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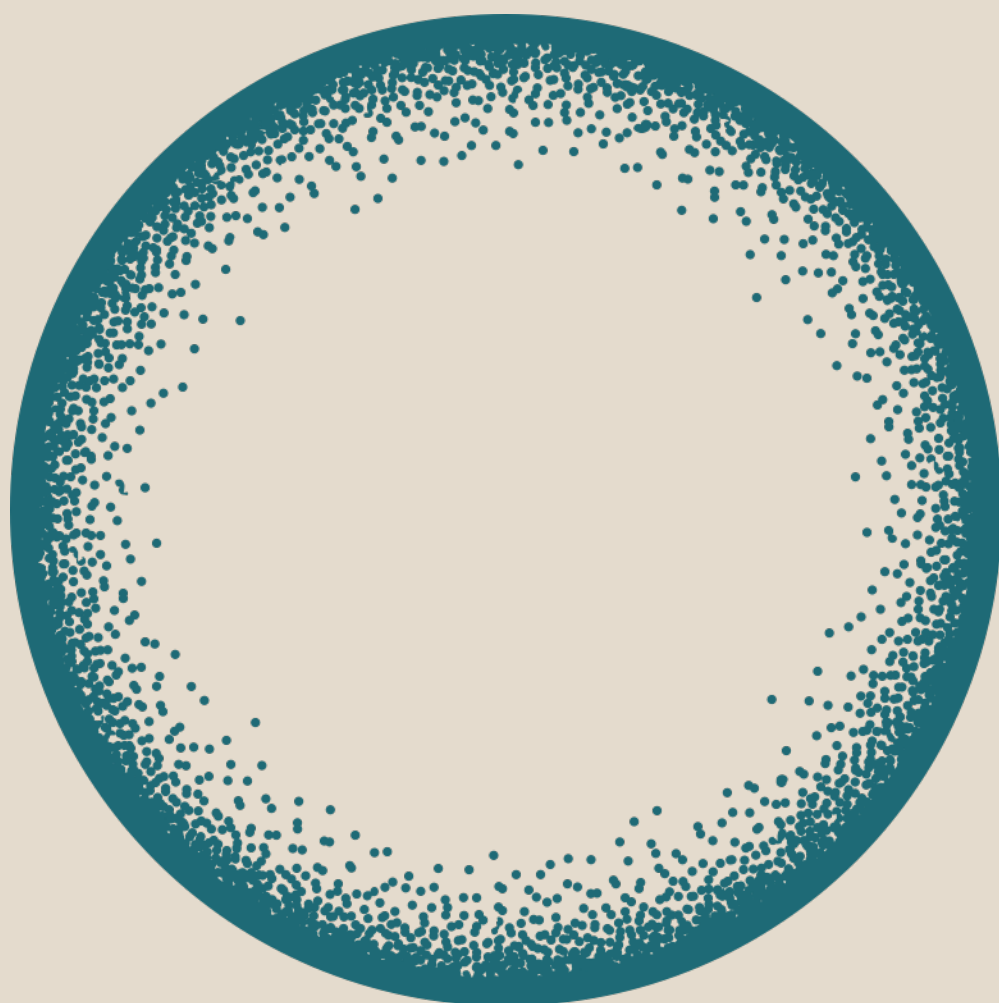
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A NEW FISCAL POLICY FOR GERMANY¹

Philippa Sigl-Glöckner*, Max Krahe, Pola Schneemelcher
Florian Schuster, Viola Hilbert, Henrika Meyer²
Dezernat Zukunft

Abstract

The sustainability of public finances should be measured by the debt-to-GDP ratio; the debt-to-GDP ratio is best controlled by keeping the deficit in check. For decades, these ideas shaped German fiscal policy. In 2009, with the introduction of the debt brake, this approach found its way into the German constitution.

Recent research, however, has shown that this paradigm yields suboptimal results in the current environment: It neither ensures the long-term sustainability of public finances, nor limits external imbalances, nor effectively contributes to solving the challenges Germany faces today, in particular decarbonisation and demographic change. As this is increasingly being recognised, a lively debate on the future of fiscal rules has developed, both in Germany and internationally. This working paper contributes to that debate by developing reform ideas that depart from a positive goal for fiscal policy rather than from the deficiencies of the current rules.

The paper starts off with an overview over the current reform debate. Following this literature review, three closely related questions are answered: what is the right objective for fiscal policy? What might an institutional framework look like to put this objective into practice? And what concrete, politically realistic reform options could move us in that direction? In response to the three questions, we identify sustainable full capacity utilisation of the economy as a sound objective for fiscal policy; make a proposal for a framework consisting of four components; and develop detailed proposals for initial reform steps to begin implementing this framework in Germany, including an adjustment of the cyclical component of the debt brake (governed by ordinary law), introducing an investment fund for municipal investments, and adding a watchman indicator for rising interest costs.

JEL codes: E62, E02, H62, H63

Keywords: Fiscal Policy, Fiscal Rules, Debt Brake, Debt Management

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“There’s also a growing chorus of top economists — right, center, and left — that say we should be less focused on the deficit and more focused on the investments we make, and can make now, in jobs, keeping families out of poverty, and preventing long-term economic damage to our nation.

The simple truth is, if we make these investments now, with interest rates at historic lows, we’ll generate more growth, higher incomes, a stronger economy, and our nation’s finances will be in a stronger position as well. [...]

So, the way I see it: The biggest risk is not going too big, if we go — it’s if we go too small.”³

Joe Biden, 5th of February 2021

1. INTRODUCTION

While the focus of US fiscal policy has shifted towards stimulus and investment, German fiscal policy remains focused on limiting the debt-to-GDP ratio. In this paper, we argue that this approach is no longer appropriate today and propose a better alternative.

Our analysis and proposal are based on two premises for which we see strong evidence in recent times: the first premise is that past deficits are no longer the decisive factor for future **fiscal sustainability**. Instead, the sustainability of future budgets depends on achieving: first, high levels of **productivity** to generate corresponding tax revenues over the long run; second, the **full utilisation of the labour force**, to boost incomes and limit the need for state subsidies in the German pension- and social insurance system; and third, the mitigation of **climate change and the prevention of natural disasters and other emergencies**, which—even if not occurring in Germany—could severely affect the performance of Germany’s export-reliant economy.

Our second premise is that fiscal policy itself is an effective and necessary tool to address these three challenges. This is obvious in the case of climate change: Many of the investments needed for decarbonisation are either not profitable, or too risky for the private sector. Fiscal policy is needed to deliver them. But recent research has shown that full capacity utilisation⁴ and high productivity, too, are tasks of fiscal policy: In times of secular stagnation, an excessively frugal fiscal policy not only causes idle capacity today, with corresponding consequences for the budget; due to hysteresis and the

³ Joe Biden, “Remarks by President Biden on the State of the Economy and the Need for the American Rescue Plan” (Speech, State Dining Room, February 2021), White House, <https://www.whitehouse.gov/briefing-room/speeches-remarks/2021/02/05/remarks-by-president-biden-on-the-state-of-the-economy-and-the-need-for-the-american-rescue-plan/>

⁴ In the anglophone literature it is customary to talk about full employment in this context (e.g. Michel Kalecki, “Political Aspects of Full Employment”, *The Political Quarterly* 14, no. 4 (1943): 322-330). In the German case however, in which low unemployment has coexisted for a considerable amount of time with weak wage growth, a large low-pay sector, and significant amounts of involuntary part-time as well as marginal employment, it is important to distinguish between mere full employment and full capacity utilisation. By the latter, we mean an economy with a labour market that is not just at full employment but sufficiently tight so to erode involuntary part-time, involuntary marginal employment, the low-pay sector, and weak wage growth over time. For a fuller definition, see box 2 on page 15 below.

existence of multiple equilibria and developmental paths, it also leads to lower productivity and weaker growth tomorrow, with further negative effects on the budget.

Building on these two premises, we show why the current fiscal paradigm is outdated and outline proposals for a new German fiscal policy, fit for addressing the challenges of our time.

The remainder of the paper is structured as follows: Part 2 provides an overview of the recent academic debate on fiscal policy. We show that there is a consensus around a need for reform. Despite this consensus, however, comprehensive proposals that address all of the major issues raised in the literature are missing. To clarify the requirements that such a comprehensive proposal must meet, in part 3 we specify what we see as the main challenges facing Germany today, as well as their connection to fiscal policy. Parts 4 to 6, the analytical heart of this paper, then demonstrate, one, why full capacity utilisation is central to meeting these challenges; two, that a new division of labour between fiscal and monetary policy is needed to achieve it; and three, that we should change the metrics we use to evaluate public debt, in order to spot fiscal sustainability risks in time. We also show that there are opportunities for debt reduction in this new framework, but that these opportunities are linked to structural reforms and a more egalitarian distribution of wealth and income, rather than fiscal frugality. In part 7, we take this analytical framework and derive a new fiscal policy framework for Germany from it, resting on three pillars and a new indicator for fiscal sustainability. In part 8, finally, we outline a set of specific reform proposals that could move German fiscal policy in this direction, while only requiring changes to ordinary law, i.e. avoiding constitutional change and its requisite two thirds majorities.

2. A REVIEW OF THE RECENT DEBATE AROUND FISCAL POLICY AND FISCAL RULES

The recent debate on fiscal policy and fiscal rules can be summarised under two main headings: A first strand of debate focuses on the question of investment. According to the International Monetary Fund (IMF), Germany, like many other countries, has been underinvesting. Correspondingly, the IMF has long called for more public investment from the German government.⁵ The *Institut der deutschen Wirtschaft* (IW, German Economic Institute), funded primarily by employers and industry, and the *Institut für Makroökonomie und Konjunkturforschung* (IMK, Macroeconomic Policy Institute), funded primarily by the trade unions, have collaborated on an investment study in 2019, which puts

⁵ See for instance IMF. *Germany: Staff Report for the 2017 Article IV Consultation* (Washington D.C.: IMF, 2017), <https://www.imf.org/en/Publications/CR/Issues/2017/07/07/Germany-2017-Article-IV-Consultation-Press-Release-Staff-Report-and-Statement-by-the-45048>.

the national investment gap at over 450 billion euros.⁶ They propose closing this gap through additional investments of 45 billion euros per annum over the coming decade.

The authors consider debt as an appropriate financing tool for investment—especially in a low interest rate environment—and propose to amend Germany’s fiscal rules via the introduction of a "Golden Rule". Under a Golden Rule, the debt brake (the *Schuldenbremse*, Germany’s balanced budget amendment) would be altered so to permit net borrowing equal to the amount of net investment (i.e. investment minus depreciation). This proposal is based on a prior recommendation of the German Council of Economic Experts: As early as 2007, in the lead-up to the balanced budget amendment, the Council recommended that the amendment should include an exemption from the deficit cap for investments.⁷ Achim Truger proposed the introduction of a Golden Rule at the European level in 2015.⁸

However, advocating for debt-financed investments neither entails nor requires abandoning the fundamental proposition that government debt should be minimised in general. Instead, the argument for debt-financing is usually based on the following two claims: (1) the return on the investments under consideration exceeds their financing costs (i.e., the loan pays for itself) and (2) it is fair that future generations, who will benefit from the investments, carry a certain part of their cost.

A second strand of debate revolves around the more basic question of whether and to what extent debt-financed government spending should be minimised at all. At least since Olivier Blanchard's speech at the American Economic Association in January 2019,⁹ this is no longer a fringe discussion. Blanchard, former chief economist of the IMF, argued that the financing- and welfare costs of debt are often lower than is generally assumed. As long as economic growth exceeds the risk-free interest rate ($r-g < 0$)—historically this is usually the case¹⁰—the ratio of debt to gross domestic product (GDP) falls even without budget surpluses.¹¹ Blanchard does not necessarily advocate for higher debt, but

⁶ Hubertus Bardt et al., “Für eine solide Finanzpolitik: Investitionen ermöglichen!” (IMK Report Nr. 152, IMK, 2019), https://www.boeckler.de/pdf/p_imk_report_152_2019.pdf.

⁷ Sachverständigenrat zur Begutachtung der gesamtwirtschaftlichen Entwicklung, *Staatsverschuldung wirksam begrenzen* (Wiesbaden: Statistisches Bundesamt (Destatis), 2007), accessed May 3, 2021, https://www.sachverstaendigenrat-wirtschaft.de/fileadmin/dateiablage/Expertisen/Staatsverschuldung_wirksam_begrenzen.pdf.

⁸ Achim Truger, “Implementing the Golden Rule for Public Investment in Europe: Safeguarding Public Investment and Supporting the Recovery” (Materialien zu Wirtschaft und Gesellschaft Nr. 138, Kammer für Arbeiter und Angestellte für Wien, 2015), <https://www.eesc.europa.eu/resources/docs/achim-truger---implementing-the-golden-rule-for-public-investment-in-europe.pdf>.

⁹ Olivier Blanchard, “Public Debt and Low Interest rates” (Vortrag, American Economic Association (AEA), 4. January, 2019), accessed May 3, 2021, <https://www.aeaweb.org/webcasts/2019/aea-presidential-address-public-debt-and-low-interest-rates>.

¹⁰ Paolo Mauro and Jing Zhou, “ $r - g < 0$: Can We Sleep More Soundly?” (IMF Working Paper WP/20/52, IMF, 2020), <https://www.imf.org/en/Publications/WP/Issues/2020/03/13/r-minus-g-negative-Can-We-Sleep-More-Soundly-49068>.

¹¹ Further, Blanchard shows that the debt-to-GDP ratio stabilises at a finite level (as long as $r-g < 0$), i.e. does not spiral out of control, even where a government runs primary deficits forever.

he directly contradicts a central assumption implicit in Germany's debt brake: that deficit-financed government spending should be rejected in principle.¹² Instead, he concludes that the world is more complex than the existing fiscal policy consensus allows for. In light of this conclusion, he called for a public debate on new fiscal guidelines.

Together with Jeromin Zettelmeyer and Álvaro Leandro, Blanchard then contributed a set of proposals to the ensuing debate. In their paper, the three propose replacing the EU's fiscal *rules* with fiscal *standards*.¹³ Their main criticism is that fiscal rules cannot account for the complexity of what actually drives the sustainability of public finances. This is particularly true once one deviates from a pure public finance view, which ignores demand effects, and includes the macroeconomic impacts of government spending in one's analysis.

Against the pure public finance view, Blanchard et al. counterpose the functional finance perspective, based on Abba Lerner's work.¹⁴ Lerner argues that fiscal policy should not be assessed according to financial parameters, such as a balanced budget, but should be evaluated solely in terms of its functional impacts on the real economy. The most important function of public finances is to ensure that the economy operates at full capacity. If there is insufficient demand, this means a deficit; if the economy is overheating, it means a surplus. Based on this, for Blanchard et al. the task of fiscal policy, especially in times of zero interest rates, is to fill the gap in demand. This rings even truer in the Eurozone, where insufficient stimulus in one country has negative externalities for other members of the monetary union. This perspective feeds into our own proposals presented below.

However, the specific policy proposals of Blanchard et al. reflect the functional finance perspective to a limited extent only. The authors propose fiscal standards and a stochastic Debt Sustainability Analysis (DSA).¹⁵ The standards would stipulate that excessive debt is not allowed; it remains open how exactly the economy should be brought to full capacity utilisation. Excessive debt would be defined as an expected primary deficit (the deficit excluding financing costs) that is highly likely to lead to an increasing debt-to-GDP ratio. Even if Blanchard et al. refrain from specifying a particular threshold (for example 60%), they therefore continue to define the sustainability of fiscal policy via

¹² Dr. Theodor Maunz and Dr. Günter Dürig, "Der Auffassung, die Aufnahme von Schulden sei ein grundsätzlich legitimes Mittel zur staatlichen Aufgabenfinanzierung, ist jedenfalls im Angesicht der heutigen Lage der Staatsfinanzen [einer Bundesschuld von über einer Billion Euro] deutlich zu widersprechen", see Theodor Maunz and Günter Dürig, *Maunz/Düring – Grundgesetz Kommentar* (Munich: C.H. Beck, 93. Edition, 2021).

¹³ Olivier Blanchard, Álvaro Leandro, and Jeromin Zettelmeyer, "Redesigning EU fiscal rules: From rules to standards" (Draft, 72nd Economic Policy Panel Meeting, 2020), https://www.economic-policy.org/wp-content/uploads/2020/10/9100_Redesigning-EU-Fiscal-Rules.pdf.

¹⁴ Abba P. Lerner, "Functional Finance and the Federal Debt", *Social Research* 10, no. 1 (February 1943): 38-51; Abba P. Lerner, *The Economics of Employment* (New York: McGraw-Hill Book Company, 1951).

¹⁵ A stochastic DSA is a debt sustainability analysis that estimates the probabilities of different possible debt development paths.

the debt-to-GDP ratio. And even if they consider demand effects in their analysis, these are usually not considered by DSAs, as no impact of public finances on GDP is modelled.¹⁶

Michael Hüther and Jens Südekum take up the idea of fiscal standards. Their criticism of the German debt brake focuses on three aspects: (1) insufficient investments, (2) the debt brake ignoring cost/benefit considerations and (3) the risk of austerity generating a lack of demand and thus weak growth. They argue that weak growth is more problematic today than after the financial crisis, since the German labour force participation rate is already so high that there is little room left for increasing tax revenues via job creation. In their view, growth based on fiscal expansion represents the only credible way to grow out of debt, given that a strong growth impulse from foreign demand cannot be expected in the aftermath of the Covid-19 crisis. Additional demand would therefore have to be generated in Germany. Hüther and Südekum consider it difficult to grow out of debt through productivity gains alone; to stand a chance at this, the efficient management of structural change in the economy and well-managed public investment is a crucial pre-requisite for them.¹⁷

Hüther and Südekum therefore suggest starting with the following question: “What exactly are the investment and expenditure needs of the public sector and what is the implied social return of each project?”¹⁸ As a specific reform of the German fiscal policy framework, they propose to establish a special investment fund that is not covered by the debt brake. In addition, the term “investment” should be defined in an economically meaningful way and the investment process designed to guarantee efficient and effective investment. The (reformed and strengthened) Stability Council (*Stabilitätsrat*) could then decide which projects might be financed by the fund.¹⁹ In the long run, Hüther and Südekum suggest that flexible fiscal standards based on the real interest rate and giving less weight to the debt-to-GDP ratio should replace rigid fiscal rules.

Apart from the difficulty of evaluating which investments are or are not productivity-enhancing by means of cost-benefit analyses,²⁰ it is questionable whether government investment decisions should be made solely on the basis of efficiency criteria. Whether or not they should be taken by a technical

¹⁶ See for instance IMF DSA for market access countries: IMF, “Review of The Debt Sustainability Framework For Market Access Countries”, (IMF Policy Paper, IWF, 2021), <https://www.imf.org/en/Publications/Policy-Papers/Issues/2021/02/03/Review-of-The-Debt-Sustainability-Framework-For-Market-Access-Countries-50060>.

¹⁷ Michael Hüther and Jens Südekum, “How to re-design German fiscal policy rules after the COVID19 pandemic” (Working Paper 4, Forum New Economy, 2020), 32, <https://www.econstor.eu/bitstream/10419/228778/1/1743366876.pdf>.

¹⁸ Ibid., 31.

¹⁹ Ibid., 35.

²⁰ On this difficulty, see for example Mariana Mazzucato, “How to make better economic policy choices”, *Project Syndicate*, December 21, 2020, <https://www.project-syndicate.org/commentary/uk-treasury-complex-system-economic-policy-making-framework-by-mariana-mazzucato-and-simon-sharpe-2020-12>.

body is therefore open to question. Similarly, it remains unclear whether an investment volume determined via the microeconomic analysis of individual projects and investment needs leads to macroeconomically optimal levels of expenditure, deficit and debt. Although Hüther and Südekum's approach is more holistic than that of the debt brake, it too does not operationalise the insight—although it is present in their analysis—that growth depends, among other things, on aggregate demand.

Jason Furman and Lawrence Summers agree with the criticism of orienting fiscal policy around a rigid debt-to-GDP ratio. They argue that it is a misleading indicator of a country's fiscal position for three reasons: (1) Debt can be repaid over time, but the debt-to-GDP ratio compares debt to one year's GDP. (2) It ignores the level of interest rates. (3) It is inherently backward-looking, as it adds up past deficits but does not consider future developments. Fundamentally, they criticise the comparison of a flow- with a stock measure, i.e. GDP with debt.²¹

Like Blanchard et al. they argue for going beyond the public finance perspective (which ignores the effects of fiscal policy on demand) and explicitly consider maximising employment as a task for fiscal policy, as long as interest rates remain at a very low level. They compare the risks of borrowing too much with those of borrowing too little and conclude: "Currently the primary worry for policy in the United States and several other countries is doing too little to expand the debt, not doing too much."²²

In other words: Today, countries cannot afford *not* to pursue expansionary fiscal policies, because the long-term effects of insufficient demand (so-called hysteresis) would have a much greater effect on fiscal sustainability than the interest paid on deficit spending. Nevertheless, Furman and Summers also view fiscal space as limited. For them, that limit is not determined—as for Blanchard et al.—by rising debt ratios, but by the ratio of government interest payments to GDP. They therefore propose to limit real interest payments in relation to GDP to 2%, a value that seems feasible in light of US history.

In their analysis, all three papers—Blanchard et al., Hüther and Südekum and Furman and Summers—move away from a rigid debt-to-GDP ratio as the appropriate anchor for fiscal policy. Instead, they argue for the necessity of a more demand-side-oriented fiscal policy. When it comes to developing specific policy proposals though, all three papers limit themselves to methods for identifying problematic debt dynamics (in the first case through a stochastic DSA, in the second by observing the real interest rate, in the third an interest-to-GDP ratio).

²¹ Jason Furman und Lawrence H. Summers, "A Reconsideration of Fiscal Policy in the Era of Low Interest Rates" (Working Paper, Brookings Institution, 2020), <https://www.brookings.edu/wp-content/uploads/2020/11/furman-summers-fiscal-reconsideration-discussion-draft.pdf>.

²² Ibid., 36.

In other words, their proposals for a new fiscal policy framework focus mainly on what should *not* happen, be it an increase in the debt-to-GDP ratio, in consumption expenditure or in financing costs. This is understandable when viewed against the assumption that representative democracies exhibit a systematic deficit bias.²³ Where this assumption is held, whether explicitly or implicitly, an upper limit becomes identical with a positive point target.

But this assumption is dated.²⁴ As Furman himself said recently:

*"I used to think that policymakers only made errors in one direction, which is irresponsibly large increases in deficits, and so that rules could play a useful role in constraining discretion. Over the last twenty-five years, however, one has seen many errors in the opposite direction. [...] So the entire premise of rules is wrong for many countries."*²⁵

If there is no inherent deficit bias, then providing an upper limit is no longer sufficient to give fiscal policy a direction and a target. An **explicitly articulated goal**, a positive vision becomes necessary.

None of the three proposals discussed, however, provides a complete and coherent positive vision: Blanchard et al. suggest redefining excessive debt and deficit levels;²⁶ they do not answer what the *right* levels are. Furman and Summers argue that stronger long-term growth should be the goal of fiscal policy and that it is a feature, not a bug, that their approach does not target a specific debt ratio. Yet, they do not present a method for deciding on the size of the deficit. Hüther and Südekum propose to exclude investment from the debt brake to enable a long-term investment agenda to be financed—an approach we build on below. But it remains unclear whether an investment volume that is determined via microeconomic analysis coincides with deficit and debt levels that are optimal for the economy as a whole.

Defining a positive goal requires an analysis of the challenges that could and should be addressed through fiscal policy. Part 3 therefore specifies these challenges in more detail, before we attempt to outline such a positive goal in part 4 further below.

3. THE CURRENT CHALLENGES

²³ See e.g. James M. Buchanan and Richard E. Wagner, *Democracy in Deficit: The Political Legacy of Lord Keynes* (New York: Academic Press, 1977), Alberto Alesina and Guido Tabellini. "A positive theory of fiscal deficits and government debt", *The Review of Economic Studies* 57, no. 3 (July 1990): 403-414, or Karl Schiller, „Die Grenzen der Wirtschaftspolitik (neu betrachtet)“, *Jahrbücher für Nationalökonomie und Statistik* 201 (1986): 1-11.

²⁴ Whether it was ever accurate remains unclear. See for example Moritz Schularick, "Public and Private Debt: The Historical Record", *German Economic Review* 15, no. 1 (2013): 191-207.

²⁵ Jason Furman, "I don't love Schuldenquote – Obamas oberster Wirtschaftsberater im DZ-Interview", *Dezernat Zukunft*, May 12, 2021, <https://dezernatzukunft.org/i-dont-love-schuldenquote-obamas-chem-oberster-wirtschaftsberater-im-dz-interview/>.

²⁶ Blanchard, Leandro und Zettelmeyer, "Redesigning EU fiscal rules: From rules to standards", 21.

Today, Germany faces three major challenges: decarbonisation; demographic change; and the long-term stabilisation of the external balance. To meet these challenges in a sustainable manner, it is crucial to achieve an economy that is operating at full capacity, driven by strong domestic demand, a productive labour force and high levels of investment. In the following, these challenges and their connection to fiscal policy are described in more detail.

Germany has committed to be **carbon neutral by 2045 at the latest**. Over the last 30 years, Germany's greenhouse gas emissions have been reduced by 41%, partly due to the one-off effects from the deindustrialisation of East Germany and, in the last year, the effects of the Covid-19 pandemic.²⁷ Over the next ten years, emissions must fall by a further 24% to be on track for carbon neutrality by 2045.²⁸ Even without a further increase in the emission savings target, by 2030 it would be necessary to completely phase out coal, generate 70% of electricity from renewables, have 14 million electric cars on the road, six million heat pumps installed and increase the annual rate of building renovation by at least 50%.²⁹ To our knowledge, precise and reliable figures for public financing needs related to decarbonisation do not yet exist. If the figures calculated in McKinsey's *Net Zero study for Europe* are scaled down Germany, this would correspond to additional investment of at least 27 billion euros for Germany, increasing annual investment by around 30% per annum.³⁰ The Covid-19 crisis has not made this task any easier, particularly for the Länder and municipalities who will have to shoulder a significant part of the investment: The Länder have significant debt repayment obligations, and 57% of the municipalities currently estimate that their investment volume will probably decline because of the crisis.³¹

Delivering and operating these investments requires a corresponding labour force. McKinsey projects a significant increase in employment in the building sector, renewable energies and new transport technology.³² In addition, digitisation and automation are driving structural change, and social and

²⁷ "Treibhausgase sinken 2020 um 87 Prozent", Umwelt Bundesamt, accessed May 4, 2021, <https://www.umweltbundesamt.de/presse/pressemitteilungen/treibhausgasemissionen-sinken-2020-um-87-prozent>.

²⁸ Frankfurter Allgemeine Zeitung (FAZ), "Deutschland soll bis 2045 klimaneutral werden", FAZ, accessed May 5, 2021, <https://www.faz.net/aktuell/wirtschaft/deutschland-soll-bis-2045-klimaneutral-werden-17326849.html>.

²⁹ Agora Energiewende. *Klimaneutrales Deutschland* (Berlin: Agora Energiewende, 2020), <https://www.agora-energie-wende.de/veroeffentlichungen/klimaneutrales-deutschland-zusammenfassung/>.

³⁰ McKinsey NetZero, Destatis, own calculations; according to McKinsey 60% of investment does not have a profitable business case, see McKinsey & Company, *Net-Zero Europe: Decarbonization pathways and socioeconomic implications* (McKinsey & Company, 2020), <https://www.mckinsey.com/business-functions/sustainability/our-insights/how-the-european-union-could-achieve-net-zero-emissions-at-net-zero-cost>; calculation providing a lower bound as there may be other reasons beyond profitability for public investment, see Mariana Mazzucato, *The Entrepreneurial State* (London: Anthem Press, 2013).

³¹ KfW Bankengruppe. *KfW-Kommunalpanel 2020* (Frankfurt am Main: KfW Bankengruppe, 2020), 37, <https://www.kfw.de/PDF/Download-Center/Konzernthemen/Research/PDF-Dokumente-KfW-Kommunalpanel/KfW-Kommunalpanel-2020.pdf>.

³² McKinsey & Company, *Net-Zero Europe: Decarbonization pathways and socioeconomic implications*, 186

demographic changes are increasing the need for social services. According to the Federal Ministry of Labour and Social Affairs (BMAS), 1.7 million jobs will be lost and 2 million new jobs created by 2030.³³ This requires spending on education, training, research and infrastructure, especially if the goal is not just to do the bare minimum, but to create an innovative climate-neutral economy with a **labour market operating at full capacity** that ensures long-term prosperity.

There are good reasons for this, even without the ambition to compete with China for economic dominance: Germany has a **rapidly ageing population**. A shrinking working-age population will have to be sufficiently productive to pay for pensions and care. In 2040, the **demographic dependency ratio** in Germany will be 52%; in 2019 it stood at 36%.³⁴



Figure 1: Interest costs vs. public pension subsidy as % of federal budget, target figures for 2020

Data: Deutsche Rentenversicherung, BMF

The consequences for the federal budget are already visible today. Subsidies to the public pension insurance system already amount to over 100 billion euros per year. In 2019, they accounted for 29% of the federal budget, while interest payments accounted for 3.5% only (Figure 1).³⁵ Thus, **well-paid**

³³ "Fachkräftemonitoring: Aktualisierte Projektion zur Entwicklung des Arbeitsmarktes", Bundesministerium für Arbeit und Soziales (BMAS), accessed April 30, 2021, <https://www.bmas.de/DE/Arbeit/Fachkraeftesicherung-und-Integration/Fachkraeftemonitoring/fachkraeftemonitoring.html>.

³⁴ Population aged 65 or older compared to population between 20 and 64, see "Old-age dependency ratio increasing in the EU", Eurostat, accessed May 6, 2021, <https://ec.europa.eu/eurostat/web/products-eurostat-news/-/DDN-20200713-1>; Data: European Commission, "The 2021 Ageing Report: Underlying Assumptions and Projection Methodologies (Institutional Paper 142, European Commission, November 2020)", https://ec.europa.eu/info/publications/2021-ageing-report-underlying-assumptions-and-projection-methodologies_en.

³⁵ We use figures from 2019, since the 2020 budget is not representative of the usual composition of the federal budget, given significant Covid-19-related spending.

employment that minimises the need for government subsidies to pensions (and other social insurance benefits) is a key lever for securing sustainable public finances in the long term.³⁶ Here, there is room for improvement: the **economic dependency ratio**, the proportion of people dependent on transfers to those in work, stood at 62% in 2020, well above the demographic dependency ratio of 36%.³⁷ For while Germany may have a low unemployment rate, 4.5 million workers are only marginally employed (corresponding to 10% of the entire labour force).³⁸ In addition, 0.8 million people not counted as unemployed are participating in labour market measures or are excluded for other reasons such as temporary illness.³⁹

The weak development of wages at the bottom end of the income distribution over the last 25 years also poses a challenge to the financing of pensions and the welfare state: Real gross hourly wages of the lowest three deciles were still below 1995 levels in 2018 (even though they have been on an upward trend since 2013)—two lost decades that Germany cannot afford to repeat. Moreover, almost 22% of dependent employees are on low wages,⁴⁰ up from 17% in 1995.⁴¹ There are clear gender differences: Not only is female labour market participation lower than that for men. In addition, almost 50% of women who work part-time, mostly due to family responsibilities.^{42, 43}

An increasing *demographic* dependency ratio does not necessarily lead to fiscal problems, especially if it is accompanied by steady productivity gains. However, it makes the reduction of the *economic* dependency ratio, together with strong wage growth especially in the lower income deciles, key factors for the sustainability of public finances.

³⁶ Gemeinschaftsdiagnose, *Pandemie verzögert Aufschwung – Demografie bremst Wachstum* (Essen: Gemeinschaftsdiagnose, 2021), https://gemeinschaftsdiagnose.de/wp-content/uploads/2021/04/GD_F21_Langfassung_online.pdf; Bundesministerium der Finanzen (BMF), *Tragfähigkeitsbericht 2020* (Berlin: BMF, 2021), https://www.bundesfinanzministerium.de/Content/DE/Downloads/Broschueren_Bestellservice/2020-03-11-tragfaehigkeitsbericht.pdf?__blob=publicationFile&v=14.

³⁷ Ratio of transfer and pension recipients to employed persons, own calculations based on the definition of Erik Türk et al., "Den Demographischen Wandel Bewältigen: Die Schlüsselrolle des Arbeitsmarktes" (IMK Report 137, Institut für Makroökonomie und Konjunkturforschung (IMK), 2018), https://www.imk-boeckler.de/de/faust-detail.htm?sync_id=HBS-006858. Instead of the age range 15 to 64, the age range 20 to 64 is used to establish comparability with the demographic dependency ratio.

³⁸ Institut Arbeit und Qualifikation der Universität Duisburg-Essen, "Beschäftigte in Minijobs 2003 – 2020", accessed April 30, 2021, http://www.sozialpolitik-aktuell.de/files/sozialpolitik-aktuell/_Politikfelder/Arbeitsmarkt/Datensammlung/PDF-Dateien/abbIV91.pdf.

³⁹ Bundesagentur für Arbeit, *Jahreszahlen – Teil Arbeitsmarkt (2020)*, published by the Bundesagentur für Arbeit in April 2021, https://statistik.arbeitsagentur.de/SiteGlobals/Forms/Suche/Einzelheftsuche_Formular.html?nn=1610080&topic_f=anba-arbeitsmarkt.

⁴⁰ The low-wage threshold is set at a gross hourly wage of 11.40 euros.

⁴¹ Alexandra Fedorets, Markus M. Grabka, Carsten Schröder and Johannes Seebauer. *DIW Wochenbericht: Lohnungleichheit in Deutschland sinkt* (Berlin: Deutsches Institut für Wirtschaftsforschung (DIW), 2020), https://www.diw.de/documents/publikationen/73/diw_01.c.725379.de/20-7-1.pdf.

⁴² Pola Schneemelcher and Philippa Sigl-Glückner, "Close the Gap!", *Dezernat Zukunft*, March 11, 2021, <https://dezernatzukunft.org/close-the-gap/>.

⁴³ "Unfreiwillig Teilzeitbeschäftigte", Statistisches Bundesamt (Destatis), accessed April 30, 2021, <https://www.destatis.de/DE/Themen/Arbeit/Arbeitsmarkt/Qualitaet-Arbeit/Dimension-3/unfreiwillig-teilzeitbeschaeftigte.html>.

Low earnings are not only problematic from a budgetary perspective, they also lead to a lack of domestic demand due to weak purchasing power and so contribute to **external imbalance**. In the German case, the lack of domestic demand has been compensated by an export surplus of such drastic proportions that the European Commission has found Germany to exhibit significant macroeconomic imbalances for years. In its country-specific recommendations, the European Commission proposes increasing both investment and incomes (both through higher wages and longer working hours). However, progress in implementing these recommendations has been 'limited' recently, according to the 2020 Country Report.⁴⁴

While a trade surplus is not an immediate problem for the German budget, it does put Germany in a position of economic dependency, potentially limiting its foreign policy options, particularly vis-à-vis important non-democratic trading partners. It also requires other countries to sell assets or take on more and more debt over time (as they import more than they export), a situation that is not sustainable in the long run and may lead to international tensions. The US Treasury, which has placed Germany on its monitoring list because of its high trade surplus, explicitly mentions the debt brake as one reason for the trade surplus and calls on Germany to shift permanently to a more expansionary fiscal policy after Covid-19. This could help to make progress towards a more balanced trade account.⁴⁵

In sum, the main task facing German fiscal policy makers today is to ensure: An economy running at full capacity, driven by strong domestic demand, a productive labour force and high levels of investment, so to cope with demographic change, decarbonisation, and to reduce Germany's external imbalance.

The current fiscal policy framework in Germany (see Box 1), and in particular the debt brake, miss this mark. Their focus is on stabilising the debt-to-GDP ratio at 60%, rather than tackling the challenges just outlined. This is not simply a different focus, neither aggravating nor resolving the challenges before us. Instead, it is positively dangerous, for it carries the risk of conveying a misplaced sense of security: Even if this target is achieved, as was briefly the case in 2019, it does not guarantee sufficient levels of investment, productivity growth or balanced foreign trade. In this manner, substantial risks can build up under the radar, with major consequences for the German economy and the public budgets once they materialise.

⁴⁴ European Commission. *Länderbericht Deutschland 2020* (Brussels: European Commission, February 2020), 20, <https://eur-lex.europa.eu/legal-content/DE/TXT/PDF/?uri=CELEX:52020SC0504&from=EN>.

⁴⁵ U.S. Department of the Treasury Office of International Affairs. *Macroeconomic and Foreign Exchange Policies of Major Trading Partners of the United States* (Washington D.C.: U.S. Department of the Treasury, 2021), 25, https://home.treasury.gov/system/files/206/April_2021_FX_Report_FINAL.pdf.

Box 1: The current fiscal policy framework in Germany

At heart, German fiscal policy today is guided by two economic ideas: (1) Limiting the **debt-to-GDP ratio** at a certain level makes sense. (2) Limiting the debt-to-GDP ratio can be combined with counter-cyclical fiscal policy by using automatic stabilisers to offset the deviation of GDP from **estimated potential output**.

These ideas are reflected in the European **Stability and Growth Pact** (SGP) and its translation into national law, the **debt brake** enshrined in the Constitution. The SGP limits gross debt to 60% and the deficit to 3%.⁴⁶ Under the preventive arm added in 2011, member states are also supposed to achieve a Medium-Term Objective (MTO). For Germany, this included a structural deficit of 0.5% of GDP pre Covid-19 crisis.⁴⁷

The debt brake limits the annual deficit.⁴⁸ The specific borrowing limit (not actual borrowing but as calculated in the context of the debt brake) for a given year depends on the economic situation. The method for calculating the so-called **cyclical component** (which accounts for the economic situation, i.e. whether the economy is seen to be in a boom or a slump) is regulated by simple law and a government regulation. The latter does not require approval by Parliament. Today, the method it is based on a procedure defined by the European Commission's Output Gaps Working Group (with the participation of German ministries). Minor adjustments to the calculation method can change the borrowing limit by tens of billions of euros. Due to its high political significance and weak theoretical foundations, the methodology is continuously adapted and tweaked.

In the context of the Covid-19 crisis, both the limit to net borrowing under the debt brake and the SGP requirements were suspended on the basis of emergency clauses contained in the respective legislation.

This hardly comes as a surprise: the objective of the debt brake and the fiscal framework as a whole is backward-looking, not forward-looking. It dates from a time when interest payments on the national debt accounted for about 9% of the budget, yields on German government bonds stood at 9% and

⁴⁶ "Der neue Stabilitäts- und Wachstumspakt", Bundesministerium der Finanzen (BMF), accessed April 30, 2021, https://www.bundesfinanzministerium.de/Web/DE/Themen/Europa/Stabilisierung_des_Euroraums/Haushaltspolitische_Ueberwachung_der_EU/Stabilitaets_und_Wachstumspakt/stabilitaets_und_wachstumspakt.html.

⁴⁷ Bundesministerium der Finanzen (BMF). *Deutsches Stabilitätsprogramm 2019* (Berlin: BMF, 2019), https://www.bundesfinanzministerium.de/Content/EN/Standardartikel/Press_Room/Publications/Brochures/2019-04-17-german-stability-programme-2019.pdf?__blob=publicationFile&v=7.

⁴⁸ Philippa Sigl-Glöckner, Max Krahe, Nicolas Gassen, Joost Pietschmann, Mathis Richtmann and Pola Schneemelcher, "Schuldenbremse 101: Die wichtigsten Begriffe rund um die Schuldenbremse", *Dezernat Zukunft*, 01. April 2021, <https://dezernatzukunft.org/schuldenbremse-101/>.

growth at 5%. Inflation was moving towards 5%⁴⁹ and the ratio of working age to retiree population stood at five to one;⁵⁰ it dates from a time when capital, not labour, was the problem.⁵¹

Today, yields on German government bonds are negative. It is not financing costs that need to be brought under control, but labour that needs to be mobilised, investments made, purchasing power increased and the international environment stabilised. We are in a situation where it is not the debt level that costs us, but the focus on backward-looking rules. It is high time for an update, for a new German fiscal policy.

In the following, we outline a proposal.

4. MAXIMISING, NOT STABILISING POTENTIAL OUTPUT

Recent economic research has shown that economies can suffer from **demand side secular stagnation**.⁵² Neither global export opportunities nor domestic demand automatically guarantee that an economy will operate at full capacity.⁵³ This results in a specific positive goal for good fiscal policy: to ensure the economy is operating at full capacity.

Box 2. Definition of ‘full capacity utilisation’

Full capacity utilisation is often equated with full employment. However, especially in view of the situation on the German labour market described at the beginning, this definition is incomplete. Despite a high level of employment, there are a large number of configurations in which income from work is insufficient to ensure an adequate pension or social safety net and people become dependent on state benefits. We therefore define full capacity utilisation as a state in which everyone has the opportunity to be sufficiently productive to support themselves. The economic dependency ratio according to Türk et al. can be a first indication of this, but beyond that, wage development should also be

⁴⁹ Jan Prieue, "Europäische Wirtschafts- und Währungsunion: Grenzwerte für Defizite und Schulden in der Kritik", *Wirtschaftsdienst* 100 (July 2020): 538 – 544.

⁵⁰ "koordinierte Bevölkerungsvorausberechnung für Deutschland - Variante 1: Moderate Entwicklung bei niedrigem Wanderungssaldo (G2L2W1)", Statistisches Bundesamt (Destatis), accessed April 30, 2021, <https://service.destatis.de/bevoelkerungspyramide/#!y=1992&a=20,65&v=2&g>.

⁵¹ To give an example from the times: One chapter in the manifesto "Because the Country Must Change", written by a set of prominent public intellectuals and elder statesmen, was entitled "Capitalism Suffering from a Lack of Capital" (German: "Kapitalismus, der an Kapitalmangel leidet") (Marion Dönhoff, Helmut Schmidt, Wolfgang Thierse et al. (Hamburg: Rowohlt, 1992)).

⁵² Lawrence H. Summers, "Demand Side Secular Stagnation", *American Economic Review: Papers & Proceedings*, 105, no. 5 (2015): 60-65.

⁵³ Locus classicus: John Maynard Keynes, *The General Theory of Employment, Interest and Money* (London: Palgrave Macmillan, 1936).

observed: On the one hand, it is central to financing the welfare state, but on the other hand it can also be an indicator of (over)full utilisation and rising prices.

Closely linked to the concept of full capacity utilisation is the foreign trade balance. If this shows a trade surplus over many years, this indicates a structural deficiency in domestic demand. In this case, the trade surplus supports the domestic economy, but at the same time deprives trading partners of demand and thus makes it more difficult for them to operate their economies at full capacity.

4.1 Stabilisation across the business cycle is not the same as ensuring full capacity utilisation

At first glance, the goal of full capacity utilisation seems to be integrated into the existing framework of German fiscal policy. The debt brake already allows for a certain degree of fiscal stabilisation through its cyclical component and the emergency clause, i.e. to feed additional demand into the economy during downturns.

A deeper analysis, however, shows that stabilising the business cycle and ensuring full capacity utilisation are two fundamentally different objectives, calling for different and potentially opposing fiscal policies. **Cyclical stabilisation** aims to stabilise growth and capacity utilisation around a past trend. Whether this trend corresponds to the only or the best possible growth path of the economy is unclear but is often affirmed by proponents of the stabilisation approach.⁵⁴ As long as it is assumed that there is only one trend, reforms that lead to economic growth exceeding the trend (for example, by increasing female labour force participation) would be interpreted as overheating the economy, which in turn makes savings necessary.

Ensuring **full capacity utilisation**, on the other hand, assumes that economies have several possible equilibria and growth paths. Where this is the case, a democracy can use fiscal policy not only to stabilise the economy around a trend, but to attempt to influence the trend itself in the desired direction. However, this requires moving away from the goal of balanced budgets over the business cycle.⁵⁵ In the case of structurally weak demand, for example, persistent budget deficits may be necessary *over the long run* to keep the economy running at full capacity; similarly, in the case of structur-

⁵⁴ See for instance Andrew Bailey, Gouverneur of the Bank of England: "Monetary policy cannot increase output above potential in the long term", in "Bank of England is not doing 'monetary financing'", *Financial Times*, April 5, 2020, <https://www.ft.com/content/3a33c7fe-75a6-11ea-95fe-fcd274e920ca>.

⁵⁵ Or, to be more precise, it requires moving away from the idea that balanced budgets can be achieved through targeting the fiscal balance. In Part 5, we explain that it is also possible to limit the deficit and the debt ratio within the framework of a full capacity utilisation approach, but by means of *structural* policy (including tax policy), rather than via the fiscal balance.

ally excessive demand, *permanent* (and not just cyclical) budget surpluses may be necessary to prevent the economy from overheating. Moreover—and, in the old paradigm, paradoxically—despite the possibility of persistent budget deficits, a fiscal policy geared towards full capacity utilisation can be more sustainable than a cyclical stabilisation approach, insofar as a higher growth path ensures higher tax revenues, lower expenditures on social security and a stronger, more innovative real economy. The prerequisite is economic growth exceeding interest rates.

We therefore propose that a new German fiscal policy should move away from the cyclical stabilisation approach and instead aim for full capacity utilisation; not because sustainable finances are secondary, but because sustainable finances today primarily depend on the growth path taken by the economy, rather than on interest payments on past deficits.

Two arguments speak for this change: A backwards-looking one, and a forward-looking one.

4.2 The moderately successful search for potential output

Over time, it has become apparent that the central analytical component of the cyclical stabilisation approach—non-cyclical **potential output**, around which the economy is to be stabilised—has an inherent weakness: it has not been possible to estimate it with either precision or robustness.⁵⁶ Thus, the trend around which stabilisation is to be undertaken is missing. This makes the cyclical stabilisation approach effectively indeterminant. It does not provide a well-founded direction for fiscal policy.

This weakness has become apparent on both sides of the Atlantic. The EU's estimation method, developed with the participation of the German government and used for the implementation of the German debt brake, too, was modified in 2002, 2004, 2010, 2013 and 2016.⁵⁷ The quantitative effects of these revisions were considerable⁵⁸ and added to the already large revisions that result from initially estimated model inputs being replaced *ex post* by actual values.⁵⁹ The introduction of a 'constrained judgement' approach in 2016, i.e. the possibility for the European Commission to override the result of the output gap calculation under certain circumstances, signalled a recognition by the

⁵⁶ For more detailed evidence of this statement, see Schuster, Florian, Philippa Sigl-Glöckner und Max Krahé. "Wird die Konjunkturkomponente der Schuldenbremse in ihrer heutigen Ausgestaltung ihrer Aufgabe noch gerecht? Analyse und ein Reformvorschlag" (Working Paper, Dezernat Zukunft, forthcoming).

⁵⁷ 2002: Switch from a purely statistical to a model-based estimation procedure. 2004: Removal of the requirement that the deviation of the NAWRU from the unemployment rate must average zero over the business cycle. 2010: Switch from Hodrick-Prescott (HP) to Kalman filter. 2013: Introduction of the New Keynesian Phillips Curve (NKP), alongside the Traditional Phillips Curve (TKP). 2016: Introduction of the 'constrained judgement' approach.

⁵⁸ For example, due to the 2013 adjustment, the unemployment rate at which Spain's economy was considered to be at full capacity changed from around 26% to 21%.

⁵⁹ This process of retrospective recalculation (where only inputs, and not the estimation method itself, change) leads, on average, to changes in estimated potential output of about 1.5 percentage points of GDP; cf. Eugen Tereanu, Anita Tuladhar and Alejandro Simone, "Structural Balance Targeting and Output Gap Uncertainty" (IMF Working Paper WP/14/107, IMF, 2014), <https://www.imf.org/external/pubs/ft/wp/2014/wp14107.pdf>.

European Commission and the European Council that, even after the series of prior modifications, the quantitative estimates were not robust enough to serve as a reliable basis for fiscal decision-making.⁶⁰ Further ad-hoc adjustments to the estimation method became necessary in the course of the Covid-19 crisis, in order to avoid implausibly large reductions in potential output.

The reason for all these changes was not primarily progress in economic knowledge,⁶¹ but rather the repeated attempt to adjust the calculation method so that its results reached a minimum level of economic and political plausibility, rather than visibly promoting pro-cyclical fiscal policy.⁶² This shows that over the past two decades it has not been possible to design a stable method of estimating potential output in Europe that is robust and precise enough to withstand repeated plausibility checks.

In the US, we have seen in recent years what happens when potential output estimates are virtually ignored in fiscal and monetary policy. Actual output exceeded estimated potential output from 2017 to 2019. Yet both fiscal and monetary policy remained expansionary, contrary to what a cyclical stabilisation approach would have recommended. Instead of leading to overheating and rising inflation, unemployment continued to fall. The size of the labour force increased as people returned to the labour market from inactivity.⁶³ The US case shows that output well above the previously estimated potential output is possible. Potential output was elastic in a positive sense.

This experience led the US Federal Reserve to switch from a (symmetric) stabilisation approach to an (asymmetric) maximum employment approach in the summer of 2020.⁶⁴ Similarly, President Biden's fiscal policy is not oriented towards stabilising potential output, but, as described in the opening quote, deliberately aims at "more growth, higher incomes, a stronger economy"—among other things with a stimulus package that exceeds the size of the estimated output gap by a factor of three.⁶⁵

⁶⁰ European Commission, "Vade Mecum on the Stability & Growth Pact" (Institutional Paper 101, European Commission, 2019), https://ec.europa.eu/info/sites/default/files/economy-finance/ip101_en.pdf.

⁶¹ This is, for instance, evident in the fact that there was no uniform switch to a New Keynesian Phillips Curve with the 2013 methodological changes. Instead, some countries retained the Traditional Phillips Curve, while others adopted the New Keynesian Phillips Curve.

⁶² Philipp Heimberger, Jakob Huber and Jakob Kapeller, "The power of economic models: The case of the EU's fiscal regulation framework", *Socio-Economic Review* 18, no. 2 (April 2020): 337-366.

⁶³ "Unemployment Rate: Federal Reserve Bank of St. Louis", accessed May 3, 2021, <https://fred.stlouisfed.org/series/UNRATE>.; "Labor Force Participation Rate: Federal Reserve Bank of St. Louis", accessed May 3, 2021, <https://fred.stlouisfed.org/series/CIVPART>.

⁶⁴ Jerome Powell, "New Economic Challenges and the Fed's Monetary Policy Review" (Speech, Economic Policy Symposium of the Federal Reserve Bank of Kansas City, Jackson Hole, WY, 27. August 2020), <https://www.federalreserve.gov/newsevents/speech/powell20200827a.htm>. See footnotes 23, 24, and 25 in particular.

⁶⁵ The Congressional Budget Office (CBO) has estimated the output gap for 2021 at close to 2% of GDP (CBO, *An Overview of the Economic Outlook* (Washington D.C.: CBO, February 2021), 3, <https://www.cbo.gov/system/files/2021-02/56965-Economic-Outlook.pdf>). The American Rescue Plan, President Biden's stimulus package, amounts to around 1,9 billion US-Dollar, more than 8% of US GDP, which stood at close to 22 billion US-Dollar pre Covid-19 crisis.

4.3 Multiple equilibria and development paths

The American experience already points to the second, forward-looking argument in favour of our proposed paradigm shift: **market economies have multiple demand-side equilibria and development paths**. Economies can enter different growth paths as a result of negative or positive demand shocks as well as other, more structural demand-side changes. This makes it possible to move the economy onto a permanently higher and qualitatively different growth path through expansionary fiscal policy. **In light of the challenges for Germany discussed above, we see this as a strong argument for targeting full capacity utilisation with fiscal policy, thereby mobilising all resources to cope with climate and demographic change.** In other words, potential output should be maximised—by means of a full capacity utilisation approach—not stabilised.

There are several reasons why economies have multiple demand-side equilibria and development paths, so that a full capacity utilisation approach can increase potential output in the long run. Here we describe three:

1. The past matters. So-called hysteresis effects cause economies to remain permanently on lower growth paths as a result of a crisis.⁶⁶ As Figure 2 shows, the Eurozone, for example, permanently abandoned its former growth path during and after the Great Financial Crisis.

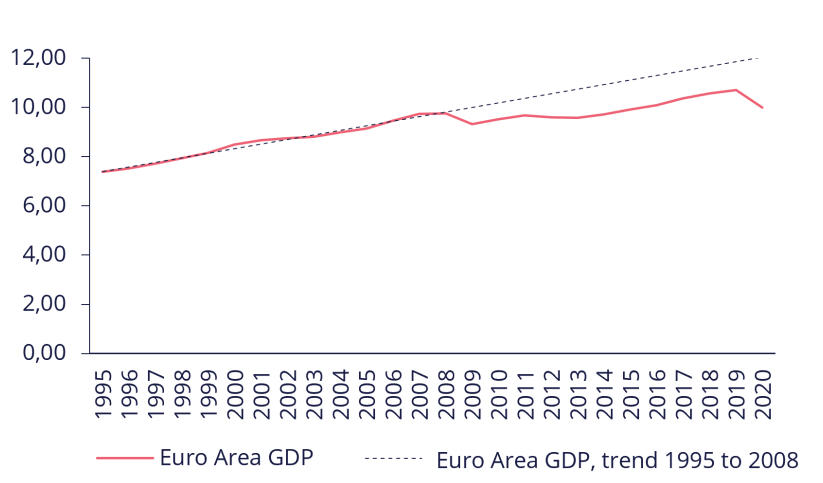


Figure 2: Hysteresis effect in the euro area; real GDP vs. GDP trend 1995 to 2008 in tril. Euro, calendar-adjusted and chained

Data: Federal Reserve Bank of St. Louis (FRED)

⁶⁶ For a comprehensive overview over hysteresis effects and evidence for the former, see: J. Bradford DeLong and Lawrence H. Summers, "Fiscal Policy in a Depressed Economy" (Brookings Papers on Economic Activity 2012(1), Brookings Institution, 2012), https://www.brookings.edu/wp-content/uploads/2012/03/2012a_DeLong.pdf, as well as Antonio Fatás and Lawrence H Summers, "The permanent effects of fiscal consolidations", *Journal of International Economics* 112 (May 2018): 238-250.

One reason for hysteresis effects is a lack of investment during a crisis, which is not necessarily compensated for afterwards. This may be due to the fact that companies are highly indebted as a result of the crisis and/or have only limited access to capital, especially if the financial sector has also been hit;⁶⁷ entrepreneurs may also become risk-averse in crises and shy away from investments despite financing opportunities (see also point 2). Labour markets, too, are path dependent: In particular, when there is insufficient demand over a prolonged period of time, people give up looking for work and withdraw from the labour market. Longer periods of unemployment lead to skills being lost and people becoming stigmatised. Amongst those particularly heavily affected are: Older people who decide to retire earlier in the face of a difficult labour market situation; young workers who try to enter the labour market and rely on someone to invest in their skills; and low-skilled workers who are mostly in insecure jobs.⁶⁸ A third possible source for hysteresis effects are permanent shifts in aggregate demand. If, for example, a rise in inequality has shifted incomes from the bottom to the top, this can lead to permanently lower demand due to different marginal propensities to consume. If this is not offset, for example by higher budget deficits, a permanently lower level of output is to be expected. Self-fulfilling prophecies via expectation-effects (see point 2) can lead to similarly secular shifts in aggregate demand.⁶⁹

2. The future matters. Investment decisions depend not only on interest rates but also on expected revenues and profits. These in turn are based on radically uncertain assumptions about the future. Endogenous expectation formation processes can therefore shift the level of investment upwards or downwards, independently of prior changes in the real economy or financial markets.⁷⁰ Crucially, this factor limits the effectiveness of monetary policy stimulus. Even if the central bank or market movements lower the interest rate in a crisis, it remains unclear whether this lower interest rate will raise the level of investment to the macroeconomically necessary level. Pessimism about future revenues, uncertain labour costs, wariness of competition, supply chain concerns or general negative market sentiment; all of these can, and in practice often do, outweigh cheaper financing costs. Despite the ultra-loose monetary policy of the European Central Bank, for example, net fixed capital formation by private investors in Germany remains below 2008 levels (see Figure 3).

⁶⁷ Richard Koo, „Balance sheet recession is the reason for ‘secular stagnation’”, *VoxEu*, August 11, 2014, <https://voxeu.org/article/balance-sheet-recession-reason-secular-stagnation>.

⁶⁸ Danny Yagan, „Employment Hysteresis from the Great Recession”, *Journal of Political Economy* 127, no. 5 (2019): 2505-2558.

⁶⁹ J.W. Mason, „The Persistence of Demand”, *The Slackwire*, May 23, 2021, <http://jwmason.org/slackwire/the-persistence-of-demand/>.

⁷⁰ Robert Shiller, *Narrative Economics* (Princeton, NJ: Princeton University Press, 2019).

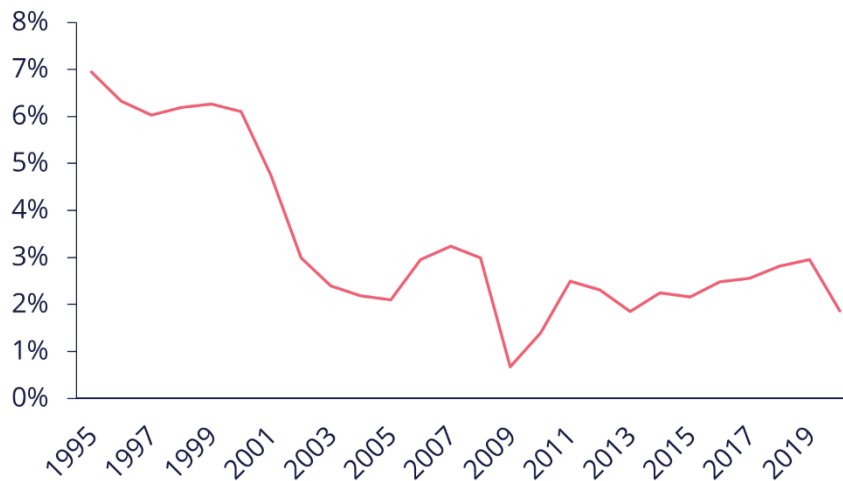


Figure 3: Net private fixed capital formation in Germany as % of GDP

Data: Annual Macro-economic Database of the European Commission's Directorate General for Economic and Financial Affairs (AMECO)

3. Financial markets have their particularities, too. The risk appetite of financiers can change over time, whether due to external factors such as banking regulation, because expectations have changed, or because society is ageing, so that safe retirement products become more desired than opportunities for rapid wealth accumulation. As investors become more risk-averse and their preferences shift towards liquid assets, the cost of financing illiquid, real-economy investments becomes more expensive, independently of other developments. As a result, the interest rate on risky investments may be too high for enough investment projects to be realised to push the economy to its capacity limit.

These and other mechanisms ensure that an economy is neither fixed to a certain equilibrium nor to a certain development path on the supply side. On the contrary, the supply side is recreated every day through a multitude of investment or non-investment decisions. Where demand is slack, not only will existing capacities lie idle, but there is a high probability that trend growth itself will fall. Workers who do not work lose their skills, or at least do not learn new ones. Machinery, infrastructure and buildings are abandoned due to lack of demand and become dilapidated as they are not used for new projects. Learning by doing fails to take place. In contrast, where demand is high and stable and optimism prevails, not only are all existing resources put to use, but more investment is likely to take place, more learning by doing happens, and the chances of productivity breakthroughs increase.

This is not to say that the supply side is fully determined by aggregate demand. Of course, a multitude of other factors play a role, too. But given the challenges faced today, no instrument can be left unused.

We therefore propose to change Germany’s fiscal policy framework from one focused on stabilisation to one that aims at full capacity utilisation. Instead of aiming at stabilising an indeterminate potential output, inherently unobservable and only poorly proxied in the past, the state should spend more money than it takes out of the economy until full capacity utilisation is reached, and only start saving when the risk of (demand-side) inflation sets in. Such a policy of full capacity utilisation, if maintained and managed well over time, can make an important contribution to sustainably increasing and maximising (always unobservable) potential output.

What a full capacity fiscal framework could look like in concrete terms is presented in part 7. Before that, we discuss two objections to this approach: in part 5, we consider the argument that monetary policy should be used, instead of fiscal policy, to achieve full capacity utilisation; in part 6, the objection that our proposal would lead to escalating debt-to-GDP ratios and the risk of sovereign default and financial instability. Both objections help identify refinements to our approach; neither is a convincing argument against it.

5. A NEW DIVISION OF LABOUR BETWEEN MONETARY AND FISCAL POLICY

For the past 30 years, monetary policy has been used to stabilise the economy by influencing interest rates. Fiscal policy on the other hand, has been geared towards limiting the deficit and debt. Klaas Knot, President of the Dutch central bank, provided a concise summary statement of this view in a recent speech:

*“The consensus view before the global financial crisis of 2008 prescribed a clear division of tasks between monetary and fiscal policy. According to this view, an independent central bank should be tasked with stabilizing prices, which would normally have a countercyclical element to it. Fiscal policy should focus on achieving public debt sustainability.”*⁷¹

Why should this division of labour be reversed?

Apart from the fact that under a common currency like the euro, fiscal policy is the only tool that remains at the national level to stabilise the economy,⁷² there are four other reasons in favour of one

⁷¹ Klaas Knot, “The case for fiscal stabilization in a low interest rate environment” (Witteveen Lecture, Erasmus School of Economics, Rotterdam), June 11, 2021, <https://www.dnb.nl/actueel/algemeen-nieuws/speeches-2021/speech-klaas-knot-the-case-for-fiscal-stabilization-in-a-low-interest-rate-environment/>. Institutionally, this fundamental orientation was reflected in the Maastricht Treaty and the Stability and Growth Pact, as well as in the Washington Consensus, Bill Clinton's balanced budgets of the 1990s, and Gordon Brown's 40% debt ratio target of 1997. Deficits downturns were consciously accepted in this paradigm, but the strategic goal was balanced budgets over the budget cycle and stable or falling debt-to-GDP ratios.

⁷² Apart from those parts of banking regulation that are still under national control.

or the other allocation of roles. When considering them, it quickly becomes clear that a greater role for fiscal policy is appropriate today.

But it is also true that there is no one optimal allocation of roles between monetary and fiscal policy that remains valid forever. The two are inherently intertwined. Who should take on which role depends on many factors and considerations, many of which change over time. In the current situation, however, it seems that the time has come for a more active fiscal policy, and not only in the euro area.

5.1 The effective lower bound

Today, the most obvious reason for a role reversal between fiscal and monetary policy is that monetary policy has reached the *effective lower bound*. While a few exceptional tools remain,⁷³ central banks are already doing their utmost and can no longer stimulate the economy by lowering the inter-bank rate much further, as they did before the crisis. This was already emphasised two years ago by Janet Yellen, former President of the US Federal Reserve and current US Treasury Secretary.⁷⁴ The European Central Bank (ECB) has been calling for a more active role for fiscal policy for years⁷⁵ for the same reason, and sees its own role in keeping financing conditions favourable for both governments and the private sector.⁷⁶ This is also a key motivation for the proposals of Furman and Summers, who, like us, emphasise the possibility of chronically insufficient demand in their analysis.⁷⁷

5.2 Who has effective control over fiscal sustainability?

Another reason for a role reversal between monetary and fiscal policy lies in currently comparatively high public debt levels, which have once again risen noticeably as a result of the Covid-19 crisis. As J.W. Mason and Arjun Jayadev show, the higher the debt, the greater the effect of interest rates—i.e. the *monetary*, not the fiscal, lever—on the development of the budget balance and the debt level.⁷⁸ In this context, it makes sense to use monetary policy to stabilise government debt, while fiscal policy is used to keep the economy running at full capacity.

⁷³ In particular helicopter money.

⁷⁴ Janet Yellen, "Comments on monetary policy at the effective lower bound", *Brookings Institution*, September 14, 2018, <https://www.brookings.edu/blog/up-front/2018/09/14/comments-on-monetary-policy-at-the-effective-lower-bound/>.

⁷⁵ See for instance: Isabel Schnabel, "High Debt, Low Rates and Tail Events: Rules-Based Fiscal Frameworks under Stress" (Speech, Third Annual Conference des European Fiscal Board, Frankfurt am Main, February 26, 2021), <https://www.ecb.europa.eu/press/key/date/2021/html/ecb.sp210226~ff6ad267d4.en.html>.

⁷⁶ Isabel Schnabel, "Paving the path to recovery by preserving favourable financing conditions", Speech, NYU Stern Fireside Chat, March 25, 2021, <https://www.ecb.europa.eu/press/key/date/2021/html/ecb.sp210325~e424a7f6cf.en.html>.

⁷⁷ Furman and Summers, "A Reconsideration of Fiscal Policy in the Era of Low Interest Rates", 12.

⁷⁸ J. W. Mason and Arjun Jayadev, "A comparison of monetary and fiscal policy interaction under 'sound' and 'functional' finance regimes", *Metroeconomica* 69, no. 2 (May 2018): 488-508.

An example that makes this particularly clear is Italy: from 1995 to 2019, the country had a primary deficit in exactly one year, 2009. Since 2008 alone, financing costs have increased the debt-to-GDP ratio by 10 percentage points, while primary budget surpluses have reduced it by 5 percentage points.⁷⁹ Therefore, simply from a mathematical point of view, it makes sense to entrust monetary policy with keeping deficits and debt in check when debt levels are high. The task of fiscal policy in this case would be to ensure full capacity utilisation.

5.3 Meeting the financing needs of the *real* economy and the public

However, looking only at overall or macroeconomic effects is insufficient. Fiscal and monetary policy operate through different channels, too, with different microeconomic and allocative effects. Both create more demand by creating new debt,⁸⁰ but monetary policy predominantly encourages new *private* debt, so that the precise injection of demand is decided by financial markets. Fiscal policy, on the contrary, creates *public* debt. Where demand is injected is decided through parliamentary and ministerial processes. Thus, the trade-off between monetary and fiscal policy lies primarily in what *type* of debt and decision-making processes are judged to be effective and legitimate in a given situation or for a given purpose.

Especially given the current challenges described at the beginning, we see the possibility of more direct influence offered by fiscal policy as a significant advantage. Both bank lending and the capital investments of other investors have focused heavily on financial assets and real estate, with opaque and potentially problematic translation into the wider the real economy in recent years (see also Figure 3).⁸¹ Even if demand stimulation via monetary policy has prevented even deeper downturns, it has stimulated demand mainly via asset price inflation. Wage increases largely failed to materialise, as did an upswing in real investment.

As Jens Weidmann's 2014 appeal⁸² to the trade unions, calling for more aggressive wage bargaining, makes clear, the central bank's means to boost wages are very limited. In contrast, the public sector

⁷⁹ International Monetary Fund (IMF). *Italy: Staff Report for the 2020 Article IV Consultation* (Washington D.C., IMF, 2020), <https://www.imf.org/en/Publications/CR/Issues/2020/03/19/Italy-2020-Article-IV-Consultation-Press-Release-Staff-Report-and-Statement-by-the-Executive-49277>.

⁸⁰ Those who favour monetary policy as the driving force of the economy are often under the impression that they can economise on "debt". This is not true, as will be examined in more detail in Part 5. On the subject of money creation see: Bundesbank, *Monatsbericht April 2017* (Frankfurt am Main: Bundesbank, 2017), 15 ff., <https://www.bundesbank.de/resource/blob/614448/c0acb63e33120467bbb3615c63dc7e1a/mL/2017-04-geldschoepfungsprozess-data.pdf>.

⁸¹ Philippa Sigl-Glöckner, "Ein Blick ins Innere des europäischen Finanzgetriebes", *Makronom*, May 7, 2018, <https://makronom.de/qe-programm-ezb-wirkung-finanzfluesse-visualisierung-ein-blick-in-das-innere-des-europaeischen-finanzgetriebes-26305>

⁸² Ulrike Herrmann, "Inflation soll die Welt retten", *TAZ*, July 21, 2014, <https://taz.de/Bundesbank-fordert-hoehere-Loehne/!5037176/>.

is by far the largest employer in Germany, with 308 billion euros in personnel costs,⁸³ corresponding to almost ten percent of German GDP. A substantial share of the 1.3 trillion euros of public subsidies and grants⁸⁴ also flows into wages, whose level can thus be directly or indirectly influenced by the state.

Equally, a rapid decarbonisation of the economy cannot be achieved through monetary policy alone. Less than half of the investments needed to achieve a decarbonised economy in Europe have a positive investment case.⁸⁵ For them to be made at all, let alone to happen at the necessary pace, government funding is needed. This includes not only the expansion of infrastructure or the development of new industries, but also, for example, the refurbishment of buildings, which, according to the German government's plans, must proceed twice as fast as it has in the past.⁸⁶

Monetary policy is also not the most appropriate means of eliminating the German foreign trade imbalance: lowering interest rates to stimulate the economy generally weakens the exchange rate (as investors move parts of their portfolios to currency areas with higher interest rates). This makes German exports cheaper internationally, imports from outside the Eurozone more expensive, and tends to cause the export surplus and import deficit to grow further. A fiscal stimulus would have the opposite effect; imports would rise, and the foreign trade balance would move in the direction of equilibrium.

Hence, if we want to master demographic change with higher wages, climate change with better investment, and the external imbalance with stronger domestic demand, fiscal policy, not monetary policy, seems to be the appropriate instrument.

5.4 Democratic legitimacy

Last but not least: Especially when it comes to certain missions or distributional effects, fiscal policy is also preferable on grounds of institutional legitimacy. Central bank decisions are made by technocrats. With fiscal policy, on the other hand, democratically elected representatives of the people are in charge, there are public parliamentary debates and clearly allocated responsibilities.

This implies that fiscal policy should not be used solely as a stabilising instrument, but also to address long-term challenges that relate to (and affect) the basic structure of the economy and are therefore

⁸³ Statistisches Bundesamt (Destatis), *Finanzen und Steuern: Vierteljährliche Kassenergebnisse des Öffentlichen Gesamthaushalts* (Wiesbaden: Destatis, 2019), https://www.statistischebibliothek.de/mir/receive/DEHeft_mods_00130347.

⁸⁴ Ibid.

⁸⁵ McKinsey & Company, *Net-Zero Europe: Decarbonization pathways and socioeconomic implications*, 33.

⁸⁶ Agora Energiewende, *Klimaneutrales Deutschland*.

inherently political. This aspect is therefore addressed separately and explicitly in our proposals below.

Summing up, a greater role for fiscal policy is appropriate today due to (1) monetary policy having reached the effective lower bound, (2) the significant impact monetary policy can have on fiscal sustainability in the case of high debt levels, (3) the possibility of influencing the economy more directly by means of fiscal policy and (4) fiscal policy's comparatively higher democratic legitimacy.

Strikingly, the ECB has already initiated this role reversal: As Isabel Schnabel said recently, the objective of its unconventional monetary policy has shifted: "[O]ur pledge to preserve favourable financing conditions shifts the focus from quantities—the amount of assets we purchase—towards prices—the conditions at which sovereigns, firms and households can access credit."⁸⁷ Hence the ECB is already providing favourable financing conditions, thereby stabilising the cost of public debt.

Should interest rates rise, public debt levels become significantly lower, and should we enter a context in which no major structural changes in the economy need to be mastered so that investment issues become politically uncontroversial, the optimal distribution of roles between monetary and fiscal policy could change again. As of today, however, it seems that the time for a more active fiscal policy has come, and not only in euro area countries.

6. DEBT (RATIO) CONTROVERSIES

A second criticism of our proposed paradigm shift might be: If fiscal policy is used to ensure full capacity utilisation, this creates the risk of escalating debt and thus the possibility of national bankruptcy.

This criticism again reveals the difference between a stabilisation- and a full capacity utilisation approach. Under a policy regime focused on macroeconomic stabilisation that uses the current methodology for estimating potential output, limiting the debt-to-GDP ratio takes priority. Because of the manner in which potential output is calculated, the debt brake in its current design does not permit the running of deficits across an entire economic cycle, even if the cycle takes place against a backdrop of demand side secular stagnation, i.e. an insufficient overall level of aggregate demand. The

⁸⁷ Isabel Schnabel, "Paving the path to recovery by preserving favorable financing conditions" (Speech, NYU Stern Fireside Chat, March 25, 2021), <https://www.ecb.europa.eu/press/key/date/2021/html/ecb.sp210325~e424a7f6cf.en.html>; Original: „our pledge to preserve favorable financing conditions shifts the focus from quantities – the amount of assets we purchase – towards prices – the conditions at which sovereigns, firms and households can access credit.“

level and trend of capacity utilisation,⁸⁸ and thus in particular the unemployment rate, are thus turned into dependent variables that are subordinated and must adjust to the objective of limiting the debt-to-GDP ratio.

Under our proposal, it would be the other way round: full capacity utilisation and full employment would be the priority goal; deficit and debt would be the dependent, subordinated variables that would have to adjust.

Since the debt and deficit ratios would thus be "set free", just as, for example, the money supply was after the abandonment of monetarism, it is appropriate to examine whether this does or does not entail the risk of a debt spiral, potentially leading to national bankruptcy.

For monetary sovereigns, this risk does not exist per se, since the central bank can buy the government's own bonds, either to secure liquidity or to keep financing costs low. The binding debt limit for states with their own currency is inflation.

But the same does not apply to states without their own currency. They face a liquidity and financing cost risk. If interest rates are high, financing costs themselves easily become drivers of the deficit. Here, the higher the debt level, the greater the effect of a change in interest rates (and, ceteris paribus, the higher the liquidity risk, as more bonds have to be rolled over). Hence, a high debt-to-GDP ratio carries certain risks. However:

- The **indicator** currently used to assess debt as high or low, safe or dangerous, is problematic. The **debt-to-GDP ratio** is uninformative and should be dropped. In parts 7.1 and 8.1 we present a better alternative.
- The most appropriate **means** of controlling the level of government debt is not the fiscal balance. Structural and especially distributional policies are more appropriate to reconcile the objectives of full capacity utilisation, maximisation of potential output and financial stability.

6.1 Leaving the debt-to-GDP ratio behind

Public debt can be dangerous. But the *degree* of danger posed by any given amount of debt is not obvious. It depends on many factors. Therefore, an analytical framework, an indicator, is needed to translate absolute debt figures into risk and cost estimates.

⁸⁸ In contrast to cyclical fluctuations, which are explicitly to be smoothed by fiscal policy.

The most important indicator currently used to assess public debt as high or low, safe or dangerous, is the debt-to-GDP ratio. This indicator dominates both research and academia,⁸⁹ as well as the policy framework, especially at the European level.

But the debt-to-GDP ratio is a poor indicator. Furman and Summers explain why this is so at the theoretical level, as described above. They criticise that the debt-to-GDP ratio is backward-looking, ignores the level of interest rates and compares apples with oranges, since debt is a stock measure, but GDP is a flow measure.⁹⁰

In practical terms, the limited usefulness of the debt-to-GDP ratio can be seen, for example, in the fact that Japan has had a debt-to-GDP ratio of well over 200% for years, yet has not encountered any problems with servicing its debt or public financial stability. Ukraine, on the other hand, has had to go through debt restructuring in 2015 with a debt ratio of only 80%. In 2020, the country turned to the IMF again, this time already at a ratio of around 60%. France, finally, experienced significant issues with currency stability and inflation in the early 1980s—at debt levels well below 30%.⁹¹

As the latest revision of the IMF DSA for countries with market access shows, the gross debt level, which is compared to GDP in the context of the debt ratio, is also not very meaningful. Thus, when calculating public debt, the IMF now takes into account liquid financial assets and whether the central bank holds government bonds in order to determine the net debt level.⁹² In addition, the structure of the debt, including the debt instruments used, their maturity, investor base, the legal basis of the instruments issued,⁹³ and the ability to hedge against interest rate changes all play a role in assessing future financing risks. All these factors influence the risks to liquidity and financing costs associated with sovereign debt. None of them is visible through the lens of the debt-to-GDP ratio.

We therefore propose that the debt-to-GDP ratio be replaced by a new interest rate indicator. We outline the basic idea in 7.1 and present a concrete design in 8.1 in the context of our reform proposals for Germany.

⁸⁹ See, for example, the controversy surrounding Carmen M. Reinhart and Kenneth S. Rogoff, "Growth in a Time of Debt", *American Economic Review: Papers & Proceedings* 100 (May 2010): 573-578, which was conducted almost entirely in the vocabulary of the debt-to-GDP ratio.

⁹⁰ Furman und Summers, "A Reconsideration of Fiscal Policy in the Era of Low Interest Rates".

⁹¹ Peter Hall, *Governing the Economy* (Cambridge: Polity Press, 1986).

⁹² International Monetary Fund (IMF), "Review of The Debt Sustainability Framework For Market Access Countries", 22.

⁹³ *Ibid.*, 51

6.2 Controlling debt through structural reforms, not the fiscal stance

If one wants to minimise public debt to limit fiscal sustainability- and financial stability risks, what is the most effective means to do so? In today's fiscal framework, both at the German and European level, the budget balance is considered as the most important tool. If (according to the debt-to-GDP ratio) the debt level is too high, the instinctive response is to call for cuts to government spending and/or increases in revenues.

This remedy is problematic at two levels. Apart from the often-negative real economic consequences of fiscal consolidation in the context of secular stagnation, the consequences for public finances can also be negative: The productive base—the GDP that can be taxed—shrinks, and the financing costs of existing debt become increasingly difficult to shoulder. In the case of Greece, for example, the IMF projects that from 2008 to 2028 negative GDP growth—not the primary deficit—will be the largest contributor to the rising debt burden.⁹⁴

It is largely as a result of this dynamic that Furman and Summers (as mentioned above) state pointedly that governments cannot afford *not to* run deficits in today's situation of a lack of demand and low interest rates.⁹⁵

If one wants to boost demand, one can do so through three channels: increasing private debt; increasing public debt; or demand-side structural reforms that permanently raise the demand level of the economy.

Where monetary policy is used to manage the economy, as has been the case for most of the last 40 years, increasing private debt is the main tool. The central bank lowers interest rates; cheaper interest rates are supposed to boost private lending, which in turn generates demand for the economy.

In the US of the 1990s and 2000s, one could observe the fullest unfolding of this approach: Besides mortgage loans, which were easy to get even for workers with little job security,⁹⁶ it was not uncommon for people to have multiple credit cards. At least since the subprime crisis and the Great Recession after 2008, the risks and side effects of this model are well known.⁹⁷

⁹⁴ International Monetary Fund (IMF), *Greece: Staff Report for the 2019 Article IV Consultation* (Washington D.C., IMF, 2019), <https://www.imf.org/en/Publications/CR/Issues/2019/11/14/Greece-2019-Article-IV-Consultation-Press-Release-Staff-Report-and-Statement-by-the-48806>.

⁹⁵ Furman and Summers, "A Reconsideration of Fiscal Policy in the Era of Low Interest Rates".

⁹⁶ The most extreme version of this was known as NINJA loans: mortgage loans for borrowers with **No Income, No Job, no Assets**.

⁹⁷ Colin Crouch, "Privatised Keynesianism: An Unacknowledged Policy Regime", *The British Journal of Politics and International Relations* 11, no. 3 (August 2009): 390.

If, on the other hand, one wants to increase demand without increasing private debt (and, by hypothesis, without adding to the public debt), there are **non-fiscal, structural levers that** can be used. These include, in particular, the **distribution of wealth and income**, as well as the **savings rate of society as a whole**:

- Poorer and lower-income households have a higher marginal propensity (MPC) to consume than richer and higher-income households (see Figure 4). The more equal income and wealth are distributed, the higher the structural level of demand of an economy. A high structural level of demand in turn reduces the need for public deficits: full capacity utilisation is already achieved at a lower level of debt and deficits. The more unequal the distribution, on the other hand, the higher the need for deficits and debt. Atif Mian has studied the relationship between rising debt (of households and governments) and increasing wealth concentration in the US. He found exactly this mechanism: the higher inequality, the higher the credit intensity of growth, i.e. the higher the deficits needed to generate growth and run the economy at full capacity.⁹⁸

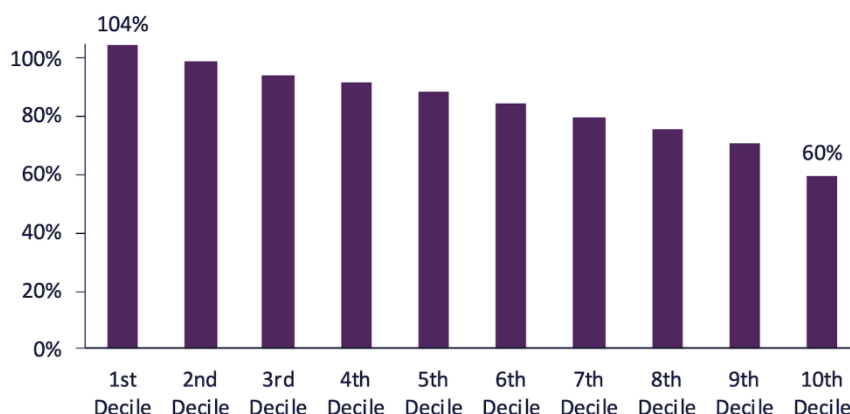


Figure 4: Consumption rate as % of net household income

Data: DIW

- A second structural feature of the economy that influences the debt level and interest costs at which full capacity utilisation is achieved is the private savings rate. If, as in Germany, both the government and the private sector save, the gap in demand can only be closed by a trade surplus. This however only shifts the debt problem abroad, as those who import more than they export have to get into debt. If the goal is to achieve an economy running at full capacity

⁹⁸ Atif Mian, "How to think about finance?" (Policy Brief 7, Economists for Inclusive Prosperity, February 2019), <https://econfp.org/policy-briefs/how-to-think-about-finance/>.

with as little debt as possible, in addition to a more equal distribution of income and wealth, the general savings rate (the saved share of income) should be lowered, for example through a strengthened welfare state that reduces the need for precautionary saving.

Hence, if there is a way to limit the need for debt in the long run—without running the economy into the ground—it is not through overly restrictive fiscal policy, but rather through thoughtful measures for evenly distributed wealth gains. Structural reforms such as the reintroduction of a wealth tax or a more progressive income tax are doubly effective:⁹⁹ they reduce the budget deficit directly without slowing down demand (since the consumption behaviour of the wealthy changes little even in the face of higher taxes). At the same time, they can raise the structural level of aggregate demand by tending to equalise the distribution of income. Any effects on investment demand can be offset by interest rate cuts, fiscal investment incentives or public investment.

A coherent fiscal policy can thus resort to structural reforms such as progressive taxation of high incomes and wealth to combine the goals of full capacity utilisation and limiting government (as well as private) debt levels.¹⁰⁰ Rising wages through full capacity utilisation would further reduce the deficit- and debt levels required to sustain full utilisation, as they too would raise aggregate demand. Reducing debt via contractionary fiscal policy, on the other hand, is a counterproductive tool: in the context of secular stagnation, it lowers output and reduces debt levels, if at all, only with considerable collateral damage. It directly contradicts the goal of keeping the economy running at full capacity on a sustained basis and is therefore not an adequate option in view of the challenges described at the beginning.

7. A NEW FISCAL POLICY FRAMEWORK BUILT ON THREE PILLARS AND GUARDED BY A WATCHMAN

To recap: The core of our proposal is that a new fiscal policy for Germany should move away from a stabilisation approach and instead aim for full capacity utilisation; this means a role reversal between fiscal and monetary policy, as well as the use of demand-side structural reforms (instead of the fiscal balance) to control the risk of excessive debt. What might a new fiscal policy for Germany look like that puts this paradigm into practice?

⁹⁹ In the case of Germany, it would be important to include corporate assets in this tax. In Germany, wealth inequality is driven mainly by rising corporate profits and goes hand in hand with rising income inequality, see Mai Dao, "Wealth Inequality and Private Savings: The Case of Germany" (IMF Working Paper No. 20/107, International Monetary Fund, June 1, 2020), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3652495.

¹⁰⁰ The fiscal policy approach advocated here therefore sees taxes not only as a source of revenue, but also as a means of influencing the relationship between overall leverage in the economy, and aggregate demand.

7.1 The watchman: a new interest rate indicator for fiscal sustainability

A fiscal policy that seeks to advance rapidly towards its desired goals—in this case a full-capacity-utilisation-, productive, and sustainable economy—needs an attentive watchman, in case obstacles emerge on the road ahead. In particular, in a monetary union like the EU, issuing government bonds involves the risk of future interest cost increases.¹⁰¹ To recognise this risk soon enough to allow for an effective response, an indicator that signals emerging risks *early enough* is required.

If one observes only or primarily the **debt-to-GDP ratio**, however, an increase in financing costs will be noticed very late. In Figure 5, we simulate a change in interest rates to compare different indicators that could act as watchman. For years one to four, a low interest environment akin the current one persists. Starting in year five, interest rates rise again, by 20 basis points per annum. But it is not until 13 years later, in year 18, that this feeds through to the debt-to-GDP ratio. Hence using the debt-to-GDP ratio to conduct forward-looking fiscal policy is a bit like looking in the rear-view mirror to anticipate potholes, roadblocks, or other obstacles.

As mentioned above, Furman and Summers propose a different safety measure: capping **real interest costs at 2% of GDP**. However, it might be difficult to comply with this limit once it becomes relevant, especially if a country starts off with very low interest costs. In our example, the 2% threshold of the interest/GDP ratio is not exceeded until year 23 (not shown). To stabilise interest costs thereafter, an annual primary surplus of 8% of GDP would be required after that point. This is hardly achievable.¹⁰² A similar problem, incidentally, casts further doubt on the debt-to-GDP ratio: here, too, a very steep annual primary surplus may suddenly be required once an allegedly critical threshold is breached.

An indicator at once more sensitive and sensible would be the **increase in interest payments in relation to the budget**.¹⁰³ This ratio visibly starts to move in year eight (see Figure 5, Interest rate ratio). At this time, in year eight, interest costs as a share of the budget are still low. Thus, it is not necessarily advantageous to limit the primary deficit from here onwards to limit financing cost. However, one could imagine a requirement for the government to (re)evaluate its fiscal policy strategy at

¹⁰¹ Whether, in addition to interest cost risks, liquidity or roll-over risks exist depends on the precise design of the monetary regime (we assume an absence of substantial foreign currency debt). Due to the expansion of the ESM, liquidity risks in the euro area are now largely a political choice and are therefore not discussed here.

¹⁰² The size of the fiscal turnaround needed is the result of two factors reinforcing each other: First, over the eighteen-year period (from the rise in interest rates until the threshold is hit), a large part of the bond portfolio matures and is reissued and rolled over. This means that most bonds now have a higher coupon, which the government has to pay until the bonds mature again. Secondly, the further rise in interest rates, which would be quite possible in such a scenario, reinforces this dynamic.

¹⁰³ We prefer the budget rather than GDP in the denominator of the interest rate ratio, as this indicator should behave less pro-cyclically: While the budget grows in a downturn due to automatic stabilisers, an abrupt drop in GDP could lead to a sudden breach of the threshold and trigger pro-cyclical policies.

this point, and to present to parliament how it intends to proceed, given changed financing conditions. This could, for instance, be the right time to consider distributional structural reforms, such as those mentioned above. Such a procedure would be akin to central banks reviewing their strategies when macroeconomic circumstances have changed.¹⁰⁴

Assumptions	
Growth	1%
Debt-to-GDP ratio	100%
Central government budget/GDP	10%
Deficit	0%
Average duration of government bond portfolio	7
Bond yield in year 1	-0,50%
Change in bond yield (BPs) from year 5, per year	0.20pp
Initial financing costs of the bond portfolio	0,80%

¹⁰⁴ See "Questions and answers on the strategy review", European Central Bank, accessed May 3, 2021, <https://www.ecb.europa.eu/home/search/review/html/questions.en.html> and "Review of Monetary Policy Strategy, Tools, and Communications", Federal Reserve, accessed May 3, 2021, <https://www.federalreserve.gov/monetarypolicy/review-of-monetary-policy-strategy-tools-and-communications.htm>.

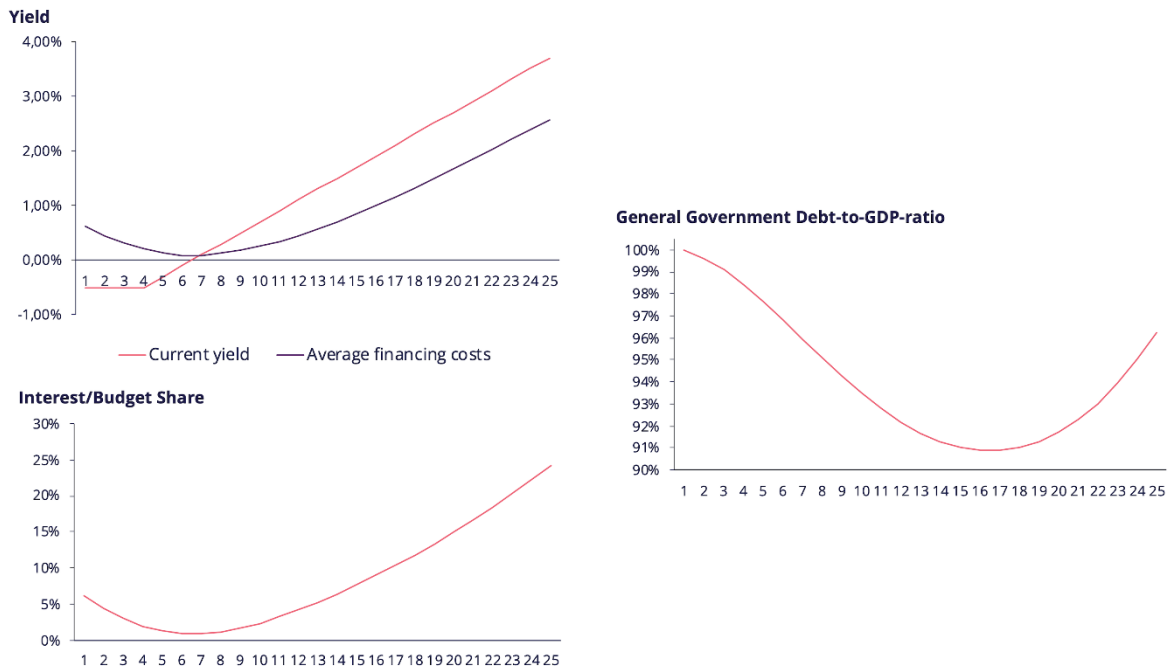


Figure 5: Possible “watchman” indicators: government bond yield, share of interest payments in the budget, general government debt-to-GDP ratio; x-axis: years.

Data: Own calculations

The precise design of the interest rate indicator and the determination of the threshold value should depend on the specific government debt profile. In 8.1 we present a proposal for Germany.

7.2 The three pillars of a new fiscal policy

As long as the interest rate indicator is not triggered, the fiscal policy regime could be based on three main pillars, which together aim to achieve **sustainable full capacity utilisation** and the implementation of political objectives, such as **decarbonisation**. The three pillars are:

1. **A coordination of fiscal and labour market policy;** fiscal policy should support good jobs and decent wages, via ensuring an appropriate level of aggregate demand
2. **More effective automatic stabilisers;** these can prevent scaring of the economy as a result of downturns
3. **Productive investment** as a foundation for good, sustainable work tomorrow, and to ensure that tight labour markets do translate into productivity gains.

Coordinated fiscal and labour market policy

Today, labour market policy is mainly pursued via direct measures, such as the introduction of a minimum wage or a right to return from part-time to full-time work. These are necessary, as there are always micro-frictions in labour markets.

But in addition to direct intervention, fiscal policy can make a large difference. J.W. Mason and Andrew Bossie, in their study of the U.S. economy during World War II, show the potential of a high-pressure economy to drive strong labour market outcomes: At the time, the U.S. government massively increased its spending on war industries; military spending between 1940 and 1944 increased by 70% of 1940 GDP. Contrary to expectations, the U.S. economy experienced rapid growth. Mass-producing military goods and fielding an army of millions was not enabled by restrained consumption and the downsizing of civilian production, but rather by the rapid growth of productivity and the labour force. It was not only the 13 million people who found work in war production or in the military, who were paid directly by the state, who benefited economically. Salaries in low-wage civilian sectors such as agriculture, textiles and the food industry grew even faster than in the war industries, as the supply of labour became scarcer.^{105, 106} “Despite the lack of direct redistribution through taxes and transfers, the war years saw by far the greatest compression of incomes in US history”, according to Mason and Bossie.¹⁰⁷ This succeeded in part because the additional government demand mobilised those who previously were outside the (wage) labour force, or earned very low incomes: The unemployed, women and those employed in agriculture.¹⁰⁸

There are large differences between the US in the 1940s and Germany today. While US unemployment was still at 15% in 1940, it had fallen to 5% in Germany by 2019.¹⁰⁹ However, the massive import deficit (or the massive export surplus) that Germany's existing fiscal policy has been enabling for years shows that there is plenty of room for boosting demand here and now, too. Likewise, the economic dependency ratio and the large low-wage sector indicate that the German labour market is not working at full capacity. And what the US example shows in any case: Fiscal policy can have a significant impact on a country's potential output, through the interplay of government (which creates

¹⁰⁵ J.W. Mason and Andrew Bossie, "Public Spending as an Engine of Growth and Equality: Lessons from World War II" (Working Paper, Roosevelt Institute, September 2020), 8, https://rooseveltinstitute.org/wp-content/uploads/2020/09/RI_LessonsfromWWIIPart2_WorkingPaper_202009.pdf.

¹⁰⁶ *Ibid*, 25.

¹⁰⁷ *Ibid*, 28.

¹⁰⁸ *Ibid*, 11.

¹⁰⁹ US: "Labor Force Statistics from the Current Population Survey", Bureau of Labor Statistics Series, ID LFU21000100, accessed May 3, 2021, <https://data.bls.gov/pdq/SurveyOutputServlet>. Germany: Bundesagentur für Arbeit, "Jahresrückblick 2019", published January 1, 2020, accessed May 3, 2021, <https://www.arbeitsagentur.de/presse/2020-02-jahresueckblick-2019>.

demand) and the market mechanism (which transmits the increased demand into the capillaries of the economy and the labour market).

Mason and Bossie wrote their paper to show the economic opportunities that decarbonisation offers today, when combined with full capacity utilisation macroeconomic policy. Furthermore, societal and demographic changes in Germany have the potential to greatly increase demand in social services: If one strives for equal opportunities for women and men in the workplace, this requires a corresponding social infrastructure including day-care centres and schools. In addition, a society that wants its elderly to live in dignity requires sufficient nursing and medical care. Both child- and elderly care require more personnel and corresponding funding. Since the state not only pays a significant number of workers directly in these sectors, but also sets wages and prices for other providers, it has several means at its disposal to create good jobs with decent wages. In doing so, it not only stimulates demand in the respective sectors, but also sets a minimum standard for other occupations: Workers provided with worse conditions would have an incentive to leave and switch to the social services sector.¹¹⁰

¹¹¹ Thus, focusing fiscal labour market policy on the social services sector—as the Biden infrastructure plan proposes to do in the US—could be a targeted way of lifting labour market participation, hours worked, as well as wages and productivity.

Automatic stabilisers

Automatic stabilisers are public expenditures and revenues that offset cyclical fluctuations without active government intervention. They include revenues that decrease/increase in a downturn/upswing and expenditures that increase/decrease in a downturn/upswing.¹¹² The aim of automatic stabilisers is to prevent downturns from leading to permanent reductions in potential output and to reduce inflation risks in boom times. Effective automatic stabilisers are particularly important when the ability of monetary policy to steer the economy is limited, either by a monetary union or because monetary policy has reached the *effective lower bound*. Five aspects seem central to their design:

¹¹⁰ It can of course be argued that more money will not necessarily lead to more labour mobilisation, since there is already a shortage of skilled workers in the areas mentioned. However, this overlooks the fact that in elderly care, for example, only 29% of employees work full-time. The reasons for this include workload and health problems in addition to caring for family members. See Federal Statistical Office (Destatis), *Pflegestatistik 2019* (Wiesbaden: Destatis, 2019), https://www.destatis.de/DE/Themen/Gesellschaft-Umwelt/Gesundheit/Pflege/Publikationen/Downloads-Pflege/pflege-deutschlandergebnisse-5224001199004.pdf?__blob=publicationFile and Karl Blum, Matthias Offermanns and Petra Steffen, *Situation und Entwicklung der Pflege bis 2030* (Düsseldorf: Deutsches Krankenhaus Institut (DKI), 2019), https://www.dki.de/sites/default/files/2019-10/DKI%202019%20-%20Pflege%202030%20-%20Bericht_final_0.pdf.

¹¹¹ Elderly care and education are already among the most popular retraining occupations in Germany: "Neustart durch Umschulung - die zehn beliebtesten Umschulungsberufe", Kursfinder, accessed May 3, 2021, <https://www.kursfinder.de/ratgeber/die-10-beliebtesten-umschulungsberufe/>.

¹¹² Olivier Blanchard and Lawrence H. Summers, "Automatic Stabilizers in a Low-Rate Environment" (Working Paper 20-2, Peterson Institute for International Economics, 2020), <https://www.piie.com/system/files/documents/pb20-2.pdf>.

1. Automatic stabilisers should stabilise demand as effectively and comprehensively as possible. Sebastian Gechert and Ansgar Rannenberg have shown that spending multipliers exceed tax multipliers, especially in crises.¹¹³ For the US, direct purchases by the government have the highest multipliers, followed by transfer payments to state and local governments and individuals.¹¹⁴ Payments to low-income individuals are particularly effective because—as described above—the marginal propensity to consume is highest for low incomes.
2. The aim of automatic stabilisers should be to preserve the *productive* potential of the economy as much as possible, without promoting inefficiencies. Thus, one danger of the German *Kurzarbeit* furlough scheme (under which companies can temporarily cut their employees hours and salaries, which are then topped up by the government; under the extended short-time work allowance activated in crises such as the Covid-19 pandemic, the government also covers social security contributions) lies in slowing down the reallocation of labour to more productive uses.¹¹⁵ For this reason, Enzo Weber proposes coupling the extension of *Kurzarbeit* or of government paying social security contributions to training schemes.¹¹⁶ In addition, *Kurzarbeit* neither covers marginal workers nor the self-employed—of whom there are more than four million in Germany—and therefore does not provide a comprehensive safety net.
3. Triggers played a minor role in the past, as the focus was on 'fully' automatic stabilisers such as income tax or social benefits. Today, however, this is no longer seen as sufficient for major downturns. For example, Blanchard or the ECB advocate the development of semi-automatic stabilisers:¹¹⁷ these are automatic in the sense that their trigger is determined by a rule, but not fully automatic, as they are only activated during downturns. According to Blanchard, such triggers should preferably be based on unemployment and not on GDP. An example would be the Sahm Rule recession indicator, which is activated when the three-month moving average of the unemployment rate increases by at least 0.5 percentage points compared to its lowest level

¹¹³ Sebastian Gechert and Ansgar Rannenberg, "Which Fiscal Multipliers are Regime-Dependent? A Meta-Regression Analysis", *Journal of Economic Surveys* 32, no. 4 (September 2018): 1160-1182.

¹¹⁴ Heather Boushey et al., "The Damage Done by Recessions and How to Respond", in *Recession Ready: Fiscal Policies to Stabilize the American Economy*, ed. Heather Boushey, Ryan Nunn and Jay Shambaugh (Washington D.C.: Brookings Institution, 2019), 26.

¹¹⁵ Pierre Cahuc, "Short-time work compensation schemes and employment: Temporary government schemes can have a positive economic effect" (Working Paper, Forschungsinstitut zur Zukunft der Arbeit (IZA), 2019), <https://wol.iza.org/uploads/articles/485/pdfs/short-time-work-compensations-and-employment.pdf?v=1>.

¹¹⁶ Enzo Weber, "Qualification: Further training concept for crises", *Wirtschaftsdienst* 101, no. 3 (March 2021): 154.

¹¹⁷ See for example "5. Towards a second generation of automatic fiscal stabilisers" in Othman Bouabdallah et al, "Automatic fiscal stabilisers in the euro area and the COVID-19 crisis", *ECB Economic Bulletin*, no. 6 (2020), https://www.ecb.europa.eu/pub/economic-bulletin/articles/2020/html/ecb.ebart202006_03~3175750a6d.en.html#toc8 or Blanchard and Summers, "Automatic Stabilizers in a Low-Rate Environment".

within the last twelve months.^{118, 119} Claudia Sahm suggests using this indicator as a trigger for cyclical direct payments to individuals.¹²⁰

4. Automatic stabilisers should be set up in such a way that they take effect as quickly as possible. This makes major investment projects that require significant lead times for procurement, contracting, etc. largely unsuitable, even if project plans already exist. Similarly, taxes that have to be paid in advance on the basis of past revenues and are refunded only following the submission of tax declarations for the respective year are problematic. To mitigate this issue, the German tax authorities both enabled adjusting advance tax payments and claiming refunds during the ongoing tax year to smoothen the impact of the Covid-19 crisis.¹²¹
5. Automatic stabilisers must be able to work in practice and not be restricted by liquidity shortfalls or institutional factors such as fiscal rules, especially in crises. Therefore, they should be located at the (supra)national level if possible: Liquidity shortfalls are least likely in the case of (well-rated) sovereign bond issuers, for whom financing costs tend to fall rather than rise during crises, due to the *flight to safety* phenomenon. A good example of this is the German *Kurzarbeitergeld*, the furlough scheme mentioned above, which not only sits at the federal level but is also paid for by the Federal Employment Agency, which is not subject to the debt brake.¹²² In contrast, local trade tax (the *Gewerbesteuer*) is a more problematic stabiliser, since it directly funds municipal spending. Municipalities are both subject to their *Land's* (federal state) budget law, which in most cases prohibits debt for non-investment purposes, and have much less favourable and more uncertain borrowing conditions than the federal government; maintaining spending levels in the face of tax revenue shortfalls thus becomes difficult.

Productive public investment

Public investment is often considered in isolation from the labour market, even though it only becomes productive through labour and should hence be thought of in connection with the latter. In a

¹¹⁸ Blanchard and Summers, "Automatic Stabilizers in a Low-Rate Environment".

¹¹⁹ "Sahm Rule Recession Indicator," Federal Reserve Bank of St. Louis, accessed May 3, 2021, <https://fred.stlouisfed.org/series/SAHMCURRENT>.

¹²⁰ Claudia Sahm, *Direct Stimulus Payments to Individuals* (Washington D.C.: Brookings Institution, 2019), https://www.brookings.edu/wp-content/uploads/2019/05/ES_THP_Sahm_web_20190506.pdf.

¹²¹ "Steuerliche Hilfen für Unternehmen und Beschäftigte", Federal Ministry of Finance (BMF), accessed 3 May, 2021, <https://www.bundesfinanzministerium.de/Content/DE/Standardartikel/Themen/Schlaglichter/Corona-Schutzschild/2020-03-19-steuerliche-Massnahmen.html>.

¹²² The BA's budget balance is not restricted by the debt brake. If the BA runs a deficit, it takes out a loan from the federal government. This is a financial transaction, since only an exchange of assets (liquidity against loan contract) takes place. Since financial transactions are not covered by the debt brake, the BA has secure and unrestricted access to liquidity in crises via the federal government.

knowledge-based society like Germany's, investment in education has the biggest medium-term return from a budgetary perspective.¹²³ Yet, in budgetary practice, investment is often only defined as the acquisition of fixed or financial assets. This applies both in European and German budgetary accounting.¹²⁴ Where this is the case, the definition should be adjusted so as not to exclude the most productive investments. From an economic perspective, it would be ideal to be able to prioritise investments ex ante. Yet, that is hardly possible based on a quantitative ranking, since all established methods for calculating returns on investment depend heavily on arbitrary assumptions.¹²⁵ For many investments, however, this is not decisive: whether a school building is refurbished, for example, should hardly depend on its relative return. What matters for investments whose benefits are not subject to great uncertainty is above all predictable financing and stringent implementation. Delivering such investment well thus primarily requires a steady provision of funds and careful implementation, rather than the optimisation of cost-benefit-calculations.¹²⁶

Investment in innovation is mostly of a different nature: Its productivity is unknown ex ante. It can also hardly be estimated by cost-benefit-calculations that assume a static environment: Fundamental innovations often bring about systemic change. An example would be the federal government's investment in the mRNA vaccine manufacturers Biontech and CureVac, which contributed significantly to the German biotech sector growing by 36% in 2020,¹²⁷ and, via enabling a faster relaxation of pandemic-related health measures, to overall economic performance in 2021 and beyond. Rainer Kattel et al. suggest looking at the dynamic efficiency of such investment for evaluation, i.e. to set a goal and continually optimise over time how resources are optimally deployed to achieve that goal.¹²⁸ Especially for systemic investments in decarbonisation, such approaches should play a central role.

Three pillars and a watchman: this is the possible shape of a new, goal-oriented fiscal policy framework. It consists of the three pillars of productive investment, effective automatic stabilisers and a

¹²³ Tom Krebs and Martin Scheffel, *Public Investment and Inclusive Growth in Germany* (Gütersloh: Bertelsmann Stiftung, 2017), https://www.bertelsmann-stiftung.de/fileadmin/files/BSt/Publikationen/GrauePublikationen/NW_Oeffentliche_Investitionen_und_inklusives_Wachstum.pdf.

¹²⁴ See for example Eurostat, "European system of accounts (ESA 2010)" (Luxembourg: Eurostat, 2013), <https://ec.europa.eu/eurostat/documents/3859598/5925693/KS-02-13-269-EN.PDF/44cd9d01-bc64-40e5-bd40-d17df0c69334> and Bundeshaushaltsordnung.

¹²⁵ Florian Misch and Peter Wolff, "The Returns on Public Investment: Concepts, evidence and policy changes" (Discussion Paper 25/2008, German Development Institute, 2008), 12, https://www.die-gdi.de/uploads/media/DP_25.2008.pdf.

¹²⁶ International Monetary Fund (IMF), *Making Public Investment More Efficient* (Washington D.C.: IMF, 2015), 21, https://infrastructuregovern.imf.org/content/dam/PIMA/Knowledge-Hub/Publications/MakingPublicInvestmentMoreEfficient_May2015.pdf.

¹²⁷ Die Zeit, "Biotech industry records boost: Money for growth scarce", *Die Zeit*, April 20, 2021, <https://www.zeit.de/news/2021-04/20/biotech-branche-verzeichnet-schub-geld-fuer-wachstum-knapp>.

¹²⁸ Rainer Kattel et al., "The economics of change: Policy appraisal for missions, market shaping and public purpose" (IIPP WP 2018-06, UCL Institute for Innovation and Public Purpose, 2018), <https://www.ucl.ac.uk/bartlett/public-purpose/wp2018-06>.

full capacity utilisation fiscal policy. For risk management, it is flanked by an attentive watchman, the interest rate indicator, which sounds the alarm in time whenever circumstances change. Taken as a whole, such a fiscal policy framework not only stabilises but contributes to *maximising* potential output. Over time, this would help the economy to meet the challenges of demographic change, decarbonisation and external balance.

In the following, we outline what the first steps towards such a fiscal policy regime could look like for Germany.

8. REFORM OPTIONS FOR GERMAN FISCAL POLICY

The following reform options show how German fiscal policy could be adapted to today's challenges, in line with the latest research. Importantly, none of our proposals involve changing the Constitution.

Nevertheless, these proposals should be seen as no more than a first step towards a goal-oriented fiscal policy. A full capacity utilisation fiscal policy requires, in the medium term, that the very architecture of rules built around output gaps, however calculated, should be abandoned. Instead, an **inductive approach** should be adopted. A new set of indicators (see 7.2) should be constructed to show how close the economy is to full capacity. Given the inherently limited knowledge we have about the production and development possibilities of the German and European economies, a gradual fiscal expansion approach could then be adopted to approach this goal: In normal times, the deficit would, for as long as the interest rate alarm does not go off, be increased in small steps until the economy reaches full capacity and inflation starts to occur. (This would require the abolition of the debt brake.) In crisis times, as in the USA during the COVID-crisis, needs-based deficits could be run, the size of which would go beyond what is necessary from a macroeconomic full capacity utilisation perspective.

Since economies are complex adaptive systems,¹²⁹ and since the structural changes resulting from reforms can only be predicted to a very limited extent, we believe it makes more sense to derive further reform steps from a **medium-term fiscal policy strategy review**, rather than committing to a fixed reform path a priori. By pursuing such an inductive approach, fiscal policy would follow the example of central banks in recent years.¹³⁰

¹²⁹ _ Owen Barder, "Development & Complexity" (Lecture, Center for Global Development, May 2012), <http://www.owen.org/wp-content/uploads/Development-and-Complexity-Slides.pdf>.

¹³⁰ Both the ECB and the Federal Reserve took the change in macroeconomic conditions as an opportunity to conduct a strategy review. See "Questions and answers on the strategy review", European Central Bank, accessed 3 May, 2021, <https://www.ecb.europa.eu/home/search/review/html/questions.en.html> and "Review of Monetary Policy Strategy, Tools, and Communications", Federal Reserve, accessed May 3, 2021, <https://www.federalreserve.gov/monetarypolicy/review-of-monetary-policy-strategy-tools-and-communications.htm>.

In the short term, we propose the following package of measures. We consider these reforms urgent to orient German fiscal policy towards sustainability and to enable forward-looking policies.

8.1 From the debt-to-GDP to the interest rate ratio

We argued above that financing costs as share of the budget is a more sensitive, forward-looking indicator than the debt-to-GDP ratio. For Germany, we suggest that a **one percentage point increase in financing costs as a share of total budget expenditure** should be set as a threshold at which fiscal policy strategy needs to be re-evaluated. Specifically, this **interest rate indicator** would be triggered when the interest rate ratio has increased cumulatively by one percentage point since the last time it was triggered.

An example may help to illustrate how this indicator is calculated: in 1995, interest expenditures made up 10.7% of the budget, in 1996 11.2% and in 1997 12.1%. From 1995 to 1997, the calculation of the indicator would have followed the equation specified under (a) below. In this case, the interest rate indicator would have been triggered in 1997 because the interest rate ratio increased cumulatively by one percentage point. After that, the indicator would have been reset to zero and counting would have started again. The interest rate indicator for 1998 would have been calculated using the equation specified under (b). The negative values of the interest rate indicator in the following years are ignored to account for the asymmetric risk (rising financing costs are problematic, falling ones are not). In this case, the equation under (b) also applies. For example, from 1999 onwards, the last point at which the indicator would have been triggered and reset to zero, the interest rate ratio fell by a cumulative 2.3% until 2003. From 2003 to 2004, the interest rate ratio then rose by 0.1%. The indicator value for 2004 would have been 0.1% accordingly.

$$\text{a) } indicator_t = interest\ expense_t - interest\ expense_{t-1} + indicator_{t-1}$$

$$\text{b) EXCEPT IF: } indicator_{t-1} \geq 1Pp \text{ OR } indicator_{t-1} < 0Pp$$

$$\text{THEN: } indicator_t = interest\ expense_t - interest\ expense_{t-1} + 0$$

Had the indicator been used in the past, e.g. starting in 1985, it would have been triggered four times so far: in 1992, 1994, 1997 and 1999 (see Figure 6). Both in 1994 and 1999 this happened on the back of strong yield increases following interest rate hikes in the US. The still ongoing decline in financing costs commenced with the bursting of the dot-com bubble in early 2000.

From a historical perspective, the advantages and disadvantages of the indicator become clear: On the one hand, while the debt ratio reflects a higher interest rate level with significant delay, the interest rate indicator reacts much faster and thus provides more opportunities for *preventive* action. On the

other hand, it can also be driven by current events: If the indicator were to trigger automatic requirements (for example, the obligation to run a primary surplus), the German government would have had to start saving just as the dot-com bubble burst. This would probably have exacerbated the downturn. Thus, the indicator being triggered should only require the government to *re-evaluate its own fiscal strategy* and to *account to the Bundestag* for how it intends to deal with the rise in financing costs. It should not trigger any automatic requirements for fiscal consolidation.

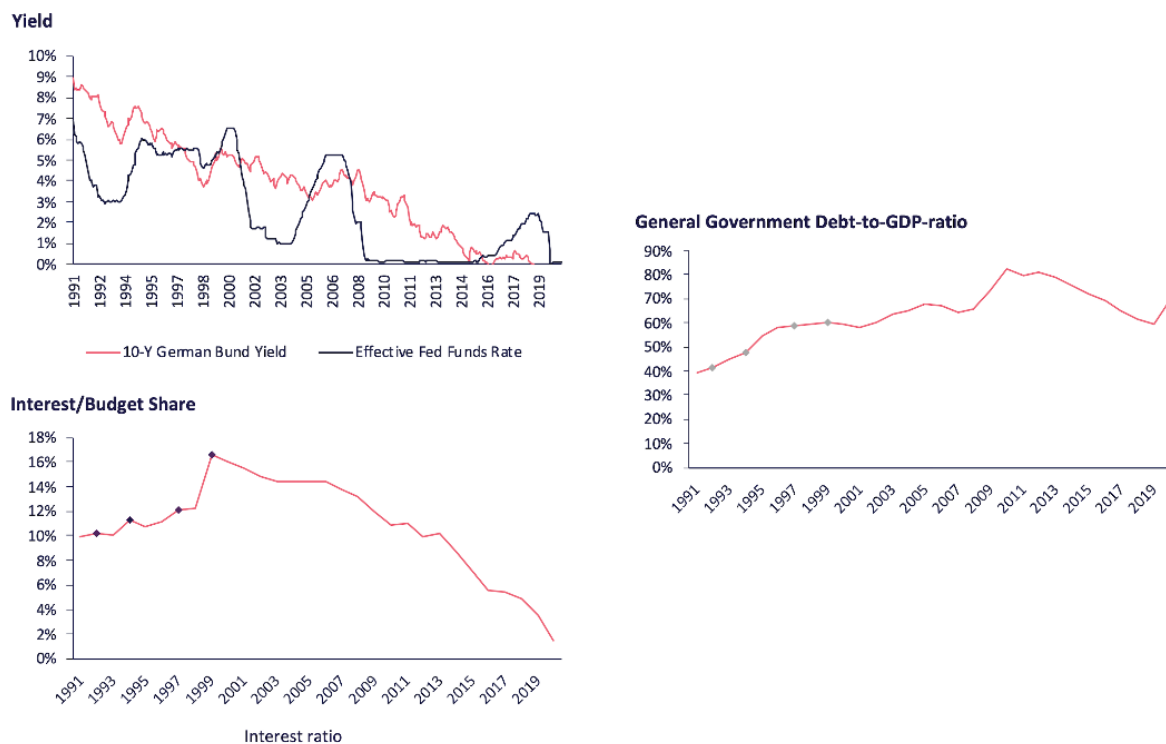


Figure 6: Triggering of the interest rate indicator in the past

Data: FRED, Bundesbank, BMF, DIW

So much for a historical perspective. In the following, we apply our interest rate indicator to possible future scenarios (see Figure 7). In both scenarios, growth of 1% and a primary deficit of -3% are assumed.

- The scenario "Financial Plan" corresponds to the bond yields implied in the Federal Government's Financial Plan 2020 to 2024, whose increases are then linearly extrapolated for 2025 to 2030. With a yield of 2.2% in 2030, this scenario is particularly cautious.
- The "Forward" scenario is based on the interest rate expectations implied in the EUR Eonia Forward 10y1y. The expected yield in 2030 is 0.35%.

In the "Financial Plan" scenario, the indicator is triggered for the first time in 2022. This is partly due to a sharply declining budget volume after the crisis (even under the "Forward" scenario, the interest

rate ratio rises by 0.9 percentage points), partly due to the assumed rapid rise in yields. This again shows why an automatism requiring certain budgetary measures once the indicator is triggered is not appropriate: the situation should certainly be monitored closely at this point, but the one-off effect of a post-Covid decline in budget size should be taken into account. As a result of a further rise in interest rates, the indicator is then triggered again in 2028 and 2030, confirming the trend that has been emerging since 2022. At this point, the indicator has been triggered three times within ten years and a "wait and see" response by the government will hardly suffice. In the "Forward" scenario, the interest rate indicator is only triggered in 2027, as a consequence of continued but gradual increases in the interest rate.

If the debt-to-GDP ratio is used to assess the situation, in contrast to the interest rate indicator, the different dynamics of the two scenarios would hardly be discernible: the difference between the debt-to-GDP ratios of the two scenarios amounts to only 1.7 percentage points in 2030.

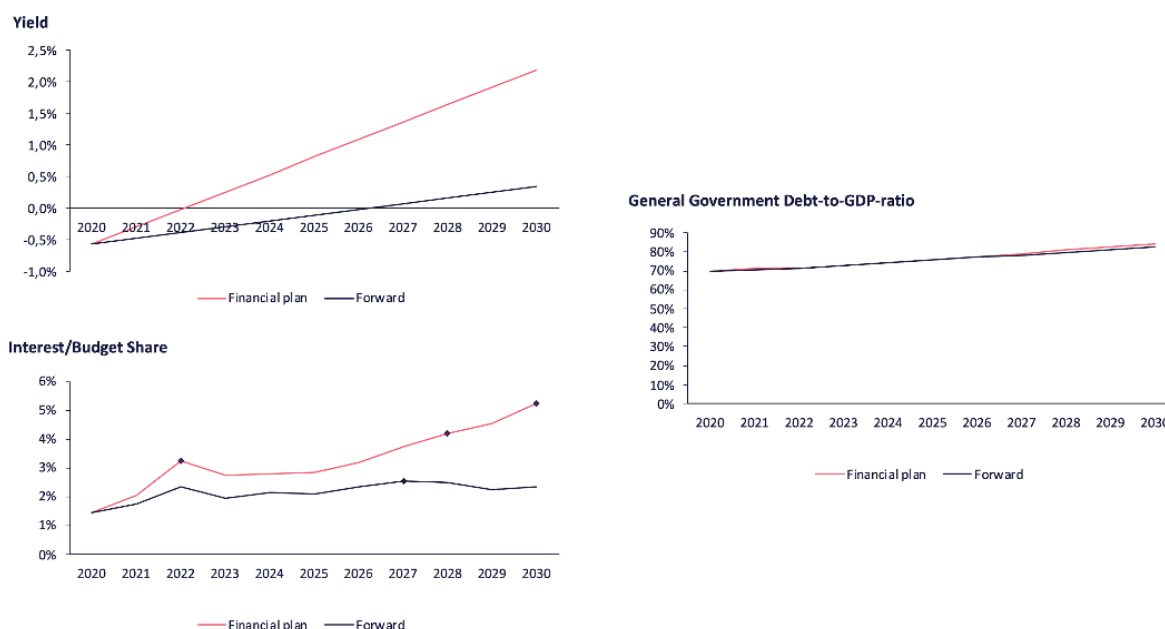


Figure 7: Projected triggering of the interest rate indicator for the interest rate scenarios "Financial plan" and "Forward"

Data: Finanzagentur, BMF, BMWi, Bundesbank, Bloomberg, Reuters, own calculations

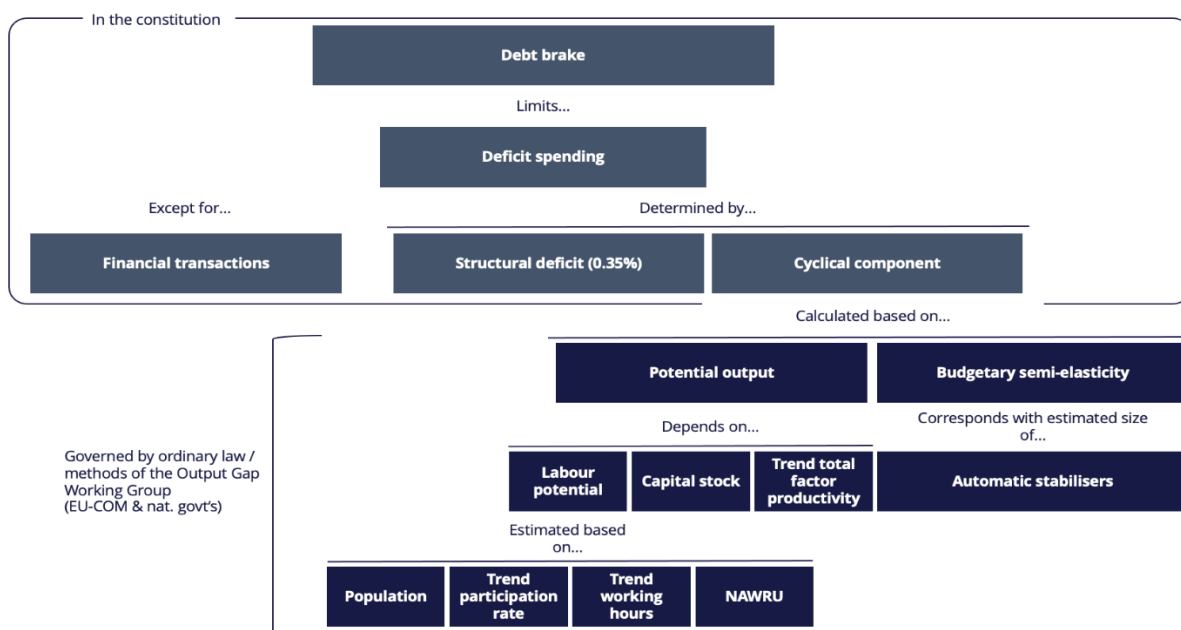
In other words, the interest rate indicator is a more attentive watchman than the debt-to-GDP ratio, which takes centre stage today. The new indicator could contribute significantly to identifying changing debt dynamics at an early stage. Therefore, it might strengthen supervision through the Stability Council to include this indicator in its key figures. Our recommendation is to include it and replace the currently observed interest-tax ratio with it (a potentially pro-cyclical indicator, since tax revenues fall during a crisis while they rise during a boom).

8.2 Moving from potential output to full capacity utilisation

As long as the interest rate indicator is not triggered, fiscal policy should pursue three goals: Full capacity utilisation and high productivity in the labour market; automatic stabilisers that can operate freely and cushion shocks; and sufficient public investment to ensure productivity gains in the future.

In order to achieve full capacity utilisation and high productivity in the labour market under the debt brake, we propose a **modification of the inputs to the calculation of potential output**. This would affect the size the “Konjunkturkomponente”, the cyclical component of the deficit permitted under the debt brake, and hence the permissible overall size of the deficit.¹³¹

Our proposal does not involve changes to the calculation method itself, in order to keep the hurdle for reform as low as possible. Moreover, the calculation of the cyclical component is governed by ordinary law, so no constitutional amendment would be required to implement our proposal (see Figure 8).¹³²



Sources: BMF, Ademmer et al. (2019), own

Figure 8: Legal and economic structure of the debt brake and the current calculation of potential output

Data: BMF, Ademmer et al. (2019), own illustration

¹³¹ For reasons of comparability, the following calculations use the annual macroeconomic dataset (AMECO) of the European Commission's Directorate General for Economic and Financial Affairs. All data used here are taken from the spring projection of 2020 and therefore already include the predicted economic slump due to the Covid-19 pandemic.

¹³² As long as the new simple law and regulation continue to comply with the provisions of the constitution.

Today, potential output is calculated based on the method developed by the European Commission in consultation with the member states. As discussed above, this method is adjusted regularly. Since potential output is unobservable, it has to be estimated, which in the EU method is done using a Cobb-Douglas production function approach:

$$GDP_{pot} = A * L^{0,65} * K^{0,35}$$

A denotes total factor productivity (TFP) of the production factors labour (L) and capital (K). The factor labour is of particular methodological interest here. It is calculated according to

$$L = Population_{15-74} * Participation\ rate * (1 - NAWRU) * Working\ hours$$

and is consequently measured as aggregated, average working hours at trend utilisation. This refers to the long-term trends of the individual variables, which are determined using various statistical filtering methods. The variable *NAWRU* stands for *non-accelerating wage rate of unemployment*, i.e. the estimated lowest possible unemployment rate at which wage inflation does not accelerate. According to theory, if the unemployment rate falls below the *NAWRU*, workers have too much bargaining power vis-à-vis employers due to the scarce supply of labour and can push through ever higher wage increases.

As stated above, potential output and labour potential feeding into its calculation are currently by and large extrapolated from historical trends. For this methodology to do justice to the term "potential", it must be assumed that the economy has steadily run at potential in the past. However, as explained in part 4.3 above, there are a wide variety of reasons why this is not necessarily the case. Therefore, we propose to modify the inputs for the calculation of potential output as follows, to move the estimate closer to actual potential output:

NAWRU: To move from *trend* to *full capacity utilisation* of the economy, we replace the *NAWRU* with a first proxy of full employment. There is still no uncontroversial conceptualisation of this term; classical estimates put it at an unemployment rate between two and three percent.¹³³ As a rough first proxy, we take actual unemployment and **deduct long-term unemployment** from it. The reason for this is that, while there will always be a degree of frictional, short-term and cyclical unemployment, in a state of full employment there should not be anyone looking for a job who is perennially unable to find one. For 2019, this measure yields an unemployment rate of 1.2% at potential, which is well below the *NAWRU* of 3.4% and also the values of 2 to 3% classically defined as full employment.

¹³³ E.g. William H. Beveridge and Charlotte Luetkens, *Full Employment in a Free Society* (Hamburg: Verlag für Wirtschaft und Sozialpolitik, 1946) or the German *Stabilitätsgesetz* (Stability Act, StabG) of 1967.

Participation rate: According to figures from Eurostat¹³⁴ and the German Federal Employment Agency, the labour force participation rate of men has been consistently above 80% since 2005, while that of women was consistently lower, by more than 10 percentage points at times.¹³⁵ Recently, in 2019, 83.5% of men participated in the labour market, but only 74.9% of women—a gap of 8.6 percentage points. In Sweden, this gap is only 3.4 percentage points, in Finland 3.3 and in Lithuania only 2.3 percentage points. In the following calculations, in accordance with Article 3 of the German constitution and in light of the figures from Northern Europe, a target value of **three percentage points** is aimed at for the participation gap between men and women.

Working hours: In Germany, almost twelve million people worked part-time in 2019,¹³⁶ with an average work week of 19.5 hours.¹³⁷ As part of the Labour Force Survey, which covers the entire European Union, people are asked why they work part-time.¹³⁸ When full-time work could not be found, caring for children or incapacitated adults was given as reason, or other family or personal obligations prevented full-time employment, we classify part-time as involuntary or non-essential. By this definition, 47.1% of part-time workers—or 5.6 million people—could have worked more in 2019. According to working time preferences also covered by the Labour Force Survey, most underemployed respondents would like to work ten additional hours. Since there is not a perfect mapping of responses on working hours to underemployed persons, this scenario is only considered as an upper limit. In a more conservatively estimated scenario, the weekly working time of involuntarily or non-necessarily underemployed is increased by five hours, i.e. one additional hour per day.¹³⁹

Fiscal space: The three modifications outlined here result in increased labour potential, which feeds into the potential output calculation: this increases the estimate of potential output and thus what is achievable under full capacity utilisation. Fiscal space consequently also increases. For 2023—the first year in which the debt brake takes effect again—the German Ministry of Economic Affairs (BMWi) projects a cyclical component of 4.5 billion euros. Full employment, an increased participation rate of women, and five additional hours of work per week for the underemployed would double it, each; ten additional hours per week would increase it by a further 4 billion euros, compared to the five-hour scenario. The combined scenario of full employment, higher female participation and five additional hours of work for the underemployed would **increase the cyclical component to just**

¹³⁴ Eurostat data key: lfsa_argan.

¹³⁵ The labour force participation rate measures the size of the labour force, i.e. the total of employed and unemployed persons, as a percentage of the total working age population. The latter, as defined by the International Labour Organisation, refers to the population aged 15-64.

¹³⁶ Eurostat data key: lfsa_epgaed.

¹³⁷ Eurostat data key: lfsa_ewhun2.

¹³⁸ Eurostat data key: lfsa_epgar.

¹³⁹ "Working Time Wishes 2019," Federal Statistical Office (Destatis), accessed March 18, 2021, https://www.destatis.de/DE/Presse/Pressemitteilungen/2020/11/PD20_468_133.html.

under 20 billion euros in 2023; assuming ten additional hours of work, it would amount to just under 24 billion euros. Based on today's GDP projections, the scenarios would result in permitted “cyclical” **deficits of 0.5% and 0.6% of GDP in 2023** (although the actual values would probably be lower ex post due to the positive effects of fiscal policy on growth), on top of the permitted structural deficit of 0.35% of GDP.

Limitations and outlook: Adjusting the inputs to calculate potential output would represent a significant improvement of the status quo; but is not sufficient in the medium to longer term. For further progress beyond this initial step, we propose a strategy for inductively pursuing a full capacity utilisation target, which takes into account both more granular labour market data and wage development. To this end, on the one hand, unemployment and employment rates should be minimised/maximised inductively by carefully increasing demand until price increases occur; on the other hand, a dashboard of threshold values for the participation of women, part-time, low-wage and temporary employment should be set, to be monitored with a traffic light system. As long as the values are within the permissible range, the "labour market traffic light" would be green and policy could focus solely on headline labour and employment rates.

8.3 Effective automatic stabilisers

In addition to potential output, the cyclical component (CC) depends on the budgetary semi-elasticity (SE):¹⁴⁰

$$CC = SE * (GDP - GDP_{pot})$$

The budgetary semi-elasticity measures the relative impact of a deviation of output from its potential on the federal government's budget balance, i.e. net lending/borrowing, measured as a percentage of GDP. For the German government as a whole, the semi-elasticity is 0.5, for the federal government 0.203.¹⁴¹ Intuitively, this means that the federal budget may compensate, via additional borrowing, around 20 cents for each euro "lost" when the economy is falling short of potential output. The size of the semi-elasticity is not based on some theoretically optimal value, but on the estimated *actual* impact of the business cycle on the fiscal balance *without discretionary policy interventions*.

Using the semi-elasticity in this manner entails three difficulties: First, it is difficult to measure, partly because different types of shocks may have very different effects on the economy and thus on the budget. Second, there is no theoretically optimal value to which it could be aligned. And thirdly, it

¹⁴⁰ The budgetary semi-elasticity is often written as (ϵ) in the literature.

¹⁴¹ Federal Ministry of Finance (BMF), "Allocation of the 2018 recalculated budget semielasticity to the federal government, Länder, municipalities and social security funds", in *Monthly Report April 2019* (Berlin: BMF, April 2019), <https://www.bundesfinanzministerium.de/Monatsberichte/2019/04/Inhalte/Kapitel-3-Analysen/3-6-budgetsemielas-tizitaet.html>.

remains unclear whether the automatic stabilisers are actually allowed to operate at the scale suggested by the semi-elasticity, especially in large downturns and in federally organised states. Hard budget constraints (be it due to debt prohibitions as at the state level¹⁴² or limited access to liquidity as is often the case at the municipal level) may cause the actual changes in the fiscal stance to be smaller than expected, e.g. because lower tax revenues are offset by compensatory spending cuts. For example, as a result of the Covid-19 crisis, the city of Munich decided to postpone around one billion euros in school construction investments until after 2025.¹⁴³

Instead of trying to define the appropriate size of the semi-elasticity, it seems more useful to ensure that the automatic stabilisers meet the criteria outlined under 7.2 of (1) maximum effectiveness, (2) comprehensive preservation of productive potential, (3) well designed triggers, (4) timeliness and (5) being allowed to function in practice, as well as having as few undesirable side effects as possible.

In the long term, making the currently existing automatic stabilisers fully functional and reducing undesirable side effects such as declining investment would require a reform of the financial relations between the federal government and state-level governments in Germany, as well as a sounder financial foundation for municipalities. In the short term, investment vehicles that do not fall under the debt brake can increase fiscal space (see 8.4 for options).

In addition, automatic stabilisers could, for example, be extended to include a cyclical progressive adjustment of social contributions (see for instance the proposal by the DIW on this¹⁴⁴).¹⁴⁵ This would reduce the comparatively high social insurance contribution rate on low incomes in Germany in periods of economic weakness and thus support domestic demand. The incentive of employers to lay off low wage earners would also be weakened. Alternatively, a counter-cyclically fluctuating (per capita) carbon dividend could be paid out.¹⁴⁶ The advantage over the previous proposal would not only be the explicit promotion of a societal goal, but also that direct payments to individuals trigger

¹⁴² The debt brake of the German Länder does not allow any structural deficits. The cyclical component, which in principle allows for deficits in order to stabilise spending and hence growth over the cycle, is calculated differently depending from federal state to federal state. In some cases, procedures are used that make cyclically induced net borrowing practically impossible (for example in Saxony).

¹⁴³ Jakob Wetzel, "Die Schulbauoffensive gerät ins Stocken", *Süddeutsche Zeitung*, November 17, 2020, <https://www.sueddeutsche.de/muenchen/muenchen-coronakrise-schulbau-verzoegerungen-1.5117334>.

¹⁴⁴ Stefan Bach, Peter Haan and Michelle Harnisch, *DIW Wochenbericht: Progressive Sozialbeiträge können niedrige Einkommen entlasten* (Berlin: DIW, 2020), https://www.diw.de/documents/publikationen/73/diw_01.c.581472.de/18-13-3.pdf.

¹⁴⁵ This would probably even be possible without expanding the semi-elasticity used for calculating the debt brake, since the social security system is not covered by the debt brake.

¹⁴⁶ Philippa Sigl-Glöckner, "A Debt Brake for the 21st Century", *Makronom*, December 17, 2020, <https://makronom.de/fiskalpolitik-reform-eine-schuldenbremse-fuer-das-21-jahrhundert-37885>.

a greater consumption effect than reduced levies.¹⁴⁷ Since wealthier households have a larger CO₂ footprint, the distributional effects would be progressive as well, in addition to the highly targeted consumption support effect.¹⁴⁸ Finally, the current *Kurzarbeitergeld*, i.e. furlough scheme, could be developed further to include an automatic trigger that would activate the expanded version of the scheme as used during the Covid-19 crisis during times of severe crisis.¹⁴⁹

The effects of an expansion of the automatic stabilisers and the associated increase in the budgetary semi-elasticity would have a significant impact on the size of the cyclical component. If, for example, the budgetary elasticity at the federal level were increased to about 0.5—i.e. compensating 50 cents for every euro of under- or overutilisation of the economy—the increase in potential output (as described in the previous section) would increase fiscal space by a factor of 2.46 from 20 billion euros to just under 50 billion euros and from 24 billion euros to just under 60 billion euros.

8.4 Securing productive investment

In the context of the debt brake, one of the most prominent reform proposals to ensure sufficient levels of investment is the introduction of a Golden Rule. This would allow for deficit spending equal to net investment. However, according to the current Federal Budget Code, this would—as mentioned above—only include investments in fixed assets and financial assets.¹⁵⁰ A meaningful Golden Rule, besides requiring constitutional reform, would therefore require adopting a more comprehensive definition of the term "investment", as for instance the one used by the US Congressional Budget Office, which includes not only physical capital but also research and development as well as education and training.¹⁵¹

Yet even without reforming the debt brake, expanding debt-financed investment would be possible: Investment could be financed through legally independent public corporations. Their borrowing would not count towards the federal deficit, as long as they pursue an independent corporate purpose

¹⁴⁷ Claudia Sahm, "Direct Stimulus Payments to Individuals in Recession Ready," in *Recession Ready: Fiscal Policies to Stabilize the American Economy*, ed. Heather Boushey, Ryan Nunn and Jay Shambaugh (Washington D.C.: Brookings Institution, 2019).

¹⁴⁸ Sebastian Gechert et al, "Economic Instruments for a Climate and Socially Compatible CO₂ Pricing", (IMK Study No. 65, Macroeconomics and Business Cycle Research Institute (IMK), September 2019), https://www.boeckler.de/pdf/p_imk_study_65_2019.pdf.

¹⁴⁹ "Verlängerung der Erleichterungen beim Kurzarbeitergeld", Federal Ministry of Labour and Social Affairs (BMAS), accessed May 4, 2021, <https://www.bmas.de/DE/Corona/erleichtertes-kurzarbeitergeld.html#docac1889d9-c87e-4f42-994e-db703a1645dbbodyText1>.

¹⁵⁰ See, for example, the election programme of the Greens: "Germany. Alles ist drin.", Bündnis 90/Die Grünen, accessed May 4, 2021, https://cms.gruene.de/uploads/documents/2021_Wahlprogrammwurf.pdf.

¹⁵¹ Congressional Budget Office (CBO), *Budgeting for Federal Investment* (Washington D.C.: CBO, 2021), 6, <https://www.cbo.gov/system/files/2021-04/56900-capital-budgeting.pdf>.

and do not function solely as a financing vehicle for government.^{152, 153} The Federal Government can provide such public investment corporations with both equity and debt financing through financial transactions. Financial transactions are exempt from the debt brake as long as the asset acquired by the Federal Government through the transaction corresponds to the transaction value.^{154, 155, 156} This mechanism could for instance be used to finance the federal share in railway investment, amounting to 60 billion euros.¹⁵⁷ A well specified purpose and a carefully designed corporate governance structure would help to ensure the targeted use of government funds by public investment corporations.

In Germany today, however, the most urgent unmet investment needs are at the municipal level. Here, an investment gap of 149 billion euros¹⁵⁸ meets cash strapped local treasuries, whose volatile income sources tended to complicate investment planning already prior to the pandemic: Both federal subsidies and highly cyclical revenues such as local trade tax (*Gewerbesteuer*) are difficult to predict over prolonged periods of time, as both the Great Financial Crisis and Covid-19 demonstrated. Extensive bureaucracy and an intricate grant application system do not exactly help in ensuring funds arrive where they are most needed. In response to this, René Geißler developed a proposal for a municipal investment fund to overcome these problems.¹⁵⁹ The fund—ideally, attached to an existing, legally

¹⁵² Even if these debts do not count towards the German constitutional debt brake, they are nevertheless very likely to fall under the Maastricht criteria, see Federal Ministry of Finance (BMF), "Maastricht debt: methodological principles, compilation and development in Germany", in *Monthly Report April 2018* (Berlin: BMF, April 2018), <https://www.bundesbank.de/resource/blob/732992/1b6ec3e991c00a5229c2a8ad6a807dd6/mL/2018-04-maastricht-data.pdf>.

¹⁵³ Georg Hermes, Lukas Vorwerk and Thorsten Beckers, "Die Schuldenbremse des Bundes und die Möglichkeit der Kreditfinanzierung von Investitionen - Rechtslage, ökonomische Beurteilung und Handlungsempfehlungen" (IMK Study No. 70, Macroeconomics and Business Cycle Research Institute (IMK), October 2020), https://www.imk-boeckler.de/download-proxy-for-faust/download-pdf?url=http%3A%2F%2F217.89.182.78%3A451%2Fabfrage_digi.fau%2Fp_imk_study_70_2020.pdf%3Fprj%3Dhbs-abfrage%26ab_dm%3D1%26ab_zeig%3D9095%26ab_diginr%3D8483.

¹⁵⁴ The term "financial transaction" is not further specified in the ordinary law that specifies how Article 115 of the Constitution is to be executed. But, as the aim of the introduction of the debt brake was to align German law with the Stability and Growth Pact, the definition of the term "financial transaction" can be deduced from the European System of Accounts. ESA 2010 classifies a transaction as a financial transaction if each asset is matched by an equal liability. In addition, the acquired asset should correspond to the value of the financial transaction in order not to run counter to the economic efficiency requirement of the budget law (Christian Meyer, "Greift die neue Schuldenbremse?", *Archiv des öffentlichen Rechts* 136, no. 2 (June 2011): 266-322).

¹⁵⁵ A later depreciation does not trigger a revaluation of financial transactions: "This procedure is—at least theoretically—endlessly repeatable, because the reduction in value of the previous shares in the corporation through the depletion of equity via annual losses due to depreciation, personnel and other expenses is not taken into account." Purchasing perpetual bonds emitted by a public corporation could probably also count as financial transactions: "For example, previous expenditure on grants to loss-making areas of the public sector could be given as interest-free loans with an infinite term, which the federal government is allowed to refinance through loans." (Christian Magin, "Die Wirkungslosigkeit der neuen Schuldenbremse - Warum die Staatsverschuldung weiterhin ungebremst steigen kann", *Wirtschaftsdienst* 90, no. 4 (2010): 262-268).

¹⁵⁶ This is also important in order for an equity injection to be permitted under state aid law (see "Equity requirements of public enterprises and state aid law", Public Sector Institute, accessed 4 May, 2021, https://publicgovernance.de/media/PG_Fruehjahr_2013_Fokus_Eigenkapitalbedarf_oeffentlicher_Unternehmen_und_Beihilfenrecht.pdf).

¹⁵⁷ Bardt et al., "For a Social Fiscal Policy: Enabling Investment!".

¹⁵⁸ KfW Bankengruppe. *KfW Municipal Panel 2020*.

¹⁵⁹ René Geißler, "A Municipal Investment Programme for the Next Decade", (Policy Paper, Dezernat Zukunft, April 2021), <https://dezernatzukunft.org/ein-kommunales-investitionsprogramm-fuer-das-naechste-jahrzehnt/>.

independent federal corporation—should provide steady, predictable financing over at least ten years in the form of block grants without application process. Instead of detailed guidelines for the use of funds, the federal and state governments would define policy areas that funding can and should be used for. Municipalities would then prove the corresponding use of funds through public reporting, instead of submitting reports to the Federal Ministry of Finance, as is current practice.

Should this not be possible for political reasons, the *Kreditanstalt für Wiederaufbau* (KfW) could grant municipal loans with very long maturities, which could be backed and subsidised by the federal government, if necessary. This solution has clear disadvantages compared to a federally funded municipal investment fund: First, the KfW pays about 20 to 40 basis points more than the federal government when it borrows. Second, the KfW’s administration of funds would add additional costs, without adding any clear value. Thirdly, it is highly questionable whether municipalities in financial difficulties, which likely need the money the most, should take out further loans. Finally, in the interest of transparency and accountability, if what is needed for municipal investment is federal grants, these should not be ‘disguised’ as KfW loans but declared as grants in the budget.

8.5 A joined-up framework

In the end, it is crucial that all the three pillars that our goal-oriented fiscal policy paradigm builds on—ensuring full capacity utilisation in the labour market, having effective automatic stabilisers and funding productive investment—fit together and reinforce each other. Investment is a prerequisite for education and training. Only in a full-capacity-utilisation labour market will everybody able and willing to work *actually* be able to use their education and training, gain valuable further experience, and work productively and securely throughout her or his working life. People with good and secure incomes, further, have a higher propensity to consume, which in turn boosts corporate profits and thus increases private investment. Automatic stabilisers then prevent these self-reinforcing mechanisms from being disrupted by downturns. And should financing conditions change, finally, the interest rate indicator will be triggered before an abrupt policy change becomes necessary, allowing for a timely rebalancing of fiscal- and other economic policies.

9. CONCLUSION

Preventing the worst might offer side constraints on, but fails to set a course for, fiscal policy. A strategy of “no” is a poor guide in times of change, when new paths must be found to master the challenges ahead. Yet, to date, even the proposals that recognise that we are in new fiscal times have focused on what must *not* happen: be it an increase in the debt-to-GDP ratio, in consumptive expenditures or in financing costs. Specific, *positive* answers on how public finances should be (re)designed

to ensure long-term prosperity and sustainability, as well as supporting the goals of a democratic society, are missing. As Table 1 (below) shows, a number of reform proposals do discuss demand-side obstacles to realising potential output. However, specific positive proposals, in particular how much spending (and what kind) might be needed to achieve full capacity utilisation, are difficult to find.

Starting from the *Functional Finance* approach, returned to the limelight by Blanchard et al. (2020), we address this gap in this paper. Building on other recent proposals from Furman and Summers and Hüther and Südekum, we developed a positive paradigm and translated it into a policy framework with three pillars and a watchman (see Table 2 below): an **investment fund** that strengthens the supply side with sensible and productive investments, particularly at the municipal level; an **adjustment of the calculation of potential output**, to shift fiscal policy from stabilisation around a historical trend to full capacity utilisation; an **update of the automatic stabilisers**, to avoid permanent reductions in economic potential following cyclical downturns as well as overheating in upturns; and an **interest rate indicator** that ensures that budgetary risks do not build up unnoticed in the form of escalating financing costs. In addition, we discussed how the debt level can be lowered by means of **distributional structural reforms**. These, we believe, cover all of the issues we raised at the beginning of the paper.

These proposals undoubtedly require further elaboration and discussion. Moreover, the nexus between fiscal policy and financial market stability, which Furman and Summers raise, deserves more attention. Besides the question of interest rates, the role of government bonds as the “raw material” of much of contemporary finance should be analysed carefully. Yet, we hope that our proposals, while no more than a first sketch, will help advance the debate on a new German fiscal policy fit for our time: In a moment when we need to reconfigure our economy around a zero emissions goal, when we can only cope with demographic change by increasing productivity, and when capital is cheap, it seems paradoxical to focus on any other goal than sustainable full capacity utilisation and productive investment.

ANNEX I

Table 1: Overview of fiscal policy reform proposals in the literature

	Golden Rule	Public investment fund	European <i>fiscal standards</i>	Interest/GDP ratio
Descrip- tion	Deficit financing of net investment only	Deficit financing of net investment possible if $r < g$; investment decisions based on cost-benefit-analysis by Stability Council; move towards <i>fiscal standards</i> in the future	Replacement of fiscal rules by fiscal standards; judicial enforcement; stochastic DSA; common debt at EU level	Maximise employment; interest rates/GDP $< 2\%$; additional investment of 1% GDP; long-term: crisis response debt-financed; investment

				(all with NPV >0) debt-financed; otherwise no debt, shift in budget composition.
Supply side	Yes	Yes	No (not the focus of the paper)	Yes, deficit financing for permanent expenditure with NPV >0 (e.g. education)
Demand side	Recognises the possibility of demand-side barriers to growth	Recognises the possibility of demand-side barriers to growth	Recognises the possibility of demand-side barriers to growth	Recognises the possibility of demand-side barriers to growth
Full capacity utilisation	No	No	Hinted at: demand externalities as potential cause of structurally insufficient demand, EU debt mentioned as possible solution; concrete design missing	Conditional: Objective to maximise employment as long as interest costs <2% GDP
Counter-cyclical	Not inherently	Not inherently	Yes	Yes, debt financing for emergencies
Financing cost	Optional: Possible upper limit for maximum deductibility of net investments, for example 1-2% GDP	Yes, average financing costs < nominal growth as condition for borrowing	Yes, probabilistic assessment of debt sustainability	Yes, real interest expenditure < 2% GDP; strengthening the demand-side effectiveness of the budget.
Source	Truger (2015, 2021)	Hüther, Südekum (2020)	Blanchard, Leandro, Zetzelmeier (2021)	Furman, Summers (2020)

Table 2: Overview of proposals made in this paper

	Description	Aim	Expected results	Institutional responsibility
Interest rate indicator (Interest/budget ratio)	Monitor increase in interest rate payments as percentage of the budget; one percentage point increase triggers strategy review	A vigilant watchman	Projected: Strategy review in 2022 and 2028 and 2030 in high yield case; Looking back: 1992, 1994, 1997 and 1999	Monitoring through the Stability Council, delivery of the strategy review: Government, presenting to Parliament
Full utilisation of the labour force	Amend potential output calculation feeding into the cyclical component of the debt brake: Instead of calculating labour market capacity based on arbitrary historic trends, use full employment w/o long-term unemployment, adjust possible working hours for involuntary part-time employment, bring gender-based participation rates into accordance with the gender equality clause of the German constitution and Scandinavian precedent.	Manage decarbonisation and demographic change through full mobilisation of resources and demand stimulus; bring external balance into equilibrium; increase investment through stabilising expectations	2023: 20 to 24 bn. Euro (0.5%-0.6% of GDP);	Federal government, ideally coordinating with European partners through Output Gaps Working Group at the EU-Commission

Effective automatic stabilisers	Counter-cyclical progressive adjustment of social security contributions and/or counter-cyclically fluctuating climate bonus (per capita cash transfer to mitigate distributional effect of CO ₂ price)	Avoid permanent reduction of economic potential following cyclical downturns; reduce risk of overheating and inflation during upturns	2023: Increasing federal budgetary semi-elasticity from 0.203 to 0.5; in combination with changed potential output gap calculation: 50 to 60 bn. Euro	Legislative changes by Parliament; EU Commission recalculating the budgetary semi-elasticity
Productive investment	10-year investment programme for local governments with indicator-based allocation of block grants (no project-based applications)	Ensuring future sustainability and productivity; protecting local public investment against economic downturns, allowing for the build-up of capacity at the local level	No fixed size, exempt from the debt brake as a financial transaction	Financing through an investment fund added to an existing, stand-alone public legal entity, with funds provided from the federal budget via financial transactions; second best: highly concessional loans through the <i>Kreditanstalt für Wiederaufbau</i> (KfW); execution: Mainly local authorities

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