



Federal Ministry  
of Finance

# German Stability Programme 2018

STABI  
LITÄT



# German Stability Programme

2018



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## Preface to the German Stability Programme for 2018

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 18. April 2018. 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 likewise 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 2018 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 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](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

Germany's public finances continued to develop favourably in the past year. Strong economic growth with real growth above potential and record employment on the labour market, together with lower interest payments for public debt due to extremely low interest rates on capital markets, created exceptionally good conditions for fiscal policy. Among other things, this paved the way for general government surpluses again in 2017. The federal government continued to pursue its future-oriented and growth-enhancing course of recent years and contributed to reducing the aggregate debt-to-GDP ratio to 64.1% of gross domestic product (GDP) in 2017.

In 2017, Germany once again complied in full with the rules of the Stability and Growth Pact. Last year, the general government budget – which encompasses the budgets of the Federation, *Länder*, local authorities and social security funds – generated a surplus of 1.1% of GDP. The *Länder* and local authorities in particular recorded exceptionally large surpluses, while the Federation likewise made a positive contribution to the general government surplus.

If the economic upswing persists, the general government budget will likely continue to show further surpluses in the years ahead. Therefore, in its projections for the development of public budgets, the federal government expects that the debt-to-GDP ratio will decline further towards the *Maas-tricht* upper limit of 60% of GDP. The last time Germany's debt-to-GDP ratio came in below this important threshold was in 2002.

The constitutive session of the 19th German Bundestag on 24 October 2017 brought to an end the 18th legislative term and all unfinished business from that legislative term, including the draft budget act for 2018 (see Rule 125, first sentence, of the Rules of Procedure of the German Bundestag). Interim budget management under Article 111 of Germany's Basic Law (*Grundgesetz*) entered into effect on 1 January 2018. While interim budget management is in effect, no new measures affecting finances can normally be introduced unless they are unavoidable on grounds of necessity or urgency. The federal government will introduce the bill for the 2018 federal budget into parliament taking into account the measures agreed in the coalition agreement.



On the basis of balanced budgets without new borrowing, the federal government will continue its growth and future-oriented fiscal policy trajectory. In the coalition agreement, the coalition parties have agreed to make use of fiscal policy leeway among other things to further strengthen investment in infrastructure, education and research. In 2017, general government investment increased by 6.5% to a record €71.1bn, stronger than nominal GDP and public expenditure.

Despite the exceptionally good current preconditions for fiscal policy, it is important not to overlook structural changes that have already taken place or are on the horizon. Fiscal policy has to face multiple challenges in order to safeguard the current positive economic trends, to maintain Germany's international competitiveness – also with respect to tax policies – and to ensure the long-term sustainability of public finances.

The current state of the German economy generally is one of slightly overstretched capacity; capacity constraints, including skills shortages, are already limiting economic momentum in some sectors such as construction. A booming economy needs fiscal policy that restricts additional public spending and provides appropriate tax relief so as to avoid further exacerbating economic constraints and to help guard the economy against overheating. Accordingly, under the rules on implementing the constitutional requirement of balanced public finances in Article 109 of the Basic Law (the 'debt brake'), cyclical increases in revenue do not open up additional fiscal space for government expenditure or tax relief.

For a number of years now, wages and salaries have been rising again at a much more dynamic pace, with employment levels at an all-time high. This has led – partly as a result of tax progression – to a marked increase in the aggregate tax ratio. At 40% of GDP, this is currently well above its long-

term average.<sup>1</sup> The federal government therefore continues to pursue the important objective of limiting the tax burden in a way that facilitates growth and employment and safeguarding the international competitiveness of the German tax system.

Furthermore, the ongoing exceptionally low interest rate environment on capital markets cannot be expected to go on benefiting public finances forever. Capital market yields on medium- and long-term government bonds have already inched back up in recent months. In the current fiscal plan through to 2021, the federal government is therefore preparing for a necessary normalisation of capital market conditions.

Finally, the projections for this stability programme already reflect expected demographic trends in Germany. The current period of demographic reprieve will come to an end in the first half of the next decade as the post-war baby-boomers reach retirement. This means the ratio of pensioners to the working population will rise from just over 32% to 37% by 2025. This structural shift will impair the economy's growth potential, with fiscal effects on the revenue side. At the same time, the ageing society will tend to cause higher public spending. Social spending – among other things on long-term care, health and pensions – is the biggest expenditure item in the public budgets of the federal government, *Länder*, local authorities and social security funds. According to current projections, social spending will continue to rise, not least as a result of demographic developments. Although the high level of immigration in recent years is contributing to a temporary stabilisation of population figures, this will not be able to compensate for the ongoing ageing of the population. Targeted measures for increased employment – especially of older people, women and immigrants – therefore remain essential for sustained sound finances.

<sup>1</sup> Tax ratio 2017, National Accounts definition.

Specific federal government measures to promote growth and employment are described in detail in Germany's National Reform Programme (NRP) to be adopted by the federal government on 25 April 2018 and submitted to the European Commission by the end of April. Among other things, the federal government outlines there how it is addressing the macroeconomic challenges described by the European Commission in its 7 March 2018 Country Report. In this connection, the NRP outlines the progress that Germany has made in implementing the country-specific recommendations made by the Council of the European Union in 2017 as well as the Europe 2020 growth strategy.

## 2. Aggregate economic conditions in Germany

### 2.1 Aggregate economic conditions in Germany in 2017

The German economy is currently in one of the longest cyclical upturns since the 1980s. GDP rose for the eighth year in a row in 2017 with growth accelerating once again compared with the previous year. With a robust domestic economy and rising external demand, real growth was 2.2%, the strongest increase since 2011. The German economy grew much faster than its potential growth rate, which the federal government estimates at real growth of around 1.8% for 2017. The German economy's overall capacity utilisation was above average.

The strong upswing is broad-based and driven by both domestic and foreign demand. As in previous years, domestic demand provided the main impetus for economic expansion, with a growth contribution of 2.0 percentage points. Sustained employment growth, rising incomes and wages and low interest rates buoyed private consumption (up 1.9% year-on-year in real terms) and private investment in housing construction. Overall, construction investment grew by 2.7%. However, the pace of

expansion in the construction industry was limited by capacity constraints.

Labour market trends remained very positive. On preliminary calculations, the number of people employed increased to 44.29m and thus reached a new all-time high. This increase is due in particular to larger numbers of jobs requiring social security contributions, mainly created in business-related services and in health and social services. Unemployment was at its lowest level for more than 25 years, with an average of 2.53m people registered as unemployed in 2017. The ratio of job vacancies to the number of persons employed is exceptionally high. Even if it is too early to speak of a nationwide skills shortage, the Federal Employment Agency already reports shortfalls in individual occupations and notably in engineering, construction and some health and care occupations.

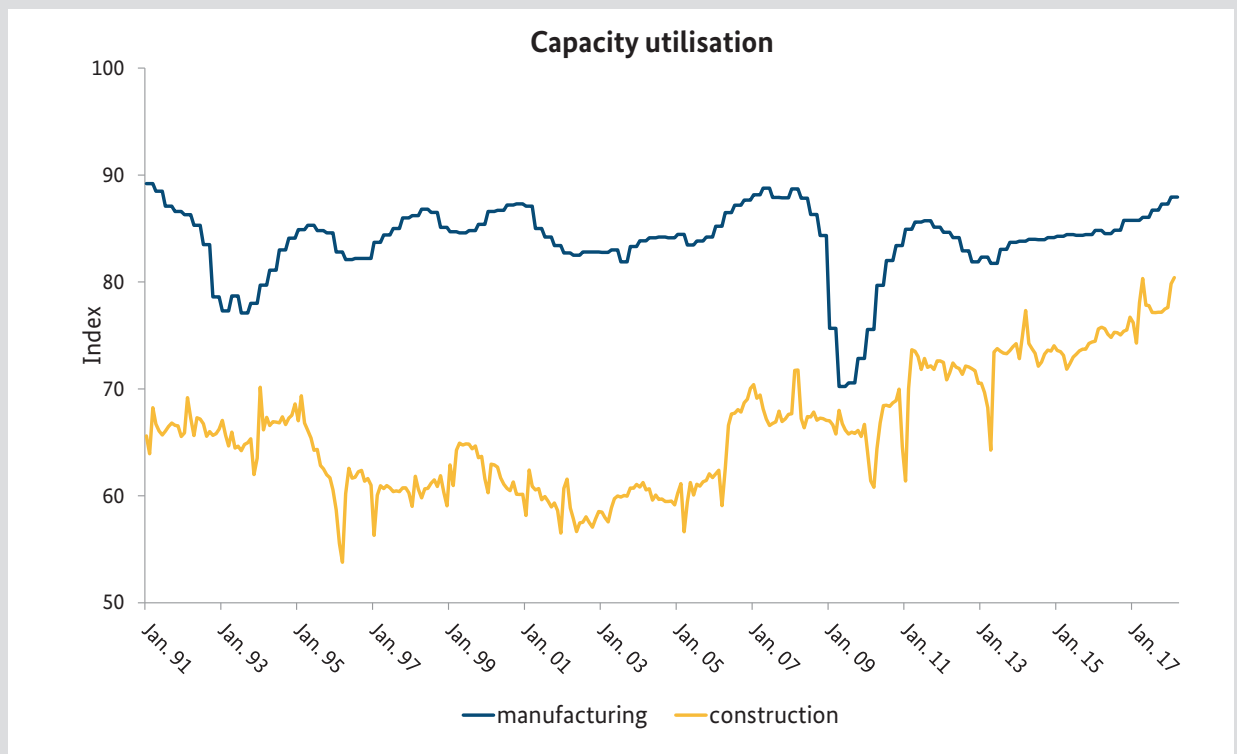
Employment-related immigration is a key factor in the ongoing growth in employment. Foreign nationals accounted for half of the increase in jobs requiring social security contributions. According to the Institute for Employment Research, the labour pool grew by 570,000 individuals in 2017 despite substantial effects of demographic change

(with a negative impact of 300,000). This increase was due in approximately equal parts to the increased labour force participation of women and older people and to immigration (primarily from Southern and Eastern Europe and of asylum seekers).

Increasing exports also contributed to the growth of the German economy. The global economic recovery in important regions such as the European Union and the United States led to higher exports and in the same connection to an increase in investment. Machinery and equipment investment in particular rose more strongly than expected (+4.0%) while growth in construction investment was somewhat weaker, as mentioned above (+2.7%). Other fixed capital investment – including investment in in-

tellectual property, the importance of which has increased significantly with the spread of digital technology – increased by 3.5% in 2017. The external balance of goods and services, meaning the difference between exports and imports, had only a minor positive impact on GDP growth (+0.2 percentage points) as imports grew less strongly than exports. Imports from the euro area went up by 6.4% in 2017. These totalled just under 37% of German imports. Imports from the United States also increased (+5.3%). Uncertainties persist in relation to foreign trade, for example with regard to the potential resurgence of protectionist trade barriers, economic development in China, geopolitical conflicts and the consequences of the United Kingdom’s withdrawal from the European Union.

Figure 1a: Capacity utilisation trends in Germany



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

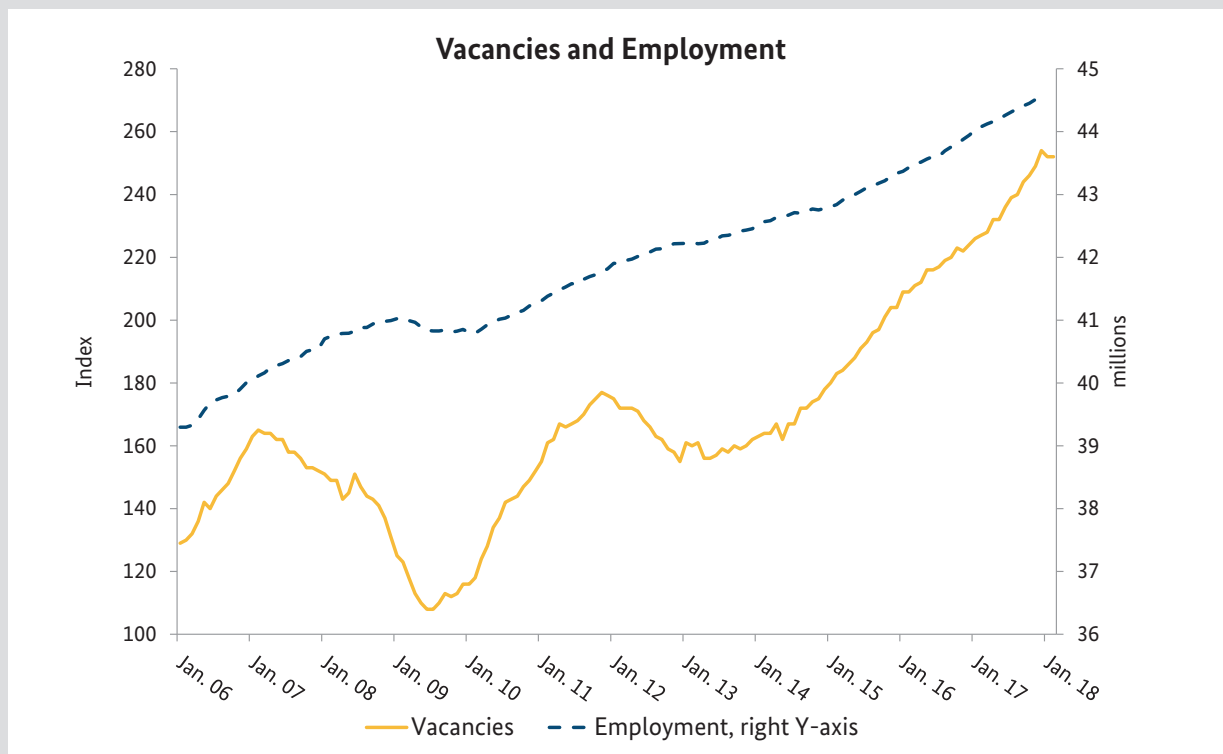
At 1.8%, consumer prices in Germany rose significantly faster in 2017 than in the previous year. Mainly driven by more dynamic trends in energy and food prices, inflation grew at its fastest pace in four years.

## 2.2 Short- and medium-term outlook for the aggregate economy, 2018–2022

Leading indicators suggest that the outlook for 2018 is positive. The business and consumer climate is very good. Incoming orders from Germany and abroad are clearly on an upward trend. Manufacturing export expectations stabilised at a high level at the beginning of the year.

The labour market remains in good shape. Most additional employment is in services, but jobs also continue to be created in industry. Going forward, however, the rise in employment is likely to lose momentum due to the increasingly tight labour supply, making it harder to expand output.

Figure 1b: Labour market trends in Germany



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

In its annual projection for 2018, the federal government expects a continuation of the strong upturn and a 2.4% increase in real GDP. Private consumption is projected to increase by 1.9%, which, like last year, will once again make it a key driver of growth. Decisive factors here are the positive outlook on the labour market and in particular favourable income trends. Given the growing tightness of the labour market and good corporate earnings, gross wages and salaries per employee are expected to increase by a substantial 2.9% (2017: +2.7%). Total gross wages and salaries are projected to increase by 4.1%, accompanied by marked employment growth. Alongside the gain in property income, public consumption will also increase at a faster pace in 2018 than in the previous year. As a result, disposable income is projected to post a significant 3.6% increase.

The labour market remains a key driver of economic growth in Germany. It is expected to sustain its dynamic trend, albeit at a reduced pace. This will continue to be aided by increasing labour force participation among older workers and women and by immigration, mostly from other EU countries. The federal government expects that unemployment will continue to decrease this year, although at a slower rate, with the number registered as unemployed falling by around 145,000. Demand for labour will remain strong, as reflected by labour market indicators and large numbers of vacancies. As domestic labour force participation is already very high by international standards, further activation of the potential workforce is likely to slow down over time. It is becoming increasingly difficult to make up for the negative impacts of demographic change on the labour supply. This effect is likely to be compounded to the extent that immigration from the European Union is expected to decrease. Despite intensive integration efforts and strong labour demand, the integration of refugees into the labour

market will be achieved only gradually. As a result, the number of people in employment is expected to increase at a slightly slower pace than in the previous year (by 1.1% or 490,000) and to reach a total of 44.8m. With energy prices less buoyant, consumer price inflation is expected to be slightly lower in 2018 than in the previous year (+1.7% year on year) and to remain moderate on the whole. Core inflation, which excludes food and energy prices, is expected to increase to +1.6%.

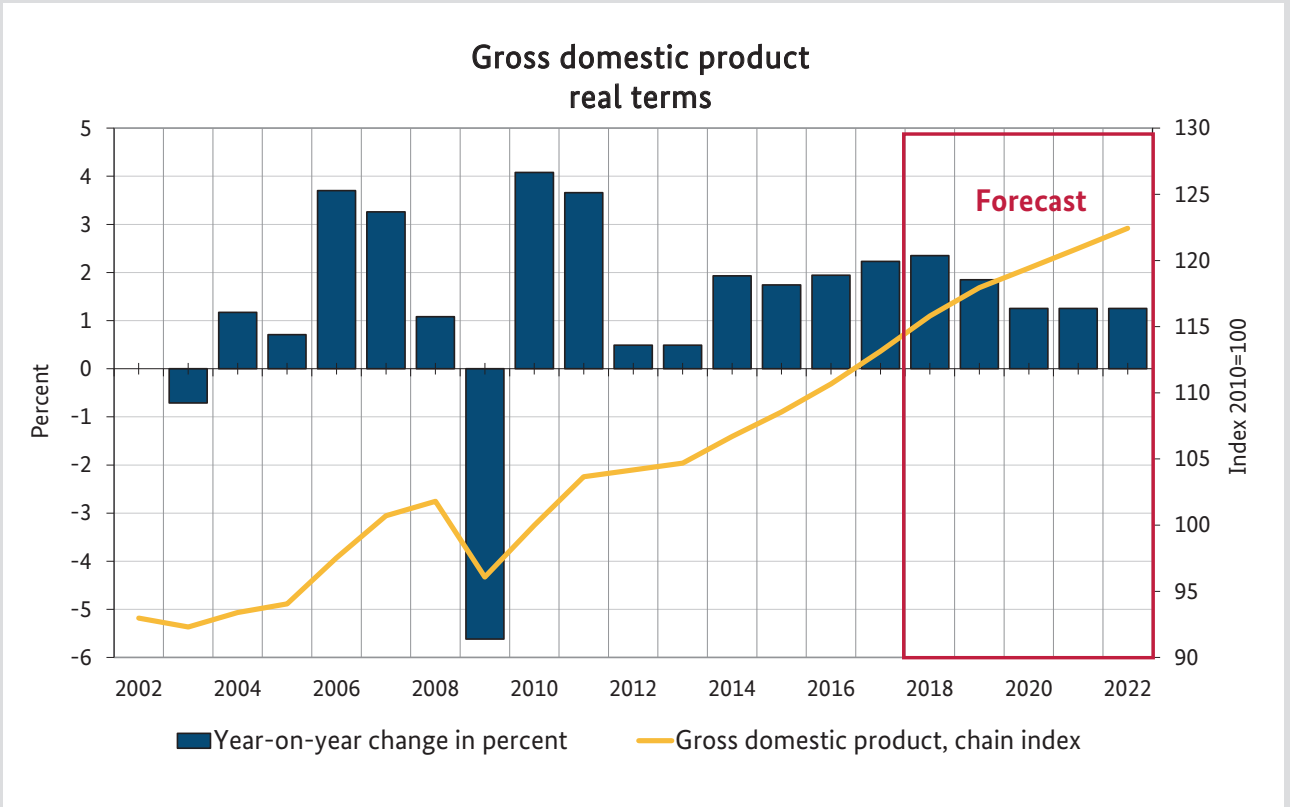
The increase in equipment investment is expected to accelerate to about 5.0% in real terms year on year. This is supported by the brightening global economic environment with the related improved sales prospects, the good corporate profit situation, the ongoing favourable borrowing terms for business and above-average capacity utilisation. The most recent DIHK economic survey shows that companies have stepped up their investment plans both in industry and across the economy as a whole. With regard to the rationale for investment, expansion and rationalisation gained in importance across all sectors. Construction investment will also rise this year, by +2.8%. Housing construction is expected to provide a boost here; it is likely to accelerate given increases in household income and low interest rates. A dynamic rise is also anticipated in other assets (including investment in research and development), with the federal government expecting an increase here of 4.2% for 2018. Intellectual property now accounts for about a quarter of corporate investment, and this proportion is expected to continue increasing.

Global economic growth is once again expected to increase slightly this year and will be sustained by almost all regions. This will benefit exports by German businesses. At the same time, the rise in export activity and increased plant and equipment investment will give a big boost to imports, due to the high import content of German exports.

As a result, imports are expected to post higher gains (+5.8% in real terms) than exports (+5.3%). The external balance of goods and services, meaning the difference between exports and imports, will have only a minor positive impact on GDP growth (+0.2 percentage points).

Due to the strong upturn in 2017, gross domestic product once again rose faster than aggregate potential output. The output gap was thus slightly positive. In light of the expected economic growth, the output gap is expected to further increase this year and next. The German government expects real GDP to grow at a rate of 2.4% in 2018 and 1.9% in 2019. In its medium-term projection, the federal government assumes an average growth rate of approximately 1¼% p.a. for the period 2020-2022. Positive employment trends are expected to continue during this period. By 2022, the number of people in work will have increased to around 45.5m. Potential growth is estimated at around 1½%. This means that the positive output gap is expected to close gradually by the end of the medium-term projection period, implying that aggregate capacity utilisation will return to normal in 2022.

Figure 2: Gross domestic product, in real terms





### 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

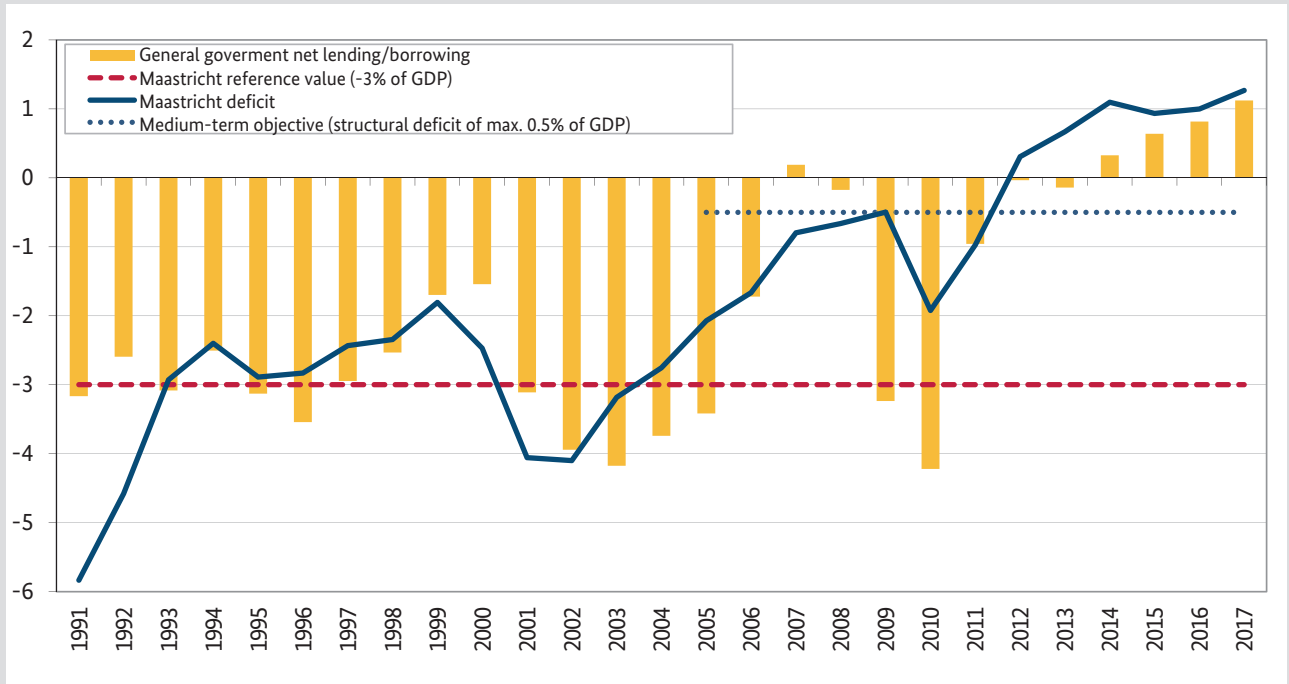
The Stability and Growth Pact (SGP) requires member states to bring their budgets close to balance over the medium term and to set their own binding targets to this end. The SGP also sets upper limits on budget deficits and debt ratios. Compliance with these targets and limits serves to safeguard each euro member state's capacity to act. This includes flexible rules on 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 2017, Germany once again complied in full with the rules of the SGP. Germany's budget policies successfully kept the country's nominal deficit well below the upper limit of 3% of GDP. The actual general gov-

ernment fiscal balance of the Federation, *Länder*, local authorities and social security funds, including off-budget entities, was +1.1% of GDP in 2017. As Figure 3 shows, the general government budget also recorded a structural surplus of 1.3% in 2017.

Alongside the strong GDP growth, these general government budget surpluses have contributed significantly to the reduction in the debt-to-GDP ratio in recent years. In 2017, the debt-to-GDP ratio fell significantly by 4.2 percentage points. It is thus on a sustained downward trend. 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. Germany has fulfilled this requirement for the relevant three-year period from 2015 to 2017.

Figure 3: Comparison of structural and actual financial balance (in % of GDP)



1995: Excluding asset transfers associated with the assumption of the liabilities of the *Treuhandanstalt*, an agency charged with liquidating assets formerly owned by the East German government, and of the residential construction enterprises of the former East Germany. Inclusive of these effects, the total government deficit amounted to 9.4% of GDP.  
 2000: Excluding UMTS revenue. Inclusive of these effects, the government budget showed a surplus equal to 0.9% of GDP.

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. The country-specific MTOs are binding minimum requirements. Under the Treaty on Stability, Coordination and Governance in Economic and Monetary Union (the fiscal compact), member states whose debt ratios are above 60% and whose public finances are at risk of being unsustainable over the long term must not post structural deficits exceeding 0.5% of

GDP. Accordingly, Germany's Stability Programme sets the same upper limit. 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. In its 22 November 2017 opinion on Germany's draft budgetary plan and elsewhere, the European Commission had criticised Germany's compliance with Regulation (EU) No 473/2013, specifically with regard to the requirement of Article 4(4) that the draft

budget must be based on independently endorsed or produced macroeconomic forecasts. The European Commission's main objection was the absence of an independent body charged with producing or endorsing macroeconomic forecasts, for which a legal framework should be put in place. To implement Regulation (EU) No 473/2013, a law on the drafting of the federal government's macroeconomic forecasts was enacted in 2017 (*Vorausschätzungsgesetz*, Federal Law Gazette I, p. 2080) together with a related ordinance (*Vorausschätzungsverordnung*, Federal Law Gazette I, p. 3378). The law codifies the procedure currently applied by the federal government to draft macroeconomic forecasts. The federal government's projection is based on the projections of the Joint Economic Forecast Project Team, whose members are leading economic research institutions. Commencing in autumn 2018, the Joint Economic Forecast Project Team, as the independent institution designated for the purpose, will review all three of the federal government's projections (annual, spring and autumn projection) and comment accordingly.

### 3.2 Fiscal situation and strategic direction

The ECOFIN Council gave the following recommendations for fiscal policy in the euro currency area on 22 November 2017:

*"Fiscal policies should strike the appropriate balance between ensuring the sustainability of public finances, in particular reducing debt ratios where they are high, and supporting the economic recovery. While ensuring the effective functioning of national fiscal frameworks, Member States should pursue fiscal policies in respect of the SGP and which support investment and improve the quality and composition of public finances, also by making use of spending reviews and adopting growth-friendly and fair tax structures." Furthermore, "[g]iven the positive cyclical condi-*

*tions, all Member States should prioritise reforms that increase productivity and growth potential, improve the institutional and business environment, remove bottlenecks to investment, support the creation of quality jobs and reduce inequality."*

The federal government takes these guidelines into account when setting its fiscal policy and makes sure that the German economy can continue to tap its potential. Extremely low interest rates on capital markets, strong economic growth above the potential growth rate and record employment on the labour market have created exceptionally good conditions for fiscal policy and have paved the way for general government surpluses.

From a cyclical perspective, it is important to detect signs of overheating and procyclical developments at an early stage. Expansionary fiscal policy is not generally appropriate in a situation of overutilised capacity. Excessive spending increases would unnecessarily exacerbate the tendency to overheat unless they address clearly identified bottlenecks in goods and public policy conditions, such as in infrastructure and education. Otherwise, they could harbour threats to macroeconomic stability, which would harm economic development in Germany and also across the euro area in the medium and long term.

A key indicator for assessing the stance of fiscal policies and its impact on the economy is the change in the cyclically adjusted general government primary balance. This balance remained unaltered in 2017 compared with the previous year, meaning that Germany's fiscal policy stance is cyclically neutral. However, at 3.4%, government primary spending rose more sharply than nominal potential output (+3.3%).

In addition, fiscal policies that aim to ensure stability must also take into account the fact that, although low interest rates continue to ease the burden on public budgets significantly, the current conditions on capital and financial markets should be

viewed as both exceptional and of limited duration. To ensure that public budgets remain on a secure footing in the future, policy-makers must prepare for a normalisation of global financial conditions.

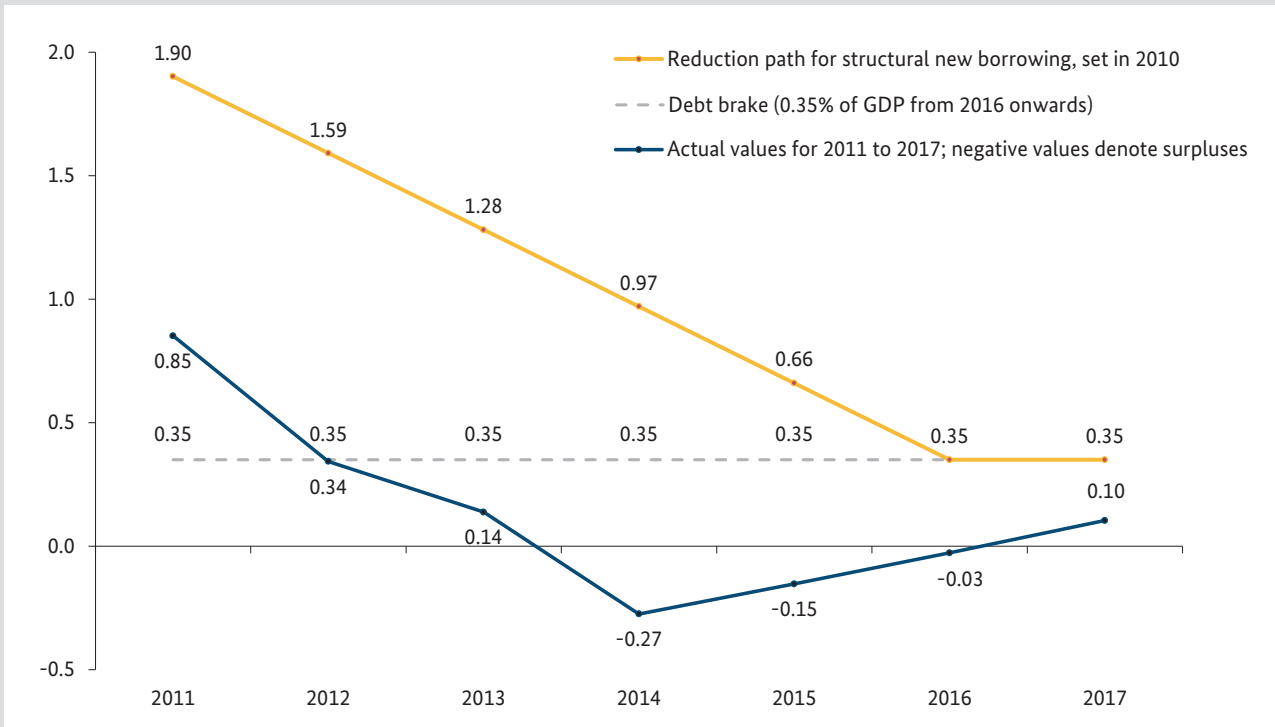
In view of this, forward-looking fiscal policy is needed in order to fully safeguard the government's ability to take effective action in the future. Periods of strong economic performance need to be used to make public finances resilient against changes of the business cycle and interest rates. The federal government has not had to resort to new borrowing in its budget execution since 2014, and the federal budgets actually drawn up since 2015 have contained no new borrowing (see Figure 4). Similarly, there is a commitment to taking on no new debt in the coalition agreement adopted by the coalition parties on 12 March 2018. The federal government thus reaffirms its commitment to a stability-oriented fiscal policy in line with demographic requirements.

Its fiscal policy objective is to strengthen the domestic economic foundations for growth and pave the way for sustainable public finances. Over the next four years, the federal government intends to implement the coalition agreement with priority expenditure in the following key areas: Future-focused investment in education, research, universities and digital technology (approximately €6bn), families, children and social affairs (€12bn), construction and housing (€4bn), equivalent living conditions agriculture, transport and local authorities (€12bn), international responsibilities for security and development (€2bn) and relief for taxpayers by a phased and near-complete abolition of the solidarity surcharge (€10bn). The overall fiscal policy direction, including the measures with an effect on finances for 2018, is likely to have a slightly expansionary impact on the economy.

To ensure sound fiscal and budget policies, it is essential not only to address cur-

rent challenges but also to identify in advance basic spending trends and their medium- and long-term consequences so that appropriate measures can be adopted if necessary. For example, the share of interest expenditure in total federal budget spending (interest expenditure ratio, as defined in fiscal statistics) declined from its highest level of 16.6% in 1999 to 5.3% in 2017. The decrease in the interest expenditure ratio is mainly attributable to lower interest expenditure as a result of exceptional monetary measures and associated conditions on European capital markets. Nonetheless, the ratio fell only marginally last year as there was no further decline in capital market interest rates. The reduced burden on public finances should not be considered to be permanent. Instead, capital markets can be expected to normalise, and fiscal policy must be prepared for this. It is also essential not to lose sight of the above-average increase in primary spending. In particular, expenditures for cash and non-cash social benefits increased at an above-average rate of most recently +3.8% year on year in 2017. Among other things, higher expenditures were recorded for pensions, health care and long-term care. According to the government's projection, social spending will remain at a high level. These expenditure trends must be monitored closely in order to ensure that public budgets remain able to target expenditures towards areas that are crucial for future growth, including education, research and technology.

Figure 4: Change in the Federation’s structural deficit (in % of GDP)



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

## Excerpt [convenience translation] from the ‘Finances and Taxes’ chapter of the coalition agreement of 12 March 2018 between the parties CDU, CSU and SPD

### Sound finances

We want to use the financial leeway afforded to the federal government by the good economic situation in a responsible and socially equitable manner in order to shape policy. We agree on the goal of a balanced budget without new borrowing and in compliance with the relevant constitutional requirements. As provided for in the Stability and Growth Pact, we want to reduce the general government debt-to-GDP ratio to below 60% of the gross domestic product.

The benchmark figures (top-down) approach for budget drafting introduced in 2011 has proven effective and will be retained. The existing participation rights of the German Bundestag and its Budget Committee in decisions at European level with an effect on finances will be respected.

On the basis of the balanced budget, we want to use the resources available to do even more for citizens. This also includes generating additional leeway by comprehensive critical review of responsibilities and regular assessment of measures for effectiveness and efficiency. Approaches for the improvement of impact orientation in budgeting, such as revenue and expenditure-side budget analysis, will be enhanced and refined for this purpose.

Based on the federal government’s financial planning for the drafting of the budget (51st Financial Plan), expenditure of €1.392tn is planned for the years 2018 to 2021. In addition to the measures planned there, we intend to use the financial leeway foreseeable in the next four years for priority expenditure in the following key areas:

### Priority expenditure in the following key areas

#### 1. Investment in the future: Education, research, universities, digitalisation

| Measure  | Total 2018-21 |
|--|---------------|
| All-day school/all day child-care programme  | 2.0           |
| Advanced further training  | 0.35          |
| Reform of education assistance (BAföG)   | 1.0           |
| Successor to Higher Education Pact (from 2021)                                     | 0.6           |
| Federal share in phased attainment of 3.5% research and development target by 2025 | 2.0           |
| Broadband rollout, digital pact for schools (infrastructure <sup>1</sup> )         | Fund          |
| <b>Total (bn.)</b>   | <b>5.95</b>   |

## 2. Families, children and social affairs

| Measure   | Total 2018-21 |
|---|---------------|
| Increase in child benefit and tax-free child allowance (federal share)        | 3.5           |
| Child day-care (fees and quality)   | 3.5           |
| Combating child poverty with supplementary child allowance                    | 1.0           |
| SGB II integration budget headings: Social labour market/social participation | 4.0           |
| <b>Total (bn.)</b>  | <b>12.0</b>   |

## 3. Construction and housing

| Measure  | Total 2018-21 |
|--|---------------|
| Further federal promotion of social housing in 2020/2021   | 2.0           |
| Tax incentives to increase home ownership (depreciation rules, energy-efficient refurbishment, promotion of family home ownership) | 2.0           |
| <b>Total (bn.)</b>   | <b>4.0</b>    |

## 4. Equivalent living conditions, agriculture, transport and local authorities

| Measure  | Total 2018-21 |
|--|---------------|
| Increase in funding under Community Transport Financing Act (GVFG) 2020/21 | 1.0           |
| Regional structure policy/coal policy structural change                    | 1.5           |
| Rural regions/agriculture  | 1.5           |
| Continuation of local authority and <i>Länder</i> programmes               | 8.0           |
| <b>Total (bn.)</b>   | <b>12.0</b>   |

## 5. International responsibility in security and development

| Measure                                  | Total 2018-21 |
|--|---------------|
| Increase in defence budget and ODA ratio | 2.0           |
| <b>Total (bn.)</b>                       | <b>2.0</b>    |

## 6. Tax relief

| Measure              | Total 2018-21 |
|----------------------|---------------|
| Solidarity surcharge | 10.0          |
| <b>Total (bn.)</b>   | <b>10.0</b>   |

1. Further measures to be clarified in 2018/2019 budget preparations

Other measures agreed by the coalition can be funded if additional financial leeway becomes available or if corresponding direct, full and permanent reciprocal financing is assured.

We want to use the auction proceeds for 5G licences to set up an investment fund which will be available for the expansion of digital infrastructure.

We will secure the continued funding of the ongoing measures to relieve the burden of refugee costs on the *Länder* and local authorities (annual block grant for integration, accommodation costs, unaccompanied refugee minors) with a total of a further €8bn over the years through to 2021 and – where necessary – work together to restructure it more efficiently.

We want to ensure by means of targeted programme design that federal funds provided to other regional government entities for specific purposes such as social housing are used in full for those purposes.

### **Tax policy**

We will provide relief for lower and middle incomes in particular on the solidarity surcharge. We will abolish the solidarity surcharge in phases and will begin from 2021 with a substantial initial step in the amount of €10bn. Approximately 90% of all solidarity surcharge payers will consequently be provided with full relief by means of an exempt amount (with a sliding transitional range).

Tax simplification is an ongoing responsibility. An important political goal here is to progress step by step and, in particular, to make use of the technical possibilities of modern information technology. We will expand the possibilities for citizens to communicate electronically with the revenue administration. We aim to introduce pre-filled tax returns for all taxpayers by the 2021 assessment period.

We want fair allocation of the tax burden for married couples. We want to inform married couples better about the marginal burden approach (*Faktorverfahren*) and improve acceptance of it. Married couples with the tax class combination III/V are to be regularly informed about the marginal burden approach in tax assessment notices and be alerted to the possibility of changing to the tax class combination IV/IV with application of the marginal burden approach.

In Europe, we support a common tax base and minimum rates of corporate taxes. We want to take the initiative with France here in order also to respond to international changes and challenges, not least in the United States.

The withholding tax on interest income will be abolished upon establishment of the automatic exchange of information; we will prevent evasion. We stand by our previous objective of introducing a financial transaction tax in the European context.



In Germany, we want fair tax enforcement – from tax collection to tax audit. All assets obtained from a criminal offence and all unlawful profits are to be consistently confiscated.

The procedure for collection and reimbursement of import VAT represents a serious competitive disadvantage for German industrial and commercial enterprises as well as German airports and seaports. We will therefore improve this procedure in cooperation with the *Länder*.

We will augment and enhance the role of the Federal Central Tax Office (*Bundeszentralamt für Steuern*) with commensurate resources. This is to become the central point of contact for tax questions and for the provision of binding information for non-residents.

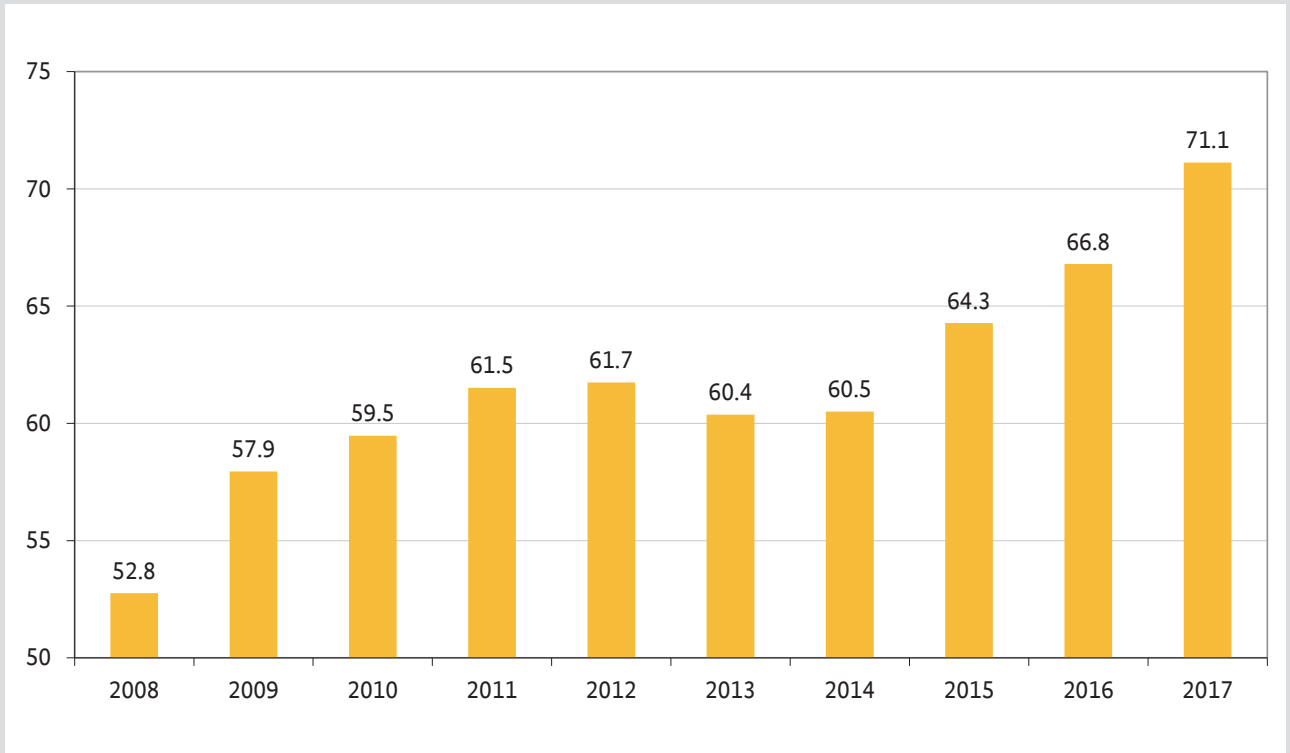
### 3.3 Fiscal policy measures in terms of expenditure and revenue

The federal government continued to pursue its future-oriented and growth-enhancing fiscal policy in the past year. It further increased investment in infrastructure, education and research and additionally improved the enabling conditions for private investment. Both of these have combined to help boost potential output. This focus is in line with the recommendations contained in the Ecofin Council's opinion (dated 11 July 2017) on Germany's 2017 Stability Programme, which called on Germany to further increase public investment in infrastructure, education and research. An immediate consequence of this growth-oriented fiscal policy was a significant rise in general government gross fixed capital formation in 2017 with an increase of 6.5% over the previous year. This is larger than the increase in public spending (+3.6%) and nominal GDP (+3.8%), showing once again that sound public finances and additional investment can go hand in hand.

The federal government also contributed substantially to the positive momentum of general government investment by providing financial relief to the *Länder* and local authorities, which account for a good two-thirds of public investment.<sup>2</sup> To provide local authorities lacking adequate financial resources with support in the area of educational infrastructure, the federal government, among other things, amended the Local Authority Investment Promotion Act (*Kommunalinvestitionsförderungsgesetz*) in 2017 and increased the size of the Local Authority Investment Promotion Fund (*Kommunalinvestitionsförderungsfonds*). The amount of funding was doubled from €3.5bn to €7bn. The *Länder* are now also being provided with federal financial assistance in the amount of €3.5bn for investment by local authorities with inadequate financial resources in general education and vocational school refurbishments, conversions and extensions over the period 1 July 2017 to 31 December 2022. Under this provision, all necessary infrastructure measures are eligible for funding, including those to bring school buildings up to standard in terms of digital requirements.

<sup>2</sup> Based on the terminology used in the European system of integrated economic accounts (ESA), the term 'local authorities' is used here. It generally refers to both local authorities and associations of local authorities.

Figure 5: General government gross fixed capital formation (in €bn)



The federal government provided a further €1.5bn to support local authority investment in 2017. With the restructuring of *Partnerschaft Deutschland – Berater der öffentlichen Hand GmbH* in 2017, the federal government has additionally created an advisory service for all levels of government and all forms of procurement in order to relieve planning capacity constraints in public investment. Access to these consulting services has been made easier for local authorities especially.

In addition to supporting local authorities with social welfare expenditure – such as full reimbursement of net expenditure on basic security benefits in old age and in the event of reduced earning capacity, of contributions to the cost of housing and heating in connection with basic security benefits

for job seekers, and the federal contribution to childcare provision for under-threes – the federal government increasingly assists local authorities with the financial planning and implementation of infrastructure projects. Total funding for such measures was €13bn in 2017.

The federal government continues to relieve the burden on the *Länder* and local authorities in connection with costs relating to refugees and asylum seekers. For example, the federal government increased the proportion of VAT revenue allocated to the *Länder* and contributed once again in 2017 towards costs incurred under the Asylum Seeker Benefits Act (*Asylbewerberleistungsgesetz*). To this end, it advanced the *Länder* an amount of €1.16bn. Likewise in 2017, it provided a €2bn block grant for integration

purposes. In addition, the federal government met the full cost of accommodation for persons granted asylum status or protected status. In total, the relief provided to the *Länder* and local authorities amounted to approximately €6.8bn in 2017. This relief will continue to be provided in 2018.

The federal government has made it clear that it is placing a top priority on providing the financing to deliver humanitarian assistance to refugees and to perform refugee-related tasks. Accordingly, the net federal surplus in 2017 was transferred to the 'asylum reserve' established in 2015.

The influx of refugees has increased demand for housing. This is one reason why the Federation has increased the compensation payments that it is providing to the *Länder* from 2007 to 2019 – in order to compensate for the discontinuation of earlier financial assistance and funding for social housing – by a total of €3bn for the years 2016 to 2019. Under the reform of financial relations between the Federation and the *Länder*, the *Länder* will be allocated over €4bn a year in additional VAT revenues from 2020, among other things because of the termination of the compensation payments. The coalition agreement between the governing parties provides for €2bn in further funding for social housing for the years 2020 and 2021. Furthermore, the agreement stipulates that the federal government can continue to assume joint responsibility with the *Länder* for the funding of social housing. In addition, the Federation is selling properties at discount rates to the *Länder* and local authorities for social housing, providing properties rent-free to accommodate asylum seekers and refugees, and reimbursing the *Länder* and local authorities for the renovation and development of these properties. The coalition agreement also includes plans to build 1.5m homes in the new legislative term and to promote rural development and mobility. Families are to receive financial support to encourage home

ownership. Up to a specific income limit, the coalition agreement therefore provides for a home ownership-related child benefit (*Baukindergeld*) in the amount of €1,200 per child per year for a period of ten years on the purchase of a first home, whether it is a new build or an existing property.

On the basis of a balanced budget without new borrowing, the federal government plans when making use of financial leeway to prioritise investment in the future and for social cohesion. The majority is to go to the *Länder* and local authorities, which are to provide for better education from nursery schools through to universities.

On the government revenue side, further relief in terms of income tax and social security contributions took effect on 1 January 2018. These measures will boost incentives to work and will help strengthen the economy. Both the personal basic tax-free allowance and the remaining tax thresholds were increased in order to offset the effects of bracket creep and the rise in the minimum subsistence level. The tax-free child allowance, child benefit and the maximum maintenance amount were also increased. These measures will reduce the burden on taxpayers by about €4bn in 2018. The statutory pension insurance contribution rate was also reduced from 18.7% to 18.6% at the beginning of 2018. Moreover, the average supplementary contribution to the statutory health insurance scheme will fall from 1.1% to 1.0%.

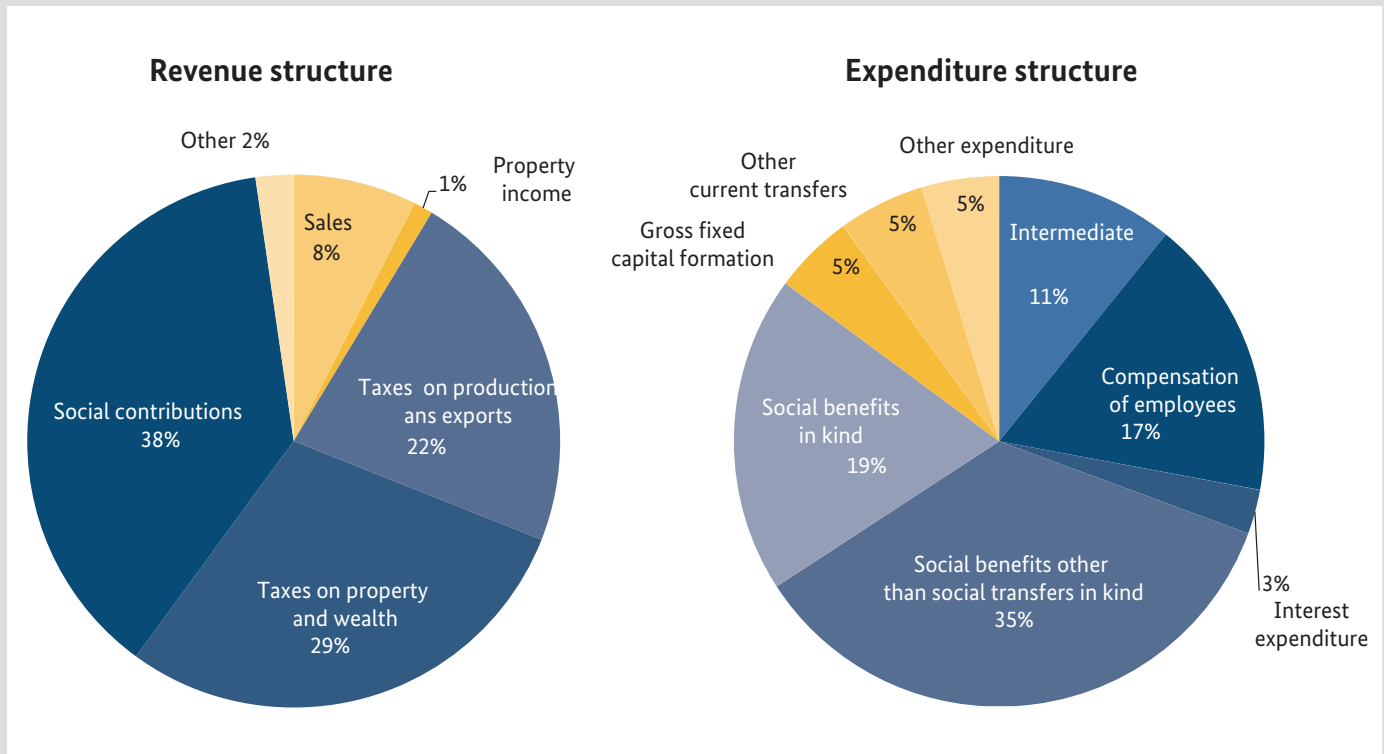
The federal government will continue its course of growth and employment-friendly tax relief. This year, it will present reports on the effects of bracket creep and on the minimum subsistence level that is to be kept free of tax, and will work to adjust income tax rates accordingly. In addition, the federal government plans in the current legislative term to provide relief for lower and middle incomes in particular on the solidarity surcharge. The solidarity surcharge is to be abolished in phases, beginning from 2021

with a substantial initial step in the amount of €10bn. Approximately 90% of all taxpayers who pay solidarity surcharge – a supplementary levy on top of income tax – are consequently to be provided with full relief by means of an exempt amount with a sliding transitional range. In addition, the federal government intends to reduce the unemployment insurance contribution rate by 0.3 percentage points, to restore equal funding by employers and employees in statutory health insurance, and to reduce the costs of social insurance contributions for lower-income earners by expanding ‘midi jobs’.

The federal government considers it an important task to take action against tax fraud and tax avoidance, for fair taxation of large corporate groups and to prevent tax evasion by closing tax loopholes and tax havens. For this reason, the federal government is – among other things – pressing ahead with implementation of the OECD Action Plan on Base Erosion and Profit Shifting (BEPS). This aims for profits to be taxed where economic activities generating the profits are performed and where value is created. In 2017, in line with international accords, the federal government introduced legislation to combat harmful tax practices in connection with IP box regimes (*Gesetz gegen schädliche Steuerpraktiken im Zusammenhang mit Rechteüberlassungen*). The legislation, which entered into effect in 2018, restricts the deduction of domestic operating expenses for licences in certain circumstances. This is to prevent multinational companies from shifting profits via royalty payments to countries with special preferential arrangements such as patent boxes and licence boxes. The same act also increased the maximum amount for low-value assets to be accounted for as expense in the year of purchase from €410 to €800 and the minimum amount for low-value assets to be pooled for depreciation purposes from €150 to €250. These measures serve to improve the existing de-

preciation arrangements and relieve businesses of red tape. In addition, exit grants for business angels were made fully tax-free in the INVEST scheme for the promotion of German start-ups.

Figure 6: General government revenue and expenditure structure 2017



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

Financial relations between the Federation and the *Länder* were reorganised under an act of July 2017 amending the Basic Law and an act of August 2017 concerning the reorganisation of the federal financial equalisation scheme from 2020 and amending budgetary law.

The agreed reorganisation of the federal financial equalisation scheme abolishes the previous ex-ante VAT equalisation and replaces the previous financial equalisation among the *Länder* with a financial capacity equalisation scheme, with horizontal allocation of VAT. The horizontal financial capacity equalisation will be effected via additions

to and deductions from the VAT allocations made to the *Länder* on the basis of their respective share of the population. In an additional part of the new arrangement, the Federation will support weaker *Länder* with further supplementary allocations from 2020. Overall, with the measures introduced, the Federation will contribute significantly more funding to the *Länder* than previously. The laws under the reformed financial equalisation scheme stipulate clear rules on the allocation of responsibilities among the Federation, the *Länder* and local authorities.

In this legislative term, the reorganisation of financial relations between the Federation and the *Länder* now has to be consistently implemented. This includes, for example, establishing the Stability Council's procedure for monitoring compliance

with the debt brake by the Federation and the Länder and implementing the administrative reform of the federal long-distance road network while ensuring smooth transition of the autobahn administration to the Federation.

### 3.5 Implementation of country-specific fiscal policy recommendations

The federal government's future-oriented and growth-enhancing strategy, including the measures described in section 3.3, addresses the country-specific fiscal policy recommendations issued by the Council on 11 July 2017. Germany was given two recommendations for 2017 and 2018, each featuring several reform elements of fiscal policy relevance.

The first recommendation is, while respecting the medium-term objective, to achieve a sustained upward trend in public investment, especially in education, research and innovation. Capacity and planning constraints for infrastructure investment are to be addressed, the efficiency and investment-friendliness of the tax system are to be further improved and competition is to be stimulated in business services and regulated professions. As in past years, the second recommendation is directed among other things at reducing the high tax wedge for low-wage earners and facilitating transitions to standard employment.

In its country report on Germany dated 7 March 2018, the European Commission confirmed Germany's progress in addressing, among other things, the 2017 country-specific fiscal policy recommendations. With a view to efforts to accelerate public investment, it commended in particular the improvement in planning capacity for infrastructure investment, the additional funding for local authorities, and the reform of federal financial relations. Regarding the tax system, the Commission has identi-

fied – along with a need for further action – progress in reducing disincentives to work for second earners, facilitating the transition to standard employment and, as a result of the measures entering into effect on 1 January 2018, for reducing the tax wedge. Federal government measures aimed at addressing these challenges and implementing the country-specific recommendations of the Council of the European Union are described in detail in Germany's 2018 NRP, which was adopted by the federal cabinet on 25 April 2018. The 2018 NRP also outlines the progress made and the measures taken to meet the targets of the Europe 2020 growth strategy.

## 4. General government budget balance and debt level projection

Germany continues to set a structural balance of -0.5% of GDP as its MTO.

### Assumptions underlying the projection

The general government budget projection presented in this section is based on the short- and medium-term prospects for the development of the economy. The public budget projections provided here were able to take into account up to and including the fourth quarter of 2017 for the Federation and the *Länder* and up to and including the third quarter of 2017 for local authorities.

The fiscal impacts of the measures prioritised by the coalition parties (see excerpt from the coalition agreement beginning on page 21) are the subject of ongoing consultations regarding the federal budget and medium-term fiscal plan. These can be taken into account in projections of the revenue and expenditure in the general government budget once the outcomes of the consultations on implementation of those measures are known. Therefore, the projection of general government revenue and expenditure presented here constitutes a scenario reflecting the state of public budgets

without the effects of the measures decided by the coalition. A cursory assessment of the fiscal impacts of these measures on the general government budget balance is provided in section 4.6. The information remains subject to the outcome of the ongoing consultations on the federal budget and medium-term fiscal plan. An updated projection will be provided on the basis of the 2018 draft budget under the Draft Budgetary Plan once the federal government has adopted it.

In light of the ongoing budget preparation process and the fact that key parameters for the medium-term fiscal plan through to 2022 are still pending, the projection period for this projection comprises the years 2018-2021.<sup>3</sup>

<sup>3</sup> Due to the formation of the government following the 2017 Bundestag elections, the Federal Government will only prepare a budget for 2018 this spring. The German Stability Programme for 2018 consequently includes a medium-term fiscal plan solely for the years 2018-2021, meaning a three-year period instead of a four-year period as in past years. The Code of Conduct of the Stability and Growth Pact requires the submission of three-year fiscal plan.

## 4.1 Trends in general government revenue and expenditure

### Record revenue with strong upturn

In 2017, revenue was up by 4.3% on the year and thus grew at a faster pace than GDP (nominal GDP growth: +3.8%).<sup>4</sup> Good labour market conditions once again contributed significantly to this figure. Tax revenue and revenue from social security contributions went up by 4.8% and 4.6% respectively. As a result, the revenue ratio increased from 45.0% to 45.2% of GDP. The tax-to-GDP ratio by the National Accounts definition<sup>5</sup> went up from 23.3% to 23.5% of GDP.

In the projection period to 2021, tax revenue is expected to continue growing at a somewhat faster pace (of 3¾% per year on average) than nominal GDP. Accordingly, the tax ratio is expected to rise to approximately 23¾% of GDP by the end of the projection period.

The revenue ratio – which also includes other government revenue such as revenue from business activities and fees – is projected to stabilise at around 44¾% of GDP in the coming years.

Table 1: Trends in the government revenue ratio

|  | 2017        | 2018        | 2019        | 2020        | 2021        |
|--|-------------|-------------|-------------|-------------|-------------|
|  | in % of GDP |             |             |             |             |
| <b>Taxes</b>                                   | 23.5        | 23 ½        | 23 ½        | 23 ½        | 23 ¾        |
| <b>Social security contributions</b>           | 16.8        | 16 ¾        | 16 ¾        | 16 ¾        | 16 ¾        |
| <b>Taxes and social security contributions</b> | 40.3        | 40 ¼        | 40 ¼        | 40 ¼        | 40 ½        |
| <b>Total revenue</b>                           |             |             |             |             |             |
| <b>April 2018 Update</b>                       | <b>45.2</b> | <b>44 ¾</b> | <b>44 ¾</b> | <b>44 ¾</b> | <b>44 ¾</b> |
| April 2017 Update                              | 45 ¼        | 45 ¼        | 45 ¼        | 45 ¼        | 45 ¼        |

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.

<sup>4</sup> Where not otherwise specified, all data contained in this projection are based on the definitions laid down in the 2010 European system of national and regional accounts (in accordance with Regulation (EU) No 549/2013).

<sup>5</sup> The tax-to-GDP ratio differs from a tax ratio based on cash statistics or fiscal statistics, i.e. using the results of the Working Party on Tax Revenue Estimates gives different ratios.



## Expenditure ratio stabilising

Government expenditures rose by 3.6% in 2017, slightly more slowly than nominal GDP. This indicates a gradual normalisation after the high levels of refugee migration in 2015 and 2016 and the resulting effects on public budgets. The expenditure ratio fell slightly, from 44.2% to 44.1% of GDP.

During the projection period through to 2021, general government expenditure will increase on average by 3¼% per year, with government consumption rising in the same order of magnitude. Total social spending (i.e. social benefits other than social transfers in kind as well as social transfers in kind) is expected to increase more rapidly, by an average of 3¾% per year. The social spending ratio, at 24.0% of GDP in 2017, will remain broadly constant through the projection period.

General government gross capital formation posted a disproportionate increase in 2017, by 5.1% year on year in 2017. Investment at the general government level will rise by an average of 5% per year over the projection period between 2017 and 2021 and thus at a higher rate than total expenditure. This means the positive trend of recent years will continue.

## 4.2 Trends in the government budget balance

A budget surplus of 1.1% of GDP was generated in 2017. The public budgets of the Federation, *Länder* and local authorities benefited especially from the dynamic development of tax revenue, especially from profit-based taxes. The social security funds also recorded disproportionately large increases in social security contributions. At the same time, lower interest spending reduced the burden on public finances. As a result, all sub-sectors of the general government were able to post surpluses in 2017, with the *Länder* and local authorities accounting for the largest portion of the surplus, at 0.8% of GDP.

Public budgets used some of the surpluses in 2017 to build up reserves. For example, the Federation was able to top up the reserve to finance costs relating to the reception and accommodation of refugees and asylum seekers.

Table 2: Trends in the government expenditure ratio

|                   | 2017        | 2018 | 2019 | 2020 | 2021 |
|-------------------|-------------|------|------|------|------|
|                   | in % of GDP |      |      |      |      |
| April 2018 Update | 44.1        | 44   | 43 ½ | 43 ½ | 43 ¼ |
| April 2017 Update | 44 ¾        | 45   | 45   | 44 ¾ | 44 ¾ |

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

As things stand, the surplus is expected to decrease in 2018. This is due to rising transfers to the European Union budget and the calling-in of guarantees in connection with the sale of HSH Nordbank. In subsequent years – in the scenario presented here, which does not yet include measures under the coalition agreement – the general government surplus is once again expected to increase to 1½% of GDP at the end of the projection period.

Table 3: Trends in the general government balance

|                          | 2017        | 2018     | 2019       | 2020       | 2021       |
|--------------------------|-------------|----------|------------|------------|------------|
|                          | in % of GDP |          |            |            |            |
| <b>April 2018 update</b> | <b>1.1</b>  | <b>1</b> | <b>1 ¼</b> | <b>1 ½</b> | <b>1 ½</b> |
| April 2017 update        | ½           | ¼        | ¼          | ½          | ½          |

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

### The *Länder* and local authorities account for most of the surplus

Looking at the various levels of government, the *Länder* and local authorities accounted for most of the surplus in 2017. Two one-off effects will result in a reduction in the *Länder* surplus in the current year. One is the calling-in of the guarantee on HSH Nordbank, and the other is the assumption of local authority liabilities by the Land Hesse. In their own right, these two one-off effects will reduce the *Länder* surplus by approximately ¼% of GDP in 2018. There will be a temporary increase in the local authority surplus due to the Hesse *Land* government's assumption of local authority liabilities. From 2019, the *Länder* surplus is expected to return to ¾% of GDP.

Table 4: Budget balances according to government level

|                              | 2017        | 2018     | 2019       | 2020       | 2021       |
|------------------------------|-------------|----------|------------|------------|------------|
|                              | in % of GDP |          |            |            |            |
| <b>Central government</b>    | 0.0         | 0        | ¼          | ¼          | ½          |
| <b>State government</b>      | 0.5         | ¼        | ¾          | ¾          | ¾          |
| <b>Local government</b>      | 0.3         | ½        | ¼          | ¼          | ¼          |
| <b>Social security funds</b> | 0.3         | ¼        | ¼          | ¼          | 0          |
| <b>General government</b>    | <b>1.1</b>  | <b>1</b> | <b>1 ¼</b> | <b>1 ½</b> | <b>1 ½</b> |

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 Structural indicator trends

Cyclical and extraordinary factors outside governmental control can alter the government budget balance. Structural indicators are examined as part of European budgetary surveillance in order to assess the impact of budgetary and fiscal policies and reach conclusions about the general thrust of fiscal policy. To this end, European budgetary surveillance looks at the structural balance and trends in expenditure (as defined for the purposes of the expenditure benchmark) in comparison with the trend in GDP at normal economic capacity utilisation levels.


#### Structural balance: MTO attained by a clear safety margin

The structural balance is determined by adjusting the nominal balance for cyclical influences in accordance with the common EU method. One-off effects (notably the repayment of nuclear fuel duty) that adversely affected the nominal balance in 2017 are also not considered in determining the structural balance.

Last year, the structural balance for the Federation, *Länder*, local authorities and social security funds improved from 1.0% of GDP to 1.3% of GDP. Key factors influencing this development included the disproportionately large increase in tax revenues and lower transfers to the European Union.

In the current year, 2018, the structural surplus is expected to decrease substantially; as things stand, the surplus will turn out to be approximately ½% of GDP. This primarily reflects the larger positive output gap. The portion of the general government budget balance that is explained by cyclical factors is set to rise significantly relative to the previous year. From 2019, in the scenario presented here (meaning without measures under the coalition agreement), the structural surplus will increase again to around 1½% of GDP in 2021. In their own right, the measures under the coalition agreement would lead cumulatively to a fiscal stimulus of approximately 1½% of GDP, primarily in the period from 2019 to 2021 (see section 4.6).

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

|   | 2017 | 2018  | 2019 | 2020 | 2021 |
|---|------|---|------|------|------|
| <b>Real GDP</b>   |      |   |      |      |      |
| % change yoy  | 2.2  | 2.4   | 1.9  | 1.3  | 1.3  |
| <b>Actual balance, excluding measures (% of GDP)</b>                                      | 1.1  | 1   | 1 ¼  | 1 ½  | 1 ½  |
| <b>Structural balance, excluding measures (% of GDP)</b>                                  | 1.3  | ½   | ¾    | 1    | 1 ½  |
| <b>Additional fiscal stimulus from measures under the coalition agreement<sup>1</sup></b> |      |   |      |      |      |
|   |      |  |      |      |      |
|   |      | Cumulatively at least 1½% of GDP  |      |      |      |

Figures for the projection period are rounded to a quarter of a percentage point of GDP.  
 1 See section 4.6

Germany will thus attain the MTO of 0.5% of GDP by a clear safety margin.

Trend in expenditure (expenditure benchmark definition)

In addition to the MTO (a structural deficit of no more than 0.5% of GDP), the preventive arm of the SGP also includes an expenditure benchmark. Under the expenditure benchmark<sup>6</sup>, for member states that attain their MTO without a safety margin, adjusted expenditure must not increase at a faster pace than average nominal potential output, meaning the trend in GDP at normal capacity utilisation. For the purpose of the expenditure benchmark, expenditure is adjusted among other things by interest expenditure, cyclical labour market effects, fluctuations in investment spending around the average, co-financed EU programmes, discretionary measures on the revenue side and one-off effects on the revenue and expenditure sides.

Germany’s expenditure – under the expenditure benchmark definition – is expected to grow by 5% this year and thus significantly more rapidly than average nominal potential output.

6 As stipulated by the European Commission.

This rise in expenditure growth in 2018 is mainly due to one-off effects and discretionary revenue-side measures; the increase in unadjusted expenditure is projected to be significantly weaker, at around 4%. In the medium term, Germany will comply with the expenditure benchmark, with expenditure growth in 2020 and 2021 about half of a percentage point below the average potential output growth rate. As Germany continues to meet its MTO by a clear margin, the expenditure benchmark under Article 5 of Regulation (EU) No 1466/97 is not binding according to the Code of Conduct of the Stability and Growth Pact.

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.

If actual GDP growth were to exceed the federal government's annual projection by half a percentage point per year (the baseline scenario), the budget balance would remain at the 2017 level in 2018 and increase further in subsequent years. In the alternative scenario, with GDP growth half of a percentage point lower than in the baseline

**Table 6: Expenditure benchmark: projected expenditure and potential output**

|   | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|------|------|------|------|------|
| <b>Expenditure</b><br>(yoy increase; according to the expenditure benchmark definition) | 3.4  | 5    | 3 ½  | 3    | 3    |
| <b>Nominal GDP potential</b><br>(moving ten-year annual average)                        | 3.3  | 3.2  | 3.4  | 3.5  | 3.4  |

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

#### 4.4 Sensitivity of budget balance projection

Sensitivity analyses can provide indications 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 ½ percentage point decrease or increase in real GDP in the years 2018 to 2021. All other assumptions – including interest expenditure, the projected GDP deflator and the composition of GDP – are held

scenario, the general government budget would, in purely statistical terms, be slightly in surplus over the projection period.

#### 4.5 Trends in debt levels

The debt-to-GDP ratio has fallen continuously since 2012. Having stood at 79.9% in 2012, the debt-to-GDP ratio had fallen to 64.1% by the end of 2017.

The healthy state of public finances, the strong upturn and the planned further winding down of the resolution authorities' portfolios will continue to have a favourable impact on the debt ratio over the projection period – without taking into ac-

Table 7: Sensitivity of the general government budget balance projection

| GDP trends according to             | 2017   | 2018 | 2019 | 2020 | 2021 |
|-------------------------------------|--|------|------|------|------|
|                                     | <b>general government budget balance in % of GDP</b> |      |      |      |      |
| - Baseline scenario                 | 1.1  | 1    | 1 ¼  | 1 ½  | 1 ½  |
| - Alternative scenarios             |  |      |      |      |      |
| • -½ pp p.a. compared baseline      |  | ½    | ¾    | ½    | ½    |
| • +½ pp p.a. compared with baseline |  | 1 ¼  | 1 ¾  | 2 ¼  | 2 ½  |

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

The decrease in the debt-to-GDP ratio in the past year is largely due to the positive development of the economy. All levels (the Federation, *Länder*, local authorities and social security funds, including off-budget entities) contributed to the reduction in debt in 2017. A substantial share was accounted for by the resolution authorities established by the Federation and the *Länder* following the financial crisis.

count the measures planned by the coalition. A decrease by some three percentage points to 61% of GDP is expected in 2018. On this basis, the debt ratio would pass below the Maastricht reference value in 2019. The debt-to-GDP ratio is projected to decrease to 53% by the end of the projection period in 2021.

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

|                   | 2017                          | 2018 | 2019 | 2020 | 2021 |
|-------------------|-------------------------------|------|------|------|------|
|                   | <b>Debt ratio in % of GDP</b> |      |      |      |      |
| April 2018 Update | 64.1                          | 61   | 58 ¼ | 55 ¾ | 53   |
| April 2017 Update | 66 ¼                          | 64   | 61 ¾ | 59 ¾ | 57   |

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

## 4.6 Effects of the measures quantified in the coalition agreement on the general government budget balance

As shown in section 3, the coalition agreement includes a list of priority measures affecting finances with a volume, as relates to the federal budget, of approximately €46bn over four years. The coalition agreement additionally contains plans for a 0.3 percentage point reduction in the unemployment insurance contribution rate. The fiscal impact of further planned social security measures is not quantified in the coalition agreement and is therefore not taken into account in the following.

The expenditure increases/revenue decreases set out in the coalition agreement are to be viewed in relation to the fiscal planning of the previous federal government for the years 2018 to 2021. In connection with this, there is the objective of balancing the federal budget without new borrowing.

Altogether, the measures that have already been quantified and that are likely to have an effect on the general government budget balance are expected to reduce the general government surplus by approximately 1½% of GDP, primarily in the period from 2019 to 2021. It should be noted in this regard that some of the measures referred to in the coalition agreement will have a positive impact on the financial situation of the *Länder* and local authorities. The figure of approximately €46bn referred to in the coalition agreement solely represents the effect on the federal budget, whereas the impact on the general government balance estimated here (i.e. approximately 1½% of GDP) also includes the impacts on the other sub-sectors of government (the *Länder*, local authorities and social security funds).

Taking a closer look at the impact that the measures quantified in the coalition agreement are expected to have on the gen-

eral government balance, half of this impact will involve a reduction in revenue and half will involve an increase in expenditure relative to the scenario without those measures presented in section 4.1. About two-thirds of the increase in expenditure will consist of higher current expenditure, and about one-third will consist of higher investment spending (see Table 9). The annual average impact on the general government balance is expected to be approximately ¼% to ½% of GDP; this can be stated more precisely when the timing of the measures through to 2021 has been decided.

In addition to the measures referred to, further investment spending is planned for broadband expansion and for the 'Digital Pact' for schools. This is not taken into account here as no figure is stated for this purpose in the list of priority expenditures in the coalition agreement.

Table 9: Estimated impact on the general government budget balance of quantified measures under the coalition agreement\*

|   | Cumulative effect for 2018 – 2021<br>% of GDP |
|---|---|
| <b>Revenue</b>                              | - $\frac{3}{4}$                               |
| <b>Expenditure</b>                          | $\frac{3}{4}$                                 |
| Current expenditure                         | $\frac{1}{2}$                                 |
| Investment expenditure**                    | $\frac{1}{4}$                                 |
| <b>Reduction of surplus/fiscal stimulus</b> | <b>1 <math>\frac{1}{2}</math></b>             |

\* The table only includes measures that are quantified in the coalition agreement and are assessed to have an effect on the general government budget balance. The data are subject to the outcomes of the preparation of the federal budget for 2018 and 2019 and of the medium-term fiscal plan through to 2022.

\*\* Excluding investment package for expansion of digital infrastructure.



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

### 5.1 Challenges to the sustainability of public finances

The changing age structure of the population will increasingly affect public finances in the years ahead. The current demographic reprieve will come to an end in the first half of the next decade as the post-war baby-boomers reach retirement.

Population ageing will then also be reflected in the old-age dependency ratio. This is the ratio of the retirement-age population to the working-age population. The old-age dependency ratio will increase from just over 32% in 2017 to just under 56% in 2070. Although immigration in recent years is contributing to a temporary stabilisation of population numbers in Germany, it will not be able to make up for the ongoing ageing of the population. According to updated projections from the 13th Coordinated Population Projection published by the Federal Statistical Office, Germany's population, which today is 82.6m, is expected to decline by about 3½m by 2070.

Ageing and population decline are largely driven by the interaction of birth rates, life expectancy and migration:

- The rise in the average number of children per woman from 1.39 in 2011 to 1.59 in 2016 is indicative of structural improvements. In the long term, the birth rate in Germany is even expected to increase further to just under 1.68 in 2070. However, this increase is not sufficient to maintain the population in the long term without immigration. This would require about 2.1 births per woman.
- Life expectancy in Germany will also continue to rise significantly – by about 7 years for men and 6 years for women in 2070.
- The migration trend is subject to considerable uncertainty. There is expected to have been significant net migration in 2017, albeit at a lower level than under the refugee influx in 2015 and 2016.

In economic terms, the projected significant decline in the working-age population will tend to lead to a downward trend in Germany's potential output. This will be caused by a declining contribution by the volume of labour to the growth in potential output (see Figure 7).

### Potential output and potential growth

Potential output is a measure of production capacity in the whole economy, which determines an economy's potential for growth in the medium and long term. The potential growth path is the trend in GDP and hence of aggregate activity that is possible without inflationary pressures under the given institutional framework.

Potential output can be determined by various estimation techniques that differ in economic rationale and the statistical methods used.

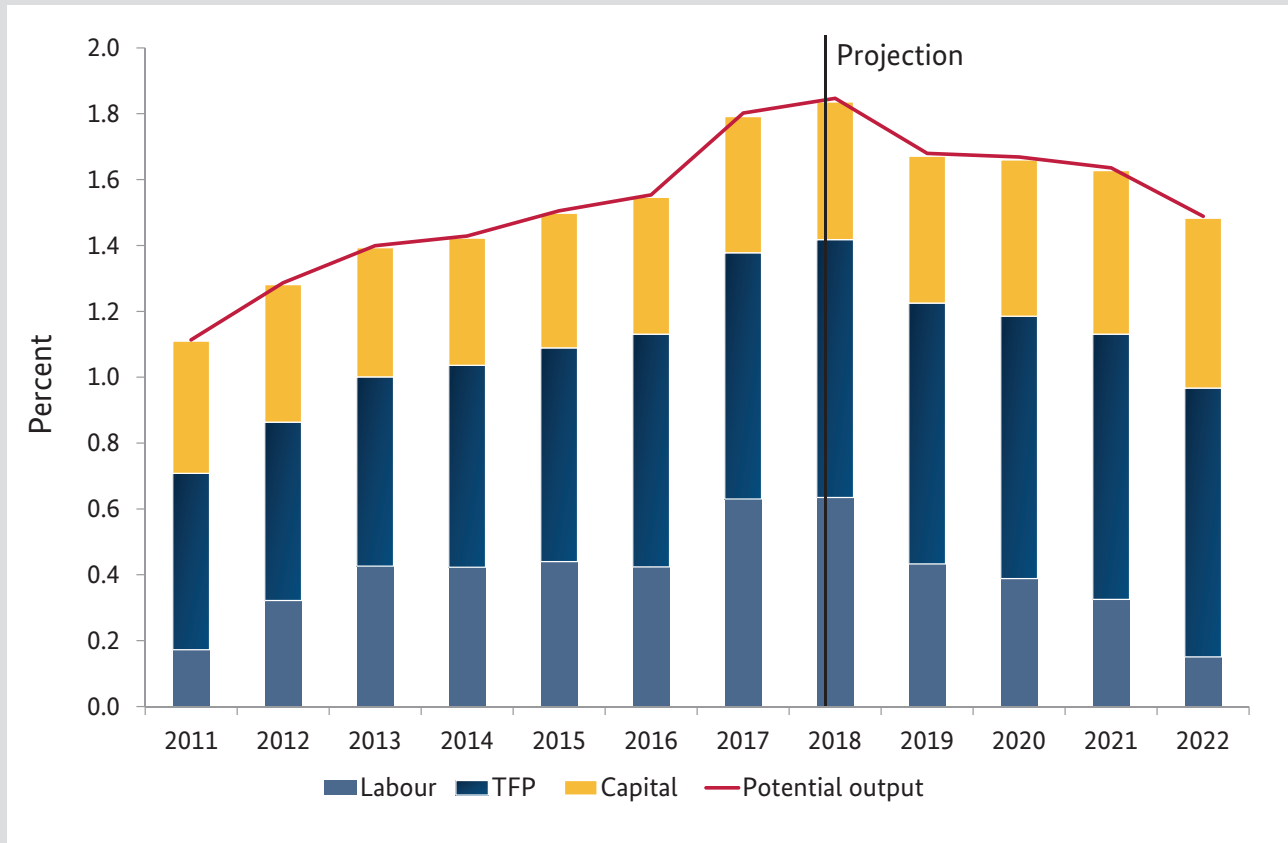
The federal government estimates potential output using the production function approach used by the European Union. The main determinants of medium- and long-term growth prospects in this approach are the expected trend in the two factors of production labour and capital combined with a measure of technical progress (total factor productivity, TFP).

The federal government expects that potential output will grow by 1.8% in 2018. It estimates that technical progress (total factor productivity) will contribute 0.8 percentage points to growth, capital employed 0.6 percentage points and the volume of labour 0.4 percentage points.

The impact of demographic trends will increase through to 2022. According to the federal government's projections, the growth contribution from the volume of labour will decrease significantly and reduce potential growth to 1.5% in 2022.

For the very long term – based on the current projections in the 2018 Ageing Report – the expectation is for a decrease of marginally over 1%.

Figure 7: Trend in German potential output, 2011–2022



Most of all, this affects the revenue base of public finances and the social security systems. Relief could come in the form of productivity gains and higher labour force participation. The unbroken trend towards more advanced educational qualifications, the record increase in the employment rate via the increasing employment of women and the successful integration of immigrants into the labour market make for favourable conditions in this context.

A future-oriented and growth-enhancing fiscal policy must address all foreseeable structural changes resulting from demographic change. Only then can the sustainability of public finances and the state's ability to take effective action be ensured in the future.

## 5.2 Government revenue and expenditure from a long-term perspective

The Federal Ministry of Finance regularly develops long-term scenarios for the trend in public finances as part of an early warning system. The Fiscal Sustainability Report helps keep a watch on fiscal policy risks and provides indications as to the extent of any need for action to safeguard sound public finances.

The key indicator for assessing long-term fiscal sustainability is the amount of consolidation needed today to ensure that all future expenditure, including accrued public debt, is in balance with expected revenue. This indicator is called the 'sustainability gap'. On the basis of calculations in the Finance Ministry's fourth Sustainability Report, Germany's sustainability gap is in a range between 1.1% and 3.7% of GDP.<sup>7</sup> These results are confirmed by the projections coordinated at EU level for the 2018 Ageing Report.

The projections in the 2018 Ageing Report likewise indicate that fundamental changes in Germany's demographic structure will exert significant upward pressure on age-related costs. On top this pressure increases dramatically if greater weight is given to demographic and macroeconomic risks, such as risks related to labour market trends, interest rates and demographics

The successes in consolidating public finances and reforming social security systems have significantly improved the sustainability position and have compensated for the increased burden on pension, health and long-term care insurance in recent years. Nonetheless, structural reforms are still needed to permanently close the sustainability gap.

## 5.3 Measures to ensure long-term fiscal sustainability

In face of the demographic challenges, sound public finances and sustainable social systems require measures to strengthen productive labour force participation and hence long-term growth potential. A demographically resilient fiscal policy must focus on facilitating the employment of women and older workers, reducing long-term unemployment and attracting skilled labour from abroad.

Federal government policies have helped to lay the groundwork for the positive trends in employment and education. Key actions include measures in the area of vocational training, the 2020 Higher Education Pact, and measures to further improve options for balancing work, family and care-giving commitments. Conditions have been improved for integrating refugees into the training and labour markets, for example by expanding and further diversifying the curriculum of integration courses and combining them with labour market policy measures, introducing job-related German language instruction as a federally funded standard policy instrument, promoting employment and training, temporarily suspending the reviews that are conducted to determine whether a German or other foreign worker is available to fill a given vacancy. These measures are helping refugees to gain better access to the labour market. Measures have also been taken to boost investment in education and research.

<sup>7</sup> In the report on the sustainability of public finances, long-term projections look at age-related spending in the following categories: pensions, health care, long-term care, unemployment benefits, education and family benefits. In the baseline year of 2016, this spending stood at 25.9% of GDP and accounted for approximately 60% of all public spending. Assuming no change in the general parameters, these projections show that age-related spending is set to rise to between 29.0% and 32.6% of GDP by 2060, an increase of between 3.1 and 6.5 percentage points.

The expansion of childcare infrastructure for children under the age of three has helped more mothers into work. In 2006, 43.8% of mothers with a youngest child under three were in employment. By 2016, the employment rate among mothers with a youngest child under three had increased to over 55%. The female employment rate has risen overall. This went up from 65.0% in 2006 to 74.5% in 2016. Most recently, a new investment program for €1.126bn was launched in 2017 for the further quantitative and qualitative enhancement of child day-care.

For the new legislative term, too, numerous measures have been agreed in the new coalition agreement to strengthen the skills base and enhance educational opportunities and qualifications, for example by providing extra funding for child day-care, expanding all-day schooling and childcare, supporting the *Länder* with regard to investment in educational infrastructure, developing a national further training strategy and introducing a skilled worker immigration act.

An equally helpful change has been a further increase in the effective retirement age, which went up from 63.5 years in 2010 to 64.1 years in 2016. With their experience and potential, older employees are indispensable to the labour market. In statutory pension insurance, Germany has improved the long-term financing of the pension system with a phased increase in the standard retirement age to 67. With legislation to facilitate a flexible transition from employment into retirement and to strengthen prevention and rehabilitation in working life (the *Flexirentengesetz* or 'Flexible Pensions Act'), the federal government improved the scope in law for fitting employees' transition from employment into retirement around their personal preferences. This encourages older workers to remain in employment up to a greater age.

Social policy pledges to increase benefits under the coalition agreement for the previous legislative term were fulfilled with an

act concerning performance improvements in statutory pension insurance (*RV-Leistungsverbesserungsgesetz*), changes in reduced earning capacity pensions and the alignment of pensions in eastern Germany with those in western Germany.

An act (called the *Rentenüberleitungsabschlussgesetz*) was adopted in 2017 that provides for the full alignment of parameters used to determine pension amounts in eastern and western Germany. Over a period of seven years starting in 2018, pension levels and other benefits under pension law in the new (eastern German) *Länder* will be raised in increments up to the respective levels that apply in the western German *Länder*. In return, earnings in the new *Länder* will no longer receive favourable treatment in calculations. Pensions will be determined uniformly throughout Germany from 2025. A law improving reduced earning capacity benefits (*EM-Leistungsverbesserungsgesetz*) enacted at the same time improved benefits for future recipients of reduced earning capacity pensions under statutory pension insurance. Commencing 2018, for future recipients, the added periods that are credited to reduced earning capacity pensions will be extended in stages by a total of three years to 65 years of age by 2024. From 2024, new recipients of a reduced earning capacity pension will be treated as if the average income earned before the loss of earning capacity had continued to apply for three years longer than is currently the case. In total, this measure will result in a substantial increase in the future pension entitlements of new pensioners with reduced earning capacity. The coalition agreement of 12 March 2018 additionally provides for the extension to the added periods to be brought forward.

To place pension arrangements on a broader footing against the background of demographic change, the federal government has expanded funded private and occupational pension systems over the past decades. An act to strengthen occupational pensions (the *Betriebsrentenstärkungs-*

*gesetz*), which entered into force on 1 January 2018, has now opened up new avenues for the more widespread adoption of occupational pensions. Under what is referred to as the “social partner model”, employers can now commit to paying contributions without any additional guarantees or liability. In the future, collective agreements can provide for option systems where most employees are automatically part of an occupational pension scheme unless they explicitly opt out. Where employees make use of their deferred compensation entitlements, the employer will have to pay at least 15% of the deferred compensation to the organisation implementing the pension scheme in return for the social security contributions saved. A specific tax incentive scheme is to be introduced with regard to company pensions for low wage earners. The size of the incentive is 30% of the additional contributions made by the employer. The tax-free amount for payments into pension funds (*Pensionskassen* and *Pensionsfonds*) or direct pension insurance (*Direktversicherungen*) will also be combined into a single percentage limit and increased. Among other changes in tax-incentivised private pensions, the annual basic subsidy for Riester pensions is to be increased from €154 to €175. In occupational pensions, disbursements under Riester plans are no longer taken into account when determining statutory health and long-term care insurance contributions. Finally, an exempt amount has been introduced for recipients of basic security benefits in old age so that up to approximately €200 per month in income from additional pensions is no longer deductible from the basic security benefits.

It is also important that people should be able to recognise gaps in their own old-age provision at an early stage and address them as effectively as possible. That is why it is a priority for the federal government to ensure that people are well informed about the status of their old-age provision, taking into account all three pillars of the pension

system (statutory, occupational and private pensions).

The positive employment situation is reflected in the finances of statutory pension insurance. According to the most recent pension insurance report, the current contribution rate of 18.6% can be maintained through to 2022. On the annual pension adjustment, pensions increased as of 1 July 2017 by 1.9% in western Germany and 3.59% in eastern Germany.

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

Against the backdrop of a balanced federal budget and a stable situation of overall governmental finances, it is all the more necessary to improve the effectiveness of resources deployed for citizens and the economy. The coalition agreement therefore provides for generating additional leeway by comprehensive critical review of responsibilities and regular assessment of measures for effectiveness and efficiency along with the augmentation and refinement of approaches to improve impact orientation in budgeting, such as revenue and expenditure-side budget analysis. Potential starting points include spending reviews and subsidy policy. Reforms of statutory health insurance could also lead to efficiency gains.

The federal government has conducted spending reviews in selected policy areas since 2015. These theme-based budgetary analyses examine whether the relevant federal government goals still have priority, whether they are attained and whether goal attainment is effected economically. This is made all the more important by the fact that the federal government faces numerous new fiscal policy challenges that need to be reconciled with the balanced budgets objective.

It is important for subsidies to fulfil their purposes in a manner that is both effective and cost-efficient. For this reason, it is crucial to have an effective performance evaluation system in place. Germany's subsidy policy guidelines state that all subsidies granted by the federal government must be evaluated on a regular basis, particularly in terms of target accuracy, efficiency and sustainability. Such evaluations seek in particular to prevent the misallocation of resources and to identify potential for optimisation. The subsidy policy guidelines set the framework for the federal government's subsidy policy. They ensure transparency, reinforce accountability, and improve governance with a view towards facilitating the effective management and control of subsidies.

At the end of the most recent legislative term, the federal government commissioned a systematic evaluation of a further 32 tax benefits. Each and every measure is also subject to a sustainability impact assessment in the regular subsidy reports. Sustainability impact assessments broaden the spectrum of subsidy management instruments. They aim to make holistic appraisals of subsidies by weighing the outcomes of individual measures from a variety of sustainability-related perspectives. The federal government's 26th Subsidy Report was adopted by the federal cabinet on 23 August 2017; the next subsidy report is planned for summer 2019.

The federal government has implemented a series of reforms in recent years to improve quality and cost-efficiency in statutory health insurance. In the inpatient sector, the measures taken in the past legislative term under the Hospital Structures Act (*Krankenhausstrukturgesetz*) are beginning to have an impact. Utilisation of the hospital structure fund for the restructuring of hospital capacity thus shows initial signs of capacity being adjusted in line with demand. The Act on Strengthening Pharmaceutical Supply in Statutory Health Insurance (*Arzneimittelversorgungsstärkungs-*

*gesetz*), which largely entered into force in 2017, improved the balance between encouraging innovation on the one hand and affordability on the other. This safeguards quality in the supply of pharmaceuticals and notably rapid access to innovative drugs and the financial sustainability of the statutory health insurance system. In long-term care insurance, revenue amounting to 0.1 of a percentage point of insurance contributions is being allocated to a long-term care insurance reserve fund for a period of 20 years. From 2035 onwards, money will be withdrawn from this fund for the purpose of stabilising contribution rates.

Further information on individual measures can be found in the federal government's NRP 2018.

## Annex

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Table 10: Forecast of macroeconomic trends<sup>1</sup>

|  | ESA code    | 2017<br>Index<br>2010=100 | 2017          | 2018 | 2019 | 2020 | 2021 | 2022 | 2020 to<br>2022 <sup>4</sup> |
|--|-------------|---------------------------|---------------|------|------|------|------|------|------------------------------|
|  |             |                           | % change p.a. |      |      |      |      |      |                              |
| <b>1. Real GDP. chain index</b>  | B1g         | 113.13                    | 2.2           | 2.4  | 1.9  | 1.3  | 1.3  | 1.3  | 1 ¼                          |
| <b>2. GDP in respective market prices (€bn)</b>                        | B1g         | 3,263.4                   | 3.8           | 4.1  | 3.7  | 3.2  | 3.2  | 3.2  | 3 ¼                          |
| <b>Real utilisation of GDP chain index</b>                             |             |                           |               |      |      |      |      |      |                              |
| <b>3. Private consumption expenditure<sup>2</sup></b>                  | P.3         | 110.36                    | 1.9           | 1.9  | 1.7  | 1.1  | 1.1  | 1.1  | 1                            |
| <b>4. Government consumption expenditure</b>                           | P.3         | 113.72                    | 1.6           | 1.8  | 1.5  | 0.9  | 0.9  | 0.9  | ¾                            |
| <b>5. Gross fixed capital formation</b>                                | P.51        | 117.84                    | 3.3           | 3.8  | 3.2  | 2.8  | 2.8  | 2.8  | 2 ¾                          |
| <b>6. Changes in inventories (GDP growth contribution)<sup>3</sup></b> | P.52 + P.53 | -                         | 0.1           | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | -0                           |
| <b>7. Exports</b>  | P.6         | 133.94                    | 4.7           | 5.3  | 4.0  | 3.9  | 3.9  | 3.9  | 4                            |
| <b>8. Imports</b>  | P.7         | 131.61                    | 5.1           | 5.8  | 4.8  | 4.6  | 4.6  | 4.6  | 4 ¾                          |
| <b>Contributions to real GDP growth<sup>3</sup></b>                    |             |                           |               |      |      |      |      |      |                              |
| <b>9. Final domestic demand</b>  |             | -                         | 2.0           | 2.2  | 1.9  | 1.3  | 1.3  | 1.3  | 1 ¼                          |
| <b>10. Changes in inventories and net acquisition of valuables</b>     | P.52 + P.53 | -                         | 0.1           | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | -0                           |
| <b>11. External balance of goods and services</b>                      | B.11        | -                         | 0.2           | 0.2  | 0.0  | 0.0  | 0.0  | 0.0  | -0                           |

1 2017: Federal Statistical Office: as of February 2018  
2018 and 2019: results of the short-term forecast for the 2018 Annual Projection, January 2018  
2020 to 2022: results of the medium-term forecast for the 2018 Annual Projection, January 2018

2 Including private non-profit organisations serving households

3 Contribution to GDP growth rate

4 Values rounded to ¼

Table 11: Price trends – deflators<sup>1</sup>

| ESA code  | 2017<br>Index<br>2010=100 | 2017          | 2018 | 2019 | 2020 to<br>2022 <sup>3</sup> |
|---|---------------------------|---------------|------|------|------------------------------|
|   |                           | % change p.a. |      |      |                              |
| <b>1. GDP</b>   | 111.80                    | 1.5           | 1.8  | 1.9  | 2                            |
| <b>2. Private consumption<br/>expenditure<sup>2</sup></b> | 108.70                    | 1.7           | 1.6  | 1.8  | 2                            |
| <b>3. Public consumption</b>                              | 113.84                    | 2.2           | 2.2  | 2.1  | 2 ½                          |
| <b>4. Gross fixed capital formation</b>                   | 114.72                    | 2.4           | 1.8  | 2.2  | 1 ¾                          |
| <b>5. Exports</b>   | 105.61                    | 1.6           | 0.3  | 0.2  | 1 ½                          |
| <b>6. Imports</b>   | 102.83                    | 2.6           | 0.2  | 0.2  | 1 ¾                          |

1 2017: Federal Statistical Office: as of February 2018

2018 and 2019: results of the short-term forecast for the 2018 Annual Projection, January 2018

2020 to 2022: results of the medium-term forecast for the 2018 Annual Projection, January 2018

2 Including private non-profit organisations serving without a commercial purpose

3 Values rounded to ¼

Table 12: Labour market trends<sup>1</sup>

|   | ESA code | 2017<br>Level | 2017<br>% change p.a. | 2018<br>% change p.a. | 2019<br>% change p.a. | 2020 to<br>2022 <sup>7</sup> |
|---|----------|---------------|-----------------------|-----------------------|-----------------------|------------------------------|
| <b>1. Employment, persons (domestic)<sup>2</sup> (m)</b>  |          | 44.3          | 1.5                   | 1.1                   | 0.8                   | ¼                            |
| <b>2. Employment, hours worked<sup>3</sup> (bn hours)</b> |          | 60.0          | 1.1                   | 1.3                   | 0.9                   | ¼                            |
| <b>3. Unemployment rate<sup>4</sup> (%)</b>               |          | -             | 3.6                   | 3.2                   | 3.0                   | 3 ¼                          |
| <b>4. Labour productivity<sup>5</sup> (2010=100)</b>      |          | 104.8         | 0.7                   | 1.2                   | 1.0                   | 1                            |
| <b>5. Labour productivity<sup>6</sup> (2010=100)</b>      |          | 107.6         | 1.1                   | 1.1                   | 0.9                   | 1                            |
| <b>6. Compensation of employees (€bn)</b>                 | D.1      | 1667.9        | 4.4                   | 4.0                   | 3.9                   | 3 ¼                          |
| <b>7. Compensation per employee (thousand €)</b>          |          | 41.7          | 2.6                   | 2.7                   | 3.0                   | 3                            |

1 2017: Federal Statistical Office: as of February 2018.

2018 and 2019: results of the short-term forecast for the 2018 Annual Projection, January 2018.

2020 to 2022: results of the medium-term forecast for the 2018 Annual Projection, January 2018.

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 (2022).

Table 13: Sectoral balances<sup>1</sup>

|   | ESA code | 2017 | 2018 | 2019 | 2020 to 2022 <sup>2</sup> |
|---|----------|------|------|------|---------------------------|
| % of GDP  |          |      |      |      |                           |
| <b>1. Net lending/borrowing vis-à-vis the rest of the world</b> | B.9      | 7.9  | 7.9  | 7.7  | 7                         |
| of which:   |          |      |      |      |                           |
| - Balance on goods and services                                 |          | 7.6  | 7.6  | 7.3  | 6 ¾                       |
| <b>2. Net lending/borrowing of households</b>                   | B.9      | 5.1  | 4.8  | 4.6  | 4 ¼                       |
| <b>3. Net lending/borrowing of general government</b>           | EDP B.9  |      |      |      |                           |
| <b>4. Statistical discrepancy</b>                               |          | -    | -    | -    | -                         |

1 2017: Federal Statistical Office: as of: February 2018  
 2018 and 2019: results of the short-term forecast for the 2018 Annual Projection, January 2018  
 2020 to 2022: results of the medium-term forecast for the 2018 Annual Projection, January 2018

2 Values rounded to ¼; value for last year of forecast (2022)

Table 14: General government budgetary prospects

|   | ESA code        | 2017<br>€bn | 2017     | 2018 | 2019 | 2020 | 2021 |
|---|-----------------|-------------|----------|------|------|------|------|
|   |                 |             | % of GDP |      |      |      |      |
| <b>Net lending (EDP B.9) by sub-sector</b>                        |                 |             |          |      |      |      |      |
| <b>1. General government</b>                                      | S. 13           | 36.6        | 1.1      | 1    | 1 ¼  | 1 ½  | 1 ½  |
| <b>2. Central government</b>                                      | S. 1311         | 1.1         | 0.0      | 0    | ¼    | ¼    | ½    |
| <b>3. State government</b>  | S. 1312         | 16.2        | 0.5      | ¼    | ¾    | ¾    | ¾    |
| <b>4. Local government</b>  | S. 1313         | 8.8         | 0.3      | ½    | ¼    | ¼    | ¼    |
| <b>5. Social security funds</b>                                   | S. 1314         | 10.5        | 0.3      | ¼    | ¼    | ¼    | 0    |
| <b>General government (S.13)</b>                                  |                 |             |          |      |      |      |      |
| <b>6. Total revenue</b>   | TR              | 1,474.6     | 45.2     | 44 ¾ | 44 ¾ | 44 ¾ | 44 ¾ |
| <b>7. Total expenditure</b>                                       | TE <sup>1</sup> | 1,438.0     | 44.1     | 44   | 43 ½ | 43 ½ | 43 ¼ |
| <b>8. Net lending/borrowing</b>                                   | B.9             | 36.6        | 1.1      | 1    | 1 ¼  | 1 ½  | 1 ½  |
| <b>9. Interest expenditure</b>                                    | D. 41           | 38.9        | 1.2      | 1    | 1    | 1    | 1    |
| <b>10. Primary balance<sup>2</sup></b>                            |                 | 75.5        | 2.3      | 2    | 2 ¼  | 2 ½  | 2 ½  |
| <b>11. One-off and other temporary measures<sup>3</sup></b>       |                 | -11.0       | -0.3     | - ¼  | 0    | 0    | 0    |
| <b>Selected components of revenue</b>                             |                 |             |          |      |      |      |      |
| <b>12. Total taxes</b><br>(12=12a+12b+12c)                        |                 | 767.2       | 23.5     | 23 ½ | 23 ½ | 23 ½ | 23 ¾ |
| 12a. Taxes on production and imports                              | D.2             | 344.9       | 10.6     | 10 ½ | 10 ½ | 10 ½ | 10 ¼ |
| 12b. Current taxes on income, wealth, etc                         | D.5             | 422.3       | 12.9     | 13   | 13   | 13 ¼ | 13 ½ |
| 12c. Capital taxes  | D.91            | 0.0         | 0.0      | 0    | 0    | 0    | 0    |
| <b>13. Social security contributions</b>                          | D.61            | 548.1       | 16.8     | 16 ¾ | 16 ¾ | 16 ¾ | 16 ¾ |
| <b>14. Property income</b>  | D.4             | 16.9        | 0.5      | ½    | ½    | ½    | ½    |
| <b>15. Other<sup>4</sup></b>                                      |                 | 142.3       | 4.4      | 4 ¼  | 4    | 4    | 4    |
| <b>16. = 6. Total revenue</b>                                     | TR              | 1,474.6     | 45.2     | 44 ¾ | 44 ¾ | 44 ¾ | 44 ¾ |
| <b>p.m.: Tax burden</b><br>(D.2+D.5+D.61+D.91-D.995) <sup>5</sup> |                 | 1,315.3     | 40.3     | 40 ¼ | 40 ¼ | 40 ¼ | 40 ½ |

Table 14: Continuation

|   | ESA<br>code                    | 2017<br>€bn | 2017     | 2018 | 2019 | 2020 | 2021 |
|---|--------------------------------|-------------|----------|------|------|------|------|
|   |                                |             | % of GDP |      |      |      |      |
| <b>Selected components of expenditure</b>                       |                                |             |          |      |      |      |      |
| <b>17. Compensation of employees + intermediate consumption</b> | D.1+P.2                        | 401.8       | 12.3     | 12 ¼ | 12   | 12   | 11 ¾ |
| 17a. Compensation of employees                                  | D.1                            | 246.5       | 7.6      | 7 ½  | 7 ½  | 7 ¼  | 7 ¼  |
| 17b. Intermediate consumption                                   | P.2                            | 155.3       | 4.8      | 4 ¾  | 4 ¾  | 4 ½  | 4 ½  |
| <b>18. Social payments (18=18a+18b)</b>                         |                                | 783.5       | 24.0     | 23 ¾ | 23 ¾ | 24   | 24   |
| <b>of which: unemployment benefits<sup>6</sup></b>              |                                | 47.4        | 1.5      | 1 ¼  | 1 ¼  | 1 ¼  | 1 ¼  |
| 18a. Social transfers in kind supplied via market producers     | D.6311.<br>D.63121.<br>D.63131 | 277.9       | 8.5      | 8 ½  | 8 ½  | 8 ½  | 8 ½  |
| 18b. Social transfers other than in kind                        | D.62                           | 505.5       | 15.5     | 15 ¼ | 15 ¼ | 15 ½ | 15 ½ |
| <b>19. = 9. Interest expenditure</b>                            | D.41                           | 38.9        | 1.2      | 1    | 1    | 1    | 1    |
| <b>20. Subsidies</b>  | D.3                            | 27.6        | 0.8      | 1    | 1    | 1    | 1    |
| <b>21. Gross fixed capital formation</b>                        | P.51                           | 71.1        | 2.2      | 2 ¼  | 2 ¼  | 2 ¼  | 2 ¼  |
| <b>22. Capital transfers</b>                                    | D.9                            | 41.9        | 1.3      | 1 ¼  | 1    | 1    | 1    |
| <b>23. Other<sup>7</sup></b>                                    |                                | 115.0       | 3.5      | 3 ½  | 3 ½  | 3 ¼  | 3 ¼  |
| <b>24. = 7. Total expenditure</b>                               | TE (1)                         | 1,438.0     | 44.1     | 44   | 43 ½ | 43 ½ | 43 ¼ |
| p.m.: Government consumption (nominal)                          | P.3                            | 638.7       | 19.6     | 19 ¾ | 19 ½ | 19 ½ | 19 ½ |

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 15: No-policy change projections\*

|   | 2017    | 2017 | 2018                           | 2019                           | 2020                           | 2021                           |
|---|---------|------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|
|   | €bn     |      | % of GDP                       |                                |                                |                                |
| <b>1. Total revenue at unchanged policies</b>     | 1,474.6 | 45.2 | 44 <sup>3</sup> / <sub>4</sub> | 44 <sup>3</sup> / <sub>4</sub> | 44 <sup>3</sup> / <sub>4</sub> | 44 <sup>3</sup> / <sub>4</sub> |
| <b>2. Total expenditure at unchanged policies</b> | 1,438.0 | 44.1 | 44                             | 43 <sup>1</sup> / <sub>2</sub> | 43 <sup>1</sup> / <sub>2</sub> | 43 <sup>1</sup> / <sub>4</sub> |

Table 16: Amounts to be excluded from the expenditure benchmark\*

|  | 2017 | 2017 | 2018                          | 2019 | 2020 | 2021 |
|--|------|------|-------------------------------|------|------|------|
|  | €bn  |      | % of GDP                      |      |      |      |
| <b>1. Expenditure on EU programmes fully matched by EU funds revenue</b> | 3.3  | 0.1  | 0                             | 0    | 0    | 0    |
| <b>2. Cyclical unemployment benefit expenditure</b>                      | 0.2  | 0.0  | 0                             | 0    | 0    | 0    |
| <b>3. Effect of discretionary revenue measures</b>                       | 0.7  | 0.0  | - <sup>1</sup> / <sub>4</sub> | 0    | 0    | 0    |
| <b>4. Revenue increases mandated by law</b>                              | 0.0  | 0.0  | 0                             | 0    | 0    | 0    |

Table 17: General government debt developments (Maastricht debt ratio)\*

|   | ESA code | 2017     | 2018                          | 2019                           | 2020                           | 2021                           |
|---|----------|----------|-------------------------------|--------------------------------|--------------------------------|--------------------------------|
|   |          | % of GDP |                               |                                |                                |                                |
| <b>1. Gross debt</b>  |          | 64.1     | 61                            | 58 <sup>1</sup> / <sub>4</sub> | 55 <sup>3</sup> / <sub>4</sub> | 53                             |
| <b>2. Change in gross debt ratio</b>                        |          | -4.1     | -3                            | -2 <sup>3</sup> / <sub>4</sub> | -2 <sup>1</sup> / <sub>2</sub> | -2 <sup>3</sup> / <sub>4</sub> |
| <b>Contribution to changes in the Maastricht debt ratio</b> |          |          |                               |                                |                                |                                |
| <b>3. Primary balance</b>                                   |          | 2.3      | 2                             | 2 <sup>1</sup> / <sub>4</sub>  | 2 <sup>1</sup> / <sub>2</sub>  | 2 <sup>1</sup> / <sub>2</sub>  |
| <b>4. Interest expenditure</b>                              | D.41     | 1.2      | 1                             | 1                              | 1                              | 1                              |
| <b>5. Stock-flow adjustment</b>                             |          | -0.5     | <sup>1</sup> / <sub>2</sub>   | <sup>3</sup> / <sub>4</sub>    | <sup>3</sup> / <sub>4</sub>    | <sup>1</sup> / <sub>2</sub>    |
| <b>p.m.: Implicit interest rate on debt<sup>1</sup></b>     |          | 1.8      | 1 <sup>3</sup> / <sub>4</sub> | 1 <sup>3</sup> / <sub>4</sub>  | 1 <sup>3</sup> / <sub>4</sub>  | 1 <sup>3</sup> / <sub>4</sub>  |

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

\*Figures for the projection period are rounded to <sup>1</sup>/<sub>4</sub>.

Table 18: Cyclical developments<sup>1</sup>

|  | ESA code | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2020 to 2022 <sup>1</sup> |
|--|----------|------|------|------|------|------|------|---------------------------|
| % of GDP   |          |      |      |      |      |      |      |                           |
| <b>1. Real GDP growth (%)</b>                              |          | 2.2  | 2.4  | 1.9  | 1.3  | 1.3  | 1.3  | 1 ¼                       |
| <b>2. Net lending of general government</b>                | B.9      | 1.1  | 1    | 1 ¼  | 1 ½  | 1 ½  | -    |                           |
| <b>3. Interest expenditure</b>                             | D.41     | 1.2  | 1    | 1    | 1    | 1    | -    |                           |
| <b>4. One-off and other temporary measures<sup>2</sup></b> |          | -0.3 | - ¼  | 0    | 0    | 0    | -    |                           |
| <b>5. Potential GDP growth (%)</b>                         |          | 1.8  | 1.8  | 1.7  | 1.7  | 1.6  | 1.5  | 1 ½                       |
| contributions:   |          |      |      |      |      |      |      |                           |
| - labour   |          | 0.6  | 0.6  | 0.4  | 0.4  | 0.3  | 0.2  | ¼                         |
| - capital  |          | 0.4  | 0.4  | 0.4  | 0.5  | 0.5  | 0.5  | ½                         |
| - total factor productivity                                |          | 0.7  | 0.8  | 0.8  | 0.8  | 0.8  | 0.8  | ¾                         |
| <b>6. Output gap</b>                                       |          | 0.4  | 0.9  | 1.0  | 0.6  | 0.2  | 0.0  | -                         |
| <b>7. Cyclical budgetary component</b>                     |          | 0.2  | ½    | ½    | ¼    | ¼    | -    | -                         |
| <b>8. Cyclically-adjusted balance (2 - 7)</b>              |          | 0.9  | ½    | ¾    | 1    | 1 ½  | -    | -                         |
| <b>9. Cyclically-adjusted primary balance (8 + 3)</b>      |          | 2.1  | 1 ½  | 1 ¾  | 2    | 2 ½  | -    | -                         |
| <b>10. Structural balance (8 - 4)</b>                      |          | 1.3  | ½    | ¾    | 1    | 1 ½  | -    | -                         |

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

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



Table 19: Divergence from previous update

|  | ESA code | 2017             | 2018          | 2019             | 2020             | 2021             |
|--|----------|------------------|---------------|------------------|------------------|------------------|
| <b>Real GDP growth (yoy in %)</b>                |          |                  |               |                  |                  |                  |
| April 2017 projection                            |          | 1.4              | 1.6           | 1.5              | 1.5              | 1.5              |
| April 2018 projection                            |          | 2.2              | 2.4           | 1.9              | 1.3              | 1.3              |
| Difference                                       |          | 0.9              | 0.8           | 0.4              | -0.2             | -0.2             |
| <b>General government net lending (% of GDP)</b> |          |                  |               |                  |                  |                  |
|  | B.9      |                  |               |                  |                  |                  |
| April 2017 projection                            |          | $\frac{1}{2}$    | $\frac{1}{4}$ | $\frac{1}{4}$    | $\frac{1}{2}$    | $\frac{1}{2}$    |
| April 2018 projection                            |          | 1.1              | 1             | 1 $\frac{1}{4}$  | 1 $\frac{1}{2}$  | 1 $\frac{1}{2}$  |
| Difference                                       |          | $\frac{3}{4}$    | $\frac{3}{4}$ | 1                | 1                | 1 $\frac{1}{4}$  |
| <b>General government gross debt (% of GDP)</b>  |          |                  |               |                  |                  |                  |
| April 2017 projection                            |          | 66 $\frac{1}{4}$ | 64            | 61 $\frac{3}{4}$ | 59 $\frac{3}{4}$ | 57               |
| April 2018 projection                            |          | 64.1             | 61            | 58 $\frac{1}{4}$ | 55 $\frac{3}{4}$ | 53               |
| Difference                                       |          | -2 $\frac{1}{4}$ | -3            | -3 $\frac{1}{2}$ | -4               | -3 $\frac{3}{4}$ |

Government account figures for the projection period are rounded to  $\frac{1}{4}$ .

Table 20: Long-term trends in age-related general government expenditure

|  | 2016  | 2020        | 2030        | 2040        | 2050        | 2060        |
|--|---|-------------|-------------|-------------|-------------|-------------|
|  | Expenditure in % of GDP<br>(pessimistic basic variant "T-" / optimistic basic variant "T+") |             |             |             |             |             |
| <b>Pension expenditure<sup>1</sup></b>                       | 9.5   | 9.7 / 9.5   | 10.6 / 10.0 | 11.6 / 10.8 | 12.4 / 11.3 | 13.2 / 11.8 |
| <b>Health care expenditure<sup>2</sup></b>                   | 7.6   | 7.9 / 7.8   | 8.2 / 8.1   | 8.6 / 8.3   | 8.7 / 8.2   | 8.7 / 8.0   |
| <b>Long-term care expenditure<sup>3</sup></b>                | 1.0   | 1.1 / 1.1   | 1.4 / 1.3   | 1.7 / 1.5   | 2.2 / 1.8   | 2.5 / 1.9   |
| <b>Unemployment benefits<sup>4</sup></b>                     | 2.3   | 2.3 / 2.1   | 2.9 / 1.5   | 2.8 / 1.4   | 2.8 / 1.4   | 2.8 / 1.4   |
| <b>Spending on education and childcare<sup>5</sup></b>       | 4.0   | 4.0 / 4.0   | 4.1 / 4.1   | 4.1 / 4.3   | 4.0 / 4.2   | 4.1 / 4.3   |
| <b>Expenditure on the family benefits system<sup>6</sup></b> | 1.6   | 1.6 / 1.6   | 1.6 / 1.7   | 1.6 / 1.7   | 1.6 / 1.7   | 1.7 / 1.8   |
| <b>Total age-related expenditure</b>                         | 25.9  | 26.2 / 26.0 | 28.5 / 26.5 | 30.2 / 27.9 | 31.3 / 28.4 | 32.6 / 29.0 |
|  | Assumptions   |             |             |             |             |             |
| <b>Productivity growth (%)<sup>7</sup></b>                   | 0.6   | 1.0 / 0.9   | 1.9 / 1.9   | 1.8 / 2.0   | 1.6 / 1.8   | 1.6 / 1.9   |
| <b>GDP growth (%)</b>  | 2.2   | 1.4 / 1.4   | 1.1 / 1.8   | 0.9 / 1.5   | 0.9 / 1.6   | 0.7 / 1.5   |
| <b>Labour force participation (%)</b>                        |   |             |             |             |             |             |
| - Men (15 to 64)   | 85.2  | 85.4 / 85.0 | 86.0 / 86.5 | 85.9 / 86.4 | 85.9 / 86.4 | 86.1 / 86.7 |
| - Women (15 to 64)   | 78.2  | 79.6 / 78.5 | 82.2 / 82.6 | 82.5 / 82.8 | 83.0 / 83.3 | 83.5 / 84.0 |
| <b>Unemployment rate (%)</b>                                 | 3.9   | 3.8 / 3.6   | 5.5 / 3.0   | 5.5 / 3.0   | 5.5 / 3.0   | 5.5 / 3.0   |
| <b>Old-age dependency ratio</b>                              | 32.3  | 35.1 / 34.7 | 46.9 / 45.0 | 54.7 / 50.2 | 58.6 / 51.2 | 64.1 / 53.7 |
| <b>Total population (m)</b>                                  | 82.3  | 81.5 / 82.2 | 79.6 / 81.9 | 76.8 / 80.6 | 73.2 / 78.8 | 69.2 / 76.9 |
| <b>Population aged 65+ (m)</b>                               | 17.4  | 18.4 / 18.4 | 22.2 / 21.8 | 23.9 / 23.4 | 24.0 / 23.2 | 23.9 / 23.2 |

The values shown have been consolidated to take into account cross-payments between individual sub-budgets. Last update of the projections (2020-2060): 2015 basis year, projection data and legal situation as of 30 June 2015.

Sources: values for 2016: 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): Professor Martin Werding (Ruhr-Universität Bochum), projections for the fourth Sustainability Report by the Federal Ministry of Finance, Cologne 2016.

- 1 Statutory pension insurance and civil servants' pension
- 2 Statutory health insurance and medical assistance payments for civil servants and eligible relatives
- 3 Long-term care insurance; according to the fourth Sustainability Report, an inflation-linked continuation would result in values of approximately 1.1% and 0.8% in 2060.
- 4 Unemployment insurance, other expenses of the Federal Employment Agency and basic provision for job seekers (including accommodation costs)
- 5 Public education spending (including child-care facilities) according to the definition used in the Education Finance Report
- 6 Child benefit, tax-free allowances for children under the Income Tax Act, parental benefit
- 7 Measured by labour productivity

Comments: 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. Figures on productivity growth and GDP growth refer to changes compared with the previous ten-year period. The old-age dependency ratio is based on the definition of a working-age population as aged 15-64.

Table 21: Technical assumptions

|  | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2020 to 2022 |
|--|------|------|------|------|------|------|--------------|
| <b>Short-term interest rate (annual average)</b>         | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00         |
| <b>USD/€ exchange rate (annual average)</b>              |      | 1.19 | 1.19 | 1.19 | 1.19 | 1.19 | 1.19         |
| <b>Growth of German sales markets (in %)<sup>1</sup></b> | 5.2  | 4 ½  | 4    | 3 ½  | 3 ½  | 3 ½  | 3 ½          |
| <b>Oil price (Brent, USD/barrel)</b>                     | 64   | 66   | 63   | 60   | 59   | 58   | 59           |

1 Values rounded to ¼.

Table 22: Contingent liabilities

| <b>% of GDP</b>                          | <b>2017</b> |
|--|-------------|
| <b>Public guarantees</b>                 | 14.3*       |
| Of which: linked to the financial sector | 0.5         |

\* Year 2016





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