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Significantly Improved Growth Prospects

Medium-term Forecast for the Austrian Economy until 2022

Significantly Improved Growth Prospects. Medium-term Forecast for the Austrian Economy until 2022
Following the financial and economic crisis (GDP –3.8 percent in 2009) and the sluggish development in 2012-2015 (+0.7 percent p.a.), economic activity picked up significantly from mid-2016 onwards. For the years 2017 and 2018, the current forecast foresees an annual real GDP growth of 2¾ percent. In the medium term, an average growth of real GDP of 2 percent per year is expected (2013-2017 +1.2 percent p.a.), which is about ¼ percentage point higher than the average of the Euro area. The robust growth for the world economy has a stimulating effect on exports (+3.7 percent p.a.), which in turn has a positive effect on equipment investments. Private consumption is expected to increase by 1½ percent p.a. over the forecast period due to an increase in disposable income (2013-2017 +0.7 percent p.a.). The economic expansion combined with labour market policies ("Employment Bonus" and "Initiative 20,000"), will have a stronger positive effect on employment surpassing the dynamics of labour supply, resulting in a drop in unemployment. From 2020 onwards, labour supply is expected to again increase more strongly than labour demand, and as a result the unemployment rate is expected to rise from 8.0 percent in 2019 to 8.4 percent by the end of the forecast period. Inflationary pressure will remain moderate in the medium term, and the inflation differential to the Euro area average is expected to further decrease. The consumer price inflation will average of 1.9 percent p.a. On the basis of the projected business cycle and the assumed economic policy framework the overall government budget is expected to be balanced (both structurally and as defined according to Maastricht) from the middle of the forecast period onwards. As a result, the government debt ratio (total public debt as a percentage of nominal GDP) is projected to decline by around 17 percentage points to nearly 64 percent between 2017 and 2022.

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1. The international environment

Austria's major goods export markets, covering half of the world economy and accounting for 85 percent of Austrian exports, will expand by nearly 4 percent (on a purchasing-power-weighted basis) in 2017, broadly in line with the average for the last three years. While GDP growth has picked up significantly in the euro area, East-central Europe (CEEC 5) and the USA, a slowing trend in China has a moderating effect. Since, the Chinese market is less important for Austria's exports than for global economic growth, export-shares-weighted growth of Austria's major trading partners of 2.5 percent is almost ½ percentage point higher in 2017 than on average for the last three years (+2.1 percent). With GDP growth in the euro area, the CEEC 5 and the USA expected to decelerate in the next few years, Austria's export markets are projected to expand at a more moderate 2.0 percent annually, export weighted, over the period from 2018 to 2022 (on a purchasing-power-weighted basis +3.2 percent p.a.)[1].

1.1 USA: downward correction of asset prices as economic risk

In the USA, the business cycle upswing is already well advanced, production is expanding for eight years in a row and annual GDP growth slightly above 2 percent on average since 2010. The unemployment rate has fallen from 10 percent in October 2009 to 4.2 percent in September 2017. A lower rate had been achieved only once in the last 35 years, namely in 1999-2000 during the dotcom stock price bubble. Share valuations are currently also very high, fuelled by the extremely expansionary monetary policy since the financial market crisis in 2007-08. From the end of 2008 to end-2015, the key interest rate was 0 to 0.25 percent, and until November 2014 the Federal Reserve, resorting to "quantitative easing", purchased securities of a total 4.5 trillion $. When the Fed announced the phasing-out of the Bond Purchase Programme in summer 2013, it triggered strong capital outflows and financial market and real economy turbulence in emerging markets. Since then the gradual normalisation of monetary policy has proceeded without frictions. However, the already very high share valuations in the USA, which received a further boost after the November 2016 Presidential elections, carry the potential of a downward correction. This would be accompanied by a cyclical downturn and rising unemployment, since changes in asset prices usually have a rather strong impact on private demand in the USA. Apart from such risk scenarios, the underlying growth prospects remain fundamentally sound. Private indebtedness has declined significantly since the recession, the labour force is expanding, and wages are likely to gain momentum as unemployment recedes. On the basis of these fundamentals, medium-term growth of US GDP is projected at 1.8 percent p.a.

1.2 Cyclical recovery in the euro area narrows the output gap

Despite a virtually stagnating labour force in the euro area, the expected medium-term GDP growth forecast of 1.8 percent p.a. is on a par with that for the USA. The main reason is the larger extent of idle productive capacity, which offers the euro area a higher growth potential in the near future. The unemployment rate of 9.1 percent in August 2017 is still substantially above the 7½ percent recorded ten years ago. It is still very high in Spain (August 2017: 17.1 percent), Greece (July 2017: 21.0 percent) and exceeds the pre-crisis level also in Italy. Since production capacities have long been under-utilised, wages and prices have picked up but tentatively so far, with core inflation mostly keeping below a rate of 1 percent during the last four years. Most recently though, with the recovery, core inflation has edged up to 1.3 percent in September 2017. The current upswing has started one year ago and is now gaining pace. The output gap would close over the medium term should the current momentum be sustained over the course of several years.

The ECB is expected to terminate its Bond Purchase Programme in the course of 2018 and to start raising the key refinancing rate in 2019.

Monetary policy in the euro area remains expansionary, thereby supporting the economic recovery. The ECB's main refinancing rate has been stuck at 0 percent since April 2016, the deposit rate at –0.4 percent, and the marginal lending rate at 0.25 percent. Since April 2017, in the context of its Bond Purchase Programme, the European Central Bank has been buying bonds in circulation (secondary market) to a monthly amount of 60 billion € (before, since April 2016, 80 billion € per month). Between March 2015 and September 2017, the total amount of purchases was above 2 trillion €.

Over the forecast horizon, monetary policy is likely to turn less expansionary. In June 2017, the ECB refrained from mentioning further interest rate cuts. The gradual phasing out of the Bond Purchase Programme during 2018 is likely to be followed by interest rate hikes in 2019. The main refinancing rate is expected to rise steadily to-

[1] The medium-term forecast for the global economy was prepared using the macroeconometric world model of the Oxford Economics (Global Economic Model). It covers a total of 80 countries, including the USA, the majority of EU countries, Japan, Russia, China, India, and Brazil in high detail.

wards 2.1 percent by 2022. The reduction of monthly bond purchases since April 2017 and the anticipated further tightening of monetary policy in the next few years will contribute towards an increase in the average yield of outstanding German 10-year government bonds from an average 0.5 percent in 2017 to a projected 2¼ percent in 2022.

1.3 Benign growth perspectives for the UK and East-central Europe despite political risks

Contrary to widespread expectations, growth in the UK has been robust since the "Brexit" referendum of June 2016. Even gross fixed investment, largely dependent on the expectations, has kept an upward path. The rate of unemployment fell to a low 4.2 percent in July 2017. Yet, the depreciation of the pound sterling is increasingly driving up prices, thereby dampening private consumption expenditure. Exports, on the other hand, should benefit from the weaker currency. Demographic trends are also favourable, as the working age population and the labour force are likely to expand over the medium term. For the second half of the forecast period, GDP growth is expected to attain 2½ percent p.a.

Table 1: International economy

	Percentage shares 2016		Ø 2007-2012	Ø 2012-2017	Ø 2017-2022	2017	2018	2019	2020	2021	2022
	Austria's exports of goods	World GDP[1]	GDP volume, percentage changes from previous year								
EU	69.5	16.7	− 0.1	+ 1.7	+ 1.9	+ 2.5	+ 2.4	+ 2.0	+ 1.8	+ 1.8	+ 1.7
UK	3.1	2.3	− 0.1	+ 2.1	+ 2.1	+ 1.7	+ 1.5	+ 1.6	+ 2.2	+ 2.5	+ 2.4
Euro area	51.7	11.8	− 0.3	+ 1.4	+ 1.8	+ 2.3	+ 2.4	+ 2.0	+ 1.7	+ 1.6	+ 1.4
Germany	30.5	3.3	+ 0.7	+ 1.6	+ 1.6	+ 2.0	+ 2.4	+ 1.8	+ 1.5	+ 1.3	+ 1.1
Italy	6.4	1.9	− 1.5	+ 0.3	+ 1.6	+ 1.6	+ 2.1	+ 2.0	+ 1.5	+ 1.3	+ 1.2
France	4.1	2.3	+ 0.3	+ 1.1	+ 1.9	+ 1.9	+ 2.4	+ 2.0	+ 1.9	+ 1.8	+ 1.6
CEEC 5[2]	14.2	1.6	+ 1.7	+ 3.0	+ 2.9	+ 4.3	+ 3.5	+ 3.2	+ 2.5	+ 2.4	+ 2.8
Czech Republic	3.7	0.3	+ 0.2	+ 3.0	+ 2.7	+ 4.8	+ 3.6	+ 2.9	+ 2.2	+ 2.2	+ 2.7
Hungary	3.3	0.2	− 1.0	+ 3.0	+ 2.0	+ 3.9	+ 3.1	+ 2.4	+ 1.5	+ 1.5	+ 1.7
Poland	3.0	0.9	+ 3.4	+ 3.1	+ 3.2	+ 4.4	+ 3.7	+ 3.6	+ 2.8	+ 2.8	+ 3.3
USA	6.7	15.5	+ 0.6	+ 2.2	+ 1.8	+ 2.2	+ 2.1	+ 1.9	+ 1.8	+ 1.7	+ 1.6
Switzerland	5.9	0.4	+ 1.2	+ 1.4	+ 1.8	+ 1.2	+ 1.8	+ 1.7	+ 1.8	+ 1.8	+ 1.8
China	2.5	17.8	+ 9.4	+ 7.1	+ 5.7	+ 6.6	+ 6.1	+ 5.8	+ 5.7	+ 5.5	+ 5.3
Total[3]											
PPP-weighted[4]		50	+ 2.7	+ 3.7	+ 3.2	+ 3.9	+ 3.6	+ 3.3	+ 3.2	+ 3.1	+ 3.0
Export weighted[5]	85		+ 0.2	+ 1.9	+ 2.0	+ 2.5	+ 2.4	+ 2.1	+ 1.9	+ 1.9	+ 1.8
			Ø 2008-2012	Ø 2013-2017	Ø 2018-2022	2017	2018	2019	2020	2021	2022
Forecast assumptions											
Crude oil prices											
Brent, $ per barrel			92	71	54	53	53	53	54	55	57
Exchange rate											
$ per euro			1.37	1.20	1.15	1.12	1.15	1.15	1.15	1.15	1.15
Key interest rate											
ECB main refinancing rate[6], percent			1.7	0.2	1.0	0.0	0.0	0.4	0.9	1.4	2.1
10-year government bond yields Germany, percent			2.8	0.8	1.6	0.5	0.8	1.3	1.6	1.9	2.3

Source: Statistics Austria, Oxford Economics Forecasting, WIFO calculations. – [1] PPP-weighted. – [2] Czech Republic, Hungary, Poland, Slovenia, Slovakia. – [3] EU, USA, Switzerland, China. – [4] Forecast weighted by GDP at purchasing power parities in 2016. – [5] Forecast weighted by shares of Austrian goods exports in 2016. – [6] Minimum bid rate.

The CEEC 5 is currently expanding very strongly, GDP growth is estimated at 4¼ percent in real terms for 2017, and unemployment rates fell to historical lows. This is due to the strong demand for labour, but also to labour supply-side effects since many persons of working age are looking for work in other EU countries. The resulting shortage of manpower is driving up wages and private consumption. In addition, investment has rebounded strongly since financing bottlenecks have been overcome with the transition to the new EU multi-annual financial framework and the liquidation of the implicit spending backlog. With the momentum of investment expected to return to normal in the next few years and the current consumption boom likely to abate, GDP growth is set to moderate, maintaining however an average rate of

2.9 percent p.a. between 2018 and 2022, a similar pace as in the previous five-year period.

1.4 China: slower growth, rising indebtedness

The Chinese economy enjoyed solid growth over the recent quarters. The fiscal stimulus provided during the second half of 2016 countered the trend slowdown in the manufacturing sector. Given the commitment to continued strong growth – per-capita income in 2020 shall be twice as high as ten years earlier –, the government is due to take further expansionary measures in the years to come, even if the debt burden of state-controlled enterprises is already very high.

Figure 1: Economic development of selected regions

Gross domestic product, volume, percentage changes from previous year

Source: Statistics Austria, Oxford Economics Forecasting, WIFO calculations. CEEC 5: Czech Republic, Hungary, Poland, Slovenia, Slovakia.

A risk for financial market stability may arise from a potential liberalisation of China's capital market (current account transactions have been liberalised since the 1990s). Capital controls have allowed the Chinese Central Bank to keep the renminbi exchange rate low, thereby facilitating the export-driven catching-up process. However, as the exchange rate had been regularly adjusted the current account surplus declined from 10 percent of GDP in 2007 to 1.8 percent in 2016. From an opening of capital markets (and the implicit exchange rate liberalisation), the government expects further incentives for economic growth. However, the negative experience made with financial market deregulation at the occasion of the stock market crisis in the summer of 2015 may delay such reforms. As the working-age population will decline, also the labour force will stagnate over the medium term. Officially released GDP growth rates, which have probably carried an upward bias in recent years, will probably moderate further. For the period from 2018 to 2022, a growth at an annual average 5.7 percent is expected for the Chinese economy.

Crude oil spot prices are assumed to rise gently from 52 $ per barrel (i.e. the average from January to September 2017) to 57 $ in 2022, thus remaining significantly below the level recorded for the last ten years (84 $). The euro exchange rate against the dollar is assumed to average at 1.15 $ per euro until 2022 (technical random walk assumption from August 2017 onwards).

2. GDP growth in Austria on a par with the euro area

The present medium-term projections for the Austrian economy rest until 2018 upon the WIFO short-term forecast of September 2017 (*Scheiblecker*, 2017). The calculations build upon the international scenario outlined in chapter 1 and the policy assumptions (chapter 6), using the WIFO macroeconomic model (*Baumgartner – Breuss – Kaniovski*, 2005).

Table 2: Main results

	Ø 2007-2012	Ø 2012-2017	Ø 2017-2022	2017	2018	2019	2020	2021	2022
	Year-to-year percentage changes								
Gross domestic product									
Volume	+ 0.6	+ 1.2	+ 2.0	+ 2.8	+ 2.8	+ 2.2	+ 1.8	+ 1.6	+ 1.5
Value	+ 2.3	+ 3.0	+ 4.0	+ 4.8	+ 4.8	+ 4.2	+ 3.9	+ 3.7	+ 3.6
Consumer prices	+ 2.3	+ 1.5	+ 1.9	+ 1.9	+ 1.8	+ 1.9	+ 1.9	+ 2.0	+ 2.0
GDP deflator	+ 1.7	+ 1.8	+ 2.0	+ 1.9	+ 2.0	+ 1.9	+ 2.0	+ 2.1	+ 2.0
Gross wages and salaries total[1]	+ 3.3	+ 3.3	+ 3.9	+ 3.9	+ 4.3	+ 4.0	+ 3.9	+ 3.8	+ 3.6
Per employee, volume[2]	– 0.2	+ 0.5	+ 0.6	+ 0.1	+ 0.7	+ 0.7	+ 0.7	+ 0.6	+ 0.5
Employees[3]	+ 1.2	+ 1.3	+ 1.3	+ 1.9	+ 1.8	+ 1.4	+ 1.2	+ 1.1	+ 1.0
Persons in active dependent employment[4]	+ 0.9	+ 1.2	+ 1.3	+ 2.0	+ 1.8	+ 1.4	+ 1.2	+ 1.1	+ 1.0
	Ø 2008-2012	Ø 2013-2017	Ø 2018-2022	2017	2018	2019	2020	2021	2022
	Percent								
Unemployment rate									
Eurostat definition[5]	4.7	5.7	5.4	5.6	5.4	5.4	5.4	5.5	5.6
National definition[6]	6.8	8.5	8.2	8.5	8.1	8.0	8.1	8.3	8.4
	As a percentage of GDP								
Net exports	3.4	3.4	4.3	3.6	4.0	4.2	4.3	4.4	4.5
General government financial balance (Maastricht definition)	– 3.2	– 1.6	0.2	– 0.6	– 0.3	0.0	0.2	0.4	0.4
Cyclically-adjusted budget balance									
Method of the European Commission	– 3.0	– 1.1	– 0.1[7]	– 0.5	– 0.6	– 0.2	0.1	0.4	–
WIFO method	– 2.9	– 1.0	– 0.7	– 0.7	– 1.0	– 0.9	– 0.7	– 0.4	– 0.4
Structural budget balance									
Method of the European Commission	– 2.8	– 0.8	– 0.1[7]	– 0.5	– 0.6	– 0.2	0.1	0.4	–
WIFO method	– 2.7	– 0.7	– 0.7	– 0.7	– 1.0	– 0.9	– 0.7	– 0.4	– 0.4
Gross public debt	78.8	82.7	70.4	80.9	77.2	73.6	70.2	66.9	63.9
	As a percentage of disposable income								
Household saving ratio	9.9	7.3	7.3	7.6	7.3	7.2	7.3	7.3	7.3
	Ø 2007-2012	Ø 2012-2017	Ø 2017-2022	2017	2018	2019	2020	2021	2022
	Year-to-year percentage changes								
Trend output, volume									
Method of the European Commission	+ 1.0	+ 1.3	+ 2.1[8]	+ 1.8	+ 2.0	+ 2.1	+ 2.1	+ 2.2	–
WIFO method	+ 1.2	+ 1.2	+ 1.7	+ 1.5	+ 1.6	+ 1.8	+ 1.9	+ 1.9	+ 1.5
	Ø 2008-2012	Ø 2013-2017	Ø 2018-2022	2017	2018	2019	2020	2021	2022
	As a percentage of trend output								
Output gap, volume									
Method of the European Commission	– 0.3	– 0.8	0.3[7]	– 0.2	0.6	0.4	0.2	0.0	–
WIFO method	– 0.5	– 0.9	1.4	0.1	1.2	1.7	1.6	1.3	+ 1.4

Source: Statistics Austria, WIFO calculations. – [1] Excluding employers' contributions. – [2] Employees according to National Accounts definition, deflated by CPI. – [3] According to National Accounts definition. – [4] Excluding persons in valid employment contract receiving child care benefit or being in military service. – [5] According to Eurostat Labour Force Survey, as a percentage of total labour force. – [6] According to Public Employment Service Austria, as a percentage of total labour force excluding self-employed. – [7] Ø 2018-2021. – [8] Ø 2017-2021.

Table 3: Components of aggregate demand, volume

	Ø 2007-2012	Ø 2012-2017	Ø 2017-2022	2017	2018	2019	2020	2021	2022
				Year-to-year percentage changes					
Consumption expenditure									
Private households[1]	+ 0.9	+ 0.7	+ 1.5	+ 1.5	+ 1.7	+ 1.6	+ 1.5	+ 1.4	+ 1.3
General government	+ 1.2	+ 1.3	+ 1.1	+ 1.1	+ 0.9	+ 1.2	+ 1.1	+ 1.1	+ 1.1
Gross fixed capital formation	– 0.2	+ 2.0	+ 2.1	+ 4.2	+ 3.0	+ 2.4	+ 1.9	+ 1.7	+ 1.5
Machinery and equipment[2]	+ 1.0	+ 3.2	+ 2.7	+ 5.5	+ 4.2	+ 3.3	+ 2.4	+ 2.0	+ 1.8
Construction	– 1.6	+ 0.7	+ 1.3	+ 2.8	+ 1.5	+ 1.4	+ 1.4	+ 1.3	+ 1.1
Domestic demand	+ 0.6	+ 1.3	+ 1.8	+ 2.5	+ 2.2	+ 2.0	+ 1.7	+ 1.5	+ 1.4
Exports	+ 1.2	+ 2.8	+ 3.7	+ 5.5	+ 4.8	+ 3.9	+ 3.4	+ 3.2	+ 3.2
Imports	+ 1.3	+ 3.0	+ 3.4	+ 5.1	+ 3.9	+ 3.6	+ 3.4	+ 3.1	+ 3.0
Gross domestic product	+ 0.6	+ 1.2	+ 2.0	+ 2.8	+ 2.8	+ 2.2	+ 1.8	+ 1.6	+ 1.5

Source: Statistics Austria, WIFO calculations. – [1] Including private non-profit institutions serving households. – [2] Including weapon systems and other equipment.

Due to the close international linkages, notably with the euro area and other neighbouring countries, the Austrian business cycle is decisively influenced by developments in major trading partners. Hence, Austrian exports should benefit from the favourable growth outlook particularly for the euro area and the CEEC 5 (see chapter 1). Over the period from 2018 to 2022, exports are expected to increase at an annual 3.7 percent in volume, compared with +2.8 percent p.a. for the previous five-year period. Volume imports should rise somewhat less then exports, i.e. by 3.4 percent p.a., since weaker final domestic demand will weigh on investment in machinery and equipment which is not only cyclically sensitive, but has also a high import ratio. Furthermore, in the light of terrorism and political uncertainties the relocation of international tourism service flows are likely to remain. As a consequence, Austria should benefit as a safe travel destination and the surplus on the current services account should thus increase further. Overall, the contribution of the external sector to GDP growth will remain positive and is expected to turn out almost 1 percentage point higher than from 2013 to 2017.

Due to the revival of world trade, Austrian exports should expand at an average 3.7 percent per year, enabling GDP growth of 2 percent p.a. Real trend output growth is projected at an annual 1.7 percent over to the forecast horizon. Starting from an overall output level that was 1¼ percent below trend output in 2015, the output gap is widening to an average 1.4 percent p.a. by the end of the forecast period, according to an alternative WIFO estimate for the trend output.

Figure 2: Growth of real GDP in Austria and the euro area

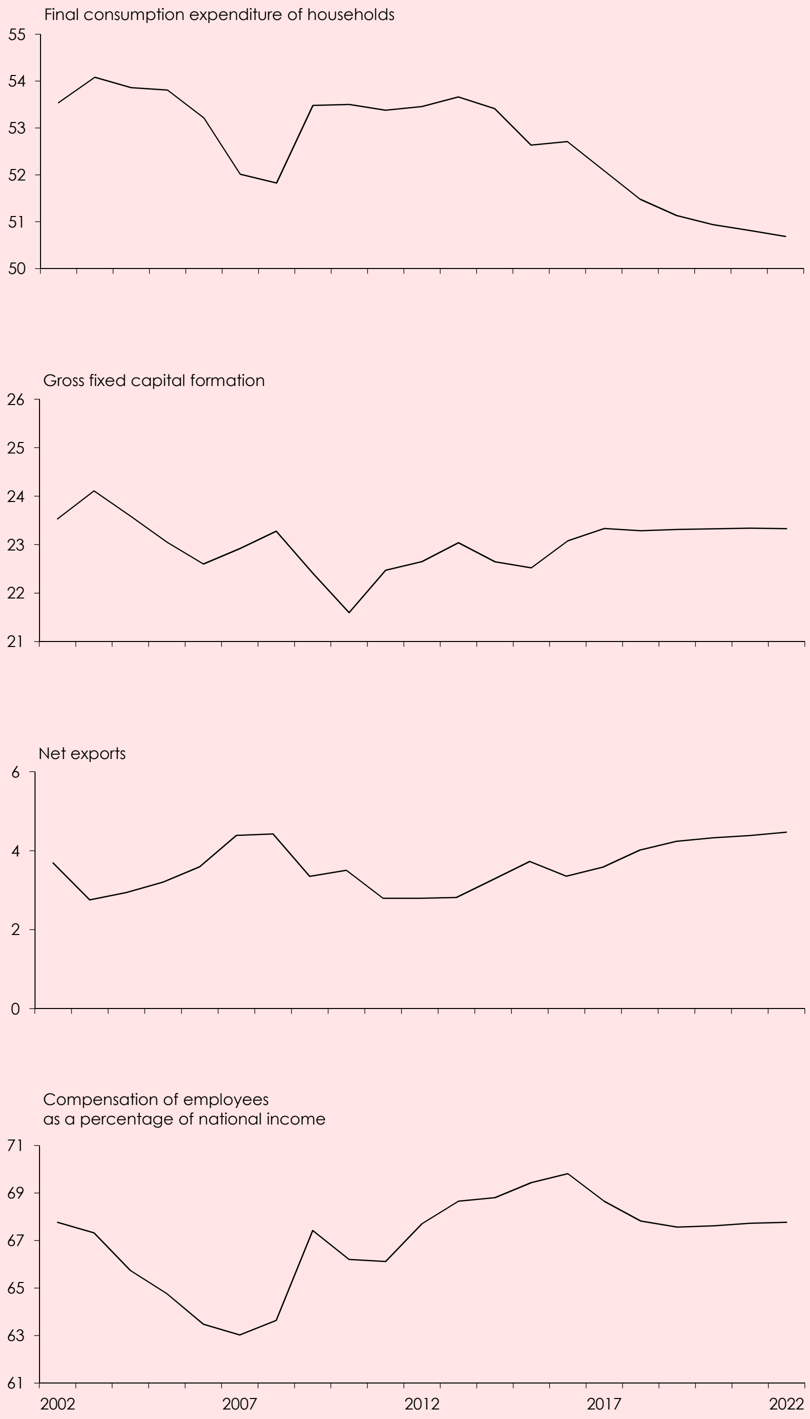
GDP volume, percentage changes from previous year

Source: Statistics Austria, WIFO calculations.

Due to the favourable business conditions, investment in machinery and equipment is set to remain lively in 2017 and 2018, increasing by 5.5 percent and 4.2 percent respectively. The strong performance in 2017 may be partly due to the accrual investment premium (Investitionszuwachsprämie) for small and medium-sized businesses. The prospect of slackening final demand will, however, decrease investment activity via the accelerator effect (2018-2022 +2.1 percent p.a., 2013-2017 +2.0 percent p.a.). In case of the investment stimulus measures being extended beyond 2017 (which is not assumed in the present WIFO forecast), this could provide an additional impetus for investment in machinery and equipment in subsequent years.

Figure 3: Expenditure on GDP and income

As a percentage of GDP, value



Source: Statistics Austria, WIFO calculations.

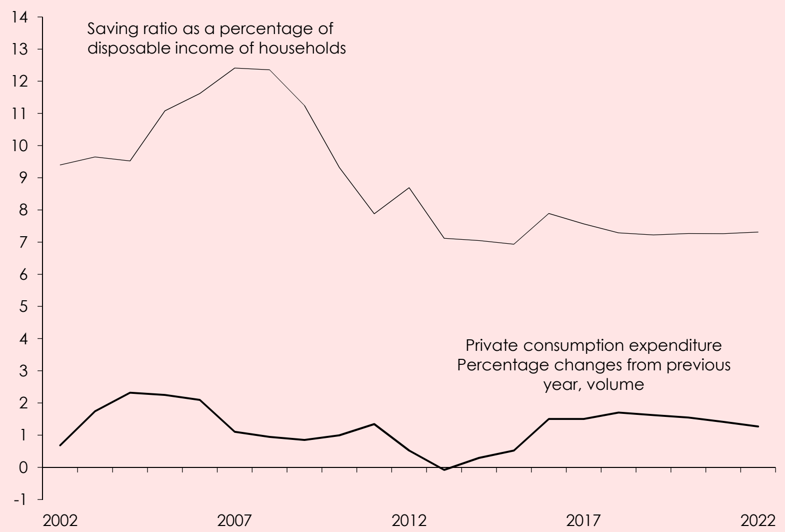
Private residential investment is expected to pick up markedly from earlier periods (2010-2016 +0.3 percent p.a., 2001-2016 excluding 2009 –0.1 percent p.a.), as suggested by recent population projections (Statistics Austria anticipates an increase of nearly 3½ percent until 2022 for the overall population and of 4½ percent for the number of private households) as well as by the likely persistence of high real estate prices. Civil engineering investment, on the other hand, should see a more modest dynamics, on account of the medium-term plans of the Federal Real Estate Agency (BIG), ASFINAG and the Austrian Federal Railways (ÖBB). Hence, total construction activity should expand at an average 1.3 percent p.a. over the entire 2018-2022 period, which would be less than the current pace, but exceeding the +0.7 percent p.a. recorded for the previous five years.

Real disposable income of private households is projected to increase at an average 1½ percent p.a. over the forecast period, 1 percentage point faster than from 2013 to 2017. Main driver behind this development will be gross wages and salaries gains of 3.9 percent p.a., corresponding to an annual per-capita increase of 0.6 percent in real terms. Measures to curb the effects of fiscal drag are currently under discussion, but as their concrete form is not yet foreseeable, they have not been taken into account in the forecast. The anticipated increase in long-term interest rates will lead to higher income from financial assets towards the end of the forecast period (2018-2022 +2.2 percent p.a., 2013-2017 –5.6 percent p.a.).

In response to higher net wage incomes from the tax reform 2015-16, the private household savings ratio ratcheted up by 1 percentage point to 7.9 percent in 2016, in line with the assumption that in the short-run about half of the additional disposable income is immediately spent on consumption. In the next five years, the savings ratio may remain stable at an average 7¼ percent, on account of higher income from financial investment. At the same time, income gains, notably from wages and salaries, will accelerate private consumption growth, to a projected annual increase of 1½ percent in real terms (2013-2017 +0.7 percent).

After a period of sluggishness from 2012 to 2015, when real GDP advanced by only 0.7 percent p.a., economic growth regained momentum from mid-2016 onwards. The outlook for 2017 and 2018 is for GDP growth of 2¾ percent, respectively. On average for the next five years, we expect annual GDP growth of 2 percent, after +1.2 percent p.a. in the previous period. In nominal terms, GDP is projected to gain 4 percent p.a., after +3 percent p.a. between 2013 and 2017.

Figure 4: Consumption expenditure and saving ratio of private households



Source: Statistics Austria, WIFO calculations.

3. Trend output and output gap

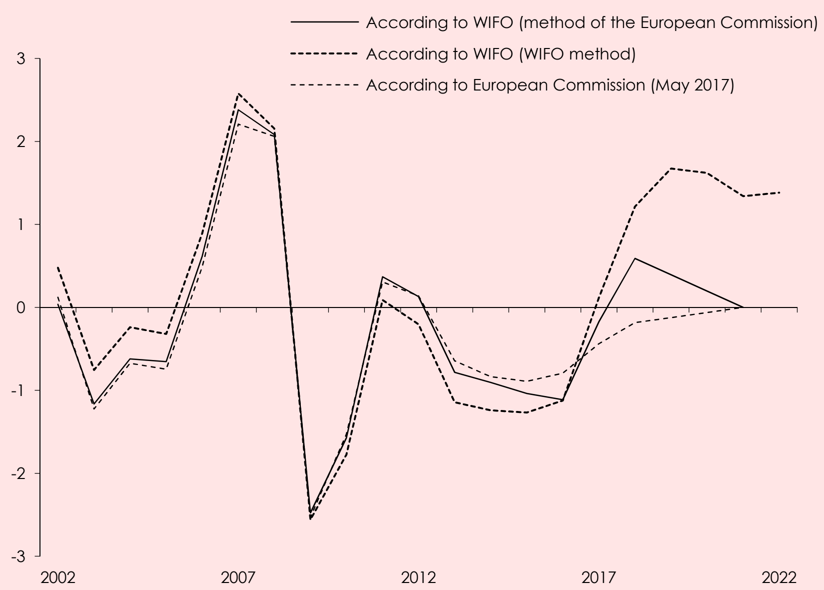
The preventive arm of the European Stability and Growth Pact intends to support Member States in meeting their budgetary objectives and in conducting a countercyclical fiscal policy. The Medium-Term Budgetary Objective (MTO) aims at a balanced budget in structural terms over the business cycle. Estimates of trend output serve to assess the position of an economy in the business cycle and the size of the output gap, which enters into the calculation of the cyclically-adjusted budget balance.

As a non-observable term, trend output has to be estimated, with different empirical approaches being available (*Bilek-Steindl et al.,* 2013, *Havik et al.,* 2014). The high sensitivity to statistical revision and the excessive pro-cyclical behaviour of trend-output estimates complicate the application of the trend-output concept for budgetary management and planning (*Maidorn,* 2016, *Hristov – Raciborski – Vandermeulen,* 2017). An overly sensitive trend-output variable lowers the amplitude of estimated variations in capacity utilisation in the overall economy and hence the difference between the observed and the cyclically-adjusted budget balance.

Following the method adopted by the European Commission, trend output defines the level of activity at which constant, i.e. non-accelerating, wage inflation is preserved. The relative deviation of real GDP (actual output) from trend output defines the cyclical position of an economy. This gauge of overall capacity utilisation, the output gap, serves in the context of the Stability and Growth Pact as the key variable for the cyclical adjustment of the general government balance. A positive output gap indicates an excessive degree of productive capacity utilisation leading to mounting inflationary pressure, whereas in the case of under-utilisation wage pressure would diminish. The concept of trend output is different from full-employment output, i.e. the output level that would be achieved at full utilisation of all production factors at their peak efficiency. According to the trend-output concept, the output gap is close to zero over the business cycle, whereas in the context of the full-employment output it would *ex definitione* always be below zero.

Figure 5: Output gap

Volume, as a percentage of trend output



Source: European Commission, WIFO calculations.

WIFO applies the production function approach developed by the European Commission which defines the transformation of labour and capital input into overall economic output. Total factor productivity (TFP) is the residual unexplained by labour and capital input (Solow residual). To determine the trend of TFP, the Solow residual is decomposed into a trend and a cyclical component, using a Kalman filter. The cyclical component is derived from the variations in capacity utilisation.

To split labour input into a trend and a cyclical component, the labour force participation rate and hours worked per employee are smoothed over time using a Hodrick-Prescott filter, while the trend of the unemployment rate (non-accelerating wage rate of unemployment – NAWRU) is estimated using a Kalman filter. The NAWRU defines the level of unemployment at which wages exert no upward pressure on inflation.

Table 4: Growth contributions of the input factors to trend output

		Ø 2008-2012	Ø 2013-2017	Ø 2018-2022	2017	2018	2019	2020	2021	2022
WIFO estimate										
GDP, volume	year-to-year percentage changes	+ 0.6	+ 1.2	+ 2.0	+ 2.8	+ 2.8	+ 2.2	+ 1.8	+ 1.6	+ 1.5
Trend output (method of the European Commission)	year-to-year percentage changes	+ 1.0	+ 1.3	+ 2.1[1]	+ 1.8	+ 2.0	+ 2.1	+ 2.1	+ 2.2	–
Labour	percentage points	+ 0.0	+ 0.4	+ 0.7[1]	+ 0.7	+ 0.7	+ 0.7	+ 0.7	+ 0.7	–
Capital	percentage points	+ 0.5	+ 0.5	+ 0.6[1]	+ 0.6	+ 0.6	+ 0.6	+ 0.6	+ 0.6	–
Total factor productivity	percentage points	+ 0.5	+ 0.4	+ 0.8[1]	+ 0.6	+ 0.7	+ 0.7	+ 0.8	+ 0.8	–
Trend output (WIFO method)	year-to-year percentage changes	+ 1.2	+ 1.2	+ 1.7	+ 1.5	+ 1.6	+ 1.8	+ 1.9	+ 1.9	+ 1.5
Labour	percentage points	+ 0.0	+ 0.4	+ 0.7	+ 0.7	+ 0.7	+ 0.7	+ 0.8	+ 0.8	+ 0.5
Capital	percentage points	+ 0.5	+ 0.5	+ 0.6	+ 0.6	+ 0.6	+ 0.6	+ 0.6	+ 0.6	+ 0.6
Total factor productivity	percentage points	+ 0.6	+ 0.3	+ 0.4	+ 0.3	+ 0.4	+ 0.4	+ 0.5	+ 0.5	+ 0.4
European Commission estimate										
GDP, volume	year-to-year percentage changes	+ 0.6	+ 1.0	+ 1.7[1]	+ 1.7	+ 1.7	+ 1.7	+ 1.8	+ 1.8	–
Trend output	year-to-year percentage changes	+ 1.0	+ 1.1	+ 1.6[1]	+ 1.4	+ 1.4	+ 1.6	+ 1.7	+ 1.8	–
Labour	percentage points	– 0.0	+ 0.2	+ 0.4[1]	+ 0.3	+ 0.3	+ 0.4	+ 0.5	+ 0.4	–
Capital	percentage points	+ 0.5	+ 0.5	+ 0.5[1]	+ 0.5	+ 0.5	+ 0.5	+ 0.6	+ 0.6	–
Total factor productivity	percentage points	+ 0.5	+ 0.4	+ 0.7[1]	+ 0.5	+ 0.6	+ 0.7	+ 0.7	+ 0.8	–

Source: European Commission, WIFO calculations. – [1] Ø 2018-2021.

The input of capital, as measured by the total capital stock in the economy, is not decomposed as it is assumed to be utilised to its full extent at all times.

The estimates for the trend of TFP and for the NAWRU are obtained from historical data and the WIFO short-term projection up to 2018. For the period 2019-2021, the method of the European Commission combines a projection for the TFP trend with a forward-looking assumption on the NAWRU such that the output gap closes towards the end of the 5-year projection period, irrespective from the present cyclical position and the size of the output gap.

According to this calculation method, using the parametric representation of the European Commission of May 2017, WIFO projects trend growth for the Austrian economy for 2018-2021 at 2.1 percent p.a., significantly above the average rate of +1.3 percent obtained for the previous five-year period. Trend growth thereby converges towards the benchmark recorded prior to the crisis that started in 2007. Following this projection, the Austrian economy would from enter a period of cyclical over-utilisation of productive capacity in 2018. On the basis of the European Commission method, the output gap of 0.6 percent of GDP in 2018 would close by 2021.

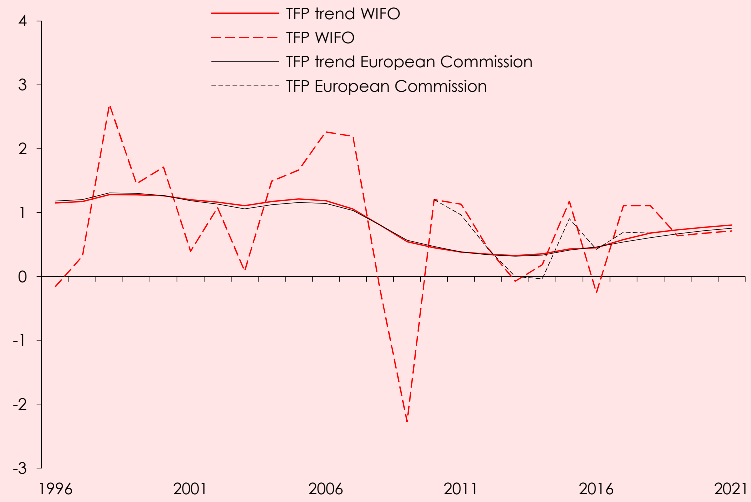
Considering that the trend estimate on the basis of the parametric representation of the European Commission may be overly procyclical and thus understate cyclical variations, WIFO has proceeded to an alternative calculation. While the latter also uses the production function approach of the European Commission, it deviates from the Commission in two important aspects: first, the labour force participation rate and average work-hours per capita are smoothed more strongly over time[2].

[2] For the alternative calculation of trend output WIFO also uses the Hodrick-Prescott filter for the smoothing of the labour force participation rate and the average hours worked. However, it sets a smoothing parameter of 100, a value that is usual for annual data. The European Commission sets this parameter at the value of 10, which enhances the variations in the adjusted series and hence their trend output estimate shows a stronger cyclical behaviour.

Trend growth thereby becomes smoother and less pro-cyclical. As a direct consequence, the (absolute) output gap becomes wider. According to this alternative estimate, trend growth for the period 2018-2022 is 1.7 percent per year. Second, the output gap is not forced to close by the end of the forecast period.

Figure 6: Development of total factor productivity (TFP)

Percentage changes from previous year



Source: European Commission, WIFO calculations.

As a result of the alternative assumptions, the positive output gap is significantly higher and does not close by the end of the projection horizon (2022 +1.4 percent of GDP). In our view, this better reflects the current situation and the medium-term forecast for Austria's economic performance than the projections based on the assumptions of the European Commission.

As illustrated by the decomposition of trend growth, the contributions of TFP, labour input and capital accumulation are broadly similar. The somewhat lower growth contribution of capital accumulation is attributable to the expected greater caution in future private investment behaviour.

4. Slight improvement on the labour market

The expected growth of GDP in real terms of 2 percent p.a. should allow employment (i.e. the number of dependent active employees) to increase by an annual average 1.3 percent over the period from 2018 to 2022. Policy measures ("Employment Bonus" effective from 1 July 2017 to 30 June 2021; "Initiative 20,000" with individual pilot projects as of autumn 2017, to be extended to the whole of Austria from 2018) will give an additional boost to labour demand, notably in 2018. In particular, "Initiative 20,000" should enable long-term unemployed persons of higher age to find a job in the secondary labour market[3].

Up to 2019, labour supply will expand less than demand, allowing unemployment to decline. With the expected slowdown of output growth and job creation, supply and demand conditions are set to turn around as from 2020, leading to a renewed pick-up in unemployment.

[3] "Initiative 20,000" runs until mid-2019, with an evaluation foreseen at the end of 2018. Depending on this evaluation, the initiative might be prolonged. which is however not assumed for the purpose of the present projection.

The increase in labour supply of 1.2 percent or 50,000 persons p.a. will mainly derive from higher female labour force participation, restriction of access to early retirement and invalidity pensions introduced at the beginning of 2014, and above all from the increase in foreign labour supply. The latter counteracts the effect of an ageing domestic labour force; indeed, the population projection by Statistics Austria of November 2016 anticipates a decline of the domestic population under 50 years of age. Overall, the working-age population will rise by 0.3 percent p.a. over the medium term.

Access to early retirement benefits amounted to around 38,000 persons in 2013 and to 22,700 in 2015. From 2018 to 2022, the number is likely to edge up from 29,500 to nearly 31,000[4].

According to the preliminary statistics released by the Federal Ministry of the Interior, 19,073 applications for asylum in Austria were filed from January to September 2017 (for September: preliminary figures; for comparison: January to September 2016 34,757 applications). 16,218 applications were admitted to an asylum procedure, including 2,676 procedures in which the application for asylum had already been filed in 2016. Compared with the same period of the previous year, the number of admitted asylum procedures applications for has almost halved. From January to end-September 2017, decisions were taken in 49,419 cases, of which 45 percent were granted asylum or subsidiary protection.

In our forecast we assume that the number of admission procedures will not reach the upper ceilings specified by the Federal Ministry of the Interior (2017: 35,000, 2018: 30,000, 2019: 25,000). In the light of current developments we set the number of newly submitted asylum applications at around 20,500 per year over the forecast horizon, equivalent to the annual average for the period from 2000 to 2014.

Out of the persons granted refugee status, about two-thirds may be assumed to join the labour force, although language barriers are an obstacle in many cases. For this reason, and given the "integration year" introduced in September 2017, the bulk of recognised refugees and persons entitled to subsidiary protection will be reflected in the labour market statistics only starting from 2019 onwards.

For cyclical reasons, the rate of unemployment (as defined by the Public Employment Service Austria) will decrease to 8.0 percent by 2019, before regaining 8.4 percent at the end of the forecast horizon under the impact of slower output growth and rising labour supply. The number of registered jobseekers is projected at 357,000 in 2022.

The number of foreign workers increased markedly faster in the first nine months of 2017 than in the same period last year (+45,322 to a total 695,291; January to September 2016 +34,584; whole year 2016 +36,009). The share of foreigners in total employment was 19.1 percent; they accounted for nearly 70 percent of the year-on-year overall job increase. Since the end of the transition period towards unrestricted access of workers from the new EU member countries in 2011 (for members from 2004) and 2014 (for members from 2007), their number has soared rapidly. The bulk of the inflow is from the EU accession countries of 2004, although the share of the two accession countries of 2007 has increased since 2014.

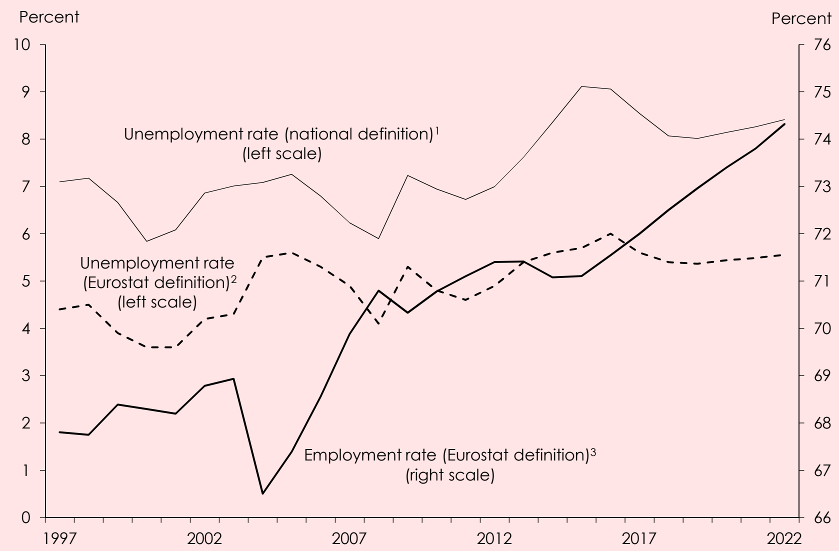
At the end of September 2017, 12,678 persons from Syria, Afghanistan and Iraq (the three main countries of origin of the sharp increase in asylum migration of 2015) were employed in Austria, 8,137 more than at the end of 2014. According to data from the Federal Ministry of the Interior, 51,697 refugees from these three countries were granted asylum or subsidiary protection (in the first-instance procedure) between 1 January 2015 and 30 September 2017.

Over the projection period, the average annual increase in the number of foreign workers is expected at 32,000, down from +47,000 p.a. in 2017 and 2018, since the rebound of economic activity in the eastern neighbour countries should dampen the emigration of labour. The policy measures of "Initiative 20,000" and "Employment Bonus" should moderate somewhat the share of foreigners in overall employment

[4] Following the main scenario of Statistics Austria's population projection from November 2016, the specific age group of women aged 50 to 59 and men of age 55 to 64 will in 2018 comprise almost 15 percent and in 2022 over 21 percent more persons than in 2013 (the year preceding the introduction of tighter access restrictions to early retirement). The share of persons receiving early retirement benefits in the age group defined above declined from 3.5 percent in 2013 to 1.9 percent in 2015. For the period 2018-2022, the share is held constant at 2.3 percent.

growth to an estimated ratio of two-thirds. The proportion of foreign workers in total employment is estimated at 23 percent in 2022.

Figure 7: Labour market trends



Source: Eurostat, Public Employment Service Austria, WIFO calculations. – [1] As a percentage of total labour force excluding self-employed; according to Public Employment Service Austria. – [2] As a percentage of total labour force, according to Eurostat Labour Force Survey. – [3] Persons in employment as a percentage of population of working age (15 to 64 years), according to Eurostat Labour Force Survey.

Table 5: Labour market, income

	Ø 2008-2012	Ø 2013-2017	Ø 2018-2022	2017	2018	2019	2020	2021	2022
					Percent				
Unemployment rate									
Eurostat definition[1]	4.7	5.7	5.4	5.6	5.4	5.4	5.4	5.5	5.6
National definition[2]	6.8	8.5	8.2	8.5	8.1	8.0	8.1	8.3	8.4
	Ø 2007-2012	Ø 2012-2017	Ø 2017-2022	2017	2018	2019	2020	2021	2022
					Year-to-year percentage changes				
Employees[3]	+ 1.2	+ 1.3	+ 1.3	+ 1.9	+ 1.8	+ 1.4	+ 1.2	+ 1.1	+ 1.0
Persons in active dependent employment[4]	+ 0.9	+ 1.2	+ 1.3	+ 2.0	+ 1.8	+ 1.4	+ 1.2	+ 1.1	+ 1.0
Self-employed[5]	+ 2.0	+ 1.6	+ 1.4	+ 1.4	+ 1.4	+ 1.4	+ 1.4	+ 1.4	+ 1.3
Registered unemployed	+ 3.2	+ 5.5	+ 0.9	– 4.5	– 4.4	+ 0.6	+ 2.9	+ 2.7	+ 3.0
Productivity[6]	– 0.4	+ 0.2	+ 0.7	+ 1.3	+ 1.2	+ 0.8	+ 0.6	+ 0.4	+ 0.5
Gross wages and salaries total[7]	+ 3.3	+ 3.3	+ 3.9	+ 3.9	+ 4.3	+ 4.0	+ 3.9	+ 3.8	+ 3.6
Per employee, volume[8]	– 0.2	+ 0.5	+ 0.6	+ 0.1	+ 0.7	+ 0.7	+ 0.7	+ 0.6	+ 0.5
Unit labour costs, total economy	+ 2.4	+ 1.8	+ 1.9	+ 0.6	+ 1.3	+ 1.8	+ 2.1	+ 2.2	+ 2.1

Source: Federation of Austrian Social Security Institutions, Statistics Austria, WIFO calculations. – [1] According to Eurostat Labour Force Survey, as a percentage of total labour force. – [2] According to Public Employment Service Austria, as a percentage of total labour force excluding self-employed. – [3] According to National Accounts definition. – [4] Excluding persons in valid employment contract receiving child care benefit or being in military service. – [5] According to WIFO, including family workers. – [6] Real GDP per employment (dependent and self-employed according to National Accounts definition). – [7] Excluding employers' contributions. – [8] Employees according to National Accounts definition, deflated by CPI.

With the business cycle upswing, unemployment should decline until 2019, before rising to a total 357,000 on annual average 2022. The unemployment rate will bottom out at a rate of 8.0 percent of the dependent labour force (as defined by the Public Employment Service Austria) or 5.4 percent of the total labour force (Eurostat definition). Slower output growth and increasing (foreign) labour supply will drive up the unemployment rate to 8.4 percent by the end of the forecast period.

5. Moderate and stable inflation outlook

Inflation has in recent years been moderated by falling crude oil prices. On the basis of quotations for oil futures contracts of early September 2017, the forecast assumes that spot market prices will gently go up from 53 $ per barrel in 2017 to 57 $ in 2022. The euro/dollar exchange rate is held constant over the forecast horizon at 1.15 $ per euro. The increase in crude oil prices will raise the contribution of refined oil product items to consumer price inflation.

Table 6: Prices

	Ø 2007-2012	Ø 2012-2017	Ø 2017-2022	2017	2018	2019	2020	2021	2022
					Year-to-year percentage changes				
Consumer prices	+ 2.3	+ 1.5	+ 1.9	+ 1.9	+ 1.8	+ 1.9	+ 1.9	+ 2.0	+ 2.0
Implicit price indices									
Private consumption	+ 1.9	+ 1.7	+ 1.9	+ 2.0	+ 1.8	+ 1.9	+ 1.9	+ 2.0	+ 2.0
Exports	+ 1.6	+ 0.1	+ 1.7	+ 1.9	+ 1.6	+ 1.5	+ 1.6	+ 1.8	+ 1.9
Imports	+ 2.3	– 0.4	+ 1.7	+ 2.0	+ 1.6	+ 1.4	+ 1.6	+ 1.9	+ 2.0
Gross domestic product	+ 1.7	+ 1.8	+ 2.0	+ 1.9	+ 2.0	+ 1.9	+ 2.0	+ 2.1	+ 2.0

Source: Statistics Austria, WIFO calculations.

Next to import prices, wage developments and changes in taxes and public charges are major determinants of inflation from the cost side. In April 2017, the tobacco tax was raised once again, and reference levels for controlled housing rents were adjusted (postponed from 2016 to 2017; effect entering the CPI from September 2017 onwards). The estimated combined impact on the year-on-year inflation rate is an increase by 0.1 percentage point, partly extending into 2018. Over the period from 2018 to 2022, nominal wages per capita may rise by an annual average 2½ percent. Unit labour costs in the overall economy, the major determinant of domestic costs, are expected to increase by 1.9 percent p.a. Gross real wages per capita for the economy as a whole will advance at an annual pace of 0.6 percent, falling slightly short of expected labour productivity gains of 0.7 percent p.a. and thus hardly exerting upward pressure on inflation.

For the period 2018-2022, we expect the consumer price index to increase at an annual average of 1.9 percent and the GDP deflator at a rate of 2.0 percent. The significantly positive inflation differential observed since 2011 vis-à-vis Germany (of 0.7 percentage points p.a. on average 2011-2016; January to September 2017 +0.5 percentage points) and the euro area (2011-2016 +0.7 percentage points p.a., January to September 2017 +0.6 percentage points) diminished to some extent in the first nine months of 2017 and should narrow further in the next few years.

6. Balanced general government budget may be achieved with control over expenditure

For the first time, a balanced general government budget may be achieved in the period under perspective, provided that the budgets in the coming years are not burdened by additional ad-hoc-decided spending programmes. As a result of the tax reform 2015-16 and the incomplete implementation of the envisaged counter-financing measures as well as the unplanned expenditure on refugees, the general government deficit (in the Maastricht definition) widened to 1.6 percent of GDP in 2016. However, a significant improvement is expected. Whereas for 2017 and 2018 we anticipate deficits of respectively 0.6 percent and 0.3 percent of GDP, a balanced budget may be achieved by 2019. The positive trend, albeit more moderate, should persist thereafter, such that in 2022 the general government budget may exhibit a surplus of 0.4 percent of GDP.

A necessary condition for such benign developments is first, that all government levels refrain from taking further deficit-increasing measures, avoiding in particular ad-hoc moves of merely short-term effect; second, annual budgets need to be executed with rigour, particularly concerning spending items of high discretionary margin (e.g. subsidies), in order to avoid deviations from the ex-ante budgetary path.

The projection takes into account the measures already adopted by the federal government that are not directly financed ("Initiative 20,000", "Employment Bonus", increase of the research premium, abolition of recourse claims of nursing care costs, investment subsidies, special funding of the National Foundation for Research, Technology and Development, municipal investment programme, reduction in the employer's contribution to the Family Benefit Fund, 50 percent-cut in the Air Transport Levy). The expected reduction of the Maastricht deficit is mainly the result of the cyclically-related buoyancy of tax revenues: for the period 2018-2022, current government revenues are projected to expand by 3.6 percent p.a. in nominal values; in the previous five-year period, the corresponding rate was 2.9 percent, dampened by the income tax reform 2015-16. Due to rising nominal wages and salaries and to fiscal drag, payroll tax revenues will prove particularly dynamic (2018-2022 +6¼ percent p.a.). Likewise, proceeds from social contributions will benefit from the projected lively growth in employment and private incomes. Corporate tax receipts increased strongly also in 2017 and should contribute to fiscal consolidation also in the next few years. VAT receipts will rise in line with nominal private consumption. With GDP at current prices projected to advance at an annual 4.0 percent, the government revenue ratio should decrease from 48.7 percent in 2017 to 47.5 percent of GDP in 2022.

Figure 8: Revenue, expenditure and financial balance (according to Maastricht) of general government

Source: Statistics Austria, WIFO calculations.

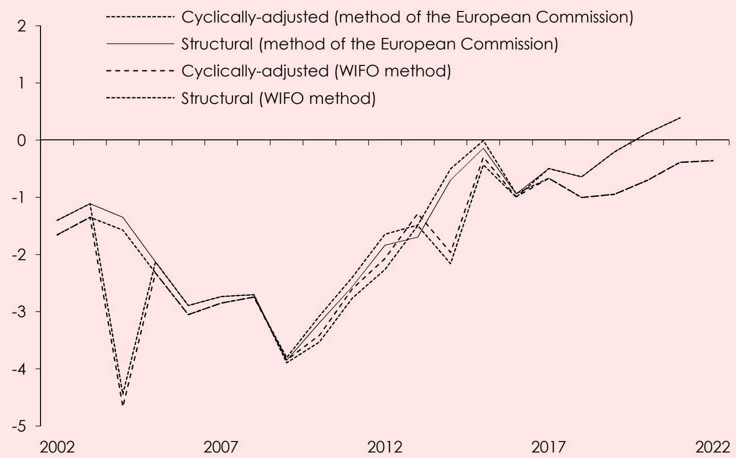
Total expenditure should rise at a somewhat slower pace than nominal GDP, thus implying a steady decline in the government expenditure/GDP ratio, from 49.3 percent of GDP in 2017 to 47.1 percent in 2022. Growth of government spending until 2022 averaging 3.1 percent p.a. will nevertheless exceed the annual 2.2 percent recorded in the earlier five-year period.

Monetary social transfers will increase above-average (2018-2022 +3.9 percent p.a.), notably pensions and nursing care benefits. Social transfers in kind, at +3.5 percent p.a., are expected to progress slightly less dynamic, on the assumption that efforts at containing health care cost will continue successfully. Employment in the public sector has increased markedly over the last few years, inter alia in order to cope with the accommodation of refugees and in the area of justice and public security. The implementation of "Initiative 20,000" and preparations for Austria taking over the EU

Council Presidency in the second half of 2018 will lead to a further increase in government personnel, requiring for 2018 an additional 200 million €. Despite continued wage moderation, public sector wages per head will nevertheless rise faster over the forecast horizon than in the previous period, i.e. +3.2 percent p.a. against +2.5 percent p.a. Public consumption overall is estimated to increase at an annual 3.2 percent, implying an average rate of 1.1 percent in real terms (following +1.3 percent p.a. for 2013-2017).

Figure 9: Cyclically-adjusted and structural budget balance

As a percentage of GDP



Source: WIFO calculations.

Due to the introduction of the "Employment Bonus" and the hike in the research premium, expenditure on subsidies will grow substantially in the first years of the forecast period. While in 2017, the "Employment Bonus" will cost only about 100 million €, the amount will rise to 600 and 700 million € between 2018 and 2020, before dropping below 100 million € in 2021 and to zero in 2022, when the measure will be phased out. For the years beyond 2018, the forecast assumes the strict implementation of the numerous political announcements of a limitation of subsidies. Interest expenditure will also continue to provide budgetary relief; the expected increase of the long-term interest rate will raise debt service cost only little in the short run, since maturing higher-interest government bonds can still be refinanced with new ones at lower interest rates. A turning point may only be reached in 2021, when debt service cost will start rising, albeit less than nominal GDP such that the debt service/GDP ratio should continue to fall.

The structural budget balance (estimated on the basis of the output gap calculation and parametric representation of the European Commission of May 2017) improved from –0.9 percent of GDP in 2016 to –0.5 percent in 2017. For 2018, a temporary deterioration of the structural balance to –0.6 percent of GDP should be expected, due to the extra spending on "Initiative 20,000", the "Employment Bonus" and an extra increase in pension benefits. In 2019, the structural deficit should again diminish significantly, giving way to a slight structural surplus of 0.1 percent of GDP, for the first time in 2020. Hence, the cut in the structural deficit should advance more quickly than projected by the Stability Programme of April 2017. Subsidies to banks in distress, which as one-off measures would have to be included into the official deficit calculation, are not included from today's perspective[5]. High revenues accruing

[5] According to the alternative WIFO estimation of the output gap, the structural budget balance would be –0.4 percent of GDP in 2022, due to the output gap turning positive as from 2017 and rising further until 2020, diminishing though remaining positive thereafter.

mainly in 2017 from extra payments related to the bank levy are not treated as one-off receipts and are thus part of the improvement of the structural balance.

Table 7: Government sector

Current prices

	Ø 2007-2012	Ø 2012-2017	Ø 2017-2022	2017	2018	2019	2020	2021	2022
				Year-to-year percentage changes					
Current revenue	+ 2.8	+ 2.9	+ 3.6	+ 3.9	+ 3.6	+ 3.6	+ 3.6	+ 3.5	+ 3.4
Current expenditure	+ 3.1	+ 2.2	+ 3.1	+ 1.8	+ 3.0	+ 2.9	+ 3.2	+ 3.2	+ 3.3
Gross domestic product, value	+ 2.3	+ 3.0	+ 4.0	+ 4.8	+ 4.8	+ 4.2	+ 3.9	+ 3.7	+ 3.6
	Ø 2008-2012	Ø 2013-2017	Ø 2018-2022	2017	2018	2019	2020	2021	2022
				As a percentage of GDP					
General government financial balance (Maastricht definition)	− 3.2	− 1.6	0.2	− 0.6	− 0.3	0.0	0.2	0.4	0.4
Cyclically-adjusted budget balance									
Method of the European Commission	− 3.0	− 1.1	− 0.1[1]	− 0.5	− 0.6	− 0.2	0.1	0.4	–
WIFO method	− 2.9	− 1.0	− 0.7	− 0.7	− 1.0	− 0.9	− 0.7	− 0.4	− 0.4
Structural budget balance									
Method of the European Commission	− 2.8	− 0.8	− 0.1[1]	− 0.5	− 0.6	− 0.2	0.1	0.4	–
WIFO method	− 2.7	− 0.7	− 0.7	− 0.7	− 1.0	− 0.9	− 0.7	− 0.4	− 0.4
Gross public debt	78.8	82.7	70.4	80.9	77.2	73.6	70.2	66.9	63.9

Source: Statistics Austria, WIFO calculations. – [1] Ø 2018-2021.

The government debt ratio for 2017 is expected at 81 percent of GDP. Favourable economic and budgetary developments, together with the proceeds from the HETA Asset Resolution AG sales ("stock-flow adjustment") may steer the debt ratio at the end of the projection period towards the Maastricht reference value of 60 percent of GDP. For the years from 2018 to 2022 combined, we assume a positive stock-flow adjustment of government debt from the liquidation of assets of public Bad Banks to the amount of 7.4 billion €. The government debt ratio would thereby fall slightly below 64 percent of GDP by 2022.

7. Risks to the medium-term forecast

Geo-political tensions have markedly increased in recent months with the conflicts of the USA with North Korea and Iran. The quest for independence of the Kurdish population in northern Iraq and possible reactions by Turkey may further destabilise the already fragile situation in the Middle East. Such risks may drive commodity prices, notably of oil, (sharply) up or lead to military conflict and even lead to a conflict with nuclear weapons.

Lack of progress in the negotiations for the withdrawal of the UK from the EU makes the scenario of a "hard Brexit" more likely, with potentially adverse consequences for both sides.

Given the currently favourable international business conditions, the cyclical risks over the forecast horizon are predominantly on the downside. The US economy has enjoyed an upturn of demand and output for the last eight years, and signs of capacity shortages are mounting, particularly with regards to qualified labour.

The hitherto only partially corrected imbalances in China's financial sector and the high level of US stock market values carry the risk of abrupt and exaggerated correction that would destabilise not only the markets directly affected, but the global economic system at large.

The risks referred to would have negative impact on the world economy and thus repercussions for economic growth in Austria.

In comparison, the upward risks to the forecast are significantly less pronounced. There is, however, the possibility of a stronger business recovery in the euro area, supported by a continued expansionary stance of monetary and fiscal policy. The further strengthening of aggregate demand would not only stimulate output growth and job creation, but also fuel inflation. In this scenario, Austria's economy would benefit from livelier export growth, but also risk importing higher inflation.

Uncertainties for the medium-term fiscal outlook mainly result from the implementation and continuation of agreed structural reforms for the health care and pension system. Further imponderables relate to the costs of refugee integration. The future inflow of asylum seekers is uncertain, and the implicit cost for government budgets also hinges on reaching a European solution to the refugee crisis. The forecast also includes no assumption on policy action to address fiscal drag in payroll taxation. Should additional support for banks in difficulty become necessary, the consolidation path would be jeopardised from the expenditure side. The envisaged gradual deficit reduction essentially depends on buoyant tax revenues. Political decision-makers should resist the temptation of embarking on ad-hoc spending programmes that would compromise fiscal consolidation.

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