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NORMALISING FISCAL AND MONETARY POLICY AFTER THE CORONAVIRUS CRISIS

This is a translated version of the original German-language chapter "Fiskal- und Geldpolitik nach der Corona-Krise normalisieren", which is the sole authoritative text. Please cite the original German-language chapter if any reference is made to this text.

KEY MESSAGES

↘ The debt ratios of some EU Member States rose sharply during the coronavirus pandemic. The sustainability and resilience of public finances to crises should be strengthened again.

↘ The best way for monetary policy to contribute to sustainable economic growth is by ensuring price stability. It should communicate a normalisation strategy to this end.

↘ To ensure a successful transformation, the policy environment for private investment should be improved and priority given to future-oriented public spending.

SUMMARY

Unprecedented economic policy measures were needed to stabilise the economy during the coronavirus pandemic. **In the course of the economic recovery, it is time to normalise fiscal and monetary policy again**. During the crisis, it was appropriate to increase public debt to offset the decline in tax revenue and to finance additional spending, such as business assistance programmes and short-time work allowance. These measures should be phased out and government debt ratios pared down again. The very expansionary monetary policy environment also played an important role in stabilising the economy. A monetary policy normalisation strategy should now be presented, however. The normalisation of fiscal and monetary policy is a key requirement for forthcoming structural change and sustainable growth.

The sharp **increase in the national debt** of many EU Member States **presents** a particular **challenge**. It increases the risks for the sustainability of public finances. The financing of fiscal stabilisation measures was facilitated immediately in the crisis by the flexible application of European fiscal rules with the aid of the general escape clause. The **German Council of Economic Experts (GCEE) presents two different approaches** for the continued **application** and **possible reform** of the **European fiscal rules** that currently apply.

The invocation of the escape clause under the debt brake rules rightly gave Germany the fiscal leeway to respond to the crisis, which current forecasts suggest will not be needed from 2023 at the latest. Compared to a number of other euro area Member States, the reduction in the government debt ratio in Germany since the financial crisis ensured a good starting position before the coronavirus crisis.

As a result of the coronavirus pandemic, monetary policy in the euro area has once again taken a much more expansionary course. The increasing risk of inflation and the growing dependency of public budgets on low interest rates in some Member States could pose a dilemma for monetary policy. Past experience shows the dangers that a delayed or inconsistent monetary policy response presents for economic development. For this reason, the **end of** the **pandemic-related monetary policy measures should be envisaged** and a strategy of normalisation communicated in order to gradually reduce the highly expansionary monetary policy in the coming years, while taking future developments into consideration.

Over the long term, the priority is to counter declining potential growth with new **stimuli for growth**. This can be achieved with targeted investment in digitalisation and measures to combat climate change. The European Recovery and Resilience Facility (RRF) makes funding available to this end, which, together with the required structural reforms, can make a key contribution to growth. The **GCEE discusses two approaches to mobilising private and public investment,** while taking into account compliance with the debt brake rule.

I. INTRODUCTION: CORONAVIRUS CRISIS AND INDEBTEDNESS

92. During the coronavirus crisis, countries around the world took **comprehensive fiscal measures** in response to the economic impact of the pandemic. At the same time, central banks **eased their monetary policy substantially**. Both approaches helped to cushion the economic downturn and support economic recovery. The **economies have recovered to varying degrees**. ↘ ITEMS 6 F.

93. **As we emerge from the overall economic crisis situation,** the end of crisis-related support measures is on the agenda in Europe. **Fiscal and monetary policy** must be **normalised** without jeopardising the recovery, however. The priority is to ensure the sustainability of the public finances of Member States and therefore to bolster countries' resilience to future crises, ideally by countries outgrowing their debt burden. ↘ ITEM 100 The GCEE **discusses two different approaches** regarding the continued application and potential reforms of **the European fiscal rules** that currently apply. ↘ ITEMS 116 FF. AND 130 FF.

    With suitable framework conditions, governments can **strengthen** long-term economic growth on a sustainable basis. This is primarily a matter of implementing reforms that unlock the **growth potential** of the economies. ↘ ITEM 187 The best way monetary policy can contribute to strengthening long-term economic growth is to ensure price stability.

94. From a fiscal policy perspective, the priority, for one, is to **avoid tax increases that will harm growth** and **to provide incentives for private-sector investment**. ↘ ITEM 189 Alongside this, the state can make targeted public investments – e.g. investments to improve infrastructure – to support processes of transformation that are needed to combat climate change and to promote digitalisation. Structural change will cause some businesses to leave the market and unleash production factors for new, growing business sectors. Due to government stabilisation measures, such as the temporary suspension of the obligation to file for insolvency, the number of bankruptcies and market exits declined during the crisis, however. Furthermore, the reallocation of labour and capital to the production of other goods and services has decreased. ↘ ITEM 410 Consequently, as the economy returns to growth, the support measures should be phased out in order to facilitate dynamic structural change. ↘ BOX 25

95. The level of **debt** has **risen sharply** in many EU Member States during the coronavirus crisis. Action to bring the debt ratio back on a downward trend will remain an enormous challenge. While the current low interest rate environment generally offers solid prospects to achieve this, real interest rates could rise again, particularly if there is an increase in longer-term inflation expectations, which would entail higher longer-term nominal interests. This would drive up the **interest cost ratios** of the various countries. ↘ ITEM 109 Over the medium term, this could spell trouble particularly for countries that have a high level of debt and poor growth prospects. Furthermore, the interest rate risks could once again test the mettle of

the European banking market, which has weathered the coronavirus pandemic well so far.

Monetary policy has given **the Member States** of the euro area major financial **flexibility** during the coronavirus crisis, particularly in the form of government bond purchases. Some public finances were heavily reliant on low interest charges even before the pandemic struck. Structural reforms that strengthen growth and competitiveness would help give monetary policy more scope to guarantee price stability and avoid being influenced by fiscal policy. For its part, monetary policy should communicate a **normalisation strategy** without delay **geared to the expected economic recovery** in the euro area. ↘ ITEM 164

96. With the **European Recovery and Resilience Facility (RRF),** the European Union (EU) has provided transfers and loans for the Member States – financed through temporary Union borrowing. ↘ ITEM 190 If **used correctly** and **accompanied** by **structural reforms,** these funds can **unlock longer-term growth potential**. The debts are repaid by the Member States via future EU budgetary contributions. Resulting net transfers to countries particularly hard hit by the pandemic could help accelerate economic convergence in Europe. Funds under the RRF prioritise the areas of **the green transition** and **digital transformation**. In many cases, they simply replace nationally planned expenditure but may allow savings in national budgets and potentially better growth prospects. It is then all the more important to ensure that the structural reforms announced by the states are actually implemented.

97. **Germany** is advantageously positioned **given its low debt ratio compared to other countries**. As the crisis abates, some fiscal support measures will be automatically scaled back and tax revenues will increase again. As envisaged, the application of the escape clause for the **debt brake** enabled comprehensive support measures during the crisis. Compliance with the debt brake without the escape clause from 2023 onwards, as planned by the Federal Government, safeguards the long-term sustainability of public finances but should not be at the expense of a sustainable economic recovery. ↘ ITEM 149

98. The economic stimulus packages and the funds under the RRF help Germany to force the pace on climate policy and push ahead with the development and expansion of digital infrastructure and public administration. It will be critical to **prioritise public funds** for future-oriented spending and to **use these funds in a targeted manner**, ↘ ITEMS 200 FF. to **reduce barriers** to the implementation of investment projects – such as complex planning and approval processes – and **to mobilise private investment** through comprehensive structural reforms. ↘ ITEM 208 The GCEE presents **two different approaches** to the **mobilisation and financing of investments,** making reference to compliance with the debt brake and possible reforms. ↘ ITEMS 206 FF. AND 229 FF.

II. FISCAL POLICY AND DEBT: THE WAY OUT OF THE CORONAVIRUS CRISIS

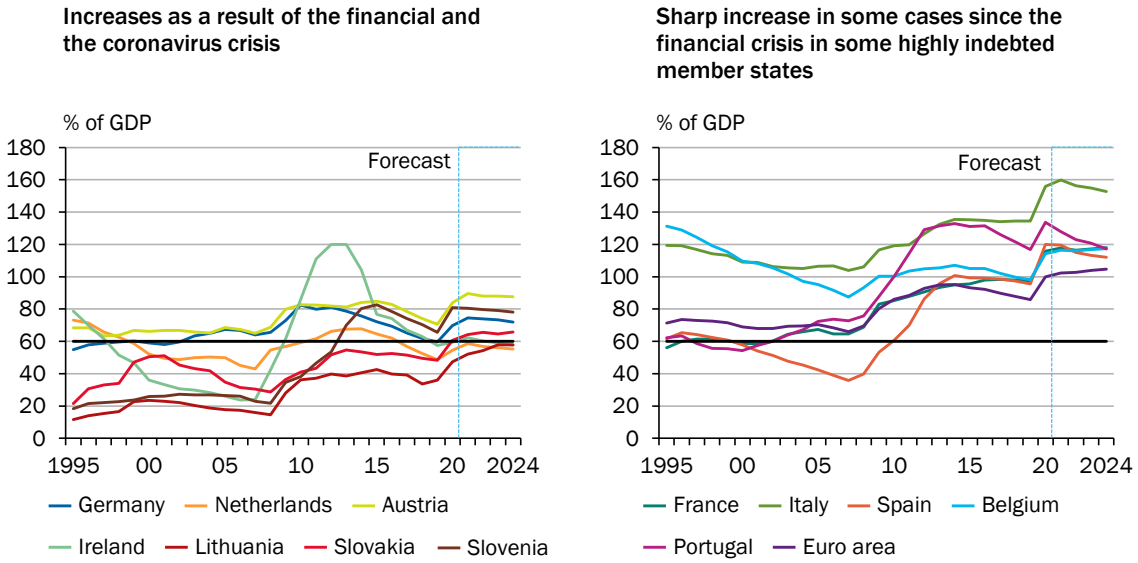
1. Fiscal policy and debt sustainability in Europe

99. The **government debt ratios of Member States** in the euro area have risen again significantly in the course of the pandemic. This poses a **particular challenge** for the individual countries. To enable a comprehensive fiscal policy response to the crisis, the general escape clause of the European fiscal rules was invoked. In light of the continuing economic recovery, the gradual normalisation of fiscal policy appears appropriate.

Debt sustainability

100. Even before the pandemic hit, the government debt ratios of many Member States was well above the level of 60 % of GDP (gross domestic product) specified in the Maastricht Treaty. It was only on a downward trend in just a few Member States. As a result of the pandemic, government debt ratios have risen considerably and are now well above 100 % of GDP in several large Member States. ↘ CHART 31 This therefore begs the question as to how sustainable the public debts of the Member States currently are. Based on the intertemporal budget constraint (ITBC) of the state, sustainability is defined as the **ability, given the anticipated development of interest and growth, to achieve sufficient primary balances** ↘ GLOSSARY **in the future** to prevent explosive increases in the government debt ratio. ↘ BOX 8

↘ CHART 31
Debt ratios in the euro area



Sources: European Commission, Stability programmes of EU Member States
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101. Institutions like the European Commission or the International Monetary Fund (IMF) use different indicators to estimate the sustainability of public debt. In the EU, **debt sustainability analyses** – e.g. in the form of S1 and S2 indicators – are an important part of regular budgetary surveillance. ↘ BACKGROUND INFO 4 They are used, for example, for the use of assistance via the European Stability Mechanism (ESM) (Alcidi and Gros, 2018).

According to the European Commission's debt sustainability monitor (2021a, p. 14) the **S1 indicator** shows a **high medium-term risk for Spain, France and Italy,** for example. The high debt ratio has the most influence in this context. ↘ CHART 33

In contrast to the S1 indicator, the **S2 indicator** analyses **long-term sustainability**. This indicator does not set a specific debt target and merely requires the stabilisation of the prevailing debt ratio over an infinite horizon. In this context, it must be noted that the S2 indicator is a **deterministic indicator**. It does not factor in stochastic risks and assumes a temporal constancy of the adopted policy measures from the time the indicator is calculated. ↘ BOX 8

The **cost of demographic change** for the pension systems plays a particularly important role in the S2 indicator. Interestingly, the S2 indicator shows a stronger need for consolidation **on the part of Germany** compared to France, due to the latter's more favourable demographic development and recent pension reforms. It is also interesting to note that Italy, having already reduced claims on the state with a reform of the pension system in the past, is in a somewhat better position than Germany according to the S2 indicator – at least in the baseline scenario with low interest rates. ↘ CHART 33 TOP Over the long term, the European Commission sees medium sustainability risks for all three countries as well as for Spain.

↘ BACKGROUND INFO 4

The S1 and S2 sustainability indicators and their components

The European Commission's S1 and S2 indicators are designed to measure medium- and long-term risks for debt sustainability and are used for fiscal surveillance within the context of the Stability and Growth Pact. The S1 indicator captures the additional adjustment to the structural primary balance ↘ GLOSSARY (cumulated over 5 years) that is required to bring the debt ratio to 60 % in 15 years. For example, a value of 4.4 percentage points – as currently the case for France – implies a consolidation effort of roughly 0.9 percentage points per year over 5 years. The required adjustment can be split into three components: the initial budgetary position, i.e. the difference between the contemporary structural primary balance and the target value at which the debt ratio would be stabilised, the debt requirement to reach the 60 % target debt, and the ageing costs. In contrast to the S1 indicator, the S2 indicator is based on the government's intertemporal budget constraint, over an infinite horizon, and quantifies the adjustment required to stabilise the prevailing debt ratio. ↘ BOX 8 It can be divided into the initial budgetary position and the costs of ageing.

↘ BOX 8

Assessment of government debt sustainability risks

The analysis of the long-term government budget constraint, and therefore the capacity of a government to service its debt obligations, begins with the period-based **budget identity**:

$$D_t = (1 + r)D_{t-1} - PB_t.$$

The public debt at the end of the year, D_t, is calculated from the debt at the end of the previous year, D_{t-1}, the government interest payments in this year, rD_{t-1}, and the primary balance in this year, PB_t, where r is the average interest rate (taken as constant) that must be paid on the public debt of the previous year. The primary balance is the difference between the government's revenue and expenditure (minus interest payments). Seigniorage (central bank profits), which the central bank passes on to the government, is included. If the budget equation is iterated into the future, and a Ponzi scheme is ruled out, the **government ITBC is**:

$$d_t = \sum_{s=1}^{\infty} \left(\frac{1+g}{1+r}\right)^s pb_{t+s},$$

Consequently, sustainability means that the current debt ratio, d_t, requires sufficient discounted **primary surpluses** (in % of GDP), pb_t, **of the government in the future**. Here, g denotes the (constant) nominal rate of GDP growth. The concept of sustainability is forward-looking and depends on the expected future interest rate level, economic growth and government revenue and expenditure decisions.

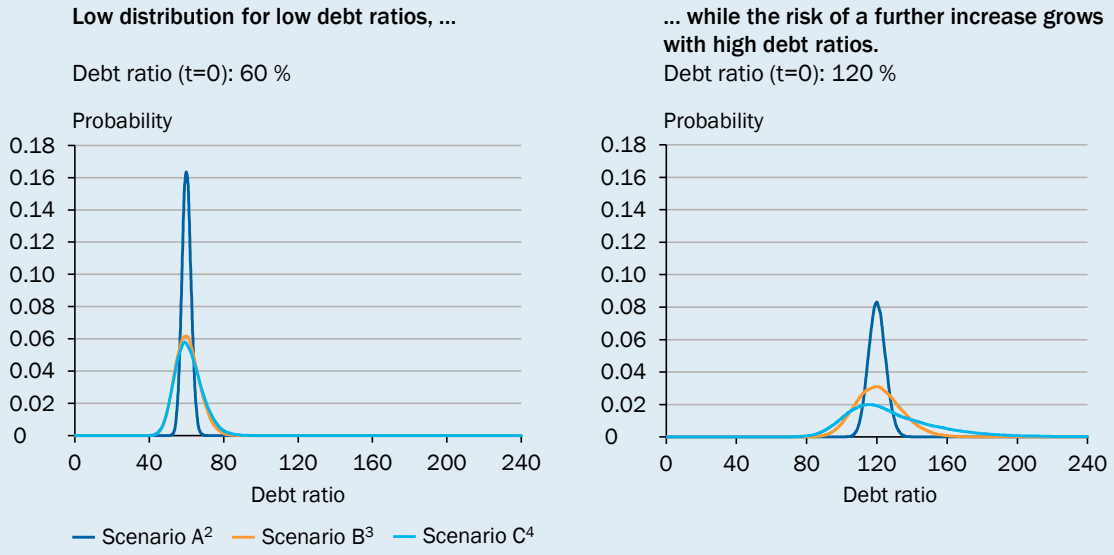
There are **different methodical approaches to measuring fiscal sustainability**, each based on different technical assumptions (GCEE Annual Report 2017 items 522 ff.). These include deterministic approaches, such as the S1 and S2 indicators. However, they do not consider the fact that changes in sustainability can be accompanied by reactions of interest rates, growth rates and on the part of policy makers.

Econometric approaches can estimate the extent to which policy makers responded in the past to changes in the public debt ratios in order to guarantee sustainability. **Structural models** can factor in this kind of endogenous response to interest rates and economic growth and **provide information on the design and impact of possible consolidation paths**. Model simulations can visualise the **uncertainty** surrounding the future development of central influencing factors (GCEE Annual Report 2017 items 543 ff.). For example, the IMF, the European Commission and the ECB apply stochastic approaches (Painchaud et al., 2013; Bouabdallah et al., 2017; European Commission, 2021a). Using stochastic debt projections, a **distribution of future debt ratios** is calculated starting from the baseline scenario. This distribution is the result of a variety of combinations of interest rates, growth and primary balances which are based on historical contexts.

A stochastic analysis with an **estimated euro area model** shows the implications of increased **macroeconomic volatility** and the **interdependencies** between the debt ratio, interest rates, GDP growth and primary balances for debt sustainability analysis. ↘ CHART 32 For example, the distribution of simulated future debt ratios increases considerably if the years of the coronavirus pandemic, which triggered an unprecedented downturn in economic output, are also factored into the assessment of macroeconomic shock volatilities (scenario B versus scenario A). Empirical analyses also demonstrate that an increase in the government debt ratio by 1 percentage point increases the **risk premium** by an average of 2 to 5 base points (Grande et al., 2014; Monteiro and Vašíček, 2019; Pamies et al., 2021). This effect is likely to be non-linear, with risk premiums being particularly sensitive to increasing debt ratios if the debt ratio is already very high (Pamies et al., 2021). If this effect is taken into consideration in model simulations, we can see a considerable risk of a sharp increase in the debt ratio (scenario C). **Political and economic** incentives as well as market upheavals that could cause governments to refuse to service their payment obligations are not considered in this context.

↘ CHART 32

Distribution of the debt ratio after seven years for a Monte Carlo simulation[1] based on an estimated euro area model



1 – Simulation of the government debt ratio d(t), i.e. public debt in relation to GDP, based on the equation: $\Delta d(t)=(r(t)-g(t))/(1+g(t))*d(t-1)-pb(t)$. The variables r(t), g(t) and pb(t) represent the real interest rate, the GDP growth rate and the primary balance of the national budget. The realisations of r(t) and g(t) are simulated based on a simple structural New Keynesian macroeconomic model that is estimated for the euro area. Three different macroeconomic shocks are considered: technology, preferences and monetary policy. The respective shocks have a normal distribution. The primary balance is constant, i.e. pb(t)=pb. In the initial situation, the following applies: $pb=(r-g)/(1+g)*d$. The distribution of the government debt ratio is the result of 50,000 simulations. 2 – The variance of the macroeconomic shocks is based on the period from 1995Q2 to 2019Q4. 3 – The variance of the macroeconomic shocks is based on the period from 1995Q2 to 2022Q4. Forecast of the GCEE from 2021Q1. 4 – Like in scenario B but the interest rate reacts to the debt level. The interest rate increases by 2 base points for every percentage point the debt ratio is above the 60 % mark. The interest rate increases by an additional 2 base points for every percentage point the debt ratio is above the 120 % mark.

Source: own calculations

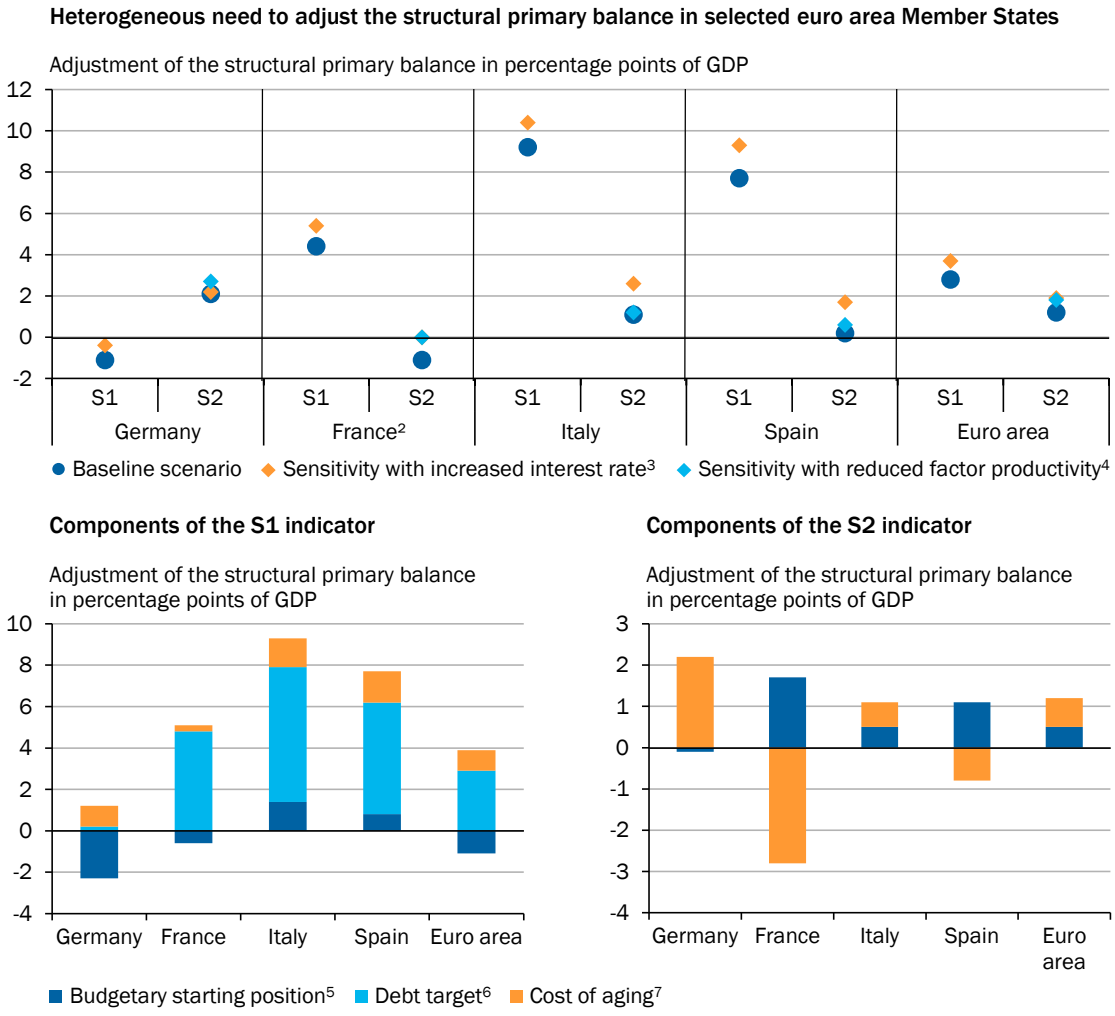
102. The development of the debt ratio also depends on the **interest rate-growth differential (r-g)** in addition to the primary balances of the government. This differential has been on a decreasing trend for some time in many developed economies, but the level **varies greatly** from country to country. For example, the moving five-year average of the interest rate-growth differential is negative for Germany. In Italy, by contrast, the interest rate (r) is still above the growth rate (g), while in Spain and France the differential is close to zero. ↘ CHART 34 LEFT This has prompted a debate on whether it is time to reassess the sustainability issue and reform fiscal rules on this basis (GCEE Annual Report 2019 items 457 ff.). ↘ ITEM 125 It is argued that a consistently negative r-g would enable governments to achieve primary deficits without driving up the debt ratio (Blanchard, 2019; Blanchard et al., 2021). Summers and Furman (2020) make the case that the current level of debt in relation to the present-day value of anticipated future tax revenue is rather low due to lower interest rates. Various studies examine the conditions for a negative r-g and measure the resulting scope for debt for countries

(Mehrotra and Sergeyev, 2020; Cochrane, 2021; Mian et al., 2021; Reis, 2021a). The outcome is that this scope is limited despite r<g.

103. **Relying primarily on a negative interest rate growth differential to guarantee debt sustainability is problematic** for several reasons. This strategy would currently not work for many Member States anyway because either

↘ CHART 33

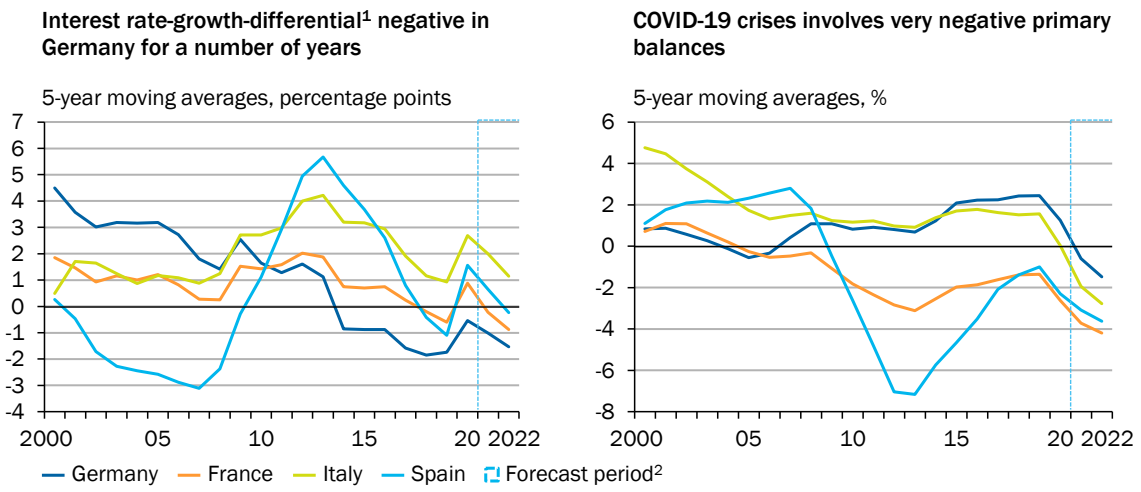
Medium- and long-term debt sustainability indicators of the European Commission in 2020[1]



1 – European Commission estimates. The S1 indicator quantifies the adjustment to the structural primary balance that is required (cumulated over five years) to bring the debt ratio to 60 % of GDP within 15 years. The S2 indicator quantifies the cumulative adjustment to the structural primary balance that is required to stabilize the debt ratio over an infinite horizon. 2 – The results for both sensitivity analyses of the S2 indicator correspond to the value zero. 3 – The scenario takes into account the effects of a higher nominal short-term and long-term interest rate on the new debt incurred. In the case of the S1 indicator, an interest rate that is one percentage point higher is assumed. In the case of the S2 indicator, a convergence is assumed within 30 years at interest rates of 2.5 % and 5 % instead of the values of 2 % and 4 % in the baseline scenario. 4 – The scenario assumes a negative shock for the long-term economic outlook in the form of a lower total factor productivity. 5 – Corresponds to the difference between the prevailing structural primary balance and the target value for the balance that would stabilise the debt ratio in the long term. 6 – Corresponds to the adjustment to the structural primary baliance that is required to reach the target debt ratio of 60 % of GDP within a prespecified time of 15 years. 7 – Corresponds to the adjustment to the structural primary balance that is required to cover the costs of aging. In the case of the S2 indicator, this includes the costs of old-age provision, health care and long-term care.

Source: European Commission

↘ CHART 34
Interest rate-growth-differential and primary balance in the euro area



1 – Difference between the average interest rate (interest expenditure of the government in relation to the debt burden in the previous year) and the nominal GDP growth rate in percentage points. 2 – European Commission forecast.

Sources: European Commission, own calculations
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the interest rate is higher than the growth rate or the primary deficits are too large. ↘ CHART 34 RIGHT Cochrane (2021) demonstrates this also for the United States. Furthermore, economic crisis situations that can cause an abrupt increase in r-g together with a simultaneous deterioration of the primary balance can also be expected in the future. Spain is a good example in this context. During the financial and sovereign debt crisis, Spain's debt ratio ballooned from around 35 % to over 100 % of economic output. In addition to enormous primary deficits, the increase of r-g by around 9 percentage points was a main contributing factor here. France and Italy also experienced an increase in r-g around that time, albeit on a much smaller scale than in Spain, at 2 to 3 percentage points. Empirical studies for r-g **reveal reversal probabilities of over 50 % in some cases within a period of 10 years**, depending on the observation period and country (GCEE Annual Report 2019 box 13). The actual interest rates which are used here to estimate the reversal probability do not correspond directly to the average interest costs of government financing.

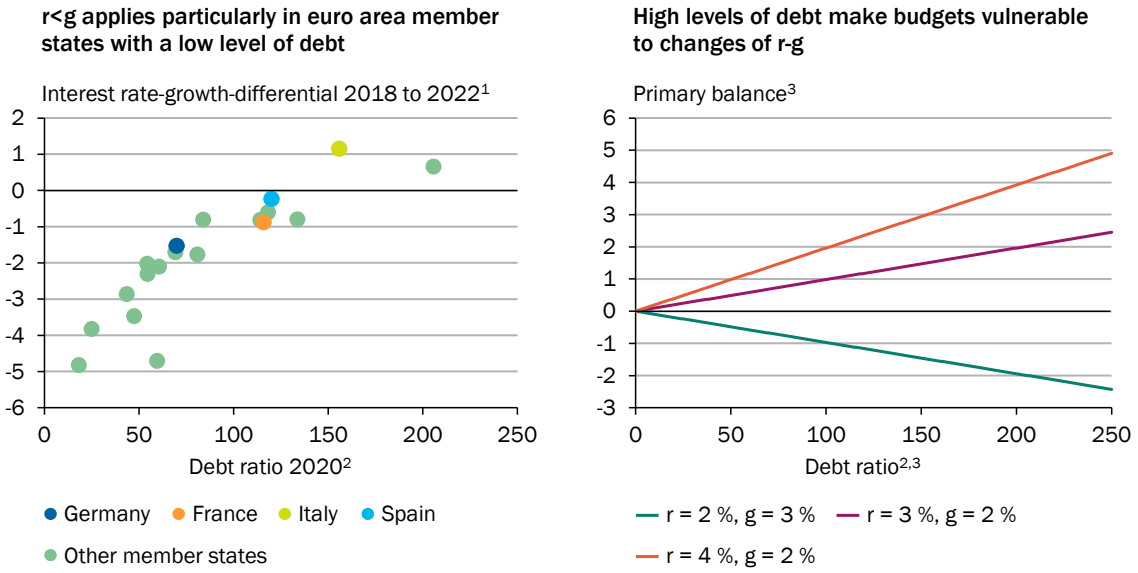
104. **Heavily indebted countries** would be particularly hard hit by changes in the interest rate-growth differential. ↘ CHART 35 While a country with a debt ratio of 200 % could carry a primary deficit of around 2 % with an r-g of –1 percentage point while also keeping the debt ratio constant, if r-g becomes positive – rising to 1 percentage point for instance – consolidation efforts of around 4 % of GDP would be needed to stabilise the debt ratio with a primary balance of +2 %.

Development of interest expenditure subject to risks

105. **The influence of fiscal policy on interest rates is limited.** While governments can reduce the risk premium with a low debt ratio and credible fiscal rules, interest rates are also primarily driven by external factors, such as the global growth trend, the general tendency of businesses and households to save and take

↘ CHART 35

Relationship between debt level, interest rate-growth-differential and primary balance



1 – Difference between the average interest rate (interest expenditure of the government in relation to the debt burden in the previous year) and the nominal GDP growth rate in percentage points. Average of the years 2018 to 2022. From 2021: European Commission forecast. 2 – In % of GDP. 3 – Primary balance = (r–g)/(1+g)*debt ratio, where r is the interest rate and g represents the nominal GDP growth rate.

Sources: European Commission, own calculations

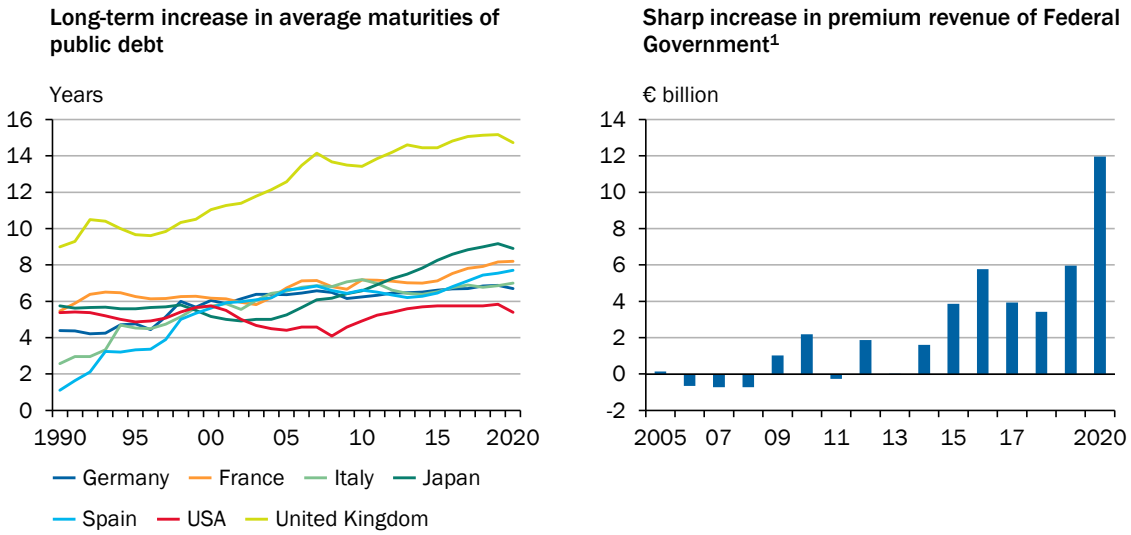
risks, the inflation outlook and monetary policy (GCEE Annual Report 2019 items 481 ff.). In the euro area, the latter must be based on the inflation outlook, however, and not on public finances. ↘ ITEM 152

106. With the **debt structure** and **debt issue conditions**, countries can, however, at least directly **influence interest expenditure** and **interest rate risks** with given interest rates. While longer maturities can increase the interest costs somewhat due to the rising yield curve, they make it easier to plan for interest costs. The average maturity of government debt has been increasing for several years in many countries, ↘ CHART 36 LEFT a development which – in addition to the long-term decline in interest rates – is also likely attributable, among other things to the lower inflationary risks owing to more independent central banks focussed on low inflation goals (Nöh, 2019).

Initially, the state can **reduce** its **interest costs** with **variable interest rate bonds** (inflation-linked). **Interest rate risks** increase at the same time, **however**. In Germany, the Final Payment Financing Act (*Schlusszahlungsfinanzierungsgesetz*) therefore specifies that payments must be made to a special fund to make provisions for inflation trends if inflation-linked bonds are issued. This reserve allocation amounted to more than €1 billion each year in the period between 2017 and 2020 (BMF, 2021a). Particularly in times of low interest rates, the practice of auctioning government bonds, which is common in many countries, produces significant **special effects due** to **premia or discounts**. ↘ BACKGROUND INFO 5 In 2020, the volume of premia received in the Federal budget reached almost €12 billion on the back of the high level of new borrowing. ↘ CHART 36 RIGHT

↘ CHART 36

Changes as a result of debt management



1 – Net income and expenditure from premia and discounts. Negative values represent a discount and positive values a premium.

Sources: Agence France Trésor, Banca d'Italia, Deutsche Finanzagentur, Federal Ministry of Finance, Ministry of Finance Japan, Nöh (2019), OECD, Tesoro Público, United Kingdom Debt Management Office, own calculations

For less volatile interest revenue and fewer incentives to give preference to interest earnings in the form of premia at the expense of future interest expenditure, it would make sense to record premia and discounts on an accruals basis. (Deutsche Bundesbank, 2021a).

↘ BACKGROUND INFO 5

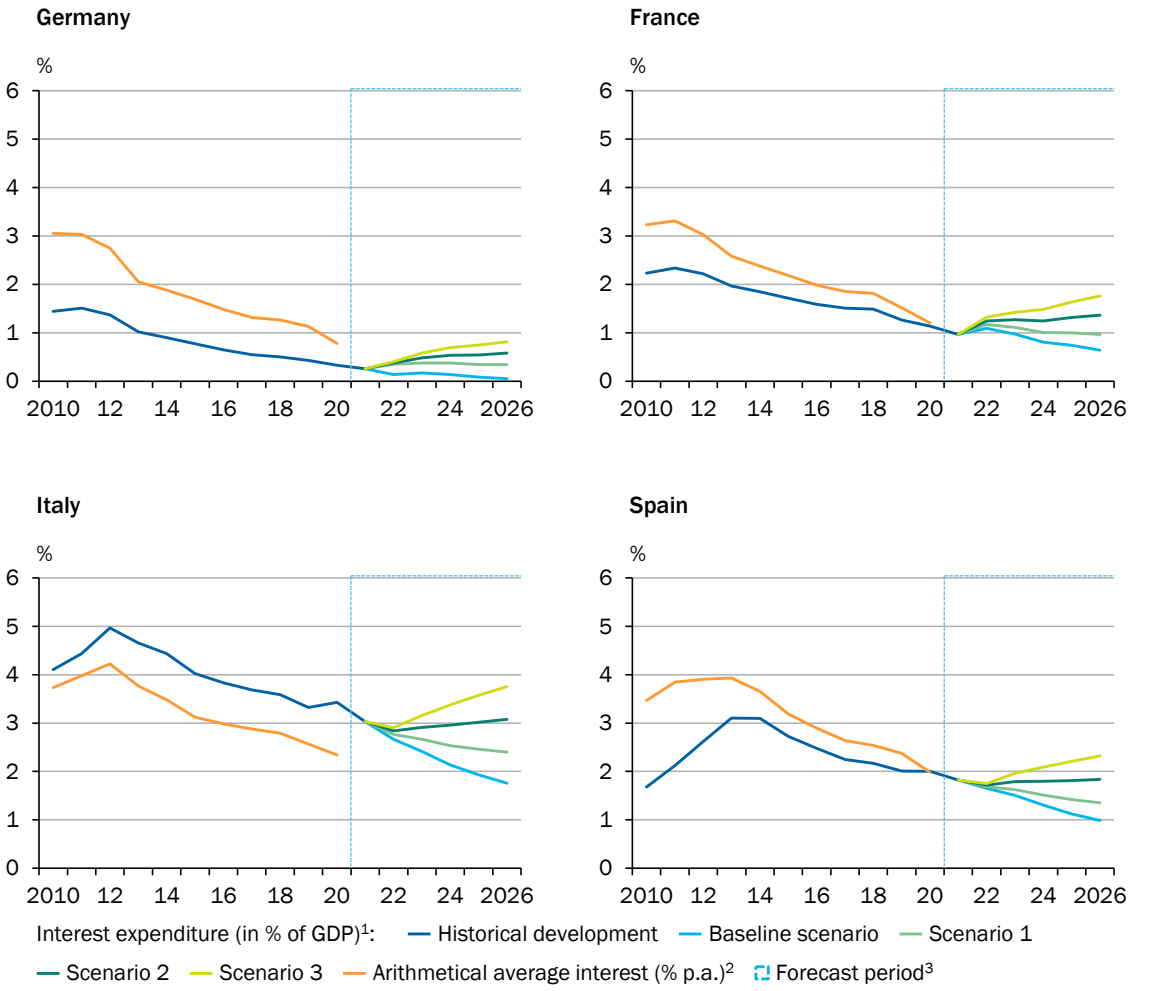
Premia and discounts through government bond issues

A premium is a one-time interest income at the time of issue and offsets the difference between the face value and market value. A premium or discount is often the result of the fact that coupons are issued in denominations of 0.25 percentage points, for example, and the market interest rate on auction day is not exactly reflected by this coupon. As bonds do not have a negative coupon, in the event of a 0 % coupon and negative market yield they trade at a (compensatory) premium. A premium (discount) also arises during tap issues of bonds that have a higher (lower) coupon than the current market interest rate offers (BMF, 2020a). By making tap issues of existing high-yield bonds, the government can intentionally generate interest receipts in the budget year of the issue. However, this contrasts with an interest rate disadvantage in the future as a higher coupon must be paid until the end of the bond's term.

107. The extremely **low interest rates** of recent years **have significantly reduced the interest expenditure** of EU Member States despite hardly any reduction in the debt ratio and even an increased debt ratio in some countries. ↘ CHART 37 This does **not**, however, **take account** of the fact that the purchase of government bonds by central banks at negative interest rates causes **central bank profits to drop.** The state interest burden that Germany faces with low interest

↘ CHART 37

Scenarios for interest expenditure show long-term decline and risks of increase



1 – In relation to nominal GDP, from 2021 in relation to the GDP forecast of the IMF. Interest expenditure to be paid by the central government. Baseline scenario: Based on the yield curve from August 2021. Scenario 1: Interest rate increase by 1 percentage point. Scenario 2: Interest rate increase by 2 percentage points. Scenario 3: Interest rate increase by 3 percentage points. 2 – Interest payments of the central government from period t divided by 0.5*(debt level t + debt level t–1). 3 – Own calculations based on the outstanding bonds of a central government. For 2021, the bond issue for the second half of the year is assumed to be identical to the bond issue in the first half of the year. From 2022, the central government debt from 2021 is taken to be constant, with a maturity structure for new issues like in 2019. The IMF's GDP forecast is based on a constant debt level.

Sources: Agence France Trésor, Deutsche Finanzagentur, Eurostat, IMF, Ministry of Finance Italy, Ministry of Finance Spain, Refinitiv Datastream, own calculations

rates is therefore higher than the interest expenditure would suggest. For example, in 2020 the Deutsche Bundesbank (2021b, p. 70) recorded losses on German government bonds of roughly €536 million. Added to this were interest payments for negative interest loans to banks of €1773 million. To ensure it was prepared for future risks, it transferred the remaining profit to provisions for risks rather than paying out to the Federal Ministry of Finance.

In addition, the lower and sometimes negative interest rates of the state represent lower or negative returns on the part of bond purchasers. This is of particular rel-

evance for the state where this affects the stability of the financial system. **Creditors** include banks and insurance companies which are required by regulatory provisions to hold secure government bonds and are therefore confronted with **interest rate risks and lower profitability**. ↘ ITEM 112

108. If the **current low interest rate** continues, the **interest rate expenditure** will continue to drop with debt ratios that the simulation takes to be constant. ↘ CHART 37 On the one hand, old, high-yield bonds are expiring to be replaced by new, lower-interest bonds. On the other hand, the government receives premium revenues due to negative market interest rates. While bonds do not carry a negative coupon, the higher issue value compared to the nominal value to be repaid generates interest revenue. ↘ BACKGROUND INFO 5

109. If inflation expectations on the financial markets rise, **medium- and long-term nominal interest rates can rise considerably**. This can also create the expectation that a **normalisation of monetary policy** may be needed earlier than anticipated. Different scenarios for the development of interest rates provide information about the potential consequences this has for public finances. An interest rate forecast for a parallel increase in the yield curve of 1, 2 or 3 percentage points demonstrates the interest rate expenditure increases that can be expected for Germany, France, Italy and Spain. The models indicate that interest payments in relation to GDP do not reach the values of 2010 in any of the scenarios in the forecast period through to 2026. In the latter scenario, interest payments for Italy and Spain could rise, respectively, from the current level of 3 % and 1.8 % to 3.8 % and 2.3 % of GDP. ↘ CHART 37 If the debt ratios were also to rise, interest payments in these scenarios would be higher, however. Given unchanged (nominal) economic growth, higher budget surpluses would be needed to maintain debt sustainability.

Risks for financial stability

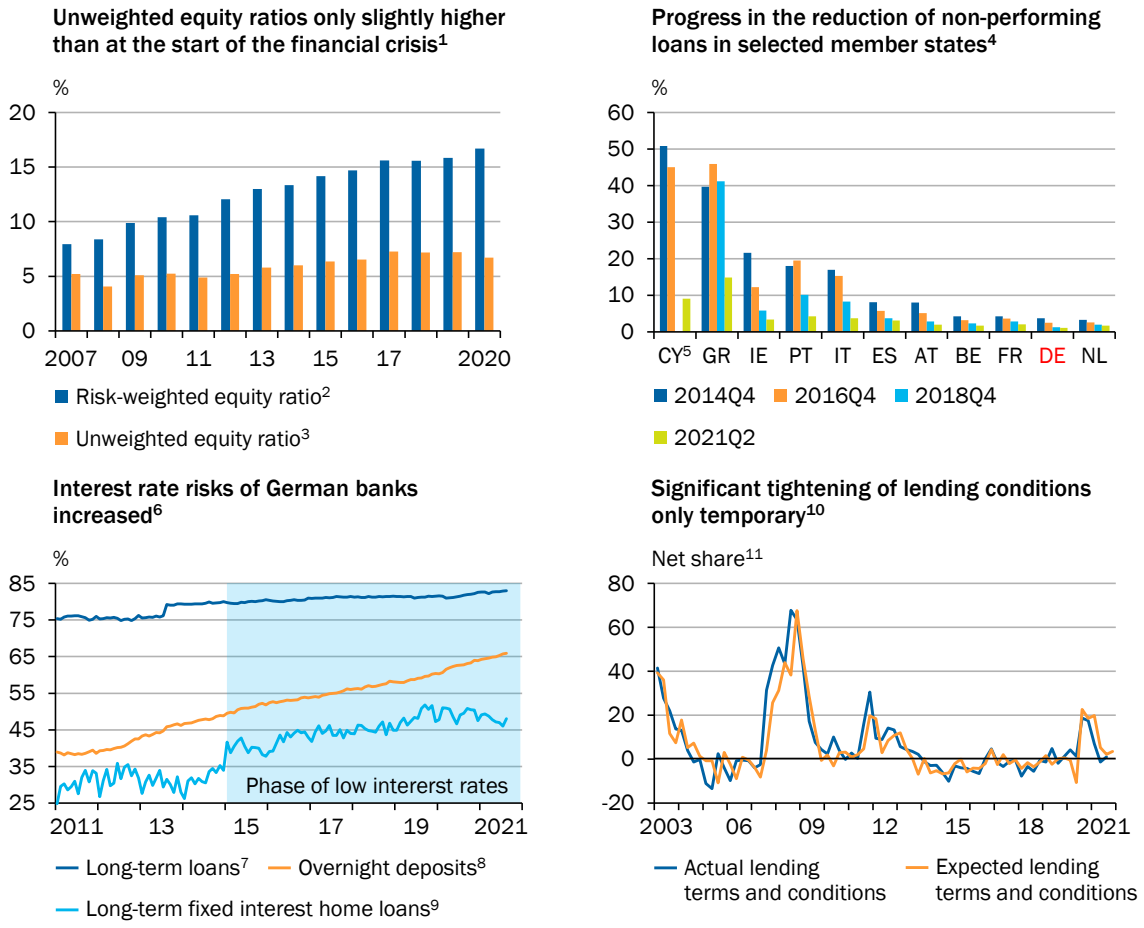
110. An increase in debt sustainability risks in Europe could **pose a challenge for the financial system**. The high and, in some cases, increased claims of European banks on domestic government (GCEE Annual Report 2020 item 309) can put a heavy strain on banks if there are doubts surrounding the financial strength of countries with particularly high debt ratios. At the same time, many businesses took out substantial loans during the crisis, some of which are government-guaranteed. The result is a financial interdependence between governments, businesses and banks, whereby difficulties experienced in one sector could put a particular strain on other sectors (Gross and Pancaro, 2021; Schnabel, 2021a).

111. In this context, it must be said that the coronavirus pandemic hit the European **financial market** in a phase in which it was **more resilient**, not least owing to the reforms implemented **since the financial crisis**. The reduction of non-performing loans and banks' higher capital ratios are likely contributors to the fact that the coronavirus crisis has so far not caused a marked loss of confidence in banks' loss absorbency capacity. ↘ CHART 38 TOP As a matter of fact, an increase in bankruptcies has not yet been observed, which is likely attributable, in part, to comprehensive government business assistance programmes. ↘ BOX 25 Banks only

tightened lending conditions temporarily at the end of 2020. In the course of the year 2021 hardly any changes have been observed so far. ↘ CHART 38 BOTTOM RIGHT

↘ CHART 38

Indicators for banks in the euro area



1 – Average value for banks and banking groups in the euro area. 2 – Tier 1 capital of a bank in relation to its risk-weighted assets. 3 – Total equity of a bank in relation to its total assets. 4 – Non-performing loans and credit facilities in relation to gross loans and credit facilities. Loans are classified as non-performing if they are overdue for more than 90 days or a full repayment without the liquidation of collateral is unlikely. Weighted averages at the country level. Data at the end of the quarter in each case. CY-Cyprus, GR-Greece, IE-Ireland, PT-Portugal, IT-Italy, ES-Spain, AT-Austria, BE-Belgium, FR-France, DE-Germany, NL-Netherlands. 5 – The decline in non-perforoming loans is attributable in large part to the restructuring and dissolution of the ertwhile second largest bank in Cyprus (Cyprus Cooperative Bank). The Cypriot state assumes the majority of the non-performing loans; Source: https://ec.europa.eu/commission/presscorner/detail/en/IP_18_4212 (European Commission, 2018). Therefore no value is available for 2018Q4. 6 – In business with private households and domestic non-financial corporations. 7 – Proportion of loans with an origin term of five years in all existing loans. The jump in the time series in August 2013 is mainly due to the new classification of EUREX Clearing Aktiengesellschaft from a non-monetary financail institution (non-MFI) to the banking sector (MFI). 8 – Share of overnight deposits in all existing deposits. 9 – Share of home loans with initial fixed interest rate over ten years in all new home loans. 10 – The actual lending terms and conditions refer to the lending terms and conditions in the past three months (according to the ECB Bank Lending Survey). For the anticipated lending terms and conditions, the institutions are surveyed about the terms and conditions in the next quarter. 11 – In each case, the net share is displayed, which is the result of the difference between the sum of the responses "tightened significantly" and "tightened slightly" and the sum of the responses "somewhat re-laxed" and "significantly relaxed". The banks' responses are weighted with the respective countries' share in the total loan volume in the euro area and with the banks' share in the total loan volume of the banks surveyed. The survey is conducted on a representative sample of banks in the euro area.

Sources: Deutsche Bundesbank, EBA, ECB, European Commission (2018)

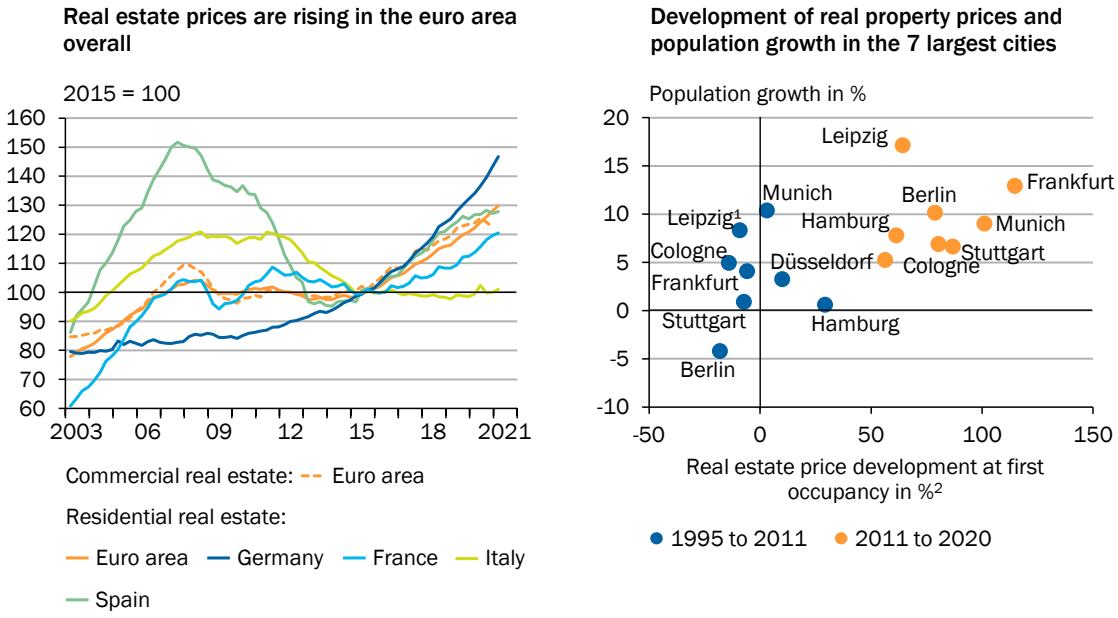
112. **On the other hand, a number of problems** in the financial market have **not yet been resolved** and have been **amplified** by the coronavirus crisis. Specifically, this includes the **low profitability of banks**, which is partly the result of the long period of low interest rates and insufficient cost reduction measures (GCEE Annual Report 2019 items 375 ff.). The coronavirus crisis is prolonging the low-interest phase and is therefore exacerbating the profitability issues (ESRB, 2021). The security purchase programmes under monetary policy ↘ ITEMS 157 F. are a contributing factor in low long-term interest rates and a flattening of the yield curve. Maturity transformation is therefore less profitable for banks. Banks have tried to counter this development with an expansion of lending operations and fixed interest periods (Deutsche Bundesbank, 2020). On the asset side of German banks, over the last ten years slightly more than 80 % of the loans extended have been longer-term loans, with long-term loans for house purchases becoming significantly important. ↘ CHART 38 BOTTOM LEFT On the other hand, sight deposits have become increasingly important on the liabilities side. Sight deposits are deposits that a customer can withdraw without notice and are not interest bearing so that any increase will strengthen the interest margin and increase maturity transformation. The increasing maturity transformation, i.e. a higher fixed interest period on the asset side of the balance sheet compared to the liabilities side, makes **banks more vulnerable to interest rate increases**, which then have to be passed on to customers on the short-term liabilities side but cannot be adjusted on the longer-term asset side.

113. In addition, the **financial market** faces **structural problems**, not least the much too slow transition to digital business models (GCEE Annual Report 2019 items 414 ff.). The coronavirus pandemic has increased the demand for digital financial solutions (Balz, 2020), no longer simply in the area of conventional online banking options but also in other areas such as portfolio management. The rapid growth in the number of users of new online brokers with extremely low transaction fees means that traditional banking institutions will need to compete for additional business segments. In light of the growing importance of new fintech businesses, the consolidation of the European banking market – which was already needed – could go even further. Financial institutions wishing to remain competitive face the challenge of having to increase investment in digital structural change despite poor profitability and the need to reduce costs (ECB, 2020a).

114. Developments in the real estate markets also produce risks for financial stability. The prolonged **period of low interest rates** is **driving up** demand for real estate finance and has contributed to **property price increases** in the euro area ↘ CHART 39 LEFT, a development particularly pronounced in the urban housing market. ↘ CHART 39 RIGHT Apart from low interest rates, structural reasons such as rural depopulation, more one-person households and migration flows between the regions are also contributing factors here (GCEE Annual Report 2018 items 660 ff.). The ECB (2021a, p. 10) sees signs of overvaluations in the residential property sector and increasing risks of a correction, which can occur in the form of an abrupt drop in prices. With regard to the commercial property market, a certain decline could be observed in the course of the coronavirus pandemic. The supposed overvaluations are spread unevenly across the euro area, however. The Deutsche

↘ CHART 39

Development of real estate prices in the euro area and in Germany



1 – Population growth partly due to incorporation of local authorities into bigger municipalities. 2 – Change in the purchase price of condominiums at first occupancy. Deflated by the consumer price index.

Sources: Association of German Cities, ECB, Federal Statistical Office, own calculations

Bundesbank (2021c) also sees price exaggerations for Germany. Substantial corrections of property prices can impact bank balances due to higher reserves for credit risks and loan defaults. Tighter lending conditions that follow can then affect overall economic development. Furthermore, businesses also use real estate as collateral for loans. In the event of price corrections, these properties lose value, making loans more expensive and leading to a scale back in investment (ECB, 2021a, p. 36).

↘ BOX 9

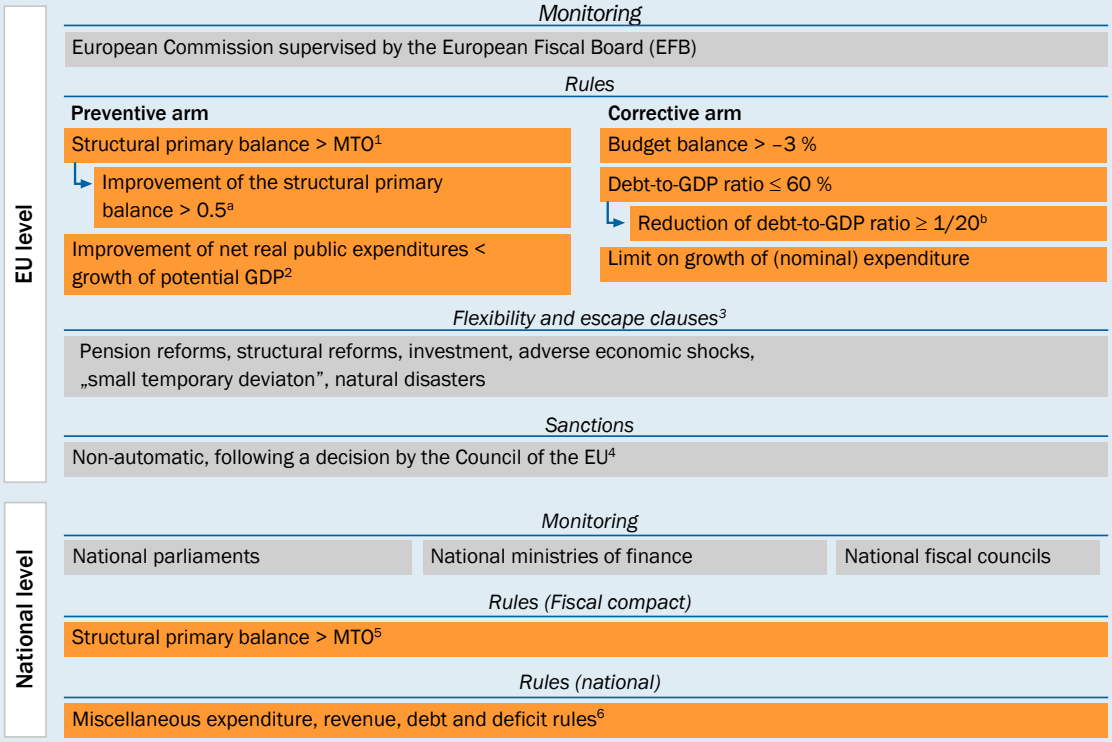
Fiscal policy institutions of the European Union

Fiscal rules have been **part of the institutional framework of the EU** since the ratification of the Maastricht Treaty. While there were initially only two rules – the 3 % deficit rule and the 60 % debt rule – fiscal rules have been continuously added and adapted since the introduction of the Stability and Growth Pact (SGP) in 1997, which also introduced a differentiation between the preventative and corrective arms. ↘ CHART 40 For example, the reforms of 2005 made provisions for the introduction of structural fiscal rules and medium-term budget objectives. (European Commission, 2017a)

The **reforms** of **2011** focussed on strengthening **economic policy coordination** in light of the financial and sovereign debt crisis **and** on the **introduction of a spending rule** and the **obligation to reduce government debt ratios** by 1/20 for the share above the 60 % limit. The countries ratifying the Fiscal Compact also undertook to introduce structural balance rules at the national level and to strengthen independent oversight through national fiscal councils. ↘ CHART 40

↘ CHART 40

Schematic representation of the fiscal rule framework of the euro area



1 – Country-specific Medium Term Objectives (MTO), structural primary deficit maximum 1 % of GDP. 2 – Net public expenditures calculated by netting out interest expenditures, cyclical elements of unemployment spending, spending on programmes funded by the EU, four year average of investment expenditures as well as one-off measures. 3 – For details see European Commission (2017a). 4 – Sanctions up to 0.2 % of GDP. Sanctions up to 0.5 % of GDP in the context of the Excessive Deficit Procedure. Other types of sanctions may involve the suspension of commitments or payments under the European Structural and Investment Funds. 5 – Country-specific Medium Term Objectives (MTO), structural primary deficit maximum 0.5 % of GDP. 6 – Various national fiscal rules for general and central government. a – Adjustment path may depend on the current debt-to-GDP ratio and the output gap. b – Assessment of compliance based on the average adjustment over the past three years.

Sources: European Commission (2017a), own representation

PUT FORWARD FOR DISCUSSION: TWO DIFFERENT VIEWS ON THE APPLICATION AND REFORM OF EUROPEAN FISCAL RULES

115. In the following section, council members put forward for discussion two different approaches to the application and reform of the European fiscal rules.

2. European fiscal rules (Veronika Grimm and Volker Wieland)

Compliance with fiscal rules and safeguarding the economic recovery

116. Since their introduction, the fiscal rules of the EU have become increasingly broader and more complex. ↘ BOX 9 At this stage, they also allow a **high degree of flexibility** with regard to their application in practice. For one, there is the **general escape clause,** allowing Member States to deviate temporarily from the rules of the Stability and Growth Pact (SGP). Further to this, the rules contain **various exceptions and broad scope** that give the European Commission **plenty of flexibility** even without applying the escape clause. The European Commission has made use of this leeway in the past. For example, a breach of the 1/20 rule – i.e. the rule to reduce the gap between the debt-to-GDP ratio and the 60 % threshold by 1/20 each year – has not yet been a reason to open an excessive deficit procedure (EDP), as other factors have also been taken into consideration.

117. For the first time since the introduction of the SGP in 1997, the European Commission – with the support of the European Council – invoked the **general escape clause for 2020, 2021 and 2022** in response to the coronavirus crisis. ↘ BACKGROUND INFO 6

↘ BACKGROUND INFO 6

Escape clause under the European fiscal rules

The **decision to activate the general escape clause** under the European fiscal rules lies with the **European Commission**. The **European Council** must **approve** this **decision** before activation can take effect. The general escape clause allows Member States to adopt budget policies within the Stability and Growth Pact to address a deep economic downturn in the euro area or in the EU overall and to take action to counter a general crisis situation that this triggers in all Member States. The corrective arm in Article 3 (5) and Article 5 (2) specifies that in the event of a deep economic downturn in the euro area or in the EU the Council can decide, at the recommendation of the European Commission, to adopt a revised budgetary stance. The general escape clause does **not suspend** the **procedures of the Stability and Growth Pact.** It does, however, give the European Commission and the Council the **power** to **adopt coordination measures** within the framework of the Pact while deviating from the budgetary obligations that normally apply. In some Member States, the activation of the escape clause in national fiscal rules depends on the activation at European level. This is the case in France, Italy and Portugal, for example (EUIFIs, 2020; Gbohoui and Medas, 2020). In Portugal, the activation of the national escape clause is automatically linked

to activation at the European level. In France, the activation of the clause must be approved by the High Council for Public Finances, and by Parliament in the case of Italy.

118. In March 2021, the **European Commission** (2021b, p. 7) made the continued **application of the general escape clause for 2022** contingent upon the general economic situation in the EU and the euro area, to be assessed on the basis of the output gaps, growth rates, labour market indicators and the level of GDP **compared to the pre-crisis level** at the end of 2019. With regard to the first three of these criteria, the European Commission pointed out that the available data was subject to uncertainties and delays and therefore placed emphasis on the comparison with pre-crisis levels for the decision-making process. Given that the European Commission's Winter Forecast of February 2021 (European Commission, 2021c, p. 18) projects that GDP will reach its pre-crisis level in the EU by mid-2022, the European Commission saw this (2021b, p. 8) as a preliminary indicator that the general escape clause should be applied in 2022 but not in 2023.

119. In the European Commission's Spring Forecast (European Commission, 2021d, p. 25) of May 2021, **pre-crisis economic activity** was projected to be reached around the **fourth quarter of 2021** in the EU as a whole and only in the **first quarter of 2022** on average in the **euro area** Member States. At the level of the individual EU Member States, this forecast projects that some would already return to their pre-crisis level in 2021 and all would return by the end of 2022 at the latest. ↘ CHART 41 TOP On the basis of this forecast, in June the European Commission (2021e) deemed the aforementioned criteria to be met and declared that the general escape clause would continue to be applied in 2022 and was expected to be deactivated in 2023. The European Commission (2021f, S. 8) pointed out that the country-specific situations of the individual Member States will be considered following the deactivation of the escape clause and the application of the fiscal rules. In March 2021 it stated that all the flexibilities within the Stability and Growth Pact will be used for individual Member States that have not yet returned to the pre-crisis level of economic activity (European Commission, 2021b, p. 8). The European Commission has therefore a **substantial** degree of **flexibility** in the application of the SGP rules, which it has also made use of in the past. ↘ ITEM 116

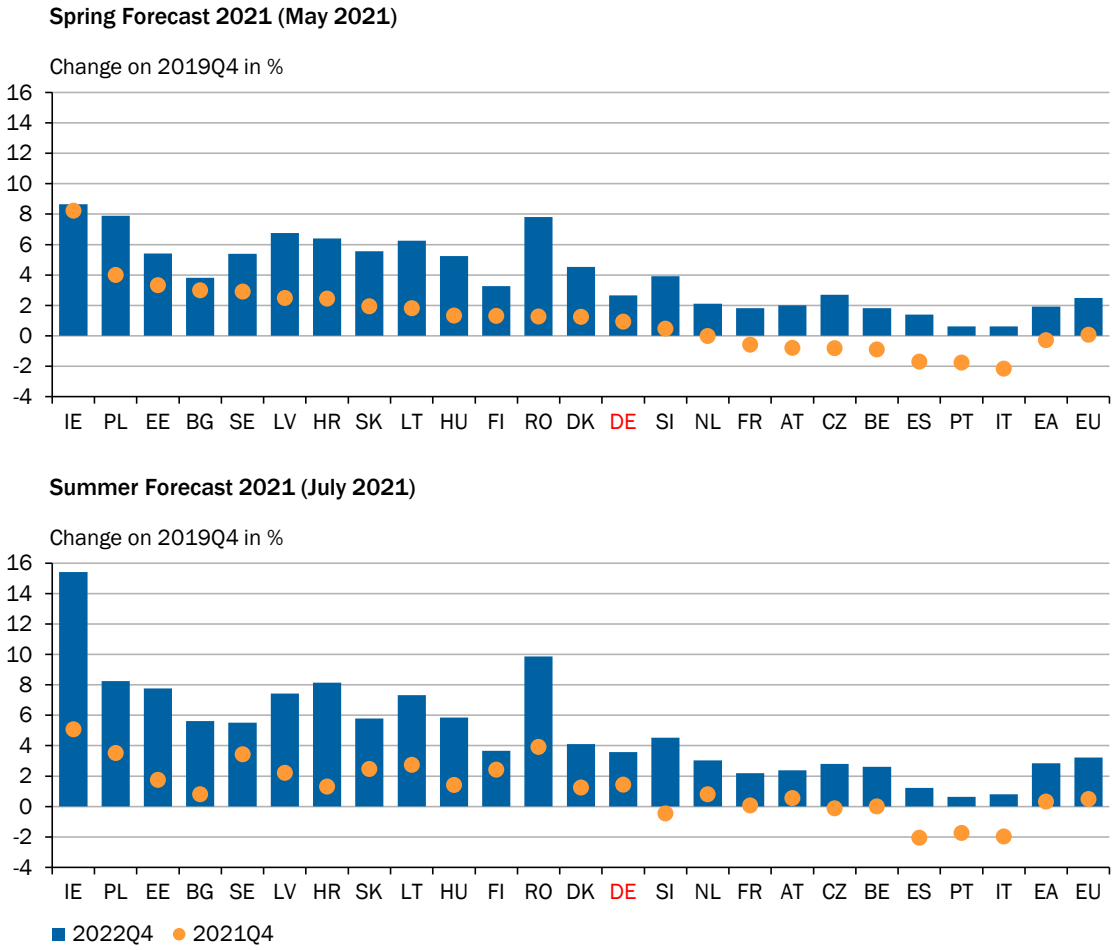
The **criteria** determining **when the general escape clause is applied and when country-specific flexibilities** are used remain **vague, however**. Clear criteria would be helpful considering that the European Commission's forecast indicates that the EU Member States will, on average, have returned to the pre-crisis level by the end of 2021 but the general escape clause – and not country-specific flexibilities – are still to be applied for 2022. In the European Commission's Summer Forecast of July 2021, the outlook had improved somewhat further, with the European Commission (2021g) expecting the pre-crisis level to be reached for the euro area by the end of 2021. ↘ CHART 41 BOTTOM The GCEE is expecting this for the fourth quarter of 2021.

120. As soon as the general escape clause no longer applies, the rules of the **preventive and corrective arm of the SGP** that are currently valid – like those for

↘ CHART 41

Pre-crisis level reached in the EU on average by the end of 2021 according to the Spring and Summer Forecast

European Commission GDP projections for EU member states



1 – IE-Ireland, LT-Lithuania, PL-Poland, SE-Sweden, EE-Estonia, HR-Croatia, FI-Finland, LV-Latvia, BG-Bulgaria, SI-Slovenia, DK-Denmark, SK-Slovakia, RO-Romania, HU-Hungary, DE-Germany, FR-France, NL-Netherlands, CZ-Czech Republic, PT-Portugal, BE-Belgium, AT-Austria, ES-Spain, IT-Italy, EA-euro area, EU-European Union. No quarterly GDP forecasts available for Cyprus, Greece, Luxembourg and Malta.

Sources: European Commission, Eurostat, own calculations

the general government deficit, the structural deficit, the debt ratio and expenditure growth – become relevant once again.

In the preventive arm, i.e. for Member States not in an EDP, the rule is that the Member States' structural deficit must be more or less equivalent to the country-specific medium term objective (MTO) or must undertake adjustment towards this objective with sufficient speed (European Commission, 2019, p. 15). The latter depends on the national economic situation and is likely to be met by most Member States by **pursuing a structural deficit reduction in steps** of 0.5 % of GDP per year. If the structural deficit of a Member State is not brought down as planned, the European Commission still has **leeway in the assessment of whether the preventive arm of the SGP is breached**. For example, structural reforms can be considered a positive element. An EDP is opened as soon as

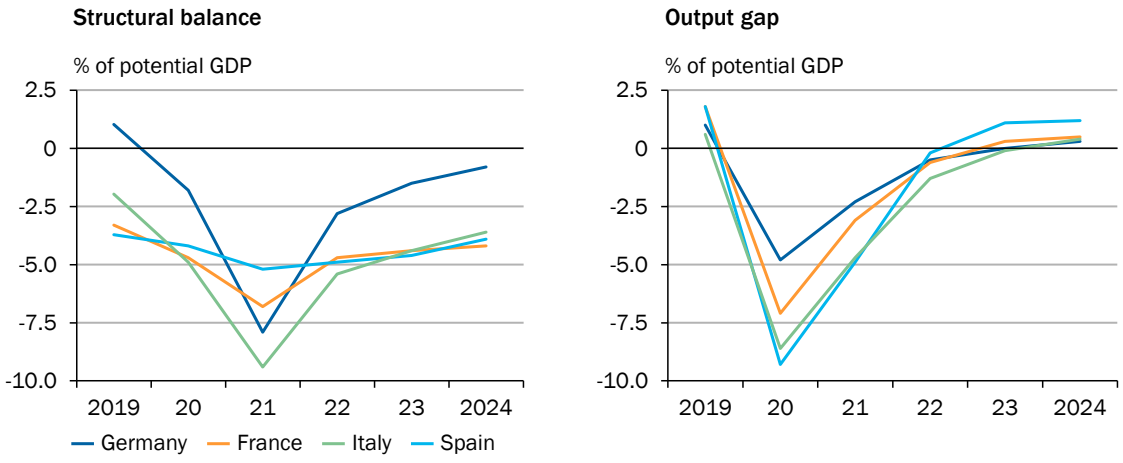
the general government deficit of a Member State exceeds 3 % or a deficit of this magnitude is planned. While in theory an infringement of the rule to limit public debt can also trigger the opening of an EDP, the interpretation is less strict in practice. **In the corrective arm of the SGP** – in which the Member State would then be – more detailed supervision rules and requirements with regard to planned national fiscal measures apply. The European Commission and the European Council also have a **wide margin for implementation here**.

121. The **forecasts presented by the EU Member States** in their stability reports show that most plan to gradually **pare down their structural deficits to a sufficient degree** in the coming years. The phase-out of pandemic-related support measures will play a particular role in achieving the necessary reduction. Spain is an exception in 2022 and 2023, as is France in 2023, as their structural deficit reductions are slightly lower than needed considering their forecast economic recovery. ↘ CHART 42 LEFT

In Spain, the output gap will be almost closed again in 2022, however, and both countries expect slightly positive output gaps in 2023 and 2024 according to their stability reports. ↘ CHART 42 RIGHT While the European fiscal rules require an improvement of over 0.5 % of GDP in this context, the forecast for Spain falls short of this requirement by 0.3 percentage points and that for France by 0.2 percentage points. In their **simulations** for the next few years, Darvas and Wolff (2021) also demonstrate that given the scope of the European Commission to flexibly apply the rules, **only a minor fiscal adjustment** would be necessary in just a few states in **order to comply with the rules,** based on the deficits projected by the European Commission. Funds from the Recovery and Resilience Facility can additionally reduce the required adjustments in this context.

122. The **fiscal policy of most** euro area **Member States** is **therefore not** significantly **limited by EU fiscal rules in the coming years**. Consequently, the application of the general escape clause is not a necessary precondition in most Member States to be able to comply with the fiscal rules from 2022 onwards. In

↘ CHART 42
Structural balance and output gap



Sources: European Commission, Stability programmes of EU member states, own calculations

mid-2021, the **independent Advisory Board to the German Stability Council** (2021) saw no need to apply the general escape clause for 2022 on the basis of the forecasts. Nor was there any need, according to the **Deutsche Bundesbank** (2021d, p. 10), to decide as early as June 2021 on the application of the general escape clause in 2022. It called for a later decision to be made on the application of the general escape clause depending on the economic recovery. In addition, there was also the option of using country-specific flexibilities where necessary instead of applying the general escape clause. **In future,** any debate on the **application of the general escape clause should be conditional on an independent analysis and review,** as suggested by the European Fiscal Board, for instance (European Fiscal Board, EFB; 2018, p. 81).

123. In light of the forecast economic growth, the **escape clause invoked due to the coronavirus crisis should cease to apply in 2023 at the very latest** so that Member States remain within the normal limits of the fiscal rules once again. The application of the general escape clause in 2022, which has already been decided by the European Commission, allows Member States to once again incur extensive budget deficits and a sharp rise in debt. From 2023, Member States would then be required to bring their structural deficit into line with the country-specific MTO by gradually reducing it by 0.5 % of GDP each year. **According to** the **forecasts** currently **available** for the development of economic output and public finances, **there are no indications that the application of currently valid fiscal rules from 2023 onwards would put the continued economic recovery at risk**.

124. According to the European Commission forecast (2021d, p. 39), **14 Member States** will exceed a **debt ratio of 60 %** in 2021. The Spring Forecast projects that the euro area is likely to have a debt ratio of at least 102 % of GDP in 2021 and of roughly 101 % of GDP in 2022. The average for the EU overall is roughly 95 % in both years. The European Commission emphasises the considerable degree of uncertainty due to the coronavirus pandemic from a macroeconomic perspective and, consequently, for fiscal policy. Either way, the European Commission has a **high degree of flexibility within the fiscal rules that currently apply to safeguard** the continued **economic recovery**. It has drawn on this flexibility in the past, for example when countries have breached the 1/20 rule associated with bringing the debt-to-GDP level down to the 60 % threshold.

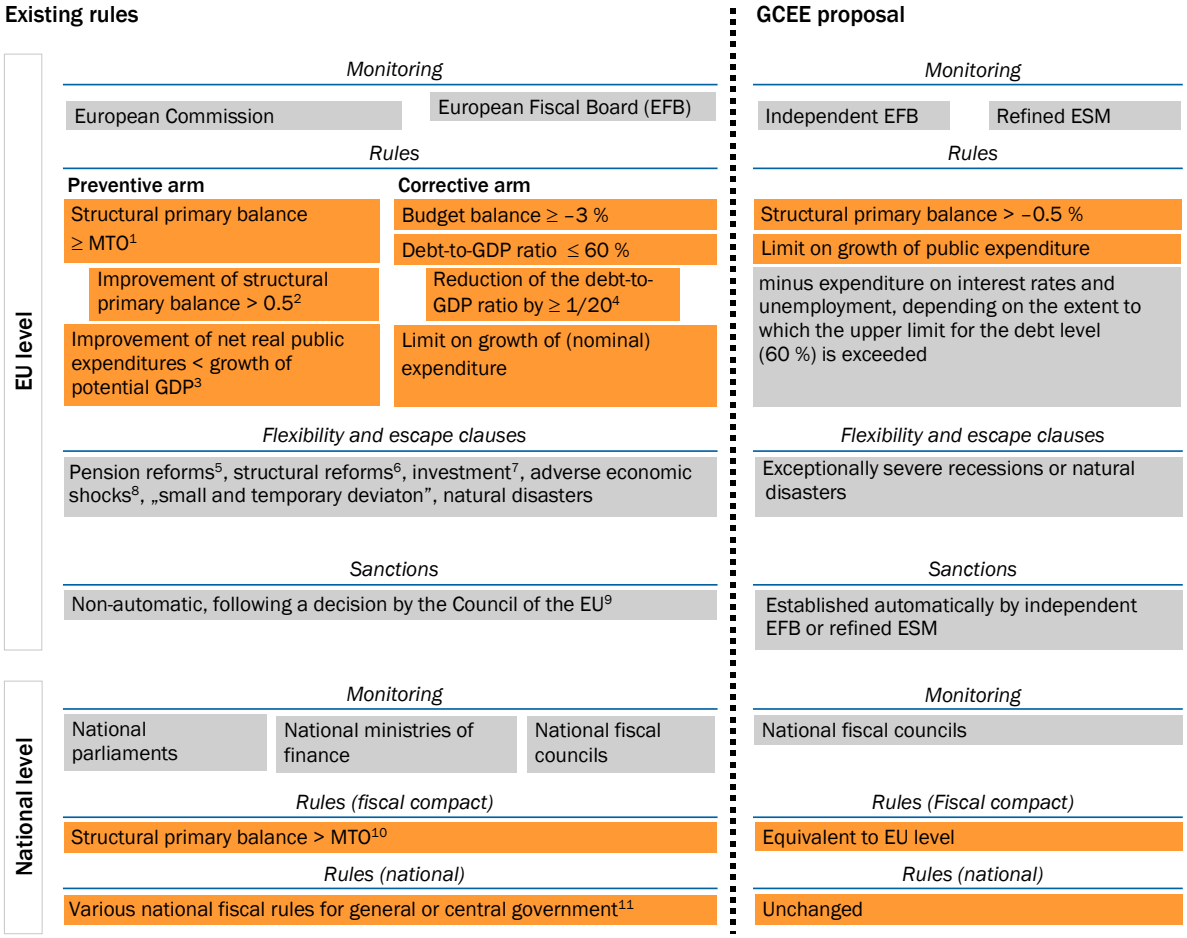
Reforming fiscal rules in order to strengthen resilience in good economic times

125. An **evaluation of the EU's fiscal framework** was already underway before the coronavirus pandemic struck and is now being relaunched (European Commission, 2021h). A number of **proposals for reform** are being discussed in this context. ↘ BOX 10 The proposals differ particularly as to whether the intention is to relax the fiscal rules in general, or to more effectively ensure that budgets are consolidated in times of good economic growth in order to improve resilience for future crises. It would make sense to reduce the complexity of the fiscal rules framework, increase transparency of compliance and implementation, and avoid procyclicality ↘ GLOSSARY of the rules (GCEE Annual Report 2020 items 297 ff.). The

German Council of Economic Experts developed a proposal back in 2017 that achieves these objectives (GCEE Annual Report 2017 items 98 ff.; GCEE Annual Report 2018 items 61 ff.). ↘ CHART 43

↘ CHART 43

Simplification of the EU fiscal framework as proposed by the German Council of Economic Experts



1 – Country-specific Medium Term Objectives (MTO), structural primary balance maximum –1 % of GDP. 2 – Adjustment path may depend on debt-to-GDP ratio and the output gap. 3 – Net public expenditures calculated by netting out interest expenditures, cyclical elements of unemployment spending, spending on programmes funded by the European Union, four year average of investment expenditures as well as one-off measures. 4 – Assessment of compliance based on the average adjustment over the past three years. 5 – Deviation from the MTO or adjustment path in event of reforms to strengthen the sustainability of national pension systems (fully financed multi-pillar system). 6 – According to the definition of the European Commission, qualified reforms must be substantial, long-term, promise positive budgetary effects, and be implemented in a binding legal form. The initial deviation from the MTO must not exceed 1.5 % of GDP. The annual deviation must not exceed 0.5 % of GDP. Cumulative deviation must not exceed 0.75 % of GDP. The exception may only be used once in the context of the adjustment path to the MTO. 7 – By their very nature and impact of action, qualified investments must be similar to structural reforms and hold the prospect of a positive effect on potential growth. Investments must qualify for co-funding through the European Regional and Cohesion Fund. The current growth in the member state concerned must be negative, as must be the output gap. The maximum annual deviation must not exceed 0.5 % of GDP. The cumulative deviation must be less than 0.75 % of GDP. The deficit limit of 3 % of GDP may not be exceeded during the entire period. The exception may only be used once in the context of the adjustment path to the MTO. 8 – Includes severe recessions in the euro area and the European Union. 9 – Must be determined by the European Commission and followed by a subsequent request by the European Council for a decision to be made. Voting in the European Council by qualified majority. Sanctions can be up to 0.2 % of GDP (up to 0.5 % of GDP in the EDP). Other types of sanctions may involve the suspension of commitments or payments under the European Structural and Investment Funds. 10 – Country-specific Medium Term Objectives (MTO), structural primary balance maximum –0.5 % of GDP. 11 – Rules valid in 2017 and beyond.

Source: European Commission, own representation

126. Some experts currently **argue** that the renewed application of the **fiscal rules following the coronavirus crisis would be unrealistic** because the path back to a debt target of 60 % is too long for some Member States with very high debt ratios and therefore the application of the 1/20 rule would require savings to be made too quickly (Martin et al., 2021). Considering the experience since the financial crisis, it is indeed **questionable whether** it is **still even realistic to expect** that the application of the fiscal rules will **bring down the debt ratios**. It obviously made sense to allow high deficits and increased debt ratios during the financial crisis and the coronavirus pandemic in order to cushion the impact of the crises. However, only a few Member States – including Germany, the Netherlands and Ireland – managed to significantly bring down their debt ratio again during the recovery following the financial crisis.

In contrast, other Member States have barely made a dent in their debt ratios despite an environment with extremely low interest rates on government bonds. Some **Member States even increased their debt ratio further in the growth phase** before the coronavirus crisis. One example in this context is France whose debt ratio rose from 65 % of GDP before the financial crisis to just below 90 % after the financial crisis. During the recovery and growth phase that followed, the debt ratio rose again to just under 100 %. The coronavirus crisis has pushed it up further to 115 %.

127. Contrasting with these developments, the priority is to **make use of times of economic expansion to reduce high debt ratios**. To achieve this goal, it would make sense to reform the fiscal rules as proposed by the German Council of Economic Experts in 2017, as compliance with fiscal rules can contribute to a more countercyclical fiscal policy (European Commission, 2020a; Larch et al., 2021). The proposed reform reduces the complex set of rules to **two central rules** and **an independent monitoring system**: an expenditure rule as an annual operational target and a structural deficit rule as a medium-term objective.

128. Primary expenditure is under the direct and discretionary control of the government, particularly if expenditure on unemployment insurance – which is sensitive to the economic cycle – is excluded. The maximum permissible change in primary expenditure under the **expenditure rule** would need to remain below average growth of potential GDP. In this context, the maximum permissible difference between expenditure growth and growth of potential GDP could be set as dependent on the gap to the 60 % debt limit, which is enshrined in the Maastricht Treaty. The expenditure rule alone, however, cannot guarantee fiscal sustainability given its focus on one side of the public budget. Fiscal sustainability could be ensured through the Fiscal Compact's **structural deficit rule,** however. The structural deficit rule is more suitable as a medium-term objective rather than as an operational rule – as currently the case – because measurement errors are associated with the use of structural variables. In addition, it would be necessary to have the **set of rules monitored** by independent fiscal councils, which would need to have sufficient resources.

129. **If Member States actually commit to an effective expenditure rule** to this effect through a reform of the rules and abolish the many exceptions to the

rules, it would be reasonable to assume that expenditure growth would be slower than economic growth in good economic times and that the debt ratio would decline considerably. With this reformed set of rules, it would be **conceivable to extend the time** for highly indebted Member States **to approach the reference value of 60 % to a period of over twenty years** if substantial and continuous progress is made. The 60 % threshold set down in the SGP should not be abandoned, however.

↘ BOX 10

Proposed reforms for European fiscal rules

The German Council of Economic Experts (GCEE) has stated that a reform of the fiscal framework could allow fiscal rules to create more fiscal scope in better economic times and counteract procyclical policies (GCEE Annual Report 2020 item 301). For this, it is desirable for the rules to rely on variables, where possible, that are under the direct control of policy makers and are associated with smaller revisions of real time estimates. This applies to a larger extent to public expenditure than to the structural deficit, which currently plays a prominent role in the set of fiscal rules. For this reason, as far back as 2017 the GCEE put forward a proposal to simplify the complex set of rules and to refocus them on two central rules and independent monitoring, wherein the operational rule would be an **expenditure rule** (GCEE Annual Report 2017 item 98). A broad range of academics and institutions also put forward a proposal for an expenditure rule of this kind (Andrle et al., 2015; Bénassy-Quéré et al., 2018; Christofzik et al., 2018; Darvas et al., 2018; Deutsche Bundesbank, 2019; EFB, 2019). Common to all is the principle that growth in public expenditure (minus interest expenditure and unemployment support) may not outpace growth of potential output while the difference between the two growth rates must be bigger the higher the debt ratio.

The GCEE's 2017 proposal, however, also retains the Fiscal Compact's structural deficit rule as a medium-term objective, as the expenditure rule alone cannot guarantee fiscal sustainability. Supporting their proposal, Feld et al. (2018) argue that the fiscal rules have so far not been sufficiently effective to limit the deficit bias of governments and guarantee the sustainability of public finances. They also want to **strengthen independent fiscal councils**, such as the EFB or the independent Advisory Board to the Stability Council in Germany. Other proposed reforms also want to **improve compliance with fiscal rules** by involving independent institutions as monitoring watchdogs (Bénassy-Quéré et al., 2018; Deutsche Bundesbank, 2019; EFB, 2020) or to enforce market discipline through various types of bonds (Bénassy-Quéré et al., 2018).

A second line of reform proposals focuses on giving **special status to public investment** (Fitoussi and Creel, 2002; Barbiero and Darvas, 2014; Truger, 2015; Deutsche Bundesbank, 2019; EFB, 2020). Depending on the proposed reform a **'golden rule'** is combined with other fiscal rules (Reuter, 2020). For example, within the framework of an expenditure rule the EFB (2020) puts forward exceptions for additional public investments, to be identified based on a comparison with the average country-specific level of public investment under the European System of Accounts (ESA) of the past few years. Another option would be a golden rule combined with a structural budget balance rule (Fitoussi and Creel, 2002; Barbiero and Darvas, 2014; Truger, 2015; Deutsche Bundesbank, 2019). The proposals differ primarily with regard to the amount of deductible investments and how these are defined. The Deutsche Bundesbank (2019), for example, is in favour of a cap at 0.5 % of GDP. Truger (2015), who believes that fiscal policy is too tightly constrained with the Fiscal Compact, recommends 1 % to 1.5 % of GDP. With regard to the definition, the Deutsche Bundesbank (2019) bases its definition on

public investments according to the national accounts, while Truger (2015) takes this as the basis with exceptions (e.g. minus military spending).

Pekanov and Schratzenstaller (2020) as well as Darvas and Wolff (2021) discuss **exceptions only with regard to green public investments**. Darvas and Wolff (2021) recommend the introduction of a "green golden rule", which would allow deficit funding of green public investments. They propose the goal of greenhouse gas emission reduction as a guideline for defining such investments. Pekanov and Schratzenstaller (2020) discuss two additional approaches. For one, an exception clause for green public investment could be added to the SGP. Secondly, the European Commission and the European Council could define country-specific targets for the share of green public investment in government spending. This type of expenditure by Member States should then not be subject to the limits set by the deficit rules of the SGP. Pekanov and Schratzenstaller (2020) recommend basing the definition of green investment on the corresponding taxonomy of the EU.

Proposals for a for-reaching reform of the EU fiscal rules want to **abandon rules in favour of qualitative standards** (Wyplosz, 2019; Blanchard et al., 2021), including standards with a margin of discretion for an acceptable fiscal position. This would require independent institutions that make discretionary decisions within the standards' framework and monitor and guarantee the implementation of the standards.

Within the existing set of rules, the EFB (2020) advocates the introduction of **country-specific adjustment paths** in order to comply with the general debt limit instead of the general rule for a reduction of the debt ratio by at least 1/20. The paths would either depend on macroeconomic variables defined ex ante or be defined on a case-specific basis. The proposal by Martin et al. (2021) goes even further with the introduction of country-specific debt limits. The proposed reform by Francová et al. (2021) also envisages adjustments to the debt rule under the SGP. In addition to raising the limit for the debt ratio to 100 % of GDP, the proposed reform argues in favour of maintaining the 3 % deficit rule. An expenditure rule would help anchor the pace of convergence towards the debt target, calibrated to be reached within a period of 20 years.

3. European fiscal rules (Monika Schnitzer and Achim Truger)

130. In the wake of the coronavirus crisis, the European Commission, with the approval of the European Council, **activated** the **general escape clause** for the years 2020, 2021 and 2022 for the first time since the introduction of the European Stability and Growth Pact (SGP) in 1997. ↘ PLUS TEXT 6 As soon as this clause is **no longer** applied, the rules of the preventive and corrective arm of the SGP that currently apply – such as those for the general government budget deficit, the structural deficit, the debt ratio and expenditure growth – become relevant once again.

Under the preventive arm of the SGP, i.e. for Member States that are not under an EDP, the rule applies that a country's structural deficit must be more or less in line with the country-specific medium-term objective (MTO) or on a path towards it at an appropriate pace (European Commission, 2019, p. 15). The necessary pace of adjustment depends on the national economic situation and normally requires a **reduction in the structural deficit in steps of** 0.5 % of GDP

per annum. Under the corrective arm of the SGP, an EDP is opened as soon as the general government deficit of a Member State exceeds 3 % or a deficit of this magnitude is planned. While a violation of the rule to limit public debt can also trigger the opening of an EDP, so far the interpretation has been more flexible in practice. **In the corrective arm of the SGP,** more detailed monitoring rules and requirements with regard to planned national fiscal measures apply.

131. It is **an undisputed fact** that **fiscal rules** are **needed** in light of **political economy considerations** to contain the **deficit bias**, and also for the purpose of fiscal and monetary policy coordination within a monetary union. More recent deliberations on fiscal policy in times of low interest rates (Blanchard, 2019; von Weizsäcker and Krämer, 2021) make little difference to this. Rather, analyses concerning sustainability and interest rate risks ↘ ITEMS 100 FF. demonstrate the continued need to limit debt ratios in the euro area and that the notion of perennially low interest rates, and therefore of self-financing deficits, is anything but convincing.

132. However, it does not therefore ensue that the fiscal rules in the euro area would need to remain unchanged after the crisis and that fiscal policy should pursue an intensified course of consolidation. Rather, the broad range of economic and financial impacts that continue to be felt in many Member States as a result of the coronavirus crisis, coupled with the high degree of economic uncertainty, are arguments in favour of a **cautious fiscal exit strategy that does not jeopardise the economic upturn** and growth prospects.

133. As the euro crisis demonstrated, **substantial fiscal multipliers** and therefore markedly **negative macroeconomic consequences** can be expected from **consolidation policy** (Blanchard and Leigh, 2013; Gechert, 2015; Gechert and Rannenberg, 2018). The acute euro crisis in the countries on the European periphery could only be overcome from 2015 onwards when the European Commission significantly relaxed its interpretation of the fiscal rules and adopted a much less restrictive fiscal policy stance. Only then were the crisis-struck countries able to transition to a more or less neutral fiscal policy which, together with bond purchases by the ECB, lead to a gradual upturn driven by domestic demand and whose outcome, nevertheless, was a significant budget consolidation and an end to the crisis-related rise in the government debt ratios (Truger, 2020).

If some countries were to face another crisis due to an **excessively restrictive fiscal policy** following the coronavirus crisis, quite apart from the economic and social costs this would also drive up the debt ratios and would therefore be **counterproductive from a consolidation policy perspective**. On the other hand, **prudent consolidation efforts** would not jeopardise the expected strong recovery and would also make it easier for the ECB to **normalise monetary policy**. ↘ ITEMS 181 FF.

The fiscal rules, which are currently not applied due to the general escape clause, carry the considerable **risk of an overly restrictive fiscal policy** in some Member States if they are applied without any modifications following the coronavirus crisis. The regulations for the structural deficit in the preventive arm and the deficit criterion in the corrective arm of the SGP would be less problematic

initially, even though this could indeed require additional consolidation efforts on the part of some countries. For example, Spain would need to step up consolidation efforts somewhat more in both 2022 and 2023, and France in 2023, than currently planned in their stability programmes. ↘ CHART 42 LEFT

134. In contrast, the **1/20 rule to reduce the debt ratio** towards the limit of 60 % of GDP **extremely challenging** for some Member States. The debt ratio for the euro area average is expected to rise from 85.8 % in 2019 to 102.4 % this year due to the coronavirus crisis. Even higher increases are expected for a number of economic heavyweights in the euro area whose debt ratios were above average even before the coronavirus crisis: in France, Spain and Italy, the ratio is expected to increase by around 20 percentage points and more to 117.4 %, 119.6 % and 159.8 % respectively (European Commission, 2021d, p. 39).

135. Referring to the need for strong consolidation efforts in countries with high debt levels, in its 2020 Annual Report (EFB, 2020) the independent European Fiscal Board (EFB) **expressed doubts** as to whether it is **at all realistic** for these countries to **comply** with the **current 1/20 rule** governing the debt ratio. In simulations for Italy, the EFB shows that Italy would need to improve its structural primary balance by around four percentage points in just three years in order to comply with the rule. Active discretionary consolidation on this scale would risk derailing the economic recovery and tip Italy back into a recession.

136. In light of these problems, **the EFB points out** that a **continued implementation of the current rules** once the coronavirus crisis is behind us would ultimately **only be possible at the cost of a relaxation of the rules in practice – in the form of constant exemption decisions and new interpretations –** to the further detriment of transparency: "Compliance with the debt reduction benchmark, […] is especially going to become a growing challenge for a sizeable group of countries, creating stronger tensions within the current system of rules. Deviations from the debt benchmark and a de facto differentiation of the speed of debt reduction are already being implemented under the current rules by way of new interpretations and by extending elements of discretion and judgement. Unless current rules are given an even wider interpretation, to the detriment of transparency […] a one-size-fits-all prescription for debt reduction may no longer be tenable." (EFB, 2020, p. 85). The Deutsche Bundesbank (2021d, p. 80), while itself in favour of the swift reapplication of the fiscal rules without modification, supports this assessment given that in its reasoning it points out that the debt rule has ultimately not been adhered to in the past.

137. For the reasons explained above, the EFB strongly advocates **country-specific differentiation** of (intermediate) **debt ratio targets** or the **speed of adjustment** towards a given reference value. In a recent interview with news magazine *Der Spiegel* Klaus Regling, the Chief Executive Officer of the European Stability Mechanism (ESM) and one of the negotiators of the SGP, states that compliance with the debt rule was not feasible for the likes of Italy, for example, and feared that sticking steadfastly to rules that had proven to be economically counterproductive could **result in a loss of credibility** (Regling, 2021). Regling obviously based his argument on an ESM discussion paper in which Francová et al. (2021, S. 15) conclude that compliance with the 1/20 rule for the debt ratio is unrealistic

and therefore keeping the rule would undermine fiscal framework credibility. They propose raising the current reference value of 60 % of GDP for the debt ratio for all Member States.

138. **Another problem** with the current fiscal rules that most of the reform proposals discussed have touched upon ↘ BOX 10 is the **lack of investment focus**. Public investment, as an expenditure category discretionally adjustable in the short term, has faced drastic cuts particularly in periods of crisis and consolidation (Barbiero and Darvas, 2014). Furthermore, there are **good economic arguments for debt financing of public net investments** (Musgrave, 1959; Truger, 2015; Expertise 2007). For this reason, many proposals for reform make provisions for the preferential treatment of public investment spending. While this does pose a problem with regard to the definition and classification of public investment spending and could present a sustainability risk if overused, it should be possible to resolve the problems of classification (EFB, 2019b, p. 77; Expertise 2007) ↘ ITEM 218 and sustainability issues could also be limited by putting caps on preferential status expenditure (Truger, 2020).

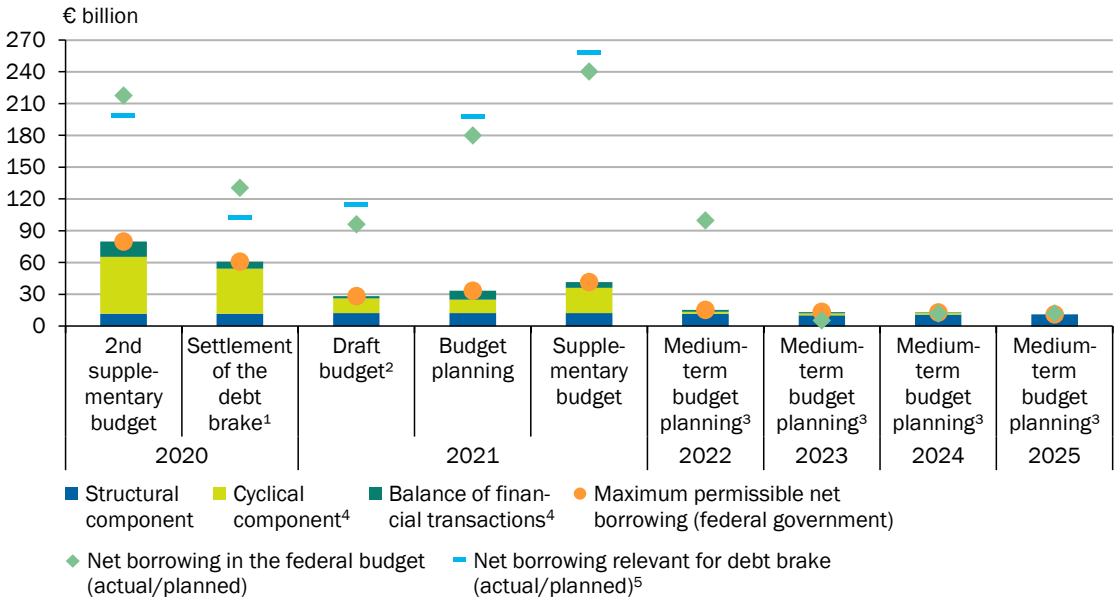
139. Against this backdrop, there are strong arguments for a **reform of the fiscal rules** that links **country-specific targets** for the debt level or pace of adjustment with the **preferential treatment of public investment spending**. This could be combined with the advantages of an expenditure rule (EFB, 2020, p. 92 f.). ↘ BOX 10 The slightly slower pace of consolidation and the somewhat higher debt ratio compared to the current set of rules that this implies is unlikely to be a problem in light of the current low interest environment. The analyses conducted also demonstrate that even a relatively sharp interest rate increase in the short-term would not overburden fiscal policy. ↘ ITEM 109 Ultimately, a reform of this kind should be **legally feasible without EU Treaty changes** and therefore **politically realistic** (Repasi, 2013, 2021).

4. Normalisation of fiscal policy in Germany

140. Due to the **sharp increase in government spending** with a simultaneous drop in revenues **in the wake of the coronavirus pandemic,** Germany reported high net borrowing in 2020 and 2021. ↘ CHART 44 This was permitted by the debt brake within the context of the **escape clause for unusual emergency situations** that are beyond the government's control and have a significant effect on government finances. The debt ratio rose by almost 9 percentage points from 59.8 % of GDP at the end of 2019 to 68.7 % at the end of 2020. ↘ TABLE 6 The Federal Government expects a further increase to 72.3 % for 2021. At the same time, it is budgeting for a general government deficit of 7.3 % of GDP in 2021. This would be far higher than the 2020 general government deficit of 4.3 % of GDP. By contrast, the GCEE expects a deficit of 4.9 % and a debt ratio of 70.6 % of GDP in 2021. A general government deficit of 1.9 % of GDP and a debt ratio of 68.2 % of GDP is expected for 2022. ↘ ITEM 85

↘ CHART 44

Net borrowing by the Federal Government in the medium term



1 – As of 1 September 2021. 2 – As of 25 September 2020. 3 – As of 6 August 2021. The structural components referring to the years 2023 to 2025 consider the repayment obligation stemming from the budget of 2020 as of the settlement of the brake brake from 1 September 2021 amounting to approximately €2.1 billion. 4 – Figures shown with inverted signs. 5 – Planned net borrowing in the federal budget minus the budget balances of federal funds and special funds.

Sources: BMF, own calculations

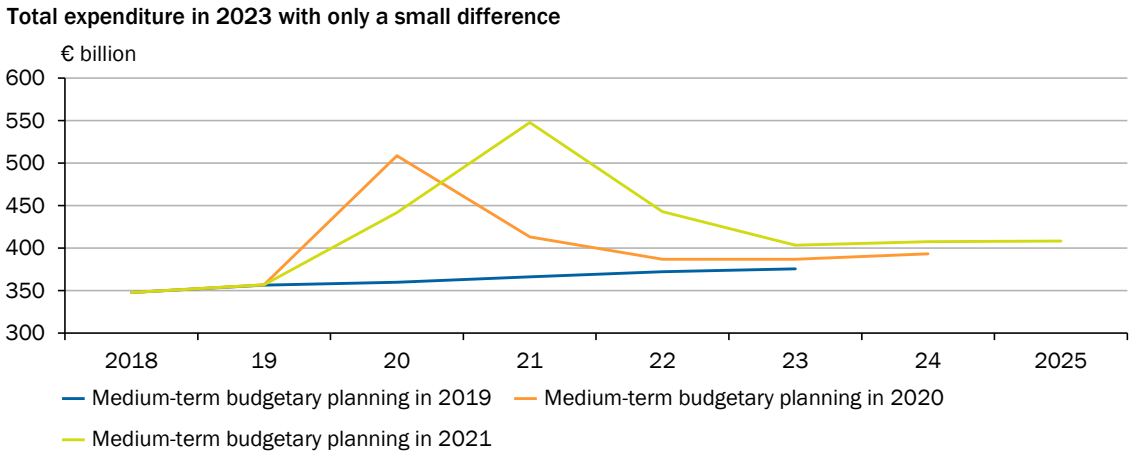
141. In its financial planning since March this year, the **Federal Government** expects that an **unusual emergency situation** within the meaning of Article 109 (3) second sentence of the Basic Law (*Grundgesetz*) will continue to apply **for 2022** with regard to the debt brake (BMF, 2021b). Drawing on the annual forecast published in January 2021, it explained that this was because the GDP pre-crisis level would not be reached until the middle of 2022. Furthermore, it expects a considerable loss of tax revenue, pandemic-driven additional expenditures and significant effects on the labour market. The Federal Government's Spring Forecast of May 2021 projected the pre-crisis GDP level to be reached by the end of 2021. In June, the Federal Government maintained its assessment that an emergency situation will continue to apply in 2022 (BMF, 2021c). As justification, it pointed to the increased financial requirements due to the costs of the coronavirus pandemic, but did not make any reference to the updated GDP forecast.

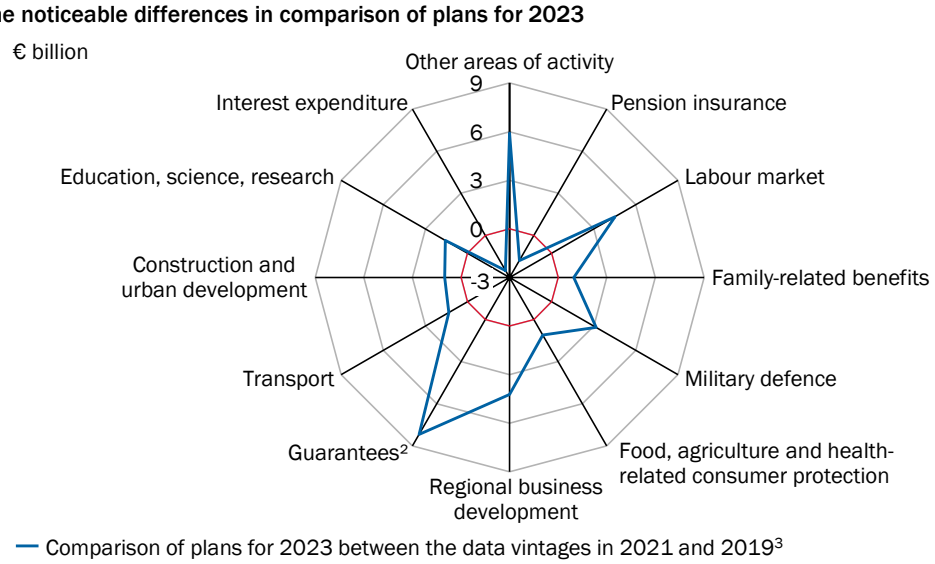
142. The **independent Advisory Board to the Stability Council** (2021) points out that much uncertainty surrounds the economic development and therefore the application of the escape clause should be reasonably justified on the basis of current forecasts. According to the Advisory Council, the forecasts presented through to June do not provide any indication of an unusual emergency situation for 2022, but rather suggest that a general economic upturn is expected. The output gap is expected to be more or less closed or in clearly positive territory. In the opinion of the Advisory Board, action to scale down fiscal economic support,

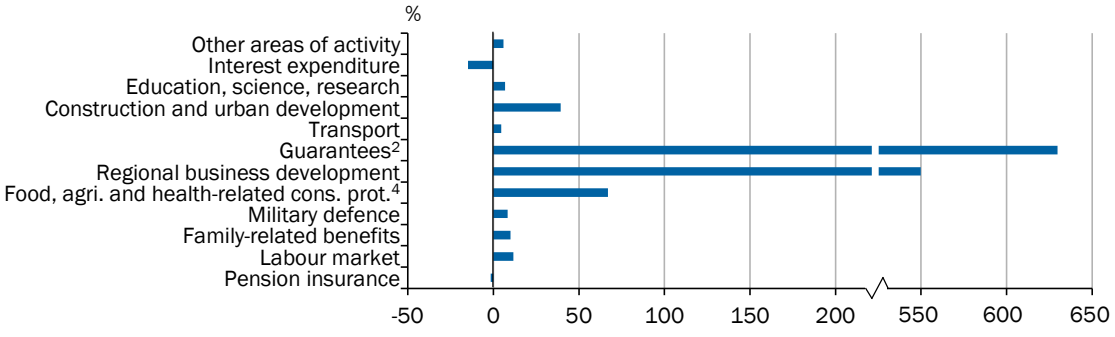
which would be expressed in a narrowing of the budget deficit, would not stand in the way of a self-sustaining recovery.

↘ CHART 45

Development of public spending in the federal budget compared to plans before the COVID-19 pandemic[1]







1 – Comparison of medium-term planning for public spending from the financial reports with data as at 2019, 2020 and 2021. 2 – Guarantees and other measures to promote business development. 3 – Comparison of planned expenditures according to main areas of activity for 2023 between the data from the 2022 financial report and the 2020 financial report. 4 – Food, agriculture and health-related consumer protection.

Sources: BMF, own calculations

Neither would compliance with the debt brake, as set down in the Constitution, require abrupt consolidation efforts in 2022 that would jeopardise the upturn. Rather, considerable budget deficits that support economic growth can still be financed in 2022 thanks to reserves previously built up by the Federation and the *Länder*. While faster decisions on adjustment measures would need to be made for the subsequent years as reserves would be used up more quickly, the Advisory Board argues that this should be manageable for the overall economic development. In return, additional repayments would be avoided in the coming years.

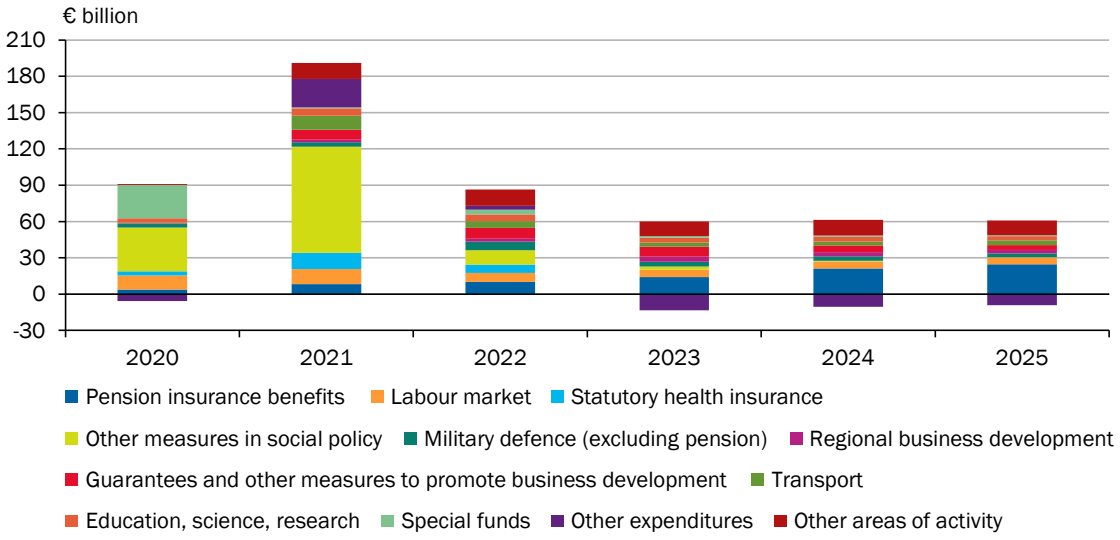
143. The **Deutsche Bundesbank** (2021d) points out that a **decision** on the escape clause will not be made anyway until the **federal budget for** 2022 is adopted, at which point it will be far easier to assess whether the country is facing an emergency situation. It stated that as forecasts for the coming year become more accurate as more data becomes available, it is prudent to incorporate the latest forecasts into budget planning and the assessment of the state of emergency on an ongoing basis.

144. **Public spending** has **increased substantially** during the coronavirus pandemic. ↘ CHART 45 TOP A detailed analysis of the changes in spending by category compared to actual expenditure in 2019 shows that growth in 2020 and 2021 was mainly attributable to additional pandemic-related expenditure, including in the labour market and statutory health insurance domains. ↘ CHART 46

145. **If we compare** the Federal Government's **current plans** for the development of public **spending over the medium term** (BMF, 2021d) with plans prior to the coronavirus pandemic (BMF, 2019), we see an increase of €27.7 billion in 2023. ↘ CHART 45, TOP This increase is particularly evident in expenditure for the labour market (approx. €4.5 billion), regional business development (approx.

↘ CHART 46

Actual and planned expenditure changes in the federal budget compared to actual expenditure in 2019[1]



1 – Comparison of the actual figures for 2019 with the medium-term plan in the 2021 financial report.

Sources: BMF, own calculations

€4.2 billion), military defence (approx. €3.2 billion), and in the area of warranties and additional measures to promote business development (approx. €8.2 billion). ↘ CHART 45 CENTER AND BOTTOM

146. **Compared to actual outlays in 2019,** spending on pension insurance, in particular, account for around 30 % of planned spending growth in 2023. ↘ CHART 46 This also applies to expenditure in the labour market domain and on warranties in the promotion of business development, albeit to a lesser degree than during the coronavirus pandemic. Other areas account for over 80 % of the planned spending increases in 2020 and 2021 compared to 2019.

147. **Public expenditure grew significantly** during the coronavirus pandemic. This was **not only** limited to **temporary increases,** however, but also **included some long-term increments**. The majority of measures in the economic stimulus package, such as business assistance ↘ BOX 11 or the child bonus, are one-off economic support measures. Furthermore, spending within the context of automatic stabilisers – such as unemployment assistance and short-time work allowance – will be lower once the pandemic is over. At the same time, however, the stimulus programme and the Future Package finance a number of long-term, transformative measures the volume of which will only be reduced slowly each year from €15 billion to €10 billion in the period from 2020 to 2024 (Gemeinschaftsdiagnose, 2020). These measures include subsidies and investments in electric mobility, the expansion of the 5G network, hospitals and vaccine development, as well as the digital transformation. In addition, expenditure for all-day schools and nurseries has been put on a permanent footing.

↘ BOX 11

An overview of COVID-19 business assistance

To stabilise liquidity and maintain the creditworthiness of businesses, self-employed workers and freelancers suffering substantial loss of turnover during the COVID-19 pandemic, the Federal Government has **so far approved financial assistance of roughly €120 billion** (Federal Statistical Office, 2021a). Loans from the KfW bank group and direct grants account for the vast majority of this assistance. The assessment basis, the funding amount and conditions of eligibility under the programmes have been continuously adapted in the course of the pandemic. ↘ CHART 47 Nevertheless there were problems with the conceptual design and administrative implementation of the assistance. ↘ BOX 25

↘ CHART 47

Overview of coronavirus grants

November and December assistance

- **Grant** of 75 % of turnover in November and December 2019

Eligibility criteria:
- Direct affected by closures[1]
- If at least 80 % of turnover from businesses directly affected by closures

Application deadline: 30. April 2021

New Start Assistance

- **Advance** of 25 % of annual turnover in 2019
- Max. €1,250 per month for January to June 2021
- Subsequent review of the exact level of support[2]

Eligibility criteria:
- **Own-account workers**
- No claims made under ÜBH III
- Full grant if turnover declines by at least 60 % in the period from January to June 2021

Application deadline: 31. August 2021

New Start Assistance Plus

- **Advance** of 25 % of annual turnover in 2019
- Max. €1,500 per month
- Subsequent review of the exact level of support[1]

Eligibility criteria:
- **Like New Start Assistance**

Application deadline: 31. December 2021

Nov 20 – Dec 20 – Jan 21 | June 21 – July 21 – Aug 21 – Sep 21 – Dec 21

Bridging Assistance (ÜBH) III

- Up to €10 million per month[3]
- **Max. amount of support** from ÜBH III & ÜBH III Plus €52 million
- Depending on drop in turnover, reimbursement of 40 %, 60 %, 100 % of **fixed costs** between November 2020 and June 2021
- April 2021: In event of drop in turnover of at least 50 % between November 2020 and June 2021: **equity grant** of up to 40 % of reimbursed fixed costs[4]

Eligibility criteria:
- **Companies with annual turnover up to €750 million**
- Maximum turnover limit does not apply if companies are affected by the closure order
- Drop in turnover of at least 30 % compared to 2019 reference month

Application deadline: 31. October 2021

Bridging Assistance (ÜBH) III Plus

- Amount of support **as under ÜBH III**
- Depending on drop in turnover, reimbursement of 40 %, 60 %, 100 % of **fixed costs**
- If turnover drops by at least 50 %: **equity grant** of up to 40 % of reimbursed fixed costs
- **Restart bonus (until September)**: 60 % grant depending on difference in personnel costs between July and May 2021, 40 % for August and 20 % for September

Eligibility criteria:
- **As under ÜBH III**
- In an event of **increase in employment** additional grant depending on personnel costs („**Restart bonus**“) if personnel costs are higher in July 2021 than in May 2021

Application deadline: 31. December 2021

1 – Review is based on actual turnover. If turnover declined by less than 60 % compared to the reference period, the advance must be repaid in part. 2 – Applies to closure by authorities from 2. November 2020. Does not apply to businesses that were affected by closures from mid-December (including hairdressing salons, retail). 3 – In a resolution of 15. June 2021, the maximum monthly level of support was increased from €1.5 million to €10 million. Likewise, the maximum level of support from both programmes (ÜBH III and ÜBH III Plus) was increased from €12 million to €52 million. 4 – An additional equity grant was introduced in a resolution of 1. April 2021

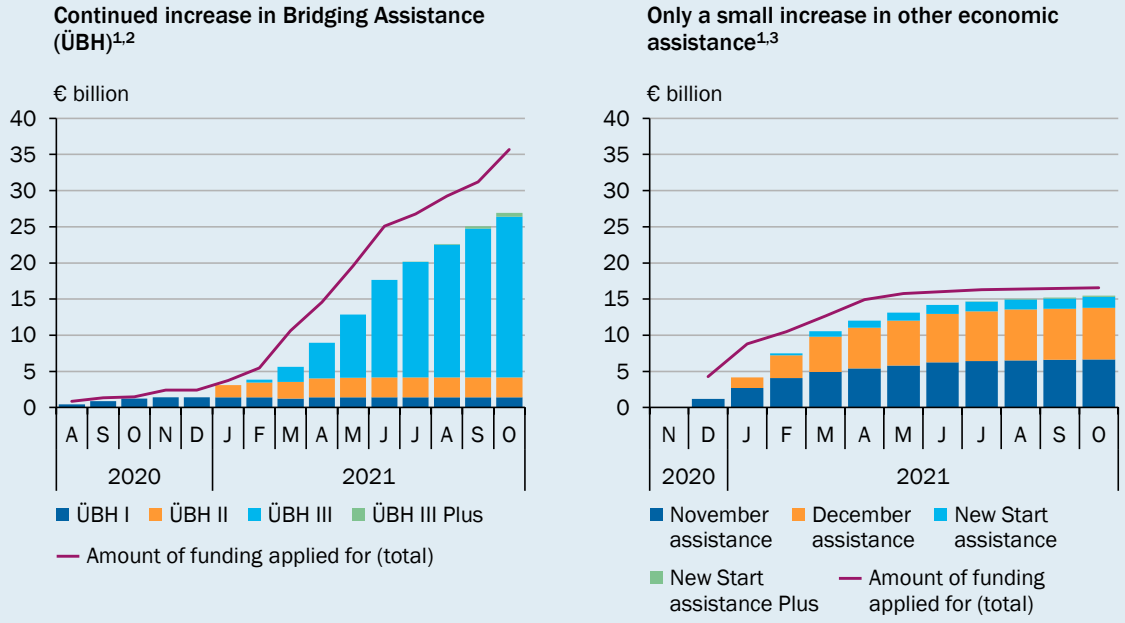
Sources: Federal Ministry of Economic Affairs and Energy, own representation

A total of **€65 billion for business assistance** is available in the 2021 federal budget (BMF, 2021e). As at 23 September 2021, the amount of funding already disbursed for 2020 and 2021 under the Bridging Assistance Programmes totalled approximately €24 billion, ↘ CHART 48 LEFT, with the bulk paid out in 2021 under Bridging Assistance III, and an additional €15 billion from the Extraordinary Economic Assistance (November and December Assistance) and the New Start Assistance for own-account workers. ↘ CHART 48 RIGHT Total funding applications for

around €47 billion have been made for 2020 and 2021 (data as at 23 September), which suggests that the budgeted amount of €65 billion will not be drawn down entirely.

↘ CHART 48

Overview of economic assistance disbursed in the coronavirus pandemic



1 – Values for October 2021 correspond to the data available as at 28 October 2021. 2 – For June 2021, the approved volume of support under Briding Assistance III corresponds to the data available as at 6 July 2021 as no data was transmitted in June. 3 – The requested volume of support under the extraordinary economic assistance programmes includes direct applications and applications via third parties scrutinising the application. No data available on the payment of December Assistance as at December 2020. Disbursed volume of support for New Start Assistance includes instalment payments and funding amounts from case processing. Only direct payments in February 2021.

Sources: Federal Ministry of Economic Affairs and Energy, own calculations

148. Central, regional and local authorities experienced a **steep drop in tax revenues** due to the coronavirus pandemic. In addition to the decline in revenue due to the economic development, the Federal Government introduced tax measures that reduce tax income, such as tax deferrals, adaptation of advance tax payments during the year, and waiving of enforcement measures. While the first tax revenue estimate following the outbreak of the pandemic anticipated general government tax revenues to drop by around 10 % in 2020, the decline in cash tax receipts proved to be less pronounced at the end of the year, at around 7.5 %. Other tax estimates for subsequent years follow a similar pattern. The result is a **significant narrowing of the gap when the last estimate before the coronavirus pandemic is compared** with the most recent estimate in May 2021, taking into account changes in tax law that have been introduced since then.

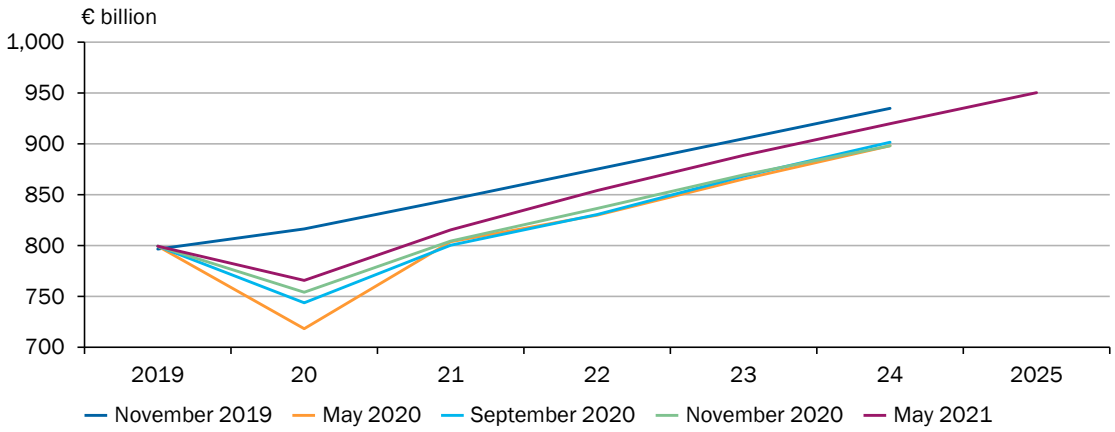
↘ CHART 49

149. Based on current forecasts and in light of existing reserves, **the German Council of Economic Experts believes that – once the crisis is behind us –**

↘ CHART 49

Tax revenue forcasts converge to estimates prior to the coronavirus pandemic when accounting for amendments to the tax law

Forecasts of the Working Party on Tax Revenue Estimates[1]



1 – Estimates of general government tax revenue while accounting for adopted amendments to the tax law at respective points in time for the entire forecast horizon.

Sources: Working Party on Tax Revenue Estimates, own calculations

Germany will be able to comply with **the debt brake once again without the application of the escape clause from 2023 at the very latest**. If there is uncertainty as to whether a state of an unusual emergency situation applies, the budget allocation process could, for example, commence with two different versions in the future. The additional work this would require could be justified if the economic situation is very uncertain and multiple rounds of replanning could be avoided. In addition, it would also provide greater transparency on the additional expenditure that is attributable to the pandemic-related unusual emergency situation.

150. Following the deactivation of the escape clause, the Federal Government plans to use existing reserves **from 2023 onwards** to smoothen the transition to the normal limits imposed by the debt brake (BMF, 2021b). Furthermore, with the discontinuation of special expenditure associated with the pandemic and a return to tax revenue growth, planned net borrowing is moving in the direction of renewed adherence to the debt brake without the escape clause (Feld et al., 2021c, 2021b).

151. If the escape clause is applied, under Article 115 (2) Sentence 7 of the Basic Law the **debt brake specifies that net borrowing** that exceeds the maximum permissible level of net borrowing, taking economic circumstances into account,

must be repaid within an appropriate period of time. Under the **Federal Government's repayment schedules,** the amount will be repaid in equal parts by 2042, ↘ BOX 12 while the repayment schedules of the *Länder* vary. ↘ TABLE 13 The repayments reduce the permissible level of net borrowing. While high repayments could considerably limit fiscal scope if the economy develops less favourably, a very long repayment period implies a higher debt ratio for longer and a higher risk

of interest rate exposure. Instead of the Federal Government's repayment schedules, an **alternative repayment plan** could entail **a growth-sensitive factor** and **increasing repayments** (roughly constant as a share of the potential). This could maintain fiscal flexibility in weak economic times while also guaranteeing debt repayment (Feld et al., 2021c).

↘ TABLE 13

Repayment schedules of the Länder[1]

	Emergency debt repayment schedules in 2020			Emergency debt repayment schedules in 2021			
	Start	Maximum period in years	Annual repayment instalment in million euros	Start	Maximum period in years	Annual repayment instalment in million euros	Emergency debt planned for 2022
BW	2024	25	325.6	Joint repayment schedule			No
BY[2]	2024	20	1,000	2025	Joint repayment schedule		Yes
BE	2023	27	270.4[a]	No emergency debt planned			No
BB	2022	30	20.3	2024	30	96.2	No
HB	No emergency debt			2024	30	25.5	Yes
HH	2025	20	150	Joint repayment schedule			Yes
HE[3]	2021	30	200 – 445	Joint repayment schedule			Yes
MV	2025	20	142.5	No emergency debt planned			No
NI[4]	2024	25	100 – 265				No
NW[5]	2020	50	200 / 500[b]	Joint repayment schedule			Yes
RP[6]	2024	17 – 25	6.8 – 10.1	No emergency debt planned			No
SL	No emergency debt			2025	30	13.6	Yes
SN[7]	2023	6	292.1	2024	6	323.3	Yes
ST	2022	1	81	2021 supplementary budget not yet adopted[9]			No
SH[8]	2024	38	50 – 304.1	No emergency debt planned			No
TH	2022	8	186.5	Joint repayment schedule			No

1 – BW-Baden-Württemberg, BY-Bavaria, BE-Berlin, BB-Brandenburg, HB-Bremen, HH-Hamburg, HE-Hesse, MV-Mecklenburg-Western Pomerania, NI-Lower Saxony, NW-North Rhine-Westphalia, RP-Rhineland-Palatinate, SL-Saarland, SN-Saxony, ST-Saxony-Anhalt, SH-Schleswig-Holstein, TH-Thuringia. 2 – Joint repayment schedule for 2020 and 2021 budgets. Repayments under the Bavaria Fund (BayernFonds) are not included. 3 – No repayment obligations incurred in the core budget for 2020. Repayment schedule of the "Safeguarding a Good Future in Hesse" special fund (Hessens gute Zukunft sichern): 2021 to 2023: €200 million; 2024 to 2026: €300 million; 2027 to 2030: €400 million; from 2030: 5% of remaining amount. 4 – Repayments in 2024 and 2025: cumulative 1/24 of the total amount of loans; 2024: €100 million; 2026 to 2048: repayment of the balance in equal parts. 5 – First repayment instalment in 2024. 6 – Repayment of 4 % of the loan amount in 2024 and in years with a negative cyclical component. Repayment of 6 % of the loan amount in years with a positive cyclical component. 7 – Repayment according to the Saxony Coronavirus Response Fund Act (Coronabewältigungsfondsgesetz); loans can be taken out until 2022 and repayment starts in the third year after borrowing. 8 – Dynamic repayment: 2024 starting with €50 million and an annual increase of 5 %. 9 – Draft 2021 supplementary budget of 26 October 2021. Details of the repayment schedule not yet published. a – Actual instalments can vary depending on the economic situation due to resolutions in the respective Budget Act. b – Due to cyclical mark-ups and mark-downs, actual repayment instalments can deviate from the baseline repayment amounts of €200 million (2024) and €500 million (from 2025).

Sources: Deutsche Bundesbank, budget plans, medium-term financial planning of the Länder, Stability Reports of the Länder, own calculations

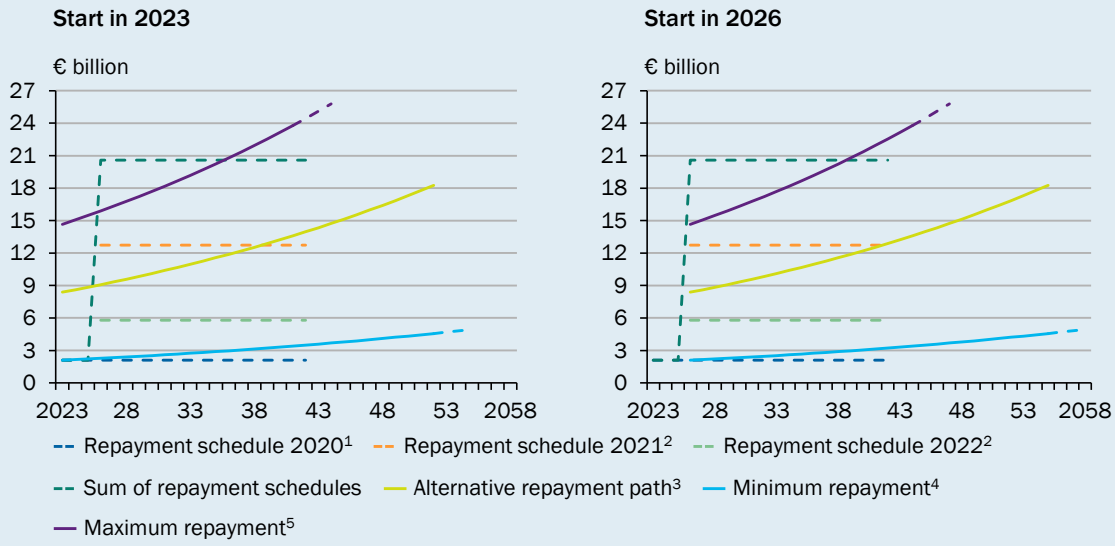
↘ BOX 12

Repayment schedules of the Federal Government and alternatives

Under the provisions of the **Federal Government's repayment schedules**, borrowed amounts are to be repaid in equal parts each year through to 2042. The repayment of debts incurred in 2020 will start in 2023, while the repayment of debts incurred in 2021 and 2022 commences in 2026. This initially results in debt repayments of around €2.1 billion per year, which then jump to approximately €20.6 billion per year in 2026. ↘ CHART 50 These schedules only marginally restrict fiscal flexibility in the first few years immediately after the crisis. Scope for fiscal measures becomes much more limited from 2026 onwards, however. With GDP growth expected to rise, repayments in the same absolute amounts result in a decreasing repayment in relation to GDP. Taking into account the cash value of future amounts and a positive imputed interest rate, future principal repayments would be lower. (BMF, 2021f)

↘ CHART 50

Repayment schedules for public debt in 2020, 2021 and 2022 budgets that exceeds the actual maximum permissible level of net borrowing



1 – Adopted repayment amounts (BMF 2021f, p. 40f.). 2 – Provisional repayment amounts (BMF 2021f, p. 40f.). 3 – Increasing with the average nominal potential growth between 1995 and 2019. 4 – The minimum repayment corresponds to 1/4 of the repayment under normal capacity utilization and, if applied exclusively, would take until 2087 (starting in 2023) or 2090 (starting in 2026). 5 – The maximum repayment corresponds to 7/4 of the repayment under normal capacity utilization and, if applied exclusively, would take until 2041 (starting in 2023) or 2044 (starting in 2026).

Sources: BMF (2021f), own calculations

An **alternative repayment schedule** could combine the three repayment schedules economically, while keeping them legally independent (Feld et al., 2021c). ↘ CHART 50 LEFT This could prevent an abrupt reduction in fiscal flexibility from one year to the next. An **increase in the principal repayments,** for example with the nominal potential growth of the past 25 years, could spread the principal repayments in a way that is **more advantageous economically**. This would keep repayment in relation to GDP more or less constant and higher payments would be due at a later, more discounted point in time.

Further to this, the **repayment schedules could be designed to be sensitive to economic growth** so that fiscal scope is not overly restricted if economic development is less favourable.

A minimum level of repayment could ensure that the debt continues to be repaid and a maximum repayment in good economic times could speed up the repayment process. With a growth-sensitive component, the repayment schedules for all three years could be grouped together and start as early as 2023. The growth-sensitive factor could be based on the calculation of the cyclical and structural component of the debt brake and support anti-cyclical fiscal policy (Feld et al., 2021c).

The repayment path under normal conditions would take 29 years with the parameters put forward by Feld et al. (2021c) and would be nine years longer than planned by the Federal Government. The period is determined endogenously and is in the range of the longest government bond of 30 years. This approach could, in theory, cover the risks of interest rate exposure and the schedule would meet the requirement, enshrined in the constitution, of an "appropriate" period of time. Years of strong economic development would shorten this period and years of weak economic performance would extend it. Alternatively, the start date of 2026 could be chosen, as already envisaged for the 2021 and 2022 repayment schedules. This would allow repayment to start when the effects of the pandemic are well behind us. ↘ CHART 50 RIGHT

III. INTERACTION BETWEEN FISCAL AND MONETARY POLICY

1. Relationship between monetary and fiscal policy decisions

152. The **sustainability of government debt** depends, among other factors, on the **interest rate level and central bank money creation**. ↘ BOX 8 Monetary policy and fiscal policy therefore interact. If the central bank can pursue stable inflation through its monetary policy decisions without being constrained by fiscal policy considerations, this is referred to as **monetary dominance**. ↘ BOX 13 If the government covers any shortfalls between government spending on the one hand and government revenue, including profits from money creation by the central bank (seigniorage), on the other through public borrowing, this restricts its anticipated scope of action in the future. This is because compliance with the long-term intertemporal budget constraint (ITBC) then requires sufficient primary surpluses in the future in order to cover the existing level of debt. If, however, the government is unable or unwilling to ensure sufficient primary surpluses, the central bank must accommodate the budget deficits through an additional easing of monetary policy in order to guarantee the sustainability of public debt. This scenario is referred to as **fiscal dominance** and can lead to an uncontrolled rise in inflation.

↘ BOX 13

The interaction between monetary and fiscal policy

The literature discusses two approaches as to how the **interaction** between monetary and fiscal policy can affect the development of the price level either through central bank money creation or through the anticipated ability of the sovereign to meet financial obligations in the future (Sargent and Wallace, 1981; Leeper, 1991). The period-based budget identity of the government ↘ BOX 8 is influenced by this interaction via seigniorage S_t, as a part of the primary balance in addition to tax revenues T_t and government spending A_t (Walsh, 2017, pp. 138 ff.):

$$D_t = (1 + r)D_{t-1} - (T_t + S_t - A_t).$$

Consequently, the seigniorage revenues, including the transfers by the national central banks to the finance ministries, are part of the ITBC:

$$d_t = \sum_{s=1}^{\infty} \left(\frac{1+g}{1+r}\right)^s (t_{t+s} + s_{t+s} - a_{t+s}).$$

In the **classic approach** according to Sargent and Wallace (1981), the government's ITBC is satisfied independently of the prevailing price level. This is done by financing present deficits with surpluses expected in the future. The necessary surpluses can be financed either through appropriate changes to future government spending and tax revenues or seigniorage income. Thus, the price level depends on the present and anticipated future money supply growth and is determined by the priority of monetary and fiscal policy actions. Two different scenarios are considered:

In the first scenario, the central bank acts completely independently and sets monetary policy (**monetary dominance**) with the objective to ensure price stability. This determines the money supply growth and therefore the level of seigniorage . In this case, fiscal policy is forced to adjust taxes and expenditure in the future so that the ITBC is satisfied given the seigniorage determined by the central bank. In practice, monetary dominance is to be achieved through the independence of the central bank and the compliance with fiscal policy rules.

In the second scenario, fiscal policy acts independently and determines current and future expenditure and taxes without giving consideration to the maintenance of debt repayment abilities in line with the ITBC and the exogenous seigniorage income determined by monetary policy (**fiscal dominance**). The debt limit resulting from the ITBC is reflected in the demand for sovereign bonds that are issued to finance the ongoing deficit. Finally, monetary policy is forced to align with fiscal policy and to fill future gaps in the financing of the deficit by compensating through seigniorage. It then no longer has control over the inflation rate and price stability is not ensured.

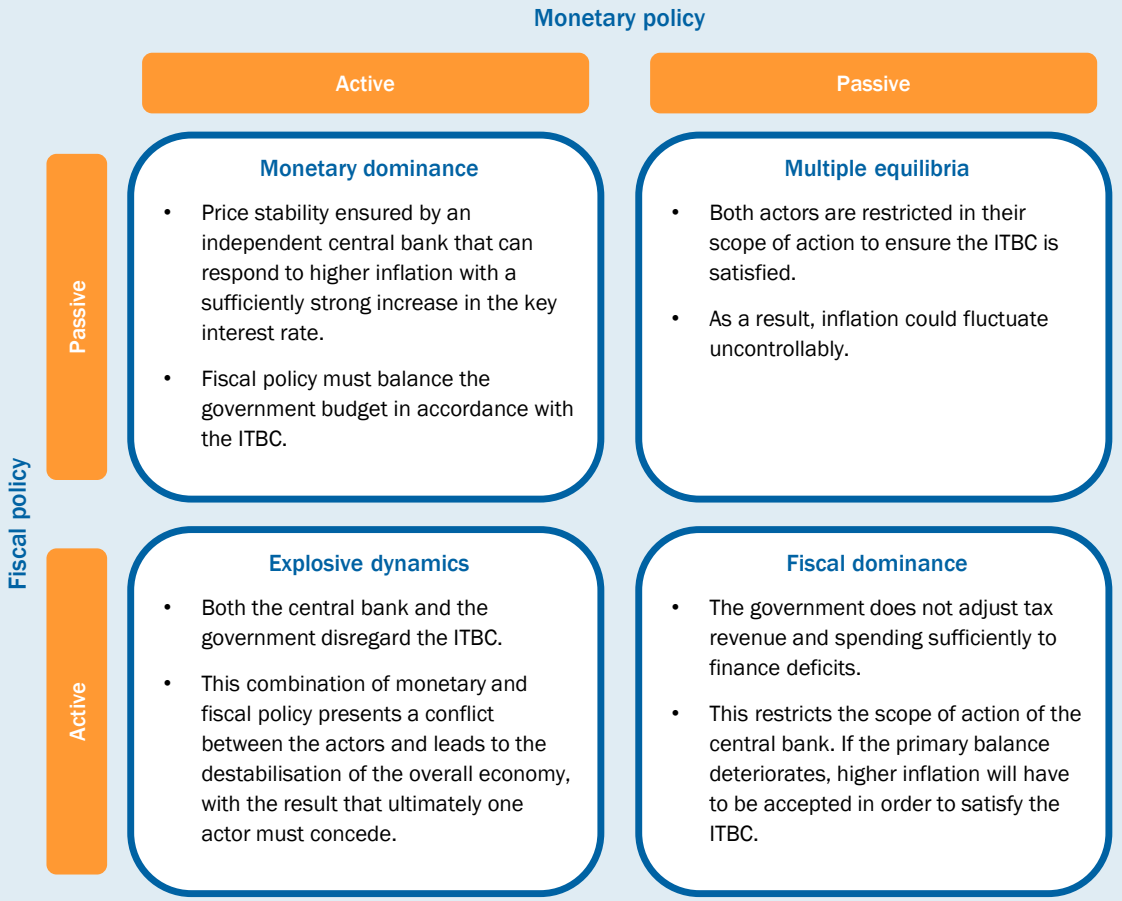
On the other hand, the **Fiscal Theory of the Price Level** (FTPL; Leeper, 1991) does not see the ITBC as a constraint that needs to be satisfied for every price level, but rather regards it as an equilibrium condition which becomes a determining factor for the price level depending on monetary and fiscal policy. Accordingly, there can be different inflation expectations and equilibria. In this context, Leeper (1991) distinguishes between four possible combinations of an active or passive monetary and fiscal policy. An active authority is not restricted by budget constraints when making decisions. By contrast, a passive authority acts in such a way that sufficient revenue is ensured to satisfy the ITBC. ↘ CHART 51 In addition to monetary and fiscal dominance, there can also be explosive inflation and debt dynamics or multiple equilibria with variations driven purely by expectations.

Both the classic approach and the FTPL demonstrate that **fiscal policy disregarding the ITBC has implications for monetary policy**. Government spending must be financed by fiscal revenues in the long term so that monetary policy can focus on controlling the price level. If government budget deficits become further entrenched and low interest rates are needed for the sus-

tainability of public finances, the central bank runs the risk of losing control of inflation. However, if the central bank raises interest rates to head off a rise in inflation, this results in lower seigniorage income and a real appreciation of public debt due to lower inflation. If fiscal policy does not offset this by adjusting the primary balance, this would then result in a rise in public debt that would become unsustainable in the long term. In a monetary union, an increase in debt in one member state that is not financed by future revenues could drive up the price level in the entire monetary union (Bergin, 2000). This justifies the limitation of debt with fiscal rules.

↘ CHART 51

Fiscal Theory of the Price Level: combinations of monetary and fiscal policy



Sources: Leeper (1991), own presentation

153. A variety of studies attempt to assess the **likelihood of fiscal dominance** over time, both empirically and using structural models. Particular attention has been paid to the developments in the United States in the 1970s and 1980s when it was only possible to bring the era of the "Great Inflation" to an end with the realignment of monetary policy under Federal Reserve Chairman Paul Volcker from 1982 onwards. ↘ BOX 14 The results provide an insight into the importance of monetary and fiscal policy regimes for the development of inflation, public debt and economic activity. The expectations of households and firms with regard to the future regime play a central role in this context.

↘ BOX 14

Empirical evidence of monetary and fiscal policy regime changes

There is a broad consensus in the literature that **US monetary policy** underwent a **regime change** under Paul Volcker, Chair of the Federal Reserve, at the beginning of the **1980s** (Taylor, 1999; Clarida et al., 2000; Lubik and Schorfheide, 2004). This realignment of monetary policy marked the end of the period known as the Great Inflation, during which the inflation rate exceeded 10 % several times and peaked at close to 15 %. During this period, the inflation rates in all G7 countries with the exception of Germany had reached double digits. The years that followed became known as the Great Moderation because this period saw inflation rates and, in particular, expectations of future price increases become anchored at a low level. Taylor (1999), Clarida et al. (2000) and Lubik and Schorfheide (2004) provide empirical evidence that, in the United States, the **insufficient reaction in the policy rate** by the **US Federal Reserve** was primarily **responsible for excessive inflation**. It occurred only under the new leadership of Volcker that the United States saw a switch to an active monetary policy regime, in which the federal funds rate responded adequately, that is more than one for one, to inflation and inflation expectations (Taylor principle).

Given the interdependencies involved, a monetary policy reaction function that is capable of stabilising inflation also requires a fiscal policy reaction which limits government debt sufficiently (Leeper, 1991; Woodford, 1996, 2001; Benhabib et al., 2001; Favero and Monacelli, 2005). Leeper (1991) demonstrates that this requirement is fulfilled by a passive fiscal policy that responds in a stabilising manner to changes in the government debt ratio. ↘ BOX 13 The **empirical evidence** as to whether US fiscal policy **responded adequately to** rising **public debt** in the past is **inconclusive**. Bohn (1998), for example, certainly finds evidence to indicate that the primary balance responded on average positively to public debt in the period 1916 to 1995. However, various studies that identify the active and passive phases of US monetary and fiscal policy provide clear evidence of regime changes (Favero and Monacelli, 2005; Davig et al., 2007; Davig and Leeper, 2011; Bianchi, 2012, 2013; Bianchi and Ilut, 2017). Their findings indicate that **US monetary policy had been passive** until the **beginning of the 1980s** and **subsequently active**. In contrast, **US fiscal policy in the 1960s and 1970s had been active** and only **later** became **gradually passive** in the 1980s and **at the beginning of the 1990s**. According to these studies, in the US the 1980s were, to some extent, characterised by conflicts between monetary and fiscal policy. Davig and Leeper (2011) find evidence suggesting that fiscal policy became active again from 2002.

Studies by Bianchi (2013), Bianchi and Ilut (2017) and Bianchi and Melosi (2017) emphasise the **role that expectations** of future regime changes play in further economic development. Bianchi and Ilut (2017) suggest that the inflation experienced in the United States in the late 1970s only began to decline following a change in the expectations of households and firms with respect to the conduct of fiscal policy. According to Bianchi (2013), the nomination of a conservative Chair of the Federal Reserve would have influenced expectations to the extent that inflation would have been lower and the trade-off between inflation and growth less severe. Bianchi and Melosi (2017) support the hypothesis that expectations of a possible shift to an active fiscal policy regime sparked inflation pressure during the financial crisis and therefore prevented deflation.

Afonso (2008) and Afonso and Jalles (2011), following the approach of Bohn (1998), find **evidence** of a **passive fiscal policy** for the **EU15** and the **OECD member states**. Most notably, the findings point to a more markedly passive fiscal policy in the periods starting with the signing of the Maastricht Treaty (1992) and with the introduction of the Stability and Growth Pact (1997). However, applying the approach set out by Bohn (1998) does not produce a homogeneous picture for individual member states of the euro area (GCEE Annual Report 2017 items 532 ff.). Kliem et al. (2016a, 2016b) investigate changes in the long-term **relationship between**

public debt and inflation. They find a significant positive correlation between budget deficits and inflation in the United States up to the 1980s and in Italy up until the beginning of the 1990s. In contrast, no such link is found for Germany, where the Bundesbank was able to act with greater independence than other central banks within the same period.

154. In the past, a **far too weak monetary policy response** to a rise in inflation has had numerous **negative macroeconomic consequences**. Not only in the 1970s, but also in the period before the financial crisis, the key policy rate in the United States was significantly lower than that indicated by interest rate rules (Taylor, 2007, 2013). However, from the early 1980s to the mid-2000s, monetary policy that was implemented in line with the interest rate rules brought about balanced economic growth along with a stable development of the price level. In case of the euro area, the Taylor rule also indicated that key policy rates were too low for several years before the financial crisis (GCEE Annual Report 2014 item 250).

155. Passive monetary policy that is subordinate to fiscal policy is also associated with **risks to financial stability**. As well as encouraging more risk-taking in the financial sector (Altunbas et al., 2014; Bonfim and Soares, 2014; Buch et al., 2014; ESRB, 2016, 2021; BIS, 2018; GCEE Annual Report 2016 item 421), the low interest rate policy and purchase programmes can give rise to exacerbated increases in asset prices. Any possibly ensuing asset price corrections may in turn have a negative impact through the credit market channel on the real economy by reducing the availability of loans and lower loan-to-value ratios (Geanakoplos, 2010). In extreme cases it may lead to **financial dominance** where the survivability of banks becomes the main driver of monetary policy.

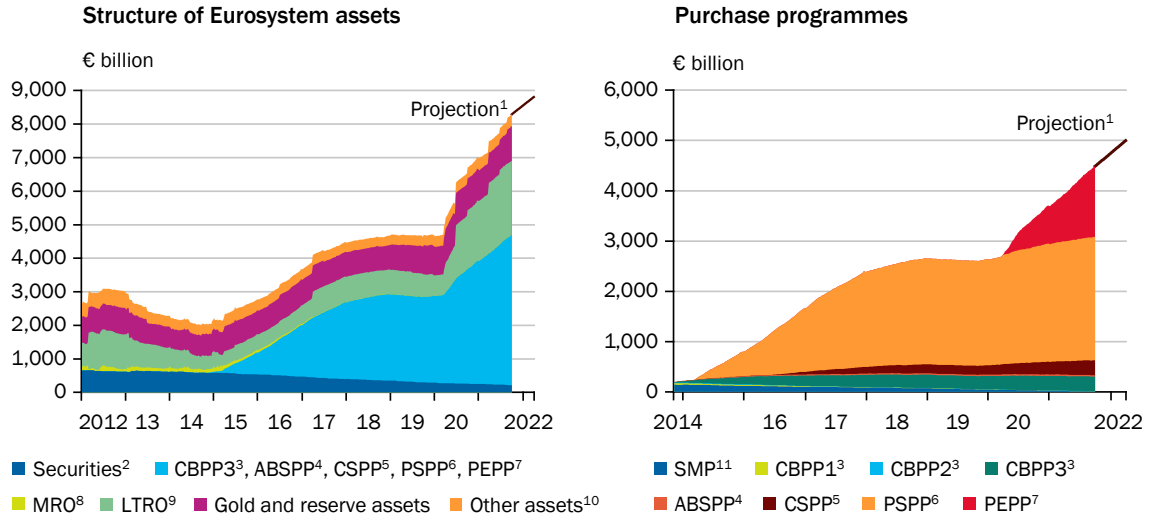
2. Assessing the risk of fiscal dominance

156. Even in the years **before the pandemic, monetary policy** in the euro area **had been** considerably **expansionary**. Since 2014, the ECB's balance sheet total grew by 120 % and was around €4,692 billion at the end of 2019, ↘ CHART 52 corresponding to approximately 39 % of the GDP of the euro area. Government bonds acquired under the Public Sector Purchase Programme (PSPP) contributed about €2,109 billion to this total. The ECB stressed that monetary policy easing supported economic growth and should therefore help achieve the inflation target at that time of below, but close to 2 % (Lagarde and de Guindos, 2019, 2020).

157. The outbreak of the **coronavirus pandemic necessitated the intervention of monetary and fiscal policy** (GCEE Annual Report 2020 items 93 ff.). The **ECB** implemented large-scale **support measures**, not least to guarantee favourable financing conditions to companies, banks and governments (GCEE Annual Report 2020 items 105 ff.). First, the ECB added €120 billion to the PSPP envelope. It subsequently announced the launch of further private and public sector securities purchases in three stages under the Pandemic Emergency Purchase Programme (PEPP) to the total value of €1,850 billion. If this volume is fully exhausted by March 2022, when the PEPP is currently scheduled to end, the ECB balance sheet – assuming that other balance sheet items remain unchanged –

↘ CHART 52

Structure of Eurosystem assets and purchase programmes



1 – Projections based on the monthly target of €20 billion since January 2021 and on the PEPP envelope of €1,850 billion until March 2022 (less purchases already made). 2 – By euro area residents including purchases of bonds (SMP, CBPP1, CBPP2) held for monetary policy purposes. 3 – Covered Bond Purchase Programme. 4 – Asset-Backed Securities Purchase Programme. 5 – Corporate Sector Purchase Programme. 6 – Public Sector Purchase Programme. 7 – Pandemic Emergency Purchase Programme. 8 – Main refinancing operations. 9 – Long-term refinancing operations. 10 – Including other claims on euro area credit institutions. 11 – Securities Markets Programme.

Sources: ECB, own calculations

would stretch to more than €8,800 billion. Of this amount, more than €4,200 billion would be allocated to government bonds of the euro area member states. Overall, the total volume of securities held under the various purchase programmes would come to just under €5,000 billion. At present, the balance sheet total amounts to €8,289 billion and the volume of securities to €4,484 billion (as of 1 October 2021). ↘ CHART 52 In September 2021 the Governing Council of the ECB decided on a slight moderation of the pace of net asset purchases, hence the total envelope may not be completely exhausted.

↘ BACKGROUND INFO 7

Regulations on public sector debt security purchases under the PEPP

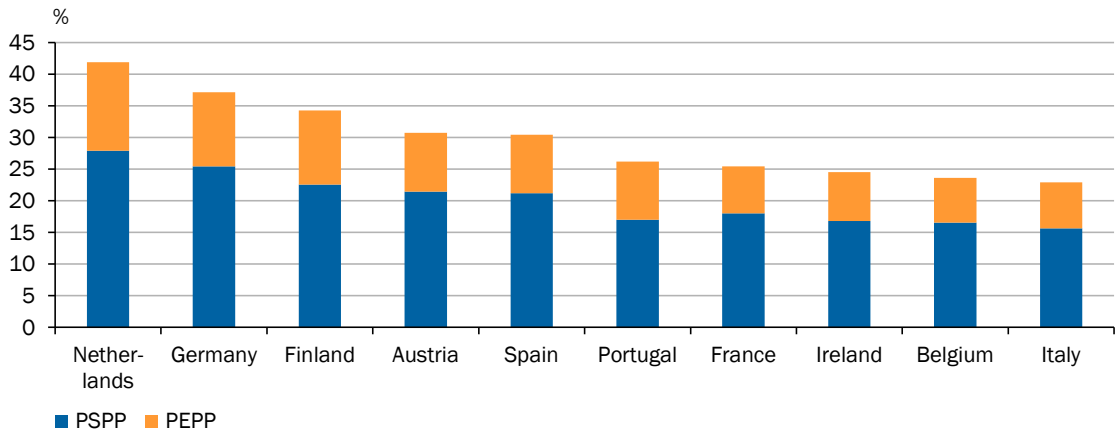
Within the framework of the PEPP, Eurosystem central banks can purchase public sector debt securities with a minimum remaining maturity of at least 70 days and a maximum remaining maturity of less than 31 years (ECB, 2020b). The purchases must be guided by the key for subscription of the ECB's capital by the national central banks, but should be conducted in a flexible manner. In this way, fluctuations in the distribution of purchase flows can occur across asset classes and between countries. Moreover, public sector debt securities that were purchased under the PEPP are not consolidated with other assets of the Eurosystem central banks. Therefore, no upper purchase limits apply to PEPP assets.

158. At the start of the **PSPP** in 2015, the Governing Council of the ECB decided that purchased government bonds were subject to **an aggregate limit of 33 % of an issuer's outstanding securities** (ECB, 2015a). Moreover, in September 2015, it was decided to increase the PSPP upper limit from the initial 25 % to 33 % per international securities identification number (ISIN), provided that this would not lead, in individual cases, to the formation of blocking minority holdings among the Eurosystem central banks (ECB, 2015b). In order to avoid any type of direct monetary financing that is prohibited by European Union treaties, in the event of an orderly debt restructuring the ECB would be required to prevent the restructuring of government debt (GCEE Annual Report 2017 item 126). However, the ECB has already stated that it accepts the same treatment as private investors under the PSPP and the PEPP (pari passu ↘ GLOSSARY) in order to ensure the effectiveness of the programmes (ECB, 2015a, 2020b). Since the announcement of Outright Monetary Transactions (OMT), the ECB has clarified that it purchases bonds under the acceptance of the pari passu clause. In addition, the ECB has specified that government bonds purchased under the PSPP have a minimum remaining maturity of at least one year and less than 31 years.

159. Considering the consolidated volume of **public sector bonds purchased** under the PSPP and the PEPP by the **Eurosystem central banks**, for **several member states** of the euro area the volume **exceeds 33 %** of their **total public debt**, respectively. ↘ CHART 53 The share is highest for the Netherlands, at just under 42 % and lowest for Italy at just under 23 %. However, since the total volume of public sector debt securities eligible for purchase under the PSPP and the PEPP is less than the total public sector debt, purchased public sector bonds account for a higher share of the eligible bonds. Commerzbank (2021) and Ducrozet and Gharbi (2021) have provided estimates to that effect in which the share of eligible bonds held by the Eurosystem central banks for Germany, for example, is higher than 40 % and for a larger number of member states it exceeds 33 %.

↘ CHART 53

The ECB holds a large share of the general government debt of member states in the euro area[1]



1 – Euro area member states government debt held by the Eurosystem central banks under the PSPP and PEPP as a share of general government debt of each member state. The general government debt is based on Eurostat data referring to the consolidated general government debt. Since the amount of government debt of a country that is eligible for purchase under the PSPP and PEPP is not provided by the central banks, there may be deviations from the information shown here.

Sources: ECB, Eurostat, own calcualtions

No aggregate upper limit applies to **PEPP assets** and they are not consolidated with assets from other purchase programmes. ↘ BACKGROUND INFO 7 Heinemann (2018) points out that the ECB becomes a "strategic investor" if the limit of 33 % is exceeded, which could be classified as critical in any legal assessment of monetary state financing. For example, in its PSPP judgment, the Federal Constitutional Court concluded among others that a manifest circumvention of the prohibition of monetary budget financing could not be identified due to compliance with an upper limit of 33 % per international securities identification number (BVerfG, 2020). Since the purchases are to be allocated according to member states' share of ECB capital, the share of bonds held by the national central banks could continue to increase for some member states. This applies in particular to those with low future financing needs.

160. In the past, the ECB has repeatedly stated that interest rates would remain at their current low level in order to ensure the continued sustained convergence of inflation expectations to the inflation target at that time of below, but close to, 2 % (Draghi and De Guindos, 2018). However, should inflation increase significantly with the onset of the **economic recovery** ↘ ITEMS 45 F. a raise in the interest rates could be necessary, especially in the medium term, once the ECB has **ended government bond purchases** under the PEPP. Even the expectation of monetary policy normalisation could significantly increase medium to long-term government bond interest rates, a scenario for which **not all member states** could be **sufficiently prepared**. ↘ ITEM 109

161. In the course of the pandemic, monetary easing has helped avert financial market turmoil and stabilise the European economy. However, once the **pandemic has ended**, it will be necessary to **normalise fiscal policy** and reduce the accumulated total debt. This would pave the way for a normalisation of **monetary policy** so that it could **respond** to possible **inflation risks** without paying particular attention to government finances of the member states. In the longer term, the normalisation of monetary policy would also imply that the high balance sheet total would be reduced again.

162. Under certain circumstances, an increase in interest rates could endanger the sustainability of public debt, in particular of heavily indebted member states with low growth prospects. However, the ECB has to give priority to price stability and is therefore only allowed to take such developments into account to a limited extent in its monetary policy decisions, in accordance with the Treaty on the Functioning of the European Union (TFEU) Article 123. The **euro area framework** has been built on the **principle of monetary dominance**. Nevertheless, there is a risk that the extraordinary monetary policy support measures could trigger expectations among market participants of a future fiscal dominance of monetary policy. It cannot be ruled out that the **expansionary monetary policy of recent years** and emergency aid from the ECB during the coronavirus pandemic could have given the **impression** that monetary policy will continue to **support government financing**. According to a Survey of the Center for Financial Studies (CFS, 2021), the overwhelming majority of financial industry professionals and managers in Germany believes there is a risk that an exit from the low-interest

rate policy will be increasingly difficult as member states of the euro area are likely to have become increasingly dependent on low interest rates.

163. In order to estimate the risk of possible **changes to the monetary and fiscal regime** in the euro area, an empirical analysis was carried out using monetary and fiscal reaction functions. ↘ BOX 15 Such reaction functions measure how the primary balance responds to overall public debt or how the key policy rate responds to inflation and the growth gap over time. In general, the estimates would suggest a **regime of monetary dominance with passive fiscal policy and active monetary policy**. However, the estimates after 2010 partly indicate a decline in the stabilising fiscal and monetary policy reaction parameters with respect to debt and inflation. These estimates can be interpreted as **subtle signs of a shift towards fiscal dominance**. In its 2021 annual economic report, the **Bank for International Settlements** warned of the risk of fiscal dominance as a result of possible tensions between monetary and fiscal policy along the normalisation path (BIS, 2021, p. 35). While **ECB** council member Schnabel (2020) currently sees no signs of fiscal dominance, she has emphasised the need for fiscal consolidation once the recovery has matured in order to protect monetary dominance.

↘ BOX 15

Empirical analysis of the monetary and fiscal regimes in the euro area

Relevant monetary and fiscal reaction functions were estimated in order to examine the monetary and fiscal regime in the euro area empirically. First, based on Afonso and Jalles (2011, 2019), an investigation was carried out using a panel data instrumental variable regression for the group of EU12 member states excluding Greece and Ireland, as to how the change in the primary balance to GDP ratio responded to the change in the total debt to GDP ratio lagged by one period (difference approach). The dataset consists of annual data for the period 1970 to 2020 and the analysis was performed using rolling window regressions with period lengths of 20 or 30 years, respectively, in order to identify a possible structural break. ↘ CHART 54 LEFT

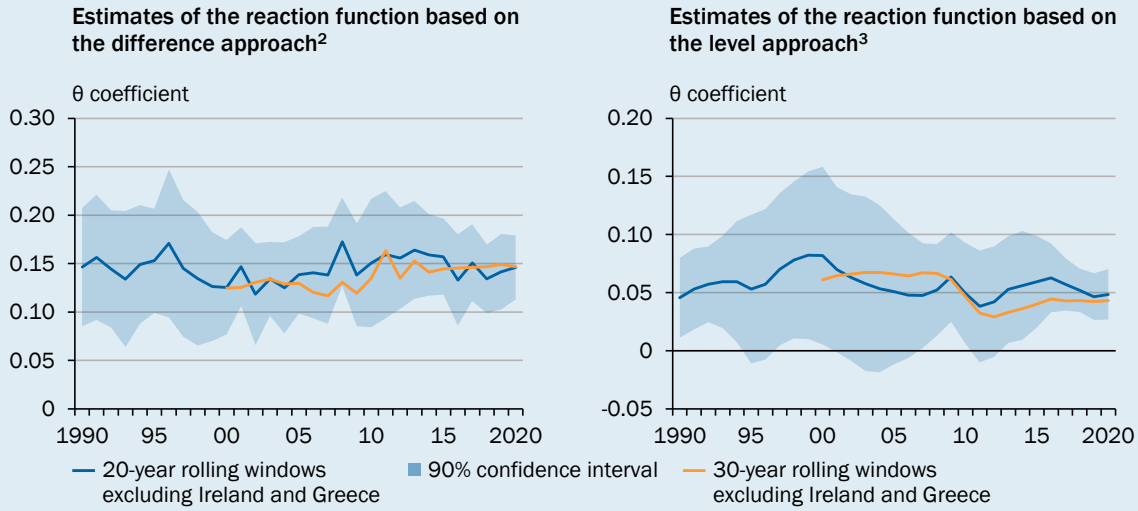
Next, the regression was also estimated as in Bohn (1998) as a panel data regression with rolling windows for the group of EU12 member states excluding Greece and Ireland. In this step, it was investigated how the primary balance to GDP ratio responds to the total debt to GDP ratio (level approach). ↘ CHART 54 RIGHT The estimates show that the reaction (θ coefficient) is positive for both regression constellations. Accordingly, an increase in the government debt to GDP ratio leads to an increase in the primary balance. Fiscal policy thus stabilises the debt. The estimates from the difference approach show a slight increase in the fiscal response in the phase after the financial crisis. At that time, many euro area member states were forced to implement consolidation measures because of the sharp increase in public debt. However, the level regression shows a weakening of the fiscal response to the debt, which, depending on the estimation procedures used, had already started at the outbreak of the financial crisis, but is statistically not significant.

In order to determine if there was a simultaneous weakening in the response of monetary policy to inflation, a robust difference rule for setting the key policy rate of the ECB was estimated. This rule or reaction function was originally estimated by Orphanides and Wieland (2013) and Bletzinger and Wieland (2017). The ECB economists Hartmann and Smets (2018) applied this approach to describe and evaluate ECB policy in the 20 years since the introduction of the euro. In their paper, they examine how the change of the key policy rate in the euro area reacts to the inflation gap and the growth gap. To take into account the effects of the effective

lower bound on interest rates and quantitative easing, shadow rates (Krippner, 2013, 2015; Wu and Xia, 2017, 2020) were used instead of the key policy rate from the third quarter of 2008 for the estimation. ↘ CHART 55

↘ CHART 54

Estimates of fiscal policy reaction functions for the euro area



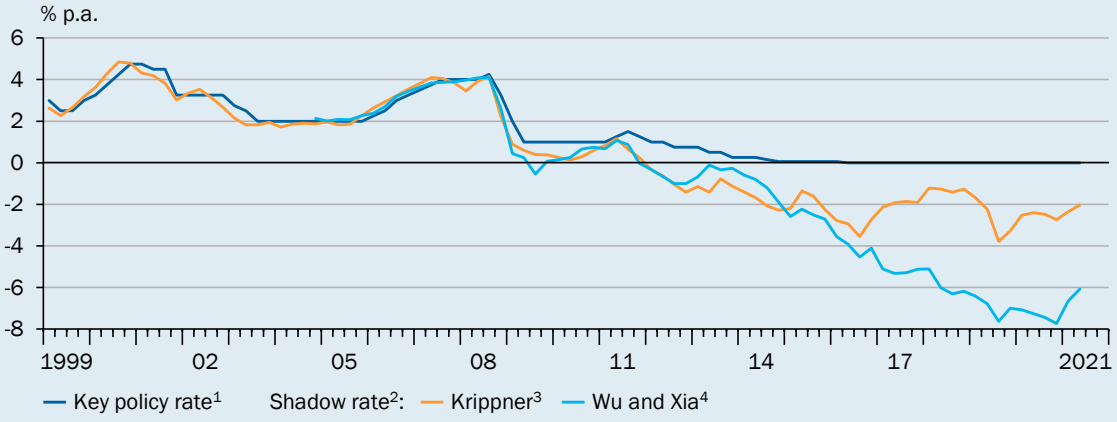
1 – The estimates are based on the approaches described in Afonso and Jalles (2011) and Bohn (1998). The annual data set includes the group of EU12 member states excluding Ireland and Greece for the period 1971 – 2020. For the rolling window regression with a period length of 20 years, the first estimation period ends in 1990; for the rolling window regression with a period of 30 years, it ends in 2000. 2 – The difference approach is based on the panel data instrumental variable approach described in Afonso and Jalles (2011). Estimated regression equation: $\Delta s_{it}=\delta\Delta s_{it-1} + \theta\Delta B_{it-1} + \alpha\Delta Z_{it} + \mu_i + \epsilon_{it}$. Here, Δs_{it} denotes the change in the primary balance to GDP ratio, ΔB_{it} the change in the public debt to GDP ratio, ΔZ_{it} the change in the output gap, μ_i the country-specific effect and ϵit the error term. Δs_{it-1} was instrumented with s_{it-2}. 3 – The level approach is based on the regression equation in Bohn (1998) and is estimated as a panel data regression with country-specific effects. Estimated regression equation: $s_{it}=\delta s_{it-1} + \theta B_{it-1} + \alpha Z_{it} + \mu_i + \epsilon_{it}$. Here, s_{it} denotes the primary balance to GDP ratio, B_{it} the public debt to GDP ratio, Z_{it} the output gap, μ_i the country-specific effect and ϵ_{it} the error term.

Sources: AMECO, OECD, World Bank, own calculations

The interest rate rule was estimated in accordance with Kim and Nelson (1999) by means of a Bayesian time-varying parameter approach for the period 1999Q2 to 2021Q2 for the entire euro area, using a shadow rate in each case. A random walk behaviour was assumed for the evolution of the regression coefficients over time. The estimates indicate that **with** the **start of the financial crisis**, the **average response** of ECB policy to **deviations from the inflation target** has **softened.** This softening is statistically significant towards the end of the estimation period. ↘ CHART 56 LEFT The difference in parameter estimates can be explained by the steep negative progression of the shadow rate provided by Wu and Xia (2017, 2020). The response to the growth gap has also declined since the financial crisis. ↘ CHART 56 RIGHT Further estimates using a Markov regime switching model also demonstrate a high probability of a regime switch following the financial crisis.

↘ CHART 55

Development of the key policy rate and shadow rate in the euro area



1 – Interest rate for main refinancing operations in the second month of each quarter. 2 – Quarterly data for the shadow rate is calculated as the average of monthly data. 3 – Updated estimates based on Krippner (2013, 2015). 4 – Updated estimates based on Wu and Xia (2017, 2020).

Sources: ECB, Krippner (2013, 2015), Wu and Xia (2017, 2020)
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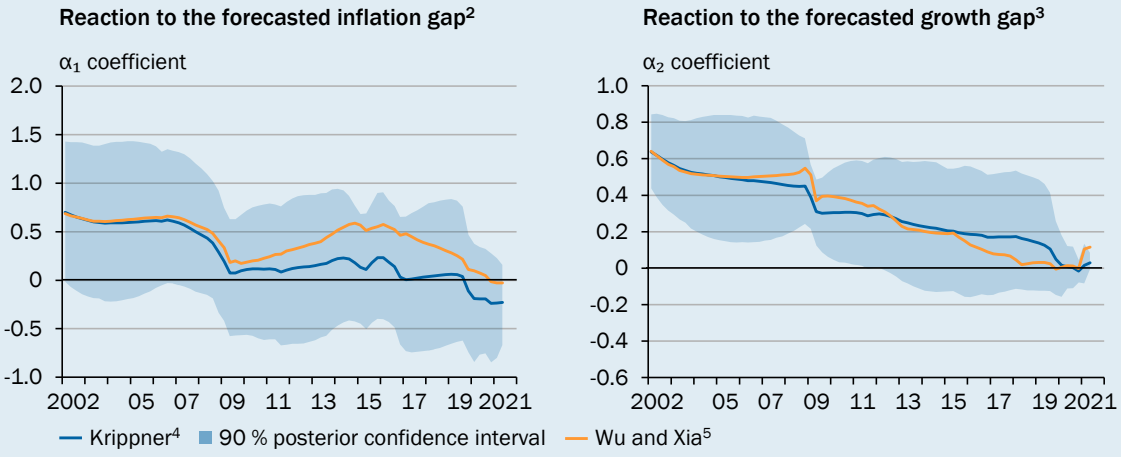
↘ CHART 56

Estimates of a monetary policy reaction function for the euro area[1]



1 – The estimates for the reaction to the inflation gap and the growth gap are based on the following regression equation (Bletzinger and Wieland, 2017) $\Delta i_t = c + \alpha_1 \pi_{t+3|t} + \alpha_2 (\Delta y_{t+2|t} - \Delta y^*_{t+2|t}) + \varepsilon_t$. Here, c denotes a constant, α_1 and α_2 the reaction to the forecasted inflation in three quarters and the forecasted growth gap in two quarters, respectively, $\pi_{t+3|t}$ represents the forecasted inflation in three quarters, $\Delta y_{t+2|t}$ represents the forecasted GDP growth in two quarters, $\Delta y^*_{t+2|t}$ the forecasted potential GDP growth in two quarters and ε_t defines the disturbance term. The data set covers the period 1999Q1 to 2021Q2. A random walk behaviour is assumed for the evolution of the coefficients over time: $\alpha_{i,t} = \alpha_{i,t-1} + v_t$. Bayesian estimation using Gibbs sampling based on Kim and Nelson (1999). 2 – Estimation results for the α_1 coefficient from the regression equation. 3 – Estimation results for the α_2 coefficient from the regression equation. 4 – For the regression, updated available estimates for the shadow rate based on Krippner (2013, 2015) were used. 5 – For the regression, updated available estimates for the shadow rate based on Wu and Xia (2017, 2020) were used.

Sources: AMECO, ECB, Eurostat, Krippner (2013, 2015), Wu and Xia (2017, 2020), own calculations
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3. Monetary policy normalisation in the euro area

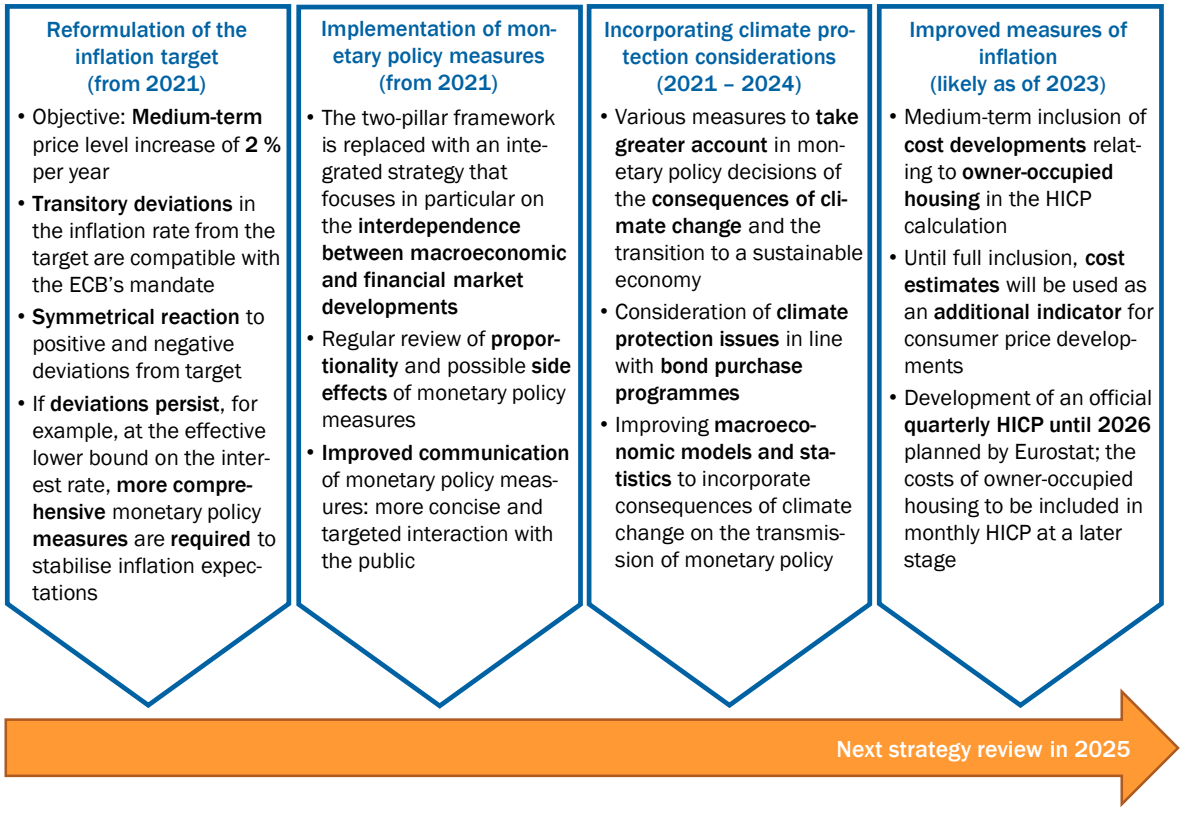
Implications of the ECB strategy review

164. On 8 July 2021 the **ECB published** the results of its **strategy review** (ECB, 2020c, 2021b). ↘ CHART 57 The ECB Governing Council decided that price stability is best maintained by aiming for a **symmetrical medium-term inflation target of 2 %**. This numerical definition replaces the previous target of "below, but close to, 2 %". The ECB Governing Council thus confirmed the medium-term orientation of its inflation target, which allows for short-term and temporary deviations from the inflation target. It also emphasised that, at a time when the economy is close to the lower bound on interest rates, particularly forceful and persistent monetary easing measures are necessary to prevent inflation from becoming entrenched at rates below the target. This could make it necessary to allow the inflation rate to exceed the target temporarily.

The Council also decided on the continued application of the Harmonised Index of Consumer Prices (HICP) to measure the inflation rate. However, in future, the **costs related to owner-occupied housing** should be included in the HICP measurement. The investment costs that an owner incurs will not be considered though (Lagarde and De Guindos, 2021).

↘ CHART 57

Results of the ECB's strategy review



Sources: ECB, own depiction
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The previous **two-pillar strategy**, which carried out the economic analysis of short and medium-term inflation risks separately from the monetary analysis of longer-term inflation risks, has been **replaced by** a new **integrated analytical framework**. This framework combines economic analysis with monetary and financial market analysis. It also includes regular assessment of the **proportionality** of monetary policy measures and their side effects. Finally, the review pointed out that climate change has a profound impact on price stability. In this context, an **action plan** has been formulated to take better account of climate risks.

165. The **strategy changes** can be **categorised** as follows: The **inflation target** was **raised only slightly**. In the past, estimates of the inflation target based on ECB monetary policy reactions were around 1.7 % to 1.8 %, suggesting that monetary policy followed this target symmetrically (Bletzinger and Wieland, 2017; Hartmann and Smets, 2018). Likewise, the long-term forecasts of the Survey of Professional Forecasters (SPF) in recent years have hovered between 1.6 and 1.9 %. Former ECB President Mario Draghi also gave his interpretation of the target as 1.9 % in press conferences. The new target has been criticised to the effect that because of the undefined tolerance range it remains uncertain how much of a deviation from the target the ECB is ready to tolerate (Angeloni and Gros, 2021).

166. The inclusion of the **costs of owner-occupied housing** in the HICP measurement and thus in monetary policy conduct is useful. These costs have risen sharply in recent years (Wieland, 2021). It remains to be seen how these costs will now be broken down into a consumer and investment component. On the other hand, the new strategic orientation does not make any provision for more inclusion of additional broader inflationary measures such as the GDP deflator in monetary policy assessment. The GDP deflator is a comprehensive measure in particular of domestic inflation with respect to goods and services (Alcidi and Gros, 2020; Feld et al., 2021a). Unlike the HICP for example, it is subject to revisions and is only available on a quarterly basis. However, it more accurately reflects the impact of monetary policy on pricing within the euro area.

167. With the **discontinuation of the two-pillar strategy**, the previously very prominent cross-check of the inflation forecast by means of monetary analysis with longer-term trends of money growth will no longer take place or largely fade into the background. This could be a drawback because according to Trichet (2011) this cross-check was the trigger for the important monetary policy switch to higher interest rates in 2005 and since 2020 broad money growth has increased to double-digits for the first time again. A regular review of **proportionality**, on the other hand, is a sensible and necessary strategy element (GCEE Annual Report 2020 item 203). Feld and Wieland (2021) have developed an analytical framework for this purpose to systematically present the proportionality of monetary policy measures, such as purchase programmes.

168. The **focus of the climate-related action plan** is to improve transparency and risk assessment. The adaptation of the corporate bonds purchase programme planned to date focuses on requiring companies to disclose climate-related information. Making further changes to the purchase programme in order to give

greater consideration to carbon emissions would provoke extensive conflicts of objectives for monetary policy while hardly contributing to climate protection (Liebich et al., 2021). While generally better information regarding climate-related activities is to be welcomed and should help improve the decisions made by financial market players, the Advisory Board to the Federal Ministry of Finance (2021) warns that excessive bureaucratic effort should be avoided. ↘ BOX 32 On the other hand, it stresses that sustainable financial assets can make a significant contribution mainly through the active influence of investors on business decisions. Shareholders can usually have an active influence. Other investors can also exert a public influence on companies, call on management to implement changes in company policy or forward private information to companies. Since central banks purchase securities, not shares, and the other mentioned ways of exerting influence should be out of the question, they depend on effects resulting from passive investment, which only occurs when demand for sustainable investment products exceeds supply.

169. The result of the strategy review has **implications** for the **normalisation of monetary policy**. In particular, the emphasis placed on inflation in the current situation being allowed to moderately exceed the target for a transitory period increases the scope of the ECB to **delay first steps in tightening of monetary policy**, despite a rebound in the economy.

Monetary policy and current inflation trends

170. At present, the ECB's **key policy rate**, the main refinancing operations rate, remains at 0 %. However, the rate that determines the level of short-term interest rates on the money market is the **rate on the deposit facility** of the ECB, which has been –0.5 % since September 2019. In the medium and longer term, the interest rate level is also determined by the 3-year **targeted longer-term refinancing operations** (TLTRO) with an interest rate of –1 %. Quarterly TLTROs have already been announced until June 2022. In addition, the securities purchase programmes of the ECB have an impact on the overall interest yield curve.

171. The **Governing Council of the ECB** has already announced that **monetary policy will continue on an expansionary course**. The Council expects the ECB interest rates to remain at the present or lower level until it judges that inflation will reach 2 % well before the end of its forecast period, remain entrenched there for the rest of the forecast period and the inflation trend will progress sufficiently for the **inflation rate to stabilise at 2 % in the medium term**. In this case, inflation can moderately exceed the inflation target for a transitory period. It is planned to continue net asset purchases under the Asset Purchase Programme (APP) until shortly before the first increase in the interest rate and returns from maturing securities to be reinvested for a longer period of time. Net asset purchases under the PEPP are planned to continue at least until March 2022, but in any case, at least as long as the coronavirus crisis has passed according to Governing Council of the ECB (ECB, 2021c).

172. Since the beginning of 2021 inflation in the euro area, as measured for instance by the HICP, has increased significantly from –0.3 % in December 2020 to 3.4 %

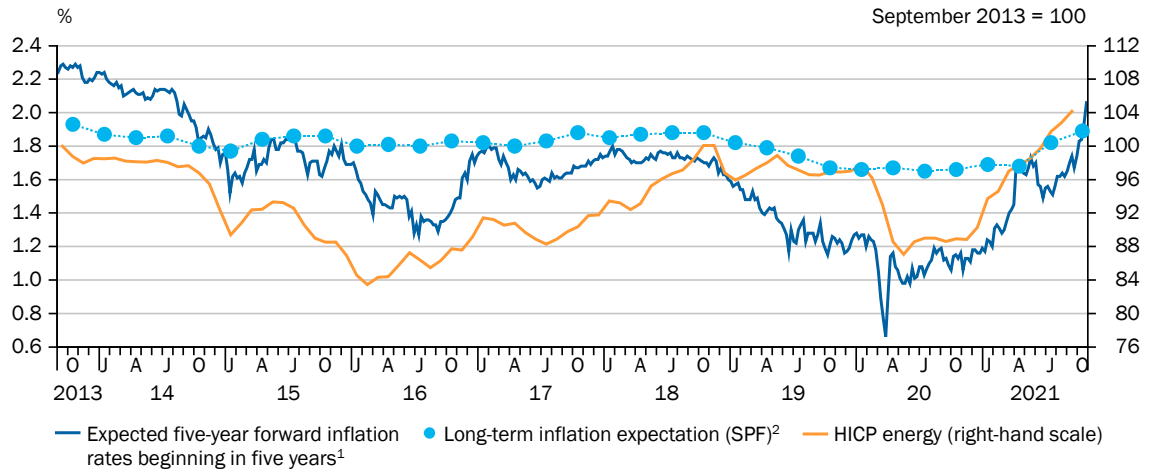
in September 2021 compared to the same month in the previous year. The Consensus forecast for the entire year 2021 is 2.3 % (Consensus, 2021). The GCEE is assuming an inflation rate of 2.4 %. Among others, **base effects and special factors** will play an important role this year, such as the **steep increase in energy prices** or the ending of the temporary reduction in VAT in Germany. ↘ ITEM 39

Since these effects are likely to have a mainly temporary impact, the GCEE expects **inflation in 2022 and 2023** to return to **lower** levels. For 2022, it assumes a rate of 2.1 % measured by the HICP. In the medium term, the **ECB** expects the inflation rate in the euro area to be below, but closer to the inflation target of 2 % than before the pandemic. For 2022 and 2023, the ECB staff forecasts growth rates in the HICP of 1.7 % and 1.5 %, respectively (ECB, 2021d). The median of the ECB SPF forecasts for the fourth quarter 2021 in 2022 and 2023 is 1.9 % and 1.7 %, respectively, for the HICP. Nevertheless, **forecast uncertainty** is high. For 2021, the increase in the inflation rate to date has been significantly higher than expected, and for 2022 the forecasts have been corrected upwards. For example, the SPF forecast for 2021 in the first quarter of this year was still a mere 0.9 % and was revised to 2.3 % in the fourth quarter of 2021. Lastly, the forecast for 2022 rose from 1.5 % to 1.9 %. The Consensus forecast is 2.0 %. ↘ ITEM 13

173. The **long-term inflation expectation** has risen to 1.9 % in accordance with the current SPF. In the third quarter of 2020, it was still 1.6 %. The literature shows that survey-based inflation expectations offer a potential basis for explaining and forecasting consumer prices (Gábriel, 2010; Berge, 2018). The indicator for **inflation expectations** for the period in five to ten years derived from derivatives traded in the **financial markets** has risen by more than 0.8 percentage points since spring 2020. This indicator was used for instance by Draghi (2015) to justify the easing of monetary policy in 2015. Since market-based inflation expectations

↘ CHART 58

Long-term inflation forecasts and energy prices in the euro area



1 – Market based long-term inflation expectations in five years from now for five years. Derived from the fixed payments of inflation swaps which are exchanged for the annual inflation rates realised over the next five or ten years. 2 – SPF (Survey of Professional Forecasters), expectation for inflation in five years from now.

Sources: ECB, Eurostat, Refinitiv Datastream, own calculations

are largely determined by their highly volatile risk component and since they fluctuate in the short term similar to energy prices, they are only meaningful to a limited extent in the long term (Hammoudeh and Reboredo, 2018; Casiraghi and Miccoli, 2019) . ↘ CHART 58

Monitoring inflation risks

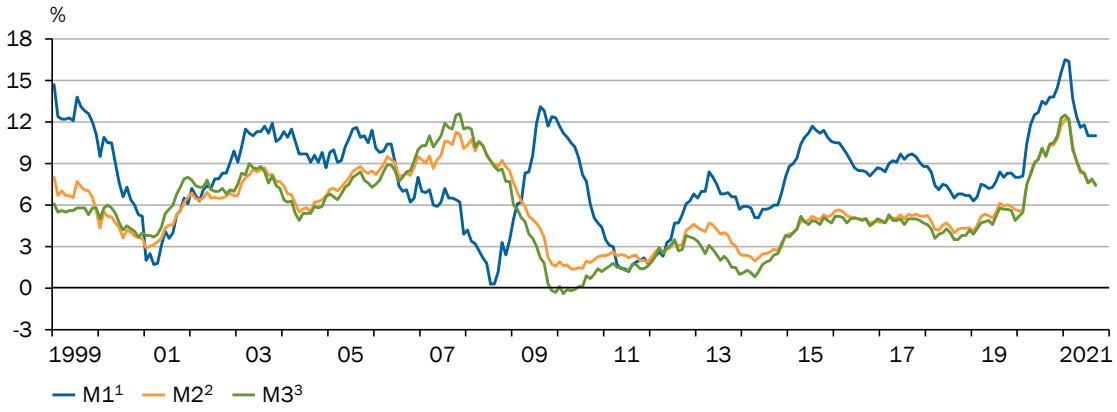
174. The inflation outlook for the years ahead is subject to upward risks. For example, option prices on the financial markets reflect a 40 % probability that inflation over the next 5 years will exceed the ECB target of 2 % (Schnabel, 2021b). In particular, the pandemic could have repercussions that will only materialise at a later stage. ↘ ITEM 47 ↘ BOX 2 There are indications that **supply bottlenecks in intermediate goods** and significantly increased shipping costs will persist for a long time and can affect consumer prices with a considerable time lag (Herriford et al., 2016; Wohlrabe, 2021). ↘ BOX 3 In addition, the coronavirus pandemic has shown that **adaptations in consumption behaviour** can lead to an underestimation of the inflation rate. The reason for this is that consumption baskets used to measure inflation are only updated at regular intervals and shifts in demand are therefore only taken into account with a delay (GCEE Economic Forecast 2021 item 27). In the longer term, factors such as **skilled labour shortage caused by demographic change** will result in higher prices. **Climate protection** could also carry risks of inflation: historically speaking, increases in production costs are high and persistent factors in explaining fluctuations in inflation (Smets and Wouters, 2003, 2005, 2007; Pytlarczyk, 2005).

175. The **output gap** is another indicator of future inflation development. The coronavirus pandemic caused a large negative gap in 2020, which is expected to narrow in 2021 and to close only in 2022. This suggests a dampening effect on current and future wage growth and price developments. It should be noted that behavioural responses to the pandemic and health care policy restrictions have not only reduced aggregate demand, but also supply. Accordingly, the output gap affecting inflation is significantly smaller than indicated by the deviation from long-term potential output (Eichenbaum et al., 2020). Despite the robust growth path of the euro area, a large positive gap is not expected in 2022 because of the high potential output. Therefore, only **limited inflationary pressure** is likely.

176. A risk factor for higher than expected inflation is associated with the currently observed inflation increase itself. At low or even negative nominal interest rates, this increase leads to a reduction in **short-term real interest rates**. Lower real interest rates in turn boost aggregate demand and thus increase price pressure. Inflation therefore becomes self-perpetuating until monetary policy is adjusted accordingly. Furthermore, monetary policy has once again been greatly eased in 2020 and 2021, thus also stimulating demand, inflation and inflation expectations.

177. A possible inflation risk could be based on the fact that all monetary aggregates have expanded strongly. For example, in the course of 2021, the **monetary aggregate M3** has returned to **double-digit growth rates of up to 13 %** for the first time since 2007 and the annual average for 2020 already increased by around

↘ CHART 59
Money growth in the euro area
Change on previous year



1 – Currency in circulation and overnigth deposits, non-MFIs. 2 – M1 plus deposits with an agreed maturity of up to two years and deposits redeemable at notice of up to three months. 3 – M2 plus repurchase agreements, money market fund shares/units and debt securities with a maturity of up to two years.

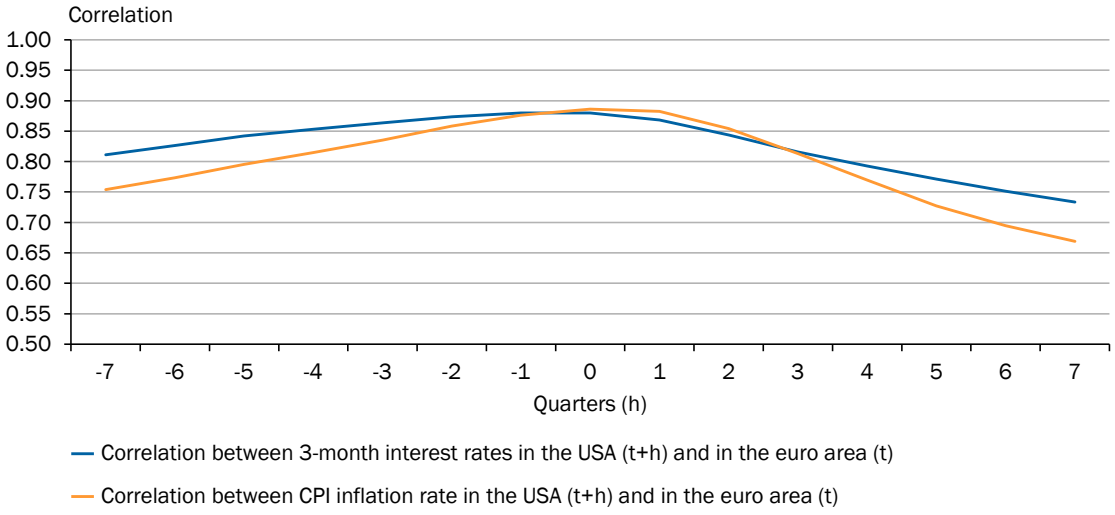
Sources: ECB, own calculations

9 % compared to 2019. ↘ CHART 59 According to empirical studies, there is a positive link between money growth and the longer-term inflationary trend, although this has weakened slightly since the 1990s (Benati, 2009; Hofmann, 2009; Rua, 2011; Teles et al., 2016). Since the start of the massive quantitative easing in the spring of 2015, the broad money supply M3 only grew at a moderate rate of between 4 and 5 percent until 2019, possibly due to the decreasing velocity of money. In connection with the massive increase in the **public borrowing requirement** quantitative easing could now be assumed to have a significantly stronger inflationary effect (Leeper, 1991; Reinhart and Rogoff, 2010; Bordo and Levy, 2020). ↘ BOX 13 Furthermore, the sharp increase in money and credit growth is likely to contribute to **price increases in assets** such as real estate (Barksenius and Rundell, 2013, Fratzscher et al., 2016). ↘ ITEM 114 Large asset price increases relative to the real fundamental data can in turn cause financial market stability risks, which are difficult to curb with macroprudential measures only (GCEE Annual Report 2019 items 397 ff.).

178. Statistical analysis shows that US inflation rates and, in particular interest rates, act as positive **leading indicators** in relation to the euro area ↘ CHART 60. In the past, monetary policy developments in the euro area tended to follow those in the United States. The exchange rate and commodity prices are important transmission channels (Neri and Nobili, 2010). In the **United States**, inflation in 2022 is likely to reach a significantly higher level than in the euro area, according to the GCEE forecast. ↘ ITEM 19 According to the Federal Open Market Committee (FOMC) survey of 22 September 2021, 9 out of 18 FOMC members expect **first key policy rate increases in 2022** of between 25 and 50 basis points (Fed, 2021a). While most FOMC members assume that inflation will return to 2 to 2.5 % next year, a number of commentators have recently stressed increased inflation risks. For example, Rogoff (2021) observes that the roots of sustained inflation in

↘ CHART 60

US inflation and interest rates as leading indicators for the euro area



1 – Estimation period: 1971 to 2021.

Sources: AWM, Fed, own calculations

the 1970s mainly stem from politico-economic issues, and that the list of similarities between the 1970s and today is alarming. Reis (2021b) emphasises that insufficient tightening of monetary policy causes decoupling of inflation expectations and could result in a permanently higher inflation rate via second-round effects. Roubini (2021) observes that the United States is already experiencing mild stagflation.

Exiting pandemic-related monetary measures

179. Against the backdrop of the expected economic recovery and an inflation rate in the euro area that is closer to the target of 2 %, an **exit from pandemic-related monetary policy measures** should be envisaged. The total envelope of the PEPP Pandemic Emergency Purchase Programme is €1,850 billion (ECB, 2021e). Net bond purchases under the programme have already been realised to the tune of €1,404 billion (as at October 2021). According to the ECB, the programme's envelope does not necessarily have to be exhausted. Rather than stopping the PEPP abruptly, it would be sensible to gradually wind down purchases under the PEPP in accordance with the increasingly improving economic outlook (GCEE Annual Report 2020 items 199 ff.). If net purchases are scaled back earlier, the exit from the programme can follow a more moderate pace (Taylor, 2021; Weidmann, 2021).

180. It must also be clarified for how long the ECB should keep reinvesting revenues from maturing securities purchased under the PEPP in such securities. In addition to the pandemic-related balance sheet expansion under the PEPP, the ECB also plans to reinvest maturing principal payments under the PEPP until the end of 2023. Even if the ECB terminates net purchases under the PEPP, the central bank's balance sheet will remain very large compared to previous years. ↘ CHART 52

LEFT The ECB continues to play an important role in the **market for government bonds** and remains the main lender for euro area member states. ↘ ITEM 159 As governments become more dependent on monetary policy the risk of **fiscal dominance** increases, which would prevent the central bank from fulfilling its mandate permanently to maintain price stability. ↘ ITEM 152 Such a scenario should be avoided.

Timely communication of the normalisation strategy

181. Given increasing, but still moderate inflation expectations for the coming years and a slow closure of the output gap, any rapid tightening of monetary policy should be avoided for the time being. However, **the highly expansionary course of monetary policy** should be gradually **pared back** in the coming years depending on further inflation developments. In September, the ECB announced a moderation for the fourth quarter of this year in the pace of bond purchases under the PEPP from the previous amount of €80 billion per month (ECB, 2021c). With regard to the sequence of measures, it assumes that it will continue net purchases until shortly before the first increase in the interest rate and also continue to reinvest securities. This is in line with the strategy proposed by the GCEE (GCEE Annual Report 2018 item 359).

182. A **gradual reduction in expansionary measures** would be beneficial for several reasons. First, the ECB would thereby allow supply and demand of other market participants to have greater influence on security prices and give expression to their risk assessment. A gradual increase in interest rates would also reduce interest rate risks in bank balance sheets (GCEE Annual Report 2017 items 384 ff.). Furthermore, a gradual normalisation of monetary policy would incentivise financial markets and governments and provide them time to adapt to a changed monetary policy environment.

183. In addition, there is a research stream that contradicts the conventional view of the effect of an interest rate cut, which is of interest in this context. Usually, it is assumed that the best way for the central bank to tackle an inflation rate that is too low and achieve the inflation target is by cutting the interest rate. Reducing the nominal interest rate should reduce the real interest rate, stimulate investment and consumer decisions and thus spur economic momentum and price developments. However, doubts have arisen about the effectiveness of this policy, since inflation rates in many advanced economies have remained below the target level during the past decade despite low interest rates. According to this Neo-Fisherian approach, **a long-term and credible announcement of normalising monetary policy** would not have any negative real economic consequences or trigger a return to an environment of very low inflation rates. ↘ BOX 16

↘ BOX 16

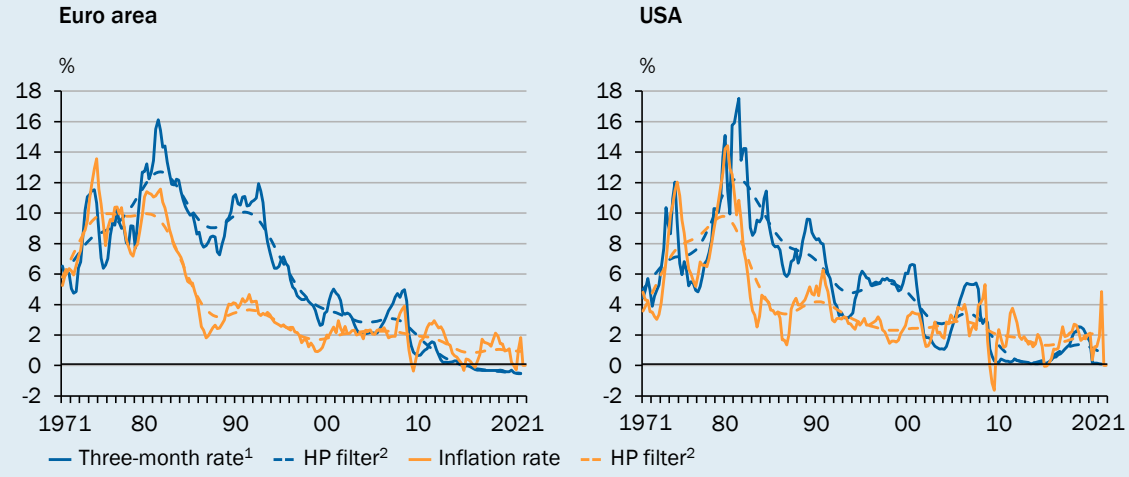
Do higher interest rates always lead to lower inflation and economic output?

The Neo-Fisherian approach argues that the "**inflation puzzle**" can be explained by the fact that interest rate cuts by central banks are only effective in the short term because **monetary policy**

neutrality holds in the long term. This means that, in the long run, the real interest rate is determined by real factors, such as productivity growth, and is therefore independent of central bank policy. The **Fisher equation** implies that nominal interest rates correspond to the inflation plus real interest rates in the long term. Accordingly, they move in lockstep with inflation if the real interest rate is independent of monetary measures (Cochrane, 2016). This correlation can be verified for the euro area and for the United States. ↘ CHART 61

↘ CHART 61

Short-term interest rates and inflation rates in the euro area and in the USA



1 – Average interest rate at which banks lend money on the unsecured interbank market. In the euro area: EURIBOR, in the USA: LIBOR. 2 – Hodrick-Prescott filter with smoothing paramter 1,600.

Sources: AWM, OECD
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Macroeconomic models suggest that interest rate reductions do not necessarily lead to higher inflation. For example, it has been shown that, in accordance with conventional wisdom, temporary interest rate reductions lead to a lower real interest rate and increase inflation in the short term (Schmitt-Grohé and Uribe, 2014, 2017; Uribe, 2017, 2018). **If the interest rate reduction is permanent, however, inflation falls in both the short and long term.** While the long-term effect is produced by the monetary policy neutrality of the real interest rate, the short-term effect stems from a decline in the inflation expectations of households and firms. The same result is obtained when monetary policy is passive (Cochrane, 2017). In terms of the **real effects** of permanent interest rate reductions, lower inflation expectations increase the real interest rate and therefore slow economic output. The short-term effects of permanent interest rate changes are referred to as the **Neo-Fisher effect** in the literature. While the long-term effects of interest rate shocks are not disputed by experts, some critical commentators point out that the Neo-Fisher effect is implausible in the short term because it depends, to a large extent, on the assumption that the expectations formed will be rational and forward-looking (Gerke and Hauzenberger, 2017; García-Schmidt and Woodford, 2019). ↘ TABLE 14

This has two implications for monetary policy normalisation. First, it is debatable whether the ECB's continuing pursuit of its negative interest rate policy will actually raise inflation and bring it closer to the target level or whether this will actually have a counter-productive effect. For example, a lower interest rate environment could perpetuate rather than remedy weak inflation. Second, a gradual and **permanent increase in interest rates could potentially bring inflation closer to the target level** within a short period and without economic contraction. For this to happen, the policy of raising interest rates would need to be pursued on a **long-term basis and communicated in a credible manner** so as to increase inflation expectations.

↘ TABLE 14

Effects of interest rate increases according to Uribe (2018)

	Transitory interest rate increases	Permanent interest rate increases
Short-term effects on inflation	↓	↑
Long-term effects on inflation	0	↑

Source: own presentation

184. The ECB should **communicate a normalisation strategy** without delay, defining **quantitative reference points for normalising monetary policy** (GCEE Annual Report 2020 item 204). This would help stabilise interest rate expectations and inflation expectations. It would be sensible in this case to publish, as other central banks do, a Governing Council forecast on the development of inflation and on policy instruments, in particular the central bank interest rate, or at least a survey of ECB council members, similar to the survey of FOMC members. That way the evolution and future normalisation of monetary policy in line with a sustained improvement of the economic conditions and an increase in inflation could be represented. In addition, interest rate rules could be helpful in demonstrating the central bank's symmetric response to inflation developments and expectations (GCEE Annual Report 2019 items 56 ff.). For example, the Federal Reserve regularly compares its policy decisions with various interest rules as part of its monetary policy report (Fed, 2019, 2020, 2021b).

IV. LEVERAGING POTENTIALS AND GROWING IN THE LONG TERM

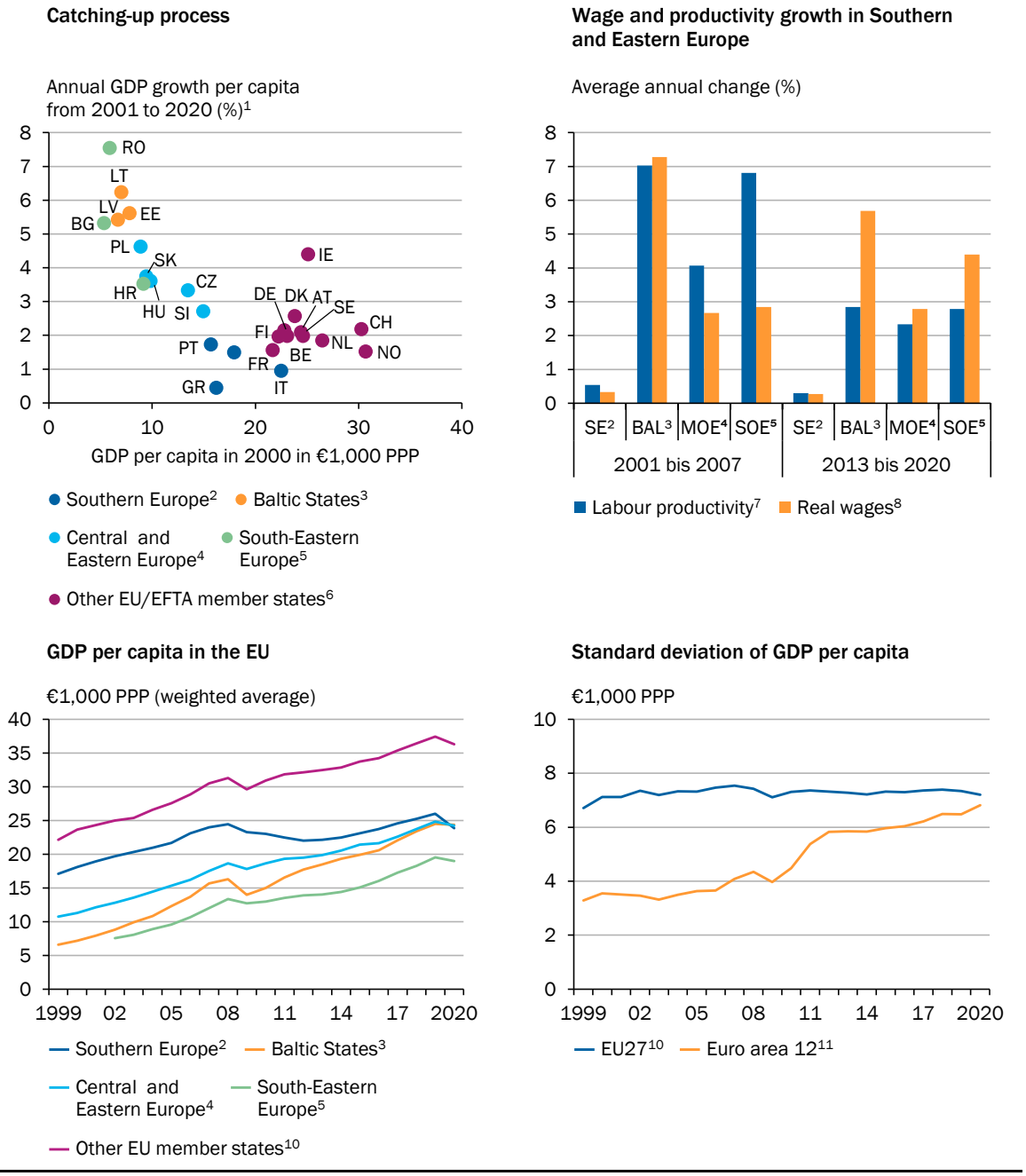
1. European growth prospects

185. The euro area is facing major economic challenges, not all of which are restricted to overcoming the coronavirus crisis. The economic structure must adapt to long-term developments such as digitalisation, climate and demographic change. ↘ ITEMS 504 FF. AND 438 FF. Adapting the economy efficiently is vital in order to improve growth prospects in the long term. This would also help the economy to outgrow from higher debt levels.

Just as in all advanced economies, productivity growth in the euro area has fallen over the past decades (GCEE Annual Report 2019 items 157 ff.; Annual Report 2020 items 88 ff.). This applies both to labour productivity and total factor productivity (TFP). Growth trends within the European countries were relatively **heterogeneous** (GCEE Annual Report 2019 items 163 ff.). The southern European countries for example, and Italy in particular, had lower potential growth.

↘ CHART 62

Real convergence in Europe



1 – Average annual GDP growth per capita in PPP (for Romania, growth from 2003 to 2020). Countries with fewer than one million inhabitants are not taken into account. AT-Austria, BE-Belgium, BG-Bulgaria, CH-Switzerland, CZ-Czech Republic, DE-Germany, DK-Denmark, EE-Estonia, ES-Spain, FI-Finland, FR-France, GR-Greece, HR-Croatia, HU-Hungary, IE-Ireland, IT-Italy, LT-Lithuania, LV-Latvia, NL-Netherlands, NO-Norway, PL-Poland, PT-Portugal, RO-Romania, SE-Sweden, SI-Slovenia, SK-Slovakia. 2 – Greece, Italy, Portugal, Spain. 3 – Estonia, Latvia, Lithuania. 4 – Czech Republic, Hungary, Poland, Slovakia, Slovenia. 5 – Bulgaria, Croatia, Romania (since no value for 2000 was available for Romania, the value from 2002 was used). 6 – Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Netherlands, Norway, Sweden and Switzerland. 7 – Real GDP per hour worked per person in employment. Country groups weighted with hours worked per person in employment. 8 – Compensation of employees deflated with the GDP deflator per hour worked per employee. Country groups weighted with hours worked per employee. 9 – Average within the country group weighted with their share of GDP in € PPP. 10 – Excluding Cyprus, Ireland, Luxembourg and Malta. 11 – Excluding Ireland and Luxembourg.

Sources: Eurostat, own calculations

Nevertheless, Europe has experienced **convergence** in terms of increasing productivity, prosperity and growth. While southern European countries had below-average growth rates in the years after the 2008/09 financial and economic crisis, the eastern European and south-eastern European countries in particular have caught up with the initial European Union and euro area Member States (GCEE Annual Report 2019 items 163 ff.). ↘ CHART 62 TOP LEFTAn explanation for this is the high productivity growth in Eastern Europe over the past 20 years. ↘ CHART 62 TOP RIGHT Among the initial twelve euro area Member States, on the other hand, there were even signs of divergence, which can be attributed to the southern European euro area Member States (GCEE Annual Report 2019 items 163 ff.; GCEE Annual Report 2020 items 315 ff.). ↘ CHARTS 62 BOTTOM LEFT AND BOTTOM RIGHT This suggests that there is potential for reforms that could help to increase long-term growth.

Economic policy and longer-term growth

186. While monetary policy cannot boost longer-term real economic growth (Lucas, 1996; Serletis and Koustas, 2019), **Member States** can, by **reinforcing market economy mechanisms** and creating the right **framework conditions,** provide incentives for investment and innovation and thus permanently improve growth prospects (GCEE Annual Report 2019 items 250 ff.). For fiscal policy, the tax system serves as an important lever to ensure a favourable environment for private investment and economic growth. In addition, targeted public investment could also spur transformation of the economy.

187. In order to improve the growth conditions in Europe from a fiscal perspective, it is particularly important to strengthen TFP growth. Investments can make a significant contribution here, in particular in the areas of the **digital transition, education as well as research and development** (GCEE Annual Report 2019 item 208; GCEE Annual Report 2020 items 316, 436 ff., 481 ff.). The significant resources available from the EU Structural and Cohesion Fund as well as from the European Recovery and Resilience Facility could provide an opportunity for stimulus in these areas. It is essential in this regard however that the resources are used efficiently and also linked to structural reforms (GCEE, 2021; GCEE Annual Report 2020 items 319, 436 ff., 481 ff.). Further stimulus for growth could be provided by **scaling back the restrictions on the European internal market** and focusing instead on **further expanding** the market. For example, financial market integration would need to be further advanced within the framework of the European Capital Market Union (GCEE Annual Report 2018 items 471 ff.; GCEE Annual Report 2020 item 314) and the market for digital services and energy further opened up (GCEE Annual Report 2020 item 322). With regard to European Union climate and energy policy, the common energy infrastructure should be expanded to increase efficiency in this area (GCEE Annual Report 2020 items 324 ff.).

188. In order to permanently increase the growth potential of European economies after the coronavirus pandemic, measures that **improve the framework conditions for businesses** in a foreseeable and broad-based way will be helpful (Taylor, 2008). This includes measures that **sustainably improve the incentives**

for building up capital and boosting innovation. It also includes carrying out checks on state ownership of companies for market compliance (Abate et al., 2020; Röhl and Rusche, 2020). State support measures should ultimately be scaled back and bankruptcy and restructuring law reformed ↘ ITEM 420 to prevent unviable companies from being kept alive through government support. ↘ BOX 25 The conditions for **start-ups** could be improved by reducing the amount of red tape involved in setting up a new business, for example by using digitised administrative procedures. ↘ ITEM 406 In addition, the conditions for private risk and equity capital should be adapted (ifW, 2020). Tax incentives for investing in start-ups could reduce entrepreneurial risk and foster investment (European Commission, 2017b). To promote sustainable growth, measures promoting **education** ↘ ITEMS 325 FF. and **research** as well as expanding **infrastructure** will also be in order. The decisive factors in this area will be the targeted use and prioritisation of public expenditure, acceleration of planning and approval procedures as well as an increase in capacities, for example in the construction industry and in public administration. ↘ ITEM 215

189. Furthermore, **tax policy** can **help** states to **outgrow from high debt-to-GDP ratios** in the medium term. It can, for example, include accelerated tax depreciation options to spur investment and employment and stimulate growth (Dorn et al., 2021). Tax increases, on the other hand, could choke growth and dampen economic performance in the longer term (Romer and Romer, 2010; Alinaghi and Reed, 2021). Empirical studies such as those carried out by Romer and Romer (2010), Favero and Giavazzi (2007) and Mertens and Ravn (2012, 2013, 2014) have identified significant positive economic growth effects of tax cuts in the United States. Gale et al. (2015) however, were unable to demonstrate any significant effects at the US federal state level using the same method such as Mertens and Ravn. For EU Member States, Van der Wielen (2020) shows significant economic growth effects based on a panel study. The paper also discusses revenue-neutral changes to the tax structure such that no burden is placed on the state budget, but in a manner that growth-friendly taxes are cut and growth-inhibiting taxes are hiked. Lee and Gordon (2005) have already presented estimates showing the strong effects of corporate tax cuts on economic growth. Likewise, Arnold et al. (2011) also identified positive economic growth effects as a result of reducing corporate taxes and financing these reductions with higher consumption taxes based on the OECD countries. These results have been the subject of some criticism, for example, by Xing (2011), who does not find evidence for a ranking of different types of taxes, and Gechert and Heimberger (2021), who find evidence of a publication selection bias in favour of reporting the growth-enhancing effects of corporate tax cuts.

Implementing the EU recovery package

190. In July 2020, EU Member States decided to establish the **European Recovery and Resilience Facility (RRF)** to support Member States with grants and loans in order to mitigate the impact of the coronavirus pandemic (GCEE Annual Report 2020 items 269 ff.). These grants and loans are implemented in a multi-stage process. ↘ CHART 63 In the plans submitted to date, **Member States draw down the full amount of grants and part of the loans provided**, which

↘ CHART 63

Roadmap for the implementation of the European Recovery and Resilience Facility[1]

Preparatory phase	**Member States prepare recovery plans**. Submission to the European Commission by 30 April 2021. European Commission informs European Parliament and Council of their receipt. Once their recovery plan has been approved, Member States can submit an update, triggering a new assessment process.	
Adoption phase	**Recovery plans assessed by European Commission** within two months from submission. Important criteria: • Country-specific recommendations within the framework of the European Semester • Promotion of growth potential, the labour market and economic and social resilience • Targets for the share of funds allocated to climate-friendly projects (37 %) and digitalisation (20 %)	
	If the assessment is positive, the European Commission informs the European Council and prepares a draft decision for implementation.	If the assessment is negative, the European Commission communicates the reasons for this to the Member State concerned.
	European Council adopts implementing decision by qualified majority within four weeks from submission.	
Implementation phase	**The European Commission concludes individual agreements (and credit agreements if applicable) with Member States.** Member States can apply for a pre-financing payment of 13 %. Member States implement the recovery plans and report on progress every six months in the context of the European Semester.	
	Member States must apply to the European Commission for the **subsequent payment** of grants[2]. These grants are disbursed on the basis of achieving **previously agreed milestones and targets**. The European Commission assesses whether milestones have been achieved; approval by the European Council is required.	
	The grants are disbursed if the outcome of this assessment is positive.	If the outcome of the assessment is negative, payment is not made to the Member State or only in part.
	If, in 18 months after approval of implementing the recovery plan, there has been **little or no implementation progress**, the European Commission can **revoke the individual agreements and credit agreements** if applicable.	
	Implementation of all reforms and investments **by August 2026**; grants can be **disbursed until 31 December 2026**. **Loans** from the financial market will be **repaid** through **multiannual financial framework** from **2028 to 2058**.	
Review phase	Independent **ex-post evaluation** by 20 February 2024 and 31 December 2028.	

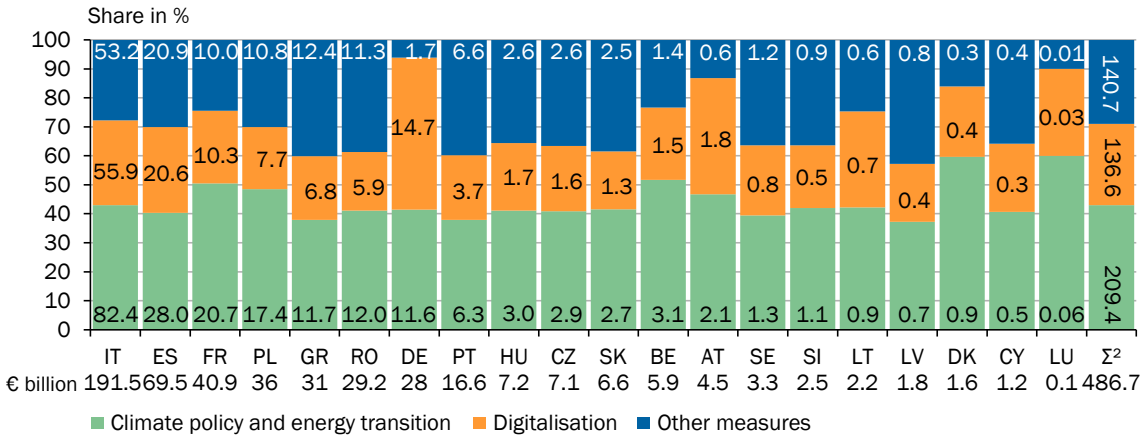
1 – As at June 2021. 2 – No more than twice a year.

Sources: European Commission, European Parliament, own depiction

are available to them according to the plan from autumn 2020. The final amount of grants available to each country depends on a number of macroeconomic factors and will therefore only be definitively determined in mid-2022. According to the plans they have submitted, Germany, France and Austria are planning, €1 billion to €2 billion more in grants than are available to them under the RRF according to the current forecast (Bruegel, 2021). ↘ CHART 64 They may need to provide the additional funds themselves if necessary or set aside the relevant measures. The potential **credit framework** (GCEE Annual Report 2020 Chart 50) will be **exhausted by Italy, Greece and Romania in full** and by Poland, Portugal, Cyprus and Slovenia in part. Member States may request loans until the middle of 2023. Therefore, the final total of loans is not yet fixed (European Parliament and Council of the European Union, 2021)

↘ CHART 64

Allocations under the National Recovery and Resilience Plans should be focused on projects in the area of climate policy and energy transition[1]



1 – Due to lack of specific detail, overlaps in the measures were not taken into account: the assignment to categories therefore corresponds to the general information provided by the member states in their recovery plans. An investment categorised by the member states under climate policy that also has digital components is therefore only assigned to the climate policy category. For Italy, Greece, Poland, Portugal, Romania, Slovenia and Cyprus: grants and loans. IT-Italy, ES-Spain, FR-France, PL-Poland, GR-Greece, RO-Romania, DE-Germany, PT-Portugal, HU-Hungary, CZ-Czech Republic, SK-Slovakia, BE-Belgium, AT-Austria, SE-Sweden, SI-Slovenia, LT-Lithuania, LV-Latvia, DK-Denmark, CY-Cyprus, LU-Luxembourg. Differences in the sums due to rounding. 2 – Sum of all states shown that had already submitted their recovery plans by July 2021, including details of the respective allocations.

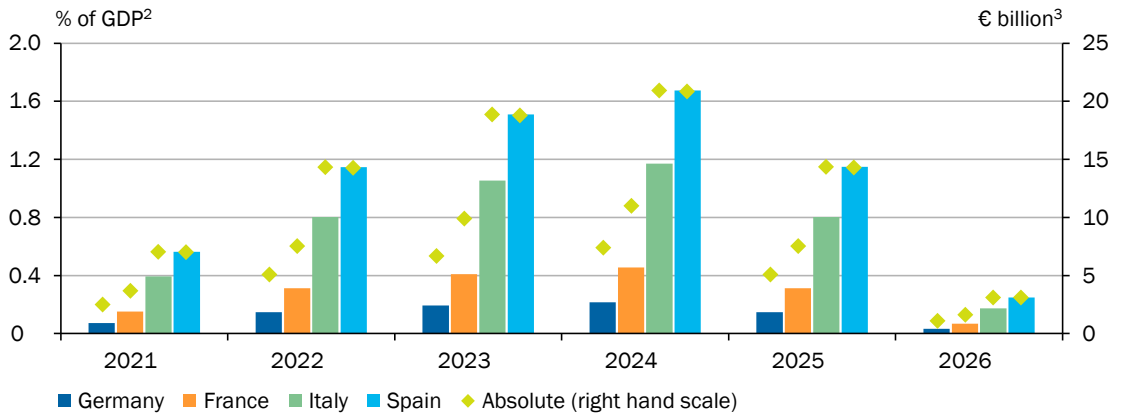
Source: Bruegel (2021) based on the national Recovery and Resilience Plans submitted to the European Commission.

191. According to the European Commission, the recovery and resilience plans of the Member States should include measures for projects that support climate objectives. These measures should account for at least 37% of the grants, while another 20% of the grants should be allocated to digitalisation (European Parliament and Council of the European Union, 2021). The recovery plans submitted show the overall share of investment in climate-friendly projects as well as digitalisation, while the subcomponents are partially unknown. The value of these reported **shares allocated to climate and digitalisation** meet the criteria required by the European Commission in each case. Member States assign the expenditure to a fixed category. However, there is some overlap between categories: some investments in the digital transition, for example, are included in the category of climate-friendly investments and then not considered digital. ↘ CHART 64

192. The grants are to be committed by the end of 2023, while disbursements will take place until the end of 2026 (European Parliament and Council of the European Union, 2021). The **targeted time profile of the disbursements and their share of GDP** is distributed **heterogeneously** across the countries. ↘ CHART 65 The largest share is attributable to 2023 and 2024, by which time the worst economic impact caused by the coronavirus pandemic should be overcome. The annual share of GDP is relatively low in Member States such as Germany at 0.1%. In other Member States such as Italy or Spain, it is higher at an average of 0.75% or 1%. Over the entire timeframe, the share of GDP in Croatia (18%) and Bulgaria (17%) is highest (GCEE Annual Report 2020 item 281). In absolute terms, Italy (€191.5 billion) and Spain (€69.5 billion) can draw down the largest amounts.

↘ CHART 65

Planned disbursements from RFF grants relative to GDP are higher in Spain than in Germany[1]



1 – Grants only. It is assumed that RFF grants are disbursed to individual countries following the timetable set by the European Commission for the EU as a whole. 2 – Based on the GDP for 2020. 3 – Grants are deflated relative to 2018.

Sources: European Commission, UBS
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193. The additional growth stimulus depends, in particular, on how **complementary measures** are actually implemented. Germany, for example, is planning to allocate a high proportion of the RRF funds for measures already planned in the economic stimulus programme implemented in June 2020 (GCEE, 2021). The situation is similar in France, where the fiscal package adopted in September 2020 will now be partly financed by European funds. This may consequently produce an **indirect stimulus** by allowing these countries to avoid tax increases or reduce public debt (Fuest and Dorn, 2021; GCEE, 2021). In any case, however, the **extent of a positive stimulus** will depend on whether the state concerned receives net transfers and loans or whether it must secure a larger share by contributing more in future to the EU budget than it receives. Moreover, the growth effect depends on the capacity of Member States to access the available funds quickly as well as in full and implement the relevant projects. For example, past experience has shown that the states receiving the highest grants from the RRF, Italy and Spain, have struggled with the effective use of European Structural Funds and have the lowest absorption rates of European funding (Becker, 2021). In addition, the stimulus effect of the recovery plans will depend on whether **expectations of a sustainably higher future growth development** are formed (GCEE, 2021).

194. If expectations of the recovery plans having a **sustainable and long-term growth effect** are to be met, the implementation of **structural reforms** to improve general framework conditions will be crucial, for example, to promote investment, innovation, labour market participation or human capital (GCEE, 2021). ↘ BOX 17 The European Commission should bear this in mind when disbursing the funds.

↘ BOX 17

Structural reforms as part of EU recovery plans in selected countries

In its Statement on the **German Development and Resilience Plan** (DARP) (BMF, 2021g), the GCEE (2021) concludes that, while the general orientation of the DARP to mitigate the long-term consequences of the coronavirus pandemic is to be welcomed, substantial reforms to improve general economic conditions do not have a sufficiently important role to play in the plan The GCEE believes that an ambitious reform agenda is desirable, as this would contribute to sustainable growth and strengthen the reform efforts of other EU Member States (GCEE, 2021).

France has integrated its European **recovery plan into** a larger-scale **national plan**, France Relance, (Ministère de l'Économie, des Finances et de la Relance, 2021). This plan comprises a volume of €100 billion, roughly 40% of which comes from European funding as part of the Recovery and Resilience Facility (RRF). In terms of structural reforms, the plan follows some of the country-specific recommendations made by the European Commission in 2019 and 2020. For example, one area of focus is training opportunities and, in particular, the development of IT skills. The plan also envisages a large-scale expansion of the broadband network, including in rural areas. In addition, the suspended reform of the pension system will be resumed as part of the French recovery plan, accompanied by the reform of unemployment insurance. On the other hand, the regulation restrictions in the service sector are not addressed in the plan (UBS, 2021).

Italy's recovery plan contains structural reforms, such as the improvement of public administration through training and digitalisation, as well as improvement of the justice system by increasing staff numbers and simplifying regulatory processes (Ministero dell'Economia e delle Finanze, 2021). However, a problem is presented by the temporary nature of the new personnel recruitment in the justice system. It also remains to be seen whether such far-reaching reforms can be implemented within the tight timeframe available, especially as this requires a political consensus (Corti and Núñez Ferrer, 2021; Frederico, 2021). Italy also aims to increase female employment by enhancing the provision of all-day childcare. However, these additional investments are not accompanied by reforms to enshrine the right to all-day childcare in law, as proposed by the Commission. Reforms to reduce working poverty are not addressed. In addition, the plan's proposals for tackling undeclared work are rather vague. The plan also lacks the vision to restructure the tax system to the point of reducing the number of tax sources that inhibit growth, such as consumption and real estate (Corti and Núñez Ferrer, 2021; Frederico, 2021

Spain's recovery plan ushers in structural reforms in eleven different policy fields, including public administration and the labour market, such as the expansion of vocational training (Gobierno de España, 2021; UBS, 2021). By having investment in sustainable infrastructure as one of its priorities, the Spanish recovery plan implements one of the country-specific recommendations by the Commission. The plan also announces the reform of the tax system and of pension insurance. There is some doubt as to whether the reform objectives can be implemented and, in particular, whether Spain has the capacity to utilise the funding provided by the RRF within the short timeframe available (Touza et al., 2020; Otero-Iglesias and Torres, 2021).

2. Leveraging growth potential in Germany

195. Even before the coronavirus pandemic struck, the German economy was undergoing a period of extensive structural change. The **long-term challenges**, especially with regard to the **digital transition** of the economy and society (GCEE

Annual Report 2020 items 524 ff.) ↘ ITEMS 438 FF. as well the transformation to **climate-neutral business models and technologies** (GCEE Annual Report 2020 items 371 ff.) ↘ ITEMS 504 FF. must be addressed with greater urgency. In addition, **demographic change** will deplete the supply of labour and place an increasing burden on social systems (GCEE Annual Report 2020 items 602 ff.). To overcome these challenges, growth-friendly and reliable framework conditions are required in particular for **private innovation and investment activity**. Last but not least, public investment in efficient infrastructure (GCEE Annual Report 2020 items 434 f. and 583 f.) and a high-quality education system ↘ ITEM 372 are also important prerequisites. However, it is clear from the coronavirus pandemic that careful monitoring of the sustainability of public finances is necessary, even during periods of economic growth, in order to preserve fiscal leeway for economic stimulus in future crises. ↘ ITEM 100 In particular, improving the institutional framework conditions for public investment is key to ensuring the effective use of public funds. ↘ ITEMS 200 FF.

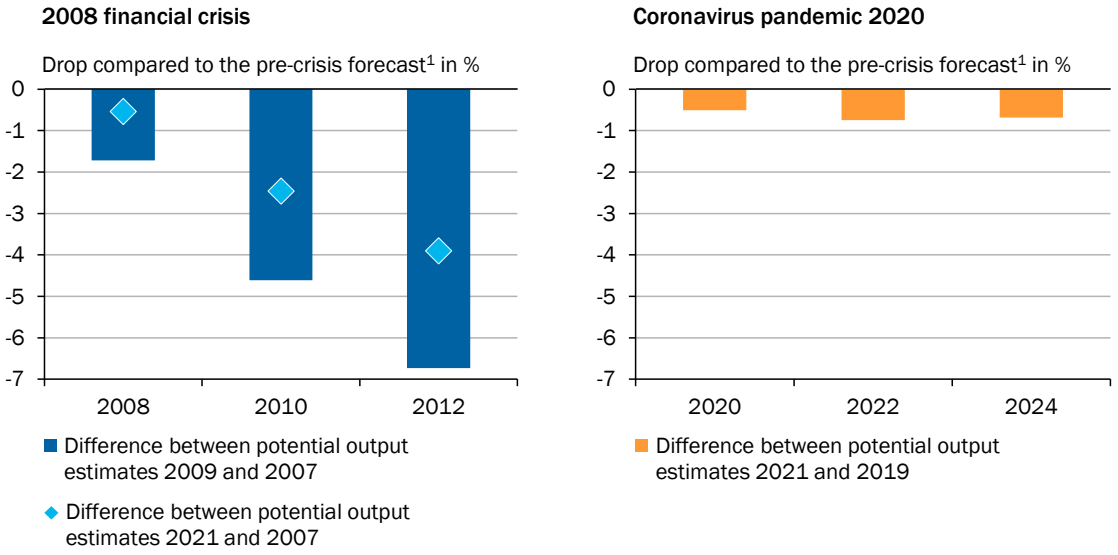
Opportunities and risks for potential growth

196. In the **short term**, there are opportunities for a comparatively high economic growth following the pandemic. Monetary and fiscal policy measures have helped stabilise private incomes. For example, economic development in the summer half year of 2021 showed that **demand bounced back** once the pandemic restrictions were eased. ↘ ITEMS 56 F. In addition, due to low consumer spending during the pandemic, private households have accumulated **unplanned savings**. Together with reduced economic uncertainty, the use of some of these unplanned pandemic-related savings is expected to accelerate the macroeconomic recovery. There is therefore no need for additional fiscal measures to boost consumer demand at present. However, the decline in **equity** experienced by many companies could inhibit investment activity and thus slow economic and productivity growth. ↘ ITEM 404

197. In the medium term, the coronavirus pandemic is likely to have a relatively low impact on economic growth. Compared to previous crisis episodes in advanced economies, the permanent effects will probably be limited, especially since **productivity has so far declined only moderately.** ↘ BOX 18 The decline in potential output growth expected by the European Commission in the coming years is therefore significantly lower than that experienced during the financial crisis of 2008 and 2009. ↘ CHART 66 Based on the latest estimation of potential output from spring 2021 for the decline following the financial crisis, it appears that the drop in potential output expected in real time was an overestimation of the actual drop that occurred. In addition, the fact that disruptions to the financial system were successfully avoided is expected to have a positive impact after the coronavirus pandemic and consequently underpin a rapid recovery in private investment. On the one hand, extensive support measures helped to limit productivity losses caused by the closure of businesses and job losses in otherwise functioning business models and thus retain capacity. On the other hand, however, the measures may also inhibit reallocation of resources and thus dampen productivity growth. ↘ BOX 25

↘ CHART 66

Loss of long-term potential output due to the pandemic is less than after the financial crisis
Difference between the forecast growth of potential output before and after the crisis for the years after the onset of the crisis



1 – European Commission forecasts. Figure shows the difference between the potential output growth projected before the corresponding crisis in subsequent years with the development of potential growth forecast or estimated after the crisis. Pre-crisis forecast from Autumn 2007 and Autumn 2019. Comparison forecast from Spring 2009 or Spring 2021. No consideration of decreases in the level of potential growth in the pre-crisis year. 2 – Ex post evaluation of the loss of aggregate growth in potential output using the forecast from Spring 2021 for the development from 2008 to 2012. Revisions to national accounts and the method of determining potential output and a differing interpretation of discretionary leeway in the estimate could explain part of the deviation.

Sources: European Commission, own calculations

↘ BOX 18

Analysis of the permanent effects of recessions and financial crises

The following section shows the **supply-side impact of recessions and financial crises** using local projections (Jordà, 2005) estimated on the basis of an unbalanced panel for the OECD countries (similar estimates in Martín Fuentes and Modern, 2020; IMF, 2021). For this purpose, the cumulative growth rates of potential output as well as its components, capital services, employment and TFP, are regressed h years after the time t ($y_{i,t+h} - y_{i,t-1}$) on indicator variables for the start of recessions ($R_{i,t}$) and financial crises ($F_{i,t}$) and various control variables ($X_{i,t}$). The regression equations for the dependent variable $y_{i,t}$ from country i at time $t + h$ is:

$$y_{i,t+h} - y_{i,t-1} = \beta_1^h R_{i,t} + \beta_2^h R_{i,t} * F_{i,t-2,t+2} + \beta_3^h F_{i,t} + \varphi_1^h X_{i,t} + \mu_i^h + \theta_t^h + \varepsilon_{i,t}^h.$$

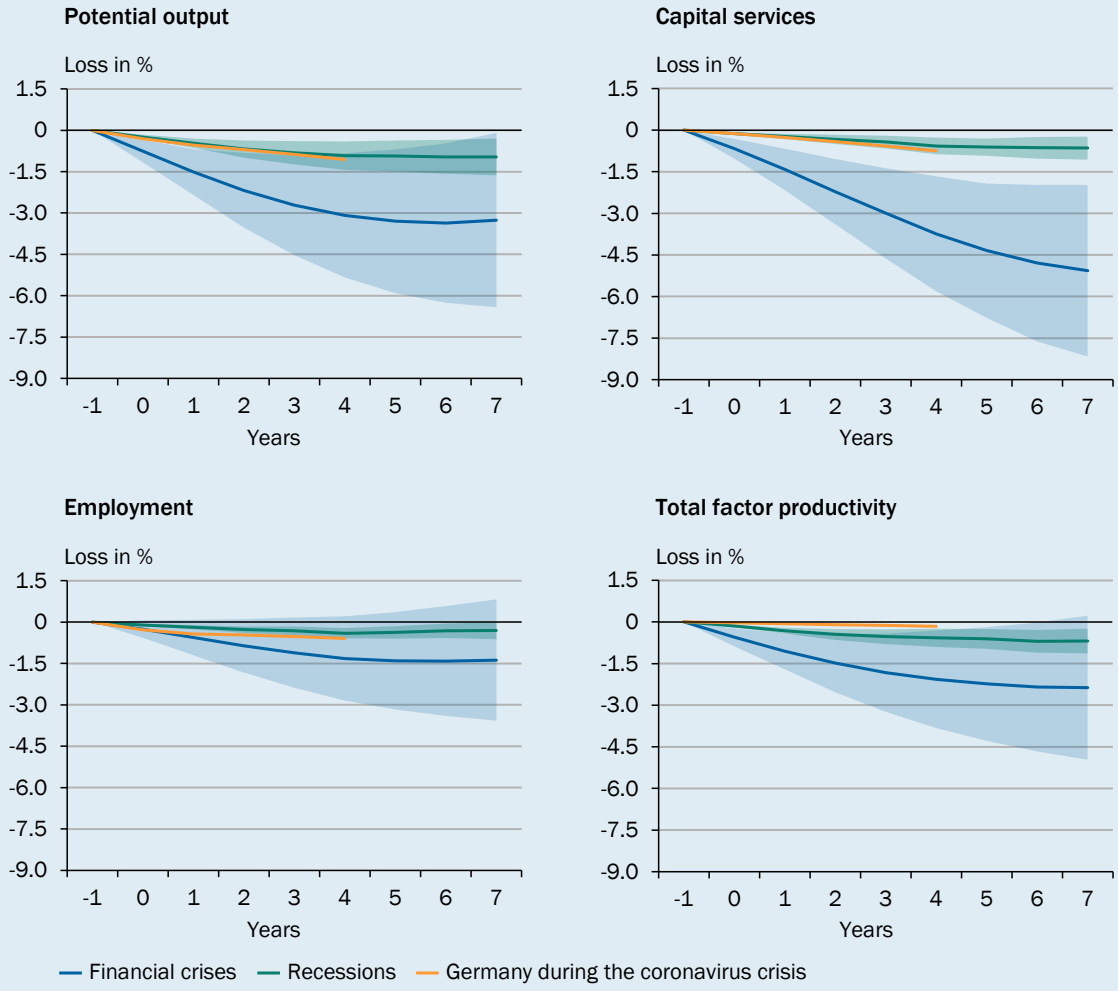
The control variables comprise the per capita potential output before the crisis, two lags in the change rate of the unadjusted dependent variable as an indicator of the economic development, two lags in the ratio of national debt to GDP and fixed effects for the particular country (μ_i^h) and year (θ_t^h). All continuous variables are logarithmised. The dating for the start of recessions and financial crises is taken from the OECD (2021) and Reinhart et al. (2016) and Laeven and Valencia (2018). Since recessions and financial crises do not always have to occur in the same year and not all recessions are associated with a financial crisis, the indicator $F_{i,t-2,t+2}$ shows whether a financial crisis occurred in the two previous or subsequent years. The

impulse response functions are derived from the coefficients β_1^h for recessions or $\beta_1^h + \beta_2^h + \beta_3^h$ for financial crises and represent the impact of the respective events on the dependent variable after h years. (Jordà et al., 2017)

↘ CHART 67

Effects of past recessions and financial crises on potential output and its components in the OECD countries[1]

Loss of potential output and its components compared to the situation without a recession or financial crisis



1 – Analysis of the effects for an unbalanced panel of annual data for the OECD countries excluding Costa Rica (insufficient data available). Greece and Spain (outliers that seem to drive individual results). Period under review: 1960 to 2019. The effects of recessions and financial crises on the dependent variables are estimated using local projections (Jordà, 2005). The potential output follows a production function approach in which the components were adjusted using the Hodrick-Prescott filter (lambda = 100). The start of the recession corresponds to the year after the economic peak identified in the OECD Composite Leading Indicators system. Dating of financial crises is taken from Reinhart et al. (2016) and Laeven and Valencia (2018). Solid lines show cumulative impulse response functions and coloured areas show the corresponding 90% confidence intervals. 2 – Effects of the COVID-19 pandemic on potential output in Germany as shown by the revised medium-term forecast for 2020 to 2024 in the GCEE Annual Report 2020 compared to the GCEE Annual Report 2019.

Sources: IMF, Jordà et al. (2017), Laeven and Valencia (2018), OECD, Penn World Table, Reinhart et al. (2016), own calculations

The estimates show the **persistent effects** of recessions and of financial crises, in particular. ↘ CHART 67 For example, seven years after the recession, potential output is on average around 1% below the level at which it would have been without a recession. **In financial crises, the loss of potential growth** jumps to around 3.3%. While losses are more or less evenly distributed across the components of capital, labour and TFP during economic downturns, this loss has a particularly heavy impact on potential for **Total Factor Productivity.** The loss of company-specific expertise, the misallocation of capital, reduced R&D expenditure and the increased number of corporate bankruptcies can reduce productivity growth in the long term (Cerra et al., 2020; Furceri et al., 2021). Severely muted investment during financial crises also leads to a strong fall in capital stock.

Although the **forecast effects of the coronavirus crisis** on potential output **in Germany are likely to be of the same order as former recessions**, it can be assumed that the decline in the volume of labour at the start of the pandemic is greater than in previous recessions. ↘ CHART 67 BOTTOM LEFT First, this is in all likelihood because the downward trend in the non-accelerating inflation rate of unemployment (NAIRU) in the coming years is expected to be weaker than expected before the pandemic. Second, the lower net immigration resulting from temporary border closures will probably only catch up partially (GCEE Annual Report 2020 item 92). However, in the medium term, the loss is likely to be comparable to that experienced in previous recessions. The revised GCEE's medium-term forecast points to relatively minor consequences for productivity in contrast. ↘ ITEM 90

198. Aside from coronavirus-driven structural change, **digitalisation** will influence productivity growth in the medium to long term and change the economic structure. ↘ ITEMS 438 FF. For example, the pandemic could result in certain production capacities becoming obsolete, especially in the personal service sector such as physical retail outlets. Insolvencies and employees switching occupations should result in partial reallocation to more productive economic areas. ↘ BOX 24

In addition, closer integration of **digital processes** in the workplace could have a positive impact on productivity growth (GCEE Annual Report 2020 items 559 ff.). ↘ ITEMS 438 FF. For example, the pandemic is likely to lead to reduced personal contact in the workplace in the foreseeable future. This could place a strain on the productivity of multinational value chains and hinder the dissemination of knowledge (Coscia et al., 2020, Blanchard and Pisani-Ferry, 2021). However, virtual substitutes may bring about lower transaction costs. Demographic change will also permanently throttle potential growth due to a shrinking supply of labour and the decline in savings and investment activity associated with an aging society (Deutsche Bundesbank, 2021e; Gemeinschaftsdiagnose, 2021).

199. The transformation towards a **climate-neutral economy** is also likely to affect productivity growth. The development of new business models and innovations for sustainable production methods could fuel productivity growth. However, with regard to the direct growth effect, it should be noted that from an economic perspective, this represents part of replacement investments for capital goods that remain functional and is therefore only likely to enhance productivity under certain conditions. Therefore, the right framework conditions are required to encour-

age investment in climate-neutral facilities that avoid carbon emissions and expand production capacities, while also offering greater incentives for efficiency-enhancing innovations.

Improving institutional frameworks for future-oriented expenditure

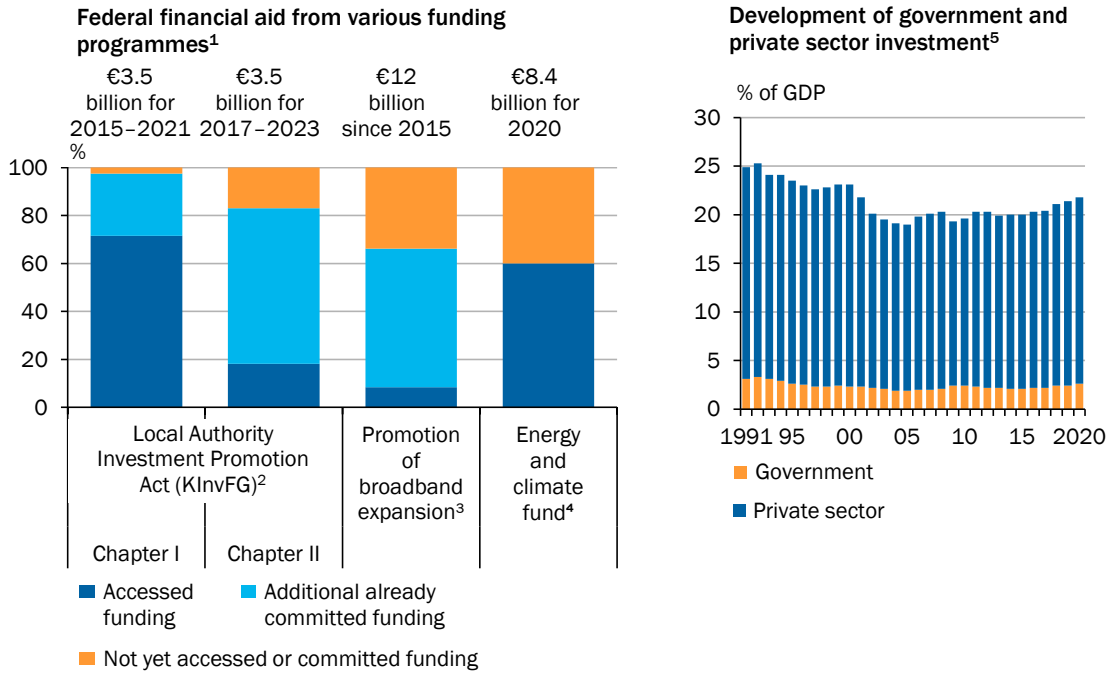
200. **Substantial private and public spending will be necessary** to transform the economy by means of digitalisation, climate protection and demographics. In this context, improving the institutional framework conditions for public investment has an important role to play in ensuring the effective use of public funds.

201. The question arises as to how **future-oriented public expenditure** that can sustainably support productivity growth in light of forthcoming structural change can be **increased and maintained.** Given the existence of political economy incentives in the political process, policy makers can tend to focus primarily on day-to-day expenditure, thus hampering growth in future-oriented expenditure (Bessley and Coate, 1998; Azzimonti, 2015). Furthermore, various barriers such as long **approval procedures and capacity bottlenecks** can block growth in real investments. For example, costs in the construction industry, which have been rapidly increasing for some time now, indicate surplus demand (GCEE Annual Report 2019 item 76). Putting investment spending on a more permanent footing is likely to encourage the private sector, in particular the construction sector, to expand capacity and thus expedite the implementation of public projects (Board of Academic Advisors at BMWi, 2020). This is likely to be particularly true in areas where the state finances a significant share of investment activity, such as civil engineering. Other barriers, such as shortages of skilled labour, can probably only be influenced in the long term (GCEE Annual Report 2019 item 548 and Box 16).

202. Political agreement to provide funding for certain goals, while necessary, is not a sufficient precondition for additional future-oriented expenditure. Past experience in recent years has shown, for example, that there are **major problems with the flow of federal funds for investment projects**. ↘ CHART 68 LEFT Although the funds from the Local Authority Investment Promotion Fund, consisting of an infrastructure and schools renovation programme (Chapters 1 and 2), have now been allocated to the tune of 97.5% and 83.1% respectively, the programmes had to be extended by a year due to unabsorbed funds. According to the Federal Ministry of Finance (2021H), capacity bottlenecks in municipal construction management and in the construction industry in particular are to blame for this extension. The energy and climate fund and the Federal funding programme for the expansion of broadband, which has been in existence since 2015, also seem to be beset by similar problems (Grimm et al., 2021). In the case of the latter, roughly €1 billion had been drawn down by the end of 2020 from a total of €12 billion provided. However, these figures could slightly underestimate the funds actually accessed: the funds are only recorded as absorbed when a project is fully completed.

↘ CHART 68

Funding programmes and investment spending in Germany



1 – Lines above the figure: Figures in € billion according to the funding approved for the relevant programme in the period under review. 2 – Financial aid accessed and committed by 31. December 2020. 3 – Payments disbursed and committed financial aid up to 31. December. 4 – Target expenditure and actual expenditure for 2020. 5 – Share of gross fixed capital formation in GDP at current prices.

Sources: Federal Ministry of Finance, Federal Statistical Office, German Bundestag, own calcualtions

203. These examples show that in addition to financial restrictions, there are also **non-monetary barriers** facing the implementation of future-oriented expenditure (Board of Academic Advisors at BMWi, 2020; Grimm et al., 2021; Sheller et al., 2021; GCEE Annual Report 2019 items 547 ff.; GCEE Annual Report 2020 Box 10). On the one hand, **cumbersome planning, licensing and legal procedures** stand in the way of faster implementation of investments. The National Regulatory Control Council (NKR, 2021) has once again, in the context of the investments required in climate protection, drawn attention to these problems and suggested options for simplifying and expediting procedures. Rapid digitalisation of administrative procedures and accelerated legal proceedings with compulsory early hearings would significantly shorten implementation delays. The NKR also points out that synergies could be generated through the improved exchange of information outside particular projects: for example, in the form of a knowledge platform for investigations, expert opinions and decisions on questions concerning the environment, nature and species protection. Against this background, the measures implemented by the Federal Government – such as the Investment Acceleration Act (Federal Government, 2020) – are to be considered as a positive first step. Another factor preventing the timely implementation of projects is a **lack of capacity and expertise in local authorities**. Inadequate capacity in public administration is likely to be partly the result of high debt levels of the municipalities and the haphazard nature of the relevant planning processes, but

above all, due to the difficulty in retaining good skilled workers in the public service.

204. These barriers could be reduced in part by institutional reforms, such as **outsourcing the operational implementation** of future-oriented projects to **legally independent institutions** (Board of Academic Advisors at BMWi, 2020). For example, synergies and economies of scale could be leveraged by bundling expertise with the help of a centralised federal agency or institutions focussed on certain topics. More frequent deployment of specialised project managers, especially for tendering, planning, procurement and implementation tasks, could also shorten procedures (NKR, 2020). In order to carry out operational work independently of policy makers, the assigned institution must have **executive powers** and **long-term budget allocations**. Policymakers could provide the guidelines for the tasks to be prioritised and specify budgets. The institutions would then commit the financial resources, within the given framework, to those areas likely to generate the highest returns. As regards governance, it should be ensured that the budget commitments proceed within the existing fiscal framework, and that control mechanisms regarding the use of funds are in place for policy makers (Board of Academic Advisors at BMWi, 2020, p. 31 f.).

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.

↘ TABLE 15

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 prog-gramme 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)

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., 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).

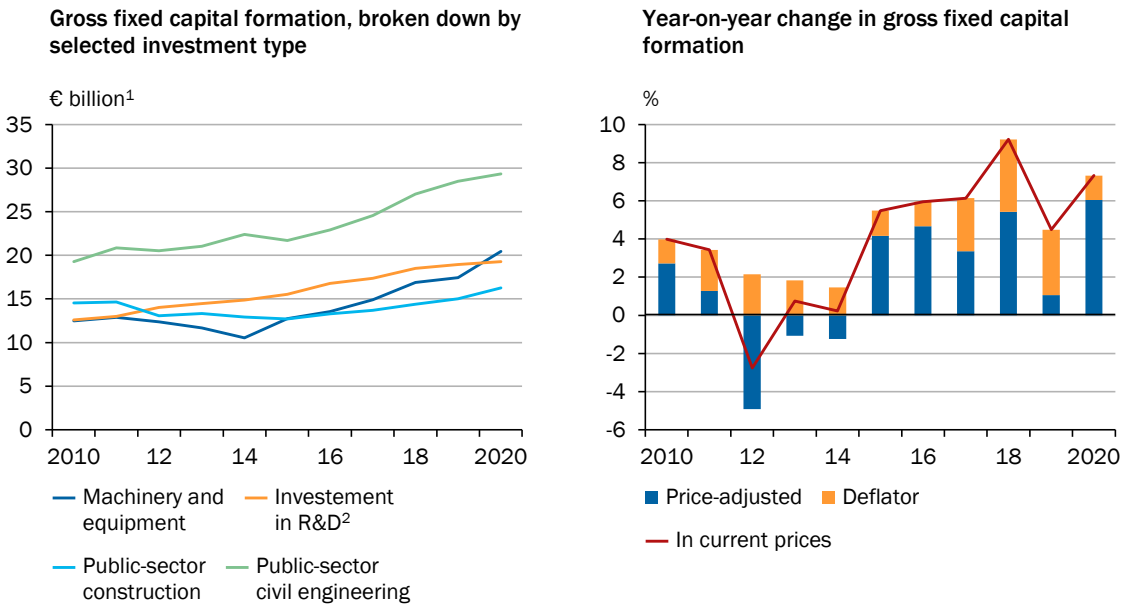
With regard to climate action, a focus on **carbon pricing** as a control instrument would create **technology-neutral incentives to invest** in sustainable business models (EWK, 2020, 2021; Feld et al., 2021b; Special Report 2019 items 202 ff.; GCEE Annual Report 2020 item 372). The lowering of the 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**

↘ CHART 69

Gross fixed capital formation by the government since 2010



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

Sources: Federal Statistical Office, own calculations

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**.

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).

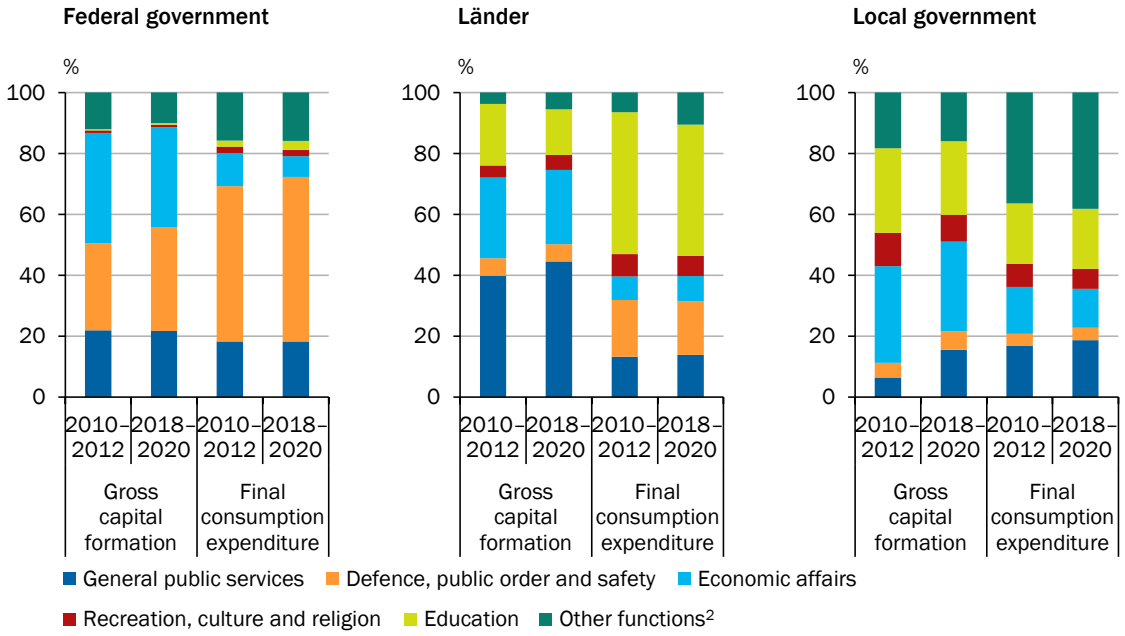
218. A budget constraint such as that imposed by the debt brake forces **conflicts between advocates of current spending and those who favour investment in the future** to be **fought out today** (Feld et al., 2021b). Conflicts of objectives are thus brought out into the open and cannot be put off for 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

↘ CHART 70

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

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 implementation 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 tran-

sitional 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. Mobilisation and financing of investment (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 objectives (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**.

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