Federal Ministry
of Finance

German
Stability Programme

2017 Update

German Stability Programme

2017 Update

Contents

Tables/Figures

Tables

Figures

Preface to the German Stability Programme for 2017

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 12 April 2017. 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 2017 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:
http://www.bundesfinanzministerium.de

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

1. Summary

With its sound public budgets, the German government is contributing to positive economic trends and stability in Europe. Germany's economic growth has continued for eight years in a row and has outstripped potential output since 2014. The domestic economy in particular is robust: the number of jobs requiring social security contributions has increased every year since 2010, unemployment is at its lowest level since German reunification, and there has been a significant rise in wages, salaries and pensions. Fiscal policies targeted towards growth-friendly consolidation have durably boosted confidence and laid the foundation for stable macroeconomic conditions, future investments, and jobs.

Germany complied in full with the rules of the Stability and Growth Pact (SGP) in 2016. Last year, the general government budget – which encompasses the budgets of the Federation, *Länder*, local authorities and social security funds – generated a surplus of 0.8% of GDP. By adopting a federal budget that contained no new borrowing, the federal government played a decisive role in this achievement. The general government debt-to-GDP ratio has declined considerably after peaking in 2010. It stood at 68.3% of GDP at the end of 2016 and is projected to continue to fall to 66¼% this year. This development is being boosted by robust growth and record employment levels, leading to higher revenues for the Federation, *Länder*, local authorities and social security funds. At the same time, the low interest rates, which are not least a result of the ECB's extremely expansionary monetary policy, are greatly reducing the interest burden on public budgets. The federal government's fiscal planning envisages that the general government debt-to-GDP ratio will fall below 60% in 2020. Germany would then be in compliance with the EU's upper limit on government debt.

Germany's public budgets continue to face multiple challenges when it comes to continuing consolidation successes and safeguarding the state's capacity to act on a permanent basis. First, fiscal policy must prepare for the necessary normalisation of European monetary policy and interest rates.

Second, the Federation, *Länder* and local authorities are still facing the tremendous task of providing humanitarian assistance to hundreds of thousands of refugees and contributing to their successful integration. The Federation's refugee-related spending remains high, at approximately €20bn per year, including funds aimed at fighting the root causes of refugee flows. The federal government has also set aside €18.7bn in reserves for refugee-related costs that may arise in the coming years.

Third, an ageing population is expected to generate greater fiscal burdens. Germany is currently experiencing a period of demographic respite. This will end towards the beginning of the next decade, when baby boomers reach retirement age. However, the general government's social spending, particularly on long-term care, health care and pensions, is already rising at an above-average rate. In 2016, it increased by 4.5%. Social spending is by far the biggest single item of spending in the federal budget. According to current projections, its share of the budget will continue to rise until 2021. Although the sustainability of public finances has gradually improved in recent years thanks to successful consolidation policies, the current view is that further measures are necessary to ensure the long-term stability of public budgets.

Fourth, there is an increasing need for action on the revenue side, as well: The federal government's priorities include placing growth- and job-friendly limits on the burden of tax and social security contributions and enhancing the competitiveness of the German tax system. Because of the progressive tax system, high employment levels and the noticeable increase in salaries and wages have caused the ratio of taxes to overall economic output to rise to 40% of GDP, well above its long term average.

Fifth, it is important to continue a policy of growth-friendly consolidation. The federal government has succeeded in consistently pursuing this approach. The government is using the resulting fiscal leeway to gradually improve the expenditure structure of the federal budget by targeting spending towards pro-growth investment in education, research and infrastructure. In total, government investment increased by 3.5% in 2016 to a new record high of €66.5bn, outpacing the increase in nominal GDP. To facilitate the spread of digital technology, boost the economy's innovative strength and enhance economic competitiveness, the federal government has made reasonable increases in spending on the expansion of Germany's broadband networks in rural areas. In addition, it is providing sizeable financial assistance to the *Länder* and local authorities so that they too can increase their investment in education, research and infrastructure.

Overall, measured, disciplined and forward-looking fiscal policies are required on both the expenditure and revenue side. For this reason, the German government is continuing the approach it has successfully pursued in recent years: The federal budget it has presented for 2017 once again contains no new borrowing and complies with all European and constitutional rules. At the same time, the government continues to adhere to fiscal policies that promote growth and jobs. In the financial plan for 2018-2021, which was adopted on 15 March 2017, the federal government reaffirmed its goal of achieving balanced federal budgets. Germany's Stability Programme for 2017 reflects these fiscal policy targets.

Specific federal government measures to promote growth and employment are described in detail in Germany's 2017 National Reform Programme (NRP), which was adopted by the federal government on 12 April 2017 and will be submitted to the European Commission by the end of April. In the NRP, the federal government describes what it is doing to address the economic challenges cited in the European Commission's country report for Germany. 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 2016 as well as the Europe 2020 growth strategy. Those measures in the NRP that have a fiscal impact also form part of the Stability Programme's fiscal strategy and public budget projection.

2. Aggregate economic conditions in Germany

2.1 Aggregate economic conditions in Germany in 2016

The German economy is experiencing solid growth. Despite the challenging global economic environment, it performed well in 2016 and posted growth for the seventh year in a row. Real GDP was up by 1.9% on the year. This means that economic growth significantly exceeded Germany's potential growth rate of 1.5%

As in previous years, the main driving force behind Germany's good economic performance in 2016 was not export activity, but domestic demand. Employment continues to rise. The number of people in employment went up for the tenth year in a row and reached 43.5m on average over the course of the year, the highest level since reunification.[1]

As in previous years, this was mainly based on an increase in jobs requiring social security contributions. In particular, there was a clear expansion in the service industries. On average, only 2.69m people were registered as unemployed. At the same time, the influx of refugees is increasingly making itself felt on the labour market. A large number of refugees from the eight most common non-European countries of origin took part in integration and labour market policy measures. On average over the course of the year, 42,000 refugees found new jobs requiring social insurance contributions, while the number of registered unemployed refugees increased by more than 70,000. Based on past experience, it takes several years for refugees to integrate into the labour market.

The fundamentally strong momentum on the labour market in conjunction with rising incomes served to boost private consumption as well as investments in private residential construction. Growth was also driven by the further year-on-year decline in average oil prices, which lowered costs for companies and increased the purchasing power of households. The rise in government consumption, especially refugee-related spending, also contributed to growth.

1 Employment data in the Stability Programme are based on the data of the 2017 annual projection, issued on 13 January 2017. At the beginning of March, the Federal Employment Agency published a very strong upward revision of the number of people in jobs requiring social insurance contributions as well as employment numbers for 2016. This increases both the level and the momentum of employment growth in the second half of 2016, with retroactive effects on other components of the national accounts.

While construction investment was higher than expected, investment in plant and equipment (machinery, devices, operating equipment, office equipment, and vehicles) increased at a very moderate pace, despite favourable financing conditions for both debt and equity. The main reasons probably include the fact that export growth continues to be sluggish and uncertainties arising from geopolitical conflicts or from trade and economic challenges in the EU. Because imports grew at a faster pace than exports, the trade balance (i.e. net exports) made a negative contribution to GDP growth, which was otherwise strong. The biggest share of imports came from China, the Netherlands and France. Exports mainly went to the US, France and the UK.

The consumer price index grew at a very moderate rate (+0.5%) last year. Inflation was tempered by the year-on-year decline in average energy prices.

2.2 Short- and medium-term outlook for the aggregate economy, 2017–2021

Aggregate economic activity is likely to have continued to expand in early 2017. Growth in 2017 continues to be driven by domestic economic trends. The political risks arising from the external economic environment can be expected to persist. In its annual forecast for 2017, the federal government expects real GDP to grow by 1.4%. The fact that the rate of change is lower than it was last year is mainly due to the lower number of working days. Adjusted for this effect, economic growth stands at 1.6%, nearly the same level as in 2016. GDP growth is roughly on a par with that of potential output.

During the projection period, GDP growth will mainly be driven by domestic demand, which remains strong. Private consumption is projected to increase by 1.4% in real terms and will thus make a significant contribution to growth. The steady rise in income and employment should continue to boost private consumer spending. The labour market is set to remain in good shape. Thanks to the high level of labour demand and robust economic growth, unemployment is expected to decline slightly once again (2017: -50,000). Employment is expected to rise by 0.7% (+320,000).[2] Gross wages and salaries are projected to increase by 3.3% against a background of continued gains in employment levels. At the same time, household disposable income is likely to expand by 2.9% in total, partly as a result of adjustments of pension amounts and of social transfers to refugees.

Despite the favourable financing conditions, companies are expected to increase their investments in plant and equipment only reluctantly, as uncertainties in the external economic environment persist and international sales prospects are brightening only slowly. However, the output capacity of German industry is being utilised at a slightly above-average rate, meaning that investments to expand capacity and replacement investments can gradually be expected to gain in significance. Construction investment is projected to rise noticeably in 2017. Bolstered by a strong labour market, increases in household income and very low interest rates, residential construction is expected to expand at faster pace than non-residential construction of office and factory buildings, for example. Public investment spending will continue to expand significantly.

International organisations expect global economic growth to accelerate only slightly this year. Real exports are predicted to slowly recover in 2017 at a rate of 2.8%. Export activity is likely to be boosted by the relatively low external value of the euro compared with the US dollar and by the economic upturn in the US. Growth in exports and the marked expansion of domes-

2 See footnote 1

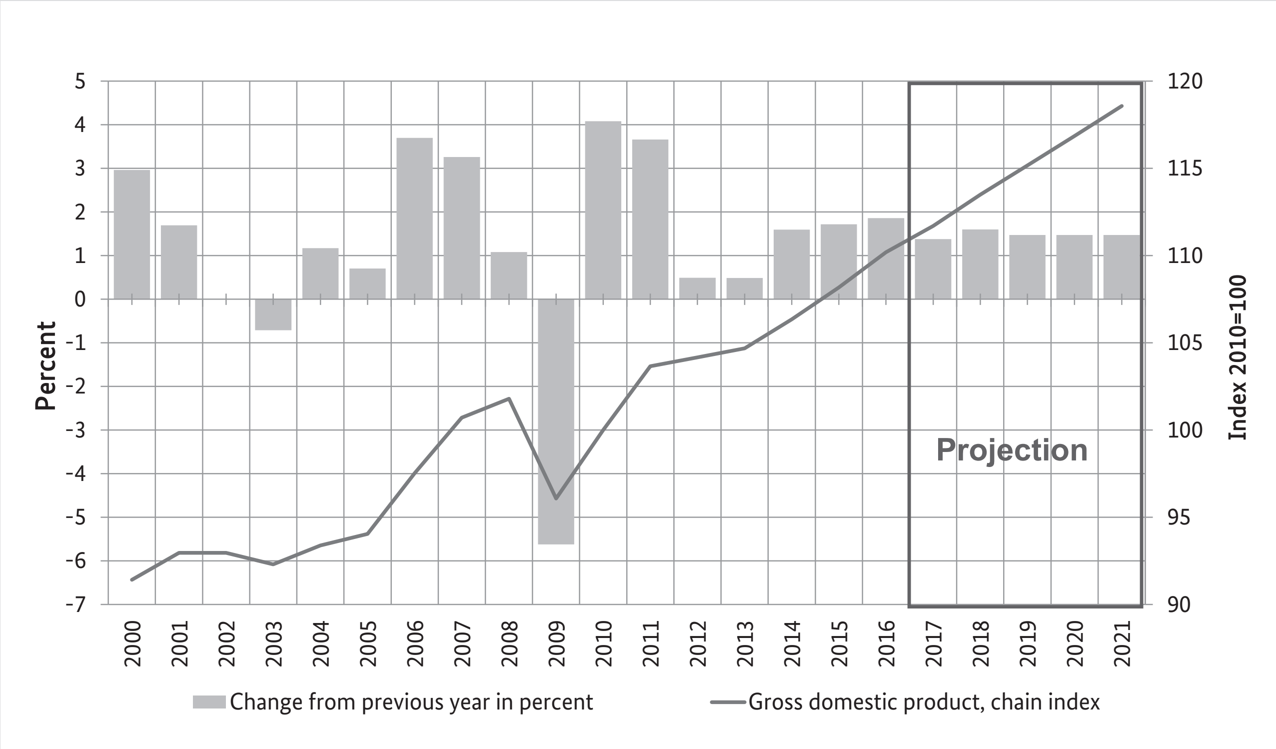
tic demand, especially on the consumer side, will in turn contribute to gains in imports. Overall, import growth is expected to outstrip export growth.

Consumer price inflation remains moderate. Based on projected oil price trends, it is expected to rise at an accelerated average rate of 1.8% this year. Core inflation, which was 1.2% in 2016, is projected to reach 1.4% in 2017. However, no inflationary tensions are expected.

GDP growth in 2016 was greater than potential output. As a result, the output gap recorded in 2015 was closed in purely numerical terms. According to short- and medium-term growth forecasts, the economy's output capacity is expected to be utilised at a normal rate in 2017 and 2018, with only a marginal negative output gap. The medium-term projection for the 2019-2021 period assumes average annual GDP growth of over 1.5%, which corresponds to potential economic growth. Positive employment trends are expected to continue during this period. The number of people in employment is projected to climb to about 44.4m by 2021.[3] The federal government predicts that the output gap will have been closed by 2019.

3 See footnote 1

Figure 1: Gross domestic product, in real terms



3. German fiscal policy in the European context

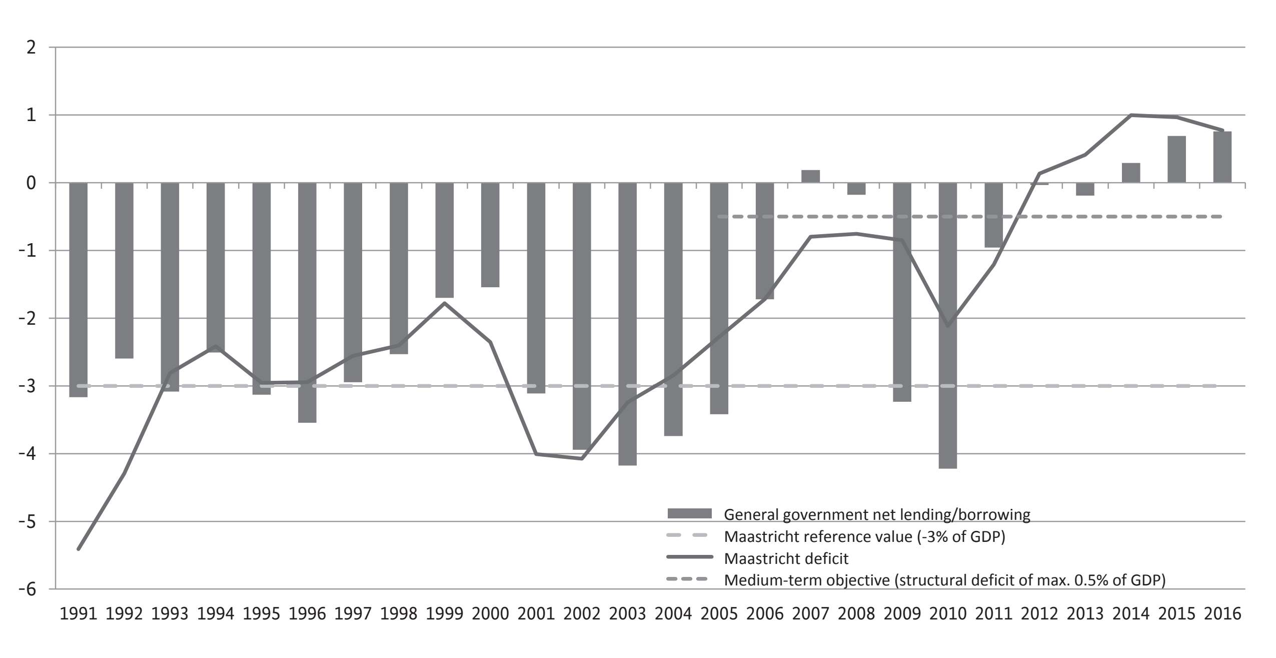
3.1 The rules of the Stability and Growth Pact and the Fiscal Compact and their implementation in Germany

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 Pact also sets upper limits on budget deficits and debt ratios. Compliance with these targets and limits serves to safeguard each euro member state's fiscal capacity to act. This already includes flexible rules on structural reforms to enhance growth potential. In this way, the Pact requires that all EU Member States pursue stability-oriented fiscal policies as a precondition for ensuring strong, sustainable growth in Europe.

In 2016, 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. In 2016, for the fifth year in a row, Germany's general government budget (encompassing the Federation, *Länder*, local authorities and social security funds, including their off-budget entities) fulfilled the criteria of being close to balance. In 2016, the budget balance stood at +0.8% of GDP. As Figure 2 shows, the general government budget also recorded a structural surplus of +0.8% in 2016.

These general government budget surpluses have played a key role in reducing the debt-to-GDP ratio in recent years. In 2016, the debt-to-GDP ratio declined appreciably, by 2.9 percentage points. General government debt is thus on a sustained downward path, despite the fact that it is still above 64.9% of GDP, the level posted in 2008 when the global financial crisis started. As part of the reforms adopted in 2011 to strengthen the Stability Pact, 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 2014 to 2016.

Figure 2: 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 9.5% 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 Pact'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 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, as is the case for Germany, a member state outperforms its MTO and is not at risk of failing to comply with the MTO throughout the duration of the programme.

In its 16 November 2016 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, the federal government has therefore presented a law on the drafting of the federal government's macroeconomic forecasts to parliament. The law codifies the procedure currently applied by the federal government to draft macroeconomic forecasts. In addition, it provides for all three of the federal government's forecasts (the annual, spring and autumn projections) to be reviewed and endorsed by an independent body yet to be determined. The macroeconomic benchmark figures of the Stability Programme are to be included in this review. The federal government's aim is for parliament to make a decision on this before the end of the current legislative term.

3.2 Fiscal situation and strategic direction

In its January 2017 conclusions, the ECOFIN Council welcomed the progress made by many member states with fiscal consolidation while also acknowledging that the favourable aggregate picture hides large differences across the member states and that public finance challenges remain. It issued a reminder that strong coordination of national fiscal policies, based on common rules, is essential to arrive at an appropriate fiscal stance and for the proper functioning of the monetary union. It reaffirmed that national fiscal policies should be pursued in full respect of the SGP and stated that it remains essential for member states to implement structural reforms to increase potential growth. The ECOFIN Council concluded that fiscal policy should be supportive to growth while ensuring longer term debt sustainability, including through increased focus on the quality and the composition of budgets towards investment and other expenditure and revenue categories that raise economic growth potential.

The federal government has taken these guidelines into account in setting its fiscal policy. Germany has succeeded in continuing its fiscal policy course towards growth and sustainable public finances. This success goes hand-in-hand with the robust performance of the German economy. Economic growth is outpacing the growth rate of potential output, the German economy is producing at close to full capacity, and total employment – which now stands at an annualised average of 43.5m – is at its highest level since German reunification.[4]

In 2016, the cyclically adjusted primary balance fell by 0.4% of GDP, meaning that Germany's fiscal policy had an expansionary effect on the economy. This year, too, the impact of fiscal policies is expected to be slightly expansionary, as a result of increased refugee-related expenses; government investment; tax relief for families, single parents and low income earners; and rising levels of expenditure by social security funds.

With the economy near full capacity, an expansionary fiscal policy is, in principle, not appropriate from an economic point of view. It could heighten the risks of regional imbalances, sectoral overheating, and fiscal instability, which would cause medium- and long-term damage to the economy in both Germany and the euro area. All empirical evidence suggests that higher government spending in Germany would stimulate only

4 See footnote 1

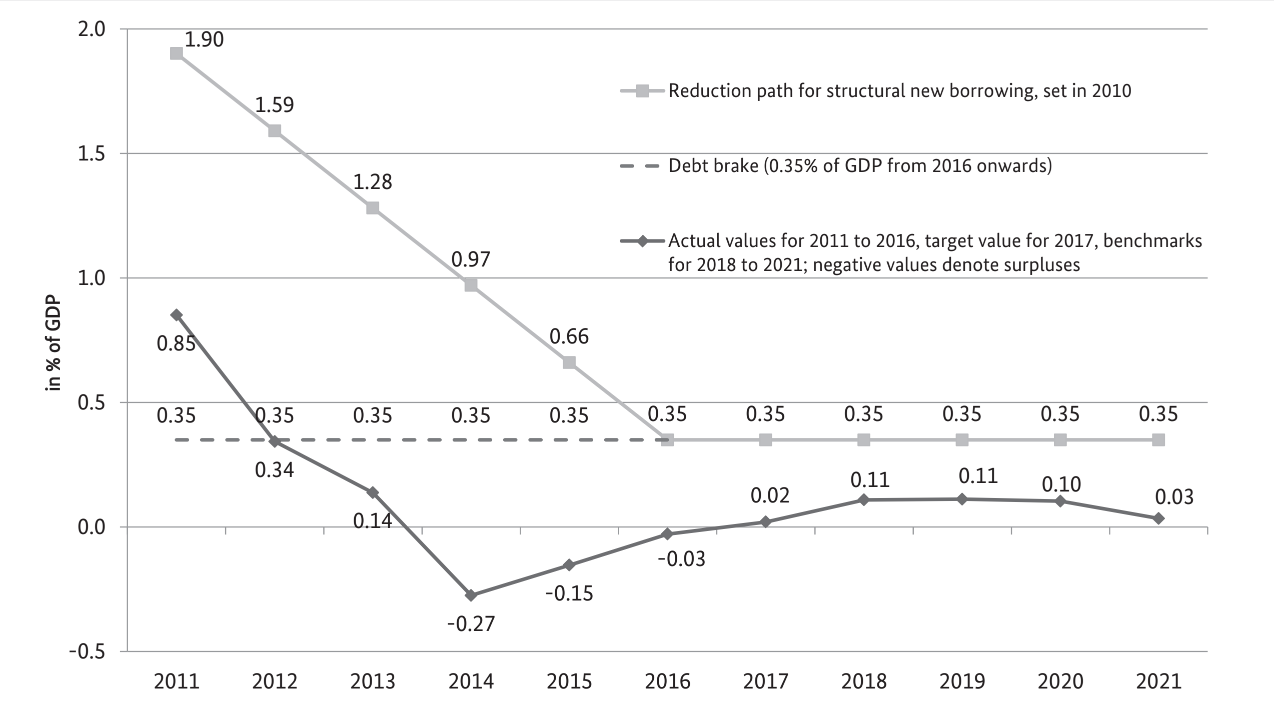
very little growth in partner countries in the euro area.

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.

Against this background, vigilant and forward-looking fiscal policies and a high degree of spending discipline are necessary in order to fully safeguard the government's ability to take effective action in the future and in the case of unexpected events. 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. The benchmark figures approved by the federal government on 15 March 2017 include no new borrowing throughout the financial planning period extending until 2021. The current federal government is committed to continuing its course of sound budgetary and fiscal policies that take the demographic situation into account. However, the draft budgetary plan envisages that the next federal government will achieve budget-wide savings of €4.9bn in total.

By staying on the path towards consolidation, the federal government is reinforcing the domestic sources of economic growth and bolstering the confidence of businesses and citizens. Moreover, this path has led to a steady reduction in structural debt and enabled the government to comply with constitutional debt brake requirements by solid margins (see Figure 3). In this way, the course has been set for the long-term sustainability of public finances. At the same time, the healthy state of public finances has given the federal government the leeway to (a) further improve the expenditure structure of the federal budget by targeting spending towards pro-growth investment in education, research and infrastructure and (b) provide targeted tax relief to taxpayers.

Figure 3: Change in the Federation's structural deficit (in % of GDP)



The financial balances of the Energy and Climate Fund, the *Aufbauhilfefonds* (a special relief fund established to remedy the damage caused by the June 2013 floods in Germany) and the Local Authority Investment Promotion Fund (*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 2017–2021 projection period.

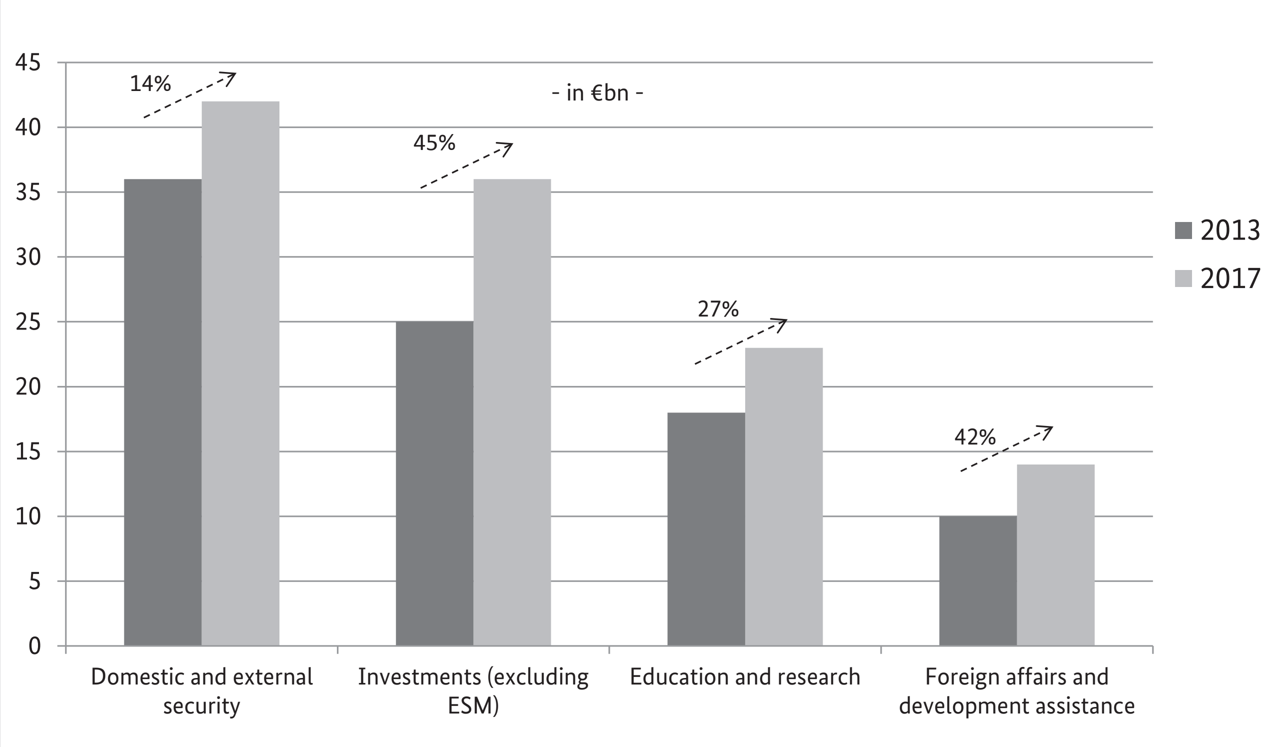
3.3 Fiscal policy measures on the expenditure and revenue side

As part of its strategy of growth-friendly consolidation, the federal government is increasing its spending in targeted areas that are conducive to economic growth. This focus is in line with the recommendations contained in the ECOFIN Council's opinion (dated 12 July 2016) on Germany's 2016 Stability Programme, which called on Germany to further increase public investment in infrastructure, education and research.

In total, government investment increased by 3.5% in 2016 to a new record high of €66.5bn, outpacing the increase in nominal GDP. In this way, the federal government is consistently following the course set in 2013, at the beginning of the current legislative term. Over this period, it has significantly increased public investment and enhanced spending on key priority areas such as education and research, domestic and external security, and fighting the root causes of refugee flows (Figure 4). The federal government played a key role in driving the general government's positive investment momentum: first, by increasing investment at the federal level, and second, by providing support for investment at the *Länder* and local authority levels.[5]

5 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 4: The Federation's budget policy priorities in the current legislative term



In Germany, most public investment (approximately 70%) is made by the *Länder* and local authorities. In order to strengthen public investment at the local government level, the federal government decided to provide targeted financial relief to the *Länder* and local authorities, amounting to approximately €79bn over the current legislative term.

In particular, these funds are used to support the local authorities with social spending, for example by taking on the full costs of basic income support provided to elderly persons and to persons with reduced earning capacity and by contributing towards housing and heating costs as part of the basic income support for jobseekers. The Federation also supports local authorities in rural areas in expanding the broadband network. During the current legislative term, the Federation is providing the *Länder* and local authorities with €6bn in financial relief for the purpose of expanding and upgrading pre-school child care facilities, schools, and higher education institutions. Also during the current legislative period, the Federation is allocating an additional €3bn to promote research, particularly within the framework of the Higher Education Pact, the Pact for Research and Innovation, and the Initiative for Excellence; some of this funding will also go to non-university research centres. Furthermore, the Federation is providing local authorities with an additional €5bn in the years from 2015 to 2020; €1.5bn of this funding will be used to boost investment by local authorities in general, while the remaining €3.5bn will flow into a special fund for the purpose of promoting investment by local authorities with inadequate financial resources. In the 2016 supplementary budget, the federal government allocated an additional €3.5bn to this fund. Local authorities with inadequate financial resources will receive these funds from mid 2017 onwards for the purpose of renovating, converting and expanding school buildings. Insufficient planning capacity can sometimes be a problem in implementing additional investment measures. For this reason, the federal government has created a special advisory service aimed at providing support for the realisation of public investment projects. Following the conversion of *ÖPP Deutschland AG,* which was available only for public-private partnerships, into the purely public consulting agency *Partnerschaft Deutschland – Berater der öffentlichen Hand GmbH*, it is now possible to also support conventional investment projects with the aim of ensuring that they are implemented quickly and economically. A special focus is placed on local authorities in this context. In addition, the local authorities will receive an additional €5bn per year in relief on a permanent basis starting in 2018.

In response to the large number of refugees entering Germany, the federal government adopted a law to expedite asylum procedures (*Asylverfahrensbeschleunigungsgesetz*), which puts in place additional important measures. For example, the federal government increased the share of VAT revenue allocated to the *Länder*. In this way, it took on a share of the costs of housing and providing for asylum seekers in 2016 as well as some of the additional administrative burden. This ranged from registering refugees to issuing decisions on asylum applications to providing a monthly lump sum of about €5.5bn for asylum seekers whose applications were unsuccessful. In addition, the Federation provided €350m to help the *Länder* and local authorities deliver assistance to unaccompanied refugee minors and a further €339m to improve care and assistance for all refugee children. Furthermore, the *Länder* will be receiving an annual block grant of €2bn for integration purposes each year between 2016 and 2018. For a fixed period of three years starting in 2016, the Federation is also covering some of the refugee-related additional costs by increasing federal government contributions to housing and heating costs provided under Book II of the Social Code. This is reducing the burden on local authorities by €400m in 2016, an expected €900m in 2017, and an expected €1,300m in 2018.

The influx of refugees is leading to a higher demand for housing. In the past, the federal government had stopped providing federal funding for social housing, and paid partial financial compensation to the *Länder* instead. The Federation has adopted legislative provisions to increase these compensation payments; in the years from 2016 to 2019, it will support the *Länder* with an additional €3bn in total. In addition, the Federation is selling properties at discount rates to the *Länder* and local authorities for social housing, providing properties rent-free to provide accommodation for asylum seekers and refugees, and reimbursing the *Länder* and local authorities for the renovation and development of these properties.

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. In view of the fact that significant extra spending – the ultimate amount of which is difficult to predict – will be required to receive and accommodate asylum-seekers and refugees, the federal government set aside €5bn in reserves for this purpose in its second supplementary budget for 2015. As a result of the budget surpluses in 2015 and 2016, these reserves stood at approximately €18.7bn at the closing of the 2016 annual accounts. Under current plans, about €6.7bn will be withdrawn from the reserves in 2017 to cover the extra spending that the Federation will incur due to the refugee situation. According to the benchmark figures decision of 15 March 2017, the remaining funds are earmarked for further costs arising in 2018 and 2019.

To ensure sound fiscal and budget policies, it is essential not only to address current 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 5.6% in 2016. The lower interest burdens are mainly a result of extraordinary monetary policy measures and the exceptional situation on the European capital markets. However, the low interest spending should be regarded as a windfall and not as a permanent situation, and it should not allow policy-makers to lose sight of the fact that general government spending on (a) social benefits other than social transfers in kind and (b) social benefits in kind has increased markedly. Most recently, in 2016, spending in these areas went up by +4.5%. Among other things, higher expenditures were recorded for pensions, health care and long-term care. According to the government's projection, social spending will continue to rise at an above-average pace. 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.

On the revenue side, sustained economic growth in combination with extraordinarily high levels of employment and a noticeable increase in salaries and wages have resulted in clear tax revenue growth. Because of the progressive tax system, this results in a rise in the ratio of taxes to overall economic output. Based on the definition used in the national accounts, the ratio of taxes to overall economic output has risen to 40% of GDP, well above its long term average. Even though the federal government has not set a target for the ratio of taxes to overall economic output, it continues to consider it a priority to place growth- and job-friendly limits on the burden of tax and social security contributions, especially on labour. Tax policies should create a reliable tax policy framework, make targeted changes to tax law and provide appropriate relief, all with the aim of ensuring that the German tax system remains growth-friendly, fair and competitive.

Income tax relief measures strengthen the domestic economy and enhance the incentive to work. For 2017 and 2018, the federal government has decided to increase the basic personal allowance, the tax-free child allowance, child benefit, and the child supplement. In addition, to compensate for fiscal drag, the other benchmark figures of the tax schedule will be adjusted by the previous year's inflation rate in 2017 and 2018. Alongside these measures, the federal government has introduced income tax relief measures totalling more than €11bn per year during the current legislative term. These go far beyond the constitutional requirement for subsistence income to be exempt from taxation.

The federal government has introduced a law to enhance loss offsetting for corporations (*Gesetz zur Weiterentwicklung der steuerlichen Verlustverrechnung bei Körperschaften*), which complements previous rules on loss offsetting and provides relief for businesses. The new rules affect companies that need to find new shareholders or replace existing ones in order to raise sufficient capital and would otherwise have to forfeit unused losses. The new law removes tax hurdles that prevent businesses from gaining access to capital. The new provisions apply retroactively from 1 January 2016.

Amendments to inheritance and gift tax legislation (*Erbschaftsteuer- und Schenkungsteuergesetz*) to bring it into line with the Federal Constitutional Court's ruling came into force in mid 2016. The new rules on the exemption of business assets are in conformity with the constitution and simultaneously take into account the needs of small and medium-sized business without fundamentally altering the tax model. This is intended to ensure smooth generational transitions within companies and to safeguard jobs.

Measures to combat cross-border profit-shifting by multinational companies remain a major tax policy objective for the federal government. The important thing now is for the recommendations of the Base Erosion and Profit Shifting (BEPS) project to be implemented consistently and uniformly. The federal government is committed to continuing international cooperation in this context. In Germany, key BEPS recommendations were already implemented in the 20 December 2016 law to implement the amendments to the EU mutual assistance directive and further measures to combat base erosion and profit shifting (*Gesetz zur Umsetzung der Änderungen der EU-Amtshilferichtlinie und weiteren Maßnahmen gegen Gewinnkürzungen und -verlagerungen*). Progress is also being made in advancing the global standard on automatic exchange of financial account information. A total of 87 countries have signed the corresponding agreement. The automatic exchange of information starts in September 2017 for early adopter countries. The aim is to establish it as an international standard in order to contain tax flight and evasion through the elimination of banking secrecy.

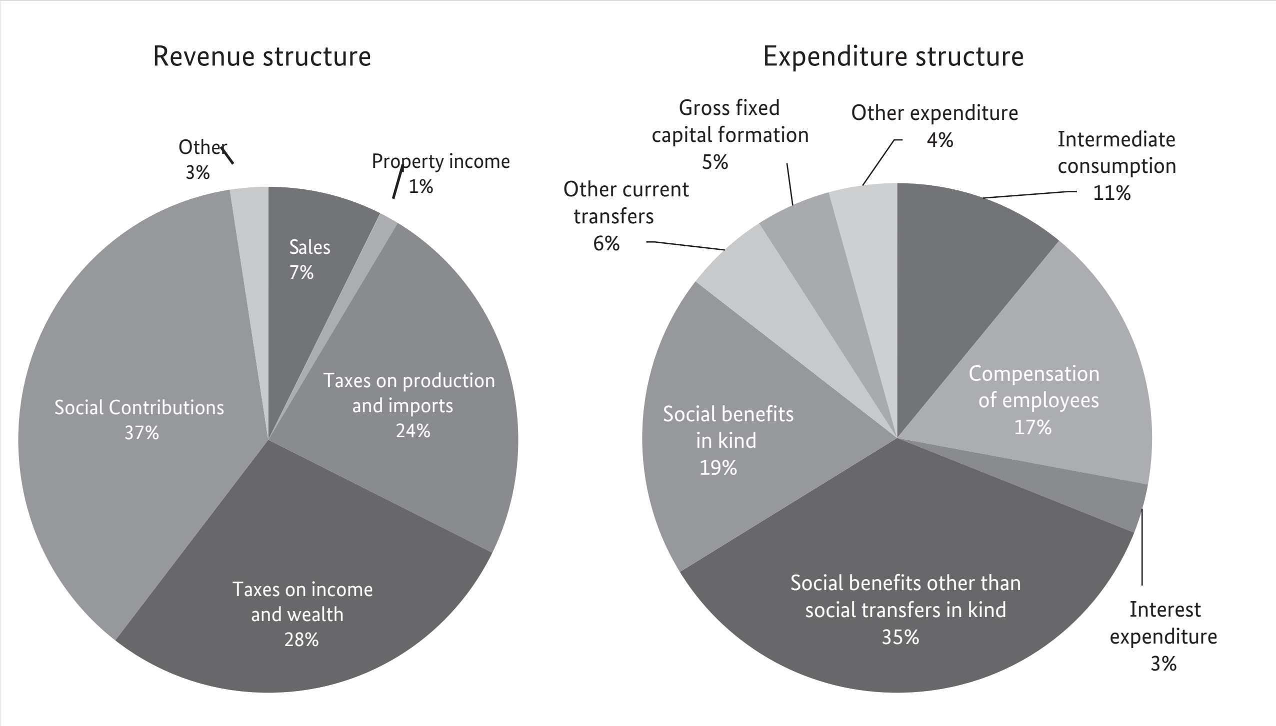
The federal government has also made significant process in continuing to improve the efficiency of the German tax administration. Together with the *Länder*, it has restructured and modernised workflows in the tax administration, especially through the use of new information technology. For example, the automated processing of tax returns and the use of risk management systems will ensure uniformity in taxation while increasing efficiency. The law to modernise taxation procedures (*Gesetz zur Modernisierung des Besteuerungsverfahrens)* came into force at the beginning of 2017. Secondary measures are to be implemented within a period of six years.

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

In late 2016, the federal government and the *Länder* agreed on key points for reorganising financial relations between the Federation and the *Länder* starting in 2020. The aim is to simplify and accelerate decision-making and other procedures. The draft bills implementing the results of these negotiations are currently passing through the parliamentary procedure. The new laws envisage that the Federation will provide annual relief to the *Länder* from 2020 onwards, starting with approximately €9.7bn.

The new rules include abolishing the current ex-ante VAT equalisation and replacing the current financial equalisation among the *Länder* with streamlined financial equalisation in VAT distribution. The following reforms were also agreed on: founding an infrastructure company for motorways and other federal highways; setting up an overarching, obligatory joint portal on which all users can access the administrative services of the Federation and the *Länder*; the possibility of granting federal financial assistance for important investments in the area of local education infrastructure to federal authorities with inadequate financial resources; more rights for the Federation in the area of tax administration; strengthening the Stability Council; and inspection rights for the Federal Court of Audit in the area of joint financing at the *Länder* level.

Figure 5: Structure of general government revenues and expenditures in 2016



3.5 Implementation of country-specific fiscal policy recommendations

The federal government's fiscal policy strategy and the measures described above address the country-specific fiscal policy recommendations issued by the Council in July 2016. In total, the Council made three recommendations for Germany, each of which contains various reform components. As in previous years, the Council supported the German government's fiscal and economic policy approach and confirmed that Germany was in good fiscal shape. It recommended that Germany should aim for a sustained upward trend in public investment in infrastructure, education, research and innovation, while respecting the MTO. In addition, it recommended that Germany should improve the design of federal fiscal relations with a view to increasing public investment, especially at the local authority level. As in 2014 and 2015, the recommendations also included improving the efficiency of the tax system, reducing the tax wedge for low-wage earners, creating stronger incentives for later retirement, and stimulating competition in the service sectors.

In its country report on Germany, which was published on 22 February 2017, the European Commission confirmed Germany's progress in addressing the 2016 country-specific recommendations. The Commission also described the economic challenges that Germany continues to face. 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 2017 NRP, which was adopted by the federal cabinet on 12 April 2017. The 2017 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 to 2021

Germany continues to set a structural balance of -0.5% of GDP as its MTO. This fulfils European rules requiring general government budgets that are close-to-balance or in surplus.

4.1 Trends in general government revenue and expenditure

Record revenue levels spurred by continued employment growth

In 2016, revenue was up by 4.2% on the year and thus grew more dynamically than GDP.[6] This figure reflects the good conditions on the labour market, with tax revenue and revenue from social security contributions each increasing by 4.5%. As a result, the revenue ratio increased from 44.7% to 45.1% of GDP, the highest level recorded since 2000. The tax-to-GDP ratio grew from 23.1% to 23.3% of GDP, the highest it has been since 1991.[7]

In the projection period to 2021, tax revenue is expected to keep growing at a somewhat faster pace (of 3.4% per year on average) than nominal GDP. Accordingly, the tax ratio is expected to rise to approximately 23½% of GDP by the end of the projection period. Revenue from social security contributions rose to 16.7% of GDP in 2016. The medium-term budgetary projection also takes into account the 0.2 percentage point increase in the contribution rate for long-term care insurance at the beginning of 2017.

The revenue ratio – which also includes other government revenue such as revenue from business activities and fees – is projected to stabilise at around 45¼% of GDP in the coming years.

Expenditure ratio temporarily increasing

Government expenditures rose by 4.0% in 2016, a higher increase than in previous years. This development was once again driven by expenditures on social benefits (i.e. social benefits other than social transfers in kind as well as social benefits in kind), which grew by 4.4% on the year, and by a

6 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).

7 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.

Table 1: Trends in the government revenue ratio

	2016	2017	2018	2019	2020	2021
			in % of GDP			
Taxes	23.3	23½	23½	23½	23½	23½
Social contributions	16.7	17	17	17	17	17½
Taxes & social contributions	40.0	40½	40½	40½	40¾	40¾
Total revenue						
April 2017 Update	**45.1**	**45¼**	**45¼**	**45¼**	**45¼**	**45¼**
April 2016 Update	44½	44½	44½	44½	44½	-

Differences between (a) the total tax ratio and (b) the sum of the tax ratio and the social contribution ratio are due to rounding; Figures for the projection period are rounded to ¼ percentage points of GDP.

sharp year-on-year rise of 8.7% in intermediate consumption. The main factors behind this were trends in spending by social security funds and the costs of housing and providing for refugees. According to current estimates, expenditures associated with refugee-related immigration required additional budgetary resources totalling ½% of GDP in 2016 compared with 2014, the year preceding the strong influx of refugees. All government levels will cover additional costs associated with the refugee situation. However, the federal government is giving additional support to the *Länder* and local authorities to help them house and provide for refugees and is therefore bearing the lion's share of the burden. Once again, the strain was reduced by a decline (of 8.3%) in interest expenditure.

During the projection period, general government expenditure is expected to increase by roughly 3.3% per year on average, with government consumption rising at a faster rate of 3.7% per year. Total social spending (i.e. social benefits other than social transfers in kind as well as social benefits in kind) is expected to increase at an above-average rate, from 24.1% of GDP in 2016 to 24.9% of GDP in 2021. The share of social benefits in total government expenditure is also set to increase, from 54.5% to 55¾%.

Public investment at the general government level (Federation, *Länder* and local authorities) will rise by an average of 5% per year between 2016 and 2021 and is thus expected to increase at a higher rate than total expenditure. This means that the positive trends seen the last three years will continue. During the period from 2005 to 2016, public investment rose by 3.8% per year on average – at a higher rate than expenditure, revenue, and GDP during the same period.

Since expenditure trends are projected to outpace the nominal growth rate of GDP, the expenditure ratio is expected to rise to 45% of GDP in the short term and decline only slightly over the further course of the projection period.

Table 2: Trends in the government expenditure ratio

	2016	2017	2018	2019	2020	2021
			in % of GDP			
April 2017 Update	**44.3**	**44¾**	**45**	**45**	**44¾**	**44¾**
April 2016 Update	44½	44½	44½	44½	44½	-

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

4.2 Trends in the government budget balance

The budget surplus of 0.8% of GDP in 2016 was partly a result of positive economic trends and an accompanying rise in employment. In particular, the public budgets of the Federation, *Länder* and local authorities benefited from dynamic tax revenue trends, especially from profit-based taxes. The social security funds also recorded strong increases in social security contributions. At the same time, lower interest spending reduced the burden on public budgets by 0.8% of GDP compared with 2008, the year when the financial and debt crisis began. In 2016, public budgets used some of the surpluses to build up financial reserves. For example, the Federation was able to stock up (a) the reserves in place to finance costs relating to the reception and accommodation of refugees and asylum seekers and (b) the Local Authority Investment Promotion Fund.

Factors that will have an adverse impact on the general government budget balance in 2017 and in subsequent years are the outflows of funds from the Local Authority Investment Promotion Fund, the Energy and Climate Fund, and the reserves to cover the costs of tasks associated with receiving and accommodating refugees and asylum-seekers. As a result, the general government balance will deteriorate slightly, but will continue to be able to post surpluses thanks to positive economic trends and the relief provided by lower interest expenditure.

Table 3: Trends in the general government balance

	2016	2017	2018	2019	2020	2021
			- in % of GDP -			
April 2017 update	**0.8**	**½**	**¼**	**¼**	**½**	**½**
April 2016 update	0	0	0	0	0	-

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

All government levels generate surpluses in 2016

As in the previous year, all government levels achieved budget surpluses in 2016. The Federation, *Länder* and local authority budgets are expected to remain close-to-balance or in surplus throughout the projection period to 2021. Overall, the budgets of social security funds are expected to be balanced in the years from 2017 to 2021, although there will be financing deficits in the statutory pension insurance system due to the reduction of the sustainability factor. Surpluses in recent years, especially in the statutory pension and health insurance funds, allowed these systems to build up large financial reserves. As long as deficits in the pension insurance system can be financed by drawing on reserves, increases in contribution rates will not be necessary.

4.3 Structural indicator trends

The general government budget balance is influenced by numerous economic factors and extraordinary circumstances. The effect of fiscal policy on the general government budget balance – in other words, the impact of budget policy decisions about revenues and expenditures – is only one of these factors. 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. For this purpose, European budgetary surveillance looks at the structural balance and trends in primary expenditure in comparison with potential GDP, i.e. GDP against a background of normal economic capacity utilisation levels.

Table 4: Budget balances according to government level

	2016	2017	2018	2019	2020	2021
			- in % of GDP -			
Central government	0.2	0	0	0	¼	¼
State government	0.2	¼	0	0	¼	¼
Local government	0.1	¼	0	0	0	0
Social security funds	0.3	0	0	0	0	0
General government	**0.8**	**½**	**¼**	**¼**	**½**	**½**

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

Compliance with the MTO, but above-average increase in primary spending

To determine the structural balance, the nominal balance is adjusted for cyclical influences in accordance with the common EU method. In addition, one-time effects are not considered in the structural balance.[8]

While the actual fiscal balance improved slightly on the year in 2016, the opposite is true for the structural balance: Last year, the structural balance for the Federation, *Länder*, local authorities and social security funds declined from 1.0% of GDP to 0.8% of GDP. This trend is explained by the fact that the German economic situation improved markedly in 2016; the output gap closed between 2015 and 2016. By itself, the improved economic situation would have resulted in an even higher general government budget surplus. The structural budget situation was less favourable due to dynamic growth in primary spending in the general government budget, which was in excess of GDP growth.

The MTO set by Germany in accordance with the preventive arm of the SGP requires the structural deficit to remain below a maximum ceiling of 0.5% of GDP. Germany has complied with this limit since 2012. Germany's structural balance is projected to remain in line with the actual fiscal balance throughout the entire projection period, due to the output gap being nearly closed. This means that the MTO will also be complied with in the period from 2017 to 2021.

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

	2016	2017	2018	2019	2020	2021
Structural balance (% of GDP)	0.8	½	¼	¼	½	½
Actual balance (% of GDP)	0.8	½	¼	¼	½	½
Real GDP (% change yoy)	1.9	1.4	1.6	1.5	1.5	1.5

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

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 this rule, member states that do not comply with their MTOs, or comply without a safety margin, must make sure their primary expenditure (expenditure excluding interest expenditure) does not increase at a faster pace than their average nominal potential output (i.e. GDP trends under normal capacity utilisation). Primary spending is adjusted for cyclical labour market effects, fluctuations in investment spending from the average investment level, co-financed EU programmes, discretionary measures on the revenue side, and one-off effects on the revenue and expenditure sides.[9] In some

8 In the past, proceeds from spectrum auctionsauctions of mobile phone licences were recorded as positive one-off effects. As a result of the revision of the manual on the application of the ESA rules on government deficit and debtManual on Government Deficit and Debt (MGDD), these proceeds are no longer posted at the time of the auction, but are distributed evenly over the licence period and recorded as lease income. As such, they are no longer one-off effects.

9 The effects of this adjustment are currently very low. Adjusted in accordance with the expen-

years, Germany's primary spending is projected to rise at a significantly higher rate than its nominal potential output. Because Germany continues to meet its MTO by a solid margin, the expenditure benchmark under Article 5 of Council Regulation (EC) No 1466/97 is not binding, in accordance with the *Specifications on the implementation of the Stability and Growth Pact*. Nevertheless, this indicator points to heightened budgetary risks in the event of a normalisation of interest expenditure or less favourable economic trends.

Another indicator used to assess the structural orientation of fiscal policy is the fiscal stance. The fiscal stance can be quantified based on the change of the cyclically adjusted primary balance, which fell by 0.4% of GDP in 2016 and is expected to decline by roughly ¼% to ½% of GDP each year in 2017 and 2018. This suggests that Germany's fiscal policy is having an expansionary impact on the economy despite the fact that the output gap is close to zero.

diture benchmark, primary spending increased by 4.7% in 2016; the unadjusted figure is 4.5%.

4.4 Sensitivity of budget balance projection

Sensitivity analyses can provide indicators of how a projected budget balance could be affected in the event of deviations from the macroeconomic assumptions. The model used to analyse the sensitivity of the budget balance thus takes into account the possibility that the underlying macroeconomic assumptions may change. The sensitivity analysis looks at two alternative scenarios for what would occur as a result of (a) a ½ percentage point reduction or (b) a ½ percentage point increase in the real GDP growth rate in the years from 2017 to 2021. All other assumptions remain the same, including interest expenditure, the projected GDP deflator and the GDP composition. In addition, it is assumed that government revenue and expenditure will 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 such purposes.

Under the positive alternative scenario – that is, if actual GDP growth were to exceed the federal government's annual projection (the baseline scenario) by half a percentage point per year – the budget balance would

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

	2016	2017	2018	2019	2020	2021
Primary expenditure (yoy increase; according to the expenditure benchmark definition)	4.7	4¼	3¾	3¼	3¼	3¼
Nominal GDP potential (moving ten-year annual average)	2.7	2.7	2.8	2.9	3.0	3.1

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

remain at the 2016 level in 2017 and would increase in subsequent years. The negative alternative scenario – that is, if actual GDP growth were half a percentage point lower than the baseline scenario – would, in purely statistical terms, produce a balanced general government budget in 2017 and general government budget deficits from 2018 onwards; however, these deficits would still be well below the reference value of -3% of GDP.

Table 7: Sensitivity of the general government budget balance projection

GDP trends according to	2016	2017	2018	2019	2020	2021
	- general government budget balance in % of GDP -					
- Baseline scenario	0.8	½	¼	¼	½	½
- Alternative scenarios						
• -½ pp p.a. compared baseline		0	-½	-½	-¾	-1
• +½ pp p.a. compared with baseline		¾	¾	1	1½	1¾

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

4.5 Trends in debt levels

The debt-to-GDP ratio has declined steadily since 2012 (see Figure 6). Having stood at 79.9% in 2012, it had fallen to 68.3% by the end of 2016. This means that it is below 70% of GDP for the first time since 2008. Nonetheless, it remains well above the Maastricht reference value of 60%.

A nuclear waste management fund (*Entsorgungsfonds*) is to be set up this year. The federal government will receive a total of about €23bn from energy suppliers for taking responsibility for nuclear waste management. A portfolio plan is being drawn up for these funds. An investment in government bonds would have the effect of reducing debt levels. This effect was not yet taken into account in the current projection.

The decline in the 2016 debt ratio is mainly a result of the positive trends in the public budgets of the Federation and the *Länder*. The reduced debt levels can be attributed in particular to the core budgets of the Federation and the *Länder*, which generated strong surpluses. The debt levels of the local authorities and social security funds, on the other hand, remained largely unchanged compared with last year. Unlike in previous years, the resolution authorities set up by the Federation and the *Länder* did not contribute to a further reduction of debt levels in 2016. Debt reduction at existing resolution authorities was offset by the creation of a new resolution authority at the *Länder* level.

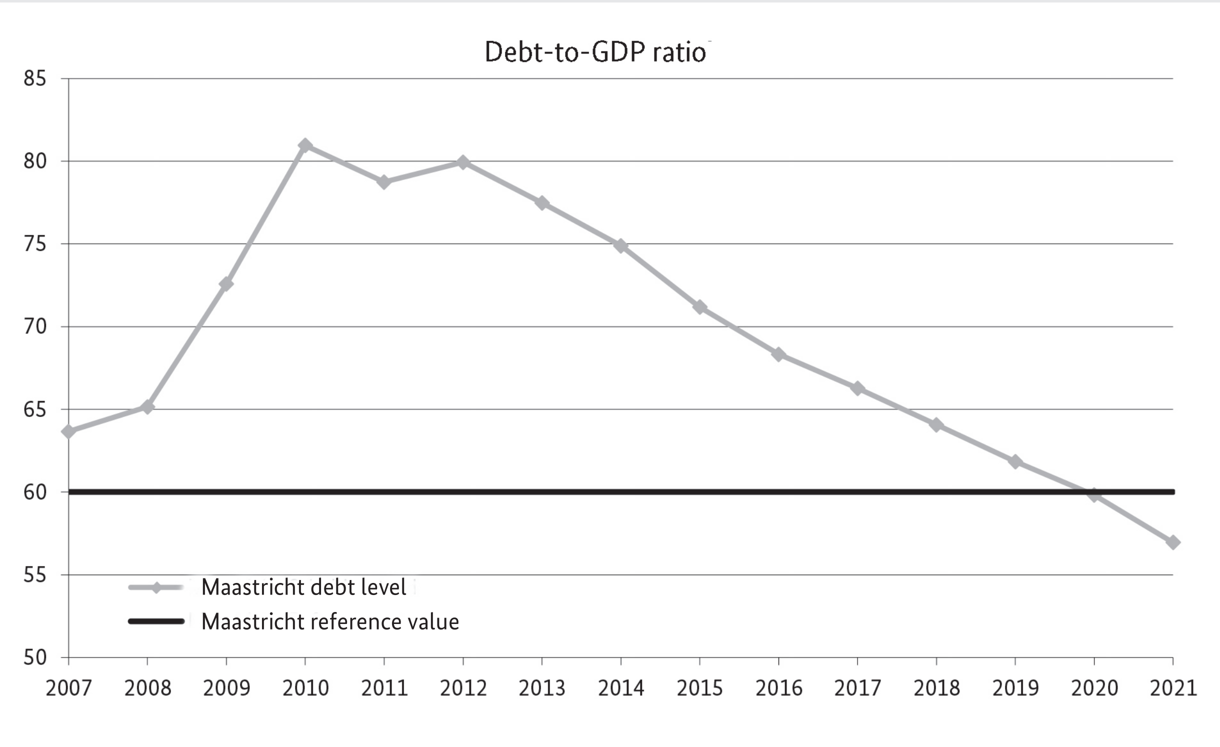
Table 8: Trends in the debt-to-GDP ratio

	2016	2017	2018	2019	2020	2021
	Debt ratio in % of GDP					
April 2017 Update	**68.3**	**66¼**	**64**	**61¾**	**59¾**	**57**
April 2016 Update	68½	65¾	63½	61¼	59½	-

Debt-to-GDP ratios for the projection period are rounded to a quarter of a percentage point of GDP.

The good condition of public budgets and the planned further winding down of the resolution authorities' portfolios will continue to have a favourable impact on the debt ratio over the course of the projection period. This ratio is expected to decline further in 2017, falling by roughly 2 percentage points to 66¼% of GDP. The debt ratio is projected to fall to 57% of GDP by the end of the projection period in 2021. It is set to fall below the 60% limit in 2020, which would achieve a key target of the coalition agreement between the current governing parties.

Figure 6: Trends in the general government debt-to-GDP ratio



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

5.1 Challenges to the sustainability of public finances

Germany's public budgets and social security systems can be described as being in stable financial condition in 2017. This can be attributed firstly to positive revenue trends, which are the result of favourable labour market conditions and rising wages and salaries, which again posted stronger gains. Secondly, on the expenditure side, there has been only a minimal age-related increase in benefit recipients. Germany is currently experiencing a period of demographic respite. However, this will end in the next decade, when baby boomers reach retirement age. This will place greater financial pressure on Germany's social security systems: The significant decline in the working-age population (by several million in just the coming decade alone[10]) will cause the contribution to growth from the volume of labour to shrink and will have an adverse impact on both public spending and public revenue. Conversely, however, increases in productivity and labour force participation rates could have positive effects. Fiscal policies that are geared towards long-term sustainability must address these structural changes in order to safeguard the state's long-term capacity to take effective policy action. The sustainability of Germany's public finances has already improved as a result of measures taken in recent years, including the federal government's successful policies of fiscal consolidation and the addition of a sustainability factor to the pension adjustment formula as part of the 2005 reforms to the statutory pension insurance system.

According to projections in the Federal Statistical Office's 13th coordinated population projection, which uses 2015 as the baseline year, the old-age dependency ratio (i.e. the ratio of the retirement-age population to the working-age population) in Germany is expected to increase by a factor of 1.75 by the year 2060. Immigration levels in recent years have contributed to a temporary stabilisation of population figures in Germany, but immigration alone will not be sufficient

10 The 14th coordinated population projection will be published by the Federal Statistical Office in the first half of 2018.

to offset the continued ageing of the population, which will be manifested for example in rising numbers of pension recipients. High employment levels will be important to stabilise the foundation for economic growth and thereby enhance the sustainability of public finances. Several key factors are helping to ensure that Germany maintains the supply of skilled labour it needs: these include the consistent trend towards higher levels of educational attainment, a record employment rate, rising employment levels among women, and the successful integration of immigrants into the labour market.

The federal government is taking targeted action to address the challenges of demographic change and the associated fiscal tasks. In early 2017, the federal government published a report entitled "Every age counts: greater prosperity and better quality of life for all generations", which sums up the results of Germany's demography policy as the 18th legislative term comes to a close. The report builds on the government's demographic strategy (which was fine-tuned in 2015) and the objectives that strategy lays out: strengthening the economy's growth potential; promoting social cohesion and equivalent living conditions; and maintaining sound public finances to ensure the government's capacity to act and reliable social security systems. The report's findings were presented at the government's demography summit, which was held on 16 March 2017.

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. The federal government has also taken numerous measures to create suitable frameworks for integrating refugees into the educational system and labour market, depending on the specific conditions in regional labour markets. These measures include the expansion of integration courses, the expansion of employment and training promotion programmes, and a temporary suspension of reviews conducted by the Federal Employment Agency to determine whether national workers should be given priority over immigrants for certain jobs (the *Vorrangprüfung*). The federal government is also taking steps to strengthen social cohesion. These include measures to further enhance government support for civic engagement and to boost long-term care and preventive healthcare for all age groups.

5.2 Government revenue and expenditure from a long-term perspective

Going forward, public budgets are expected to face rising pressure to adapt to demographic conditions. According to all available projections, the number of pensioners will rise while the number of people paying into the social security system will decline. Age-related expenditure will increase in proportion to GDP. At the same time, public revenues are expected to see a slowdown in momentum.

The Federal Ministry of Finance's report on the sustainability of public finances serves as an early warning system for forward-looking fiscal policies. This report puts forward long-term scenarios for trends in public finances, under the assumption that current policies remain unchanged. These scenarios indicate the extent to which action needs to be taken in order to ensure sound public finances. One of the indicators used in the report is the sustainability gap.

The sustainability gap indicates how much fiscal consolidation would be required in order to balance out all future expenditures (including accumulated government debt) against expected current revenues. According to the most recent calculations, Germany's sustainability gap is between 1.2% and 3.8% of GDP.[11] The current favourable trends in public debt levels are a reflection of the success achieved by the government's budget consolidation measures. Nevertheless, additional measures will be necessary to close the sustainability gap on a lasting basis. In particular, continued increases in the employment levels of women and older people are likely to have a favourable impact on the sustainability gap. A continuing increase in the effective retirement age will have an equally positive effect. Ultimately, fiscal and economic policies are also responsible overall for putting favourable conditions in place that foster higher productivity levels and steady economic growth.

Only sustained higher birth rates can slow down the ageing of society on a long-term basis. An uptick in the average number of children per woman from 1.39 in 2011 to 1.5 in 2015 points to structural improvements, although it remains uncertain whether this trend will continue. Immigration's potential contribution towards the closure of the sustainability gap will depend on how quickly and effectively immigrants can be integrated into the labour market. They can contribute to the closure of the sustainability gap only after they have successfully taken up work and started paying taxes and social security contributions.

11 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 2015, this spending stood at 25.8% 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 28.8% and 32.4% of GDP by 2060, a gain of between 3.0 and 6.6 percentage points.

5.3 Measures to ensure long-term sustainability

By introducing binding constitutional rules limiting government debt – known as the "debt brake" – Germany has had a solid framework for sound long-term fiscal policy in place since 2011. Additional prerequisites for maintaining sound public finances include sustainably financed social security systems as well as structural measures to promote higher labour force participation rates. To this end, the federal government has taken a number of measures to improve the balance between work and family life, to boost investment in education and research, and to improve the training and recruitment of skilled labour.

In recent years, Germany has carried out important reforms to its statutory pension insurance system. For example, the incremental increase of the standard retirement age to 67 substantially improves the long-term financing of the public pension system. In addition, new legislation that provides for a more flexible and individualised transition from working life to retirement (*Gesetz zur Flexibilisierung des Übergangs vom Erwerbsleben in den Ruhestand*) makes it easier for older workers to extend their working lives.

By enacting legislation to improve pension benefits (*Rentenversicherungsleistungsverbesserungsgesetz*), modifying pensions for persons with reduced earning capacity, and aligning pension levels in eastern and western Germany, the federal government is fulfilling social policy pledges laid down in the coalition agreement between the current governing parties; taken together, these measures pose additional challenges to fiscal sustainability. In this connection, on 15 February 2017 the federal cabinet adopted draft legislation that provides for the full alignment of pension levels in eastern and western Germany (the bill is called the *Rentenüberleitungs-Abschlussgesetz*). Over a period of seven years starting in 2018, pension levels and other benefits under pension law in the new (east German) *Länder* will be raised in increments up to the respective levels that apply in the west German *Länder*. In return, earnings in the new *Länder* will no longer receive favourable treatment in calculations. A law improving support for people with reduced earning capacity (*Erwerbsminderungs-Leistungsverbesserungsgesetz*), which was adopted at the same time, provides better protection from the risk of lost or reduced earning capacity for reasons of ill health. People with reduced earning capacity 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.

To mitigate the impact of demographic change and finance the public pension system in such a way as to ensure long-term intergenerational equity, the federal government carried out reforms in the early 2000s which introduced upper limits on contribution rates and set minimum pension levels before taxes. Corporate pension schemes are intended to compensate for lower statutory pensions (relative to employees' incomes). To increase the use of occupational pension schemes, especially in small and medium-sized businesses, the federal government has adopted draft legislation to strengthen occupational pensions (*Betriebsrentenstärkungsgesetz*), which will enter into force in 2018. Thanks to the social partner model, social partners will in future be able to agree defined-contribution plans without guarantees from implementing organisations (e.g. insurance companies). In the past, employers were always liable to pay a (minimum) occupational pension, which was an obstacle to the use of occupational pension schemes. Under the social partner model, the employer's obligation can be limited to paying contributions to the implementing organisation ("pay and forget"). In addition, opting-out systems will allow an employer's entire workforce to be included in the occupational pension scheme. In addition, the federal government is increasing basic subsidies to Riester pensions, thus strengthening private personal pension plans. Not least, it is important that people recognise gaps in their own old-age provision at an early stage and can 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 all three pillars of the pension system (statutory, occupational and private pensions) into account.

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

To pursue sustainable policies, it is important to examine the success of fiscal policy measures and the efficacy of taxpayer money spent on them. To systematically assess the effects of measures and programmes in each policy area, the federal government introduced spending reviews – analyses of both the revenue and expenditure sides of the budget. The aim is to produce the greatest possible impact with the limited financial resources available, thus improving the quality of public finances. In particular, the spending reviews set out to ascertain whether the underlying goals are still appropriate (priority-setting), whether they are actually being achieved (effectiveness), and whether the measures taken are economical (efficiency). Spending reviews were introduced in 2015 and contribute substantially to the performance-based development of policy approaches. The second review cycle, focusing on the policy areas of (a) housing and (b) climate and energy, was concluded successfully in March 2017. The resulting measures to further enhance the effectiveness and efficiency of funding are gradually being implemented by the various government ministries. At the same time, a new cycle was initiated, consisting of reviews focusing on (a) the procurement of standardised bulk goods and (b) humanitarian aid and transition assistance including interfaces with crisis prevention, crisis response, stabilisation and development assistance.

Substantial subsidies are granted. All financial assistance and tax relief is subject to regular review in accordance with the federal government's subsidy policy guidelines. One important element is the regular evaluation of subsidies in terms of target attainment, efficiency and transparency. For this reason, the federal government regularly reviews the necessity, expediency and effectiveness of all subsidies as well as their compatibility with the federal government's fiscal policy, economic, social and environmental objectives. The sustainability review underscores the federal government's intention to ensure that its subsidy policies are geared more towards the principle of sustainability. The federal government plans to issue the next Subsidy Report this summer, together with the draft budget for 2018.

The federal government passed legislation to enhance the financial structure and quality of the statutory health insurance system (*Finanzstruktur- und Qualitätsweiterentwicklungsgesetz*) in order to boost competition and thus improve the quality and cost-effectiveness of health care services. Allowing health insurance funds to set their own supplementary premiums creates important incentives for price-based competition. This encourages them to improve efficiency and limit spending. In the area of long-term care, revenue amounting to 0.1 percentage points of contributions levied on gross salaries will be allocated to a long-term care reserve fund for a period of 20 years. From 2035 onwards, money will be drawn from the fund for the purpose of stabilising contribution rates.

Further information on individual measures can be found in the NRP.

Annex

Table 9: Forecast of macroeconomic trends[1]

	ESA Code	2016 Index 2010=100	2016	2017	2018	2019	2020	2021	2019 to 2021[4]
			% change p.a.						
1. Real GDP. chain index	B1g	110.19	1.9	1.4	1.6	1.5	1.5	1.5	1½
2. GDP in respective market prices (€bn)	B1g	3.132.7	3.3	2.8	3.2	3.2	3.2	3.2	3¼
Real utilisation of GDP. chain index									
3. Private consumption expenditure[2]	P.3	108.60	2.0	1.4	1.4	1.4	1.4	1.4	1½
4. Government consumption expenditure	P.3	111.68	4.0	2.3	1.5	1.1	1.1	1.1	1¼
5. Gross fixed capital formation	P.51	113.22	2.3	1.7	2.8	2.5	2.5	2.5	2½
6. Changes in inventories (GDP growth contribution)[3]	P.52 + P.53	-	-0.4	0.0	0.0	0.0	0.0	0.0	-0
7. Exports	P.6	127.37	2.6	2.8	3.6	4.3	4.3	4.3	4¼
8. Imports	P.7	125.53	3.7	3.8	4.3	5.0	5.0	5.0	5
Contributions to real GDP growth[3]									
9. Final domestic demand		-	2.0	1.5	1.6	1.5	1.5	1.5	1½
10. Changes in inventories and net acquisition of valuables	P.52 + P.53	-	-0.4	0.0	0.0	0.0	0.0	0.0	-0
11. External balance of goods and services	B.11	-	-0.1	-0.1	0.0	0.0	0.0	0.0	0

1 2016: Federal Statistical Office: as of: February 2017
2017 and 2018: results of the short-term forecast for the 2017 Annual Projection, January 2017
2019 to 2021: results of the medium-term forecast for the 2017 Annual Projection, January 2017
2 Including private non-profit organisations without a commercial purpose
3 Contribution to GDP growth rate
4 Values rounded to ¼

Table 10: Price developments – Deflators[1]

	ESA Code	2016	2016	2017	2018	2019 to 2021[3]
		Index 2010=100	% change p.a.			
1. GDP		110.19	1.4	1.4	1.6	1¾
2. Private consumption expenditure[2]		106.91	0.6	1.6	1.6	1¾
3. Public consumption		111.83	1.5	2.0	1.5	2
4. Gross capital formation		112.10	1.3	1.7	1.8	1½
5. Exports		103.82	-1.0	1.5	0.9	1¼
6. Imports		100.22	-2.5	2.2	0.9	1¼

1 Federal Statistical Office: as of: February 2017
2017 and 2018: results of the short-term forecast for the 2017 Annual Projection, January 2017
2019 to 2021: results of the medium-term forecast for the 2017 Annual Projection, January 2017
2 Including private non-profit organisations without a commercial purpose
3 Values rounded to ¼

Table 11: Labour market trends[1]

	ESA Code	2016	2016	2017	2018	2019 to 2021[7]
		Level	% change p.a.			
1. Employment, persons (domestic)[2] (m)		43.5	1.0	0.7	0.7	¼
2. Employment, hours worked[3] (bn hours)		59.3	0.7	0.6	0.6	¼
3. Unemployment rate[4] (%)		-	3.9	3.8	3.8	3¼
4. Labour productivity[5] (2010=100)		104.0	0.9	0.6	0.9	1¼
5. Labour productivity[6] (2010=100)		106.0	1.2	0.8	1.0	1¼
6. Compensation of employees (€bn)	D.1	1.590.1	3.5	3.2	3.3	3¼
7. Compensation per employee (thousand €)		40.6	2.3	2.4	2.5	3

1 2016: Federal Statistical Office: as of: February 2017
2017 and 2018: results of the short-term forecast for the 2017 Annual Projection, January 2017
2019 to 2021: results of the medium-term forecast for the 2017 Annual Projection, January 2017
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 (2021)

Table 12: Sectoral balances[1]

	ESA Code	2016	2017	2018	2019 to 2021[2]
		% of GDP			
1. Net lending/borrowing vis-à-vis the rest of the world	B.9	8.5	8.1	7.9	7¼
of which:					
- Balance on goods and services		7.6	7.2	7.0	6½
2. Net lending/borrowing of households	B.9	4.9	4.8	4.5	4¼
3. Net lending/borrowing of general government	EDP B.9				
4. Statistical discrepancy		-	-	-	-

1 2016: Federal Statistical Office: as of: February 2017
2017 and 2018: results of the short-term forecast for the 2017 Annual Projection, January 2017
2019 to 2021: results of the medium-term forecast for the 2017 Annual Projection, January 2017
2 Values rounded to ¼; value for last year of forecast (2021)

Table 13: General government budgetary prospects

	ESA Code	2016	2016	2017	2018	2019	2020	2021
		€bn	% of GDP					
Net lending (EDP B.9) by sub-sector								
1. General government	S. 13	23.7	0.8	½	¼	¼	½	½
2. Central government	S. 1311	7.7	0.2	0	0	0	¼	¼
3. State government	S. 1312	4.7	0.2	¼	0	0	¼	¼
4. Local government	S. 1313	3.1	0.1	¼	0	0	0	0
5. Social security funds	S. 1314	8.2	0.3	0	0	0	0	0
General government (S.13)								
6. Total revenue	TR	1411.4	45.1	45¼	45¼	45¼	45¼	45¼
7. Total expenditure	TE[1]	1387.7	44.3	44¾	45	45	44¾	44¾
8. Net lending/borrowing	B.9	23.7	0.8	½	¼	¼	½	½
9. Interest expenditure	D. 41	43.4	1.4	1¼	1¼	1¼	1¼	1¼
10. Primary balance[2]		67.1	2.1	1¾	1¼	1½	1½	1½
11. One-off and other temporary measures[3]		-1.1	0.0	0	0	0	0	0
Selected components of revenue								
12. Total taxes (12=12a+12b+12c)		731.2	23.3	23½	23½	23½	23½	23½
12a. Taxes on production and imports	D.2	334.4	10.7	10¾	10¾	10¾	10½	10½
12b. Current taxes on income, wealth, etc	D.5	396.8	12.7	12¾	12¾	12¾	13	13
12c. Capital taxes	D.91	0.0	0.0	0	0	0	0	0
13. Social contributions	D.61	523.1	16.7	17	17	17	17	17¼
14. Property income	D.4	18.0	0.6	½	½	½	½	½
15. Other[4]		139.1	4.4	4¼	4	4	4	4
16. = 6. Total revenue	TR	1411.4	45.1	45¼	45¼	45¼	45¼	45¼
p.m.: Tax burden (D.2+D.5+D.61+D.91-D.995)[5]		1254.3	40.0	40½	40½	40½	40¾	40¾

Table 13: Continuation

	ESA Code	2016	2016	2017	2018	2019	2020	2021
		€bn	% of GDP					
Selected components of expenditure								
17. Compensation of employees + intermediate consumption	D.1+P.2	387.5	12.4	12½	12½	12¼	12¼	12
17a. Compensation of employees	D.1	235.8	7.5	7½	7½	7½	7½	7¼
17b. Intermediate consumption	P.2	151.7	4.8	5	5	4¾	4¾	4¾
18. Social payments (18=18a+18b)		755.8	24.1	24½	24½	24¾	24¾	25
of which: unemployment benefits[6]		52.6	1.7	1½	1½	1½	1¼	1¼
18a. Social transfers in kind supplied via market producers	D.6311. D.63121. D.63131	268.1	8.6	8¾	8¾	8¾	9	9
18b. Social transfers other than in kind	D.62	487.7	15.6	15¾	15¾	15¾	15¾	16
19. = 9. Interest expenditure	D.41	43.4	1.4	1¼	1¼	1¼	1¼	1¼
20. Subsidies	D.3	27.6	0.9	¾	¾	1	1	1
21. Gross fixed capital formation	P.51	66.8	2.1	2¼	2¼	2¼	2¼	2¼
22. Capital transfers	D.9	33.5	1.1	1	1	1	1	1
23. Other[7]		106.7	3.4	3½	3¾	3½	3½	3½
24. = 7. Total expenditure	TE (1)	1387.7	44.3	44¾	45	45	44¾	44¾
p.m.: Government consumption (nominal)	P.3	616.1	19.7	20	20¼	20	20	20¼

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

Figures for the projection period are rounded to ¼.

Table 14: No-policy change projections*

	2016	2016	2017	2018	2019	2020	2021
	€bn	% of GDP					
1. Total revenue at unchanged policies	1,411.4	45.1	45¼	45¼	45¼	45¼	45¼
2. Total expenditure at unchanged policies	1,387.7	44.3	44¾	45	45	44¾	44¾

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

	2016	2016	2017	2018	2019	2020	2021
	€bn	% of GDP					
1. Expenditure on EU programmes fully matched by EU funds revenue	2.5	0.1	0	0	0	0	0
2. Cyclical unemployment benefit expenditure	1.2	0.0	0	0	0	0	0
3. Effect of discretionary revenue measures	-1.2	0.0	0	0	0	0	0
4. Revenue increases mandated by law	-0.2	0.0	0	0	0	0	0

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

	ESA Code	2016	2017	2018	2019	2020	2021
		% of GDP					
1. Gross debt		68.3	66¼	64	61¾	59¾	57
2. Change in gross debt ratio		-2.9	-2	-2¼	-2¼	-2	-2¾
Contribution to changes in the Maastricht debt ratio							
3. Primary balance		2.1	1¾	1¼	1½	1½	1½
4. Interest expenditure	D.41	1.4	1¼	1¼	1¼	1¼	1¼
5. Stock-flow adjustment		0.2	¼	-0	-0	¼	-½
p.m.: Implicit interest rate on debt[1]		2.0	1¾	1¾	2	2	2

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

*Figures for the projection period are rounded to ¼.

Table 17: Cyclical developments

	ESA Code	2016	2017	2018	2019	2020	2021
		% of GDP					
1. Real GDP growth (%)		1.9	1.4	1.6	1.5	1.5	1.5
2. Net lending of general government	B.9	0.8	½	¼	¼	½	½
3. Interest expenditure	D.41	1.4	1¼	1¼	1¼	1¼	1¼
4. One-off and other temporary measures[1]		0.0	0	0	0	0	0
5. Potential GDP growth (%)		1.3	1.6	1.5	1.4	1.4	1.5
contributions:							
- labour		0.3	0.5	0.3	0.2	0.2	0.2
- capital		0.4	0.4	0.4	0.4	0.4	0.5
- total factor productivity		0.7	0.7	0.8	0.8	0.8	0.8
6. Output gap		0.0	-0.2	-0.1	0.0	0.0	0.0
7. Cyclical budgetary component		0.0	0	0	0	0	0
8. Cyclically-adjusted balance (2 - 7)		0.7	½	¼	¼	½	½
9. Cyclically-adjusted primary balance (8 + 3)		2.1	1¾	1½	1½	1½	1½
10. Structural balance (8 - 4)		0.8	½	¼	¼	½	½

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

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

Table 18: Divergence from previous update

	ESA Code	2016	2017	2018	2019	2020	2021
Real GDP growth (%)							
Previous update		1.7	1.5	1.6	1.6	1.6	-
Current update		1.9	1.4	1.6	1.5	1.5	1.5
Difference		0.1	-0.2	0.0	-0.2	-0.2	-
General government net lending (% of GDP)	B.9						
Previous update		0	0	0	0	0	-
Current update		0,8	½	¼	¼	½	½
Difference		¾	½	¼	¼	½	-
General government gross debt (% of GDP)							
Previous update		68¼	65¾	63½	61¼	59½	-
Current update		68,3	66¼	64	61¾	59¾	57
Difference		¼	½	½	½	½	-

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

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

	2010	2020	2030	2040	2050	2060
	Expenditure in % of GDP (pessimistic basic variant "T-" / optimistic basic variant "T+")					
Pension expenditure[1]	9.9	9.7 / 9.5	10.7 / 10.0	11.7 / 10.9	12.4 / 11.3	13.3 / 11.8
Healthcare expenditure[2] on statutory health insurance and medical assistance payments for civil servants	7.1	7.8 / 7.8	8.2 / 8.0	8.5 / 8.2	8.6 / 8.1	8.7 / 8.0
Long-term care expenditure[3]	0.8	1.0 / 1.0	1.3 / 1.2	1.7 / 1.5	2.2 / 1.8	2.5 / 1.8
Unemployment benefits[4]	3.7	2.4 / 2.2	3.0 / 1.6	2.9 / 1.5	2.9 / 1.5	2.9 / 1.5
Spending on education and childcare[5]	4.1	4.0 / 4.0	4.2 / 4.2	4.2 / 4.3	4.1 / 4.2	4.2 / 4.4
Expenditure on the family benefits system[6]	1.8	1.6 / 1.6	1.6 / 1.7	1.6 / 1.7	1.6 / 1.7	1.6 / 1.7
Total age-related expenditure	27.1	26.3 / 26.0	28.6 / 26.6	30.3 / 28.0	31.4 / 28.5	32.7 / 29.1
	Assumptions					
Productivity growth (%)[7]	0.6	1.0 / 0.9	1.9 / 1.9	1.8 / 2.0	1.6 / 1.8	1.6 / 1.9
GDP growth (%)	0.9	1.4 / 1.4	1.1 / 1.8	0.9 / 1.5	0.9 / 1.6	0.7 / 1.5
Labour force participation rates (%)						
- Men (15 to 64)	84.5	85.4 / 85.0	86.0 / 86.5	85.9 / 86.4	85.9 / 86.4	86.1 / 86.7
- Women (15 to 64)	74.6	79.6 / 78.5	82.2 / 82.6	82.5 / 82.8	83.0 / 83.3	83.5 / 84.0
Unemployment rate (%)	6.4	3.8 / 3.6	5.5 / 3.0	5.5 / 3.0	5.5 / 3.0	5.5 / 3.0
Old-age dependency ratio	31.1	35.1 / 34.7	46.9 / 45.0	54.7 / 50.2	58.6 / 51.2	64.1 / 53.7
Total population (m)	81.7	81.5 / 82.2	79.6 / 81.9	76.8 / 80.6	73.2 / 78.8	69.2 / 76.9
Population aged 65+ (m)	16.8	18.4 / 18.4	22.2 / 21.8	23.9 / 23.4	24.0 / 23.2	23.9 / 23.2

Table 19: Continuation

The values shown have been consolidated to take into account cross-payments between individual sub-budgets. Last update of the projections (2020-2060): 2010 base year, data and legal situation as of 30 June 2015.

Sources: actual values for 2010: 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.
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 year. The old-age dependency ratio is based on the definition of a working-age population as aged 15-64.

Table 20: Technical assumptions

	2016	2017	2018	2019 to 2021
Short-term interest rate (annual average in %)	0.01	0.00	0.00	0.00
USD/€ exchange rate (annual average)	1.11	1.05	1.05	1.05
Growth of German sales markets (in %)[1]	2.9	3	3 5/9	4
Oil price (Brent, USD/barrel)	44	56	57	57

1 Values rounded to ¼.

Table 21: Contingent liabilities

% of GDP	2016
Public guarantees	15.4*
Of which: linked to the financial sector	0.6

* Year 2015

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

April 2017

Cover images
fotolia/ Dariusz T. Oczkowicz

Edited by
Division I A 1

To order this publication
Publikationsversand der Bundesregierung
Postfach 48 10 09
18132 Rostock

Telephone: 03018 272 2721
Fax: 03018 10 272 2721
email: publikationen@bmf.bund.de

More information is available online at
www.bundesfinanzministerium.de