How To Finance Germany's Modernisation

Financing options under the debt brake

Dezernat Zukunft
Institute for Macrofinance

DZ POLICY PAPER

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Executive Summary

Germany requires 782 billion euros in additional public spending for modernisation by 2030. German politicians have so far lacked a reliable financing framework for this purpose; there are constant discussions around spending cuts or a constitutional reform of the debt brake. Neither strategy can realistically be implemented in the short term. In this policy paper, we show that many of the needs identified can in fact be financed without amending the Basic Law, and thus addressed in the short term: the debt brake already provides options to take on debt for productive expenditure as part of the cyclical component and financial transactions. Nevertheless, these financing solutions are insufficient, complex, and more expensive than necessary. A reform of the debt brake would therefore be sensible, but this will first require a new understanding of "sustainable public finances".

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Target	Additional need (in billions of EUR)			Financing options
	Federal	State	Municipal	
Education (127.2 billion euros)				
School buildings (reducing investment backlog)			57.1	Municipal investment promotion programme of the federal and state governments, funded by financial transactions in the form of loans to municipalities or municipal corporations
Teachers (constant student-teacher ratio)		15.5		Cyclical component
School digitisation		9.0		Cyclical component
All-day childcare (investments)			1.9	Municipal investment promotion programme
All-day childcare (personnel)			8.2	Municipal budgets
Legal daycare entitlements (investments)		8.4	8.4	*States:* financial transactions in the form of loans to daycare providers or state construction companies *Municipalities:* Municipal investment promotion programme
Legal daycare entitlements (personnel)		6.8	6.8	*States:* Cyclical component *Municipalities:* Municipal budgets
University buildings (maintenance)		5.1		Financial transactions in the form of loans to state construction companies
Decarbonisation (207.6 billion euros)				
Additional financing need of the federal government*	159.0			Financial transactions in the form of loans for investment, processed via the KfW or federally owned company; remainder from current tax and other revenue
Additional financing need of states and municipalities (excluding public transport)		10.8	37.8	*States:* Financial transactions in the form of loans to state-owned companies *Municipalities:* Municipal investment promotion programme
R&D (9.9 billion euros)				
Public R&D funding	5.7	4.2		Cyclical component
Health (40.4 billion euros)				
Structural reform	12.5	12.5		Financial transactions in the form of loans to hospital operators
Closure of investment gaps		8.4		
Climate change adaptation measures in hospitals		7.1		

Transport (165.5 billion euros)				
Rail infrastructure	62.0			Financial transactions in the form of loans to Deutsche Bahn
Road infrastructure (maintenance)	13.5		51.8	*Federal government:* Financial transactions in the form of loans to Autobahn GmbH *Municipalities:* Municipal investment promotion programme
Public transport		38.2		Financial transactions in the form of loans to public transport companies for investment, remainder from current tax and other revenue
Housing (30.6 billion euros)				
Social housing construction	21.9	8.7		Financial transactions in the form of equity investments in residential real estate companies
Internal security (22.8 billion euros)				
Civil protection and disaster reponse	2.3	3.0	17.5	*Federal and state governments:* current tax and other revenue *Municipalities:* Municipal investment promotion programme
Climate adaptation (38.0 billion euros)				
Climate adaptation and nature conservation		9.5	28.5	States: current tax and other revenue Municipalities: Municipal budgets
Resilience (15.1–19.8 billion euros)				
Industrial capacity for energy transition technologies	13.5			Current tax and other revenue
Critical raw materials	1.6–6.2			
Defence (103.1 billion euros)				
Bundeswehr (procurement and recurrent costs)	103.1			Financial transactions in the form of loans to defence companies for procurement, remainder from current tax and other revenues
Further aspects of external security (21.7 billion euros)				
Diplomacy and humanitarian aid	9.4			Current tax and other revenue
Development cooperation	12.4			

* In contrast to the other areas considered, the additional need for decarbonisation at the federal level is calculated as the difference between total financing need and the expected revenue from carbon pricing in two price scenarios. For this reason, the requirement is shown as a collective item; a detailed breakdown can be found in Heilmann et al. (2024).

Table 1: Overview of public financing needs and financing options

1. Introduction

Germany must modernise in order to face geopolitical, demographic, climate and economic challenges. There is a growing consensus that this modernisation requires considerable public spending.[1] Nevertheless, it has not been possible to find a reliable funding framework for these needs in recent years. Discussions have largely concerned two options: a constitutional reform of the debt brake or large-scale spending cuts. The former, however, would require a two-thirds majority in the Bundestag and Bundesrat. In the case of the latter, potential savings on the necessary scale are difficult to find and even more difficult to implement without significant economic damage. As a result, the necessary modernisation expenditure has failed to materialise, while the needs have steadily grown as a result of underinvestment.

With this paper, we introduce additional financing options into the debate. Even without reforming the debt brake in the Basic Law, many of the additional expenditure needs can still be financed. Concretely, we explain two mechanisms that allow for debt to be taken on within the framework of the debt brake: financial transactions and the cyclical component. Financial transactions represent asset swaps - for example, when the state exchanges cash for equity. Under the debt brake, the economic component allows for debt to be taken out up to full capacity utilisation of the economy. We propose using these mechanisms to finance investments and other expenditures that improve the productive potential of the German economy and thus modernise the country. These will not require an amendment to the Basic Law, but only simple legal adjustments.

Our detailed bottom-up analysis of public financing needs in Heilmann et al. (2024) allows us to develop financing solutions tailored to individual areas of expenditure and to qualitatively describe their macroeconomic impact. In Heilmann et al. (2024), we estimate expenditure needs by purpose and level of government. This helps us to identify which expenditures should be sensibly financed by borrowing, but also which additional burdens will be placed on current public revenue. It also serves to delineate the boundaries that are effectively set for German fiscal policy within the current constitutional framework.

However, a financial policy that pushes the modernisation of Germany forward will not just come up against constitutional limits, but also the limits of the real economy. One such factor is the availability of a sufficiently large workforce. Policymakers can shift these limits themselves, however, by actively addressing the supply side of the economy, and above all, Germany's labour market potential. Although the latter is not the focus of this paper, it is a key prerequisite both for modernisation and for long-term sustainable finances.

This paper also shows that, while many things are possible under the debt brake, they are made unnecessarily complicated. Necessary expenditure to strengthen productivity, public services or defence can already be financed today; however, it requires complex financing models that are not very transparent and will first have to undergo extensive legal review. In some cases, these means also lead to higher costs. It would therefore be sensible to consider a fundamental reform of German financial policy.

The overarching aim of this article is thus to further stimulate the debate on financing options. Regardless of whether the recognised financing needs are to be covered by new borrowing, budget restructuring or tax increases, all three approaches become controversial as soon as substantial amounts are involved. Socially, a stable financing framework can only succeed if the chosen instruments enjoy a high level of legitimacy. Such legitimacy requires a broad public debate that makes the pros and cons of the individual options, as well as their

1 In Heilmann et al. (2024), we estimate the relevant additional need to be EUR 782 billion by 2030. The studies by the German Economic Institute (IW) and the Institute for Macroeconomics and Economic Research (IMK) (Dullien et al. 2024) as well as the Federation of German Industries (BDI; 2024) come to similar conclusions in their relevant areas.

opportunities and challenges, visible with a view to the next federal election.

Table 1 provides an overview of the financing options described in this paper and their areas of application. Chapter 2 describes the public financing needs, and Chapter 3 describes the financing options we assign to each of them. Chapter 4 discusses their limits and limitations. Finally, in Chapter 5, we outline more fundamental ideas and questions whose resolution would be helpful for a reform of German fiscal policy.

2. Public financing needs by 2030

In a comprehensive assessment of additional public financing needs in order to achieve widely accepted targets by 2030, we have identified a minimum total requirement of 782 billion euros by 2030.[2] This corresponds to an average of three percent of the current gross domestic product (GDP) per year. This needs assessment was based on extensive consultations with technical and budget experts. Only those objectives were examined which could be considered to be widely accepted on the basis of these consultations and political decisions. Figure 1 shows the distribution of the additional funding needs across levels of government with needs respectively allocated to the relevant federal level, unless there have been clear decisions made to the contrary to take effect in the future.

Over 50 percent of the funds are required for investment measures. At the same time, we have also examined the additional operating costs required in areas where it is not possible to make sensible use of investments without such funds – for example, in the education sector. 19 percent of the identified additional needs relate to operating costs, while a further 28 percent cannot be clearly allocated or are mixed items that include expenditure for both investment and operating costs.

2 Heilmann et al. 2024

Additional public financing needs to achieve widely accepted targets by 2030

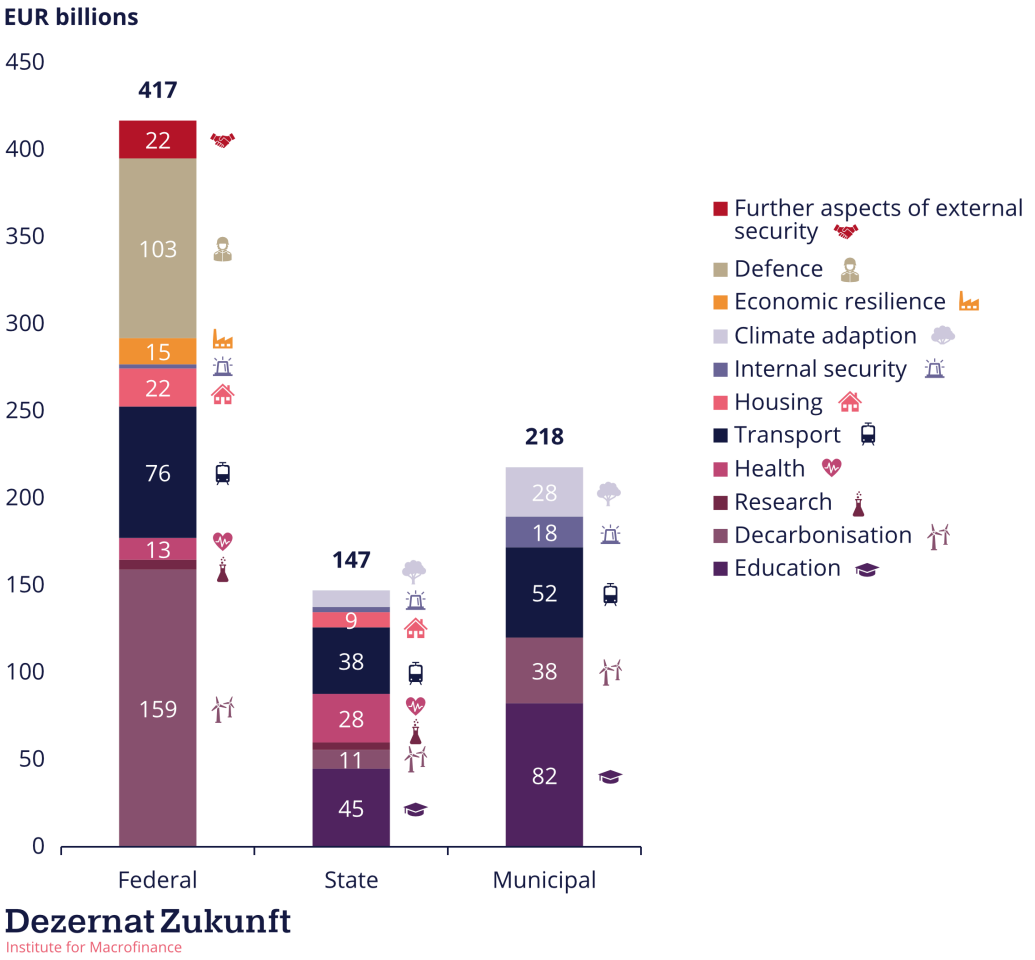


Figure 1: Additional public financing needs required to achieve widely accepted targets by 2030; **source:** own calculations

As we have generally considered political objectives and processes at the federal level and have only assessed core budgets, it is very likely that the actual additional needs of the municipalities in particular, but also of the states, will be higher than the needs identified here. We have followed the principle of determining *minimum* needs: we have deducted already-set or foreseeable appropriations from total need and, in the case of ranges, have generally selected the approach with the lowest level of need.

In the area of decarbonisation, we have calculated two scenarios at different carbon pricing levels. Higher carbon prices lead to a lower net additional need from the public sector, but there is neither a political consensus nor regulatory backing for higher prices at the European level, particularly for emissions trading with respect to the building and transportation sectors. In order to take the uncertainties in both directions into account as far as possible, we have calculated the final total using the mean value of the two scenarios: 208 billion euros.

In addition to decarbonisation, there is a particularly high need to secure defence capabilities (103 billion euros), to renovate and modernise the transport infrastructure (166 billion euros) and to secure a future-ready education system (127 billion euros) by 2030.

3. Financing options without altering the debt brake

It is not a new development for public financing needs in Germany to be very high. The fact that higher figures are nevertheless circulating in the public debate year after year is because German policy has so far failed to finance them. Tight budgets have ensured that spending cuts are made, particularly on investments in public infrastructure – after all, these are easier to cut with lower resistance than, for example, social benefits (which are in some cases even set by rulings of the Constitutional Court). The debt brake restricts the scope of action for the federal and state governments, while municipal authorities are required to balance their budgets and, in some cases, have high existing levels of debt.

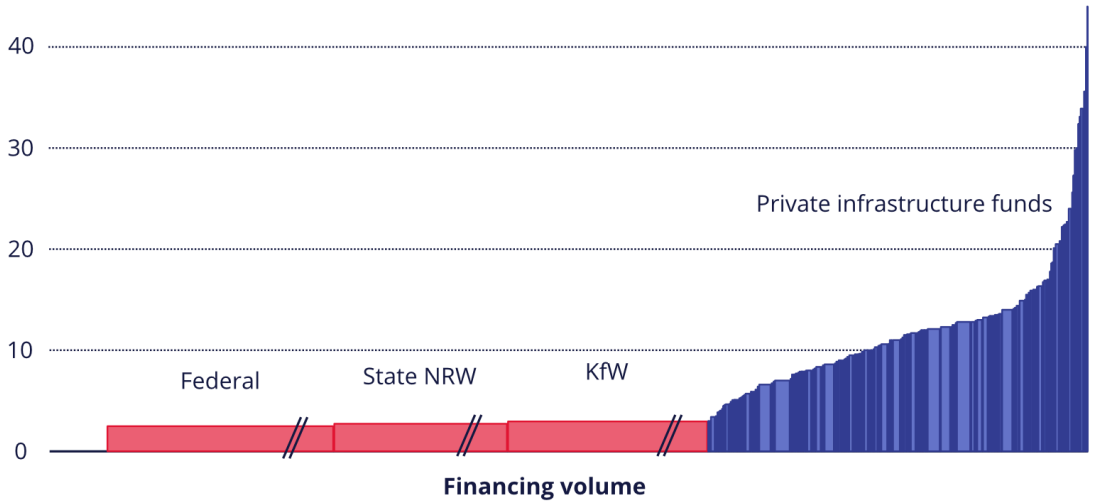
When public funds are lacking, politicians often call for private capital to help finance activities of the state, especially infrastructure. However, this entails considerable additional costs as private investors generally have higher financing costs than the federal government and many states, and desire to generate profits. For example, public-private partnerships (PPP) in highway construction or private residential construction projects are significantly more expensive than those financed directly by the public sector.[3] All else held equal, public tasks are therefore best financed by the state itself.

By analogy with the electricity market, from which the concept is familiar, we illustrate this insight in the *merit order* of financing costs. In the merit order of the electricity market, the available quantities of electricity are arranged in ascending order according to the marginal costs of the individual energy sources (i. e. renewable energies, nuclear, gas, or coal); the merit order represents the electricity supply curve. The electricity price always corresponds to the marginal costs of the cheapest energy source whose electricity production can meet current demand. Transferred to the capital market, this means that all potential investors are ranked according to their financing costs; those with the lowest costs provide the requested financing volume for investment. Figure 2 illustrates this using the example of infrastructure financing. Compared to private infrastructure funds, the federal government – followed by state governments and the KfW – always has the lowest financing costs as well as an almost unlimited balance sheet.

3 Handelsblatt (2014); German Federal Audit Office (2009)

The merit order of financing costs

Financing costs in percent



The curve shows implicit financing costs of different investors in infrastructure. The public financing costs are equivalent to the current return on 20-year bonds of the federal government, the state government of North Rhine-Westphalia (NRW), and the KfW. The financing costs for private infrastructure investors are equivalent to the net internal rates of return (NIRR) of private investment funds that have invested in Europe in the last ten years. The width of the bars is proportional to the managed financial volume (assets under management; AuM) per fund. The AuM of all funds amounts to about 330 million US dollars; however, only a fraction is available for new investments. Outliers have been removed.

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Figure 2: The merit order of financing costs; **sources:** Preqin, own calculations

But how can additional needs of almost 800 billion euros be financed from public budgets by 2030? It would be a fantasy to raise sums of this magnitude from current income, even if massive cuts were made in other areas. Spread over six years, these annual financing needs correspond to around one third of the federal budget. The necessary cuts would be both damaging to the economy and politically impossible to implement. From a financial point of view, new debt is therefore unavoidable, and even sensible. In particular, investments in public infrastructure or education lay the foundation for future growth, which makes debt financing an obvious choice. In addition, debt financing would be intergenerationally fair because it would involve the future beneficiaries of the investments in their financing. There is a whole range of policy proposals in this direction, from area-specific "special funds" (similar to that of the Bundeswehr) to the reform or even abolition of the debt brake. The problem is that they all require an amendment to the Basic Law.

In contrast, we show in this paper that many of these estimated needs can be financed within the current constitutional framework. The debt brake already stipulates that the federal government can take on debt in several ways. The government is allowed to take on debt amounting to 0.35 (federal government) or zero (state governments) percent of GDP each year. In addition, it can use two mechanisms to finance productive government spending: *financial transactions* and the *cyclical component*. As a rule, other expenses should continue to be paid from *current tax and other revenue*. In the following, we describe these three financing options and highlight which of the estimated financing needs can be financed in which way. As the provisions of the debt brake only apply to the federal and state governments, we conclude by looking separately at financing options for local authorities. An overview of the financing solutions for individual needs can be found in Table 1.

1. Financial transactions

The instrument: Financial transactions are payments that do not change the government's net financial worth. Alongside the structural deficit and the cyclical component, they are one of the three main components of the debt brake. The state may take out loans in the amount of the balance of these financial transactions. For example, if it issues bonds to acquire a stake in a company or to grant a loan, the resulting debt is not subject to the debt brake. This is because it is offset by an increase in public financial assets in the form of the equity investment or loan.[4]

Financial transactions can thus enable debt-financed investments. As we describe above, debt financing of such investments makes economic sense if they expand productive capacity and generate future growth. Loans allow the financing burden to be distributed across generations. Financial transactions are the appropriate instrument in the case of investments in public infrastructure and decarbonisation, as these are usually implemented by legally independent companies. This is a necessary prerequisite to ensure that any debt is not attributed to the federal or state governments and therefore does not fall under the debt brake.

The legally independent companies can be either public or private. With Deutsche Bahn, Autobahn GmbH, municipal companies for transport or energy, hospitals, and school and housing construction companies, the state has a large number of public companies that perform infrastructure tasks. However, private organisations whose activities explicitly pursue a public purpose also play an important role. This model is most visible in the defence sector, where private armaments companies produce goods exclusively for the Bundeswehr. These companies – whether public or private – can be provided with capital by the state via financial transactions to finance investments within the scope of what is possible under EU state aid law. Two types of financial transactions are relevant here: injections of equity and providing loans.

Equity. When the state injects equity into a company that it owns, this is initially indistinguishable from a grant. If the state already owns 100 percent of the company, it cannot receive any additional shares. In order to differentiate between equity and subsidy in line with European requirements, a certain return must therefore be expected. In return for the equity injection, the state receives a dividend from its company. The "capital injection test" is used to differentiate between a grant and an increase in equity.

The injection of equity is appropriate in those areas in which private investors play a significant role. Examples include social housing and the energy sector, where both public and private capital are important. Both municipal housing associations and energy suppliers borrow on the capital market to finance investment projects. For the most favourable financing conditions, it is important that their capital structure – the ratio of equity to debt – is solid. If they are highly indebted and have little equity, private investors demand high risk premia. Equity provided by the state enables companies to raise more money on the capital market and reduces their financing costs.

Loans. Instead of equity, the state can also provide loans. No capital injection test is required because, unlike equity, the state does not have to make an estimate of future returns in order to distinguish the loan from a grant. In return, it receives a loan agreement in which the loan conditions are regulated.[5] In the past, neither an unconditional repayment claim nor interest were necessary criteria for loans to be classified as financial transactions. In 2011, for example, an interest-free loan of 5.4 billion

4 Federal Ministry of Finance (2022)

5 Eurostat (2014)

euros was granted to the Federal Employment Agency in the budget without a fixed repayment.[6] Additionally, no regular annual repayments are planned for the loans with which the new "Generational Capital" is to be endowed.[7]

While equity increases can be well-justified in areas where companies turn a profit, loans should be used when companies have no income of their own or their profits are only possible thanks to government subsidies. This primarily includes parts of transportation infrastructure, public hospitals, the education system and defence, but also large parts of industry and energy production affected by the energy transformation.

Loans as financial transactions can make sense for two economic reasons: Firstly, because they make it possible to spread the burden over time. It is hard to justify that one generation of taxpayers should pay for all the neglected investments of the past, especially when future generations will be the main beneficiaries. Financing investments through public loans makes it possible to spread the costs across all users, namely by financing the loan over the life of the investment through grants from the budget.

Secondly, loans can enable economically sensible investments that cannot be financed through equity. This is because many public investments do not generate a return for a particular public institution, such as construction of a new school. However, they generate economic growth and additional tax revenue for the state. This additional tax revenue can in turn be used to repay the loan.

Loans for the purpose of burden-sharing and financing growth projects do not constitute a circumvention of the debt brake, as they do not allow for permanent borrowing. They merely enable the postponement of payment dates. Instead of taxpayers having to pay for all investments up-front, politicians can spread the financing burden over time by means of loans and repayment via budget subsidies. This, in turn, is permitted by the debt brake due to its cameralistic logic, because the debt brake is not a balance sheet rule that counts debts as soon as they are incurred; as a cameralistic rule, it counts debts when they fall due, i.e. when they are paid. To the extent that the state can influence the due date of its payments, it can also decide when the debt brake takes account of which debt.

The German government is already taking advantage of this. Highways are being pre-financed today, although not by the state, but by third parties. Banks grant loans with which construction investments are made, and the federal government pays off these loans over time with budget funds. If the state were to pre-finance such investments through its own debt, this would actually be cheaper thanks to its lower financing costs, which is in line with the intention of the debt brake. A federal loan is already being used in the 2025 federal budget to reduce public financing costs. Deutsche Bahn will receive a loan of three billion euros, which it can use to redeem infrastructure loans previously issued on the market.[8]

The financing of public infrastructure expenditure via financial transactions can be applied both at the federal and state levels. For the federal government, this is laid down in Art. 115 of the Basic Law and the associated implementing law. How the states deal with financial transactions is determined by the states themselves, and these have issued a large number of different regulations. Some states allow borrowing for financial transactions in the same way as the federal government, while others exclude it completely. In order to implement the financing proposal as outlined here, some states will therefore need simple legislative adjustments, but no constitutional amendments.[9]

6 German Bundesbank (2011)
7 German Federal Ministry of Finance (2024a)
8 German Federal Government (2024)
9 Scholz (2021) provides an overview of the specifics of the state regulations on the debt brake.

Neither equity injections nor loans are new or unusual instruments (see Figure 3). They have been used since the provisions of the debt brake came into force. Their use has also not been limited to productive expenditure, such as the above-mentioned example of the loan to the Federal Employment Agency in the 2011 federal budget.

How these needs can be financed: In our study, we identify an additional need of 405.3 billion euros by 2030 for investments in public infrastructure, Bundeswehr procurements and the decarbonisation of the economy, which is not yet covered by funds already budgeted. As these investments have a positive impact on the future value creation of the German economy, we propose that the necessary funds be made available via debt-financed financial transactions (see Table 2).

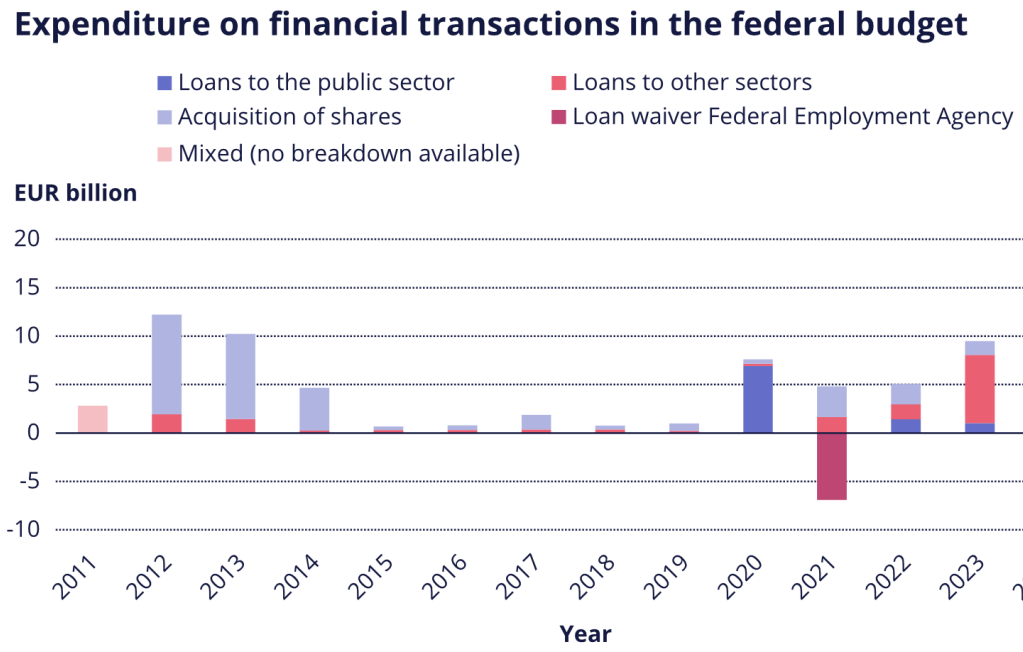


Figure 3: Expenditure on financial transactions in the federal budget; **source:** Federal Ministry of Finance

Extensive infrastructure investments are needed in the **education sector**. A large proportion of this relates to the *refurbishment and new construction of school buildings*, which are the responsibility of municipal authorities and are discussed separately below. However, the states are still responsible for investing in day-care centres (8.4 billion euros) in order to meet the *legal entitlement to a daycare (Kita) spot* that has been in force since 2013, as well as for *maintaining and closing the investment backlog for universities* (5.1 billion euros). This brings us to an additional financing need of 13.5 billion euros at the state level. The positive economic effects of investments in education are undisputed, which justifies the debt financing of this expenditure.[10] In the childcare sector, loans to public or private providers could ensure this financing in a debt-brake-neutral manner. If the states carry out the investments themselves, this model could be handled by legally independent construction companies, such as Bau- und Liegenschaftsbetrieb NRW. Investments in university buildings can also be made by these state companies. Where the legal independence of companies is still lacking, it should first be established by law in order to enable financing through financial transac-

10 Krebs and Scheffel (2017); German Council of Economic Experts (2023)

tions. Loans are a suitable form of financing here because neither daycare centres nor universities are expected to generate a business return, which is why additional equity capital would not help. The loans given would be repaid from grants out of public budgets.

Target	Additional need (in billions of EUR)	Financing options
Education		
Legal daycare entitlements (investments)	States: 8.4	Financial transactions in the form of loans to daycare providers or state construction companies
University buildings (maintenance)	States: 5.1	Financial transactions in the form of loans to state construction companies
Decarbonisation		
Additional financing needs of the federal government (investments)	Federal: 125.2	Financial transactions in the form of loans for investment, processed via the KfW or a federally owned company
Additional financing needs of states and municipalities (excluding public transport))	States: 10.8	Financial transactions in the form of loans to state-owned companies Municipal investment promotion programme
Health		
Structural reform	Federal and states: 12.5 each	Financial transactions in the form of loans to hospital operators
Closing the investment gap	States: 8.4	
Climate change adaptation measures in hospitals	States: 7.1	
Transport		
Rail infrastructure	Federal: 62.0	Financial transactions in the form of loans to Deutsche Bahn
Road infrastructure (maintenance)	Federal: 13.5	Financial transactions in the form of loans to Autobahn GmbH
Public transport (investments)	States: 19.1	Financial transactions in the form of loans to public transport companies for investment
Housing		
Social housing construction	Federal: 21.9 States: 8.7	Financial transactions in the form of equity investments in residential real estate companies
Defence		
Bundeswehr (procurement)	Federal: 90.2	Financial transactions in the form of loans to defence companies for procurement

Table 2: Financial transactions

Supporting measures by the federal government are also necessary for **decarbonisation**. In addition to the politically broadly supported goal of *offsetting* the price of carbon, these include promoting the expansion of renewable *energies* and energy infrastructures, subsidies for the transformation of *industry*, the promotion of *building* refurbishment and heating networks, subsidies for low-emission vehicles and the promotion of a nationwide charging and refuelling infrastructure in the transport sector, and support measures in the area of *natural climate protection*. Many of the necessary private investments require public subsidies before 2030, even with higher carbon prices, because investments will not automatically follow from higher prices for various reasons. For example, a high carbon price generally reduces the economic efficiency gap between low-emission and fossil-fuel industrial production, but this can lead to competitive disadvantages on international markets without global carbon pricing and therefore to reticence in investment. The European border adjustment mechanism is intended to address this starting in 2027, but will only be introduced gradually until 2035, and only for selected industries. In the building sector, energy-efficient refurbishment may be economical in the medium term if carbon prices are high, but some owners will not be able to afford the high investment costs due to limited creditworthiness.

Nevertheless, the overall need for support depends negatively on the price of carbon: the higher the carbon price, the smaller the economic viability gap for climate-friendly investments, and the lower the need for public support – with the above-mentioned restrictions. In our estimate, we use two scenarios that cover a plausible range of possible price developments in order to take account of the uncertainty surrounding the further development of the price of carbon. To determine the financing options, we take the average of the two scenarios and arrive at an additional federal need for investment funding in the energy, industry, buildings, transport and natural climate protection sectors of 125.2 billion euros by 2030. This already takes into account the proportional use of carbon pricing assumptions for investment purposes. These investments are long-term climate protection investments that will benefit both current and future generations. It therefore makes sense to spread their financing – and in particular the annual burden on the federal budget – over time. Financial transactions are suited for this purpose. Specifically, we propose providing these funds in the form of loans. They could be handled by KfW or one or more independent energy transition corporations yet to be established, which would pass on investment grants to industrial companies, energy producers and private households. This enables the latter groups to implement low-CO2 production facilities, expand renewable energy generation or renovate buildings. The repayment of the loans would have to be spread out over time by means of federal subsidies. This does not result in any hidden loans, as all payments are accounted for in the federal budget, but merely spread over the term of the loans. The states, for which we estimate additional needs of 10.8 billion euros for the *renovation of public buildings* and *natural climate protection*, could finance decarbonisation measures in a similar manner.

Significant infrastructure measures are also necessary to make the **healthcare system** more efficient. These include new buildings and upgrades to hospitals as part of the ongoing *structural reform* (12.5 billion euros each for the federal government and the states), *closing the existing investment gap in the hospital sector* (8.4 billion euros for the states) and climate protection projects, particularly for *energy-efficient upgrades to buildings* (7.1 billion euros for the states). In total, we estimate the additional need at 40.4 billion euros by 2030. Debt financing of these investments makes sense because the healthcare system contributes significantly to German GDP and a functioning healthcare infrastructure increases the well-being of society as a whole.[11] Financial transactions are suitable for their financing as hospitals are generally operated by (public or

11 Weil (2005); Fournier (2016)

private) legally independent bodies. Since the healthcare system is not subject to targeted financial returns, the federal government and especially the state governments could provide these companies with loans and stretch the repayment over time with subsidies from their budgets. An initial example in this direction is the state of Berlin, which is already supporting the state-owned Vivantes GmbH with the help of financial transactions (in the form of equity injections).[12]

Transport infrastructure is another area where our model of financial transactions can be applied. We estimate that the federal government will have to invest an additional 62.0 billion euros in *railways* and a further 3.5 billion euros in *federal long-distance roads* over the next few years. In addition, there is a financing need of 38.2 billion euros in the area of *local public transport*, of which a considerable proportion – we assume half, i.e. 19.1 billion euros – is for infrastructure investments and is to be borne at the state level. There is no question in the literature that these investments should be financed with loans, as they have a substantial effect on productivity and potential output.[13] In Schuster, Sigl-Glöckner and Heilmann (2024), we outline a financing proposal for transport investments using federal loans and financial transactions. In a similar way, the state governments could grant loans to the public transport providers in the states and municipalities, most of which are independent transport companies. Income is generated from ticket sales which, together with repayment subsidies from the federal and state governments, make the repayment of the loans plausible, therefore qualifying them as financial transactions.

We estimate an additional need of 30.6 billion euros for **social housing construction** by 2030, of which 21.9 billion euros will fall to the federal government and 8.7 billion euros to the states. This estimated need is based on the goal of politicians and the housing industry to build 100,000 new social housing units per year. Investments in residential construction lead to immediate productivity gains in the labour market and capacity expansions in the construction industry.[14] These positive effects on potential growth speak in favour of financing them with debt. As social housing construction is largely supported by municipal housing associations, we propose, in line with Dullien and Krebs (2020), to provide them with additional equity from the federal and state governments. This also improves their financing conditions with banks and on the capital market, which play a key role in residential construction. Such equity injections are shares in the traditional sense and therefore financial transactions whose profitability can be secured by future rental income.

The **Bundeswehr** also has a significant need for additional infrastructure. We count armaments as public infrastructure because they are durable goods that fulfil a central purpose for society as a whole – defence capability. In addition, defence companies often produce non-military products for other industrial sectors, such as the automotive industry, at the same time. Government spending on armaments therefore has substantial multiplier effects, such that it is directly reflected in higher economic capacities and added value.[15] Our estimate envisages an additional need for *procurement investments* of 90.2 billion euros by 2030. We propose financing these requirements by means of financial transactions. Specifically, the federal government could grant loans to defence companies. Defence companies face the challenge of obtaining favourable financing on the capital market. Sustainability criteria are becoming increasingly important in the capital market, partly because they are now part of the regulatory framework with the EU taxonomy. Whether defence companies meet these criteria is in many cases questionable. Government loans can help to reduce financing costs and improve access to liquidity because they send positive signals to the private capital market. The granting of loans would provide companies with liquidity to expand production capacities and manufacture the required milit-

12 Berlin Senate Department for Finance (2023)
13 Krebs and Scheffel (2017)
14 Krebs and Scheffel (2017); Hsieh and Moretti (2019)
15 Ramey (2007)

ary equipment. The federal government and the company could contractually agree that the government will subsequently pay off its orders from budget funds over several years and thus contribute to the loan repayment.

Overall, we propose to finance 405.3 billion euros by 2030 with financial transactions. This represents considerable additional expenditure, the realisation of which requires corresponding economic capacity. This requires a policy that consistently focuses on expanding economic potential, especially employment potential (more on this in Chapter 4).

2. Cyclical component

The instrument: In addition to financial transactions, the cyclical component is the second part of the debt brake that allows debt in excess of the structural deficit of 0.35 percent of GDP. It enables the state to pursue an anti-cyclical spending policy depending on economic capacity utilisation. The scope for borrowing is increased in economic downturn phases and reduced in economic boom phases. The degree of capacity utilisation is measured using the output gap – the difference between current GDP and an estimated potential output. Specifically, for every euro that GDP is below potential, the cyclical component allows additional borrowing of around 20 cents.[16]

Potential output cannot be observed and must be estimated. It indicates a hypothetical GDP that the economy would achieve if the production factors of capital and labour were at full utilisation. A number of input variables, which are estimated using statistical econometric methods and extrapolated into the future, play a key role in determining employment potential and a fully utilised capital stock.[17] This method is problematic because many of the required input variables cannot be determined on an economic basis alone. Their determination requires a large number of assumptions and methodological definitions which, on closer inspection, appear arbitrary, contradict the current state of research or turn out to be wrong in retrospect. The estimate of potential is therefore susceptible to revisions, which makes it difficult to plan fiscal policy, as well as pro-cyclical, which restricts the fiscal space too harshly during downturns. In addition, the cyclical component lacks democratic legitimacy because many of the methodological determinations are at the discretion of the federal government itself instead of being approved by the Bundestag. A detailed analysis of the problems of estimating potential can be found in Schuster, Krahé and Sigl-Glöckner (2021).

The calculation of potential output and the cyclical component is particularly implausible in one respect: It makes the assumption that potential output is independent of actual policy. Political reforms aimed at expanding potential output – especially labour potential – are not taken into account in the statistical model for estimating potential. Particularly as there is already a shortage of labour today, policy measures that expand potential – even beyond infrastructure expansion – are crucial to ensuring the future performance of the economy and the sustainability of public finances. One example from the recent past is the growth initiative adopted by the German government, which includes a large number of statutory measures to increase employment. The declared aim is "[to] substantially increase the long-term growth potential of the German economy with the measures adopted".[18] The initiative is even included in the German government's GDP projection, but not in the potential estimate.[19] Other countries, such as

16 Federal Ministry of Finance (2022)

17 A technically detailed description of the estimate of potential output can be found at Havik et al. (2014) and Ademmer et al. (2019).

18 Federal Ministry of Finance (2024c)

19 Federal Government (2024a)

the United Kingdom, are already further ahead. In its estimate, the UK's Office for Budget Responsibility (OBR) takes into account the effects of the policy on potential output, provided that these are sustainable, measurable and have a significantly expansive effect.[20]

The calculation of the cyclical component can be adjusted without amending the Basic Law so that it is based on realistic potential output and creates additional scope for potential-expanding policies.[21] In 2024, the federal government has already made technical adjustments to the cyclical component, as we analyse in Rennert and Schuster (2024). The main provisions on the calculation procedure are only made at the level of an ordinance to Article 115 of the Basic Law, which regulates the federal debt brake (Art115V). They could be supplemented by a mechanism to take into account the potential effects of current policy measures. Since Art. 115 of the German Basic Law (G115) stipulates that the German procedure must be in line with the European procedure, it may be necessary to amend this provision by means of simple legislation, unless potential-expanding policies are also incorporated into the assessment of economic potential at the European level. Similarly, there are no constitutional changes necessary at the state level either, but only simple legislative changes in order to adapt the economic adjustment procedures accordingly.[22]

Target	Additional need (in billions of EUR)	Financing options
Education		
Teachers (constant student-teacher ratio)	States: 15.5	Cyclical component
School digitisation	States: 9.0	Cyclical component
Legal daycare entitlements (personnel)	States: 6.8	Cyclical component
R&D		
Public R&D funding	Federal: 5.7 States: 4.2	Cyclical component

Table 3: Cyclical component

A cyclical component designed in this way gives politicians an incentive to pursue sustainable fiscal policy: A good (i.e., potential-expanding) policy brings with it a good amount of money. The process for determining the cyclical component can be used to ensure this extra "wiggle room" for debt is actually employed to this end. It is conceivable, for example, that the federal or state governments could present a list of potential-expanding policy projects as part of the budget preparation process, the effects of which on potential output would be estimated by an independent body made up of economists similar to the British OBR. Both the government proposal and the evaluation should be published so that politicians have to publicly defend their plans. The decision on permissible borrowing for potential policy measures must ultimately be made by the Bundestag or the state parliaments as part of budget legislation. This would also put the power to decide on the determining factors of financial policy back where it belongs according to the constitution: in the hands of the democratically legitimised legislature.

20 Office for Budget Responsibility (2022)

21 Korioth and Müller (2021)

22 See Scholz (2021). Although some states use tax trends or tax level procedures instead of the federal procedure, the mechanism of policies that expand potential can be established here in a similar way.

How these needs can be financed: Other government spending also has positive effects on the productive capacities of the economy without fulfilling the classic definition of an investment. In our estimate, we arrive at additional need of at least 41.2 billion euros by 2030, the financing of which has a potential-expanding nature. We therefore propose to finance them with the help of additional leeway for debt under a reformed cyclical component (see Table 3).

In addition to infrastructure investments, there is a need for additional personnel and material expenditure in the **education sector** at the state and municipal levels in order to maintain the current quality of daycare, full-time childcare and schools in general. In the daycare sector, we estimate that 61,200 additional childcare staff (in full-time equivalents) will be needed by 2030 in order to implement parents' *legal entitlement to a daycare spot*. We estimate the resulting additional costs for the states at 6.8 billion euros (including material costs). In order to maintain the current *student-teacher ratio* at schools, around 51,700 new teachers (in full-time equivalents) and additional funding of at least 15.5 billion euros will be required. There is also an additional need for the *digitisation of schools*, which requires construction measures, hardware purchases and the upgrading of employees' digital skills. For this, we have set an additional financing need of 9.0 billion euros at the state level. This expenditure is not covered by the traditional concept of investment, but is essential for the overall economic effects of education. New school buildings are worthless without new teachers, for example. These measures expand the productive potential of the economy through direct employment gains on one hand and productivity gains on the other.[23] Education personnel expenses should therefore be financed, at least temporarily, by loans, which are possible under a reformed cyclical component, until the additional tax revenues generated by education are able to cover the financing.

Additional public expenditure will also be necessary for **research and development** in order to achieve the federal and state governments' target of 3.5 percent of GDP spent on research among society as a whole. We estimate a combined additional need of 9.9 billion euros, split roughly equally between the federal and state governments. Higher public spending on research and development has a positive effect on the productivity of the economy because it promotes technological progress and innovation. It should therefore also be financed with debt and could be taken into account under the cyclical component.

One thing is important to note: The scope for additional debt available through the cyclical component is not limited to the sums mentioned here. After all, potential output is not just positively impacted by fiscal policy, but also by other legal measures. Further simplifying access to the labour market for foreign workers, or reducing financial disincentives to work, especially for women and families, could make a significant contribution to expanding economic potential. Such reforms are also likely to be necessary in order to overcome the investment backlog in the coming years.

3. Tax and other revenue

The instrument: Financing through debt is appropriate for investments and other expenditure that significantly expand the productive capacities of the economy. The decisive factor in this respect is their effect on growth and potential, and not whether they are one-off or ongoing government measures. Many other government expenditures do not fulfil this criterion. Spending on climate adaptation, foreign policy, or national security authorities, for example, are essential for other reasons. They maintain the foundations of safe co-existence, work, and business in Germany, but do not create any additional economic

23 Krebs and Scheffel (2017)

capacity. Expenditure of this kind should therefore be financed from the state's current revenues. Nevertheless, they remain important – especially in times of climate change, migration movements and a challenging security situation at home and abroad.

Target	Additional need (in billions of EUR)	Financing options
Decarbonisation		
Additional financing needs of the federal government (electricity price compensation and municipal climate protection management)	Federal: 33.8	Current tax and other revenue (excl. income from carbon pricing)
Transport		
Public transport (personnel and operation)	States: 19.1	Current tax and other revenue
Internal security		
Civil protection and disaster response	Federal: 2.3 States: 3.0	Current tax and other revenue
Adaptation to climate change		
Climate adaptation and nature conservation	States: 9.5	Current tax and other revenue
Resilience		
Industrial capacities for energy transition technologies	Federal: 13.5	Current tax and other revenue
Critical raw materials	Federal: 1.6	
Defence		
Bundeswehr (personnel and operations)	Federal: 12.9	Current tax and other revenue
Further aspects of external security		
Diplomacy and humanitarian aid	Federal: 9.4	Current tax and other revenue
Development cooperation	Federal: 12.4	

Table 4: Current tax and other income

How these needs can be financed: Our estimate results in additional financing needs in the amount of 117.5 billion euros for aspects that are socially necessary but which do not count as investments nor expand economic potential (see Table 4). They should therefore be financed from current federal and state revenues. In doing so, we explicitly leave out social expenditure, such as for the Citizen's Income (*Bürgergeld*), pension subsidies or other social benefits.

The largest block is made up of additional needs for personnel expenses, which are incurred in a number of policy areas. The **Bundeswehr** has the greatest need for personnel. This is due to the fact that all new purchases of military equipment entail additional costs for *personnel and operations*. In addition to the additional needs for infrastructure (see above), our estimate envisages further personnel and operating costs of 12.9 billion euros by 2030, which are currently not

covered. According to our estimates, a portion of the additional requirements of 38.2 billion euros in the **transport sector**, especially for *local public transport*, will also go towards personnel, which will have to be paid for out of state budgets (possibly via allocations to the municipalities). For the sake of simplicity, we assume here that half the sum, i. e. 19.1 billion euros, will go towards personnel costs.

There is a mixture of additional needs to cover costs related to personnel, operating and construction in other policy areas. For **internal security**, especially *civil protection*, we estimate additional requirements of 2.3 billion euros and 3.0 billion euros for the federal and state governments respectively. In line with an integrated concept of security that also encompasses **foreign and development policy**, we have also identified additional requirements of 9.4 billion euros for the *Federal Foreign Office* and 12.4 billion euros for the *Ministry of Development*. For **climate adaptation and nature conservation**, there are also additional needs at the state level for coastal protection, flood protection and nature conservation as well as the development of personnel expertise in state administrations, the total cost of which we estimate at just under 9.5 billion euros. Our criteria for financing through financial transactions or loans under the cyclical component cannot be applied to these needs, which is why they would have to be covered by current revenue.

For some of the federal government's needs related to **decarbonisation**, we propose above that they be financed via financial transactions in the form of loans. However, there are also financing needs related to *electricity price compensation* for industry, which we estimate will cost 27.8 billion euros by 2030, and for the establishment of *climate protection management* at the municipal level (6.0 billion euros). As these are not investments, we propose covering these parts of the decarbonisation costs from the federal government's current revenues beyond the income from carbon pricing. We have already offset the latter for compensation in the form of a direct payment to private households amounting to 50 percent of the revenue from the German Fuel Emissions Trading Act (BEHG) and the European Emissions Trading Scheme (ETS-2) as well as the pro rata financing of investments in the amount of the remaining revenue.

Finally, we identify additional financing needs in order to increase the **resilience** of the German economy. For one, this includes needs related to stockpiling *critical raw materials.* This item results from the European *Critical Raw Materials Act* and is particularly relevant for a country with few raw materials such as Germany considering the more conflict-ridden geopolitical situation of the present. We estimate these costs to be in the range of 1.6 to 6.2 billion euros. There is also an additional need for federal subsidies in order to build up minimum capacities in industrial sectors that are crucial for the *energy transition*, e.g. in the areas of wind power, solar, batteries, electrolysis and heat pumps. We estimate the costs at 13.5 billion euros. These additional requirements serve economic security rather than the expansion of economic performance, which is why they should be financed from the federal government's current tax and other revenues. Since subsidised economic sectors represent long-term costs, while commercially viable ones generate sustainable tax revenues, a central goal of the federal government should be the economic viability of as many critical sectors as possible. If this is sufficiently achieved, credit financing via financial transactions would be conceivable for similar resilience expenditure in the future.

4. Financing options for municipalities

Municipalities are a special case within the constitutional framework of budgetary policy as they are not directly subject to the debt brake. With the exception of the "city-states" of Berlin, Hamburg and Bremen, which are treated like all other federal states with respect to the debt brake, the funding options of financial transactions and the cyclical component cannot be transferred one-to-one to the municipalities.

Nevertheless, municipal budgetary policy is also subject to strict rules. In all 13 non-city states, the municipal regulations stipulate that the budget must be balanced.[24] This principle relates either to the balancing of income and expenditure (in the double-entry budget system) or income and expenditure (in the cameralistic system), but sets tight limits on the municipalities' debt options either way. Additional restrictions arise from the generally strained situation of municipal budgets. According to data from the Federal Statistical Office, German local authorities are burdened with almost 30 billion euros in old debt. The municipal financing deficit amounted to 6.4 billion euros in 2023, and according to the German Association of Towns and Municipalities, it will move towards 10 billion euros in the coming years, driven by cyclical revenue shortfalls and high costs, e. g. for refugee accommodation.[25] Since the start of the millennium, net municipal investment has been negative, meaning that municipal infrastructure is falling into disrepair.[26]

In this context, it is not surprising that the additional financing need among the municipalities is immense. If we sum up the estimated needs at the municipal level, we arrive at an additional need of 218.0 billion euros by 2030 (see Table 5). The majority of this – 174.5 billion euros – goes towards school buildings (57.1 billion euros) and all-day childcare (1.9 billion euros), daycare centres (8.4 billion euros), municipal roads (51.8 billion euros), district heating networks (12.0 billion euros), the renovation of public buildings (13.0 billion euros), natural climate protection (12.8 billion euros) and the reduction of backlogs in fire and disaster prevention (17.5 billion euros). A further 28.5 billion euros is needed for climate adaptation measures and nature conservation. There is also a need for more staff in all-day childcare (8.2 billion euros) and daycare centres (6.8 billion euros). Given their financial situation, it is doubtful that all local authorities will be able to finance such requirements in the coming years without support from the federal and state governments.

To meet investment needs, we therefore propose that the federal and state governments jointly set up investment promotion programmes through which they provide funding to the affected municipalities or municipal corporations. A municipality's participation in the investment promotion programme could be linked to its individual budget situation. Three conditions seem particularly plausible in this respect. Firstly, for local authorities whose budgets are prepared using the double-entry system, their equity base is decisive in determining whether there is scope for financing additional needs. Secondly, high levels of liquidity loans are a burden on many municipal budgets, piled up as a result of insufficient funding allocations and revenue shortfalls coupled with rising costs. Thirdly, the municipalities differ according to the extent to which they are affected by structural change. For example, cities and municipalities in coal-mining regions have to shoulder significantly higher financial burdens than those in areas where companies in the chip or renewable energy industries are located today. These three criteria are not exhaustive and are mutually correlated. Nevertheless, investment promotion should be geared towards at least these conditions in order to ensure an effective and fair distribution of financial resources. This is necessary so that urgent needs can be met where they are greatest. The necessary and sensible level of co-financing by the municipalities should there-

24 Mühlenkamp and Glöckner (2010)
25 Federal Association of Municipal Umbrella Organizations (2023)
26 Gemeinschaftsdiagnose (2024)

fore be carefully weighed up depending on the funding programme and objective.

The funding programmes can take the form of loans as described above and can therefore be booked as financial transactions. Loans to the public sector are expressly exempt from the debt brake; their repayment can be agreed with the municipalities or their corporations and supported by federal subsidies. With the municipal investment promotion fund, which expires in 2025, the federal government has already created a role model for this approach, although it provided direct grants instead of loans.[27] Since 2015, a total of seven billion euros has been made available for infrastructure and school renovation projects via this fund. Since the identified needs of the municipalities lie particularly in the areas of municipal roads and the construction of schools and daycare centres, a permanent, reliable continuation of the previous funding framework seems feasible here. In order to ensure a smooth outflow of funds, the granting of loans should be limited to only the most necessary bureaucracy.

The additional financing needs we have identified, particularly with regard to additional staff in daycare centres and full-time childcare, as well as for climate measures, would have to be covered by the current revenues of the municipal budgets unless other support systems are developed for this purpose.

Target	Additional need (in billions of EUR)	Financing options
Education		
School buildings (reducing the investment backlog)	57.1	Municipal investment promotion programme of the federal and state governments, funded by financial transactions in the form of loans to municipalities or municipal corporations
All-day childcare (Investments)	1.9	Municipal investment promotion programme
All-day childcare (personnel)	8.2	Municipal budgets
Legal daycare entitlements (investments)	8.4	Municipal investment promotion programme
Legal daycare entitlements (personnel)	6.8	Municipal budgets
Decarbonisation		
Additional needs of municipalities (excluding local public transport, investments)	37.8	Municipal investment promotion programme
Transport		
Road infrastructure (maintenance)	51.8	Municipal investment promotion programme
Internal security		
Fire and disaster prevention (investments)	17.5	Municipal investment promotion programme
Adaptation to climate change		
Climate adaptation and nature conservation	28.5	Municipal budgets

Table 5: Financing options for municipalities

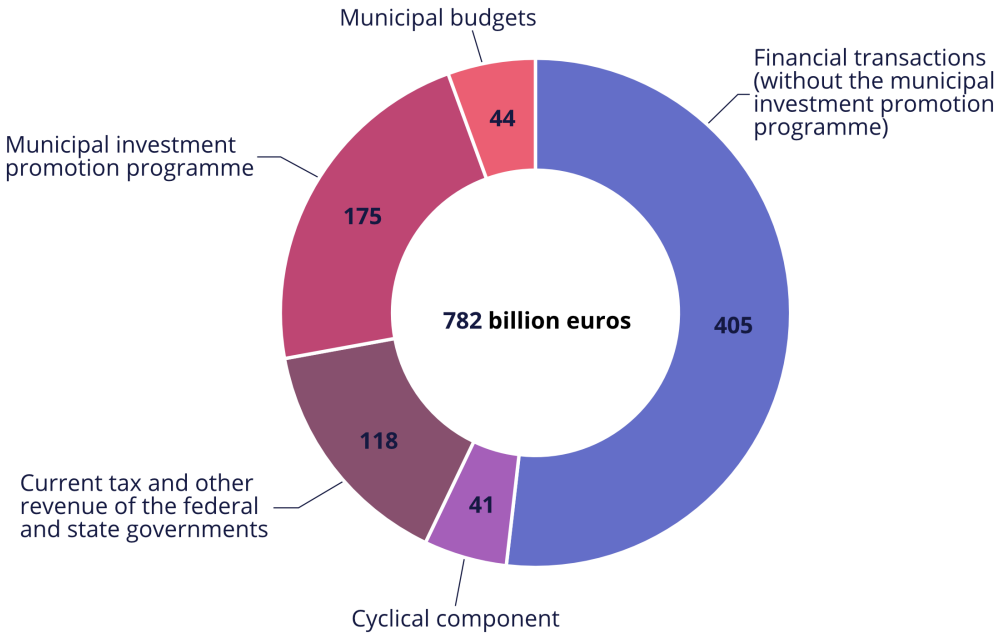
27 Federal Ministry of Finance (2024b)

4. The debt brake makes many things possible, but also complex and expensive

Our financing proposals take advantage of the fact that the debt brake already contains leeway to take on debt for productive expenditure. They can therefore be implemented without amending the Basic Law. Only adjustments at the level of simple legislation or ordinances are necessary in order to achieve an investment-friendly interpretation of the debt brake. This interpretation requires them – as does the Basic Law in general – because the constitution regulates the political order, but ultimately must be put into practice by politicians.

Additional need by financing option

In billions of euros



Dezernat Zukunft
Institut für Makrofinanzen

Figure 4: Additional need by financing option; **source:** own calculations

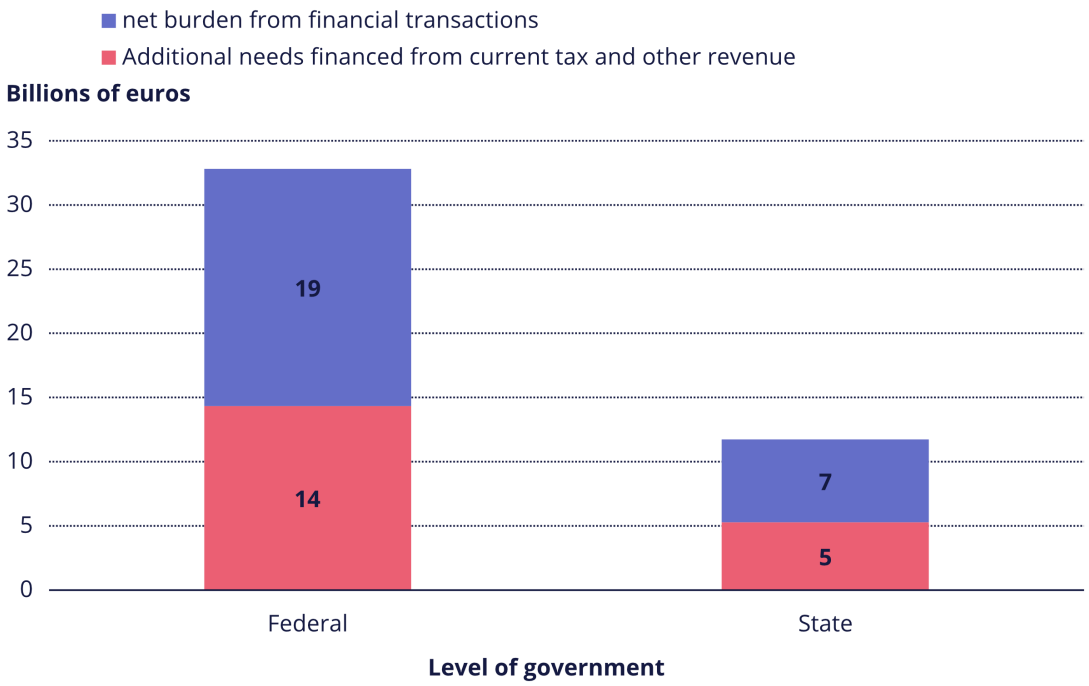
In this paper, we show how it is possible to finance productive spending using the mechanisms already set out in the debt brake: financial transactions and a simple legislative reform of the cyclical component. More than half of the additional needs identified could thus be financed by debt for financial transactions (excluding those for a possible municipal investment promotion programme). 40 billion euros could be directly reflected in a reformed cyclical component (see Figure 4).

The European fiscal rules also do not stand in the way of the financing options described, as the European regulations do not set any fundamental, hard limits that must not be exceeded regardless of the current situation. On the contrary, it is the EU states themselves that choose their spending path based on European guidelines. The European guidelines take into account productive expenditure that is in line with the EU's growth strategy. A large part of our estimated needs – especially for education, rail, health, decarbonisation and resilience – are in line with the Union's policy objectives and could be recognised as relevant factors to be excluded from the spending pathway. In short, the European regulations do not mean a

ban on debt for Germany and explicitly leave the door open for productive spending – the decisive factor is the will of German politicians.

Effective budgetary burden

Average 2026-2030



The net burden from financial transactions is the balance of the effective budgetary costs of providing loans and the return on equity holdings. For the purposes of calculation, we assumed 20-year loans with interest and the return on federal bonds set at 2.5 percent, with 30-year federal bonds and a return on equity holdings of 3.0 percent. All financial transactions are loans that are repaid with grants from public budgets. An injection of equity is only assumed in the area of social housing, for housing construction companies. Additionally, we assume that municipal investment needs are to be covered 50/50 by the federal and state governments, funded by financial transactions in the form of loans.

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Figure 5: Effective budgetary burden; **source:** own calculations

The debt brake and the EU fiscal rules are quite permissive, but effectively set limits to government spending policy. Almost 120 billion euros, or 15 percent of the additional needs we have identified for the federal and state governments, must be paid from current revenues within the given constitutional framework. For the federal government, this amounts to 86.0 billion euros by 2030, and 31.6 billion euros for the states. If one excludes the investment needs of the municipalities, for which a municipal investment promotion programme supported by the federal and state governments is conceivable, a further 43.5 billion euros would be added at the lowest governmental level as a burden on municipal budgets.

Further budgetary burdens arise for the federal and state governments from repayment subsidies for loans granted in the course of financial transactions. In a sample calculation for the proposals we have made for the use of financial transactions – including investment loans to municipal authorities – we arrive at average annual budget-related expenditure of around 19 billion euros and 7 billion euros at the federal and state levels respectively. Overall, the average annual burden on the federal budget for the period from 2026 to 2030 will be around 33 billion euros, and for state budgets, 12 billion euros (see Figure 5). For these additional needs, which cannot be financed by loans, solutions must be found within the public budgets.

The bottom line remains that financing the modernisation programme we have estimated is a major challenge within the current constitutional framework.

However, it is not impossible, as smart policies could create additional leeway that we have not explicitly considered in our needs estimate and in this policy paper. On the one hand, our financing options can also be used in part for already budgeted expenditure items and not just for additional needs, which would create more room in public budgets. On the other hand, our estimate includes a number of needs for measures that – as already mentioned – can only be implemented through complementary policies that expand potential output. For example, the provision of public funds for the expansion of renewable energies, the renovation of buildings, or new production facilities is not enough; the gains cannot be realised without additional labour. In addition to the identified financial requirements, there is therefore a need for policy measures that not only shift workers between sectors, but also expand the labour force potential of the German economy as a whole. These include reforms to pensions, the tax system and immigration in order to increase the employment of older citizens, women and foreign workers. These measures increase potential output and are reflected in greater financial leeway under the cyclical component, provided it is reformed as we have outlined. This would reduce the additional burden on public budgets that our estimate implies.

At the same time, the debt brake with its complex rules makes the presently necessary financial policy unnecessarily complicated. For example, calculating the cyclical component requires a small army of economists to determine the optimum level of government spending with respect to the economic situation using a highly complex methodology. It is doubtful that these complex financial policy constructs can be understood with sufficient transparency by the parliamentarians who are supposed to make decisions on their basis, let alone by the public.

The debt brake also makes the financing of necessary public spending more expensive than it needs to be. If, for example, the federal government finances investments in social housing through equity contributions to municipal housing companies, then this participation must generate a return for the federal government in order to be considered a financial transaction. This return must be generated by the housing companies, which increases the cost of the investment. In contrast, it would be cheaper if the federal government could make its money available directly as a subsidy, but this would fall under the debt brake. To ensure reliable financing, the federal government must therefore choose the more expensive route in this example.

Considering that the debt brake excessively restricts, complicates and increases the cost of financial policy, it would be sensible to discuss a constitutional reform of the debt brake. There have been many proposals for this in recent years, ranging from "golden rules" and linking deficit limits to the debt ratio to a more flexible approach to the emergency clause. Additionally, the CDU and CSU recently proposed leaving the rules for the federal government untouched, but "allowing [the states] a certain amount of new structural debt".[28] The states are currently only permitted to borrow for financial transactions and to smooth out fluctuations in the business cycle, but their permitted structural deficit is zero. In view of the considerable additional financing needs that we have identified for the states, this would appear to make perfect sense, but it would remain a minimal solution. A fundamental reform, on the other hand, first requires a paradigm shift German fiscal policy – and generally requires a new definition of what sustainable public finances are.

28 Tagesspiegel (2024)

5. A new definition of sustainable public finances

Closing the public investment gaps in the coming years and making the necessary investments in decarbonisation and defence is an administrative, personnel and financial feat. If you wanted to make the undertaking as difficult as possible, you could try to implement it under the debt brake as it currently stands in the Basic Law, and without an increase in the debt ratio. According to the explanatory memorandum to the introduction of the debt brake, "a sustainable [...] reduction in the debt ratio"[29] was its central objective. The probability that it will be possible to implement the necessary investments and reduce the debt ratio at the same time is likely to be low (or highly dependent on factors over which the federal government has little control, such as inflation or the level of interest rates).

It would therefore be worthwhile questioning at a more fundamental level why there is such insistence upon a debt ratio of no more than 60 percent of GDP. Even the European fiscal rules do not regard 60 percent as a strict debt limit for sustainable public finances. The debt ratio is more a product of chance than a scientifically based indicator. It owes its importance in the European context only to the fact that politicians did not have a more meaningful indicator at hand at the start of the 1990s. So the decision was made – at least provisionally – to set a debt ratio of 60 percent.[30] This describes the fiscal reality rather poorly, as the example of Germany shows: even if exceeding the 60 percent mark is declared sacrosanct in this country, Germany today with its 60 percent has one of the lowest debt ratios by international standards. Interest costs are still historically low and internationally there is certainly more concern about weak German growth than higher debt levels.[31]

What Germany lacks – and what is therefore crucial for the sustainability of German public finances – is productivity growth. This inevitably includes productive expenditure. Productive expenditure largely determines future growth, the quality of public infrastructure and state assets, to which the debt ratio is completely blind. A reform of the debt brake should therefore focus directly on productive expenditure. The aim of a reformed debt brake should be to allow such expenditure in the same way as it prevents excessive interest charges. By only looking at the debt ratio and neglecting growth, the German fiscal policy debate has been turned upside-down. It is detached from social needs and goals, even though Germany is one of the few countries (in global terms) with the economic and fiscal strength to determine its own future.

The 2025 federal elections are the right time to have a fundamental discussion about the framework of German financial policy – and to discuss ideas to turn it right-side up.

29 German Bundestag (2009)

30 In her new book *Gutes Geld (Good Money)*, published in September 2024, Philippa Sigl-Glöckner traces the history of the debt ratio in detail and exposes its problems.

31 International Monetary Fund (2024)

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