PUT FORWARD FOR DISCUSSION: TWO DIFFERENT VIEWS ON THE MOBILISATION AND FINANCING OF INVESTMENT

205. In this section, the council members discuss two different approaches to the mobilisation of private and public investment and how such investment could be financed.

3. Mobilisation and financing of investment (Veronika Grimm and Volker Wieland)

Private and public investment need depends on the economic conditions

206. The transformation of the economy through digitalisation, climate action and demographic change will require **substantial private and public spending**. Various institutions have come up with **very different estimates** of the extent of the investment required ↘ TABLE 15 – particularly to cope with the challenges of climate change mitigation – although not all of this expenditure fits the definition of capital investment contained in the national accounts. ↘ ITEM 218 Most of the studies do not indicate how much of this spending will be funded privately and how much will come from the public purse. Such allocation is not straightforward in any case, as the extent of **public spending is heavily dependent on** the business and political **environment**. This is particularly true in the case of climate change mitigation.

For example, the **energy price reform** proposed by the German Council of Economic Experts (GCEE Annual Report 2020 items 391 ff.), combined with a strengthening of the **carbon pricing** system (Special Report 2019 items 107 ff.; GCEE Annual Report 2020 items 372 ff.), would be expected to mobilise substantial private investment and significantly reduce the need for subsidy in many areas. And a transformation path towards a carbon-neutral economy that permits industrial plants to switch to gas or **blue hydrogen** during a transition period, instead of immediately focusing solely on green hydrogen ↘ BOX 31 will lead to substantially lower costs for measures such as carbon contracts for difference (CCfD).

207. So although it is **not directly** possible to determine the amount of **public-sector investment required** from the studies, the estimates and the scenarios underpinning them are nevertheless important as a basis for a political debate on the need for action.

208. The state **needs to take action** in multiple areas in order to mobilise investment. The central task of the state should be to create a favourable environment for private investment through reforms, ↘ ITEM 200 targeted public investment and coordinated activities. This might for example involve planning and, where appropriate, financing a proportion of the necessary infrastructure, and removing obstacles that are preventing the realisation of investment projects (Feld et al.,

↘ TABLE 1

Reports on estimates of capital investment needs in Germany and in the EU

Report	Areas	Period	Sector	Investment needs over the whole period		Annual investment needs	
				total	of which: additional investment needs[1]	total	of which: additional investment needs[1]
				€ billion			
Germany							
McKinsey (2021)	Climate	2021–2045[2]	Public and private	6,000 [a]	1,000	240	40
BCG (2021) on behalf of BDI	Climate	2021–2030[3]	Public and private[10]	860 [b]	560	100	
Krebs and Steitz (2021)	Climate	2021–2030[2]	Public[11]		460 [c]		46
Prognos et al. (2021b) on behalf of KfW	Climate	2020–2050[4]	Public and private	5,000 [d]	1,900	191	72
Prognos et al. (2021a) on behalf of BMWi	Climate	2020–2050[5]	Public and private		1,404		45
Bardt et al. (2019)	Infrastructure at local government	2020–2029[6]	Public		158		45
	Education				109		
	Housebuilding				15		
	Supra-regional infrastructure				158		
	Decarbonisation				75		
Krebs and Scheffel (2017)	Education and childcare	Permanent increase[7]	Public				10.4
	Housebuilding						5
	Infrastructure						5
European Union							
McKinsey (2020)	Climate	2021–2050[4]	Public and private	28,000	5,400	980	180
European Commission (2020)	Energy sector	until 2030[8]	Public and private			1,040	90
McCollum et al. (2018)[2]	Energy sector	2016–2050[9]	Public and private			302	119

1 – Investment needed in addition to the measures already announced in the reports (reference trajectory). 2 – Target: carbon neutrality by 2045. 3 – Target: greenhouse gas neutrality by 2045. 4 – Target: carbon neutrality by 2050. 5 – 87 % reduction in greenhouse gas emissions by 2050 compared to 1990. 6 – Additional need for public-sector capital investment (includes spending to promote private capital investment or capital investment in human resources. 7 – Public investment programmes; examines their impact on inclusive growth and the public finances. 8 – 55 % reduction in greenhouse gas emissions by 2030 compared to 1990. 9 – Target: keep global warming at around 1.5 °C. 10 – Estimated fiscal burden in 2025 approx. €30 billion, in 2030 approx. €50 billion. 11 – Summary of capital investment by the German government and local authorities and the promotion of private capital investment. a – Includes replacement investment and its reallocation. b – Climate-related need, whereby €300 billion already released under current regulation. c – Climate-related capital investment; does not include pure replacement investment. Additional investment spending of around €87 billion planned by the German government in connection with the 2030 climate action programme agreed in 2019, the 2020 fiscal stimulus package and the 2021 emergency climate action programme is not inlcuded and reduces the additional capital investment need. d – Climate-related capital investment as part of the total capital investment; contains replacement investment and its reallocation.

Sources: Bardt et al. (2019), BCG (2021), European Commission (2020c, 2020d), Krebs and Scheffel (2017), Krebs and Steitz (2021), McCollum et al. (2018), McKinsey (2020, 2021), Prognos et al. (2021a, 2021b)
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2021b; Grimm et al., 2021). The leverage effect of public spending often referred to in public debate only occurs when complementary **private investment can be mobilised**, **not** if this is **crowded out by state intervention**.

209. The **more important role of private investment** is evidenced by the fact that, on average, over the past ten years, it has accounted for around 89 % of total gross fixed capital formation in Germany. ↘ CHART 68 RIGHT With the right economic policy measures, Germany's long-term position as a good place to invest can be strengthened and incentives can be created to encourage a stronger focus on future-oriented business models. For example, expanding the tax breaks for research spending creates greater incentives to innovate (GCEE Annual Report 2020 item 517).

With regard to climate action, a focus on **carbon pricing** as a control instrument would create **technology-neutral incentives to invest** in sustainable business models (EWK, 2020, 2021; Feld et al., 2021b; Special Report 2019 items 202 ff.; GCEE Annual Report 2020 item 372). The lowering of the levies and surcharges on the price of electricity, especially the scrapping of the EEG surcharge, could relieve the burden on the players involved as the price of carbon increases and also make investing in integrated energy more attractive (EWK, 2020, 2021; GCEE Annual Report 2020 items 391 ff.). ↘ ITEMS 614 FF.

Public-sector investment has grown since 2014

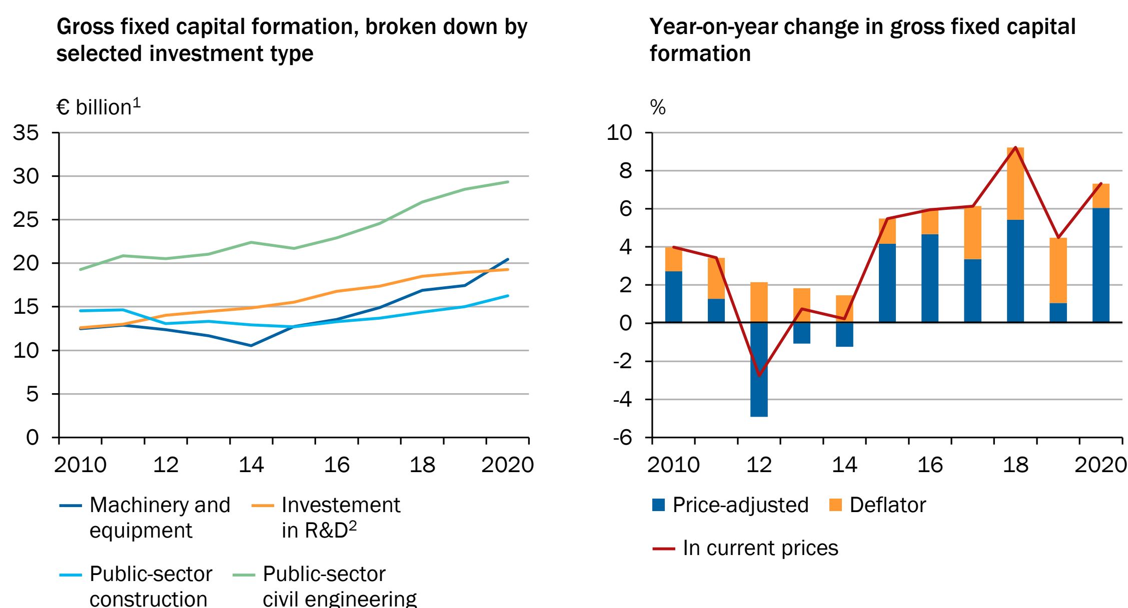
210. **Public-sector investment** has been increasing for some time. Nominal gross fixed capital formation by the German government has grown steadily since 2014 ↘ CHART 69 RIGHT and is now set to expand further as a result of two measures. The German government's **economic stimulus package** agreed in June 2020 provides for investment of around €46 billion in climate change mitigation, digitalisation, healthcare and education (Grimm et al., 2021). And the German **recovery and resilience plan** also provides funding for investment in these areas, although it should be noted that the majority of this spending was already included in the stimulus package (GCEE, 2021). The government's medium-term financial planning currently anticipates annual investment of €50 billion in the period 2023 to 2025 (BMF, 2021d).

211. In normal times, the debt brake enables structural net borrowing of 0.35 % of GDP. This restriction has **not been an obvious limiting factor** on greater public investment since the introduction of the **debt brake**. In fact, the opposite is true: Last year, the German government's investment ratio was the highest it has been since reunification (Board of Academic Advisors at the German Federal Ministry for Economic Affairs and Energy (BMWi), 2020, p. 6; Feld et al., 2021b). ↘ CHART 68 RIGHT AND 69 However, there are still many **obstacles** preventing investment activity that must be removed (GCEE Annual Report 2020 box 10). ↘ CHART 68 LEFT ↘ ITEM 203

212. There are various ways of bringing about and funding an increase in public-sector investment. Expenditure in budget planning can be examined as part of an activity review and replaced by investment, and the total available funds can be increased by raising taxes and by increasing debt (if permitted). Finally, there may be greater **scope for investment** if, in a **growing economy**, **current government expenditure is increasing at a slower rate than revenue**.

↘ CHART 1

Gross fixed capital formation by the government since 2010



1 – In current prices. 2 – Research and development.

Sources: Federal Statistical Office, own calculations

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The debate about public-sector investment

213. There has been an ongoing **debate** for a number of years about whether the volume of **public-sector investment** is sufficient and, if not, how a further increase in such investment could be financed (Expert Commission Strengthening of Investment in Germany, 2016; GCEE Annual Report 2019 items 521 ff.). Critics of the debt brake doubt whether policymakers can support sustainable growth and ensure social fairness within the confines of the debt brake. They are therefore calling for changes to the debt brake and the introduction of comprehensive exemptions for certain, mostly capital spending (**golden rule**). This would permit additional net borrowing, for example to finance capital investment (GCEE Annual Report 2019 items 562 ff.). Alternatively, the establishment of a **legally independent asset pool** for public-sector investment is proposed (Hüther and Südekum, 2019). This would serve to finance capital investment via additional debt and make the volume of such investment independent of other spending.

214. If **public-sector investment** is to be **privileged** in this way, however, it **must** be **clearly defined and segregated** from other spending (Feld et al., 2021b; GCEE Annual Report 2019 items 531 ff.). In particular, many expenditures commonly classified as being for the future, such as in education or infrastructure maintenance, are not defined as capital investment in national accounts or budgetary law. It is also unclear whether spending that is classified as necessary and as an investment in the future by today's decision-makers will be assigned the same importance by future generations. Without clear identification and segregation, there is a high risk of additional borrowing merely creating leeway for additional current spending within the core budget (Feld et al., 2021b).

A change of this kind to the debt brake would also risk shifting the discussion. Instead of being about the debt brake, it would be about the definition of capital investment, and there would be an incentive to select the widest possible definition. At the same time, the possibility of additional debt would substantially reduce the conflict in budget negotiations between proponents of current spending and those who advocate spending for the future (Feld et al., 2021b). There would be **fewer reasons not to give in to demands for additional current spending** if the level of debt could be increased to fund it. In this case, however, the additional debt would not necessarily create an asset of equivalent value for the benefit of future generations. Instead, there would be additional current spending or the activity review would be neglected, which would be detrimental to future generations. The higher national debt thereby created would limit fiscal leeway and thus restrict the room for manoeuvre available to future generations.

215. In addition to perverse incentives regarding a privileging of current spending, possible **perverse economic policy incentives** for regional preferences and unprofitable investments must be taken into account when planning and implementing public expenditure at regional level (Hodler and Raschky, 2014; Carozzi and Repetto, 2016; Fiva and Halse, 2016; Baskaran and Lopes da Fonseca, 2021). This can lead to public-sector investment in places where there is no need, or the quality of implementation can be poor so that the potential contribution to growth is reduced (Becker et al., 2013).

Create greater scope for public-sector investment

216. In order to focus public-sector spending on investment in the future, as is necessary to transform the economy, greater leeway for public-sector capital spending has to be created in the coming years. The level of public spending should not necessarily be an indicator of target attainment here. For example, the **level of public-sector investment** required largely **depends on how accurately this has been targeted** to achieve the maximum leverage on private spending. ↘ ITEM 215

217. Within a given budget, it is important to **prioritise** necessary types of investment in the future over purely current spending. So firstly, the various subsidies for activities whose priority is not investment in the future should be reduced (GCEE Annual Report 2020 item 405). This would also serve to reduce distortions and accelerate the switch to future technologies. Secondly, a rise in **current spending** based on annual increases written into law should **be limited by applying rules** so that it does not automatically use up all the headroom created by economic growth. The automatic adjustment of other long-term fiscal obligations could be indexed relative to their underlying drivers, similar to the link between retirement age and further life expectancy in later life proposed by the GCEE (GCEE Annual Report 2020 item 639).

218. A budget constraint such as that imposed by the debt brake forces **conflicts between advocates of current spending and those who favour investment in the future** to be **fought out today** (Feld et al., 2021b). Conflicts of objectives

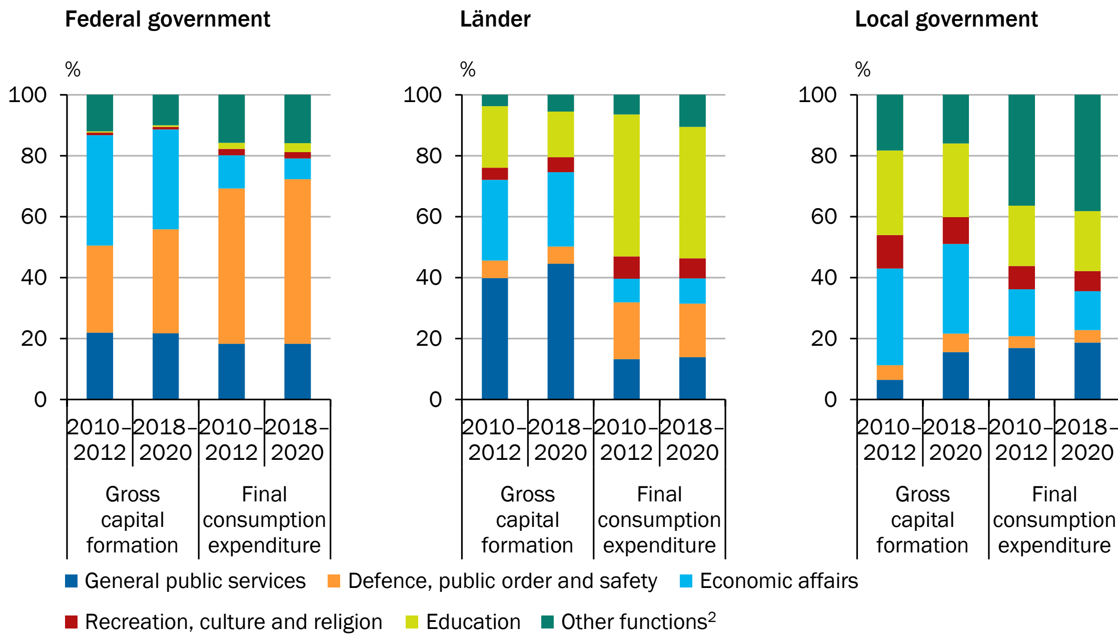
are thus brought out into the open and cannot be put off for the future. The spending preferences of different players have to be prioritised. The intensive discussion that has been going on since the introduction of the debt brake concerning the composition of the budget and the need for public-sector investment shows that the debt brake is doing what it is supposed to in this regard. This is also in the interests of the younger generations, who are not yet old enough to take part in democratic decision-making processes but will have to bear the costs of these decisions in the future.

The **definition of spending priorities** should not be carried out in blanket fashion using the categories in the national accounts. For example, the narrow focus of the definition in the national accounts means that public-sector investment is not necessarily preferable to other types of expenditure, such as spending on education or maintenance measures that counts as government consumption (GCEE Annual Report 2019 item 523). In addition to ensuring the implementation of capital spending, ↘ ITEM 204 a **transparent, public analysis and discussion process** held at regular intervals should **result** in the identification **of necessary spending for investment in the future**. This requires the decision-makers to ensure that the long-term costs and expected effects are transparent.

219. The Federal Court of Audit primarily operates ex post, auditing accounts and examining efficiency but rarely evaluating decisions in advance. In addition to the government's analyses, an institution that is attached to parliament and independent of government like the Congressional Budget Office (CBO) in the United States or the Parliamentary Budget Office (PBO) in Canada and Australia could ensure **authoritative and mandatory scrutiny** of the **costs** of legislative proposals and capital spending plans. Alternatively, existing independent institutions could be given more powers and information so that they could carry out a **transparent evaluation** of cost and benefit in advance of legislative and capital spending decisions. The government could be obliged to present its own calculations to this institution and publicly take a position on the institution's evaluation.

220. **Continuous monitoring and evaluation** are important for the **efficient and low-cost use** of public funds. The spending review is an instrument that has already been successfully introduced and could be expanded for this purpose (BMF, 2018, 2020b). In addition, particularly for government expenditure, its effects and performance should be evaluated across regions and local authorities – as is already the case in the United Kingdom and Ireland, for example. This would allow best practice examples of local implementation to be identified at an early stage, along with further potential for improvement, and budget plans to be adjusted if necessary. By formally integrating subnational levels and independent institutions into the national strategy – similar to the dialogue between federal government and federal states in Austria (Austrian Federal Ministry for Education, Science and Research, 2021) – needs and priorities can be identified at an early stage, along with any barriers. This may also help to ensure adequate funding of the lower tiers of government. Large short-term local authority loans in some municipalities currently present a significant obstacle to the implementa-

CHART 2
Government gross capital formation and final consumption expenditure by function and government subsector[1]



1 – According to national accounts definition (divisions of the classification of the functions of government). 2 – Environmental protection, housing and community amenities, health, social protection.

Sources: Federal Statistical Office, own calculations
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tion of public-sector investment (Beznoska and Kauder, 2019). The financial situation of the Länder and local authorities is therefore of particular importance with regard to investment in the future in the wider sense, because spending on sectors such as education is mostly carried out at this level. CHART 70 BOX 25

Take parliamentary scrutiny seriously

221. When outsourcing public-sector investment to an institution such as a legally independent asset pool, the constitutionally protected **budgetary laws of the parliaments** must be taken into consideration. The German federal government, Länder and local authorities already make public-sector investments outside their core budgets to a noteworthy extent (Christofzik et al., 2019). They use extrabudgetary entities, specific investment vehicles and private-sector activities for this. At federal government level, the debts of the extrabudgetary entities accounted for around one seventh of German national debt in 2019. The share is likely to be higher at Länder level, and even more so at local authority level. While further outsourcing could create a conflict with budgetary law, existing programmes of Germany’s KfW development bank for investment in climate action and digitalisation could be temporarily extended (Feld et al., 2021b). To keep the outsourced parts of the budget within limits, however, the state’s equity investments such as those in Commerzbank or the equity investments within the framework of the Economic Stabilisation Fund (ESF) should be reduced at the same time.

Unleash private-sector investment

222. Besides forcing the conflict of objectives between current expenditure and investment in the future to be fought out today, a budget restriction such as that set by the debt brake has an additional effect. The limited fiscal leeway also makes **policymakers more attentive** to the role of **private-sector investment** in the transformation and to the reforms necessary to increase it. The potential to unleash private investment by realigning the real-economy environment and the financing ecosystem to the challenges of the future is immense, especially in view of the transformation to a carbon-neutral economy. ↘ ITEM 206

The debt brake during the coronavirus crisis

223. The coronavirus pandemic has shown that the **debt brake** with its exemption clause **provides** the **necessary flexibility** in severe crises to guarantee sufficient fiscal leeway. Since the start of the crisis, the extensive fiscal measures and automatic stabilisers have played an important role in mitigating the economic slump. Unlike other countries, Germany had sufficient headroom to address the challenges of the pandemic with fiscal measures. This had been created in the preceding years when it succeeded in reducing the debt ratio after the financial crisis, not least thanks to a sustainable budget policy coupled with economic growth.

224. In the aftermath of the crisis, action should be taken to **restore** and – where necessary and possible – expand **the government's ability to react** (Brunnermeier, 2021a, 2021b). This is important, particularly with regard to potential future crises. The state was able to react because it can finance debt on the basis of future tax revenues, but the amount of this revenue depends on the future performance of the private sector. If future economic growth is weaker, the government will be less able to service debt (Felbermayr et al., 2021). ↘ ITEM 101 However, it will be **more challenging** in the coming years to achieve the necessary growth than in the years before the pandemic, not least **because of the demographic change.** ↘ ITEM 90

225. According to current forecasts for economic growth, the debt brake exemption clause is likely to be used for the final time in 2022 because of the coronavirus crisis. **In 2023**, the **normal limits** of the debt brake would **apply again**. ↘ ITEM 150 The **transition** should be structured in such a way that the **economic recovery is not slowed**. There should therefore be no tax rises. At the same time, the conditions for capital investment have to be improved. ↘ ITEM 195 This will be possible in the coming years because of the existing reserves.

However, the current situation has been used as an opportunity to discuss **more far-reaching ideas** on how to manage the transition, especially in the event of the exemption clause being invoked in the future. In addition, proposals are being discussed that would allow capital spending to be financed by additional debt when the debt brake is in place, rather than enabling the post-crisis transition. ↘ BOX 19

↘ BOX 19

Debt brake: transition following future use of the exemption clause and proposals for the financing of capital investment

In the event of a future crisis, the **transition** following use of the exemption clause could be **more difficult** if – unlike the situation after the coronavirus crisis – there are no reserves to smooth the transition.

There are essentially three conceivable means of shaping future transitions following use of the exemption clause. Firstly, the **use of the exemption clause** could be extended in the years immediately following the crisis, meaning that the debt brake would not have to be re-applied as soon as the acute fiscal need had ended. While the debt brake requires a link between the reason for the borrowing in excess of the debt brake limit and the circumstances of the crisis, there is no corresponding requirement for the scope of additional net borrowing (Kube, 2021). This could give rise to a high future repayment obligation and it is therefore uncertain whether such an extended application of the exemption would be possible without an amendment to the constitution.

A second option would be the introduction of a transitional rule for **the structural components**, as happened when the debt brake was introduced between 2011 and 2015. This was linked to the structural balance in 2010 for the German government, and Article 143d of the Basic Law (Grundgesetz, GG) specified a fixed, pre-defined time path for transition for the federal government and the Länder, but the question of what criterion would be used in the event of a new crisis to determine the scope of a temporary increase in the structural components remains unanswered. The same applies to the path for its removal. However, a constitutional amendment would be required for implementation, and this could be accompanied by demands for additional changes to the debt brake.

A third possibility would be to create new **reserves** that could be used in the years following a triggering of the exemption clause, in order to smooth the transition. However, reserves can only be created when the economy is strong and they would have to reach an appropriate level before the onset of any new crisis. There are also many budgetary law questions that would have to be answered for such a solution (Snelting, 2019).

There is increasing public debate about whether the volume of public-sector investment is sufficient and, if not, how a further increase in public-sector investment could be funded.

One group of proposals centres on the formation of a **dedicated reserve** (Feld and Fratzscher, 2021; Fuest, 2021). What all these ideas have in common is that they envisage the formation of an additional reserve, making use of the exemption rule in the 2022 budget, and suggest special borrowing or the use of unallocated budget resources. In the coming years, these funds could then be used to fund capital investment, for example in the area of climate policy or digitalisation. The volume would initially be limited by the allocation in the 2022 budget, so the instrument would be designed to be temporary, until the funds have been fully repaid. While the creation of such a reserve would not in principle require any initial change to the debt brake, its compatibility with the rules governing the debt brake would have to be examined. Legal reservations have been expressed concerning the use of these funds for purposes not directly related to a severe crisis situation (Kube, 2021).

Krebs (2021) suggests an alternative method of financing future capital investment under the debt brake (2021). Instead of creating a reserve, the **equity base** of existing public-sector companies should be expanded, new equity investments acquired or new public-sector companies established. Examples of existing public-sector companies in this case would include Deutsche Bahn or Germany's KfW development bank. As a result of the equity investment and provision of equity, the German government could finance the spending and also control what

it was spent on. In principle, this approach could be compatible with the debt brake in its present form if the equity investments were classified as financial transactions, but it would initially require a capital injection test to be passed (Kube, 2021; Federal Statistical Office, 2021b). This specifies that the equity investment cannot be used purely to offset losses and must be profit-generating. Transactions that failed the capital injection test would not be neutral within the meaning of the debt brake and would be included in the calculation of the relevant net borrowing.

A third group of proposals suggests the establishment of a **legally independent investment company** that could finance public investment on behalf of the public sector through loans (Bardt et al., 2019; Beznoska et al., 2021). Being structured as a legally independent company would exempt such a vehicle from the rules of the debt brake and thus allow loans to be financed outside its limits (Hermes et al., 2020). However, it should be reiterated that this would only be possible within very narrow constitutional limits. It would have to have a material purpose in order to be legitimate, and borrowing must not be its sole objective. Should the German federal government or Länder be liable for such a company or take over the servicing of the debt, such debt would then count as public-sector borrowing and would be subject to the limits of the debt brake (Kube, 2021).

226. In view of the wide range of publicly discussed approaches, we believe the following **criteria** should be **applied** to a transitional solution – if in fact such a solution is necessary at all in the present situation in addition to the use of existing reserves. Steps must firstly be taken to ensure that financing of public-sector investment does not fall outside the provisions of the debt brake. Nor should a transitional arrangement be structured so as to enable debt to rise unchecked, for example through a continued suspension of the debt brake long after the pre-crisis level has been exceeded. The budgetary sovereignty of parliaments and direct scrutiny by these bodies would also have to be ensured.

227. When new financial instruments are used, the spending that they fund must be **additional**. Simply shifting spending from the core budget to a new instrument, especially if such expenditure has already been planned and funded, should be avoided, as this would be more likely to strengthen current spending than capital investment.

228. Of course the option of **selective improvements to the debt brake** in the Basic Law could also be considered. These could include institutionalisation of a transition period following activation of the exemption clause (GCEE Annual Report 2020 item 222) or – based on the European fiscal rules – an increase in the maximum permitted net borrowing, if the debt ratio is well below 60 %. When considering this option, however, the **risk** would have to be factored in that a change to the constitution, which would require a large political majority, may come with a **range** of quid pro quo **demands** that could limit the binding effect of the debt brake and damage its credibility.

4. Investment mobilisation and financing (Monika Schnitzer and Achim Truger)

229. **Fiscal policy** in Germany is facing **major challenges**. Firstly, it needs to **get back to normal** after the essential support measures and the strongly expansionary approach taken to combat the coronavirus crisis, **without jeopardising** the **economic recovery** and upturn. Secondly, it faces **substantial spending demands** to **shape transformation** in the areas of climate policy, education and digitalisation.

Shaping the transformation requires a credible funding strategy

230. Public-sector spending needs cannot be determined objectively and unequivocally. They are always an expression of democratically determined normative objectives. They also depend on the specific selection of instruments and on how they are divided between public or private financing. So it is no wonder that various studies on spending/investment needs in various sectors, ↘ TABLE 15 arrive at different quantitative assessments. However, based on the table, a total potential **public-sector spending requirement** across all spending areas of up to the **mid double-digit billions range** seems plausible.

231. The **GCEE** has itself spoken out in favour of measures that create **significant spending requirements** in a wide range of areas. In the area of climate policy, for example, fully funding the proposed **energy price reform** alone would require around €20 billion a year during the period of transition (GCEE Annual Report 2020 items 396 f.). Then there are **complementary measures** for expanding infrastructure and local public transport, as well as subsidies for industry (carbon contracts for difference) and private households (e.g. improving the energy efficiency of housing; GCEE Annual Report 2020 items 255 ff.). Support for **digitalisation** and **research and development** is another important area requiring additional spending (GCEE Annual Report 2020 items 570 ff.). Last but not least, the **extensive education investment** and reforms called for would lead to substantial spending requirements. ↘ ITEM 372

Consequently, a **credible fiscal strategy** must include a **financing perspective** for spending needs in the mid double-digit billions range.

232. Essentially, expenditure can only be financed through tax rises, spending cuts, an increase in net borrowing or a combination of these. There is **no objectively correct funding option**, just complex cost/benefit considerations in which macroeconomic and distribution-policy aspects play an important role. From a macroeconomic perspective, **neither substantial tax rises or drastic spending cuts** are advisable **in the short term** because both could jeopardise the recovery. In the medium and long term, however, it is a different story. The **removal of environmentally counterproductive subsidies** is likely to play an important role here, because this is consistent with environmental policy ob-

jectives (GCEE Annual Report 2020 items 382 ff.). However, not all of the revenue generated would be available to fund state spending, as some would have to be used for social compensation in order to avoid regressive effects and hardship cases. Large **tax cuts** ↘ ITEM 189 would be in **obvious conflict** with the funding of public-sector spending and would increase the funding need.

Financing part of the investment for the future through loans is economically justifiable

233. **Funding public-sector investment for the future through loans** can **make economic sense** as it enables intertemporal application of the pay-as-you-use principle (Musgrave, 1959; Occasional Report 2007; Truger, 2015), whereby net capital spending should be funded through borrowing to ensure intergenerational fairness. The underlying assumption is that net capital spending increases the capital stock and passes on the benefit to future generations, so it can be fair for future generations to help pay for the investment by servicing the debt. Future generations inherit the public debt, but gain additional capital stock in return. From this perspective, a refusal to borrow to finance investment creates a burden for the current generation, which has to pay higher taxes or suffer lower government spending. This creates an incentive for insufficient public investment – to the detriment of future generations.

This fundamental **incentive problem is exacerbated during times of budget consolidation**, because cuts in public capital spending often appear to be the simplest way of reducing the budget deficit (Barbiero and Darvas, 2014).

234. Overall, there is therefore much to be said for **targeted privileging of investment spending** within debt rules in order to provide lasting incentives for prioritisation. Such privileging is not about enabling limitless debt, and it does not remove the government budget restriction (Feld et al., 2021b). In fact, the privileging of certain types of spending requires a democratic debate about sensible and desirable prioritisation and institutional precautions for its implementation. For the non-privileged spending categories, the budget restriction continues to apply. To avoid abuse and sustainability problems, **caps can also be set on the privileged spending** (Truger, 2015).

235. Frequently, **non-financial obstacles** such as lack of capacity in the construction industry, lack of planning capacity or lengthy approval processes and legal action can hamper public-sector investment projects (Board of Academic Advisors at the BMWi, 2020). These obstacles have to be removed to enable a massive expansion of the necessary infrastructure. Non-financial and financial obstacles should not be pitted against one another, because **both the removal of non-financial obstacles and** the provision of **sufficient finance** are required. So inadequate planning capacity, especially in public administration, may well be linked to lack of funding in the past. In addition, the Board of Academic Advisors at the BMWi (2020, p. 40) concludes there are signs that, since 2010, the **debt brake** has tended **to inhibit investment** in particularly fiscally straitened Länder.

As the public finances started to recover after 2015, public-sector investment also increased substantially across a broad front. ↘ CHART 69 The limitation of planning capacities, however, was particularly noticeable in the German government's local authority economic development programmes, which were financed in the short term from unexpected budget surpluses and, under which, requests for funds were initially slow. This indicates that a **credible and reliable long-term financing perspective** is essential, especially for the removal of non-financial obstacles, so that the corresponding **construction and planning capacities can be developed**. A long-term privileging of the relevant expenditures, or a large investment fund that can provide sufficient funding over a longer period, would send a credible signal.

236. A **long-term privileging of future-focused spending** in the budget or via a large loan-financed investment fund could be achieved by means of an **amendment to the constitution**. However, the two-thirds majority this would require in the German upper and lower parliamentary chambers currently appears **politically unrealistic**, which means that legally permitted solutions within the scope of the constitutionally enshrined debt brake must be found.

Funding possibilities limited by temporarily greater budgetary headroom

237. **A temporary increase in general budgetary headroom** would be made possible by extending and amending the repayment schedules so as to minimise the impact on the economy, as discussed by the GCEE. ↘ BOX 12 An **amendment of the repayment schedules** may be especially advisable in Länder whose budgets may otherwise come under considerable strain in the next few years because current repayment periods are very short. ↘ TABLE 13 In addition, a more stable estimate of the potential output in connection with the **cyclical adjustment**, at least during the recovery phase, could provide a degree of leeway and help to avoid a procyclical fiscal policy in future (Fatás, 2019).

238. The option of a gradual return to the standard upper limit for structural new debt of 0.35 % of GDP tabled by the GCEE would also create additional budgetary headroom in the transition period following the coronavirus crisis (GCEE Annual Report 2020 item 222). Without a change to the constitution, the exemption would have to be invoked again beyond 2022. The decisive factor here would be whether the extraordinary emergency situation of the coronavirus crisis continues to have a **significant adverse impact on government finances**, i.e. whether a causal link can still be established between the coronavirus crisis and the resulting significant financial burdens (Korioth, 2020). There are strict limits on both the reasons for and the amount of the net borrowing permitted in such circumstances. To the extent that there is still a need for additional pandemic-related spending, for example in healthcare or to stabilise the economy ↘ ITEM 147 or if funding is required to compensate for reduced tax revenues ↘ ITEM 148 or social insurance contributions, it would be possible to **invoke the exemption**. It is probably immaterial whether and precisely when real GDP has returned to its pre-crisis or normal level.

239. The options discussed above in connection with the debt brake would merely allow general leeway for a temporary period. They would therefore be more suitable for ensuring the smoothest possible fiscal-policy transition out of the coronavirus crisis or for short-term needs or as start-up financing for longer-term measures. They do not permit **long-term funding of specific public-sector investment needs**. Options currently being discussed for this purpose include, firstly, the loan-financed creation or funding of **reserves or legally dependent asset pools** from which the necessary expenditures are financed in later years, and, secondly, **legally independent extrabudgetary entities as investment companies** that can borrow outside the confines of the debt brake.

Explore lasting options for loan-financed investment under the debt brake

240. In principle, **reserves or asset pools** could play an important role in financing a long-term public-sector investment strategy. If they were given **sufficient resources** and were designed for **longer-term** use, they could also send a **credible signal** for the creation of capacity in the construction industry and in planning offices. The creation of a dedicated reserve has been proposed (Feld and Fratzscher, 2021; Fuest, 2021), making use of the exemption rule in the 2022 budget. Over the next few years, these funds could then be used to fund capital investment, for example in the area of climate policy or digitalisation. The volume would be limited by the allocation in the 2022 budget, so the instrument would be designed to be temporary, until the funds have been fully repaid.

241. It is unclear whether and under what conditions such reserves would be **permitted in law**, in part due to potential violations of the budgetary principles of universality and annuality. There could be a **risk** of successful **complaints of unconstitutionality**, as the recent judgment of the constitutional court of the federal state of Hessen (2021) showed. Moreover, the borrowing required to fund the reserves would itself have to be justified on the basis of the exemption rule of the debt brake. It is extremely doubtful whether there is sufficient causal connection between the coronavirus crisis and, for example, any comprehensive new climate change mitigation spending. Nor is it clear whether it would be legally possible to interpret the imminent threat of **climate catastrophe as an exceptional emergency situation** as defined by the debt brake and to reapply the exemption on this basis for the national efforts needed to avoid climate disaster, irrespective of the coronavirus crisis. Every time the exemption is invoked, it also has to be borne in mind that the repayment obligation can substantially restrict future budgets.

242. A second option for loan financing under the debt brake relates to the **use of legally independent extrabudgetary entities**, whose borrowing is not subject to the debt brake. These could be publicly owned companies constituted under private law or public-law institutions. Krebs (2021), for example, suggests expanding the equity base of existing public-sector companies, acquiring new equity investments or establishing new public-sector companies. Examples of existing public-sector companies in this case would include Deutsche Bahn. As a result of

the equity investment and provision of equity, the German government could finance the spending and also control what it was spent on. Other proposals envisage the use of legally independently investment companies that could finance public capital spending through loans on behalf of the public sector (Bardt et al., 2019; Beznoska et al., 2021).

243. The **legal requirements** for permitted borrowing set out by Kube (2021) in relation to such proposals, namely the passing of the capital injection test and the exclusion of debt guarantees or the servicing of the debt by core public budgets, refer to the **Eurostat criteria** that govern the European Stability and Growth Pact (Hermes et al., 2020). However, these relate to the allocation of statistical entities or their debts to the sector of 'market' or 'state' in national accounts. But prevailing legal opinion holds that this narrow definition by Eurostat is **not relevant for the German debt brake** (Wieland, 2015; Hermes et al., 2020). For example, in his legal opinion for the federal state of North Rhine-Westphalia, Wieland (2015, p. 6), says, "The rules governing the debt brake laid down in the constitution refer only to the state budgets. The local authorities are deliberately not mentioned in the Basic Law. Also **not covered are** the budgets of the social security providers and other **legally independent asset pools and companies**."

244. In addition to existing public companies (such as Deutsche Bahn) or corporate bodies such as the Institute for Federal Real Estate, other **public investment companies** could be established within the scope of the debt brake that are focused on specific topics and that can make use of synergies and economies of scale by pooling expertise (Board of Academic Advisors at the BMWi, 2020). ↘ ITEM 204 If these institutions have a clear **purpose** and are set up in accordance with **federal law**, they could be given authority to borrow (Hermes et al., 2020, p. 21 ff.). **Parliamentary scrutiny** would also have to be guaranteed in the **act establishing the institution** (Hermes et al., 2020, p. 30 ff.). A government guarantee could ensure that the institution receives favourable credit terms.

245. The new German government should formulate a **comprehensive and concrete strategy to shape the imminent transformation** as quickly as possible and identify the related public **spending requirements** in the areas of **climate policy, education and digitalisation**. If the new government acts pragmatically, there will be sufficient leeway for essential spending despite the continuing squeeze on public budgets due to the coronavirus crisis and politically imposed restrictions such as the commitment not to increase taxes and adherence to the constitutional debt brake. From an economic perspective, funding through higher net borrowing would be an option for some of the needs. In particular, legally independent extrabudgetary entities with a defined purpose, for example as **public-sector investment companies**, are considered by prevailing legal opinion to not be subject to the debt brake and could be used **specifically for investment control and financing**.