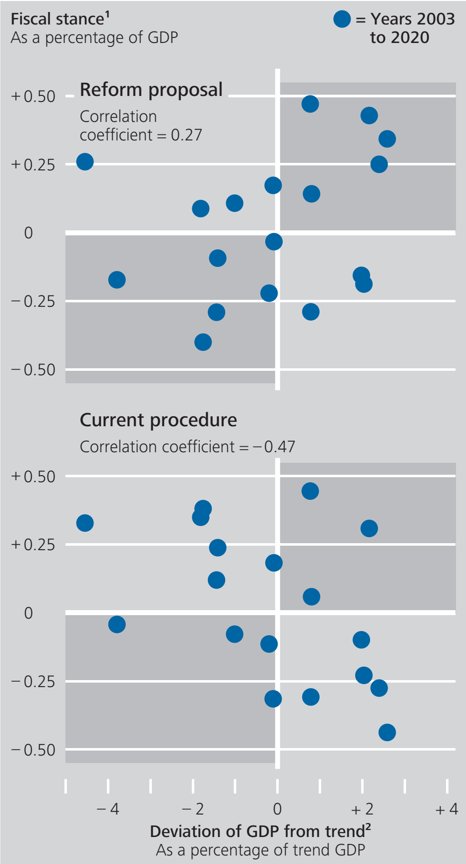
2 Added to this were surprisingly favourable results for labour market expenditure and interest expenditure. This is disregarded here.

Fiscal stance and cyclical position*



* Dots in the dark (light) quadrants represent a countercyclical (procyclical) relationship. **1** Defined here as the change in the cyclically adjusted fiscal balance. Obtained by adjusting the stylised fiscal balances calculated using the procedures for the effect of the automatic stabilisers estimated from today's perspective. **2** Estimated from today's perspective using a Hodrick-Prescott filter.

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It can also be shown whether the procedures would have supported a countercyclical stance above and beyond the automatic stabilisers. The basic idea is this: due to forecast errors, the fiscal balance resulting from each procedure deviates from the current estimate of the automatic stabilisers. If this deviation is positive in an upturn and negative in a downturn, the respective procedure permits a fiscal policy (fiscal stance) that amplifies the working of the automatic stabilisers.

The above chart contains scatter plots illustrating this relationship. It is evident that the reform procedure facilitates a countercyclical stance in most years, which would have amplified the working of the automatic stabilisers. Under the current procedure, on the other hand, the working of the automatic stabilisers is restricted in most cases. That means that the current procedure would have tended to support a procyclical fiscal stance.[3]

3 The fiscal stance is a commonly used indicator for cyclically appropriate fiscal policy. However, it should be interpreted with caution when it comes to its stabilising effect. Indeed, the specific macroeconomic impact of the fiscal stance can only be estimated with a considerable degree of uncertainty. For example, lags in the effects of fiscal stimuli play an important role. The effects also depend on the revenue and expenditure categories behind them. For more details, see Deutsche Bundesbank (2020a).

Interest expenditure: allocate premia and discounts on an accruals basis

Interest expenditure currently not always allocated on accruals basis and thus volatile

Interest expenditure is currently recorded in the budget as and when payment is made.[14] A security's bond coupon is thus booked at the time when interest is paid. Furthermore, when a security is issued, there are often mark-downs or mark-ups on the nominal value (discounts or premia). These offset the differences between the interest coupon and the market interest rate over the entire term and can be extremely high for long-dated securities. These compensatory payments are currently recognised in full at the time of issue. Any premia received, for instance, are immediately deducted from interest expenditure. Since the debt brake was introduced, premia have clearly predominated. De facto, this has increased the scope for borrowing under the debt brake in recent years.

Changeover stabilises budgetary developments, eliminates wrong incentives and brings recording closer into line with EU rules

It would be better to allocate discounts and premia over the entire term of a security and thus on an accruals basis. This ensures that structural budgetary developments are recorded appropriately from an economic perspective, stabilises interest burdens and thus also makes budget planning easier. Premia are highly volatile and to date have often meant that the budget outturn has been way off the budget estimate. Over the short term, it is currently also possible to make targeted use of coupons above market value to create fiscal space. However, this would come at the cost of scope at future coupon dates. Booking premia on an accruals basis also considerably reduces deviations from budget plans. The same naturally applies in the other direction for discounts, i.e. lower proceeds from issuing securities with coupons below the market interest rate. This scenario becomes more relevant if long-dated securities are issued in multiple tranches in times of rising interest rates. If these discounts are then booked on an accruals basis instead, this rules out potentially large one-off strains from discounts that are almost impossible to foresee. Last but not least, changing over to accruals-based accounting comes closer to the method used in the national accounts, which are key for the European fiscal rules.

Changeover possible for securities already issued

This way of booking interest expenditure can be applied not just for future issuance but also for issuance that has already taken place. This would make sense because these past issues still have an impact on budgetary developments today. High premia have been recorded in some cases in recent years. If these are then allocated on an accruals basis, the amount recorded for net borrowing in the past is too low. For budget years without use of the escape clause, this can be offset by lower positive bookings on the control account. The credit balance on the control account is then lower as a result. At the same time, this eases the strain on future budgets: after allocation on an accruals basis, premia lower interest expenditure over the entire term of the securities. This impact lasts for just over two decades and then diminishes as the securities fall due.

Control account: repay emergency loans using credit balance

Credit balance on control account may not be earmarked for use in budget plans

The aim of the control account is to prevent a systematic infringement of the standard limit under the debt brake during budget execution. Debt may not grow at a stronger pace than permitted under the standard limit. To ensure this, the control account records annual positive and negative deviations from the standard limit during budget execution.[15] If these infringements of the standard limit add up to more than 1.5% of GDP on balance, this has to be corrected going forward. To this end, structural net borrowing must remain below the standard limit of 0.35% of GDP in future budgets. However, as structural net borrowing was clearly below the standard limit in all years

14 For more information, see Deutsche Bundesbank (2021b).
15 This does not apply to emergency loans, which are subject to special repayment obligations.

up until 2019, the control account has a credit balance of €48 billion (1.3% of GDP). This type of credit balance may not be actively earmarked for use in future budgets.[16]

Consider using control account to settle emergency loans

By changing the act implementing the debt brake, it would be possible to use the credit balance on the control account to settle emergency loans. A modification of this nature would not pose a threat to sound government finances, as there is ultimately no deviation from the debt path stipulated under the debt brake.

Consequences of changeover

If the control account balance is used to settle emergency loans from the coronavirus crisis, repayment obligations will sink accordingly. As a result, the structural scope for borrowing will not fall as far below the actual standard limit. The current credit balance can offset a large part of the emergency loans from 2020. Based on the authorised repayment schedule (updated in January 2022), the annual burden – currently estimated to be €3½ billion – would then fall to €1 billion.[17]

Moderately increase scope for new borrowing especially given low debt ratios

European rules looser particularly when debt ratio below 60%

The European rules permit a structural general government deficit ratio of up to 0.5% when debt ratios are above 60%, rising to 1% when they are below the 60% mark. These deficit rules normally ensure that the debt ratio moves sufficiently rapidly towards 60% or remains under 60%. The debt brake is more restrictive in many respects, primarily because its borrowing limit of 0.35% of GDP remains unchanged when the debt ratio is low. Unlike the European rules, moreover, the debt brake requires repayment schedules, particularly for debt incurred by invoking the escape clause. The scope for borrowing is then reduced by the size of the necessary repayments.

Corresponding adjustments to debt brake viable

Sound government finances will not be jeopardised by basing the debt brake more closely on the numerical European rules. Particularly below the 60% limit for the debt ratio, the debt brake could undergo moderate adjustments. Given a general government debt ratio of under 60%, the standard limit for central government could be raised to 1% of GDP.[18] As long as the debt ratio is above the 60% mark, it could be increased slightly to 0.5% of GDP. These arrangements could include special protection for investment expenditure (see pp. 63 f.). With good reason, however, the bar for changing the standard limit is set higher than for the aforementioned measures: a broad cross-party consensus would be needed to pass the necessary amendment to the Basic Law. With this broad endorsement, the chances are good that the rules would have a strong binding effect in the future and that decision-makers would refrain from applying them too loosely.

Stability Council in any case under greater obligation to ensure compliance with European rules

At the same time, it would be important to ensure that the European rules for the structural general government deficit ratio are met across the board. Increasing the borrowing limit under the central government debt brake to the European target levels of 0.5% and 1% would, in principle, be compatible with this aim: state governments are not permitted to incur structural debt, the social security schemes are generally prohibited from borrowing and the local governments are subject to strict limits. Nonetheless, structural deficits certainly can arise at

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16 In addition to the control account, there is a general reserve which has been built up over the past few years and also amounts to €48 billion. Any surpluses available at year end have been added to this reserve. The remaining differences between structural net borrowing and the standard limit under the debt brake have then been credited to the control account. Unlike the credit balance on the control account, the general reserve may be allocated for use in future budgets.
17 If premia from previous years are booked on an accruals basis, the credit balance on the control account is lower.
18 The debt ratio should have fallen back under the 60% mark in the previous year and should remain below it according to the medium-term projections for Germany's Stability Programme. The European fiscal compact permits a structural deficit of 1% of GDP when the general government debt ratio is significantly below 60%. If the deficit and the debt ratio are kept reliably in check, however, this should not entail any substantial additional constraints.

these government levels in individual years. In addition, the debt brake limits also display some methodological differences with the EU limits for structural deficits.[19] This is true, not least, of the aforementioned extensive formation of reserves in special funds that fall outside the scope of the debt brake. Consequently, forward-looking general government budget surveillance will, in any case, become more important than before. In Germany, the Stability Council is responsible for this surveillance, with the support of an independent advisory board.[20] These bodies should flag potential conflicts with the European rules at an early stage and take steps to ensure that plans are adjusted so as to fulfil them.

Capped golden rule: secure public assets within the framework of the standard limits

Investment can be strengthened within the debt brake framework

There are sometimes calls to loosen the debt brake, with the argument that it stands in the way of forward-looking expenditure – particularly on investment. In the context of the European rules, the Bundesbank has discussed the introduction of a capped golden rule.[21] This would shield investment expenditure up to the net investment limit from consolidation pressures. Such spending could be protected in a similar way within the debt brake framework. This could be tied to the moderate loosening of the standard limits outlined above. The arrangements should take account of the fact that, in Germany, it is primarily state and local governments that are responsible for government fixed capital formation.

First option: incentive to maintain capital stock

It would already be relatively straightforward within the current framework to create incentives to maintain the capital stock. Specifically, one option would be to stipulate that central government (and possibly, along similar lines, the state governments) can only exhaust the standard limit if its (real) capital stock does not fall in net terms.[22] If, however, write-downs are higher than investment (negative net investment), the scope for borrowing would fall accordingly.[23] This would set an incentive to maintain the capital stock. Larger investments would be possible but would not increase the scope for borrowing.

Second option: incentive to expand capital stock

A second option would be to set incentives to expand the capital stock. If the standard limit for central government is raised to 0.5% of GDP, this increase could be tied to net investment: if central government's net investment is below 0.15% of GDP,[24] this would reduce the scope for borrowing accordingly. Given stable net assets, the structural borrowing limit would thus remain unchanged at 0.35% of GDP. An expansion of the capital stock could be funded with additional debt of up to 0.15% of GDP.

Central government could also use greater borrowing scope for investment to boost net investment by state and local governments

The rules applicable given a debt ratio below 60% could thus be as follows: the standard limit could increase to 1% of GDP but a part of this would be tied to reaching a certain level of net investment.[25] For example, the aim could be to use borrowing scope to secure general government net investment of 0.5% of GDP. It would not make sense for this scope to apply to central government investment alone. In-

19 For information on the methodological differences, see Deutsche Bundesbank (2019a).
20 For information on the tasks of the Stability Council, see Deutsche Bundesbank (2019a).
21 For more details on the advantages and disadvantages of investment-based golden rules and on the capped golden rule, see Deutsche Bundesbank (2019b).
22 In the following, the (real) capital stock is deemed to be stable if depreciation is offset by the acquisition of fixed assets.
23 Data on central government's write-downs can be found in the national accounts. They remain relatively stable from year to year. Here, the plans would need to include corresponding estimates. Any deviations from the outturn could then be corrected in the subsequent fiscal year. Any asset sales would need to be deducted from expenditure.
24 According to the national accounts figures for the last few years, the net investment of central government and its off-budget entities was around this size.
25 In the debate about reforming the European rules, the Bundesbank argued that, given debt ratios substantially below 60% and net investment amounting to 0.5% of GDP, deficit ratios of up to 1.5% were justifiable from a stability policy perspective. See Deutsche Bundesbank (2019b, 2021c). Given a corresponding European rule, this could also be taken into account within the debt brake framework.

stead, central government could be permitted to use its additional borrowing scope to fund state and local government net investment, too. For this purpose, central government could transfer to a state government the amount of funds used by this state and its local governments to acquire government non-financial assets.[26] This would give state and local governments a strong incentive to at least maintain their capital stock with other funds: only then would they be able to access additional central government funds for net investment.

Prevent backlogs in planning, construction and award of contracts

It should be borne in mind that, from a general government perspective, it is not a lack of funds that has tended to stand in the way of greater investment in recent years. There were often substantial delays connected with planning, approval and the award of contracts. Measures to simplify or speed up these processes would therefore seem particularly important, and several have already been announced by the Federal Government.

Emergency loans: repayment obligation to expire once moderate debt ratios achieved

Loosening of repayment obligation for emergency loans once EU debt level requirement is met

At present, the Basic Law stipulates that emergency loans must be tied to a repayment schedule. This means that when the standard limits are exceeded in emergencies, this has to be offset in the years that follow. This effectively lowers structural borrowing limits – which counts as repayment. Such a repayment obligation could be eliminated once debt ratios are sufficiently moderate again. This criterion could be regarded as fulfilled when the debt ratio is back below the Maastricht requirement of 60% and is expected to remain so in the medium-term fiscal plan. This would imply that the shock to the budget had been overcome, and a sound structural position restored. In that case, it would no longer seem necessary to restrict borrowing beyond the general borrowing limit. New arrangements such as these would likewise require an amendment to the debt brake provisions in the Basic Law.[27] Such constitutional reforms to the debt brake would have to be backed by a broad consensus. The European rules would not preclude such a loosening of the repayment rules. The debt ratio would be below the ceiling, and the European rules do not stipulate that infringements of the deficit limit should be offset by a more ambitious stance in subsequent years.

Take EU deficits into account in debt brake in the future

EU debt places fiscal burdens on central government budget and …

The NextGenerationEU (NGEU) fund has led to the EU incurring more substantial deficits, and corresponding debt, for the first time: the EU is borrowing funds in order to make transfers to Member States.[28] The loans taken out at the EU level for this purpose are to be repaid in the years from 2028 to 2058. From an economic point of view, the fiscal burdens caused by this EU debt are being shouldered by taxpayers in the Member States.[29]

… is therefore also relevant to its debt brake

At present, the debt brake does not take account of burdens on the central government budget arising from EU debt at the time when these obligations arise. This EU debt was not a topic of discussion when the debt brake was adopted, nor does the Treaty on European Union actually envisage more extensive EU deficits and debt. That is why NGEU was set up as a one-off programme. However, similar add-

26 Here, data from local government budgets using double-entry bookkeeping could provide a good basis. State governments could receive transfers in proportion to their population share.
27 Although looser repayment obligations for emergency loans could increase the incentive to declare an emergency, the relatively narrow definition of emergencies in the Basic Law would probably ensure that this effect is not too strong. However, specifying more detailed provisions regarding emergencies, including the purpose limitation of emergency loans, could be an option to consider.
28 In addition, assistance loans are granted to individual Member States as part of NGEU.
29 For a critical assessment, see Deutsche Bundesbank (2020b).

itional programmes, as well as permanent debt-financed EU facilities, are now under discussion. Consequently, it should be ensured that the aims of the debt brake are not undermined by EU deficits and debt. In future, the debt brake should therefore already take these into account at the time they arise – just like national deficits and debt. EU deficits would be counted proportionally towards central government's structural net borrowing. Germany's financing share in the EU's debt service is approximately the same as its share in the gross national income (GNI) of the EU; its GNI share could therefore be used as the basis for counting EU deficits towards the debt brake. This would make the associated burden on Germany's finances immediately visible. Current practice makes such burdens visible only when they are repaid and not when they arise, which seems to be incompatible with the intention of the debt brake.[30] If debt brake requirements are to be tied to the debt ratio, EU debt (including for assistance loans) should also be taken into account proportionally in these arrangements.

30 If the debt-financed EU deficits reduce the borrowing scope under the debt brake, Germany's later EU contributions to repayments could be factored out of the debt brake as financial transactions.

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