Federal Ministry
of Finance

German Stability Programme

2019

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German Stability Programme

2019

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Preface to the German Stability Programme for 2019

The member states of the European Union submit their medium-term fiscal plans to the European Commission and to the Economic and Financial Affairs Council (ECOFIN) by the end of April each year. To this end, in order to comply with the rules of the Stability and Growth Pact, member states of the euro area submit updated Stability Programmes, while all other EU member states submit updated Convergence Programmes.

This update of the German Stability Programme was approved by the federal cabinet on 17 April 2019. The programme follows the *Guidelines on the format and content of Stability and Convergence Programmes* (Code of Conduct). The federal government submits each update of the German Stability Programme to the competent expert committees of the German Bundestag as well as to the Finance Minister Conference (*Finanzministerkonferenz*) and the Stability Council (*Stabilitätsrat*). After review by the ECOFIN Council, the Council's opinion on the Stability Programme is also forwarded to these bodies.

By submitting this updated Stability Programme, which contains projections of budgetary trends at all government levels (Federation, *Länder*, local authorities and social security funds), the federal government is complying in full with its obligation for the year 2019 to submit national medium-term fiscal plans in accordance with Article 4 of Regulation (EU) No 473/2013 on the provisions for monitoring and assessing draft budgetary plans.

The projections of budgetary trends contained in the Stability Programme are based on all the information available at the time of publication, especially the federal government's annual projection on macroeconomic trends of 30 January 2019 and the results of the Working Party on Tax Revenue Estimates of 25 October 2018, subsequently updated to take account of the federal government's annual projection. The federal government's recent spring projection on macroeconomic trends in Germany, which was published on 17 April 2019, the same day as this Stability Programme, is not yet included in Chapter 2 or the corresponding tables. It will form the basis of the results of the Working Party on Tax Revenue Estimates that are to be published in early May 2019.

The Federal Ministry of Finance publishes the updated Stability Programme along with the programmes for preceding years online at:
https://www.bundesfinanzministerium.de/Web/EN/Home/home.html

The programmes of all EU member states as well as the corresponding European Commission analyses and ECOFIN recommendations are published on the European Commission's website at:
http://ec.europa.eu/info/business-economy-euro/economic-and-fiscal-policy-coordination/eu-economic-governance-monitoring-prevention-correction/stability-and-growth-pact/stability-and-convergence-programmes_en

1. Summary

The German government has set itself the goals of enhancing the German economy's growth drivers and future viability, strengthening social cohesion and ensuring that public finances are sound. The government's fiscal policies are a systematic reflection of these objectives.

With real GDP growth of 1.4% in 2018, Germany's economic upswing continued for the ninth year in a row. However, the momentum slowed significantly, not least as a result of a bleaker global economic outlook, which is partly driven by uncertainties associated with international trade policy and the United Kingdom's withdrawal from the European Union. The transition to new EU emissions testing standards caused substantial delivery delays in car manufacturing, which is a key industry.

Despite this, fiscal policy conditions remain favourable. The German labour market is still strong, with average employment reaching a new record high of more than 44.8m in 2018. Wages and salaries rose significantly. Public finances benefited from higher tax revenues combined with lower interest spending. In 2018, interest spending by the German public sector decreased to just 0.9% of GDP, the lowest level seen in 50 years (see **Figure 1**).

Overall, Germany achieved a general government surplus of 1.7% of GDP in 2018. The various government levels (Federation, *Länder*, local authorities and social security funds) all contributed about equally to this surplus. General government debt in 2018 fell by 3.6 percentage points, to 60.9% of GDP. In 2018, Germany thus complied in full with the rules of the Stability and Growth Pact and the Fiscal Compact.

When analysing Germany's high surplus, it is worth keeping in mind that it took considerable time to form a new coalition government at the federal level. As a result, the 2018 Federal Budget Act (*Bundeshaushaltsgesetz*) was not adopted by the Bundestag until June. Until then, an interim budget was in place at the federal level, meaning that no new measures could be carried out unless they were unavoidable on grounds of necessity or urgency. For this reason, almost all of the measures on the expenditure and revenue side that were decided on by the federal government in its coalition agreement will not have a financial impact until 2019 or even later.

These measures are set out in detail in the 2019 Federal Budget Act and the benchmark figures decision for the 2020 federal budget and the following years until 2023. For example, the federal government plans to make use of fiscal policy leeway to continue to increase public investment in infrastructure, education and research. This is one of the reasons why the German Bundestag and Bundesrat adopted a constitutional amendment that will allow the federal government to provide direct support to *Länder* and local authorities to assist them in funding schools, public transport and (as was already the case in the past) the construction of social housing, among other things (see page 23 for details).

The *Länder* and local authorities face key challenges in terms of identifying suitable investment projects, navigating the relevant planning and tendering rules when implementing them, and managing the commercial commissioning process. The federal government is passing on significant financial resources to the *Länder* to ensure that the existing fiscal space can also be used at the *Länder* and local authority level in the coming years. In this way, the federal government is solidifying its efforts to strengthen the foundations for future growth by investing in education and infrastructure. Last year, general government investment increased by 7.6% to a record €78.9bn. It grew at a significantly higher rate than nominal GDP, a trend that will continue under the fiscal policy approach pursued by the government.

The excellent situation on the labour market, with steady growth in employment and wages, has contributed to rising tax receipts in recent years. The federal government has launched important measures for growth-friendly and socially equitable tax policy. Lower taxes and social security contributions, especially for families and lower- and middle-income earners, are boosting disposable incomes and creating positive incentives for labour market participation. Tax relief measures include (a) efforts to compensate for bracket creep by increasing basic personal allowances and raising tax rate thresholds, (b) significant increases in family benefits, including child benefit, (c) lower social security contributions for low-income earners, (d) the reintroduction of the rule requiring employers and employees to pay equal contributions to statutory health insurance and (e) a reduction in the unemployment insurance contribution rate. In addition, it has been agreed that, starting in 2021, the solidarity surcharge will be eliminated for roughly 90% of income tax payers previously subject to it. The government also plans to introduce tax incentives for research that will provide targeted relief for companies and make the tax system more investment-friendly. In total, the volume of the tax measures planned for 2019–2021 will significantly exceed €25bn per year once they have taken full effect. According to current forecasts, the implementation of these measures will help to reduce the tax ratio, which has risen to a record 23.7% of GDP, back to its initial level over the course of the current legislative term.

One of the main aims pursued by the German government in its fiscal policies is to strengthen social cohesion to ensure that the favourable economic situation benefits the entire population. To this end, the government has adopted far-reaching measures, including labour-cost subsidies to help the long-term unemployed enter the labour market, more affordable pre-school childcare and a better range of childcare options starting at the beginning of 2019, an increased child supplement for low-income families starting in mid-2019, and financial assistance for the construction of social housing. In addition, child benefit and the tax-free child allowance will be increased considerably starting in 2021.

In 2019, Germany plans to take fiscal policy measures that will result in additional spending in the amount of 0.5% of GDP and reduced revenue in the amount of 0.2% of GDP. German fiscal policy will be distinctly expansionary in 2019. Despite the fact that economic growth has recently slowed, the German economy is still running at slightly excess capacity. This is particularly true of certain industry sectors, including construction, IT services and care services, areas in which there is a shortage of skilled workers. Overall, it seems appropriate to pursue fiscal policies that help to improve the German economy's growth potential in a structural way whilst following an expansionary approach in order to counteract external risks to the economy and the resulting negative developments.

Given the recent weakening of the economy, it is necessary to prepare for more difficult fiscal policy conditions. The debt brake stipulates that the *Länder* must achieve balanced budgets without net borrowing starting in 2020. The constitutional upper limit for structural net borrowing (i.e. borrowing adjusted for cyclical effects and one-off measures) in the federal budget is 0.35% of GDP.

The German government is planning to continue with balanced budgets with no new borrowing until the end of the financial planning period in 2023, thereby ensuring that the constitutional debt rules are complied with. Based on its current projections, the government anticipates that the general government surplus will decrease significantly but not disappear in the medium term, not least due to the increased funding for the *Länder* and local authorities. Partly as a result of this, the debt-to-GDP ratio will fall below 60% this year and will therefore be under the 60% ceiling set out in the Maastricht Treaty for the first time since 2002.

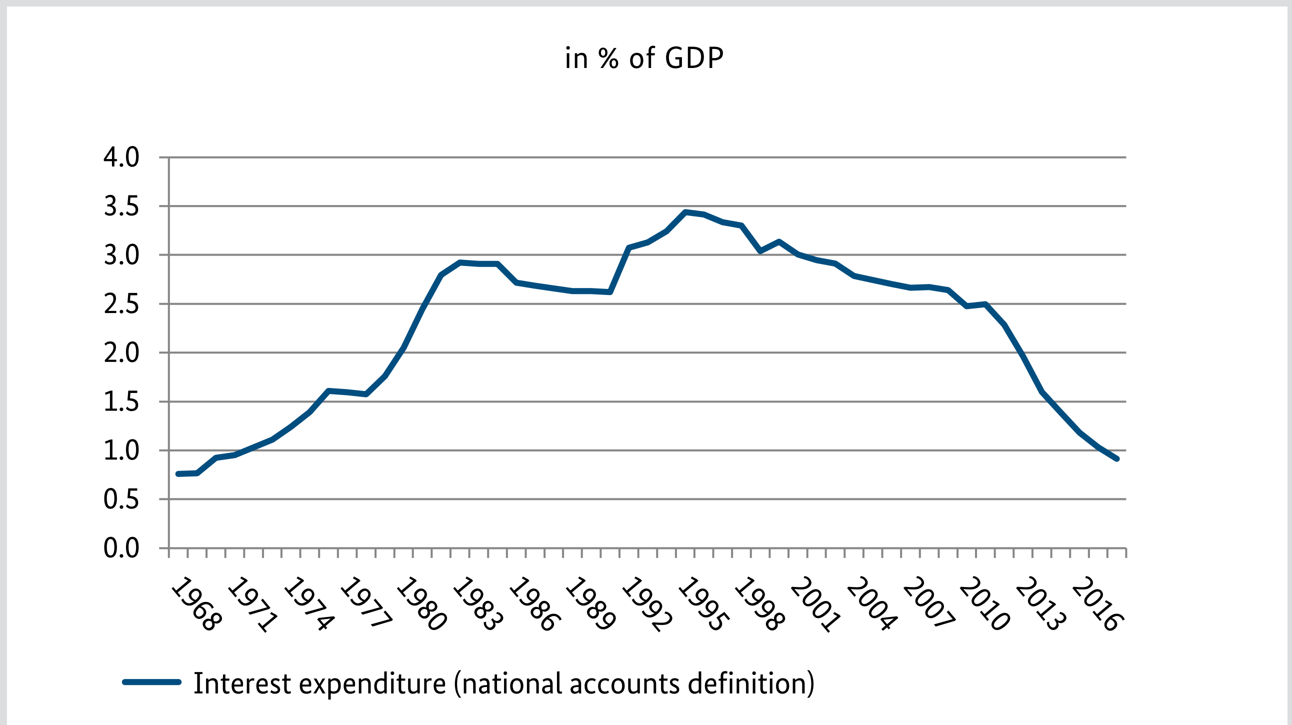
From this point of view, continuing to consolidate public budgets remains an important prerequisite for maintaining Germany's ability to act in the face of multiple emerging challenges and responsibilities. These include the financing of climate protection measures and the associated phasing-out of coal mining and the production of electricity from coal, as was recently recommended by an expert commission; the assumption of responsibility at the international level with regard to security and development cooperation; and Germany's future financial contributions to the European Union budget.

In addition, the challenges of demographic change will start affecting German society very soon. The baby boomer generation is about to start reaching retirement age, as a result of which the ratio of the retirement-age population to the working-age population will increase from approximately 33% in 2018 to nearly 44% in 2030. The consequences of this trend will put fiscal policy to the test. At the same time, policy-makers face the challenge of ensuring that social security systems remain acceptable and reliable for benefit recipients and contributors alike. In the area of statutory pension insurance, legislators have committed to taking steps by 2025 to stabilise benefit levels and limit contribution rates with the help of federal subsidies if necessary. Moreover, the pension entitlements of people with reduced earning capacity have been improved, and periods of child-rearing are being taken into account to a greater extent. Federal transfers to the statutory health insurance system will total €98bn in 2019 and increase to €114bn by 2023. The Federal Ministry of Finance will provide information about the sustainability of public finances in its next Sustainability Report, which will be issued at the end of 2019 or the beginning of 2020.

Increasing employment levels even further (especially among older people, women and immigrants) and enhancing productivity growth are essential for ensuring that finances remain sound in the long term. That is why the German government is making it easier for older people to integrate into the labour market, further expanding the provision of all-day childcare in order to improve work-life balance, and taking steps to ensure that the immigration of skilled labour can be managed in a targeted way. It is also making efforts to enhance productivity, for example by encouraging skills development among the working population in combination with life-long learning, consistently promoting digital technologies in the private sector and in public administration, and creating investment- and innovation-friendly conditions for companies. In response to demographic challenges, the federal government has appointed a commission on intergenerational fairness (*Kommission Verlässlicher Generationenvertrag*) that will look at ways to secure and develop the pension system. It will issue its recommendations by March 2020.

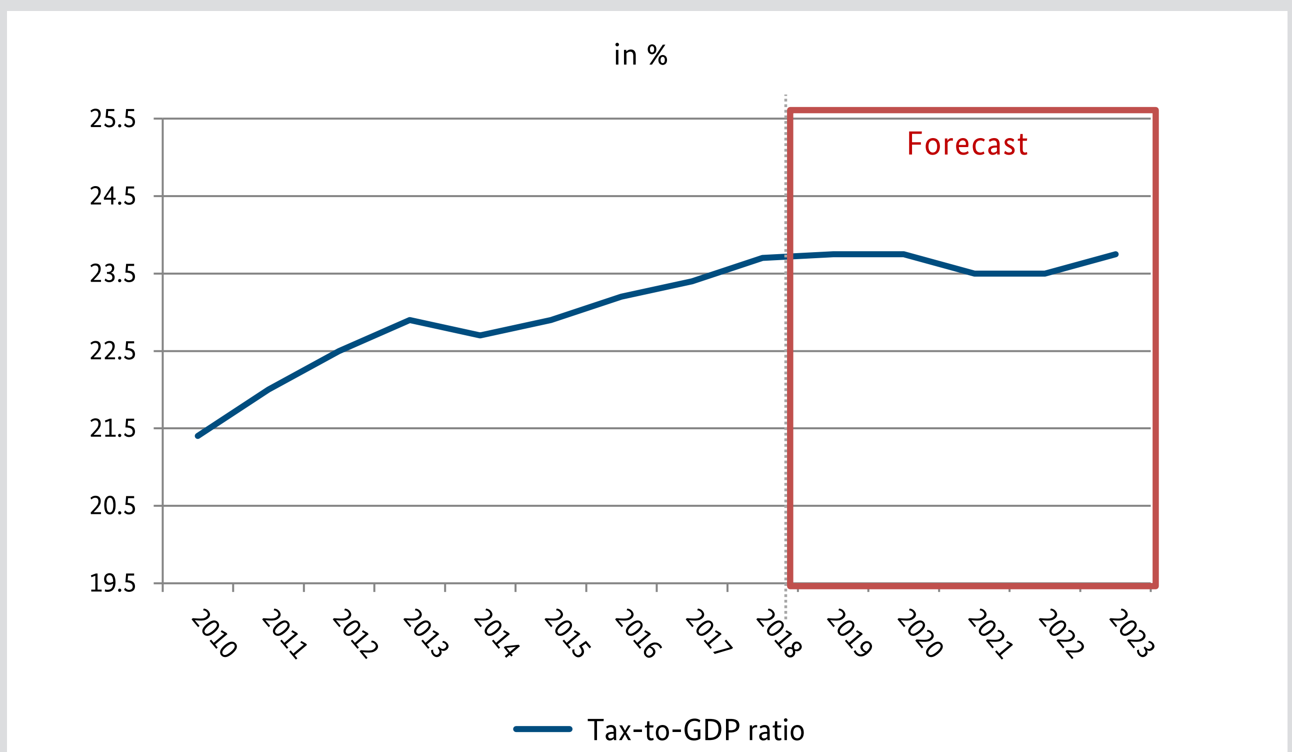
Specific federal government measures to promote growth and employment are described in detail in Germany's National Reform Programme (NRP), which was adopted by the federal government on 10 April 2019 and will be submitted to the European Commission by the end of April. In the NRP, the federal government outlines how it is addressing the macroeconomic challenges described by the European Commission in its 27 February 2019 Country Report. It also describes the progress that Germany has made in implementing the country-specific recommendations made by the Council of the European Union in 2018.

Figure 1: Interest expenditure in public budgets: a historical perspective



Source: Federal Statistical Office, February 2019

Figure 2: Taxes 2010–2023



Source: 1991-2018: Federal Statistical Office; 2019-2023: Finance Ministry projection

2. Aggregate economic conditions in Germany

2.1 Aggregate economic conditions in Germany in 2018

Although the German economy continued to expand in 2018, the second half of the year saw a noticeable loss of momentum. Real GDP was up by 1.4% on the year and thus remained markedly below the growth rates posted for the two preceding years (2.2% in both 2016 and 2017) and slightly below the overall potential output of 1.6% p.a.

The slowdown in economic momentum was reflected by weaker export growth in particular. From June onwards, German exports recorded only slight gains. In addition to low global economic momentum, uncertainties associated with potential trade disputes and the withdrawal of the United Kingdom from the EU exerted a negative effect. Other factors included the problems experienced by the German automotive industry in connection with the transition to the new EU emissions testing standard (Worldwide Harmonised Light Vehicle Test Procedure) as well as weather-related logistics bottlenecks, especially in the chemicals industry. Overall, real exports rose by a total of only 2.0% in 2018, following growth of 4.6% in the previous year. At the same time, real imports increased at a significantly higher rate of 3.3%, meaning that the external balance of goods and services reduced GDP growth by 0.4%, in purely arithmetic terms.

In contrast, the domestic economy made a positive contribution to economic growth. This is reflected by a marked increase in domestic demand (up by 1.9%) compared with the previous year. Strong employment growth and rising incomes resulted in a favourable consumer climate and also contributed to higher investments in private residential construction. As a result of the weak third quarter of 2018, however, private consumption rose by a mere 1.0% in real terms. Private construction investment expanded at a noticeably higher rate, posting real growth of 2.4% on the year. Extremely low interest rates on the capital markets and very high capacity utilisation in industry gave a boost to investment in machinery and equipment, which increased by 4.2% on the year, adjusted for inflation.

Labour market trends remained very positive. According to the Federal Statistical Office's preliminary calculations, average employment rose to more than 44.8m in 2018, the highest level since German reunification. This increase primarily affected jobs that are subject to social security contributions. A breakdown into industry sectors shows employment growth nearly across the board. The highest increase in absolute terms was posted in manufacturing. Other sectors with above-average employment growth included business-related services as well as health and social services. The number of unemployed persons averaged 2.34m in 2018, the lowest figure recorded since reunification. The average annual unemployment rate stood at only 5.2%. According to the Federal Employment Agency, it has become considerably more difficult to find skilled workers in a number of occupational fields, especially technical occupations, construction, and health and long-term care.

On average, consumer prices rose by 1.8% on the year in 2018. The increase was driven primarily by higher energy prices for light heating oil and motor fuels. Core inflation (the rise in consumer prices excluding the prices of food and energy) was 1.3% on average in 2018.

2.2 Short- and medium-term outlook for the aggregate economy, 2019-2023

Leading indicators suggest that the weaker economic momentum will persist in 2019. Business sentiment remains subdued, and export expectations in the manufacturing sector indicate that external economic uncertainties are likely to continue. The consumer climate offers more positive prospects. Rising wages and employment levels and increased social benefits other than in kind contribute to this optimism.

In its annual projection for 2019, the federal government anticipates real GDP to grow by a moderate 1.0%. The lower annual rate of growth compared with the previous year is partly attributable to a very slight carry-over effect from 2017. GDP growth will primarily be driven by domestic demand, which is expected to remain strong (see **Figure 3**). Private consumption is projected to increase by 1.3% in real terms and will thus make a significant contribution to growth. This trend will be driven largely by continued increases in income and employment. Gross wages and salaries are projected to increase by 4.2%. Changes affecting taxes and social security contributions that came into effect at the beginning of 2019 counteract fiscal drag effects and are thus expected to have a noticeable positive effect on net wages (expected rise of 4.8%). Disposable incomes are projected to see a substantial rise of 2.8% owing to (a) the increase in social benefits other than in kind, which is partly a result of federal government decisions, and (b) the pension increase that is expected to come into effect on 1 July.

Despite the uncertainties emanating from the external economic environment, gross fixed capital formation will probably continue to increase, as there are sound reasons for expansion investment in the business sector. Examples include the high level of capacity utilisation, well-filled order books and favourable financing conditions as a result of low interest rates and high liquidity of businesses (see **Figure 4**). Given the weaker momentum of the global economy, however, investment in machinery and equipment is expected to grow at a slightly lower rate (+2.3%) than in 2018. In contrast, construction investment is likely to post a marked rise (+2.9%), as the strong labour market, increases in household income and low interest rates continue to favour private residential construction. Public investment spending will also expand significantly once again in 2019. However, the marked rise in construction prices indicates increasing supply-side constraints.

Global growth lost momentum last year. All larger member states within the euro area recorded weaker growth than in the previous year. International organisations expect the pace of economic growth to continue to lose steam in the current year. As a result, it is anticipated that real exports will grow at only a moderate rate of 2.7% in 2019. The automotive industry could make a positive contribution once the problems with the transition to the new emissions testing standard are resolved. Due to dynamic levels of domestic demand, imports are expected to increase by a comparatively high 4.0%. The current account surplus is projected to continue to fall to approximately 7¼% of GDP.

The labour market will most likely continue to do well and play a key role in supporting the German economy. However, a number of leading labour market indicators, such as the number of vacant positions, have recently recorded a slight weakening. Based on this, it is reasonable to assume that employment growth in 2019 might not continue at the same rate as in previous years. Overall, employment is expected to expand by roughly 390,000 in 2019, bringing employment levels to a new record high of 45.2m.

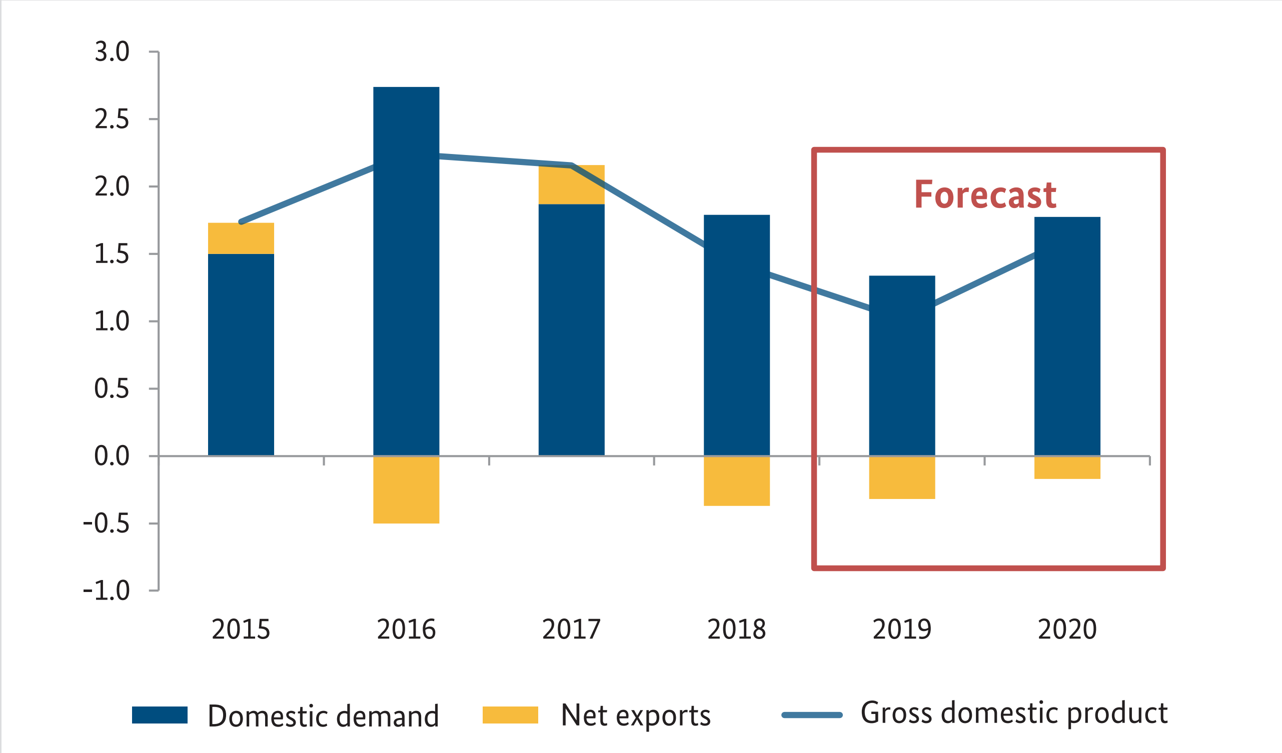
Consumer price inflation is projected to stand at 1.5% in 2019, slightly lower than in the previous year. This is partly due to the fact that prices for energy products are likely to be lower than in 2018. Core inflation is projected to reach 1.6%.

As a result of the somewhat slower pace of growth in 2018, the positive output gap between actual GDP and potential output has narrowed slightly. In view of the projected weakening of economic growth, the output gap will continue to decline by an estimated 0.4 percentage points in 2019, falling to 0.4% of potential output. The federal government assumes that real GDP will increase by 1.6% in 2020, of which approximately 0.4 percentage points are attributable to additional working days in the 2020 calendar year. The medium-term projection for the 2021–2023 period assumes average annual GDP growth of 1.1% (see **Figure 6**). The positive trend on the labour market is expected to continue. The number of people in work is projected to increase to approximately 45.4m by 2023. Domestic demand will remain a key driver of growth.

The moderate projected rate of GDP growth in the 2021–2023 period is attributable, on the one hand, to the technical assumption that the output gap will have closed by 2023. On the other hand, estimated potential output growth is projected to decline from currently 1.5% to 1.2% in 2023. The reason for this is a weaker – and, in 2023, negative – contribution of labour to growth. With labour force participation already extremely high and structural unemployment very low, there is very little scope for increasing potential output by further activating the domestic working-age population. Alongside the immigration of skilled

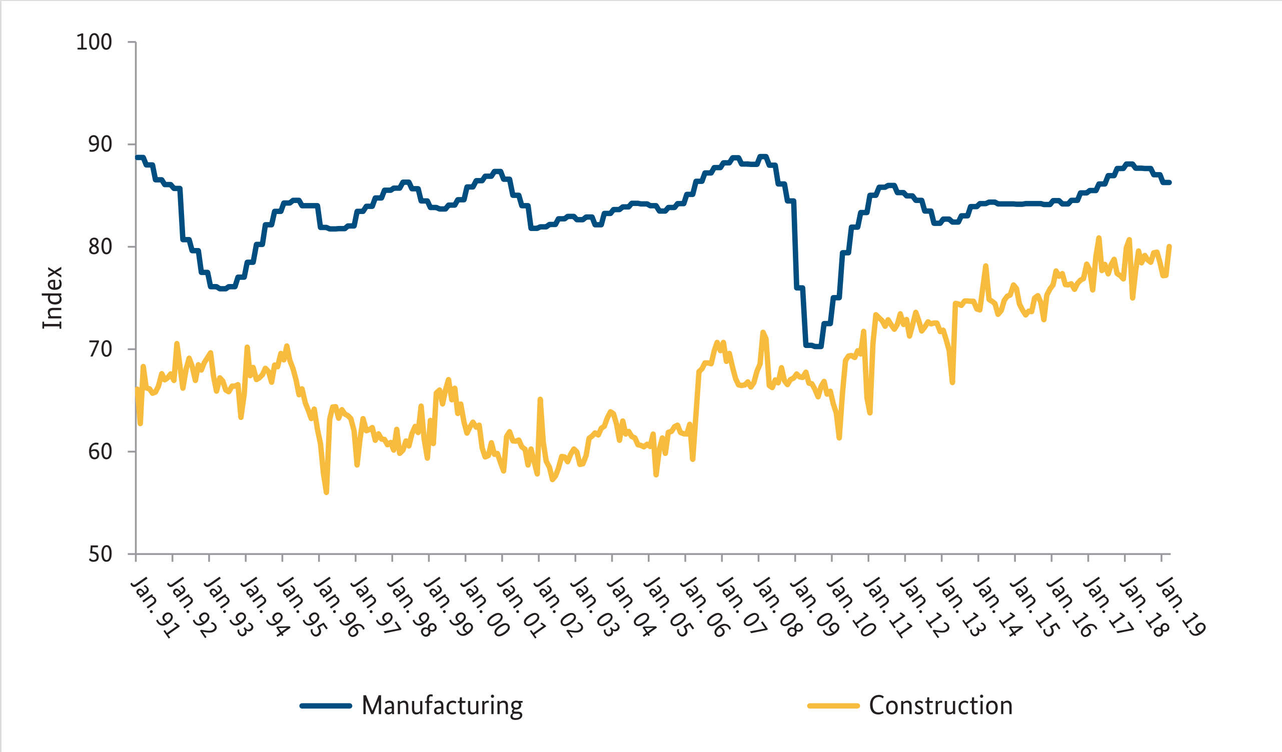
labour, productivity-enhancing measures arising from the increased use of digital technology, both in the private sector and in public administration, can be expected to become even more important in the foreseeable future. This is made even more pressing by demographic trends, including the baby boomer generation reaching retirement age.

Figure 3: Factors contributing to real GDP growth in percentage points



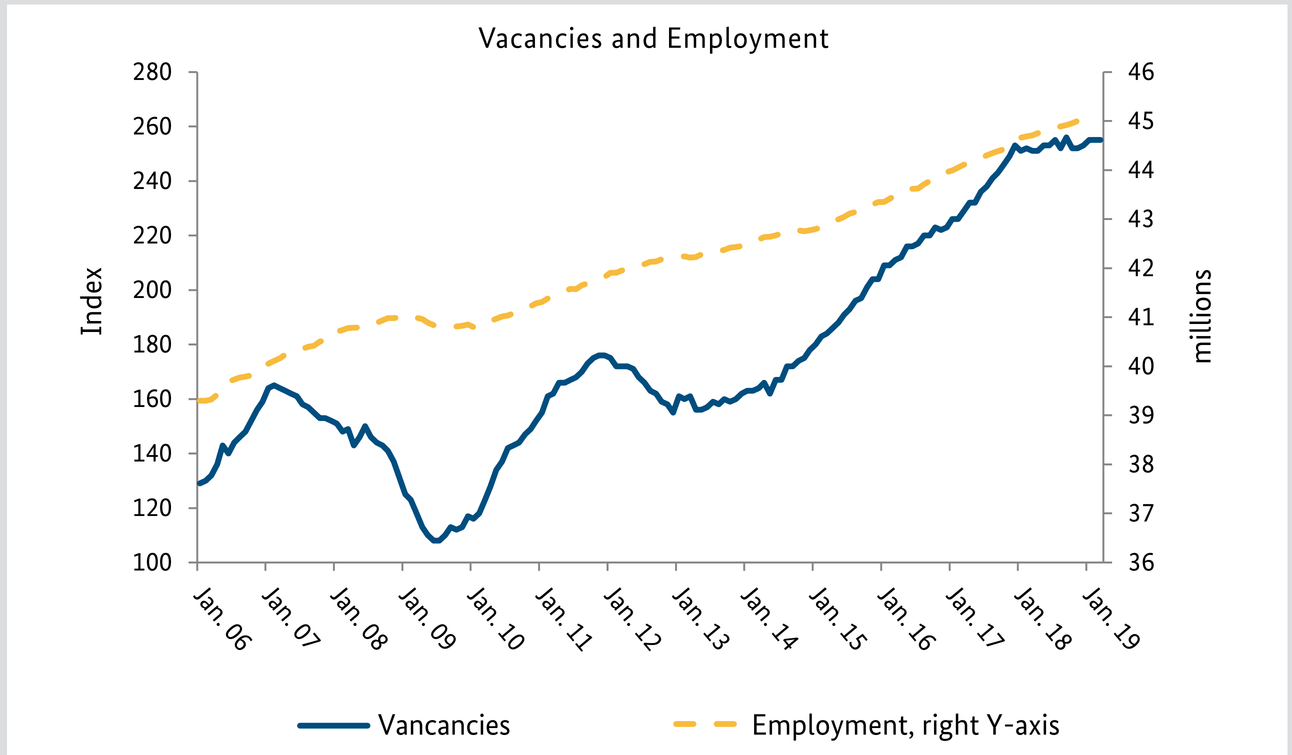
Source: 2015-2018: Federal Statistical Office; 2019-2023: annual projection by the federal government

Figure 4: Capacity utilisation in Germany



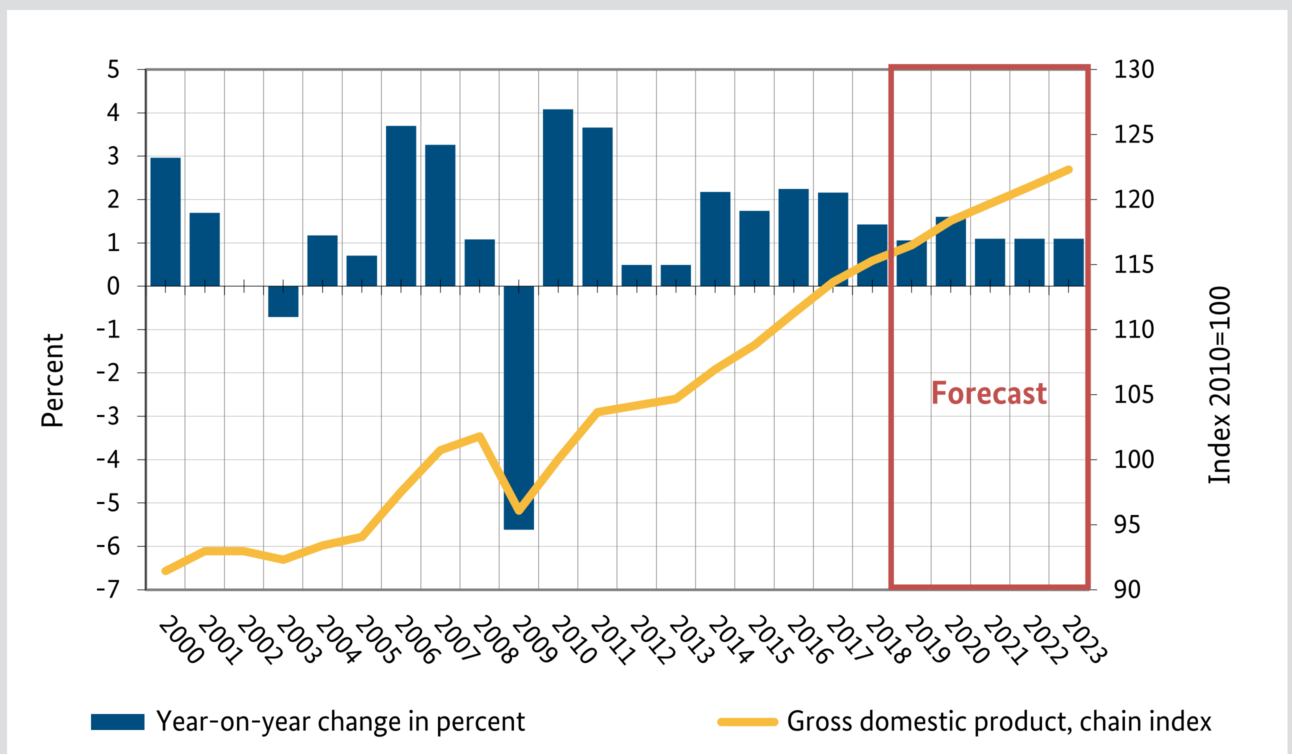
Source: ifo Institute

Figure 5: Labour market trends in Germany



Source: Ifo Institute, Federal Employment Agency, Federal Statistical Office

Figure 6: Gross domestic product, in real terms



Source: 2000-2018: Federal Statistical Office; 2019-2023: annual projection by the federal government

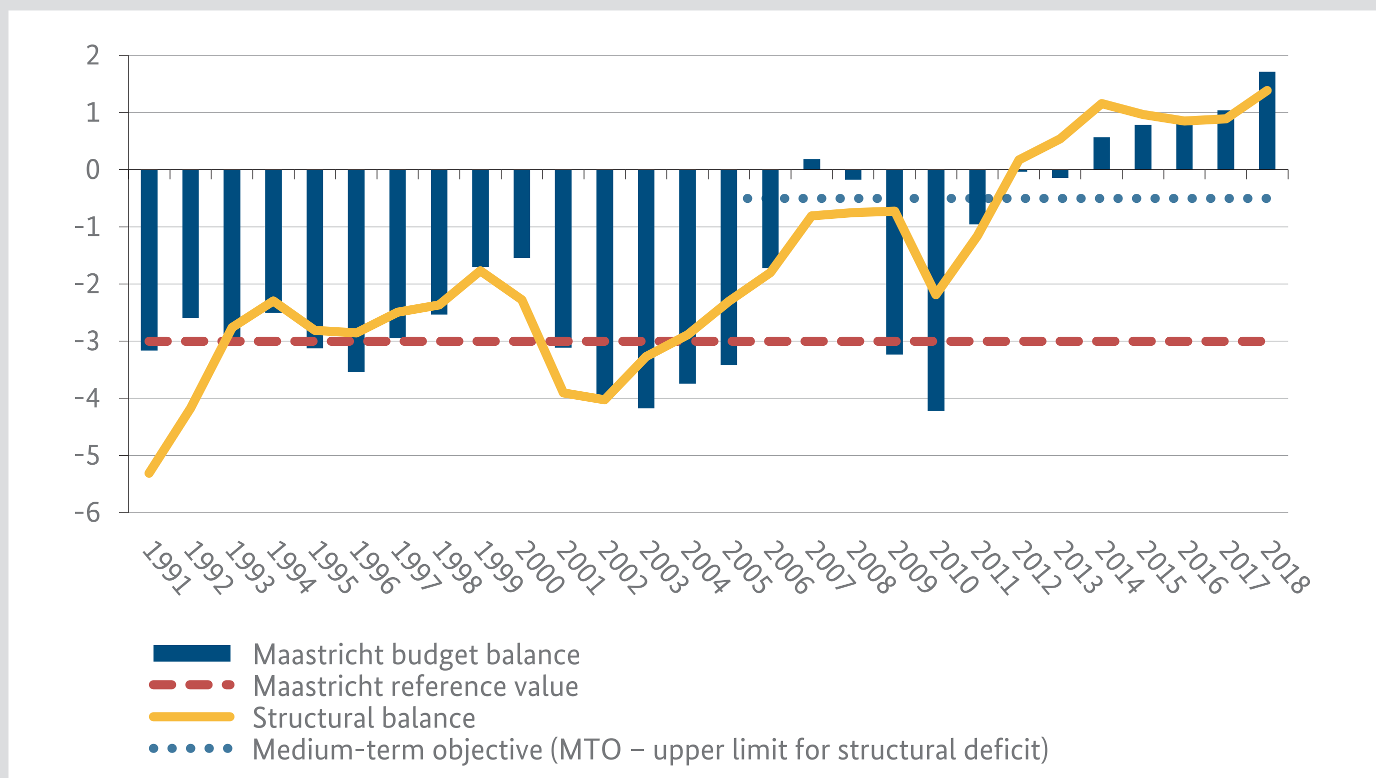
3. German fiscal policy in the European context

3.1 The rules of the Stability and Growth Pact and the Fiscal Compact and their implementation in Germany

The Stability and Growth Pact (SGP) requires member states to bring their budgets close to balance over the medium term and to set their own binding targets to this end. The SGP also sets upper limits on budget deficits and debt ratios. Compliance with these targets and limits serves to safeguard each euro member state's capacity to act. This includes flexible rules that allow for investment as well as structural reforms to enhance growth potential. In this way, the SGP requires that all EU member states pursue stability-oriented fiscal policies as a precondition for ensuring strong, sustainable growth in Europe.

In 2018, Germany once again complied in full with the rules of the SGP. The country successfully kept its nominal deficit well below the upper limit of 3% of GDP. The actual general government fiscal balance of the Federation, *Länder*, local authorities and social security funds, including off-budget entities, stood at +1.7 % of GDP in 2018. As **Figure 7** shows, the general government budget recorded a structural surplus of 1.4% in 2018.

Figure 7: Comparison of structural and actual fiscal balance (in % of GDP)



1995: Excluding asset transfers resulting from the assumption of debt owed by the Treuhand privatisation agency and German Democratic Republic housing construction companies. When this factor is included, the general government deficit amounted to 9.4% of GDP.
2000: Excluding UMTS proceeds. When this factor is included, the general government budget ran a surplus of 0.9% of GDP.

Source: Federal Statistical Office, February 2019; Finance Ministry calculations

Alongside strong GDP growth, the general government budget surpluses of recent years have contributed significantly to reducing the debt-to-GDP ratio, which is on a sustained downward path. In 2018, the debt-to-GDP ratio fell by 3.6 percentage points to 60.9% of GDP. As part of the reforms adopted in 2011 to strengthen the SGP, the EU introduced the "1/20 rule" as a way to spur the reduction of excessive debt levels. This rule, which is binding on all member states, requires that the gap between a member state's debt level and the 60% Maastricht upper limit be reduced by at least 1/20 per year, averaged over the most recent three years. For Germany, this translates into a required reduction of the debt-to-GDP ratio by an annual average of approximately 3 percentage points in the relevant three-year period from 2016–2018. The reduction actually achieved was even higher, meaning that Germany also complied with this SGP rule by a comfortable margin.

Germany is currently subject to what is known as the preventive arm of the SGP. Member states subject to measures of the SGP's preventive arm must, over the medium term, achieve budgets that are close to balance or in surplus. To this end, they set a medium-term objective (MTO) for their general government structural budget balance. The structural balance is determined by adjusting the nominal balance for cyclical and one-off effects. Euro area member states must also comply with the fiscal compact (Treaty on Stability, Coordination and

Governance in the Economic and Monetary Union), which stipulates that the general government budget must be balanced or in surplus. This is achieved if the MTO is met. A member state whose ratio of general government debt and GDP at market prices is significantly below 60% and whose risks in terms of the long-term sustainability of public finances are low is permitted to increase the structural deficit under its MTO to a maximum of 1.0% of GDP at market prices. With its Stability Programme, Germany retains its target of a structural deficit no higher than 0.5% of GDP.

The requirements of the SGP's preventive arm also include an expenditure benchmark, which limits permissible increases in government spending for member states that are on the adjustment path towards their MTO or are just reaching it. The expenditure benchmark is not binding if a member state outperforms its MTO and is not at risk of failing to comply with the MTO throughout the duration of the programme. This is the case for Germany.

3.2 Fiscal situation and strategic direction

On 22 January 2017, the ECOFIN Council issued the following recommendations to euro area member states for their fiscal policies:

"While pursuing policies in full respect of the Stability and Growth Pact, support public and private investment and improve the quality and composition of public finances. Rebuild fiscal buffers, especially in euro area countries with high levels of public debt. Support and implement EU actions to combat Aggressive Tax Planning. Shift taxes away from labour and strengthen education and training systems and investment in skills, as well as the effectiveness of active labour market policies that support successful labour market transitions. Promote quality job creation and address labour market segmentation and ensure adequate and sustainable social protection systems across the euro area."

The federal government takes these guidelines into account in its fiscal policy. It has set itself the goals of enhancing the German economy's growth drivers and future viability, strengthening social cohesion, and ensuring that public finances are sound. Fiscal policy conditions have been highly favourable so far, with a strong labour market, record levels of employment, above-average tax receipts and low interest on government debt. However, it is essential that Germany be prepared for the many challenges ahead.

These include the financing of climate protection measures and the associated phasing-out of coal mining and the production of electricity from coal, as was recommended by an expert commission; the assumption of responsibility at the international level with regard to security and development cooperation; and Germany's future financial contributions to the European Union budget. There are also demographic challenges. The baby boomer generation will soon start to reach retirement age. The

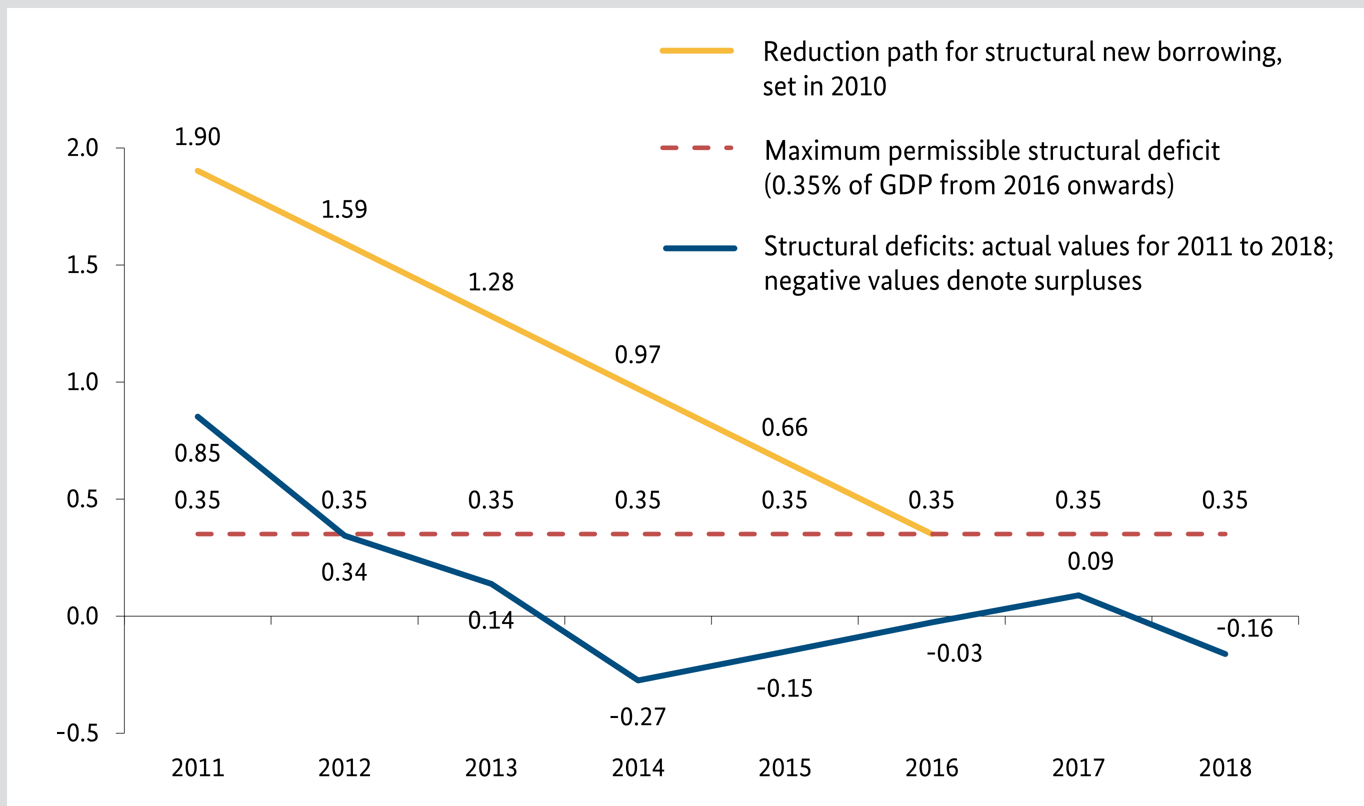
consequences of this will put fiscal policy to the test. The federal government has therefore appointed a commission on intergenerational fairness that will look at ways to secure and develop statutory pension funds as well as the two other pillars of the pension system after 2025. It will issue its recommendations by March 2020.

The German government is pursuing fiscal policies that promote education, research and digital innovation through increased investment, thereby boosting productivity and growth potential. According to the federal government's current projections, the general government budget will once again post a substantial surplus in 2019, but this surplus will be smaller than the surplus recorded in 2018 (+¾% of GDP in 2019 compared with 1.7% in 2018). In 2019, Germany plans to take fiscal policy measures that will result in additional spending in the amount of 0.5% of GDP and reduced revenue in the amount of 0.2% of GDP. According to the projections, the cyclically adjusted primary balance will decline by ¾ of a percentage point, from 2.2% to 1½% of GDP, meaning that Germany's fiscal policy approach can be classified as distinctly expansionary. Despite the fact that economic growth has slowed, the German economy is still running at slightly excess capacity. The positive output gap is set to narrow from 0.8% of potential GDP in 2018 to 0.4% in 2019. Germany's expansionary fiscal policy appears appropriate in order to counteract cyclical and external economic risks.

Thanks to the federal government's policies, general government investment by the public sector (+7¾ yoy) and investment by the Federation (€38.9bn) will both rise to record levels in 2019. The federal government's investments until 2023 will focus on priority areas that are crucial for Germany's future, namely infrastructure, education, universities, research and digital technology. Because many of these areas fall within the remit of the *Länder* and local authorities, the federal government has taken steps to equip these government levels with substantial financial resources.

Another key aim pursued by the German government is to enhance social equity and strengthen social cohesion. To this end, the government is supporting lower- and middle-income groups as well as families. Funds for the construction of social housing are being increased in 2019. In addition, more funding will be provided for the integration of long-term unemployed persons into the labour market. The Federation's high levels of social spending reflect the priority given to this area: in 2019, social spending will rise to €173m. Its share in the federal budget will increase to more than 50%. At the general-government level, social spending will account for 24¼% of GDP.

Figure 8: Change in the Federation's structural deficit (in % of GDP)



The financial balances of the Energy and Climate Fund (2011 onwards), the *Aufbauhilfefonds* (a special relief fund established to remedy the damage caused by the June 2013 floods in Germany, 2013 onwards), the Local Authority Investment Promotion Fund (*Kommunalinvestitionsförderungsfonds*, a special fund to promote investment at the local authority level, 2015 onwards) and the Digital Infrastructure Fund (2018 onwards), all of which are relevant for determining the Federation's structural deficit, are taken into account.

Source: Federal Ministry of Finance

3.3 Fiscal policy measures in terms of expenditure and revenue

The aim of investing in infrastructure, education and research is to enhance Germany's potential for growth. Boosting public investment is a fiscal policy priority for the federal government in the current legislative term. In 2018, the Federation made available a total of €14.3bn for investment in federal transport infrastructure. This figure will be increased to approximately €14.6bn in 2019. Moreover, the federal government continues to support the *Länder* and local authorities with their investments, including the areas of social housing and local public passenger transport. This is being achieved by increasing the *Länder's* share of VAT revenues and, starting in 2020, providing higher supplementary grants to financially strapped *Länder*, as set out in the 2017 reorganisation of financial relations between the Federation and the *Länder*. The federal government is making available a total of €5bn for the construction of social housing over the 2018–2021 period. Federal government funds for local public passenger transport are being increased by €1.7bn over the period ending in 2022.

In addition, the federal government has created a special digital infrastructure fund, most of which (70%) will be used to support the nationwide roll-out of gigabit networks. These efforts will be co-financed by the *Länder* and local authorities. The remaining 30% will be used to support the *Länder* in implementing the "Digital Pact for Schools", which aims to improve conditions at all schools across Germany to ensure that education becomes better geared towards digital processes. The federal government already allocated €2.4bn to the special fund in 2018. Starting this year, revenues from the allocation of 5G frequencies will be paid into the digital infrastructure fund.

An amendment to the Basic Law is necessary in order to implement some of the relief measures that will benefit the *Länder*.

Basic Law amendment to increase the financial support provided by the Federation to the *Länder*

New legislation amending the Basic Law (*Gesetz zur Änderung des Grundgesetzes*), especially Articles 104c, 104d and 125c, gives the Federation additional powers to provide financial support for the investments of the *Länder* and local authorities in local education infrastructure, the construction of social housing and local public rail transport.

Under the German constitution, responsibility for education infrastructure lies with the *Länder*. In view of the considerable need for investment in this area, the Federation will, in future, be able to provide more support to the *Länder* for certain tasks with the help of ring-fenced co-financing. These tasks include local education infrastructure, especially all-day schooling and childcare, digital technologies and vocational schools. In the past, the Federation's ability to provide financial assistance was limited to co-financing the investments made by financially strapped local authorities. This constraint has now been lifted (Article 104c of the Basic Law).

The first stage of Germany's federal reforms (*Föderalismusreform I*) in 2006 transferred sole responsibility for promoting social housing to the *Länder*. However, the situation in the housing market has become more strained in many regions, especially in large metropolitan areas. Property prices and rents have risen considerably in recent years. The aim is to allow the Federation to counteract these tensions by allocating funds for the construction of social housing. In future, the Federation will be able to provide direct, ring-fenced financial assistance to the *Länder* for the construction of social housing (new Article 104d of the Basic Law).

Under another amendment (Article 125c of the Basic Law), the federal government is now already able to top up funds for special programmes in the area of local public rail transport under section 6(1) of the Local Transport Financing Act (*Gemeindeverkehrsfinanzierungsgesetz*), a change that had previously been slated for 2025 under the 2017 reorganisation of financial relations between the Federation and the *Länder*.

The government is strengthening social cohesion with the help of targeted measures in the areas of tax policy, education, and social security. To promote early childhood education and care and improve work-life balance, the Federation will allocate €5.5bn over the period until 2022 to improving quality in child day care and making it more affordable for parents. Starting on 1 July 2019, the maximum child supplement rate will be raised from €170 to €185 per month and child. This supplementary benefit is available to low-income families in which parents' earnings are not sufficient to fully meet children's subsistence needs.

A new home ownership-related child benefit (*Baukindergeld*) came into force in September 2018. It provides targeted support to families and single parents for their first purchase of owner-occupied housing. The amount of the benefit is €1,200 per child per year for a period of up to ten years. A sum of €570m has been allocated for this in the 2019 federal budget; approximately €3.8bn will be provided in the period up to 2023.

The federal government's financial burden has increased in connection with the large number of refugees who have been taken in in recent years. Since 2015, the federal government has provided substantial relief to the *Länder* and local authorities for refugee-related spending. *Länder* receive €670 per asylum seeker per month during the asylum procedure and a sum of €670 for each asylum seeker whose application is denied. Including ex-post accounting and a part payment for September–December, the Federation's additional contribution for 2018 stood at approximately €1.6bn. In addition, the federal government provided a €2bn block grant to the *Länder* for integration measures. The federal government also met all additional accommodation costs for persons granted asylum status or protected status. In total, the refugee-related relief provided to the *Länder* and local authorities amounted to approximately €7.5bn in 2018. This will be continued in 2019. A total of approximately €6.2bn has been allocated for this purpose in the 2019 federal budget.

The federal government also spends significant amounts of money in crisis-hit regions and the main countries of origin of refugees, partly in the hope of reducing potential migration flows. Last year, about €6.9bn were allocated to addressing the root causes of refugee flows and supporting refugees in their regions of origin. The federal government plans to spend a further €6.9bn on this in 2019.

In the area of international development cooperation, the federal government has made a commitment, conditional upon the availability of funds, to at least maintain the current ODA ratio (Official Development Assistance ratio, which measures spending in relation to gross national income), not including domestic refugee-related costs that are eligible as ODA. According to the OECD's calculations, Germany's 2017 ODA spending amounted to US$25.0bn, which translates into an ODA ratio of 0.67% of GDP (including eligible domestic refugee-related costs).

Defence expenditure, according to NATO's definition, will increase by about €5.2bn to a total of €47.3bn in 2019 compared with actual spending in 2018. This will allow the Federal Armed Forces to improve staffing and continue to modernise equipment, thus reinforcing the turnaround in defence spending that has already been put into action. In this way, Germany is meeting its mutual defence obligations towards its NATO allies and supporting the EU's Common Foreign and Security Policy.

Germany is fulfilling its international responsibilities in other areas, too. The German government has taken on an appropriate share of international climate protection spending and is one of the world's largest contributors. In 2015, Germany announced that it would aim to increase its contribution to international climate protection fi-

nancing to €4bn by 2020, using budgetary resources and grant equivalents[1] from development loans. At the Climate Change Conference in Katowice in December 2018, the signatory states of the Paris Agreement were able to agree on a comprehensive rulebook. At an early stage of the negotiations, Germany announced that it would increase its contribution to the Green Climate Fund substantially. Initially, in 2015, the German government pledged €750 to the fund, which will be provided from the federal budget by 2023. In Katowice, the federal government announced that it would provide up to €1.5bn in additional resources to the fund starting in 2020.

To implement climate protection goals in Germany, the federal government had set up an expert commission for growth, structural change and employment. It presented its final report at the end of January 2019, in which it recommended phasing out coal mining and the production of electricity from coal by 2038 at the latest. The German government is currently analysing these recommendations, including the potential costs. To date, the government has earmarked a total of €2.5bn to support the necessary structural changes in its financial plan to 2023.

On the revenue side, the federal government is placing an emphasis on growth-friendly and socially equitable tax policy. Lower taxes and social security contributions, especially for families and lower- and middle-income earners, are boosting disposable incomes and creating positive incentives for labour market participation. The government's changes to social security contributions are particularly advantageous for lower-income groups. The current sliding scale for jobs with reduced employee social security contributions (known as "midi-jobs") is being expanded towards the threshold for employment subject to unlimited social security contributions. From 1 July 2019 onwards, the upper limit on earnings for reduced contributions will be raised from €850 to €1,300. In addition, the lower pension contributions of people in this group will no longer result in a lower pension entitlement. In future, someone on a gross monthly income of €850 will pay about €23 less per month in social security contributions. The changes will benefit up to 3.5m people.

In addition, the German government is reducing the contributions of those insured under the statutory health insurance system by about €8bn per year. Contributions to statutory health insurance are now once again financed in equal parts by employers and employees, a change that came into effect at the beginning of 2019. This lowers the average supplementary premium by 0.5 percentage points of the income subject to social security contributions in 2019. Starting at the beginning of 2019, the contribution rate to unemployment insurance was also lowered by 0.5 percentage points of gross earnings subject to contributions. This was possible thanks to the reserves that had been accumulated in the unemployment insurance system as a result of the sustained employment boom on the German labour market. To cover additional costs arising from the expansion of services in the long-term care sector in the current legislative term and thus ensure that contributions remain stable until 2022, the contribution rate in the social long-term care insurance system was increased by 0.5 percentage points starting on 1 January 2019.

The volume of the various tax relief measures planned by the federal government will significantly exceed €25bn per year by the end of the legislative term in 2021. For example, the Act to Reduce Family Tax Burdens and to Modify Additional Tax Regulations (*Gesetz zur steuerlichen Entlas-*

1 The grant equivalent is the difference between the face value of a loan and the present value of its debt service (principal and interest, discounted by the rate set by the OECD's Development Assistance Committee).

tung der Familien sowie zur Anpassung weiterer steuerlicher Regelungen) entered into force at the beginning of 2019. It sets out increases in basic personal allowances, child benefit and tax-free child allowance as well as steps taken to counteract bracket creep that will make taxpayers as a whole €9.8bn better off each year. In addition, starting in 2021, the solidarity surcharge will be eliminated for roughly 90% of income tax payers previously subject to it, which corresponds to a tax cut of approximately €10bn.

The federal government is creating tax incentives for private residential construction. The Act on Tax Incentives for the Construction of New Rental Housing (*Gesetz zur steuerlichen Förderung des Mietwohnungsneubaus*) introduces a time-limited special depreciation allowance for affordable new rental properties. The aim is to encourage investment in new rental housing as quickly as possible. This measure will reduce the general government tax take by a projected €0.3bn per year by the end of the projection period.

In addition, changes to real property tax are to be introduced before the end of the year. Real property tax accrues solely to the local authorities and is one of their main sources of income. In 2018, revenue from this tax amounted to roughly €14.2bn . Until now, real property tax has been calculated on the basis of assessed values for houses and undeveloped land dating from 1964 (in the *Länder* of former West Germany) or 1935 (in the *Länder* of former East Germany). In April 2018, the Federal Constitutional Court declared this to be unconstitutional and demanded a change by the end of 2019. The main point of criticism was that the values applied no longer sufficiently reflect actual changes in value. The reform will observe the requirements of the Federal Constitutional Court, maintain current revenue levels and retain the right of local authorities to apply a multiplier.

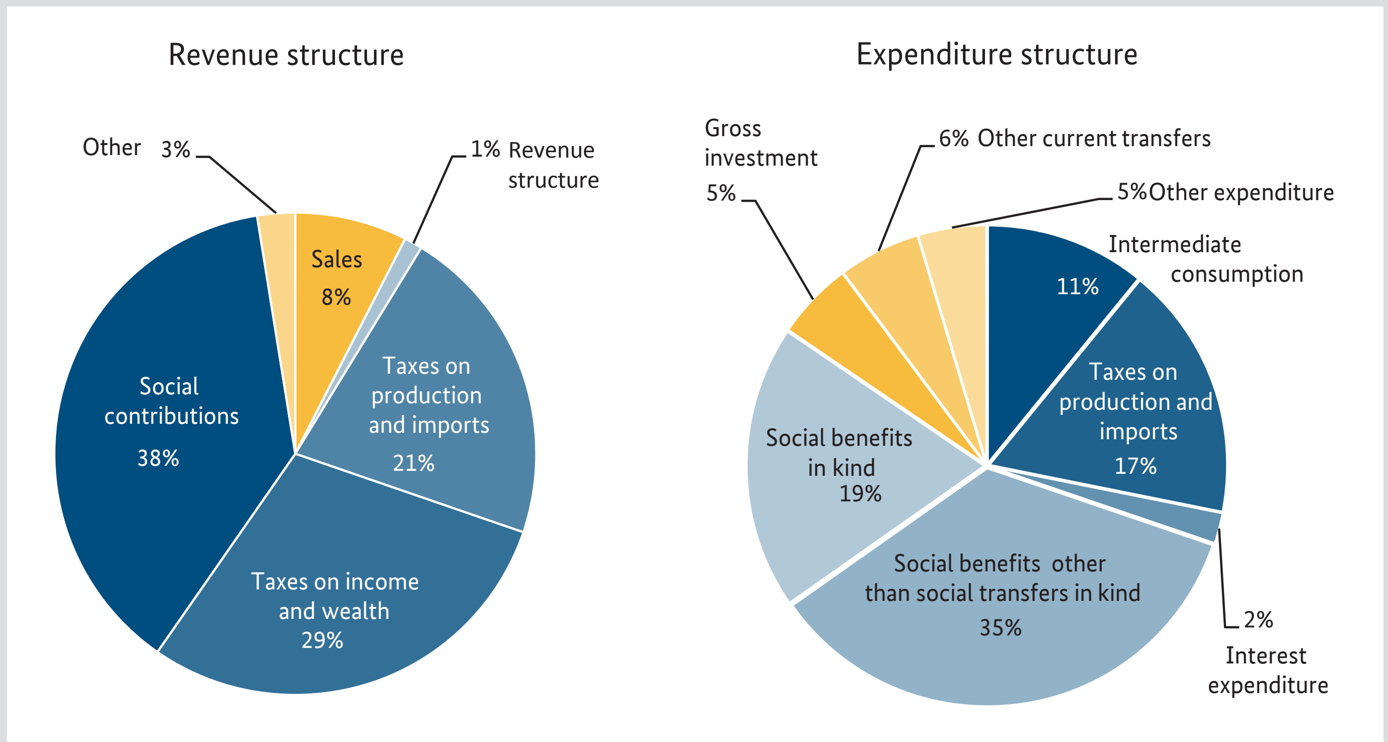
The federal government also wants to ensure that businesses enjoy growth-friendly and fair tax conditions. To this end, it plans to present draft legislation introducing tax incentives for research in the first half of 2019.

Taking effective action against tax fraud and tax avoidance is another key priority for the federal government. In December 2018, Germany adopted legislation aimed at avoiding losses in VAT revenue in the online goods trade by making marketplaces liable for remitting VAT. In addition, the German government is intensifying cross-border cooperation to combat international tax fraud and tax avoidance, especially through comprehensive exchange of information, data and experience with authorities in other countries.

The German government is committed to fair and efficient taxation beyond Germany's national borders. Further measures to combat base erosion and profit shifting (BEPS) are necessary as a follow-up to the successful G20 and OECD project in this area. In addition, a comprehensive and internationally coordinated approach is needed in order to tackle the challenges of taxing the digital economy. To address these two issues, the OECD is currently discussing the redistribution of taxation rights and – at the joint initiative of Germany and France – measures for effective international minimum taxation. A final report will be published in 2020.

At the EU level, Franco-German cooperation on a common corporate tax base will inject fresh momentum into the negotiations in the Council of the European Union on the harmonisation of direct taxes. This cooperation is based on the European Commission's draft directive. At a bilateral ministerial meeting at Schloss Meseberg outside Berlin in June 2018, Germany and France agreed on a joint policy position and also gave new momentum to deliberations about a European financial transaction tax.

Figure 9: General government revenue and expenditure structure 2018



Source: Federal Statistical Office, February 2019

3.4 Reorganisation of financial relations between the Federation and the *Länder*

The fiscal strategy outlined above addresses the country-specific fiscal policy recommendations issued by the Council of the European Union on 13 July 2018. The Council recommends that Germany continue to increase investment while respecting the medium-term objective. Alongside fiscal measures, the Council also recommends structural reforms to promote private investment. What is new is the explicit recommendation that Germany step up its efforts to ensure the nationwide availability of high-capacity broadband infrastructure. The Council identifies a need and a scope for fiscal policy action to improve the efficiency and investment-friendliness of the tax system and address the high burden of taxes and social security contributions, especially for second earners and low-wage workers.

In its country report on Germany, which was issued on 27 February 2019, the European Commission asserts that Germany has made limited progress in implementing the country-specific recommendations. The European Commission commends Germany for having boosted public investment and taken measures to reduce taxes and social security contributions. However, it calls for further improvements, especially in the area of investment at the local authority level. The European Commission recognises capacity constraints in the construction sector as an obstacle that could have undesirable effects on construction prices and corporate investment.

A detailed description of the measures taken by the federal government to address these challenges and implement the country-specific recommendations of the Council of the European Union can be found in Germany's 2019 NRP, which was adopted by the federal cabinet on 10 April 2019.

4. General government budget balance and debt level projection

Medium-term objective

Germany's medium-term objective (MTO) is a structural general government balance of −0.5% of GDP.

4.1 Trends in general government revenue and expenditure

Record revenue levels as labour market conditions remain robust for the time being

Revenue was up by 4.7% on the year in 2018. This means that, once again, revenue grew at a faster rate than GDP.[2] Very positive conditions on the labour market again played a key role in driving this result. Tax revenue increased by 4.5% on the year, and revenue from social security contributions climbed by 4.2% on the year. As a result, the revenue ratio – which, in addition to revenue from taxes and social security contributions, also includes other government revenue such as revenue from business activities and fees – rose from 45.0% to 45.6% of GDP. The tax-to-GDP ratio (based on the definition used in the national accounts) rose as well, from 23.4% to 23.7% of GDP.

Tax revenue is expected to grow at a slower pace during the projection period to 2023, due mainly to weaker economic growth and measures to reduce income tax. During the projection period, both tax revenue and nominal GDP are expected to grow by an annual average of about 3%. The tax-to-GDP ratio will be approximately 23¾% at the outset of the projection period. It is then expected to decline temporarily to about 23½ due to a reduction in the solidarity surcharge before rising back to 23¾% by the end of the projection period. The social contribution ratio will remain basically constant at about 17% of GDP during the early part of the projection period, before climbing to roughly 17¼% of GDP by the end of the projection period. This increase is due to a sharper increase in social security contributions that will kick in towards the end of the projection period (for example, a 0.1 percentage point reduction in the unemployment insurance contribution rate that took effect in 2018 on the basis of a government ordinance will expire in 2022).[3]

According to the projection, the revenue ratio is expected to fall during the early part of the projection period to about 45% of GDP before rising slightly to roughly 45¼% of GDP by the end of the period.

2 Where not otherwise specified, all data contained in this projection are based on the definitions laid down in the 2010 European System of Accounts (in accordance with Regulation (EU) No 549/2013).

3 However, a separate 0.4 percentage point reduction in the unemployment insurance contribution rate that also took effect in 2018 is not time-limited.

Table 1: Trends in the government revenue ratio

	2018	2019	2020	2021	2022	2023
			in % of GDP			
Taxes	23.7	23 ¾	23 ¾	23 ½	23 ½	23 ¾
Social security contributions	16.9	17	17	17	17	17 ¼
Taxes and social security contributions	40.5	40 ¾	40 ¾	40 ½	40 ½	40 ¾
Total revenue						
April 2019 update	**45.6**	**45 ½**	**45 ¼**	**45**	**45**	**45 ¼**
April 2018 update[4]	44 ¾	44 ¾	44 ¾	44 ¾		

Differences between (a) the total tax ratio and (b) the sum of the tax ratio and the social security contribution ratio are due to rounding; figures for the projection years are rounded to a quarter percentage point of GDP.

Government expenditure ratio will remain steady at a high level

Government expenditure rose by 3.2% on the year in 2018. This rate is markedly lower than the rate posted in 2017. One reason for this slower rate of increase is that the 2018 federal budget was not adopted until mid-year, and the interim budget that was in place until that time restricted spending growth. The increase in expenditure in 2018 was roughly the same as the rate of GDP growth. As a result, the government expenditure ratio remained unchanged on the year at 43.9% of GDP.

During the projection period, general government expenditure is expected to grow by an annual average of 3½% and will therefore exceed the rate of nominal GDP growth. General government expenditure will grow at a particularly strong rate in 2019 (+4¾%) due to increases in federal spending. Government consumption expenditure is expected to increase at an annual average rate of 3¾% during the period up to 2023. Total social spending (i.e. social benefits other than social transfers in kind as well as social benefits in kind) is expected to increase at an even faster rate of about 4% per year on average. As a percentage of GDP, social spending is expected to climb steadily from 23.8% in 2018 to approximately 25% in 2023.

Government gross fixed capital formation increased by 7.6% on the year in 2018 (following a jump of 7.5% in 2017). This rate of increase is disproportionately high in relation to the growth rates of both total expenditure and GDP. Government investment will continue to grow at an above-average pace during the early part of the projection period; towards the middle of the period, investment levels will remain significantly higher, but the rate of growth will be somewhat more moderate.

4 At the time when Germany submitted its Stability Programme for 2018, no financial plan for the years up to 2022 had yet been prepared because the new government had formed only shortly before. See the 2018 German Stability Programme, p. 29, footnote 1.

Table 2: Trends in the government expenditure ratio

	2018	2019	2020	2021	2022	2023
				in % of GDP		
April 2019 update	**43.9**	**44 ½**	**44 ½**	**44 ½**	**44 ½**	**44 ½**
April 2018 update	44	43 ½	43 ½	43 ¼		

Figures for the projection period are rounded to a quarter of a percentage point of GDP.

4.2 Trends in the government budget balance

The general government budget posted a surplus of 1.7% of GDP in 2018. In particular, the public budgets of the Federation, *Länder* and local authorities benefited from dynamic tax revenue trends, especially from profit-based taxes. The investment income received by the Federation also contributed to this positive result, due mainly to the Bundesbank's significantly higher profits. In addition, social security funds recorded strong increases in social security contributions. At the same time, government budgets benefited from lower interest expenditure. As a result, all subsectors of the general government ran budget surpluses in 2018.

Public budgets used part of the 2018 surpluses to build up financial reserves. For example, the Federation allocated an additional €11.2bn to the financial reserves that have been set aside to finance costs relating to the reception and accommodation of asylum-seekers and refugees.

A general government surplus amounting to ¾% of GDP is expected in 2019. This is ¾% of GDP less than the surplus that was posted in 2018. This decrease in the rate of surplus is being driven mainly by fiscal policy measures adopted by the federal government, and by slower year-on-year growth in tax revenue due to current weaker levels of economic growth. At present, the federal government still expects another general government surplus of about ¾% of GDP in 2020. The surplus level is expected to taper to about ½% of GDP in the years from 2021 to 2023. This further lowering of the rate of surplus from 2021 onwards will be driven by the planned reduction of the solidarity surcharge and by the projected increase in the statutory pension insurance system's financing deficit.

Table 3: Trends in the general government balance

	2018	2019	2020	2021	2022	2023
				in % of GDP		
April 2019 update	**1.7**	**¾**	**¾**	**½**	**½**	**½**
April 2018 update	1	1 ¼	1 ½	1 ½		

Figures for the projection period are rounded to a quarter of a percentage point of GDP.

In 2019, the budget surplus posted by the *Länder* will increase, because two special factors that had reduced the 2018 budget balance at the state government level – namely (1) payments that Hamburg and Schleswig-Holstein had to make due to guarantee claims in connection with the sale of HSH Nordbank and (2) the assumption of local government debt in the state of Hesse – no longer apply. In turn, the discontinued assumption of local government debt by the state of Hesse will have an adverse impact on the budget balance at the local government level.

Table 4: Budget balances according to government level

	2018	2019	2020	2021	2022	2023
	in % of GDP					
Central government	0.5	0	0	0	0	¼
State government	0.3	½	½	¼	¼	¼
Local government	0.4	¼	¼	0	0	0
Social security funds	0.4	¼	¼	0	0	0
General government	1.7	¾	¾	½	½	½

Figures for the projection period are rounded to a quarter of a percentage point of GDP. Differences between the general government budget balance and the budget balances of the various levels of government are due to rounding.

4.3 Trends in the general government structural balance

Fiscal policy influences the general government budget balance mainly through the channel of budget policy, i.e. the management of revenue and expenditure. At the same time, the general government budget balance is affected by a number of cyclical, structural and exceptional factors that lie largely outside the control of the state. For this reason, EU budgetary surveillance looks at structural indicators in order to assess the impact and stance of fiscal policy. To do this, the structural balance and primary expenditure trends are compared with GDP trends at normal capacity utilisation levels.

Structural balance: Medium-term objective will be met with considerable room to spare

To determine the structural balance, the nominal balance is adjusted for cyclical influences in accordance with the EU's standardised method. One-off effects that had an impact on the nominal budget balance in 2018 (negative: payments on guarantee claims in connection with the sale of HSH Nordbank; positive: penalties paid by two automotive groups, payment by Toll Collect) are not taken into account when calculating the structural balance.

In 2018, the structural surplus for the Federation, *Länder*, local authorities and social security funds grew from 0.9% of GDP to 1.4% of GDP. The main factor driving this positive trend was a disproportionate increase in tax revenue.

The structural surplus is expected to be considerably smaller in 2019, at about ¾% of GDP. This means that the structural surplus is expected to decline at a somewhat slower pace than the general government surplus. This can be explained in particular by the fact that the cyclically induced part of the general government surplus will also decline due to a reduction in the positive output gap. The structural balance is expected to keep getting smaller in the next few years, falling to ¼% of GDP in 2022. Towards the end of the projection period in 2023, assuming that the output gap will close and the cyclical component will thus be zero, the structural surplus is expected to increase again slightly while the general government surplus remains constant.

Germany will meet its medium-term objective (a structural balance no greater than 0.5% of GDP, which is the maximum permissible structural deficit) with considerable room to spare throughout the entire projection period.

Table 5: Structural balance compared with actual balance and GDP trend

	2018	2019	2020	2021	2022	2023
Structural balance (% of GDP)	1.4	¾	½	½	¼	½
Actual balance (% of GDP)	1.7	¾	¾	½	½	½
Real GDP (% change yoy)	1.4	1.0	1.6	1.1	1.1	1.1

Figures for the projection period are rounded to a quarter of a percentage point of GDP.

Trends in general government expenditure (using the expenditure benchmark definition)

In addition to the medium-term objective, the preventive arm of the Stability and Growth Pact also includes an expenditure benchmark. Under this rule, member states that meet their MTOs without a safety margin must make sure their adjusted expenditure does not increase at a faster pace than their average nominal potential output (i.e. GDP trends under normal capacity utilisation). For the purpose of the expenditure benchmark, expenditure is adjusted for various items including interest expenditure, cyclical labour market effects, fluctuations in investment spending from the average investment level, co-financed EU programmes, discretionary measures on the revenue side, and one-off effects on the revenue and expenditure sides.

Using the expenditure benchmark definition, Germany's expenditure is projected to increase by 5½% on the year in 2019 and thus at a significantly faster pace than average nominal potential output. Expenditure growth will exceed average potential growth in the next few years before converging with the potential growth rate in 2022. Because Germany continues to meet its medium-term objective by a comfortable margin, the expenditure benchmark under Article 5 of Council Regulation (EC) No 1466/97 is not binding, in accordance with the *Specifications on the implementation of the Stability and Growth Pact*.

Table 6: Expenditure benchmark: projected expenditure and potential output

	2018	2019	2020	2021	2022	2023
Expenditure (yoy increase; according to the expenditure benchmark definition)	4.2	5 ½	4 ¼	4	3 ½	2 ¾
Nominal potential GDP growth (moving 10-year annual average)	3.2	3.5	3.3	3.2	3.2	3.2

Figures on expenditure trends for the projection period are rounded to a quarter percentage point of GDP.

4.4 Sensitivity of budget balance projection

Sensitivity analyses can provide indicators of how a projected trend is affected under altered conditions. The model used to analyse the sensitivity of the budget balance thus takes into account the possibility that the underlying macroeconomic assumptions may change. Two alternative scenarios are analysed to show what would occur in the event of a one-half percentage point decrease or increase in the real GDP growth rate in the years from 2019 to 2023. All other assumptions – including interest expenditure, the projected GDP deflator and the composition of GDP – are held constant. In addition, government revenue and expenditure are assumed to respond to the GDP scenarios in a manner consistent with their long-term elasticity. The budget semi-elasticity used in the European budgetary surveillance process is applied for this purpose.

Under the positive alternative scenario – that is, if actual GDP growth were to exceed the federal government's annual projection (the baseline scenario) by one-half a percentage point per year – the budget balance would return to the 2018 level by the end of the projection period in 2023. Under the negative alternative scenario – that is, if actual GDP growth were one-half a percentage point lower than the baseline scenario – the budget balance would show a deficit of roughly ½% of GDP at the end of the projection period.

Table 7: Sensitivity of the general government budget balance projection

GDP trends according to	2018	2019	2020	2021	2022	2023
	General government budget balance in % of GDP					
- Baseline scenario	1.7	¾	¾	½	½	½
- Alternative scenarios						
• real GDP growth ½ pp p.a. below baseline		½	¼	-¼	-½	-½
• real GDP growth ½ pp p.a. above with baseline		1	1 ¼	1 ¼	1 ¼	1 ¾

Figures for the projection period are rounded to a quarter of a percentage point of GDP.

4.5 Trends in debt levels

Germany's debt-to-GDP ratio has declined steadily since 2012, from 79.9% in 2012 to 60.9% by the end of 2018.

The debt ratio's decline in 2018 is mainly attributable to the strong performance of the overall economy. All government levels (Federation, *Länder*, local authorities and social security funds) posted substantial surpluses and reduced their debt levels in 2018. As in previous years, government resolution authorities made an important contribution to debt reduction through portfolio sales.

Table 8: Trends in the debt-to-GDP ratio

	2018	2019	2020	2021	2022	2023
	Debt ratio in % of GDP					
April 2019 update	**60.9**	**58 ¾**	**56 ½**	**54 ¾**	**53**	**51 ¼**
April 2018 update	61	58 ¼	55 ¾	53		

Figures for the projection period are rounded to a quarter of a percentage point of GDP.

The debt-to-GDP ratio is expected to keep declining even after the end of the projection period. It is expected to fall by approximately 2 percentage points in 2019, to 58¾%. If this is the case, Germany's debt ratio will fall below the Maastricht reference value of 60% in 2019. The debt ratio is projected to drop to 51¼% of GDP by the end of the projection period in 2023.

5. Long-term fiscal sustainability and quality of public finances

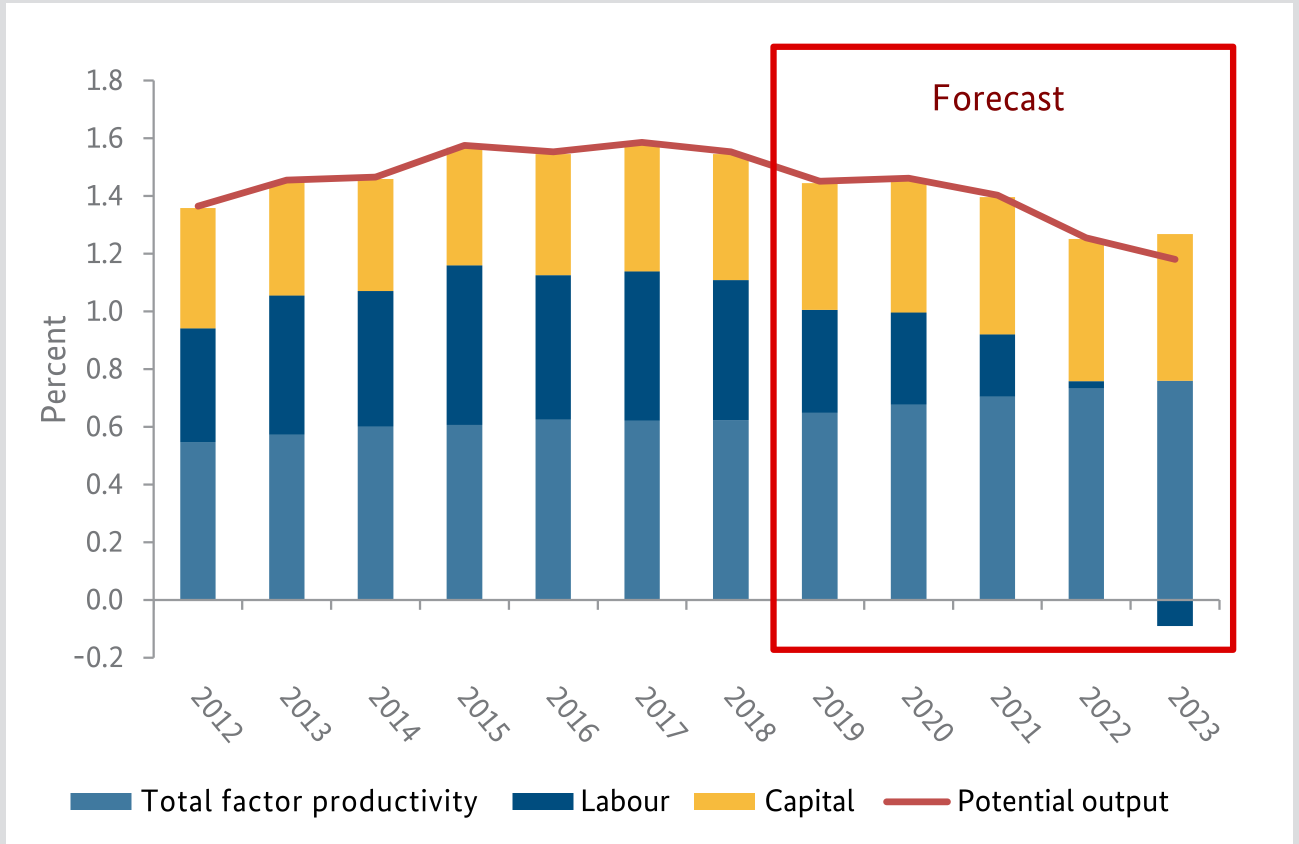
5.1 Challenges to the sustainability of public finances

Demographic trends will have a strong impact on Germany's public finances and social security systems in the foreseeable future. The current demographic situation is still relatively favourable, as the baby boomer generation is still part of the labour force. This will change noticeably once baby boomers start reaching retirement age in the mid-2020s. That is why the federal government continues to implement the demographic strategy that was developed in cooperation with key stakeholders in society. The aim is to secure the general prosperity of society and the government's capacity to act on a long-term basis.

The demographic changes also include a decline in the labour-force potential, resulting in a higher old-age dependency ratio, i.e. the ratio of the retirement-age population (aged 65+) to the working-age population (aged 15–64). According to current projections of the Federal Statistical Office, the old-age dependency ratio will increase from approximately 33% in 2018 to nearly 44% in 2030 and, in the long term, to almost 55% by 2060. Although the increased immigration levels seen in recent years are contributing to a stabilisation of population numbers in Germany, immigration will not be able to make up for the ongoing ageing of the population. Even with significant immigration, the number of people of working age (aged 15–64) is expected to decline by about €4.5m by 2030.

Forward-looking fiscal and economic policies can adapt to the conditions of demographic change and take timely and targeted action in this regard. In this context, potential output is a key long-term determinant of future economic growth and fiscal sustainability. Potential output determines aggregate economic performance at normal capacity utilisation of all economic production factors. According to the federal government's projections, demographic change will cause the growth contribution from the volume of labour to decrease unless targeted counter-measures are taken (see **Figure 10**). As a result, potential growth would decline to 1.2% by 2023. Based on the current projections in the 2018 Ageing Report, an average decline to just over 1% is to be expected by 2070. However, it is possible to counteract this expected long-term decline in the volume of labour, especially if Germany succeeds in strengthening the growth factors in the economy and promoting productivity-enhancing measures in the private sector and in public administration. In the foreseeable future, the enhanced use of digital technologies is an especially important factor in this context.

Figure 10: Trend in German potential output, 2010 - 2023



Source: annual projection by the federal government

5.2 Government revenue and expenditure from a long-term perspective

The Federal Ministry of Finance publishes a comprehensive report on the long-term development of public finances and their sustainability once every legislative term. The last Sustainability Report was issued in August 2016 and was based on the 13th Coordinated Population Projection published by the Federal Statistical Office in 2015, which did not yet take account of the substantial flow of migration into Germany. The 14th Coordinated Population Projection will be published in the second quarter of 2019. Work on the next Sustainability Report has already commenced. It will most likely be issued in late 2019 or early 2020.

The Sustainability Report acts as a long-term fiscal policy stress test, outlining the risks to public finances associated with demographic change and their implications for a comprehensive fiscal and economic policy strategy. To assess the sustainability of public finances, long-term revenue and expenditure projections for public budgets are calculated under the assumption of "no-policy-change". The focus is on pension, health and long-term care insurance. The result of this analysis shows what is known as the sustainability gap, which measures the fiscal consolidation that would be required in order to balance out all future expenditures (including accumulated government debt).

There have been a number of developments since the publication of the last Sustainability Report in 2016 which should have a positive overall effect on sustainability (see Table 19 for details). One factor is the noticeable reduction of public debt. Another is the improved situation on the German labour market, with record levels of total employment and of employment subject to social security contributions. This has had a very positive effect on the financial resources of the social security systems. As a result, it was possible to cover most of the costs of recent improvements in pension, health and long-term care insurance benefits using higher receipts from contributions.

It is true that ageing will, in the medium and long term, significantly increase the costs of healthcare, long-term care and pensions. This will be exacerbated if employment, productivity or interest rate trends turn out to be less favourable than expected.[5] However, the exceptionally positive employment trends seen in recent years and the associated increase in tax revenue and contribution receipts demonstrate how important it is to take further targeted structural policy action to boost potential growth.

In times of mounting cyclical and external economic risks, it is particularly important to take steps towards mitigation and reduce the economy's susceptibility to crisis, not least with the long-term sustainability of public finances in mind. Against this background, growth-oriented fiscal and economic policies are key to strengthening drivers of growth and unlocking the economy's productive potential.

5 These results are confirmed by the European Commission's Fiscal Sustainability Report 2018 and the projections coordinated at EU level for the 2018 Ageing Report.

5.3 Measures to ensure long-term fiscal sustainability

The federal government is strengthening Germany's long-term growth potential, partly through targeted public investment. In particular, this includes higher spending on education, research and development. At the same time, the government is improving general conditions for private investment, innovation and the spread of digital technology throughout the economy. The federal government is also taking targeted steps to improve vocational training and facilitate the immigration of skilled workers. Partly in order to enhance social equity, the government has improved the pillars of the social security system in a forward-looking way.

The Skills Development Opportunities Act (*Qualifizierungschancengesetz*), which came into effect at the beginning of 2019, increases government support for continuing education and training. This will benefit employees who are in need of further training because of the spread of digital technology or who are affected by structural changes in some other way. The increased funding is also aimed at those who are interested in pursuing continuing vocational education and training in occupations in which there is a shortage of skilled workers. Scaled based on company size, the funding consists of a training cost subsidy and a wage subsidy. Employees in companies that employ up to ten people, for example, can receive funding for up to 100% of their training costs. In companies with more than 2,500 employees, the subsidy can amount to 15%, or 20% if there is a company agreement or a collective agreement that encompasses skills development. The Federal Employment Agency and the Federation could incur costs of approximately €1bn in total for the implementation of the continuing education measures under the Books II and III of the Social Code (*Sozialgesetzbuch*) by 2022. In this way, the German government is increasing opportunities for all employees and job seekers to acquire new qualifications in the area of digital technologies as well as in other areas. In addition, the federal government is committed to pooling and developing existing continuing education programmes run by the Federation and the *Länder* into a national continuing education strategy.

The federal government is also taking steps to help long-term unemployed persons who are not benefiting from the favourable situation on the labour market. "*MitArbeit*" is a general strategy that takes a holistic approach to improving the employability of long-term unemployed persons by providing them with intensive guidance, individual advice and effective financial support while at the same time offering them concrete employment opportunities. To this end, the Inclusion Act (*Teilhabechancengesetz*) has introduced two new instruments into Book II of the Social Code that provide for labour-cost subsidies for a period of up to five years. A total of €4bn in additional federal budget funds has been earmarked for these measures over the 2018–2022 period under the integration budget heading for Book II of the Social Code.

In addition to taking advantage of the supply of skilled workers in Germany and Europe, Germany also needs to become more attractive for skilled workers from third countries. Germany is in the process of adopting a Skilled Labour Immigration Act (*Fachkräfteeinwanderungsgesetz*), which will strengthen the legal conditions to enable the immigration of skilled workers from non-EU countries, simplify procedures for the recognition of foreign qualifications, intensify language learning in Germany and abroad, develop a skilled labour recruitment strategy in cooperation with German industry associations, and improve administrative procedures.

The federal government and the *Länder* launched the Excellence Strategy with the aim of encouraging research excellence at universities. The programme consists of two funding lines: (a) clusters of excellence for project-based funding and (b) funding for the institutional strengthening of individual universities of excellence or university consortia on the basis of successful clusters of excellence. The volume of financial support will total €533m per year starting in 2018, with the Federation covering 75% and the *Länder* 25%.

In 2016, the Council of the European Union recommended that member states set up national productivity boards in order to unlock long-term growth potential. The idea is that the boards should act as independent expert bodies and analyse national developments and policy challenges using transparent and comparable indicators and taking into account national wage setting practices and institutions with a view to enhancing productivity and competitiveness. The German government has decided to entrust the German Council of Economic Experts with this task. In future, the German Council of Economic Experts will publish the results of this analysis in an annual report and submit them for discussion. In addition, there will be a regular exchange of views with the social partners at the national level and with the productivity boards of other member states.

The federal government plans to take further measures to enhance social security in Germany. The ageing of society will put a strain on social security systems, and policy-makers face the challenge of ensuring that these systems remain acceptable and reliable for benefit recipients and contributors alike. On the initiative of the federal government, the Bundestag has therefore introduced legislation guaranteeing pension levels and pension insurance contributions until 2025. To this end, two lines have been drawn: The first is a stabilisation of the benefit level at 48% until 2025. The second is a maximum contribution rate of 20% for pension insurance, also until 2025. In addition, a minimum contribution rate of 18.6% has been introduced until 2025 in order to secure the stabilisation of contribution rates.

To tackle the challenges that lie ahead, the federal government has appointed a commission on intergenerational fairness that will look at ways to secure and develop statutory pension funds as well as the two other pillars of the pension system after 2025. It will issue its recommendations by March 2020.

According to current projections, federal transfers to the statutory health insurance system will total €98.0bn in 2019 and increase to €114bn by 2023 (see **Figure 11**). In addition, €2bn of federal budget funds will be allocated every year between 2021 and 2024 to a reserve fund dedicated to safeguarding the pension system against demographic effects. The purpose of this is to protect the upper limit on contribution rates.

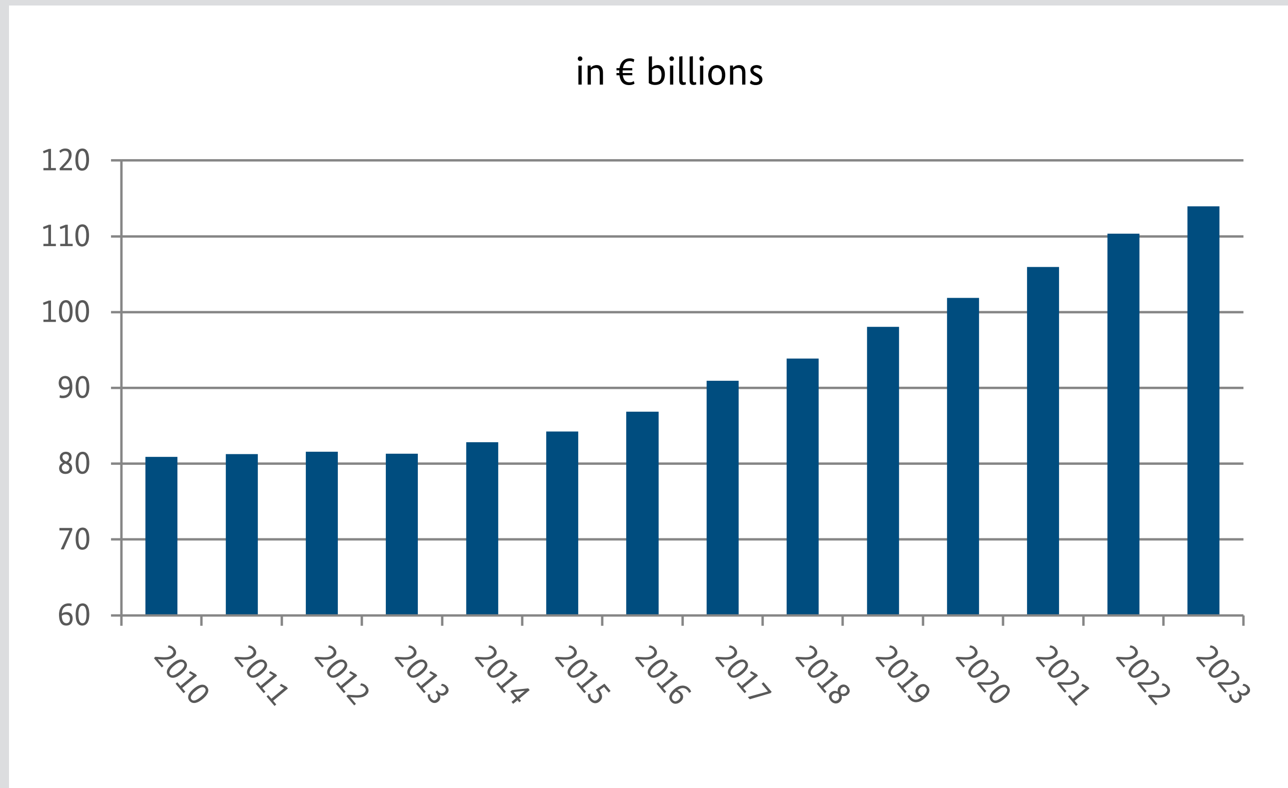
Lawmakers have also decided to significantly improve provisions for people with reduced earning capacity. For new pensioners, the added periods that are credited to reduced earning capacity pensions will be increased to 65 years and eight months in 2019. They will subsequently be further increased to 67 years, in line with the increase in the standard pensionable age. This measure will give rise to additional expenditures totalling €0.1bn in 2019. An additional half year will be credited to the pensions of mothers and fathers who bore the main responsibility for rearing children born prior to 1992. This measure is already benefiting nearly 10m pensioners. As a result of this change, the German pension authority (Deutsche Rentenversicherung) will incur additional costs totalling €3.8bn in 2019. Lawmakers have also decided to make additional transfers of €500m per year from the federal budget to the statutory pension insurance system in the years between 2022 and 2025.

Legislation to strengthen occupational pensions (*Betriebsrentenstärkungsgesetz*), which entered into force in 2018, opened up new avenues for the more widespread adoption of occupational pensions. Under the "social partner model", collective agreements can include commitments on the part of employers to pay contributions without any additional guarantees or liability. In addition, collective agreements can provide for opt-out systems under which employees are automatically part of an occupational pension scheme unless they explicitly opt out. Since January 2018, disbursements from occupational pensions under Riester plans are no longer taken into account when determining statutory health and long-term care insurance contributions of those in receipt of statutory pensions. Finally, an exempt amount has been introduced for recipients of basic security benefits in old age: up to approximately €200 per month in income from additional pensions is no longer deductible from the basic security benefits.

In the area of private pensions, the federal government is supporting the interests of life insurance policy holders by securing interest rate guarantees in a way that is more efficient and sustainable. In addition, supervision will be improved in the areas of life insurance and consumer protection. There are plans to introduce a statutory cap on commissions before the end of the legislative term.

Finally, the federal government is working on providing information that extends across all pillars of the pension system. This would allow people in Germany to gain an overview of their individual pension situation across all three pillars – statutory, occupational and private pensions.

Figure 11: Federal transfers to the statutory health insurance system



Values from 2020 onwards: as per the federal government's decision on benchmarks for the 2020 federal budget and the financial plan to 2023.

Source: federal budget

5.4 Measures to increase the effectiveness and efficiency of public revenues and spending

In order to secure the long-term sustainability of public finances, it is vital to conduct comprehensive critical reviews of responsibilities and regularly assess measures for effectiveness and efficiency, irrespective of the current economic and budgetary situation. The aim is to make public budgets more results-driven and create additional fiscal policy leeway.

Since 2012, the federal budget has been prepared using what is known as a top-down approach. This has significantly simplified negotiation and coordination processes between line ministries and the Federal Ministry of Finance. However, the new approach makes it even more important to ensure that the independent allocation of funds by the line ministries is reasonable and economical from a fiscal policy point of view. Spending reviews are an important instrument for this.

The federal government has conducted spending reviews since 2015. These budgetary analyses look at selected policy areas or horizontal tasks to determine whether the relevant federal government goals still have priority, whether they are being attained and whether the corresponding tasks are being performed economically. The 2017/18 review cycle focused on the areas of procurement, humanitarian aid, and emergency and transition assistance. The spending review of the current 2018/2019 cycle, which looked at debt claim management, has already been completed successfully.

The federal government also regularly reviews the target accuracy, cost-efficiency and necessity of subsidies. The results are published in the Subsidy Report. The federal government's 27th Subsidy Report is planned for summer 2019. The results of the systematic evaluation of 33 tax benefits, which was commissioned by the Federal Ministry of Finance at the end of the previous legislative term, will be incorporated in this year's Subsidy Report. This implements the requirement for regular performance evaluations that was set out in the federal government's subsidy policy guidelines. The evaluation also looks at the sustainability of measures.

The federal government has implemented a series of reforms in recent years to improve quality and cost-efficiency in statutory health insurance. The 2015 Hospital Structure Act (*Krankenhausstrukturgesetz*) laid the groundwork for improving the quality of hospitals, with a special focus on hospital care. Under legislation to promote care staff (the *Pflegepersonalstärkungsgesetz*), the hospital structure fund will be extended to 2022 and its financial volume substantially increased from €1bn to €4bn over a period of four years. The primary aim of the hospital structure fund is to reduce overcapacity in the in-patient sector, consolidate out-patient care services and locations, and convert some hospitals into local treatment centres that do not provide acute in-patient care.

There is scope for enhancing the cost-efficiency of healthcare by creating better links between the out-patient and in-patient sectors. That is why the federal government aims to develop cross-sectoral care to bring it more closely into line with the actual needs of patients. The government has set up a joint Federal and *Länder* working group for this purpose. In addition, an innovation fund was created in 2016 to promote projects and research for coordinated and cross-sectoral care, with a total volume of €1.2bn until the end of 2019. The innovation fund will be continued beyond 2019 with a funding volume of €200m per year. Half of the funding comes from the cash reserves of the national health fund; the other half is financed by the health insurance funds.

Digital technologies offer great potential for improving and streamlining procedures in healthcare. Electronic patient records are a key element of this, enabling medical data to be provided subject to the patient's consent. The Appointment Service and Care Act (*Terminservice- und Versorgungsgesetz*), which was adopted by the Bundestag on 14 March 2019, aims to expedite the introduction of such records. Under this legislation, health insurance funds must provide insured persons with electronic patient records no later than the beginning of 2021. To this end, the federal government is promoting the nationwide introduction of telematics infrastructure. The aim is to ensure that various digital applications, including digital prescriptions, are compatible with each other and can be used by all insured persons as well as by service providers. Medical and dental practices, hospitals, pharmacies and other service providers will be connected to this infrastructure.

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Table 9: Forecast of macroeconomic trends[1]

	ESA code	2018 Index 2010=100	2018	2019	2020	2021	2022	2023	2021 to 2023[4]
			% change p.a.						
1. Real GDP chain index	B1g	115.28	1.4	1.0	1.6	1.1	1.1	1.1	1
2. GDP in respective market prices (€bn)	B1g	3386.0	3.3	3.1	3.6	3.0	3.0	3.0	3
Real utilisation of GDP chain index									
3. Private consumption expenditure[2]	P.3	111.33	1.0	1.3	1.6	1.1	1.1	1.1	1
4. Government consumption expenditure	P.3	115.28	1.0	2.1	1.8	1.1	1.1	1.1	1
5. Gross fixed capital formation	P.51	121.30	2.6	2.4	2.7	2.6	2.6	2.6	2 ½
6. Changes in inventories (GDP growth contribution)[3]	P.52 + P.53	-	0.6	-0.2	0.0	0.0	0.0	0.0	-0
7. Exports	P.6	136.40	2.0	2.7	3.1	3.1	3.1	3.1	3 ¼
8. Imports	P.7	135.97	3.3	4.0	4.0	4.1	4.1	4.1	4
Contributions to real GDP growth[3]									
9. Final domestic demand		-	1.8	1.6	1.7	1.3	1.3	1.3	1 ¼
10. Changes in inventories and net acquisition of valuables	P.52 + P.53	-	0.6	-0.2	0.0	0.0	0.0	0.0	0
11. External balance of goods and services	B.11	-	-0.4	-0.3	-0.2	-0.2	-0.2	-0.2	-¼

1 2018: Federal Statistical Office: as of February 2019
2019 and 2020: results of the short-term forecast for the 2019 Annual Projection, January 2019
2021 to 2023: results of the medium-term forecast for the 2019 Annual Projection, January 2019
2 Including private non-profit organisations serving households
3 Contribution to GDP growth rate
4 Values rounded to ¼

Table 10: Price trends – deflators[1]

	ESA code	2018	2018	2019	2020	2021 to 2023[3]
		Index 2010=100	% change p.a.			
1. GDP		113.84	1.9	2.1	2.0	1 ¾
2. Private consumption expenditure[2]		110.35	1.6	1.4	1.6	1 ½
3. Public consumption		116.44	2.6	2.3	2.2	2 ½
4. Gross fixed capital formation		118.65	3.5	2.9	2.9	2
5. Exports		106.94	1.1	0.9	0.7	2 ¼
6. Imports		104.70	1.8	0.4	0.7	2 ¼

1 2018: Federal Statistical Office: as of February 2019
2019 and 2020: results of the short-term forecast for the 2019 Annual Projection, January 2019
2021 to 2023: results of the medium-term forecast for the 2019 Annual Projection, January 2019
2 Including private non-profit organisations serving without a commercial purpose
3 Values rounded to ¼

Table 11: Labour market trends[1]

	ESA code	2018	2018	2019	2020	2021 to 2023[7]
		Level	% change p.a.			
1. Employment, persons (domestic)[2] (m)		44.8	1.3	0.9	0.7	0
2. Employment, hours worked[3] (bn hours)		61.1	1.4	0.5	0.8	-¼
3. Unemployment rate[4] (%)		-	3.2	3.0	2.8	3 ¼
4. Labour productivity[5] (2010=100)		105.5	0.1	0.2	0.9	1 ¼
5. Labour productivity[6] (2010=100)		107.6	0.0	0.5	0.8	1 ¼
6. Compensation of employees (€bn)	D.1	1,745.1	4.6	4.3	3.9	3
7. Compensation per employee (thousand €)		43.0	3.0	3.2	3.0	3

1 2018: Federal Statistical Office: as of February 2019.
2019 and 2020: results of the short-term forecast for the 2019 Annual Projection, January 2019.
2021 to 2023: results of the medium-term forecast for the 2019 Annual Projection, January 2019.
2 Employed persons, domestic concept.
3 National accounts definition.
4 Unemployed (ILO) / labour force.
5 Real GDP per person employed (domestic).
6 Real GDP per hour worked.
7 Values rounded to ¼; unemployment rate: value displayed is value for last year of forecast (2023).

Table 12: Sectoral balances[1]

	ESA code	2018	2019	2020	2021	2022	2023	2021 to 2023[2]
		% of GDP						
1. Net lending/borrowing vis-à-vis the rest of the world	B.9	7.4	7.3	6.9	6.7	6.5	6.3	6 ¼
of which:								
- Balance on goods and services		6.8	6.6	6.3	6.1	5.9	5.7	5 ¾
2. Net lending/borrowing of households	B.9	5.2	4.9	4.5	4.1	4.0	3.8	3 ¾
3. Net lending/borrowing of general government	EDP B.9	1.7	¾	¾	½	½	½	
4. Statistical discrepancy		-	-	-	-	-	-	-

1 2018: Federal Statistical Office: as of February 2019
2019 and 2020: results of the short-term forecast for the 2019 Annual Projection, January 2019
2021 to 2023: results of the medium-term forecast for the 2019 Annual Projection, January 2019
2 Values rounded to ¼; value for last year of forecast (2023)

Table 13: General government budgetary prospects

	ESA code	2018	2018	2019	2020	2021	2022	2023
		€bn			% of GDP			
Net lending (EDP B.9) by sub-sector								
1. General government	S. 13	58.0	1.7	¾	¾	½	½	½
2. Central government	S. 1311	17.9	0.5	0	0	0	0	¼
3. State government	S. 1312	11.1	0.3	½	½	¼	¼	¼
4. Local government	S. 1313	14.0	0.4	¼	¼	0	0	0
5. Social security funds	S. 1314	14.9	0.4	¼	¼	0	0	0
General government (S.13)								
6. Total revenue	TR	1,543.6	45.6	45 ½	45 ¼	45	45	45 ¼
7. Total expenditure	TE[1]	1,485.5	43.9	44 ½	44 ½	44 ½	44 ½	44 ½
8. Net lending/borrowing	B.9	58.0	1.7	¾	¾	½	½	½
9. Interest expenditure	D. 41	31.0	0.9	¾	¾	¾	¾	¾
10. Primary balance[2]		89.0	2.6	1 ¾	1 ½	1 ¼	1 ¼	1 ¼
11. One-off and other temporary measures[3]		-2.9	-0.1	0	0	0	0	0
Selected components of revenue								
12. Total taxes (12=12a+12b+12c)		801.0	23.7	23 ¾	23 ¾	23 ½	23 ½	23 ¾
12a. Taxes on production and imports	D.2	355.9	10.5	10 ½	10 ½	10 ½	10 ½	10 ½
12b. Current taxes on income, wealth, etc	D.5	445.1	13.1	13 ¼	13 ¼	13	13	13 ¼
12c. Capital taxes	D.91	0.0	0.0	0	0	0	0	0
13. Social security contributions	D.61	571.7	16.9	17	17	17	17	17 ¼
14. Property income	D.4	18.4	0.5	½	½	½	½	½
15. Other[4]		152.4	4.5	4 ¼	4 ¼	4	4	4
16. = 6. Total revenue	TR	1,543.6	45.6	45 ½	45 ¼	45	45	45 ¼
p.m.: Tax burden (D.2+D.5+D.61+D.91-D.995)[5]		1,372.7	40.5	40 ¾	40 ¾	40 ½	40 ½	40 ¾

Table 13: Continuation

	ESA code	2018	2018	2019	2020	2021	2022	2023
		€bn	% of GDP					
Selected components of expenditure								
17. Compensation of employees + intermediate consumption	D.1+P.2	418.1	12.3	12 ½	12 ½	12 ¼	12 ¼	12
17a. Compensation of employees	D.1	256.3	7.6	7 ½	7 ½	7 ½	7 ½	7 ½
17b. Intermediate consumption	P.2	161.8	4.8	5	5	4 ¾	4 ¾	4 ¾
18. Social payments (18=18a+18b)		806.5	23.8	24 ¼	24 ¼	24 ½	24 ¾	25
of which: unemployment benefits[6]		49.3	1.5	1 ¼	1 ¼	1 ¼	1 ¼	1 ¼
18a. Social transfers in kind supplied via market producers	D.6311, D.63121, D.63131	286.1	8.5	8 ½	8 ½	8 ¾	8 ¾	9
18b. Social transfers other than in kind	D.62	520.3	15.4	15 ¾	15 ¾	15 ¾	16	16
19. = 9. Interest expenditure	D.41	31.0	0.9	¾	¾	¾	¾	¾
20. Subsidies	D.3	28.9	0.9	¾	¾	¾	¾	¾
21. Gross fixed capital formation	p.51	78.9	2.3	2 ½	2 ½	2 ½	2 ½	2 ½
22. Capital transfers	D.9	41.2	1.2	1 ¼	1 ¼	1 ¼	1	1
23. Other[7]		81.0	2.4	2 ½	2 ½	2 ½	2 ½	2 ½
24. = 7. Total expenditure	TE[1]	1,485.5	43.9	44 ½	44 ½	44 ½	44 ½	44 ½
p.m.: Government consumption (nominal)	P.3	662.2	19.6	20	20 ¼	20 ¼	20 ¼	20 ¼

1 Adjusted by the net amount of payments in connection with swaps, so that TR - TE = B.9.
2 The primary balance corresponds to (B.9. line 8) plus (D.41. line 9).
3 A plus sign means deficit-reducing one-off measures.
4 P.11+P.12+P.131+D.39+D.7+D.9 (except D.91)
5 Including those collected by the EU and including an adjustment for uncollected taxes and social contributions (D.995), if appropriate.
6 Includes cash benefits (D.621 and D.624) and in-kind benefits (D.631) related to unemployment benefits.
7 D.29+D4 (except D.41)+ D.5+D.7+P.52+P.53+K.2+D.8

Figures for the projection period are rounded to ¼.

Table 14: No-policy change projections*

	2018	2018	2019	2020	2021	2022	2023
	€bn	% of GDP					
1. Total revenue at unchanged policies	1,543.6	45.6	45 ½	45 ¼	45	45	45 ¼
2. Total expenditure at unchanged policies	1,485.5	43.9	44 ½	44 ½	44 ½	44 ½	44 ½

Table 15: Amounts to be excluded from the expenditure benchmark*

	2018	2018	2019	2020	2021	2022	2023
	€bn	% of GDP					
1. Expenditure on EU programmes fully matched by EU funds revenue	4.2	0.1	0	0	0	0	0
2. Cyclical unemployment benefit expenditure	0.1	0.0	0	0	0	0	0
3. Effect of discretionary revenue measures	-2.9	-0.1	0	- ¼	- ½	0	0
4. Revenue increases mandated by law	0.0	0.0	0	0	0	0	0

Table 16: General government debt developments (Maastricht debt ratio)*

	ESA code	2018	2019	2020	2021	2022	2023
		% of GDP					
1. Gross debt		60.9	58 ¾	56 ½	54 ¾	53	51 ¼
2. Change in gross debt ratio		-3.6	-2 ¼	-2	-1 ¾	-1 ¾	-1 ¾
Contribution to changes in the Maastricht debt ratio							
3. Primary balance		2.6	1 ¾	1 ½	1 ¼	1 ¼	1 ¼
4. Interest expenditure	D.41	-0.9	- ¾	- ¾	- ¾	- ¾	- ¾
5. Stock-flow adjustment		1.9	1 ½	1 ¼	1 ¼	1 ¼	1
p.m.: Implicit interest rate on debt[1]		1.5	1 ½	1 ¼	1 ¼	1 ½	1 ½

1 Proxied by interest expenditure divided by the debt level of the previous year.

*Figures for the projection period are rounded to ¼.

Table 17: Cyclical developments[1]

	ESA code	2018	2019	2020	2021	2022	2023	2021 to 2023
		% of GDP						
1. Real GDP growth (%)		1.4	1.0	1.6	1.1	1.1	1.1	1
2. Net lending of general government	B.9	1.7	¾	¾	½	½	½	-
3. Interest expenditure	D.41	0.9	¾	¾	¾	¾	¾	-
4. One-off and other temporary measures[2]		-0.1	0	0	0	0	0	-
5. Potential GDP growth (%)		1.6	1.5	1.5	1.4	1.3	1.2	1 ¼
contributions:								
- labour		0.5	0.4	0.3	0.2	0.0	-0.1	0
- capital		0.4	0.4	0.5	0.5	0.5	0.5	½
- total factor productivity		0.6	0.6	0.7	0.7	0.7	0.8	¾
6. Output gap		0.8	0.4	0.5	0.2	0.1	0.0	-
7. Cyclical budgetary component		0.4	¼	¼	0	0	0	-
8. Cyclically-adjusted balance (2 - 7)		1.3	¾	½	½	¼	½	-
9. Cyclically-adjusted primary balance (8 + 3)		2.2	1 ½	1 ¼	1 ¼	1	1 ¼	-
10. Structural balance (8 - 4)		1.4	¾	½	½	¼	½	-

1 A plus sign means deficit-reducing one-off measures.

Government account figures for the projection period are rounded to ¼.

Table 18: Divergence from previous update

	ESA code	2018	2019	2020	2021	2022	2023
Real GDP growth (yoy in %)							
April 2018 projection		2.4	1.9	1.3	1.3	1.3	-
April 2019 projection		1.4	1.0	1.6	1.1	1.1	1.1
Difference		-1.0	-0.9	0.3	-0.2	-0.2	-
General government net lending (% of GDP)	B.9						
April 2018 projection		1	1 ¼	1 ½	1 ½	-	-
April 2019 projection		1.7	¾	¾	½	½	½
Difference		¾	- ½	- ¾	-1	-	-
General government gross debt (% of GDP)							
April 2018 projection		61	58 ¼	55 ¾	53	-	-
April 2019 projection		60.9	58 ¾	56 ½	54 ¾	53	51 ¼
Difference		0	½	¾	1 ¾	-	-

Government account figures for the projection period are rounded to ¼.

Table 19: Long-term trends in age-related general government expenditure

	2017	2020	2030	2040	2050	2060
	Expenditure in % of GDP (pessimistic basic variant "T-" / optimistic basic variant "T+")					
Pension expenditure[1]	9.5	9.6 / 9.4	10.6 / 9.9	11.6 / 10.8	12.3 / 11.2	13.2 / 11.7
Health care expenditure[2]	7.5	7.7 / 7.7	8.1 / 7.9	8.5 / 8.1	8.6 / 8.0	8.6 / 7.9
Long-term care expenditure[3]	1.2	1.2 / 1.2	1.5 / 1.4	1.9 / 1.7	2.4 / 2.0	2.7 / 2.0
Unemployment benefits[4]	2.3	2.3 / 2.2	2.9 / 1.5	2.9 / 1.5	2.8 / 1.4	2.8 / 1.4
Spending on education and child-care[5]	4.0	3.9 / 4.0	4.1 / 4.1	4.1 / 4.3	4.0 / 4.2	4.1 / 4.3
Expenditure on the family benefits system[6]	1.6	1.6 / 1.6	1.6 / 1.7	1.6 / 1.7	1.6 / 1.7	1.6 / 1.7
Total age-related expenditure	25.8	26.0 / 25.7	28.2 / 26.2	29.9 / 27.6	31.0 / 28.1	32.3 / 28.7
	Assumptions					
Productivity growth (%)[7]	0.8	0.9 / 0.9	1.9 / 1.9	1.8 / 2.0	1.6 / 1.8	1.6 / 1.9
GDP growth (%)	2.2	1.6 / 1.6	1.1 / 1.8	0.9 / 1.5	0.9 / 1.6	0.7 / 1.5
Labour force participation (%)						
- Men (15 to 64)	85.8	85.9 / 86.0	86.0 / 86.5	85.9 / 86.4	85.9 / 86.4	86.1 / 86.7
- Women (15 to 64)	79.4	79.6 / 80.0	82.2 / 82.6	82.5 / 82.8	83.0 / 83.3	83.5 / 84.0
Unemployment rate (%)	3.5	3.8 / 3.5	5.5 / 3.0	5.5 / 3.0	5.5 / 3.0	5.5 / 3.0
Old-age dependency ratio	32.7	35.1 / 34.7	46.9 / 45.0	54.7 / 50.2	58.6 / 51.2	64.1 / 53.7
Total population (m)	82.8	81.5 / 82.2	79.6 / 81.9	76.8 / 80.6	73.2 / 78.8	69.2 / 76.9
Population aged 65+ (m)	17.7	18.4 / 18.3	22.2 / 21.8	23.9 / 23.4	24.0 / 23.2	23.9 / 23.2

Sources: Actual values as of 31 December 2017: Federal Statistical Office, German Pension Insurance, Federal Ministry of Health, Federal Employment Agency, Federal Ministry of Labour and Social Affairs, Federal Ministry of Finance, Federal Ministry for Family Affairs, Senior Citizens, Women and Youth; projections (2020–2060): Prof. Martin Werding (Ruhr University Bochum), projections for the Finance Ministry's Fourth Sustainability Report, Cologne 2016.
Last update of the projections (2020-2060): 2015 base year, data and legal situation as of 30 June 2018.

1 The figures shown reflect two variants: 'T-', which is based throughout on slightly pessimistic assumptions, and 'T+', which is based throughout on slightly optimistic assumptions. Cross-payments between sub-budgets have been consolidated.
2 Statutory pension insurance and civil servants' pensions
3 Statutory health insurance and medical assistance payments for civil servants and eligible relatives
4 Long-term care insurance: an inflation-linked extrapolation produces values of approximately 1.3 and 1.0 for the year 2060. The dynamic index used in the EU's 2018 Ageing Report (1/3 in line with prices to 2/3 in line with wages for in-kind benefits, and 2/3 in line with prices to 1/3 in line with wages for cash benefits) is not taken into account in the above table; instead, the figures here are indexed solely in line with wages.
5 Unemployment insurance, other expenses of the Federal Employment Agency and basic provision for jobseekers (including accommodation costs)
6 Public education spending (including child-care facilities) according to the definition used in the Education Finance Report
7 Child benefit, tax-free allowances for children under the Income Tax Act, parental benefit
8 Measured by labour productivity
9 Inflation-adjusted figures on productivity growth and GDP growth refer to changes compared with the previous ten-year period.
10 The old-age dependency ratio is based on the definition of a working-age population aged 15-64.

Table 20: Technical assumptions

	2018	2019	2020	2021	2022	2023	2021 to 2023
Short-term interest rate (annual average)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
USD/€ exchange rate (annual average)	1.18	1.14	1.14	1.14	1.14	1.14	1.14
Growth of German sales markets (in %)[1]	3.6	3	3	3 ¼	3 ¼	3 ¼	3 ¼
Oil price (Brent, USD/barrel)	71	57	58	59	60	0	40

1 Values rounded to ¼.

Table 21: Contingent liabilities

% of GDP	2018
Public guarantees	13.3*
Of which: linked to the financial sector	0.3

* Year 2017

Published by
Federal Ministry of Finance
Public Relations Division
Wilhelmstr. 97,
10117 Berlin, Germany

April 2019

Edited by
Division I A 1

To order this publication
Publikationsversand der Bundesregierung
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Fax: 03018 10 272 2721
email: publikationen@bundesregierung.de

More information is available online at
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