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Spring 2017



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| <p><b>Abstract</b></p> <p>The Finnish economy is on track to post growth of 1.2% in 2017. This growth is more broad-based than last year: not only private consumption and investment growth, but also exports growth is picking up. Growth prospects in the global economy and world trade are looking up, despite being overshadowed by the threat of protectionism. World trade is set to grow by 3% this year and to slightly accelerate towards the end of the forecast period. The Finnish economy is bolstered by accelerating growth in the euro area and rebounding export demand in response to the weakening euro.</p> <p>It is projected that total output growth will come in at one per cent in 2018, climbing further to just over the one per cent mark in 2019. In 2018–2019 the main focus of growth will shift from private consumption to foreign trade. In 2017 private investment growth will be driven by business expansion and replacement investments as well as by household and investor housing purchase intentions.</p> <p>Inflation will accelerate to 1.2% in 2017 on the back of rising crude oil prices, and continue to edge up slightly in 2018. It is thought that the Competitiveness Pact will contribute to reduce negotiated wages to some extent, but other factors are expected to drive nominal earnings to growth of 0.5% in 2017. The Competitiveness Pact and measures introduced from the beginning of 2017 to increase the supply of labour will bolster employment growth. Employment has developed favourably in recent years despite the sluggish economy. Measures adopted under the Competitiveness Pact will be one contributing factor. In the light of the current forecast the Government's employment target will not be reached. High long-term and structural unemployment will present a challenge for the economy.</p> <p>Debt to GDP has grown without interruption for a long time, and the debt ratio will continue to rise. In 2016 Finland's public deficit dropped below the 3% of GDP limit, but the debt to GDP ratio will remain well above the 60% mark. The tax rate, or the ratio of taxes to GDP, will fall in the next years ahead. The Competitiveness Pact will significantly reduce the tax rate. The expenditure rate will also fall over the outlook horizon. It is expected that the health, social services and regional government reform will initially have a slightly negative effect on public finances.</p> |   |                   |           |
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## Preface

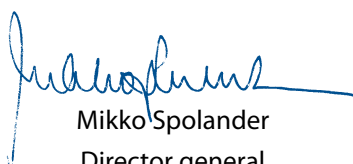
The Spring 2017 Economic Survey is prepared as background material for the Government's spending limits decision. It offers projections of Finland's economic outlook for 2017–2019. In addition to short-term prospects, the Economic Survey includes medium-term projections extending to 2021.

The forecast and trend projections in the survey are prepared independently by the Ministry of Finance Economics Department based on the Act on the implementation of the Treaty on Stability, Coordination and Governance in the Economic and Monetary Union and on multi-annual budgetary frameworks (869/2012).


The forecasts are based on provisional national accounts data for 2016 published by Statistics Finland in March 2017 and on other public statistical sources available on 26 April 2017. Both the short-term and medium-term projections take account of the decisions taken by the Government in its spending limits discussions on 25 April 2017.

Helsinki April 2017


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The source for all data on materialised developments is Statistics Finland unless otherwise indicated.

#### SYMBOLS AND CONVENTIONS USED

|      |   |
|------|---|
| -    | nil   |
| 0    | less than half the final digit shown                |
| ..   | not available                                       |
| .    | not pertinent                                       |
| **   | forecast  |
| CPB  | CPB Netherlands Bureau for Economic Policy Analysis |
| HWWI | Hamburgisches WeltWirtschafts Institut              |
| IMF  | International Monetary Fund                         |
| MoF  | Ministry of Finance                                 |

Each of the figures presented in the tables has been rounded separately.

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# Summary

## Economic outlook for 2017–2019

The Finnish economy has returned to positive growth. Output growth picked up to 1.4% in 2016, and economic growth was rather more broad-based than the year before as public investment also was up. Economic growth was nonetheless mainly driven by private consumption and investment demand, as exports increased by no more than 0.5%.

In 2017 the Ministry expects to see the economy grow at almost the same rate as last year. The projected average growth rate for the coming years is just over one per cent. Despite this growth Finnish GDP in 2019 will still fall almost one per cent short of the peak figure in 2008. The gap compared to 2008 is particularly noticeable for exports and industrial output and, despite robust growth, for private investment.

Over the next few years economic activity will be driven by both domestic and foreign demand. The patterns differ clearly, however. Private consumption and to some extent investment demand growth will slow, but exports will pick up. The growth prospects for exports are bolstered by strengthening global export demand and improving business cost competitiveness. Household consumption demand is hampered by subdued purchasing power. Investment growth is held back by the slowdown of construction and the waning of the growth effects of ongoing major investment projects.

### **Global economic growth picking up**

Global economic growth is accelerating, but the outlook for the coming years is overshadowed above all by the threat of protectionism. Growth is gathering momentum in industrial countries, particularly in the United States. Economies are also rebounding in the euro area and Japan. The outlook for emerging economies is more chequered. It is expected that Chinese output growth will continue to slow. India remains on a strong growth track. The Russian economy is expected to rebound slightly from the downturn caused by falling oil prices. Emerging economies will continue to drive the global economy to 4% growth at the end of the outlook period.

The euro area rebound is supported by the moderate price of oil, the weakening euro and the consequent pickup in export demand. It is predicted that Finland's major trade partners will see quite healthy economic development. Finland's market share in world trade is no longer shrinking, but nor is there any growth in sight. In the euro area, on the other hand, Finland has almost regained the same market share as it had before the crisis. Rebounding global trade will create somewhat more demand in Finland than in recent years.

### **Economic growth is stable**

Finland's GDP growth forecast for 2017 is 1.2%. The main drivers of this moderate growth are a broad-based rise in private investment and an increase in confidence-driven private consumption. Private investment growth, then, is driven by business expansion and replacement investments as well as by household and investor housing purchase intentions. Private consumption growth is supported by strong consumer confidence and improving employment. The world trade outlook has improved, which is reflected in stronger demand for Finnish exports. As a result it is projected that exports growth will accelerate clearly in 2017. On the other hand imports growth is also set to accelerate, and therefore foreign demand overall will act to slow GDP growth. Imports growth will be sustained, among other things, by export industry imports of production inputs and rebounding domestic demand. Because of other components except goods trade, the current account will remain in deficit throughout the forecast period.

It is projected that industry output will rise by no more than half a per cent this year because only the metal and chemical industries have seen a more notable increase in the value of new orders received. Construction growth will slow cyclically after last year's robust growth, and service output will rise steadily on the back of strong private business services.

With economic growth remaining moderate, employment in 2017 will be just 0.4% higher than last year. At the same time the employment rate will climb to over 69% and the unemployment rate fall back to 8½%. It also seems that long-term unemployment is no longer increasing. Inflation will pick up to 1.2% this year, a clearly higher rate than in 2016. Inflation is driven above all by the price of crude oil, which is much higher than last year.

In 2017 earnings development will mainly be determined by the Competitiveness Pact concluded by the social partners. There will be no increases to negotiated wages, and public sector holiday bonuses will be cut temporarily by 30%. The net effect of these factors will lower the standard wage rate on average by 0.2%. The forecast for earnings development assumes that factors other than increases to negotiated wages will drive up earnings by 0.7%. It is thus predicted that nominal earnings will rise by 0.5% in 2017.

In 2018 economic growth will slow marginally to 1%. This is largely due to falling private consumption demand, as purchasing power growth will be slower than this year. Wage earners' purchasing power will be dented by rising taxes and accelerating inflation. Machinery and equipment acquisitions will drive investment to slightly stronger growth than this year, but public consumption will remain on a downward track, partly because of the Competitiveness Pact and partly because of fiscal adjustment. Exports growth will continue to accelerate. This trend is bolstered not only by strengthening export demand, but also by scheduled deliveries of machinery and equipment as well as export industry investment in production capacity. On the other hand the growth of exports and domestic demand will also drive imports growth, so the contribution of foreign demand to economic growth will be limited.

Industry output growth is bolstered by the expansion of production capacity and increasing demand in the forest industry. Service output growth will still be based on increasing business demand. GDP growth is strong enough to keep employment on an upward trend, and at the same time the number of unemployed people is slowly falling. The growth of employment and fall in unemployment will both be accelerated by steps taken under the Competitiveness Pact to reduce labour costs as well as by measures introduced from the beginning of 2017 to increase the supply of labour. Inflationary pressures will remain lower than usual over the coming years because there are idle resources in the economy.

Economic growth will pick up again in 2019 and climb to just over one per cent. This slight rebound will be driven first and foremost by exports, which will benefit from increases in production capacity and strengthening international demand. Although accelerating, exports growth will still be somewhat slower than world trade growth. The overall impression of economic growth in 2017–2019 is more positive than in earlier years, but nonetheless the picture remains subdued. The reason for this is that throughout the outlook period, the performance of exports will remain weaker than in the pre-crisis years. Cumulative economic growth will come in at less than 3½%, and the negative output gap will not yet close in 2019.

### **Economic growth not enough to eliminate deficit in public finances**

Finnish public finances slipped into deficit towards the end of the last decade. Although the general government budgetary position has improved in the past couple of years, deficits will persist in the coming years, even though they are gradually shrinking. Within general government, the sector showing the biggest deficit is central government. The tax rate, or the ratio of taxes to GDP, will fall in the next years ahead. The Competitiveness Pact will significantly reduce the tax rate. The expenditure rate will also fall over the forecast period. It is expected that the health, social services and regional government reform will initially have a slightly negative effect on public finances.

Public debt to GDP dipped temporarily in 2016, but will begin to edge up again over the forecast period. Debt to GDP will remain well above the 60% reference value. Towards the end of the decade it is expected that the debt rate will be reversed, albeit temporarily.

### **Risks to economic development are balanced**

The rather positive global economic outlook is overshadowed by downside risks. Key among these risks are the growth of protectionism and pressures on the multilateral trade system. In the euro area, the risks remain skewed to the downside, despite the economic rebound. In some economies recovery from the debt crisis may take longer than anticipated, and public sector fiscal adjustment may dampen demand to a greater extent than expected. Furthermore, the financial solidity and large volume of bad loans on the books of some European banks are a cause for concern. One major upside risk is pro-growth economic policy in the United States. This is mainly related to some of the actions planned under the new administration, such as infrastructure investments and tax cuts.

The domestic risks are related to the development of the real economy and the labour market. Under conditions of modest purchasing power, the growth of household consumption depends on strong confidence, which may accelerate private consumption growth if it gains more momentum. Also, other monthly indicator material points to possible acceleration of gdp growth.

Confidence may also quickly be eroded. Investment growth requires strong overall demand, which may be adversely affected by both domestic and foreign uncertainties. Employment has increased in recent years despite extremely sluggish economic growth, and the Competitiveness Pact is increasing average working hours, so employment growth may turn out to be slower than expected. In the first months of 2017 the number of employed persons has been higher than last year only in the public sector. Based on the current forecast the Government's employment target will not be reached, and high long-term and structural unemployment will present a challenge for the economy. Regional and occupational mismatch problems between unemployed job seekers and job vacancies continue to stand in the way of an improvement in the employment situation.

**Table 1. Key forecast figures**

|  | 2016<br>EUR<br>bn | 2014                | 2015 | 2016 | 2017** | 2018** | 2019** |
|--|-------------------|---------------------|------|------|--------|--------|--------|
|  |                   | change in volume, % |      |      |        |        |        |
| GDP at market prices                               | 214               | -0.6                | 0.3  | 1.4  | 1.2    | 1.0    | 1.2    |
| Imports  | 78                | -1.3                | 3.1  | 2.5  | 3.1    | 3.4    | 3.4    |
| Total supply                                       | 292               | -0.6                | 0.7  | 0.0  | 1.7    | 1.7    | 1.8    |
| Exports  | 76                | -2.7                | 2.0  | 0.5  | 2.9    | 3.4    | 3.6    |
| Consumption  | 171               | 0.4                 | 1.1  | 1.5  | 0.7    | 0.3    | 0.6    |
| private  | 119               | 0.8                 | 1.5  | 2.0  | 1.1    | 0.7    | 0.8    |
| public   | 52                | -0.5                | 0.1  | 0.5  | -0.4   | -0.5   | 0.1    |
| Investment   | 46                | -2.6                | 1.1  | 5.2  | 2.8    | 3.1    | 3.3    |
| private  | 37                | -3.4                | 2.6  | 6.1  | 3.2    | 3.6    | 4.0    |
| public   | 8                 | 0.9                 | -4.9 | 1.4  | 0.9    | 0.7    | -0.1   |
| Total demand                                       | 293               | -0.8                | 1.5  | 1.6  | 1.7    | 1.6    | 1.8    |
| domestic demand                                    | 218               | -0.1                | 1.4  | 2.1  | 1.2    | 1.0    | 1.2    |
|  |                   | 2014                | 2015 | 2016 | 2017** | 2018** | 2019** |
| GDP, EUR bn  |                   | 205                 | 210  | 214  | 219    | 225    | 232    |
| Services, change in volume, %                      |                   | -0.4                | 0.9  | 0.7  | 1.1    | 0.9    | 0.8    |
| Industry, change in volume, %                      |                   | -0.2                | -2.1 | 1.0  | 0.5    | 2.1    | 2.2    |
| Labour productivity, change, %                     |                   | 0.1                 | 0.4  | 0.1  | -0.4   | 0.8    | 0.8    |
| Employed labour force, change, %                   |                   | -0.4                | -0.4 | 0.5  | 0.4    | 0.5    | 0.5    |
| Employment rate, %                                 |                   | 68.3                | 68.1 | 68.7 | 69.1   | 69.6   | 70.0   |
| Unemployment rate, %                               |                   | 8.7                 | 9.4  | 8.8  | 8.5    | 8.1    | 7.8    |
| Consumer price index, change, %                    |                   | 1.0                 | -0.2 | 0.4  | 1.2    | 1.3    | 1.4    |
| Index of wage and salary earnings, change, %       |                   | 1.4                 | 1.4  | 1.2  | 0.5    | 1.2    | 1.5    |
| Current account, EUR bn                            |                   | -2.6                | -1.2 | -2.3 | -2.3   | -2.6   | -2.7   |
| Current account, relative to GDP, %                |                   | -1.3                | -0.6 | -1.1 | -1.1   | -1.1   | -1.2   |
| Short-term interest rates (3-month Euribor), %     |                   | 0.2                 | 0.0  | -0.3 | -0.3   | -0.2   | 0.0    |
| Long-term interest rates (10-year govt. bonds), %  |                   | 1.3                 | 0.7  | 0.4  | 0.6    | 1.0    | 1.4    |
| General government expenditure, relative to GDP, % |                   | 58.1                | 57.0 | 56.1 | 55.2   | 54.7   | 54.0   |
| Tax ratio, relative to GDP, %                      |                   | 43.9                | 44.0 | 44.4 | 43.1   | 42.8   | 42.5   |
| General government net lending, relative to GDP, % |                   | -3.2                | -2.7 | -1.9 | -2.3   | -2.0   | -1.7   |
| Central government net lending, relative to GDP, % |                   | -3.7                | -3.0 | -2.7 | -2.7   | -2.2   | -1.8   |
| General government gross debt, relative to GDP, %  |                   | 60.2                | 63.7 | 63.6 | 64.7   | 65.4   | 65.7   |
| Central government debt, relative to GDP, %        |                   | 46.3                | 47.6 | 47.8 | 49.1   | 49.7   | 50.0   |

## Medium-term outlook

Finnish GDP growth accelerated to almost 1½% last year, after several years of weak economic development. In 2017–2019, economic growth is expected to average just over 1%. In the medium term growth will remain around the 1% mark, which is a historically slow rate of growth.

The medium-term outlook can be examined on the basis of potential output, which is thought to determine the economy's medium-term growth prospects. In its assessments of potential output, the MoF Economics Department uses the production function method as developed jointly by the EU Commission and Member States, in which potential output growth is divided between projections of potential labour input, capital and total factor productivity. Potential output is an unobservable variable and its assessment is highly challenging, especially during a strong economic cycle and under conditions of rapid changes in the production structure.

The growth of labour input will drive potential output to moderate growth in 2017–2019, but it will then begin to slow. Labour input will decrease as the population of working age continues to shrink, but at the same time labour participation rates are expected to increase somewhat, especially in older age groups. Another factor determining labour input growth is the structural unemployment rate: this is the level of unemployment below which upward wage pressure begins to develop in the labour market. Using the EU's common method, it is estimated that the Competitiveness Pact will contribute to lower Finland's structural unemployment rate to just over 7%. The medium-term projection is that unemployment will begin to approximate this level as the output gap closes.

Increasing total factor productivity has been a major driver of economic growth in the past decades. In recent years, however, total factor productivity has shown only modest growth. This slowdown is attributable to both cyclical and structural factors. Output has dropped significantly in high-productivity branches, and at the same time services have gained increasing prominence in the economy. In recent years total factor productivity trend growth has been marginally negative, and it is expected that in the medium term growth will be slightly positive, compared with growth rates of over 2% in the early 2000s.

The economy's potential output is dependent not only on labour input and total factor productivity, but also on the existing capital stock. Several years of low investment have contributed to slow capital stock growth and therefore undermined the economy's future growth potential. However the rise in investment rate that started in 2016 will increase potential output through capital stock growth on average by almost half a per cent a year. Overall it is projected that in the medium term, the economy's growth potential will rise to just over half a per cent a year.

The difference between total actual output and potential output, i.e. the output gap is negative when actual output is lower than potential output. This means there is idle capacity in the economy and output can grow more rapidly than potential output without creating upward pressure on prices. The 2017 estimate is that the output gap will stand at just over -1% of potential output. When GDP growth exceeds its potential, the output gap contracts, and according to the forecast the output gap will close in 2021.

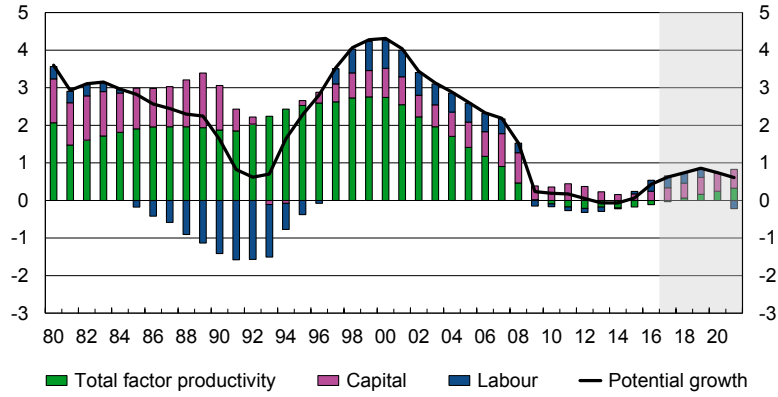
Finnish public finances have been running a significant deficit since 2009. The projected average rate of economic growth at just over one per cent is not enough to bridge the deficit in public finances. At the same time, population ageing is continuing to weigh down on public finances. General government revenue is therefore no longer enough to sustain all the public sector structures and functions that were created on the foundations of stronger economic growth. Furthermore, it is expected that in the short term, the Competitiveness Pact will undermine the budgetary position of general government.

**Table 2. Key forecast figures for the medium term**

|  | 2015 | 2016 | 2017** | 2018** | 2019** | 2020** | 2021** |
|--|------|------|--------|--------|--------|--------|--------|
| GDP at market prices, change in volume, %          | 0.3  | 1.4  | 1.2    | 1.0    | 1.2    | 1.0    | 1.0    |
| Consumer price index, change, %                    | -0.2 | 0.4  | 1.2    | 1.3    | 1.4    | 1.7    | 2.0    |
| Unemployment rate, %                               | 9.4  | 8.8  | 8.5    | 8.1    | 7.8    | 7.6    | 7.4    |
| Employment rate, %                                 | 68.1 | 68.7 | 69.1   | 69.6   | 70.0   | 70.4   | 70.7   |
| General government net lending, relative to GDP, % | -2.7 | -1.9 | -2.3   | -2.0   | -1.7   | -1.1   | -1.2   |
| Central government                                 | -3.0 | -2.7 | -2.7   | -2.2   | -1.8   | -1.4   | -1.5   |
| Local government                                   | -0.6 | -0.5 | -0.5   | -0.5   | -0.5   | -0.4   | -0.4   |
| Social security funds                              | 0.9  | 1.3  | 0.9    | 0.7    | 0.5    | 0.6    | 0.6    |
| Structural balance, relative to GDP, %             | -1.2 | -0.9 | -1.7   | -1.5   | -1.4   | -1.0   | -1.2   |
| General government gross debt, relative to GDP, %  | 63.7 | 63.6 | 64.7   | 65.4   | 65.7   | 65.2   | 65.0   |
| Central government debt, relative to GDP, %        | 47.6 | 47.8 | 49.1   | 49.7   | 50.0   | 49.7   | 49.7   |
| Output gap, % of potential output <sup>1</sup>     | -2.6 | -1.7 | -1.2   | -0.9   | -0.5   | -0.3   | 0.0    |

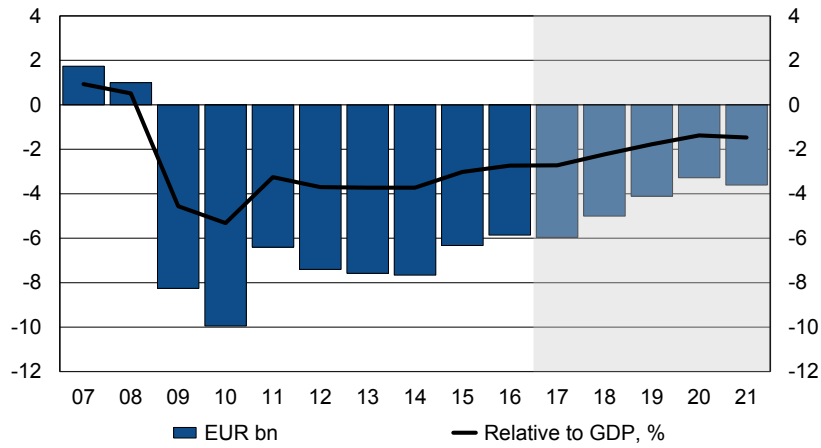
<sup>1</sup> Estimated according the method developed jointly by the EU Commission and Member States

### Contributions to potential growth according to EU method, %



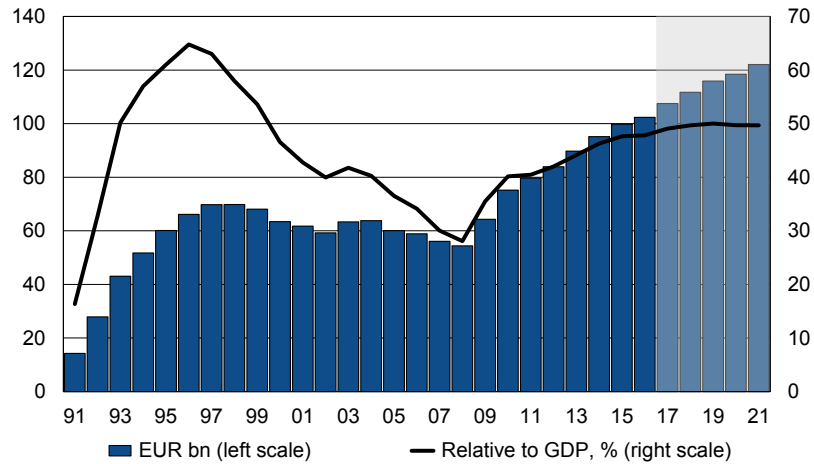
Sources: Statistics Finland, MoF

### Central government financial balance



Sources: Statistics Finland, MoF

### Central government debt



Sources: Statistics Finland, MoF



## MACROECONOMIC IMPACTS OF FISCAL DEVALUATION

One way of tackling competitiveness problems is by means of internal or fiscal devaluation (FD). FD can be described as a fiscal policy measure that has similar impacts on the real economy as the traditional devaluation of the nominal exchange rate.<sup>1</sup> The difference is that FD does not raise import prices vis-à-vis prices of domestic products. In contrast to conventional devaluation, FD increases the real value of debts to the extent that falling labour costs lower the general price level. Conventional devaluation has the effect of raising the price level at least via import prices.

The impact of FD on price competitiveness increases in inverse proportion to its upward effect on wages. The impact is further enhanced by the price elasticity of domestic production. In the longer term the effects of FD can be significantly enhanced through improvements to the efficiency of goods markets. One way to do this is through increased competition. In the Finnish context these effects have earlier been discussed by Kajanoja<sup>2</sup> and Kilponen<sup>3</sup> in the Bank of Finland publication *Euro & talous*.

This text box examines calculations prepared using the MoF Economics Department's macroeconomic model (Kooma) in which the costs of domestic production are reduced. The aim is to achieve a three percentage point decrease in unit labour costs in 2017. This effect is produced by lowering ancillary labour costs. The decision was made to effect the FD via earnings-related pension contributions of which employers account for a considerably larger share than employees, in contrast to earned income insurance under the national health insurance system or unemployment insurance. The loss of central government revenue is offset by increasing value added tax.

More specifically, the calculation transfers the payment of a portion of employers' earnings-related pension contributions to employees: that portion is 3.7 percentage points of the wage bill, which amounts to EUR 3 billion. Compensation for employees is delivered in the form of reduced taxes on earned income. Since earnings-related pension contributions are tax deductible, the higher contribution rate will increase the overall tax burden on employees by EUR 1.9 billion. This is the amount of tax relief that would suffice to restore employees' earned income taxes to the same level as before the transfer of payment.

The arrangement to reduce employer contributions creates a deficit of almost EUR 2 billion in public finances. This is offset by raising the VAT rate, for instance by hiking the reduced VAT rates to the basic rate of 24%. This would at once reduce market distortions caused by inconsistent VAT configurations. The increase generates static tax revenue of approx. EUR 2.5 billion. The calculation is furthermore affected by benefits based on different indices: the net revenue from the VAT hike would amount to around EUR 1.9 billion. The arrangement as a whole would be neutral for public finances when its employment effects are not taken into account.

1 See e.g. Farhi, E., Gopinath, G., and Itskhoki, O. (2014). Fiscal Devaluations, *Review of Economic Studies* 81(2), pp. 725-760.

2 Lauri Kajanoja: Fiskaalinen devalvaatio vai hallituksen kilpailukyypaketti? *Euro & talous* 2015.

3 Juha Kilponen: Fiskaalisen devalvaation dynaamisista vaikutuksista. *Euro & talous* 2015.

As FD improves price competitiveness, the volume of exports will be slightly higher than in the baseline. The effects are strongest in the first two years, but do not completely disappear over the next eight years. Higher exports contribute to increase investment especially in the first three years. On the other hand, private consumption is lower than in the baseline, especially in the first two years. In GDP, the effect of consumption predominates in the first year, when GDP growth is slightly weaker than in the baseline. Increased exports, higher investment, improved employment, slower inflation and higher nominal wages drive GDP to slightly faster than baseline growth from the second year onwards. The dynamic effects of FD contribute to reduce the general government deficit and debt compared with the baseline.

These effects are minor, however. In 10 years GDP, for instance, is cumulatively 0.18% higher than in the baseline and the unemployment rate 0.12 percentage points lower. The results are consistent with findings from earlier simulation exercises: FD produces effects equivalent to a weakening of the nominal exchange rate, but the effects are minor.

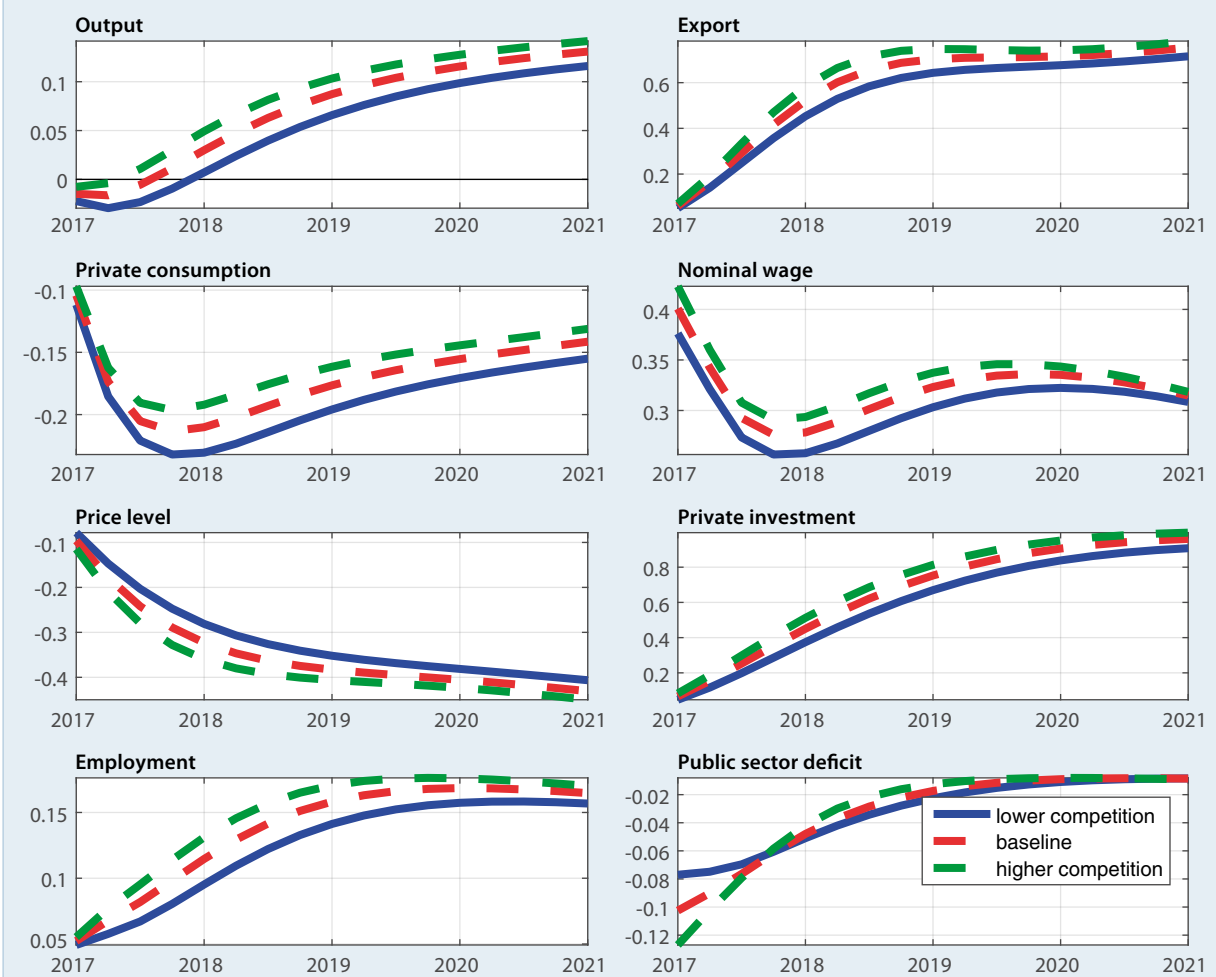
The first calculation (Figure 1) compares the effects of wage adjustment. Wages may adjust more slowly or more rapidly to the FD-induced changes in the economy. The calculations are performed using parameter values describing different degrees of wage rigidity. More flexible wage formation allows for slower wage growth towards the end of the period. This improves the price competitiveness of exports as well as employment. Private consumption also decreases less than in the baseline. More flexible wage formation enhances the positive effects of FD on production and employment.

The second calculation (Figure 2) examines the role of competition in the goods market in connection with FD. The effects are computed using different parameter values for firms' mark-up. Increasing competition in the domestic market increases the price-lowering effects of FD. This is clearly reflected in exports, which increase to a greater extent. Although wage growth accelerates slightly as a result of increased demand, employment is improved and therefore there is only a minor negative reaction in private consumption. The growth of competition underscores the positive effects of FD on employment and output.

Figure 1. Fiscal devaluation with different wage rigidities



Figure 2. Fiscal devaluation with different price mark-ups



## Fiscal Policy

Finnish public finances have been in a poor state for almost a decade. Both industrial restructuring and population ageing have contributed adverse effects. A return to normal cyclical conditions will not be enough to bring a substantial improvement in the state of public finances because the population is continuing to age and structural unemployment is high.

In the decades ahead it is unlikely that Finnish economic growth will return to the levels seen in the years and decades before the financial crisis. It is estimated that in the 2020s the growth potential of the economy will be around 1–1½%. The prospects of economic growth are hampered by high structural unemployment and the declining size of the working age population. Furthermore it seems that productivity growth will be slower than earlier.

However public expenditure will continue to grow rapidly. Pension expenditure growth has begun to slow from its peak levels as the baby boom generation has now moved into retirement, but public expenditure on care services is still to peak. Furthermore, the replacement of the Finland's fighter fleet and other required investments will place public finances under significant pressure in the 2020s.

Public services and other general government expenditure is financed from revenue generated by economic activity. For this reason the muted growth prospects ahead constitute a major challenge for public finances and fiscal policy. Muted economic growth and increasing age-related expenditure are creating a permanent imbalance in public finances.

The root causes of the imbalance in public finances are primarily structural. For this reason economic policy should be geared not only to direct adjustment measures aimed at strengthening public finances, but also to reforms that will improve the framework conditions for economic growth and strengthen the sustainability of public finances. To this end it is important to move resolutely to implement the measures set out in the Government Programme: there is no reason to revise the scale or implementation of the EUR 10 billion package of measures included in the Government Programme that is aimed at bridging the sustainability gap.

To secure the financing of public services in the long term, it is essential that the health, social services and regional government reform is implemented in such a way that the targeted savings are achieved. There remain many risks to the achievement of the EUR 3 billion savings pursued through the reform, and these risks must be given due attention in the further preparation of the reform.

The goal of increasing the employment rate can only be reached if further steps are taken to increase the demand and supply of labour. The labour market situation is slowly improving, but the Government's employment targets still remain a far way off. The Ministry forecast is that the employment rate will fall two percentage points short of the Government's target of 72% in 2019. It is particularly important to work to prevent long-term employment: when unemployment becomes structural it will not necessarily fall in a rebounding economy.

In its programme the Government has expressed its commitment to halt the growth of the debt to GDP ratio by the end of its term of office and that additional debt will no longer be taken after 2021. The debt to GDP ratio will start to edge down by the turn of the decade, but not quite yet during the Government's term in office. Furthermore, additional borrowing is not going to end by the 2021 target date because central and local government will still be firmly in deficit in 2021.

The Government has also specified deficit and surplus targets for individual sectors of public finances. The target set under the general government fiscal plan for the central and local government budgetary position is around  $-0.5\%$  of GDP in 2019. For social security funds, the Government is targeting a surplus of around one per cent in 2019. If these targets are met, public finances should be nearly in balance by the end of the parliamentary term. Based on the forecast it seems that central government will fall short of its target. Social security funds are also falling slightly short of their targets. Local government, on the other hand, will more or less hit its target.

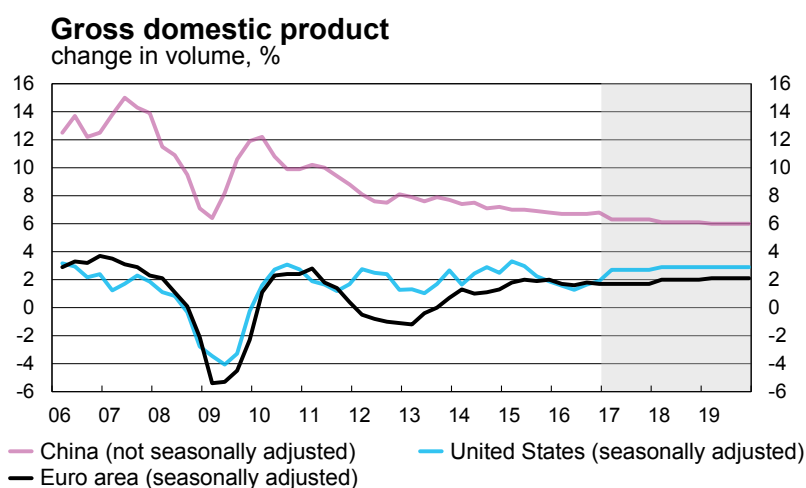
As the recession gives way to recovery, efforts can be stepped up to improve the conditions for economic growth and the state of public finances. The second half of the Government's term in office is an opportune moment to ensure that the package of measures adopted in the Government Programme is put in place and implemented. These measures still seem feasible and appropriate, both in terms of scale and timing.

# 1 1. Economic outlook

## 1.1 Global economy

### Global economic growth accelerating despite risks

Global economic growth is accelerating, but the outlook for the next few years is overshadowed above all by the threat of protectionism. Growth is gathering momentum in industrial countries, particularly in the United States. Economies are also rebounding in the euro area and Japan. The outlook for developing economies is more chequered. It is expected that Chinese output growth will continue to slow. India remains on a strong growth track. The Russian economy is expected to rebound slightly from the downturn caused by falling oil prices. Developing economies will continue to drive the global economy to 4% growth at the end of the outlook horizon.

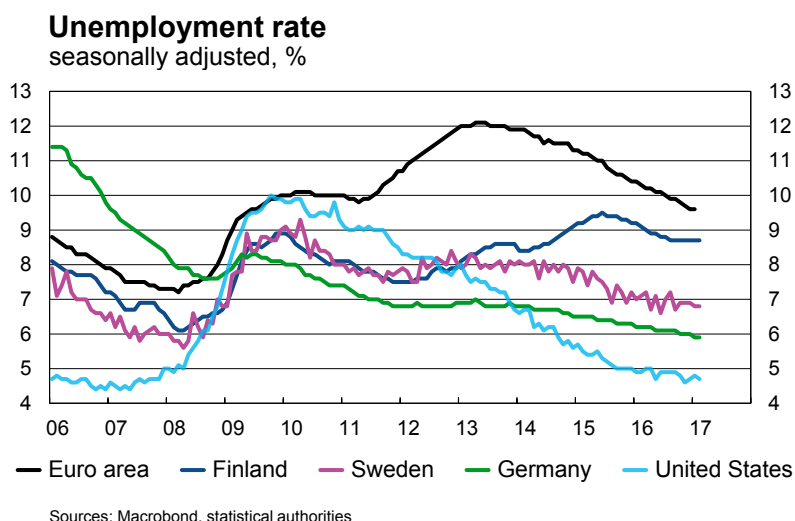


Sources: Statistical authorities, MoF

The euro area rebound is supported by the moderate price of oil, the falling value of the euro and the consequent pickup in export demand. Euro area Purchasing Managers' Indices (PMIs) suggest an increased level of economic activity. Domestic demand and private consumption in particular is rebounding on the back of employment growth. Extremely low interest rates are encouraging investment. Inflation has recently picked up with rising

energy prices, but core inflation growth is still slow. A return to normal monetary policy will require a more lasting improvement in the economic environment. Fiscal policy supports growth. Unemployment is slowly edging down from persistently high levels.

The European economic outlook is characterised by an ageing population, a slowdown of economic growth potential, high local unemployment rates and uneven productivity growth. Slow or even negative labour force growth is to some extent offset by immigration. Large companies especially in the technology sector are showing excellent productivity performance, but at the same time productivity in many SMEs is disappointing.



Broad-based growth is set to continue in the United States, but the strengthening dollar is harming exports. Household and business expectations for the economy are high. Despite the political uncertainty there are strong expectations of a pro-growth economic policy, which is reflected in record-high stock indices. The economy is close to full employment, and the pickup of inflation has already prompted a tightening of monetary policy.

Japan seems to have moved out of its persistent deflationary cycle as the general price level appears to be back on a growth track. The central bank's commitment to a growth-supportive policy is pivotal to economic recovery. The weakening yen is bolstering Japanese exports, which have long been subdued.

Slowing growth in China is a reflection of the construction boom slowdown and rising production costs in the country's coastal industrial cities. The ongoing transition of the Chinese economy from export to domestic demand driven growth is also reflected in the country's growth prospects. However, the Chinese outlook is overshadowed by high private debt levels.

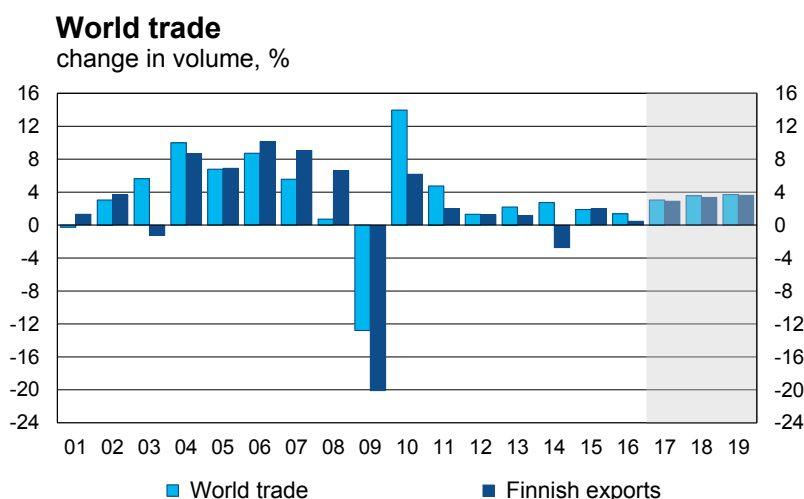
The Indian economy is performing robustly, despite last year's banknote demonetisation and slow progress with structural reform. Low energy prices and the Government's structural reform plans are continuing to bolster economic growth.



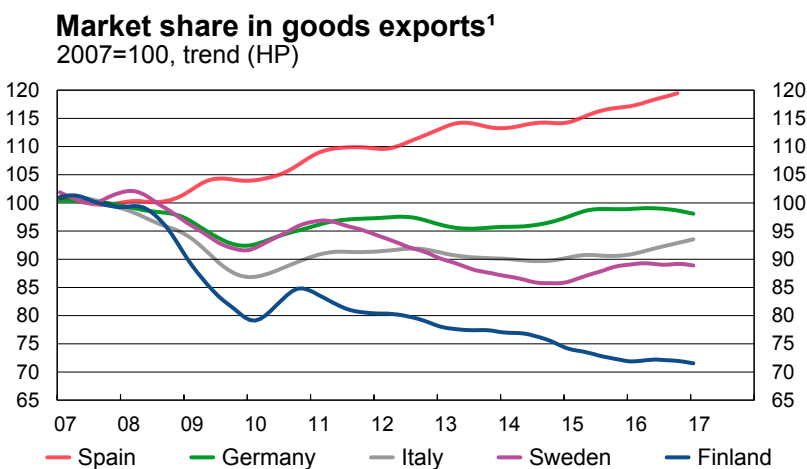
## World trade picking up but still slower than world economic growth

World trade growth has slowed in recent years, among other reasons, because of the slow-down of Chinese manufacturing and sluggish investment in industrial countries. However, imports growth is set to pick up on the back of rebounding demand in the United States, the euro area and emerging economies. Nonetheless world trade growth will remain slower than world economic growth over the next few years, in contrast to the period of intense globalisation before the financial crisis.

Finland’s market share in world trade is no longer shrinking, but nor is there any growth in sight. In the euro area, on the other hand, Finland has almost regained the same market share as it had before the crisis. Rebounding global trade will create somewhat more demand in Finland than in recent years.



Sources: CPB Netherlands Bureau for Economic Policy Analysis, Statistics Finland, MoF



<sup>1</sup> Ratio of goods exports growth to world trade growth

Sources: Macrobond, MoF

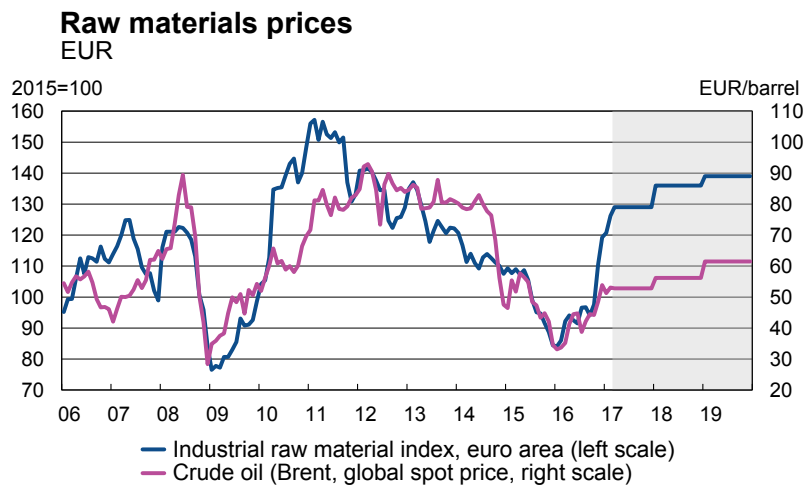
## Inflation picking up

The price of crude oil has bounced back from its rock bottom just over 12 months ago following the decision by OPEC and other oil producers to restrict production. Brimming oil stocks in the US and the improved profitability of alternative oil production methods have contributed to lower prices early in the spring. Energy is an intermediate input in all products and services and therefore affects prices across the board.

Other industrial raw material prices have been falling for a long time, but in early 2016 they hit rock bottom and returned to a growth track. Especially in late 2016 prices rose rapidly, apparently in response to manufacturing output growth.

Inflation is picking up on the back of the economic rebound and positive employment trends. The US economy, for instance, is already close to full employment. The pickup of euro area inflation reflects the rebound of private consumption, but also the growth-supportive, unusually light monetary policy.

In the United States, interest rates have begun to move back to normal. Euro area interest rates will rise slowly over the outlook horizon and remain at a clearly lower level than was seen during the pre-crisis period.



## Risks mainly to the downside

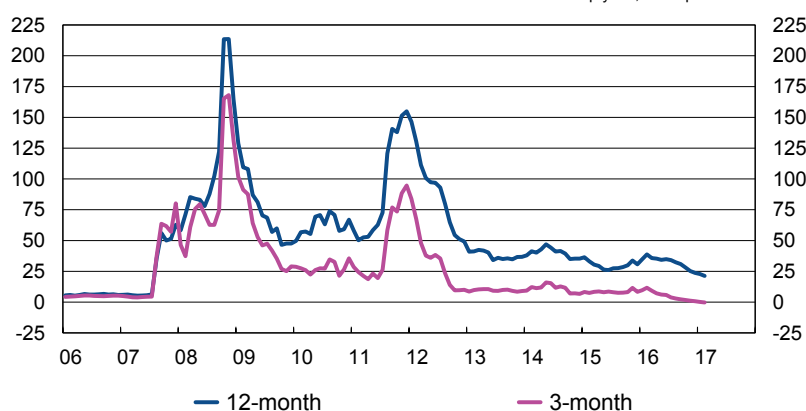
The rather optimistic global economic outlook is overshadowed by downside risks. Key among these risks are the growth of protectionism and pressures on the multilateral trade system. The trade policy intentions of the new US administration are a particular cause of uncertainty.

In China, indebtedness has continued to grow rapidly, especially in the private sector. The high and increasing debt burden coupled with slowing growth and economic restructuring may cause shocks that, because of the size of the Chinese market and global value chains, may have wide-ranging effects, in particular on raw materials and investment goods suppliers. In the longer term it is also unclear how well China will succeed in reforming its economic model and shifting the focus from manufacturing, investment and exports to domestic consumption and services. The Chinese slowdown and restructuring may also cause greater than anticipated problems especially for emerging economies.

In the euro area, too, the risks remain skewed to the downside, despite the economic rebound. Recovery from the debt crisis may take longer than anticipated for some economies. Public sector fiscal adjustment may dampen demand to a greater extent than expected. Furthermore, the financial solidity and large volume of bad loans on the books of some European banks are a cause for concern.

### Banking system risks

difference between secured Euribor and unsecured Eonia interest rate swap yield, basis points



Source: Macrobond

Growth prospects are still overshadowed by geopolitical tensions in Russia, the Middle East and elsewhere. The Russian economy remains tight, despite stronger oil prices and the rebounding rouble. An escalation of the geopolitical risks connected with Russia would adversely affect confidence and slow growth in Europe.

Long-standing very low interest rates in industrial countries and a stronger search-for-yield mentality have steered investment flows into the housing and stock market, which may have led to overvaluations. Some key stock indexes have reached all-time highs. Housing prices have risen very sharply especially in Sweden. The winding down of unconventional monetary policy during the forecast period, the edging up of interest rates and the strengthening of the US dollar may cause strong reactions in the financial market.

One major upside risk is pro-growth economic policy in the United States. This is mainly related to some of the actions planned under the new administration, such as infrastructure investments and tax cuts.

**Table 3. Gross domestic product**

|                | 2014                | 2015 | 2016 | 2017** | 2018** | 2019** |
|----------------|---------------------|------|------|--------|--------|--------|
|                | change in volume, % |      |      |        |        |        |
| World (PPP)    | 3.2                 | 3.3  | 3.1  | 3.4    | 3.9    | 4.0    |
| Euro area      | 1.0                 | 2.2  | 1.7  | 1.7    | 2.0    | 2.1    |
| EU             | 1.4                 | 1.6  | 2.0  | 2.0    | 2.2    | 2.3    |
| Germany        | 1.6                 | 1.5  | 1.6  | 1.7    | 1.9    | 2.0    |
| France         | 0.2                 | 1.2  | 1.1  | 1.4    | 1.7    | 1.8    |
| Sweden         | 2.0                 | 3.9  | 2.9  | 2.9    | 2.7    | 2.8    |
| United Kingdom | 2.9                 | 2.2  | 2.0  | 1.5    | 1.3    | 1.2    |
| United States  | 2.4                 | 2.6  | 1.6  | 2.7    | 2.9    | 2.9    |
| Japan          | -0.1                | 0.6  | 0.8  | 0.7    | 0.9    | 1.0    |
| China          | 7.3                 | 6.9  | 6.7  | 6.3    | 6.1    | 6.0    |
| Russia         | 0.6                 | -3.7 | -0.6 | 1.0    | 1.2    | 1.3    |

Sources: Eurostat, statistical authorities, IMF, MoF

**Table 4. Background assumptions**

|   | 2014  | 2015  | 2016 | 2017** | 2018** | 2019** |
|---|-------|-------|------|--------|--------|--------|
| World trade growth, %                                 | 2.8   | 2.0   | 1.4  | 3.0    | 3.6    | 3.7    |
| EUR/USD   | 1.30  | 1.10  | 1.10 | 1.02   | 1.00   | 0.95   |
| Industrial raw material price index, EA, € (2015=100) | 112.6 | 100.1 | 96.0 | 129.0  | 136.0  | 139.0  |
| Crude oil (Brent), €/barrel                           | 76.4  | 48.6  | 40.8 | 52.8   | 56.2   | 61.5   |
| 3-month Euribor, %                                    | 0.2   | 0.0   | -0.3 | -0.3   | -0.2   | 0.0    |
| Government bonds (10-year), %                         | 1.3   | 0.7   | 0.4  | 0.6    | 1.0    | 1.4    |
| Export market share (2000=100) <sup>1</sup>           | 79.4  | 79.3  | 78.6 | 78.6   | 78.4   | 78.3   |
| Import prices, %                                      | -1.6  | -3.7  | -1.8 | 2.1    | 2.1    | 1.8    |

<sup>1</sup> Ratio of export growth to world trade growth

Sources: Statistical authorities, CPB, HWWI, Reuters, MoF

## FOREIGN TRADE AND GLOBAL VALUE CHAINS

Globalisation and specialisation have led to a fragmentation of value chains, which means that the manufacture of individual final products is distributed across several countries. Intermediates exports as a proportion of total exports have consequently increased. The globalisation of value chains is directly reflected in trade structures. New international input-output databases such as TiVa and WIOD complement traditional foreign trade statistics and provide a useful tool for analysing global value chains.

Foreign trade statistics report the gross value of exported goods, which may exaggerate the contribution of exports to GDP. Similarly, they may underestimate the role of imports in that they disregard the contribution of imports as inputs in export goods. In exploring the effects of foreign trade on the economy as a whole, it is essential to consider not only overall export and import volumes, but also breakdowns by goods categories and the share of domestic and foreign value added in exports respectively.

### Finland exports intermediate products

Finnish exports consist predominantly of intermediates, which are processed into final products or integrated as part of larger installations in some other country. Intermediates exports account for around two-thirds of total Finnish exports (OECD, 2015). Intermediates are an important component of exports in other advanced economies, too. The large share of intermediates in exports is, however, not a new phenomenon, as Ali-Yrkkö et al. (2016) point out: intermediates exports have played a major role ever since the 1990s. Intermediates dominate the Finnish imports as well, accounting for some 70% of total Finnish imports.

The high share of intermediate goods in total exports and imports reflects the linkage with global value chains and the ensuing perspectives. The export breakdown by country, i.e. the countries whose final demand Finnish exports satisfy, may differ from the country breakdown for traditional goods trade. Goods trade statistics identify the country to which the goods are dispatched, whereas international input-output data allow us to also identify the destinations for indirect exports, i.e. the countries where the products produced in Finland are ultimately consumed.

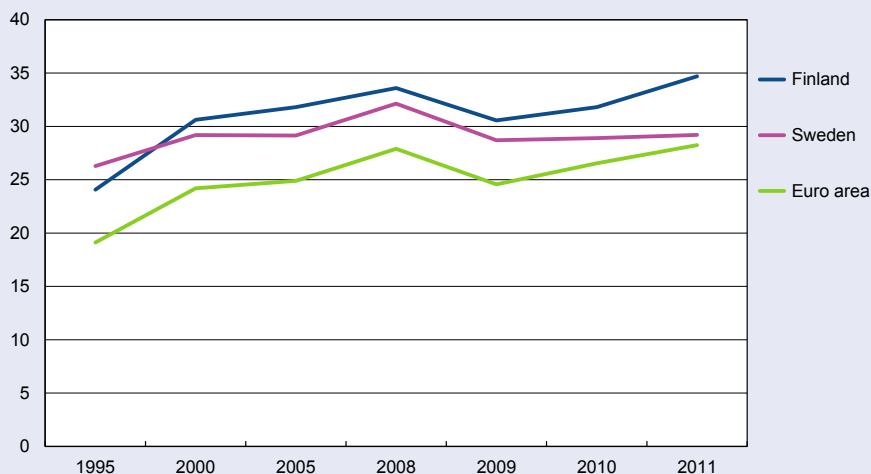
Also the key role of imports as inputs in exports is highlighted. Imported inputs are needed for the export of both intermediate and final products, which requires a favourable import environment. Ali-Yrkkö et al. (2016) emphasize the importance of smooth and effective international exchange as a key competitiveness factor.

### Increased share of foreign value added in exports

Export products and industries with high domestic value added make a stronger contribution to the national economy than those with higher foreign value added. Having said that, the benefits of exports depend not only on the sources of the value added but also the scale and the degree of processing.

The general trend resulting from value chain fragmentation has been for the share of domestic value added in total exports to decline and for the share of foreign value added accordingly to increase. In 2011 foreign value added accounted for around 35% of total Finnish exports, higher than the corresponding figure for Sweden and for the euro area. Ali-Yrkkö et al. (2016) estimate that foreign value added accounts for 38% of production.

### Foreign value added, share of gross exports %

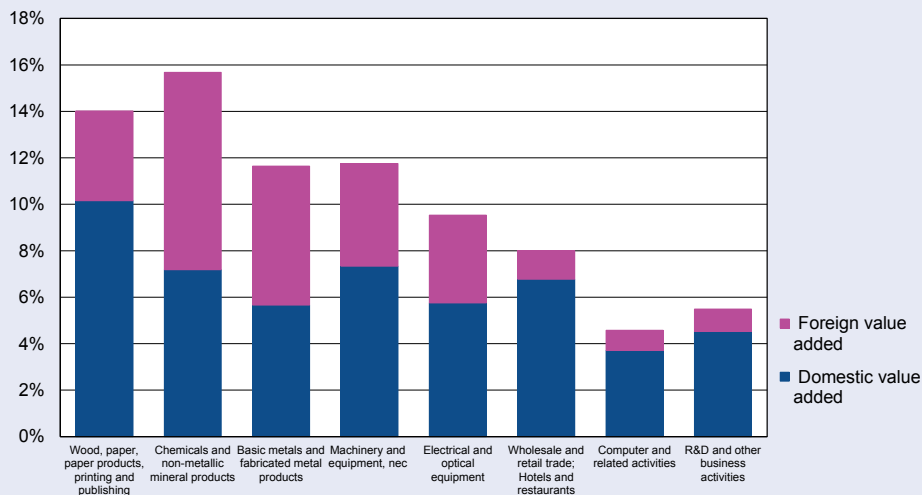


Source: OECD TiVa 2015

The share of domestic value added in exports varies depending on branch of industry. A comparison of the major industries in Finnish exports in 2011 shows that the share of domestic value added was highest in wood and paper products and in machinery and equipment. The share of domestic value added was lowest in the metal industry, where domestic and foreign value added both accounted for around 6% of total exports. In chemical and non-metallic minerals products, too, the share of domestic value added was lower than in other industry branches, accounting for around 7% of exports. This category includes fuels, for instance. Despite the relatively high share of foreign value added, these branches account for a significant share of gross exports. Domestic value added is much higher in wood and paper products at 10% of total exports.

In services such as retail, computer services and R&D, the share of domestic value added is comparatively high and close to the item overall share of exports. Indeed, when measured in value added terms, services have a much stronger role than indicated by foreign trade statistics.

### Domestic and foreign value added % of total exports



Source: OECD TiVa 2015

The growth of foreign value added in exports is indicative of a more specialised and internationally more interconnected production structure, and the role of a favourable import environment and services is increasingly pronounced.

On the other hand, the increased share of foreign value added undermines the potential for export-driven GDP growth: not all streams of export revenue contribute to GDP growth in the same way. As Ali-Yrkkö et al. (2016) point out, this also means that the national economy is less acutely affected by a decline in exports. Further analysis of global value chains is crucial for an accurate assessment and for the formulation of relevant policy recommendations.

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Ali-Yrkkö, Jyrki, Rouvinen, Petri, Sinko, Pekka ja Tuhkuri, Joonas (2016), "Suomi globaaleissa arvoketjuissa", ETLA Raportit No. 62.

Statistics Denmark and OECD, (2017) "Nordic Countries in Global Value Chains".

OECD/WTO (2015), "Trade in value added", OECD-WTO: Statistics on Trade in Value Added.

OECD.stat, [http://stats.oecd.org/Index.aspx?DataSetCode=TIVA\\_2016\\_C1](http://stats.oecd.org/Index.aspx?DataSetCode=TIVA_2016_C1).

## 1.2. Foreign trade

### Finnish exports to show moderate growth

Finnish exports have remained subdued in recent years. Annual average exports growth has come in at less than one per cent, weaker than the rates for both, world trade and euro area exports growth. The poor performance of exports is attributable to the sharp fall in exports to Russia coinciding with the decline of the computer and electronics industry and deteriorating relative cost-competitiveness. Exports are set to grow over the forecast period on the back of the favourable world economic outlook and increased export demand.

The fragmentation of global value chains has compounded the challenges of compiling export statistics. The final global output figures are only available after some delay, and therefore early assessments of the development of foreign trade sometimes might be considerably revised. The latest national accounts figures indicate that foreign trade showed a marked improvement in 2015 over previous years, with exports growth at 2%, the strongest rise since 2011, and imports increasing by 3.1%. In 2016 exports growth fell back to less than one per cent, while imports increased by 2.5% on the back of rising goods imports.

The world trade outlook has improved, which is reflected in stronger demand for Finnish exports. As a result it is projected that exports will increase by 2.9% in 2017. By the end of the outlook horizon it is forecast that exports growth will accelerate to 3.6%. In addition to the strengthening export demand, this growth will be driven by scheduled deliveries of machinery and equipment as well as an increased production capacity for export goods. During the forecast period growth will also be supported by improving cost competitiveness, with only a moderate rise expected in unit labour costs. Exports growth, although accelerating, will still be somewhat slower than world trade growth, and it is projected that Finland's market shares will remain unchanged.

**Table 5. Foreign trade**

|                               | 2014                | 2015 | 2016 | 2017** | 2018** | 2019** |
|-------------------------------|---------------------|------|------|--------|--------|--------|
|                               | change in volume, % |      |      |        |        |        |
| Exports of goods and services | -2.7                | 2.0  | 0.5  | 2.9    | 3.4    | 3.6    |
| Imports of goods and services | -1.3                | 3.1  | 2.5  | 3.1    | 3.4    | 3.4    |
|                               | change in price, %  |      |      |        |        |        |
| Exports of goods and services | -0.4                | -1.1 | -2.4 | 1.8    | 1.9    | 1.7    |
| Imports of goods and services | -1.6                | -3.7 | -1.8 | 2.1    | 2.1    | 1.8    |



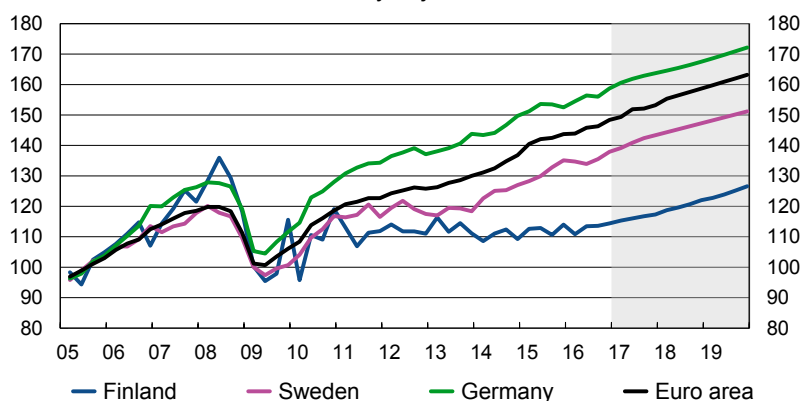
Growth in imports in 2016 was sustained by imports of energy products and investment goods. After sustained periods of decline, import prices returned to growth in the last quarter of 2016, driven by energy prices. It is forecast that imports will remain strong, growing by 3.1% in 2017 and accelerating further to 3.4% at the end of the outlook horizon. Imports growth will be sustained, among others, by export industry imports of production inputs.

The shares of goods and services in foreign trade have remained unchanged since the early 2010s. Goods account for two-thirds of exports, and services for the remaining one-third: these include, inter alia, telecommunications and ICT services, other business services and travel. The shares are roughly the same in imports of goods and services. It is anticipated the current shares of goods and services in both exports and imports continue to remain at the same levels.

Energy prices depressed export and import prices in 2016, but this effect reversed later in the year when both export and import prices started to rise. Export prices are projected to rise by 1.8% in 2017 and by 1.9% in 2018. Import prices are expected to rise somewhat more sharply at 2.1% in both 2017 and 2018. Prices are expected to slow somewhat towards the end of the outlook horizon. The terms of trade will deteriorate by 2019 due to rising import prices.

With import prices and volumes continuing to grow somewhat faster than exports, the current account will remain in deficit throughout the forecast horizon, even though primary and secondary income on net will be in surplus. The current account deficit will be attributable to the deficit in the service account, and consequently the balance of goods and services will remain negative over the forecast horizon. It is forecast that the current account share of GDP will be -1.2% in 2019.

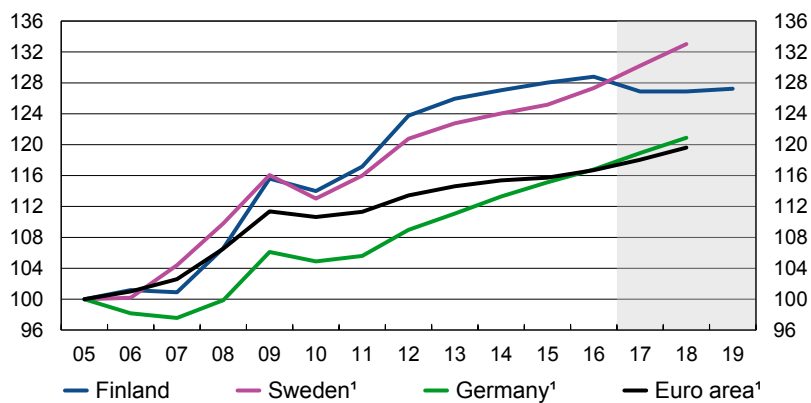
### Exports of goods and services volume 2005=100, seasonally adjusted



Sources: Eurostat, MoF

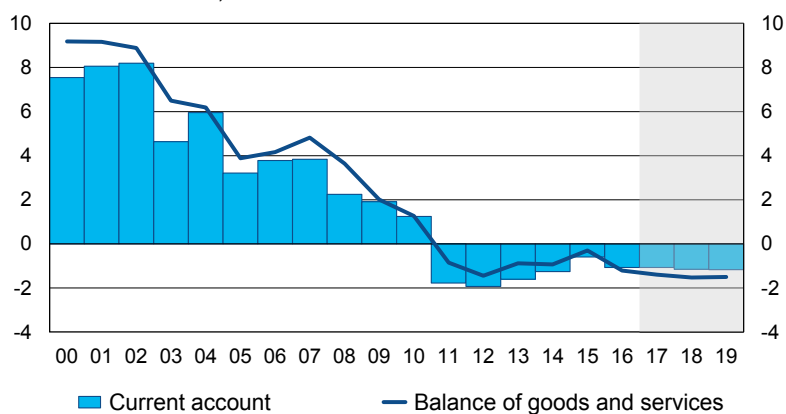
### Unit labour costs

2005=100, nominal



### Current account

relative to GDP, %



**Table 6. Current account**

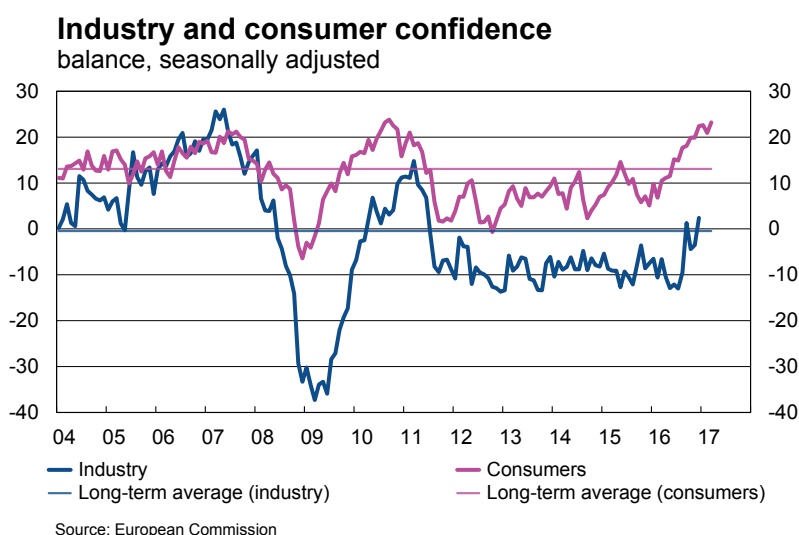
|  | 2014   | 2015 | 2016 | 2017** | 2018** | 2019** |
|--|--------|------|------|--------|--------|--------|
|  | EUR bn |      |      |        |        |        |
| Balance of goods and services            | -1.9   | -0.6 | -2.6 | -3.1   | -3.4   | -3.6   |
| Factor incomes and income transfers, net | -0.7   | -0.6 | 0.3  | 0.7    | 0.8    | 0.8    |
| Current account                          | -2.6   | -1.2 | -2.3 | -2.3   | -2.6   | -2.7   |
| Current account, relative to GDP, %      | -1.3   | -0.6 | -1.1 | -1.1   | -1.1   | -1.2   |

## 1.3 Domestic demand

### 1.3.1 Private consumption

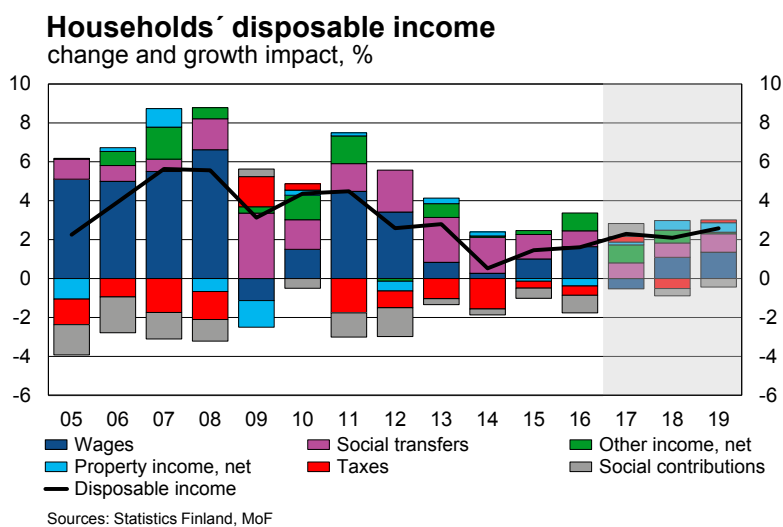
#### Consumption growth continues, but slows

Consumer Surveys indicate that general confidence in the economy's performance has clearly improved in the past six months. Confidence in the outlook for the Finnish economy has improved even more strongly than perceptions of personal finances. Expectations of declining unemployment over time have also increased. Continued private consumption growth in 2017 is based in part on the high level of consumer confidence.



According to Statistics Finland's preliminary national accounts data, private consumption growth accelerated to almost 2% in 2016. However, consumption growth slowed towards the end of the year. Retail trade growth edged up to 1.2% in 2016. Private consumption growth was bolstered above all by purchases of durables, with car sales being a particularly major factor.

In 2017 employment growth will contribute to bolster private consumption growth. The wage bill will continue to grow as a result of the increased labour input, despite moderate wage settlements and cuts to public sector holiday bonuses, but more slowly than last year. Real disposable household income will grow steadily, but this growth will be slowed by accelerating inflation. Tax cuts introduced under the Competitiveness Pact will continue to strengthen consumer purchasing power. The savings rate will remain negative and households will continue to add to their debt.

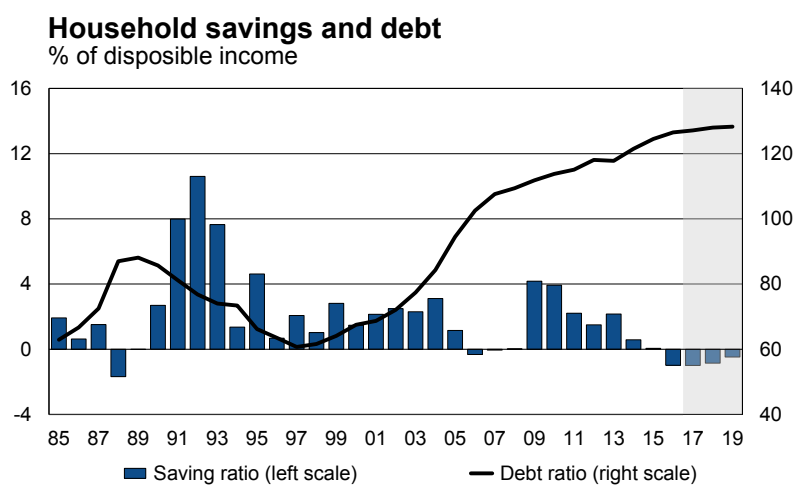


Durables consumption growth will remain brisk. Car sales early in the year have been stronger than in 2016. The tax cuts on motor vehicles scheduled for the outlook period mean that durables consumption growth will continue to outpace private consumption growth

Private consumption growth is set to slow in 2018 as wage earners' purchasing power is dented by rising taxes and accelerating inflation. Increasing employment and rising earnings levels will drive the growth of the wage bill. Real disposable household income growth is set to slow with the slowdown of current transfers growth. In 2019 the wage bill will continue to rise steadily as employment picks up. Real income growth will continue to accelerate despite rising inflation, which together with the easing of taxes will strengthen purchasing power. Private consumption growth will remain sluggish and the household savings rate will improve.

The household savings rate will remain in negative territory during the forecast horizon, despite the slowdown of consumption growth. The household savings rate has fallen almost without interruption since 2010, and in 2016 it came in at minus one per cent. The fall in the savings rate is also reflected in the growth of household indebtedness, which in 2016 climbed to over 125% of disposable income. Low interest rates and ready access to loans have increased borrowing. Long-standing low interest rates coupled with loan repayment holidays have further fuelled the growth of household debt.

A negative savings rate coupled with an increased household debt burden presents a clear downside risk to the forecast for private consumption. Confidence-driven consumption growth is highly sensitive to bad news.



### 1.3.2 Public consumption

Consisting of central government, local government and social security funds consumption expenditure, public consumption accounts for just under one-quarter of GDP. Public consumption describes general government current primary expenditure on service provision less receipts from service charges and sales of services. Around one-quarter of total public consumption goes towards health care and approximately one-fifth to social security and education each. Local government accounts for two-thirds of public consumption, but the reform of regional administration will see most of this taken over by regions. For the past 10 years public consumption has increased in real terms by around half a per cent a year, but in the next few years it is expected that this trend will turn to slight negative growth.

In 2016 central government spending growth was mainly driven by expenditure on asylum seeker reception centres. This expenditure will decrease appreciably both this year and next. Reduced social security contributions and cuts to holiday bonuses under the Competitiveness Pact will also reduce consumption expenditure. Furthermore, the introduction of longer working hours will reduce central government operating expenditure.

Local government consumption expenditure will remain unchanged from last year, despite growing demand for services. Consumption expenditure growth will be slowed by the structural adjustment measures adopted in the Government Programme, the pension reform that will reduce municipal employers' pension contributions, as well as by reduced employer contributions, cuts to holiday bonuses and moderate wage settlements under the Competitiveness Pact. In addition, it is expected that the savings potential from longer working hours will gradually reduce local government employee compensations over the next few years.

Expenditure by social security funds consists mainly of social benefits in kind paid out by the Social Insurance Institution Kela (reimbursements for medicines and travel and rehabilitation allowances) as well as wages. As in 2016, savings measures announced by the Government will reduce real expenditure on social benefits in kind in 2017, but it is expected that this expenditure will start to rise slightly from 2018.

**Table 7. Consumption**

|  | 2016<br>share,<br>% | 2014                | 2015       | 2016       | 2017**     | 2018**     | 2019**     |
|--|---------------------|---------------------|------------|------------|------------|------------|------------|
|  |                     | Change in volume, % |            |            |            |            |            |
| Private consumption                                      | 100.0               | 0.8                 | 1.5        | 2.0        | 1.1        | 0.7        | 0.8        |
| Households   | 95.2                | 0.3                 | 1.6        | 2.2        | 1.2        | 0.7        | 0.8        |
| Durables   | 8.1                 | 1.9                 | 3.2        | 6.3        | 2.6        | 2.0        | 2.1        |
| Semi-durables  | 7.9                 | 0.3                 | -0.2       | 2.6        | 1.2        | 0.5        | 0.6        |
| Non-durable goods  | 25.6                | -0.2                | -0.1       | 0.3        | 0.6        | 0.2        | 0.1        |
| Services   | 52.6                | 0.4                 | 1.3        | 1.6        | 1.2        | 0.8        | 1.0        |
| Consumption by non-profit institutions                   | 4.8                 | 3.8                 | -0.4       | -1.0       | 0.5        | 0.5        | 0.5        |
| Public consumption                                       | 100.0               | -0.5                | 0.1        | 0.5        | -0.4       | -0.5       | 0.1        |
| <b>TOTAL</b>   |                     | <b>0.4</b>          | <b>1.1</b> | <b>1.5</b> | <b>0.7</b> | <b>0.3</b> | <b>0.6</b> |
| Individual consumption expenditure in general government |                     | -0.5                | 0.9        | -0.4       | -0.3       | -0.1       | 0.9        |
| Total individual consumption expenditure                 |                     | 0.4                 | 1.4        | 0.5        | 0.8        | 0.9        | 1.0        |
| Households' disposable income                            |                     | 0.5                 | 1.5        | 1.6        | 2.3        | 2.1        | 2.6        |
| Private consumption deflator                             |                     | 1.3                 | 0.4        | 0.6        | 1.1        | 1.2        | 1.4        |
| Households' real disposable income                       |                     | -0.8                | 1.1        | 1.0        | 1.2        | 0.8        | 1.2        |
|  |                     | %                   |            |            |            |            |            |
| Consumption as proportion of GDP (at current prices)     |                     | 80.0                | 79.6       | 79.7       | 79.1       | 78.4       | 77.8       |
| Household savings ratio                                  |                     | 0.6                 | 0.1        | -1.0       | -1.0       | -0.9       | -0.5       |
| Household debt ratio <sup>1)</sup>                       |                     | 121.5               | 124.5      | 126.5      | 127.1      | 128.0      | 128.3      |

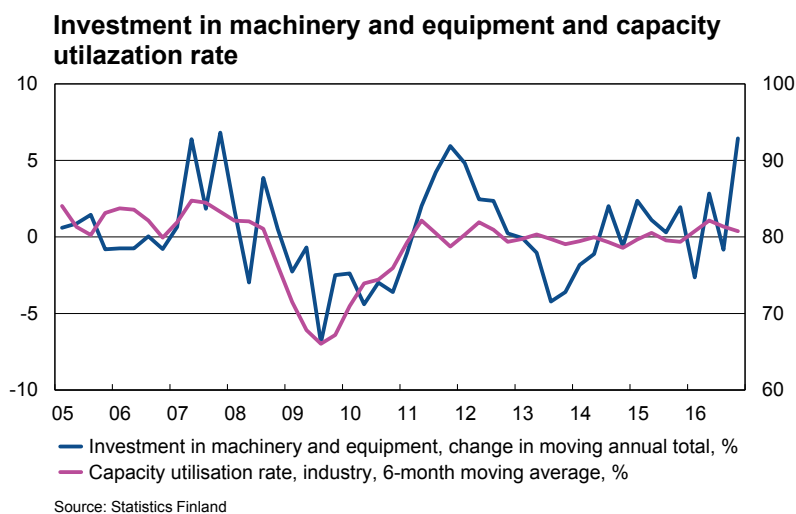
<sup>1)</sup> Household debt at end-year in relation to disposable income.

### 1.3.3 Private investment

#### Buoyant investment mood set to continue in Finland

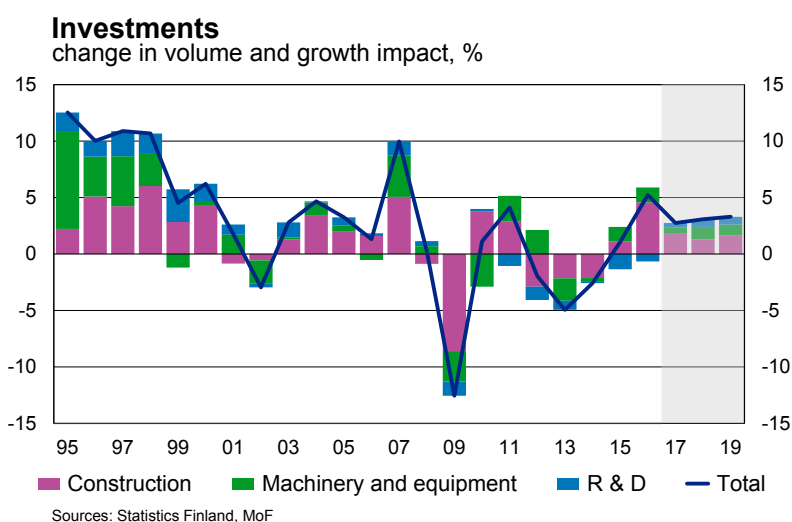
The onset of economic recovery is clearly reflected in investment trends. In 2016 private investment increased sharply at around 6% – the second fastest rate of growth recorded in the past 15 years. This strong growth was driven chiefly by the construction sector recording its fastest rate of growth last year, which furthermore coincided with the forest industry’s biggest ever investment project. In contrast to other investment types, R&D expenditure decreased last year. However it is projected that the long-standing slide will come to an end this year.

The buoyant investment mood is set to continue in the Finnish economy. The Confederation of Finnish Industries (EK) survey predicts continued favourable investment trends for industry and the energy security sector in 2017. It is expected that investment will be stepped up especially in the machinery and metal products industry as well as in the chemical industry. The electrical and electronics industry, by contrast, expect to see a continuation of negative investment growth in 2017. The forest industry has several major projects in the pipeline, some of which have advanced to the stage of environmental assessment proceedings, but the impact of these projects will only be seen towards the end of the outlook period. Large companies employing more than 500 staff account for the bulk of total investment. According to the EK investment survey and the Finnish SME barometer, SMEs have relatively stronger investment intentions for 2017 than large companies.



Private investment growth is projected to slow to 3.2% in 2017. The figure is expected to edge up again towards the end of the forecast horizon, reaching 4% in 2019. In the short term construction investment in particular is anticipated to slow. It is expected that the number of new housing starts will fall from last year's exceptionally high level of 37,000. The number of rented housing completions will be much higher than in the past few years, which will also facilitate labour mobility. Commercial facilities construction growth is also set to slow with the slight fall in the number of new project start-ups.<sup>1</sup>

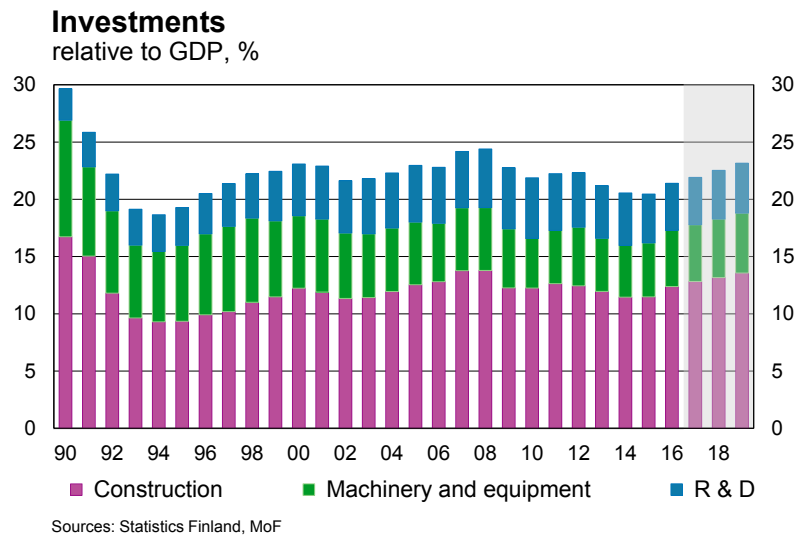
The outlook for the global economy will improve towards the end of the forecast horizon, and the growth anticipated for Finnish exports will increase demand in industry and other branches. This will bring growth in construction investment as well as in machinery and equipment investment. Furthermore, moves to ease retail planning regulations are expected to increase investment towards the end of the forecast horizon.



The anticipated negative real interest rate and ease of access to financing will bolster investment throughout the forecast horizon. One reflection of this is that private investment will outpace GDP growth. The strong investment trends will bring the private investment to GDP ratio close to the levels seen before the financial crisis, at around 19%. As the public investment to GDP ratio is set to remain unchanged, the ratio of private investment to total investment will increase.

<sup>1</sup> A group of construction sector experts (RAKSU) meeting under the auspices of the Ministry of Finance provide a more detailed assessment of the latest trends and outlook in the construction sector in their March 2017 report (in Finnish only). <http://vm.fi/documents/10623/3294335/Raksuraportti20172018/fde0ac97-10ee-47a4-b03e-bc1a1808e46b?version=1.0>





The risks to the investment forecast are more or less balanced. The preliminary data on 2016 investment - which also influence the present forecasts - contain some uncertainties, and it is possible that once updated on the basis of the July national accounts, the investment figures will be significantly revised, as happened last year. Another type of risk stems from possible delays or even cancellations of the major projects that are currently in permit granting procedures. This would result in much weaker than predicted investment trends during the outlook horizon.

**Table 8. Fixed investment by type of capital asset**

|  | 2016<br>share,<br>% | 2014               | 2015       | 2016       | 2017**     | 2018**     | 2019**     |
|--|---------------------|--------------------|------------|------------|------------|------------|------------|
|  |                     | Change in volume,% |            |            |            |            |            |
| Buildings  | 48.1                | -5.4               | 2.2        | 9.1        | 3.3        | 2.4        | 3.0        |
| Residential buildings                              | 28.7                | -6.5               | 2.0        | 9.1        | 3.1        | 1.8        | 2.6        |
| Non-residential buildings                          | 19.5                | -3.7               | 2.4        | 9.2        | 3.5        | 3.2        | 3.6        |
| Civil engineering construction                     | 9.7                 | 4.1                | 1.3        | 3.8        | 2.2        | 1.6        | 1.6        |
| Machinery and equipment                            | 22.9                | -1.6               | 5.8        | 5.7        | 2.4        | 4.8        | 4.3        |
| R&D-investments*                                   | 19.2                | -0.5               | -6.1       | -3.1       | 2.2        | 3.6        | 3.7        |
| <b>Total</b>                                       | <b>100.0</b>        | <b>-2.6</b>        | <b>1.1</b> | <b>5.2</b> | <b>2.8</b> | <b>3.1</b> | <b>3.3</b> |
| Private  | 81.8                | -3.4               | 2.6        | 6.1        | 3.2        | 3.6        | 4.0        |
| Public   | 18.2                | 0.9                | -4.9       | 1.4        | 0.9        | 0.7        | -0.1       |
|  |                     | %                  |            |            |            |            |            |
| <b>Investment to GDP ratio (at current prices)</b> |                     |                    |            |            |            |            |            |
| Fixed investment                                   |                     | 20.6               | 20.5       | 21.4       | 21.9       | 22.5       | 23.1       |
| Private  |                     | 16.4               | 16.6       | 17.5       | 18.0       | 18.6       | 19.2       |
| Public   |                     | 4.2                | 3.9        | 3.9        | 3.9        | 3.9        | 3.9        |

\* Includes cultivated assets and intellectual property products

### 1.3.4 Public investment

The public investment to GDP ratio in 2016 came in at 3.9%, close to the long-term average. Although the general government deficit is hampering investment opportunities, it is predicted that the investment rate will remain unchanged at the same level over the outlook period. Civil engineering investment and other construction investment both account for close to 30% of public investment. The share of R&D investment is over one-quarter, while machinery and equipment account for around 15%.

The Government's commitment to spend around EUR 600 million on transport infrastructure maintenance in 2016–2018 will contribute to maintain central government investment. Overall investment will not increase, however, because there are very few new infrastructure projects and because central government R&D funding is decreasing. Investment in weapons systems may increase somewhat.

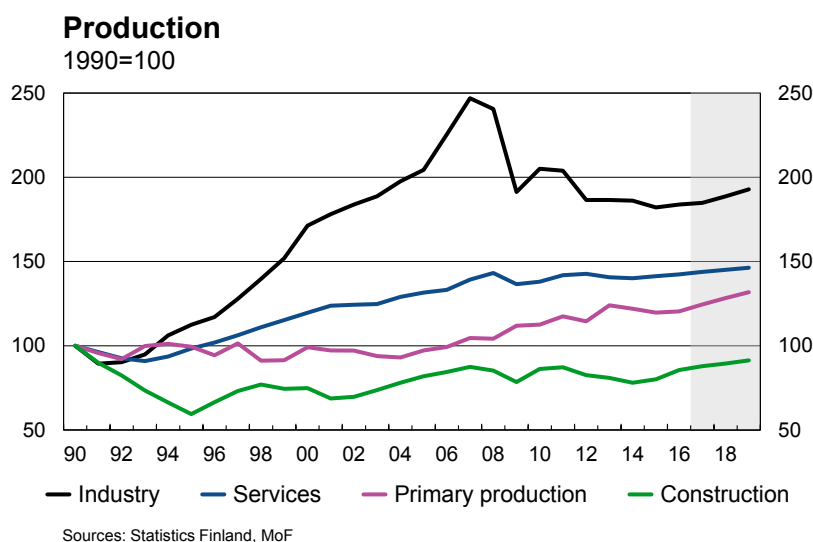
Local government investment expenditure fell slightly in 2016, but remains high. The figure will start to rise again in 2017. Maintenance and repairs of the existing local government building stock continue to require substantial investment. Investment in hospital construction is also set to increase.

## 1.4 Domestic production

### 1.4.1 Total output

#### Economic growth set to stabilise

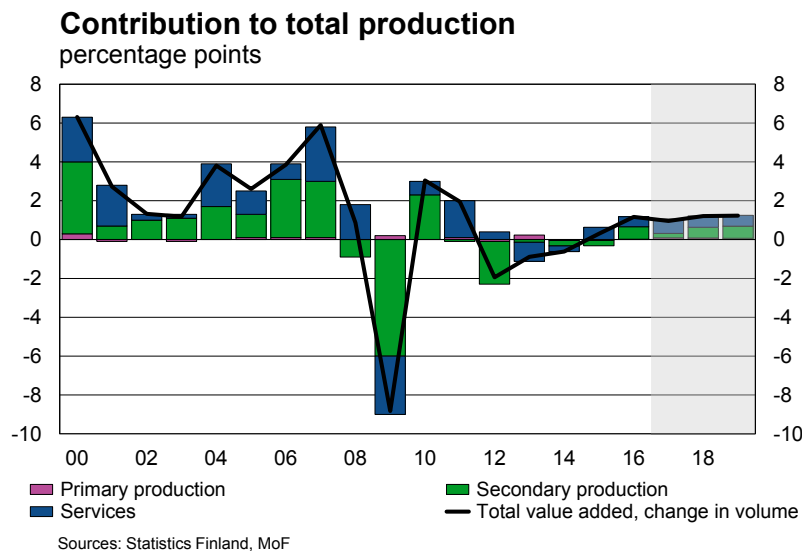
Output growth accelerated last year, as gross value added for the economy in 2016 was on average 1.2% higher than the year before. Nevertheless gross value added is still more than 6% lower than before the financial crisis in 2008. Output growth was consistent and broad-based, as value added increased in every quarter and across all main sectors of the economy. Growth was particularly robust in the construction sector, whose strong performance was driven by growth centre projects. Increased international demand boosted output above all in the forest and chemical industries. Business services recorded strong growth in 2016 on the back of rebounding business activity. Output continued to fall in the electrical and electronics industry as well as in the financial intermediation and insurance sector. Value added in public services decreased as a result of cost-savings and efficiency drives. Because of the reduced area under cultivation and adverse weather conditions, agricultural output was down from the previous year. The slide in the share of secondary production, which has continued for years, came to a halt in 2016, slowing the growth in the relative importance of services in the economy.



Despite last year's growth, major economic restructuring has meant that output levels continue to lag well behind those recorded before the financial crisis, and the resources of the economy are still in part underutilised. Corrections are now underway, however. Investment in production-related fixed assets began to rise in 2015, and consequently total net capital stock in companies has no longer decreased. Furthermore the number of unemployed persons fell by 6% last year. It is thought that unemployment is largely structur-

al and that employment needs vary from branch to branch. The number of hours worked in the national economy rose by one per cent, and therefore labour productivity improved only marginally by 0.1%. Labour productivity has been poor since the financial crisis, standing currently 1½% lower than before the crisis and more than 4% lower than in the euro area on average. Part of the reason for this lies in industry restructuring as the contribution of high-productivity sectors to total output has declined.

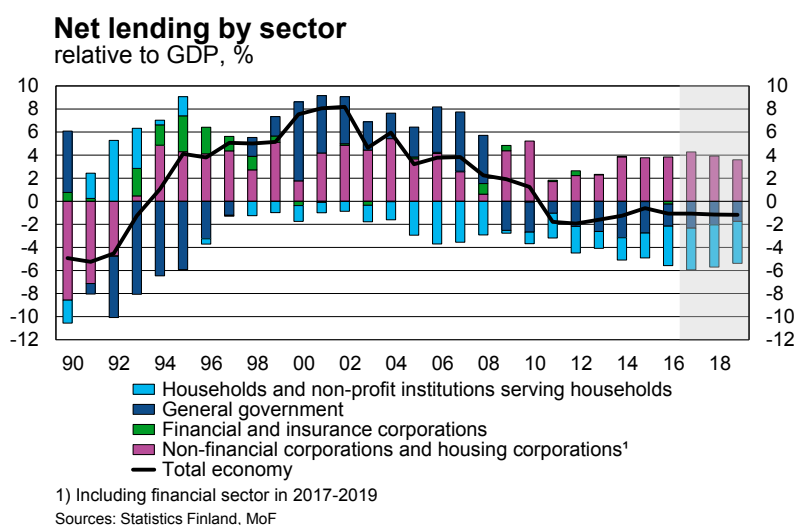
Prospects for output growth are slowly improving. World economic growth is gathering pace. As a result Finnish businesses have reported a rebound in export demand, and industrial order books have returned to growth. Wage moderation is helping to bolster the cost competitiveness of domestic production. Economic growth is expected to speed up in Finland's main export market in Europe, which will bolster industries that produce investment goods. Emerging economies will see continued steady growth, exceeding the rate of growth in the main market area. The Russian economy, another major market for Finland, is returning to growth. Together with the falling external value of the euro in relation to the dollar, this will create stronger demand and bolster the production of export companies. Driven by improving domestic and export demand, it is forecast that gross value added in the economy will increase by one per cent this year. In 2018 the growth rate will pick up to over one per cent, and remain at the same rate in 2019.



In 2016 economic activity was driven by construction and private service branches. This year industrial production will contribute to create a broader base for growth, although the rate of growth will still be rather subdued. Exports are expected to recover with the rebound of export demand, and this will provide the biggest boost to industrial production, more than 70% of which is exported. The majority of services produced are used by

the business sector, and therefore increasing domestic output will also increase demand in service branches. Household purchasing power will show only moderate improvement over the outlook period, and therefore private consumption demand will not significantly increase service production either this year or next.

With growth slightly picking up, the risks to the forecast are more or less balanced. In earlier years Finland's one-sided production structure that is tilted towards raw materials and investment goods has delayed the onset of output growth, even though world trade has gathered momentum since the financial crisis. Now, accelerating world economic growth is also increasing demand for investment goods, and this trend may prove even stronger than anticipated. Furthermore, improving cost competitiveness coupled with other business moves to enhance profitability and competitiveness may generate stronger than anticipated exports and therefore output growth. On the other hand, there still remain significant geopolitical risks, and any escalation of these risks may undermine confidence and erode growth prospects in Europe and indeed in the global economy.

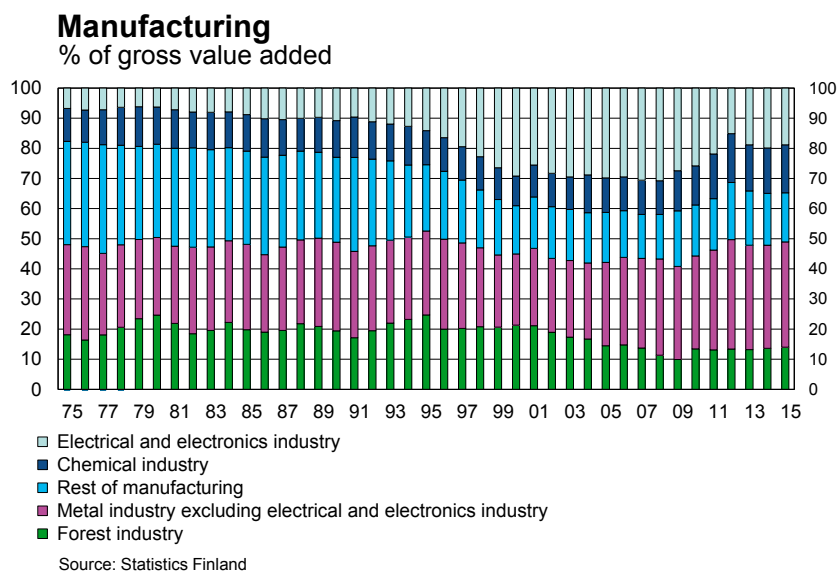


## 1.4.2 Secondary production

### Industry output growing slower than demand from export markets

Industry value added returned to growth last year, after five consecutive years of decline. Industrial output increased on average by one per cent, even though production contracted in the last quarter. Reflecting the slowdown in world trade growth, industrial export turnover did not yet increase, but domestic turnover was up strongly on the back of growth in the construction and trade sectors. Output growth was broad-based across the

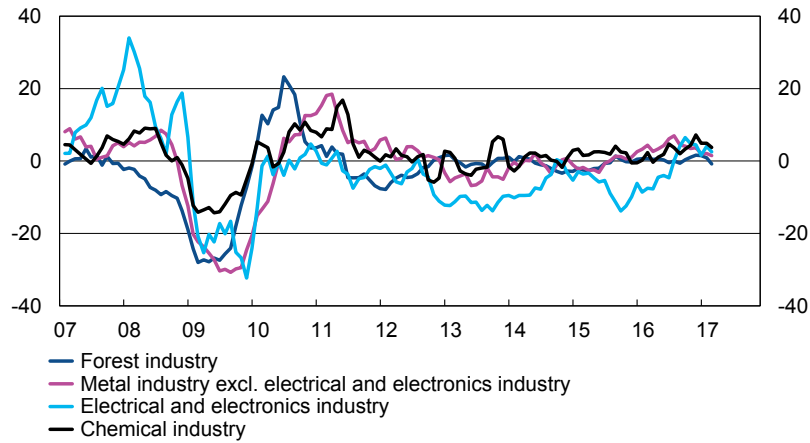
main sectors of the economy: only the electrical and electronics industry posted negative output growth last year. Strong demand for pulp and cardboard drove forest industry output to almost 6% growth. Demand for paper, on the other hand, is trending to fall. Output in the chemical industry increased by 5% and in the metal industry by 2%, driven by the manufacture of basic metals and the production of machinery. It is estimated that world industrial output increased by 1½% in 2016, and therefore it appears that Finland's share of world industrial value added continued to shrink last year.



The industrial outlook improved early in the year. Business tendency surveys suggest that industrial companies expect to increase their output in the first half of 2017, at the same rather muted rate as in late 2016. One-third of the companies responding to the Confederation of Finnish Industries EK survey were still constrained by inadequate demand, and that proportion has increased during the past the year. However, it is expected that output growth will gather pace during the course of the year as the value of new orders has begun to rise, especially in the metal and chemical industries. Competition has eased somewhat, both within the EU and in the non-EU market. Rebounding export demand will bolster industrial output growth in 2018 and 2019. The growth prospects are strongest in the chemical and metal industry, which have the largest number of companies that expect to see an increased output and that are reporting increased order books. In the forest industry, increased production capacity will bring marked growth in output from 2018 onwards. Total industry output is projected to increase only marginally this year by half a per cent, but in 2018 and 2019 growth will become more broad-based and accelerate to over 2%. However the growth rate is expected to remain far more moderate than in the pre-crisis years, and in 2019 output will still be more than 20% lower than then.

### Volume index for industrial production

3-month moving average, change from previous year, %



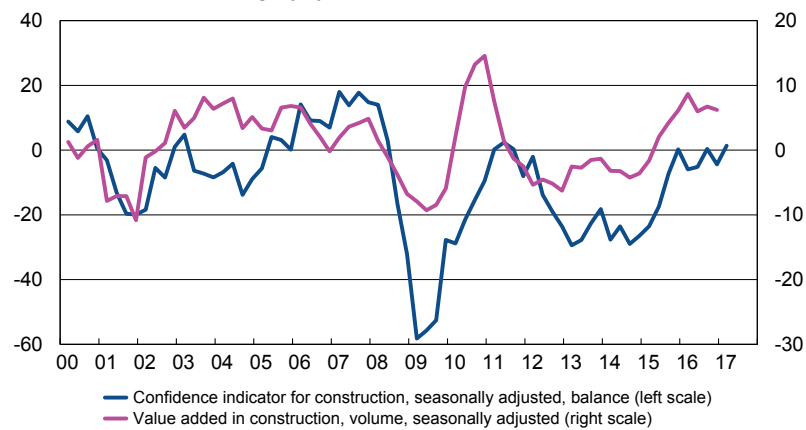
Source: Statistics Finland

### Construction remains buoyant

Construction was last year's primary growth engine. Construction value added in 2016 was up almost 7% from the year before. Construction growth was furthermore broad-based: new building construction increased in both household and business markets. Growth was strongest in the construction of agricultural, public, industrial and multi-storey residential buildings. The focus of construction activity was concentrated in population growth centres, however. After two consecutive years of growth, construction value added is now at the same level as before the financial crisis in 2008.

### Confidence and production in construction

balance and change yoy, %



Sources: Statistics Finland, European Commission

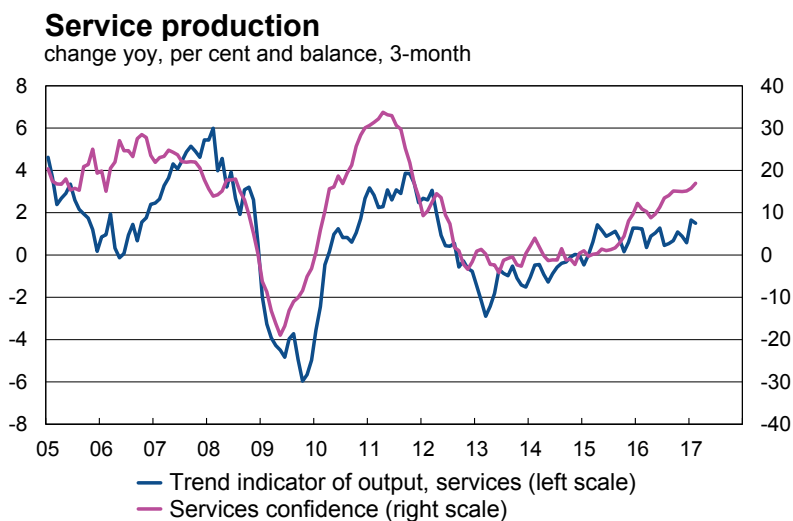
Construction growth is set to continue over the next years ahead. Planning permissions are up for residential, public, office and warehouse construction. New orders are expected to continue to rise in the next few months. The number of construction companies held back by lack of demand is continuing to fall, and there is less shortage of skilled labour than one year ago. Renovation is continuing to increase, and therefore value added in the construction sector as a whole will increase by 2½% this year. In 2018 growth will continue to slow as the number of planning applications submitted for business and industrial construction is falling. Output growth is expected to come in at less than 2%, but to climb back to over 2% in 2019.

### 1.4.3 Services

#### Private services continue to drive economic growth

Services output continued to grow in 2016. Value added in services was up 0.7%. Growth was strongest in business services and trade. Public service provision and financial and insurance activities, on the other hand, declined. Value added from service production in 2016 accounted for 70.6% of the national value added, which is still some three percentage points less than the euro area average. This share has increased by 7½ percentage points over the past 10 years, meaning that Finland has moved closer to the typical production structure in the euro area. The biggest branches are public services, real estate services and trade.

The outlook in service industries has improved since the end of last year, and expectations of sales growth remain strong. Sluggish demand is a less of an obstacle to growth in service branches than earlier. A shortage of skilled labour is hampering growth for some service companies, especially in the ICT and real estate branches.



Sources: Statistics Finland, European Commission



The majority of services produced are used in the business sector, and therefore expanding economic activity contributes to generate increased service production. Furthermore, demand for consumer services improves the growth prospects for trade. Digitalisation is set to increase demand for information services in the long term. Based on businesses' own expectations, growth prospects are strongest precisely in ICT and financial services as well as in hotel and restaurant services: in these branches there is a much larger number of companies that expect to see an increase in sales. Public service provision, on the other hand, will be negatively impacted by fiscal adjustment. In 2017 service output growth will reach just over one per cent, with industry providing the impetus. In 2018 and 2019 growth will remain steady at around one per cent, the average growth rate for service output in the 2000s. According to the forecast service production will exceed the pre-crisis level in 2019.

**Table 9. Production by industry**

|  | 2016 share, % <sup>1)</sup> | 2014 | 2015 | 2016 | 2017** | 2018** | 2019** | Average 2016/2006 |
|--|-----------------------------|------|------|------|--------|--------|--------|-------------------|
|  |                             |      |      |      |        |        |        |                   |
| Industry                                 | 20.2                        | -0.2 | -2.1 | 1.0  | 0.5    | 2.1    | 2.2    | -2.0              |
| Construction                             | 6.7                         | -3.6 | 2.7  | 6.9  | 2.6    | 1.7    | 2.2    | 0.1               |
| Agriculture and forestry                 | 2.5                         | -1.7 | -1.9 | 0.6  | 3.4    | 3.0    | 2.7    | 2.0               |
| Industry and construction                | 26.9                        | -1.0 | -1.0 | 2.4  | 0.8    | 2.0    | 2.2    | -1.5              |
| Services                                 | 70.6                        | -0.4 | 0.9  | 0.7  | 1.1    | 0.9    | 0.8    | 0.7               |
| Total production at basic prices         | 100.0                       | -0.6 | 0.3  | 1.2  | 1.0    | 1.2    | 1.2    | 0.0               |
| GDP at market prices                     |                             | -0.6 | 0.3  | 1.4  | 1.2    | 1.0    | 1.2    | 0.1               |
| Labour productivity in the whole economy |                             | 0.1  | 0.4  | 0.1  | -0.4   | 0.8    | 0.8    | 0.1               |

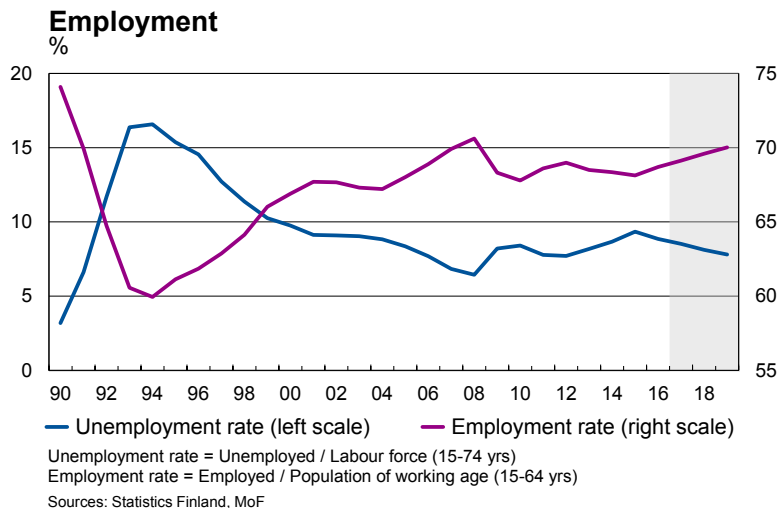
<sup>1)</sup> Share of total value added at current prices.

## 1.5 Labour force

### Growth of long-term unemployment comes to halt

The employment situation improved clearly in 2016: the number of employed persons was up 0.5% and the number of hours worked increased by 1.6%. In recent months, however, employment growth and the rise in the number of new job vacancies have been waning, even though working hours have continued to increase. It seems that the extension of annual working hours under the Competitiveness Pact has reduced employers' recruitment needs, at least temporarily. Nevertheless due to the continuing moderate economic growth in 2017 employment will be 0.4% higher than last year, and at the same time the employment rate will edge up to over 69%.

Unemployment began to fall in 2016, according to both Statistics Finland's sample-based labour force survey and employment service statistics compiled by the Ministry of Employment and the Economy. The unemployment rate for 2016 was 8.8%. Based on the labour force survey, however, the fall in unemployment has slowed considerably in recent months, and the unemployment rate trend has no longer decreased since August. However, sustained economic growth will push unemployment back onto a downward trend. The projected unemployment rate for 2017 is 8.5%



GDP growth in 2018 and 2019 will be strong enough to keep employment on an upward trend and at the same time to slowly reduce the number of people out of work. Employment growth will be bolstered by steps taken under the Competitiveness Pact to reduce labour costs as well as by measures introduced from the beginning of 2017 to increase the supply of labour. It is predicted that employment will improve by 0.5% in both 2018 and 2019. The employment rate will rise to 70% in 2019.

In the absence of more robust economic growth and given the high level of structural unemployment, however, unemployment will remain fairly high throughout the forecast horizon. The unemployment rate is expected to fall to 8.1% in 2018 and further to 7.8% in 2019.

The growth of long-term unemployment that began in 2012 has come to a halt in recent months across all age groups. Ministry statistics on structural unemployment, which include both the de facto long-term unemployed and unemployed people in comparable situations, also suggest that this has now peaked. In early 2017 the number of structurally unemployed people was slightly down on the corresponding figure last year.

In 2016 the number of people in disguised unemployment and in underemployment as a proportion of the working age population (15–64) reached its highest level since 2000. For this reason official employment and unemployment rates may give an overly positive impression of the current situation. The decline in unemployment will probably slow in the next few years as the disguised unemployed return to actively search for work. The large number of underemployed people may accordingly slow the rise of the employment rate if part of the demand for labour is channelled to the underemployed, without bringing an increase in the number of employed people.

Regional and occupational mismatch problems between unemployed job seekers and job vacancies continue to hamper an improvement in the employment situation, but it would seem that this situation is now changing for the better. According to Ministry of Employment and the Economy statistics unemployment has fallen in early 2017 across all ELY regions and all occupational groups.

The number of job vacancies is relatively high, but demand for labour remains modest compared to the broad unemployment rate. In recent months the ratio of job vacancies to the broad number of unemployed persons has been over 9%, which is equivalent to the long-term average and lower than in 2011–2012 and 2007–2008.

**Table 10. Labour market**

|                                       | 2014                          | 2015  | 2016  | 2017** | 2018** | 2019** |
|---------------------------------------|-------------------------------|-------|-------|--------|--------|--------|
|                                       | annual average, 1,000 persons |       |       |        |        |        |
| Population of working age (15-74 yrs) | 4 096                         | 4 102 | 4 109 | 4 119  | 4 131  | 4 138  |
| change                                | 9                             | 6     | 7     | 10     | 12     | 7      |
| Population of working age (15-64 yrs) | 3 491                         | 3 476 | 3 463 | 3 453  | 3 443  | 3 436  |
| change                                | -17                           | -15   | -13   | -10    | -10    | -7     |
| Employed (15-74 yrs)                  | 2 447                         | 2 437 | 2 448 | 2 458  | 2 470  | 2 482  |
| of which 15-64 yrs                    | 2 386                         | 2 368 | 2 379 | 2 387  | 2 396  | 2 406  |
| Unemployed (15-74 yrs)                | 232                           | 252   | 237   | 229    | 218    | 210    |
|                                       | %                             |       |       |        |        |        |
| Employment rate (15-64 yrs)           | 68.3                          | 68.1  | 68.7  | 69.1   | 69.6   | 70.0   |
| Unemployment rate (15-74 yrs)         | 8.7                           | 9.4   | 8.8   | 8.5    | 8.1    | 7.8    |
|                                       | 1,000 persons per annum       |       |       |        |        |        |
| Immigration, net                      | 18                            | 12    | 16    | 17     | 17     | 17     |

## 1.6 Incomes, costs and prices

### 1.6.1 National income

National income refers to domestic primary income, i.e. employee compensations, taxes on production and imports net of subsidies, operating surplus and property income. In 2016 nominal net national income increased by almost 2.9% from the year before. This growth was broad-based, but the single biggest driver was the 4.3% increase in property and entrepreneurial income.

Among the other components of national income, employee compensations in 2016 increased by 1.8% from the previous year, but their share dropped slightly to 59%. The wage bill increased by 1.6% and social security contributions paid for the benefit of employees were up 2.6%. Revenue from production and import taxes net of subsidies was up 4.8%.

It is expected that property and entrepreneurial income will continue to grow over the forecast horizon, which will contribute to drive national income growth. At the same time, their share of national income is expected to rise from 25% last year to around 28% in 2019. On the other hand, reductions to employer social security contributions will slow the growth of national income this year and to a lesser extent over the remainder of the forecast period.

In 2017 wage bill growth is anticipated to slow from 2016, but to pick up again in 2018 and 2019. It is predicted that employee compensations as a proportion of national income will fall towards the end of the outlook period, reaching around 56% in 2019, the same level as in the early 2000s.

**Table 11. Disposable income**

|   | 2016 share, % | 2014      | 2015  | 2016  | 2017** | 2018** | 2019** | Average 2016/2006 |
|---|---------------|-----------|-------|-------|--------|--------|--------|-------------------|
|   |               | change, % |       |       |        |        |        |                   |
| Compensation of employees                           | 59.2          | 0.3       | 1.1   | 1.8   | -0.6   | 1.2    | 1.5    | 2.5               |
| Wages and salaries                                  | 47.9          | 0.4       | 1.0   | 1.6   | 0.9    | 1.7    | 2.0    | 2.5               |
| Employers' contributions to social security schemes | 11.3          | -0.2      | 1.4   | 2.6   | -6.9   | -1.0   | -0.7   | 2.1               |
| Property and entrepreneurial income, net            | 24.8          | 6.4       | 6.3   | 4.3   | 8.7    | 5.5    | 5.8    | 0.6               |
| Taxes on production and imports minus subsidies     | 16.0          | 1.0       | 0.2   | 4.8   | 0.5    | 1.3    | 2.4    | 3.2               |
| National income                                     | 100.0         | 1.8       | 2.2   | 2.9   | 1.9    | 2.4    | 2.8    | 2.1               |
| Disposable income                                   |               | 1.8       | 2.2   | 3.0   | 1.9    | 2.4    | 2.9    | 2.1               |
| Gross national income, EUR bn                       |               | 207.3     | 211.3 | 216.3 | 221.5  | 227.2  | 234.1  |                   |

**Table 12. Index of wage and salary earnings and labour costs per unit of output**

|   | 2014       | 2015       | 2016       | 2017**     | 2018**     | 2019**     | Average 2016/2006 |
|---|------------|------------|------------|------------|------------|------------|-------------------|
|   | change, %  |            |            |            |            |            |                   |
| Index of negotiated wage rates                | 1.4        | 0.7        | 0.6        | -0.2       | 0.5        | 0.8        | 2.1               |
| Wage drift, etc.                              | 0.0        | 0.7        | 0.6        | 0.7        | 0.7        | 0.7        | 0.7               |
| <b>Index of wage and salary earnings</b>      | <b>1.4</b> | <b>1.4</b> | <b>1.2</b> | <b>0.5</b> | <b>1.2</b> | <b>1.5</b> | <b>2.8</b>        |
| Real earnings <sup>1)</sup>                   | 0.4        | 1.6        | 0.8        | -0.7       | -0.1       | 0.1        | 1.1               |
| Average earnings <sup>2)</sup>                | 1.2        | 1.3        | 0.1        | -0.6       | 1.3        | 1.6        | 2.2               |
| Labour costs per unit of output <sup>3)</sup> |            |            |            |            |            |            |                   |
| whole economy                                 | 0.9        | 0.8        | 0.6        | -1.6       | 0.0        | 0.3        | 2.4               |

<sup>1)</sup> The index of wage and salary earnings divided by the consumer price index.

<sup>2)</sup> Computed by dividing the national wage bill by the number of hours worked by wage and salary earners. The figures are affected by structural changes in the economy.

<sup>3)</sup> Compensation of employees divided by gross value added in volume at basic prices.

## 1.6.2 Wages and salaries

Nominal earnings, as measured by the index of wage and salary earnings, increased by 1.2% in 2016. Negotiated wages were up 0.6%, and other factors pushed up the wage index by 0.6%.

In 2017, earnings development will mainly be determined by the Competitiveness Pact concluded by the social partners. There will be no increases to negotiated wages, and public sector holiday bonuses will be cut by 30%. The net effect of these factors will lower the standard wage rate on average by 0.2%. The forecast for earnings development assumes that factors other than increases to negotiated wages will drive up earnings by 0.7%. It is thus predicted that nominal earnings will rise by 0.5% in 2017.

Earnings are expected to continue to rise moderately, edging up by 1.2% in 2018 and 1.5% in 2019. This is considerably slower than the average rate of growth in the 2000s, which is well in line with the current slower than average economic growth and subdued employment trends.

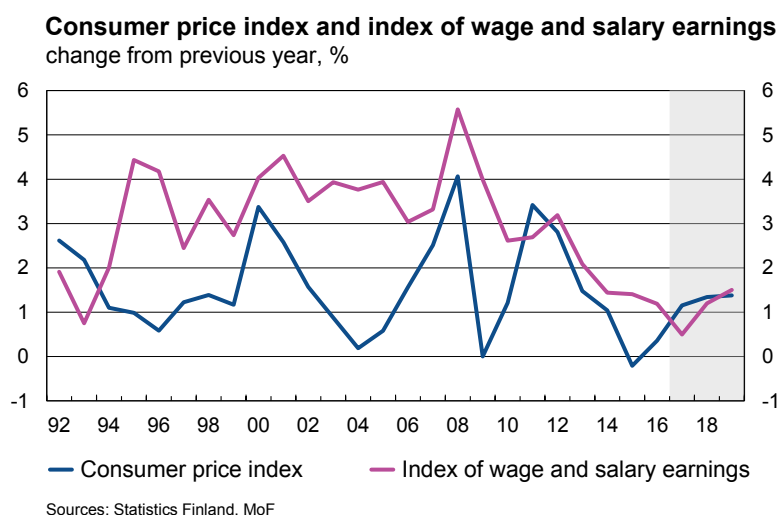
## 1.6.3 Consumer prices

Based on the national consumer price index, consumer prices rose on average by 0.4% in 2016. The fall in prices seen in 2015 continued in early 2016, but inflation started rising in the second quarter. Consumer inflation accelerated in late 2016, and the same trend has continued in early 2017. The price of crude oil increased sharply last year, and consequently the energy category had an upward effect on inflation in the last quarter. Service prices were up 2.4%, contributing to drive inflation in 2016, but this rise in service prices slowed towards the end of the year.

The inflation forecast for the current year is 1.2% as measured by the national consumer price index. It is expected then that consumer prices will rise clearly from last year. Inflation will be driven above all by the price of crude oil, which is at a much higher level than in 2016. It is predicted that the average price of oil in 2017 will climb to around 53 euros a barrel, compared with the figure of just under 41 euros in 2016. The second round effects of oil price hikes will drive up other prices as well.

Import prices began to move up in late 2016 in response to rising oil and other raw materials prices. In 2017 this will feed through to the prices of goods in particular, which after two years of clear decline are expected to remain almost unchanged from last year. It is anticipated that service prices will rise more slowly than last year, among other reasons because of moderate earnings development and a slowdown in the rise of rents. Food prices are expected to rise slightly in 2016, despite daily consumer goods retailers' announcements early in the year that they will be lowering their prices again. Changes in indirect taxes in 2017 will drive inflation by an estimated 0.2–0.3 percentage points. Increases to the annual vehicle tax, fuel oil tax and tobacco tax will add to inflationary pressure, but on

the other hand the removal of the sweet tax and the reduction of the motor car tax will have the opposite effect.



Inflationary pressures will remain lower than usual over the next years of the forecast horizon as there are idle resources in the economy and the output gap is still negative. The national consumer price index is forecast to increase by 1.3% in 2018 and 1.4% in 2019. It is expected that the continued slow rise in oil prices will maintain inflation, but over the coming years it is not thought that the energy item will accelerate overall inflation to the same extent as in the current year. On the other hand, service prices are expected to accelerate during the forecast horizon. The forecast is also impacted by assumptions of a strengthening US dollar and low but gradually rising interest rates.

ECB expert forecasts predict that euro area inflation will come in at 1.7% in 2017, 1.6% in 2018 and 1.7% in 2019. The comparative MoF growth forecasts for Finland based on the harmonised consumer price index are 1.2% in 2017, 1.3% in 2018 and 1.4% in 2019. In contrast to last year, therefore, it is expected that domestic inflation will be slower than in the euro area.

**Table 13. Price indices**

|                                       | 2014      | 2015 | 2016 | 2017** | 2018** | 2019** | Average 2016/2006 |
|---------------------------------------|-----------|------|------|--------|--------|--------|-------------------|
|                                       | change, % |      |      |        |        |        |                   |
| Export prices <sup>1)</sup>           | -0.4      | -1.1 | -2.4 | 1.8    | 1.9    | 1.7    | -0.1              |
| Import prices <sup>1)</sup>           | -1.6      | -3.7 | -1.8 | 2.1    | 2.1    | 1.8    | 0.0               |
| Consumer price index                  | 1.0       | -0.2 | 0.4  | 1.2    | 1.3    | 1.4    | 1.7               |
| Harmonised index of consumer prices   | 1.2       | -0.2 | 0.4  | 1.2    | 1.3    | 1.4    | 1.9               |
| Basic price index for domestic supply | -1.3      | -3.2 | -1.6 | 3.7    | 1.9    | 2.3    | 2.0               |
| Building cost index                   | 1.0       | 0.5  | 0.5  | 0.9    | 2.0    | 2.1    | 2.3               |

<sup>1)</sup> As calculated in the National Accounts

## 2 Economic policy and public finances

### 2.1 General government finances

Finnish public finances slipped into deficit towards the end of the last decade. The past couple of years have seen an improvement in the financial position of general government. Nevertheless general government finances remain firmly in deficit, and the situation will only improve slowly in the coming years. The foreseeable rate of economic growth will not generate sufficient revenue to cover expenses. The public debt to GDP ratio will continue to rise, dipping only temporarily towards end of the decade. For public finances to move onto a sustainable path, the financial position of general government should recover to show a clear surplus by the beginning of the 2020s.

General government in Finland consists of central government, local government, and social security funds. The latter are further divided between earnings-related pension funds, which manage statutory pension insurance, and other social security funds. From 2019, the structure of general government will be overhauled in a reform that will see the introduction of a regional government system based on counties. Statistics Finland will decide on the sector classification of regional government units at a later date. For the purposes of this MoF spring 2017 public finances forecast and medium-term outlook, regional administration is integrated as part of the system of central government.

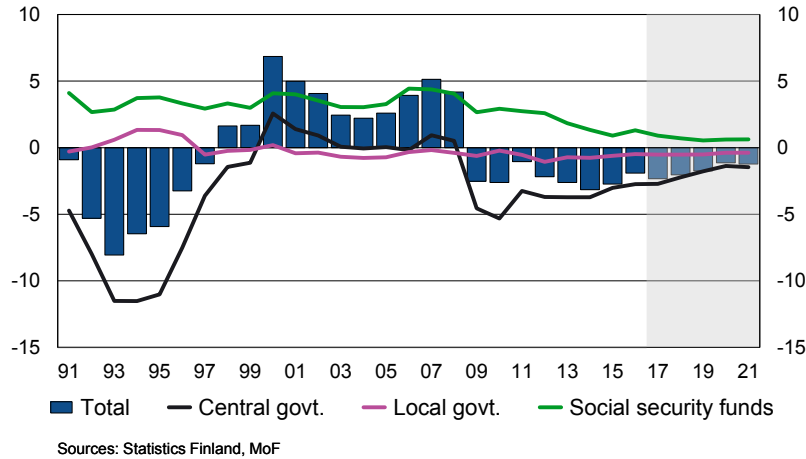
The financial position of central government improved in 2016, mainly on the back of accelerating tax revenue growth. Moderate economic growth and the fiscal adjustment decisions taken by Prime Minister Sipilä's Government will contribute to reduce the deficit over the outlook period. The local government sector's budgetary position also improved marginally in 2016, among other reasons as a result of extremely moderate consumption expenditure growth. However, the growing service needs of an ageing population are weighing down on local government finances, and from 2019 will do so on regional government finances. It is estimated that in 2021, the combined deficit of central, regional and local government finances will be around EUR 4.5 billion.

Falling unemployment expenditure and the unemployment insurance contribution hike in 2017 contributed to strengthen the financial position of other social security funds. Other social security funds will move back to a marginal surplus position during the outlook



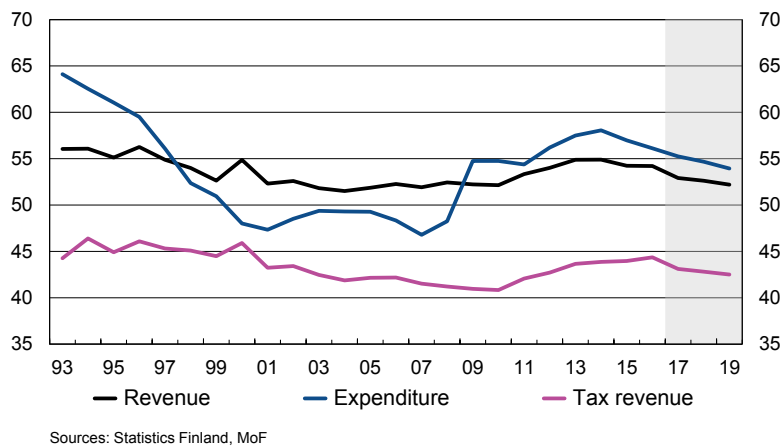
period. The surplus shown by authorised pension providers continued to shrink last year, coming in at just over 1% of GDP. It is expected that this surplus will continue to decrease over the forecast horizon to less than half a per cent of GDP.

**The financial balance of general government relative to GDP, %**



The expenditure rate<sup>1</sup> or the expenditure to GDP ratio decreased in 2016. This was mainly the result of fiscal adjustment and declining unemployment-related expenditure. The expenditure rate will continue to fall over the forecast horizon. The tax rate, or the ratio of taxes and tax-like levies to GDP, increased in 2016 in response to tax hikes and social security contribution hikes. It is predicted that the tax rate will fall appreciably from 2017 onwards as tax cuts adopted under the Competitiveness Pact take effect.

**General government revenue, tax revenue and expenditure relative to GDP, %**



<sup>1</sup> General government revenue and expenditure fell by approx. 0.6% of GDP in 2015 due to statistical revisions, which created a break in Statistics Finland time series between 2014 and 2015. The revisions had no effect on net lending. [http://www.stat.fi/til/vtp/vtp\\_2017-01-31\\_uut\\_002\\_fi.html](http://www.stat.fi/til/vtp/vtp_2017-01-31_uut_002_fi.html)

**Table 14. General government finances <sup>1)</sup>**

|  | 2014         | 2015         | 2016         | 2017**       | 2018**       | 2019**       |
|--|--------------|--------------|--------------|--------------|--------------|--------------|
|  | EUR billion  |              |              |              |              |              |
| Current taxes                                | 33.8         | 34.8         | 35.6         | 35.5         | 36.5         | 37.5         |
| Taxes on production and imports              | 29.6         | 29.7         | 30.9         | 31.0         | 31.4         | 32.1         |
| Social security contributions                | 26.3         | 27.0         | 28.0         | 27.3         | 27.7         | 28.2         |
| Taxes and contributions, total <sup>2)</sup> | 90.1         | 92.2         | 95.0         | 94.5         | 96.3         | 98.5         |
| Other revenue <sup>3)</sup>                  | 23.2         | 22.1         | 21.6         | 22.2         | 22.8         | 23.2         |
| of which interest receipts                   | 2.1          | 2.1          | 1.7          | 1.8          | 1.9          | 2.0          |
| <b>Total revenue</b>                         | <b>112.8</b> | <b>113.6</b> | <b>116.0</b> | <b>115.9</b> | <b>118.3</b> | <b>121.0</b> |
| Consumption expenditure                      | 50.7         | 51.1         | 51.9         | 51.9         | 52.6         | 53.8         |
| Subsidies                                    | 2.7          | 2.8          | 2.7          | 2.7          | 2.7          | 2.6          |
| Social security benefits and allowances      | 40.3         | 41.6         | 42.3         | 43.3         | 44.1         | 45.1         |
| Other current transfers                      | 6.1          | 5.8          | 5.6          | 5.2          | 5.2          | 5.1          |
| Subsidies and current transfers, total       | 49.0         | 50.2         | 50.6         | 51.2         | 52.0         | 52.8         |
| Capital expenditure <sup>4)</sup>            | 9.2          | 9.0          | 8.7          | 9.3          | 9.5          | 9.8          |
| Other expenditure                            | 10.4         | 9.1          | 8.9          | 8.7          | 8.8          | 8.5          |
| of which interest expenses                   | 2.5          | 2.4          | 2.3          | 2.1          | 2.0          | 2.0          |
| <b>Total expenditure</b>                     | <b>119.3</b> | <b>119.4</b> | <b>120.1</b> | <b>121.1</b> | <b>122.9</b> | <b>125.0</b> |
| <b>Net lending (+) / net borrowing (-)</b>   | <b>-6.5</b>  | <b>-5.7</b>  | <b>-4.1</b>  | <b>-5.1</b>  | <b>-4.6</b>  | <b>-4.0</b>  |
| Central government                           | -7.7         | -6.3         | -5.9         | -6.0         | -5.0         | -4.1         |
| Local government                             | -1.6         | -1.3         | -1.0         | -1.1         | -1.2         | -1.2         |
| Employment pension schemes                   | 3.4          | 2.7          | 2.3          | 1.6          | 1.2          | 0.8          |
| Other social security funds                  | -0.7         | -0.8         | 0.5          | 0.3          | 0.3          | 0.4          |
| Primary balance <sup>5)</sup>                | -6.1         | -5.3         | -3.5         | -4.7         | -4.4         | -4.0         |

<sup>1)</sup> As calculated in the national accounts, ESA2010.

<sup>2)</sup> Incl. capital taxes.

<sup>3)</sup> Incl. capital transfers and consumption of fixed capital.

<sup>4)</sup> Gross fixed capital formation and capital transfers.

<sup>5)</sup> Net lending before net interest expenses.

## HOW DOES THE PUBLIC FINANCES FORECAST TAKE INTO ACCOUNT THE REGIONAL GOVERNMENT REFORM?

On 2 March 2017 the Government submitted to Parliament a proposal for the reform of social services, health care and regional government. The purpose is to create in mainland Finland 18 counties which from the beginning of 2019 will take over responsibility for the provision of social and health care services from municipalities. The reform has been taken into account in the General Government Fiscal Plan for 2018–2021.

The reform will be progressively taken into account in the Ministry of Finance's forecasts for public finances. Since the counties will be financed by central government, the technical assumption is made that they will come under the same sector as central government in the national accounts.<sup>1</sup> The expenditures and revenues associated with the tasks and service provision obligations taken over by the counties will therefore be transferred in the forecasts from local government to central government in 2019. A more detailed and separate forecast for the regional government sector will be prepared at a later date. Impact assessments of the reform are largely based on technical assumptions. Furthermore, the forecast does not yet take into account the effects of the freedom of choice provisions regarding the provider of social and health care services.

### Revenue, expenditure and debt items transferred from local to central government

Local government total revenue will be roughly halved in 2019 as a result of the reform. Municipal tax rates will be lowered by some 12.5 percentage points across the board, while central government earned income tax revenues will be increased accordingly. The share of corporate income tax apportioned to local governments will also be reduced. All in all local government tax revenue will decrease by EUR 12.4 billion in 2019 as a result of the reform. Central government transfers to local government will also decrease with decreasing contributions and VAT refunds to local government in accordance with their reduced tasks and service provision obligations.

Local government total expenditure will decrease slightly more than total revenue. The reform will therefore slightly strengthen local government net lending. This is because it is anticipated that investments worth around EUR 0.8 billion will be transferred from hospital districts to regional government finances, part of which are financed by hospital district borrowing. The investments will be transferred to a county-owned service utility responsible for facilities management, which it is assumed will be classified under general government in the national accounts.

Under the reform social benefits and some other current transfers will also be transferred from local to regional government finances. Furthermore, some sales and fee revenue items will be transferred to counties, but on the other hand local governments' rental income will increase as the social and health care facilities remaining in their ownership are rented out to new care providers.<sup>2</sup>

<sup>1</sup> Statistics Finland will decide on the sector classification of the regional and other units created under the reform at a later date.

<sup>2</sup> In the national accounts, revenue from sales, fees and rents reduce the value of consumption expenditure.

Only a fraction of local government debt will be transferred to the regional government sector: counties will only assume the assets and debts of hospital districts and special welfare districts. In 2016 health care districts and special welfare districts had a debt stock of around EUR 1.5 billion. However, there are several major investments ahead for hospital districts in the coming years, which will swell the amount of debt transferred. Therefore the forecast assumes that some EUR 2 billion of debt will be transferred from local to central government in 2019.

#### Impact of health, social services and regional government reform on public finances forecast in 2019

|   | EUR bn       | % of GDP    |
|---|--------------|-------------|
| <b>Items transferred from local to regional government finances</b> |              |             |
| Tax revenue   | -12.4        | -5.4        |
| Central government transfers to local government*                   | -7.4         | -3.2        |
| <b>Effect of reform on local government revenue</b>                 | <b>-19.8</b> | <b>-8.6</b> |
| Consumption expenditure   | -18.5        | -8.0        |
| Consumption expenditure   | -0.8         | -0.3        |
| Gross fixed capital formation (investment)                          | -0.8         | -0.4        |
| <b>Effect of reform on local government expenditure</b>             | <b>-20.1</b> | <b>-8.7</b> |
| <b>Net lending transferred from local government</b>                | <b>0.3</b>   | <b>0.1</b>  |
| <b>Debt transferred from local government</b>                       | <b>2.0</b>   | <b>0.9</b>  |
| <b>Other effects</b>  |              |             |
| Reduced taxes on earned income to ensure no increased tax burden    | -0.3         | -0.1        |
| Costs from changes  | -0.15        | -0.1        |
| <b>Effect on general government net lending</b>                     | <b>-0.45</b> | <b>-0.2</b> |

\*includes reduced VAT refunds in accordance with transfer of tasks

#### Effect of reform on general government net lending

In the short term the health, social services and regional government reform will have a slightly negative effect on public finances. In the longer term, i.e. by 2019 the Government expects to achieve cost savings of around EUR 3 billion. In the next years ahead the reform will involve one-off implementation costs such as ICT investments. The forecast assumes that these costs will come to around EUR 150 million a year in 2018–2021. However there is still considerable uncertainty about the true scale of these costs. In addition, earned and capital income taxes will be lowered in 2019 to ensure that no one's tax burden is increased in connection with the reform. This will reduce central government tax revenue by some EUR 300 million.

**Table 15. Main economic indicators in general government**

|   | 2014     | 2015 | 2016 | 2017** | 2018** | 2019** |
|---|----------|------|------|--------|--------|--------|
|   | % of GDP |      |      |        |        |        |
| Taxes and social security contributions       | 43.9     | 44.0 | 44.4 | 43.1   | 42.8   | 42.5   |
| General government expenditure <sup>1)</sup>  | 58.1     | 57.0 | 56.1 | 55.2   | 54.7   | 54.0   |
| Net lending                                   | -3.2     | -2.7 | -1.9 | -2.3   | -2.0   | -1.7   |
| Central government                            | -3.7     | -3.0 | -2.7 | -2.7   | -2.2   | -1.8   |
| Local government                              | -0.8     | -0.6 | -0.5 | -0.5   | -0.5   | -0.5   |
| Employment pension institutions               | 1.7      | 1.3  | 1.1  | 0.8    | 0.6    | 0.4    |
| Other social security funds                   | -0.3     | -0.4 | 0.2  | 0.2    | 0.2    | 0.2    |
| Primary balance <sup>2)</sup>                 | -2.9     | -2.5 | -1.6 | -2.2   | -2.0   | -1.7   |
| General government debt                       | 60.2     | 63.7 | 63.6 | 64.7   | 65.4   | 65.7   |
| Central government debt                       | 46.3     | 47.6 | 47.8 | 49.1   | 49.7   | 50.0   |
| General government employment.<br>1000 person | 626      | 621  | 616  | 612    | 611    | 609    |
| Central government                            | 139      | 135  | 134  | 133    | 131    | 345    |
| Local government                              | 477      | 475  | 471  | 469    | 469    | 254    |
| Social security funds                         | 11       | 11   | 11   | 11     | 11     | 11     |

<sup>1)</sup> EU-harmonized definition.

<sup>2)</sup> Net lending before net interest expenses.

**Table 16. Fiscal balance and debt ratios in some EU economies**

|                | 2016           | 2017** | 2018** | 2016  | 2017** | 2018** |
|----------------|----------------|--------|--------|-------|--------|--------|
|                | Fiscal balance |        |        | Debt  |        |        |
|                | % of GDP       |        |        |       |        |        |
| *Finland       | -1.9           | -2.3   | -1.9   | 63.6  | 64.7   | 65.3   |
| Finland        | -2.2           | -2.3   | -1.8   | 63.7  | 65.6   | 66.5   |
| United Kingdom | -3.4           | -2.9   | -2.5   | 88.6  | 88.1   | 87.0   |
| Sweden         | 0.5            | -0.2   | 0.2    | 41.0  | 39.3   | 37.6   |
| Denmark        | -1.6           | -1.6   | -0.9   | 38.3  | 37.8   | 36.9   |
| Ireland        | -0.9           | -0.6   | -0.6   | 75.1  | 73.6   | 72.6   |
| Spain          | -4.7           | -3.5   | -2.9   | 99.7  | 100.0  | 99.7   |
| Netherlands    | -0.1           | 0.2    | 0.3    | 62.2  | 60.2   | 58.3   |
| Luxembourg     | 1.6            | 0.2    | 0.3    | 21.0  | 23.1   | 23.5   |
| Portugal       | -2.3           | -2.0   | -2.2   | 130.5 | 128.9  | 127.1  |
| Austria        | -1.4           | -1.2   | -0.9   | 83.6  | 81.3   | 79.3   |
| Germany        | 0.6            | 0.4    | 0.4    | 68.2  | 65.5   | 62.9   |
| France         | -3.3           | -2.9   | -3.1   | 96.4  | 96.7   | 97.0   |
| Belgium        | -2.9           | -2.2   | -2.3   | 106.8 | 106.5  | 106.1  |
| Italy          | -2.3           | -2.4   | -2.6   | 132.8 | 133.3  | 133.2  |
| Greece         | -1.1           | -1.1   | 0.7    | 179.7 | 177.2  | 170.6  |

Source: EU Commission Winter Forecast 2017; \*Finland: Ministry of Finance, Spring 2017

## 2.1.1 Estimates of fiscal policy impact

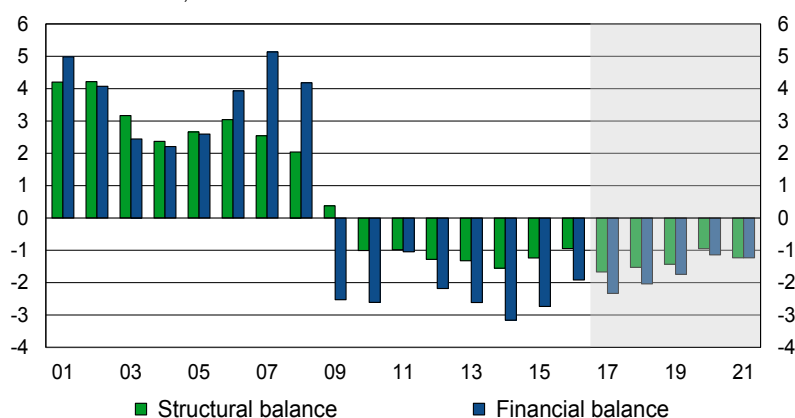
In 2017 fiscal policy at the general government level is somewhat expansionary. The expansionary effects of the Competitiveness Pact and associated Government decisions on tax cuts come to around EUR 1.2 billion. On the other hand, around EUR 750 million of the Government's fiscal adjustment measures will be targeted at central government. Furthermore, fiscal policy will tighten as a result of local government adjustment and the pension insurance contribution hike in the private sector.

The tax rate is expected to fall noticeably in 2017 as a result of the Competitiveness Pact, from last year's figure of over 44% to around 43% of GDP. The tax rate will continue to fall over the next couple of years as the most important tax bases, including the wage bill and private consumption, will increase more slowly than GDP. The expenditure rate began to edge down slowly in 2015, and the same trend will continue in the coming years in response to savings measures and reduced cyclical expenditure.

The current fiscal policy stance can also be examined against changes in the structural balance as assessed using the EU harmonised method.<sup>1</sup> An examination based on changes in the structural deficit does not necessarily give the exact same picture as an examination focused on individual revenue and expenditure items. For example, increasing age-related expenditure has the effect of widening the structural deficit over the outlook period, even in the absence of any decisions to increase expenditure.

It is expected that the structural deficit will increase appreciably in 2017 among other things as a result of tax cuts and reduced employer contributions, so fiscal policy can be described as expansionary. From 2018, fiscal adjustment will reduce the structural deficit, which means that fiscal policy will become slightly contractionary.

**General government financial balance and structural balance<sup>1</sup>**  
relative to GDP, %



1) Based on the European Commission's production function approach

Sources: Statistics Finland, MoF

<sup>1</sup> The structural deficit is calculated by removing the cyclical effect from the public sector deficit. The remainder describes the effect of the policy pursued and other than cyclical factors on the deficit. Changes in the structural deficit thus describe changes in the overall fiscal policy stance. When the structural deficit shrinks, fiscal policy is contractionary. When the structural deficit deteriorates, fiscal policy is expansionary.

## 2.1.2 General government debt

General government debt rose to EUR 136 billion in 2016. This marked an increase of just over EUR 2½ billion from two years ago, a much more moderate rise than for several years. At the same time, the growth of the debt ratio was temporarily reversed. However the public debt to GDP ratio was well over the 60% limit. It is estimated that the general government deficit is so high that public debt will continue to increase in the years ahead, although in the medium term the debt ratio will stabilise.

On-budget debt accounts for the bulk of public debt, over EUR 100 billion. Indeed, the public debt forecast is based on the central government budget deficit and thereby on central government's borrowing requirement. Local governments also carry debts, amounting to almost EUR 20 billion. The regional government reform will see the debt of health care districts transferred from local governments to counties, which in the national accounts will probably be classified under the central government sector. Social security funds have previously held no debt at all, but in 2014 and 2015 the Unemployment Insurance Fund was forced to borrow because of increased unemployment benefit expenditure. This was just temporary, however, and the debt is already being paid off.

Public debt is also defined as including the debts of extrabudgetary units that are nevertheless classified under general government; security deposits in connection with derivative instruments used for purposes of managing the central government debt portfolio; debts related to PPP projects; the capital assets of the State Nuclear Waste Management Fund; and coins in circulation. Authorised pension providers also hold derivative securities that are counted as public debt.

**Table 17. Change in general government debt ratio and related factors**

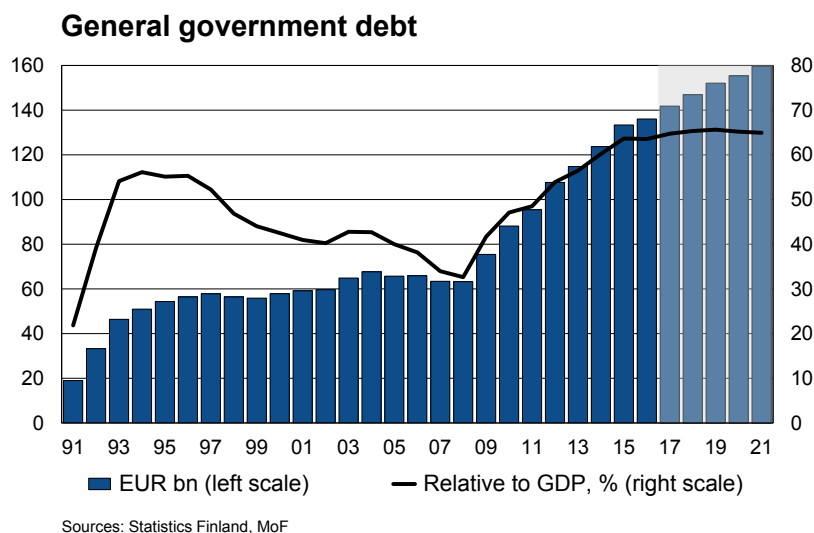
|  | 2015 | 2016 | 2017** | 2018** | 2019** | 2020** | 2021** |
|--|------|------|--------|--------|--------|--------|--------|
| Debt ratio, % of GDP                   | 63.7 | 63.6 | 64.7   | 65.4   | 65.7   | 65.2   | 65.0   |
| Change in debt ratio                   | 3.5  | -0.1 | 1.2    | 0.6    | 0.3    | -0.5   | -0.2   |
| Factors impacting change in debt ratio |      |      |        |        |        |        |        |
| Primary budgetary position             | 1.6  | 0.9  | 1.4    | 1.2    | 0.9    | 0.3    | 0.3    |
| Interest expenditure                   | 1.2  | 1.1  | 0.9    | 0.9    | 0.8    | 0.9    | 0.9    |
| Change in GDP volume                   | -0.2 | -0.9 | -0.8   | -0.7   | -0.8   | -0.6   | -0.7   |
| Change in GDP price                    | -1.1 | -0.5 | -0.8   | -1.0   | -1.2   | -1.2   | -1.4   |
| Acquisition of financial assets (net)  | 1.3  | 1.1  | 0.8    | 0.6    | 0.4    | 0.4    | 0.4    |
| Other factors <sup>1)</sup>            | 0.7  | -1.7 | -0.4   | -0.3   | 0.2    | -0.1   | 0.2    |

<sup>1)</sup> Includes privatization proceeds, lending and factors related to the valuation and timing of revenue and expenditure. Plus indicates increasing effect on debt ratio, minus a lowering effect on debt ratio.

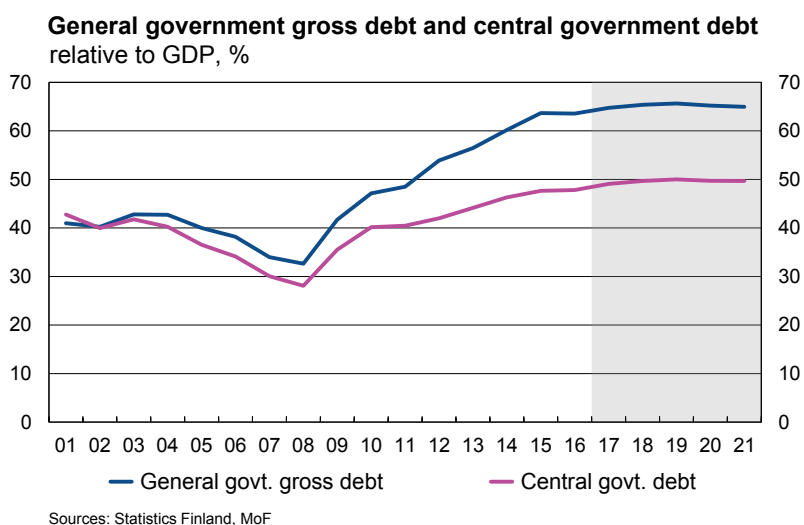
General government debt to GDP fell by 0.1 percentage point in 2016. The table below describes the factors contributing to the change in the general government debt ratio, clarifying the relationship between the financial position of general government and debt ratio change in the national accounts. A plus sign indicates that the factor has the effect of increasing the debt ratio, a minus sign that it decreases the debt ratio.

The general government primary balance (deficit/surplus excluding interest payments) showed a deficit last year. This had the effect of driving debt growth by 0.9 percentage points. Interest expenditure accounted for 0.9 percentage points of the increase in the debt ratio. When the level of debt is compared with GDP, GDP value growth has the effect of lowering the debt ratio. In 2016 the value of GDP increased by 2.2%, which slowed debt growth by 1.4 percentage points.

Earnings-related pension funds are running a surplus. In 2016 that surplus was 1.1% of GDP ('Acquisition of financial assets (net)'). The surplus of earnings-related pension funds is included in the financial position of general government, but it is not used to pay off general government debt. For this reason the surplus of earnings-related pension funds has to be excluded from the range of factors impacting the change in debt ratio. In addition to these factors, other factors reduced the general government debt ratio by 1.7 percentage points in 2016. The impact of other factors was greater than usual, among other reasons because of the reduction of central government cash funds and the reduced volume of security deposits in connection with derivative instruments.







## 2.2 Central government

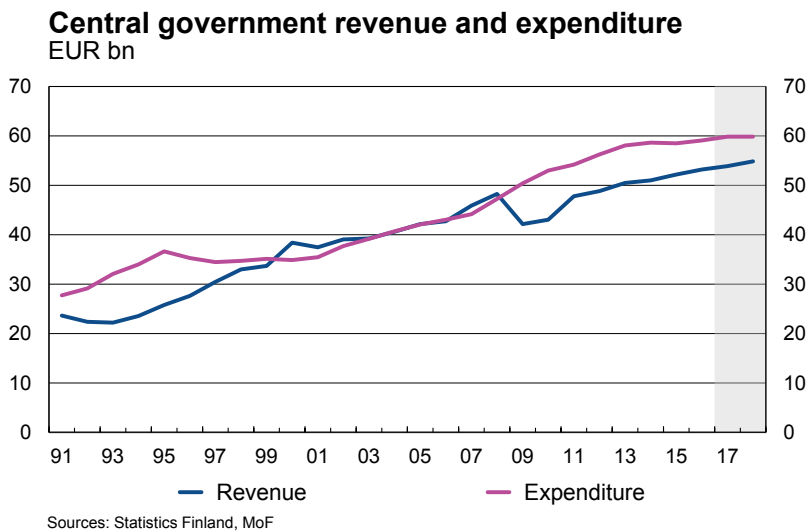
The central government deficit, as recorded in the national accounts, decreased in 2016 from the year before. This was mainly attributable to rapid revenue growth on the back of the rebounding economy. The deficit has now shrunk for two successive years. Expenditure growth has been very muted as a result of the fiscal adjustment undertaken by previous governments and the current one. Central government is nonetheless running a significant deficit and will continue to remain in deficit until the early 2020s.

In 2017 the budgetary position of central government will remain more or less unchanged. The economy is growing at a decent clip, creating the conditions under which the deficit can be reduced. Furthermore, the fiscal adjustment carried out by the Government of Prime Minister Sipilä is helping to maintain slow expenditure growth. The tax cuts adopted under the Competitiveness Pact will curb revenue growth. In 2018 the central government deficit will begin to shrink more quickly again. Total expenditure is set to fall and tax revenue growth will pick up appreciably from the previous year.

In 2019 central government expenditure and revenue will increase considerably as the health, social services and regional government reform takes effect. In the future a separate forecast will be prepared for the regional government sector. More information on the regional government reform is provided in the text box on page xx. In the medium term the central government deficit will contract in response to fiscal adjustment and strong revenue development. In the early 2020s new Defence Force acquisitions will begin to have a negative effect on central government's budgetary position.

Central government debt stood at over EUR 100 billion at year-end 2016. As central government will continue to post budget deficits through to the end of the decade, central government debt will continue to rise, albeit at a slower rate. It is estimated that in 2021, central government debt will be EUR 122 billion, or nearly 50% of GDP.

State loan guarantees at year-end 2016 totalled EUR 45 billion, the equivalent 80% of on-budget expenditure. New loan guarantees of EUR 6 billion were approved in 2016. State guarantees include all guarantees issued by central government, state enterprises, state-owned joint stock companies and special credit institutions ultimately backed by central government. These guarantees are not an expenditure item and do not show up in the State Budget, unless the guarantees are called. The amount of government-issued guarantees has increased considerably in recent years.



**Table 18. Central government <sup>1)</sup>**

|  | 2014        | 2015        | 2016        | 2017**      | 2018**      | 2019**      |
|--|-------------|-------------|-------------|-------------|-------------|-------------|
|  | EUR billion |             |             |             |             |             |
| Current taxes                                  | 12.6        | 13.0        | 13.6        | 13.7        | 14.0        | 26.7        |
| Taxes on production and imports                | 29.6        | 29.7        | 30.9        | 31.0        | 31.4        | 32.1        |
| Taxes and contributions, total <sup>2)</sup>   | 42.7        | 43.3        | 45.0        | 45.4        | 46.2        | 59.5        |
| Other revenue <sup>3)</sup>                    | 8.8         | 9.2         | 8.6         | 8.9         | 9.0         | 9.6         |
| of which interest receipts                     | 0.3         | 0.3         | 0.3         | 0.3         | 0.4         | 0.4         |
| <b>Total revenue</b>                           | <b>51.5</b> | <b>52.5</b> | <b>53.7</b> | <b>54.3</b> | <b>55.2</b> | <b>69.1</b> |
| Consumption expenditure                        | 13.7        | 13.6        | 14.2        | 14.2        | 14.2        | 33.3        |
| Subsidies and current transfers, total         | 38.2        | 38.2        | 38.6        | 39.2        | 39.1        | 32.0        |
| to general government                          | 26.2        | 26.2        | 26.9        | 27.8        | 27.6        | 19.8        |
| Interest expenses                              | 2.4         | 2.3         | 2.2         | 2.0         | 1.9         | 1.9         |
| Capital expenditure <sup>4)</sup>              | 4.8         | 4.8         | 4.6         | 4.9         | 5.1         | 6.0         |
| <b>Total expenditure</b>                       | <b>59.1</b> | <b>58.9</b> | <b>59.5</b> | <b>60.3</b> | <b>60.2</b> | <b>73.2</b> |
| <b>Net lending (+) / net net borrowing (-)</b> | <b>-7.7</b> | <b>-6.3</b> | <b>-5.9</b> | <b>-6.0</b> | <b>-5.0</b> | <b>-4.1</b> |
| Primary balance <sup>5)</sup>                  | -5.6        | -4.4        | -4.0        | -4.3        | -3.5        | -2.6        |

<sup>1)</sup> As calculated in the national accounts. Incl. health, social services and regional government reform in 2019.

<sup>2)</sup> Incl. capital taxes.

<sup>3)</sup> Incl. capital transfers (excl. capital taxes) and consumption of fixed capital.

<sup>4)</sup> Gross fixed capital formation and capital transfers.

<sup>5)</sup> Net lending before net interest expenses.

## 2.2.1 Central government expenditure

Central government expenditure as shown in the national accounts came to EUR 59 billion in 2016. In the past 10 years this figure has increased by EUR 16 billion. Most of this increase, EUR 11.4 billion, is attributable to increased expenditure on current transfers. In the past couple of years the central government expenditure to GDP ratio has declined. Consumption expenditure accounts for roughly one-quarter of central government expenditure, while current transfers to other sectors of the economy, primarily to local government and social security funds, account for over half.

Central government expenditure will increase moderately in the coming years. It is projected that on-budget expenditure will rise by around one per cent a year. The regional government reform will increase central government expenditure by some EUR 13 billion a year from 2019 onwards as it is expected that regional administration will be classified under the central government sector in the national accounts. The fiscal adjustment measures adopted under the Government Programme will reduce central government expenditure this year and next, as will the reduced costs associated with asylum seekers and reception centres in particular. Savings will also be made from a reduction of employer contributions and temporary cuts to holidays bonuses under the Competitiveness Pact. Furthermore, it is estimated that the extension of annual working hours will reduce the central government payroll and thereby employee compensations paid by central government.

On the other hand, the Competitiveness Pact will increase expenditure because the reduction of employers' social insurance contributions will be offset by increasing central government transfers to the Social Insurance Institution Kela. In 2016–2018 a total of EUR 1.6 billion will be invested in the Government's key projects, including transport infrastructure maintenance.

Interest expenditure has long been quite moderate because of low interest rates, although central government debt has risen appreciably for eight years in a row. In 2016 national accounts interest outlays were less than 4% of total expenditure, compared with the peak figure of over 16% in 1997. Interest expenditure will remain low over the coming years because interest rates are low, even though the debt burden will increase every year.

## CENTRAL GOVERNMENT ON-BUDGET ACCOUNTS AND EXPENDITURE IN 2018–2021

The spending limits decision that is included in the April 2017 general government fiscal plan and that reviews the development of central government on-budget accounts and expenditure in 2018–2021, is based on the fiscal policy objectives adopted in the Government Programme and on the Government's two previous spending limits decisions. The single most significant change during the budget planning period is the health, social services and regional government reform, which will increase on-budget expenditure and revenue considerably from 2019. By the end of the planning period in 2021, on-budget expenditure at current prices will reach EUR 71 billion, with revenue coming in at slightly over EUR 68 billion. It is estimated that over the planning period the on-budget deficit will average around EUR 3.6 billion a year.

The health, social services and regional government reform will see the provision of social and health care services transferred to counties, which will be funded from the central government budget. Because local authorities will have fewer tasks and obligations, municipal tax rates will be reduced from the beginning of 2019 by 12.49 percentage points, and at the same time central government taxes will be raised by the equivalent amount. However, all tax base changes shall be made in such a way that no one's tax burden increases in connection with the reform. Overall, taxation will be eased by some EUR 250 million. At the same time, the share of corporate income tax apportioned to local governments will be decreased by 10.54 percentage points. This will increase central government tax revenue at 2019 level by EUR 0.6 billion. The health, social services and regional government reform will also increase 2019 on-budget VAT revenue by EUR 1.2 billion. One contributing factor is the reduced amount of local government VAT refunds as a result of their reduced tasks and service obligations. The VAT refunds received by counties are entered as on-budget expenditure, and therefore the regional government reform will have no effect on the on-budget balance as far as VAT is concerned, even though it will technically increase VAT revenue. The full effects of the tax base changes in connection with the health, social services and regional government reform will not be seen in on-budget revenue until 2020 due to timing factors. This is because the previous year's tax bases are still applied in taxation in January.

The health, social services and regional government reform will increase on-budget tax revenue by EUR 13.4 billion at an annual level in 2019. At the same time, on-budget expenditure will increase by around EUR 13 billion, but because of timing factors the expenditure items will show up in the on-budget balance sooner than revenue items.

Economic growth will be rather muted in 2018–2021. GDP volume growth will average just 1.1 %, and therefore tax base growth will also remain moderate. If the effects of the health, social services and regional government reform were ignored, average annual tax revenue growth would be 2.2 %. If calculated in the same way, total on-budget ordinary revenue would increase on average by 1.6 % in 2018–2021. Corporate income tax and withholding tax on interest will be the fastest growing tax revenue items. Revenue from corporate income tax will be bolstered by improving business profitability, and revenue from withholding tax on interest by rising interest rates during the budget planning period.

**Factors impacting change in central government on-budget balance compared with spring 2016 general government fiscal plan / Spending Limits Decision, EUR billion**

|  | 2018        | 2019        | 2020        |
|--|-------------|-------------|-------------|
| <b>Estimated balance, general government fiscal plan 2017–2020, 14 April 2016</b>  | <b>-4.8</b> | <b>-3.8</b> | <b>-3.3</b> |
| Net savings and increases in central government expenditure in Government Programme (Annex 6), excluding financial investments   | 0.1         | 0.1         | 0.1         |
| Net increase in expenditure resulting from Competitiveness Pact (e.g. reduced operating expenditure and central government transfers, increased sickness insurance expenditure and tax compensations for municipalities) | -0.3        | -0.4        | -0.3        |
| Revised distribution of costs between central and local government at lower than predicted level   | 0.2         | 0.2         | 0.3         |
| Change in calculation assumptions regarding asylum seekers' family reunifications  | 0.3         | 0.3         | 0.3         |
| Change in central government unemployment security expenditure   | 0.0         | 0.1         | 0.2         |
| Change in projected interest payments on central government debt   | 0.2         | 0.3         | 0.4         |
| New measures in the security sector  | -0.1        | -0.1        | -0.1        |
| EU-chairmanship expenditure provision  | 0.0         | -0.1        | 0.0         |
| Other factors (net)*   | -0.4        | -1.4        | -0.5        |
| New tax base changes (e.g. tax cuts under Competitiveness Pact)  | -0.3        | -0.5        | -0.7        |
| Change in miscellaneous revenue and revenue from interests, dividends and sales of shares  | 0.2         | -0.1        | -0.1        |
| Other factors impacting revenue estimate (including tax accrual data and new cyclical forecast)  | 0.8         | 0.9         | 1.0         |
| <b>CHANGE TOTAL</b>  | <b>0.7</b>  | <b>-0.4</b> | <b>0.7</b>  |
| <b>Estimated balance, general government fiscal plan 2018–2021, 27 April 2017</b>  | <b>-4.1</b> | <b>-4.2</b> | <b>-2.5</b> |

\* The health, social services and regional government reform will be more immediately reflected in budget expenditure than in tax accrual, and therefore the fiscal balance will be adversely affected in 2019. The timing differences in the effects of the reform on revenue and expenditure are seen in the 'other factors' item.

The health, social services and regional government reform will not only increase overall expenditure, but also necessitate a number of intrabudgetary transfers as counties assume responsibility for the provision of health care and social services as well as other tasks previously performed by municipalities. At the start of the budget planning period additional funding is allocated to preparation and management of the health, social services and regional government reform. The reform will also require substantial changes to data management and information systems.

During the budget planning period expenditure will be driven by population ageing and the associated rise in pension costs, and towards the end of planning period especially by the Defence Forces' strategic capabilities projects. It is expected that the general rate of interest will begin to moderately trend upwards, but nonetheless remain at an exceptionally low level. This will be reflected in a slight rise in interest expenditure during the planning period, but interest expenditure will still be no more than EUR 1.4 billion in 2021. It is expected that cyclical expenditure will decrease during the budget planning period on the back of the improving employment situation. In addition, the fiscal adjustment measures set out in the

Government Programme will have the effect of reducing expenditure during the planning period, and the Government's key projects will no longer require spending. Excluding the changes associated with the health, social services and the regional government reform, it is estimated that annual on-budget expenditure will increase nominally by an average of around 1 % over the budget planning period. In real terms, however, expenditure is expected to on average decrease slightly year on year.

#### **Comparisons with previous spending limits**

Compared with last year's spending limits, tax revenue has developed more favourably than anticipated. Economic activity and tax base development have both been stronger than estimated earlier. This is most clearly seen in the growth of corporate income tax revenue, which in part is attributable to the Competitiveness Pact that has helped drive down labour costs in 2017–2018. At the same time, earned income taxes have been reduced under the Competitiveness Pact from the beginning of 2017.

The Competitiveness Pact signed in 2016 as well as new investments in security, education and employment decided upon in the general government fiscal plan 2018-2021 have the effect of increasing on-budget expenditure compared with the previous spending limits decision. Interest outlays and costs associated with immigration, on the other hand, are down in comparison with the previous spending limits decision. Furthermore, appropriations allocated for revising the distribution of costs between central and local government are lower than in the previous spending limits decision.

## 2.2.2 Central government revenues

The greatest part of central government expenditure is funded out of tax revenue. The most important tax revenue items are taxes on earned and capital income, value added tax and corporate income tax. In recent years the emphasis of taxation has shifted from direct to indirect taxes.

Finland's long-standing economic stagnation has provided no support for tax revenue growth. In 2016 economic growth began to pick up and central government tax revenue increased robustly. National accounts tax revenue was up almost 4% and came in at EUR 45 billion.

In 2017 tax bases will continue to show decent growth, but the cuts to earned income tax under the Competitiveness Pact will dampen tax revenue growth. There will be both indirect tax hikes and tax cuts. In 2018 tax revenue growth will accelerate slightly.

From the beginning of 2019 responsibility for the provision of social welfare and health care services will be transferred from local to regional governments. This reform will significantly increase central government tax revenue because part of local government revenue will be transferred to central government. Part of both municipal tax and corporate income tax revenue will now go to central government. Another provision of the reform is that no one's tax burden shall increase as a result of the transfers. For this reason earned income taxes will be moderately eased from the beginning of 2019.

**Table 19. Forecasts for certain revenue and demand items impacting taxable income and the tax base in 2015-2021, annual change**

|   | 2015               | 2016  | 2017** | 2018** | 2021/2018** |
|---|--------------------|-------|--------|--------|-------------|
|   | change, % per year |       |        |        |             |
| Taxable earned income and capital income    | 3.1                | 2.0   | 2.1    | 1.5    | 2 1/2       |
| Wage and salary earnings and other income   | 0.8                | 0.8   | 1.7    | 0.8    | 2           |
| Pensions and other social security benefits | 6.6                | 3.2   | 2.5    | 2.3    | 2 1/2       |
| Capital income                              | 12.6               | 7.8   | 2.9    | 3.1    | 3           |
| Index of wage and salary earnings           | 1.4                | 1.2   | 0.5    | 1.2    | 1 1/2       |
| Operating surplus                           | 6.5                | 3.3   | 8.4    | 5.9    | 5           |
| Value of household consumption expenditure  | -0.3               | 1.5   | 2.0    | 1.6    | 2           |
| VAT base                                    | 0.1                | 2.4   | 2.2    | 1.8    | 2 1/2       |
| Petrol consumption                          | -1 2/4             | - 1/4 | -2 3/4 | -2 2/4 | -2          |
| Diesel consumption                          | 1 2/4              | 4 3/4 | 3/4    | 2/4    | 1/2         |
| Electricity consumption                     | -1                 | 2     | 1 1/4  | 1      | 3/5         |
| Duty-paid alcohol consumption               | -3 2/4             | 0     | - 2/4  | 3 3/4  | 1/2         |
| New passenger cars                          | 4.5                | 9.1   | 4.1    | 2.5    | 2           |
| Consumer price index                        | -0.2               | 0.4   | 1.2    | 1.3    | 1 1/2       |



Other sources of central government revenue include property income and transfers from the State Pension Fund. Budget entries by the state investment company Solidium, which is classified as part of the central government sector, do not show up as central government revenue in the national accounts. Dividends received by Solidium, on the other hand, are entered as central government revenue. A transfer from the State Pension Fund is used to cover part of central government's pension expenditure. It is estimated that central government property income will remain at around EUR 1.7 billion over the forecast horizon. Central government dividend revenue will remain more or less unchanged, and interest revenue will remain at a historically very low level.

## Direct taxes

Revenue from earned income and capital income taxes consists of receipts from progressive income tax, capital income tax, the public broadcasting tax and withholding tax paid by people with limited tax liability. The most significant source of revenue is the progressive earned income tax, the accrual of which is primarily dependent on employment and wage trends. Capital income items include dividend income, capital gains and rental income.

In 2017 revenue from earned income and capital income tax is set to decrease from last year. This is largely due to the tax cuts introduced from the beginning of the year. In 2018 tax revenue will increase again. In 2019 a total of EUR 11 billion collected by local governments in municipal tax will be entered under central government earned income and capital income tax. In the medium term earned income and capital income tax revenue

**Table 20. Impact of change in selected tax base items on tax revenue**

| Tax category                | Tax base / Demand item       | Change    | Change in tax revenue, EUR million                 |
|-----------------------------|------------------------------|-----------|--|
| Taxes on earned income      | Wage and salary earnings     | 1-pp      | 387 of which central govt. 127 and local govt. 176 |
|                             | Pension incomes              | 1-pp      | 123, of which central govt. 32 and local govt. 80  |
| Capital income tax          | Investment income            | 1-pp      | 34   |
| Corporate tax               | Operating surplus            | 1-pp      | 45, of which central govt. 31 and local govt. 14   |
| VAT                         | Value of private consumption | 1-pp      | 118  |
| Car tax                     | Sales of new cars            | thousands | 6  |
| Energy tax                  | Electricity consumption *    | 1%        | 9  |
|                             | Petrol consumption           | 1%        | 13   |
|                             | Diesel consumption           | 1%        | 14   |
| Duty on alcoholic beverages | Alcohol consumption          | 1%        | 14   |
| Duty on cigarettes          | Cigarette consumption        | 1%        | 9  |

\*excl. manufacturing industries, datacenters and greenhouses

will remain strong, with wage earnings accelerating and pension income continuing to rise steadily at over 3% a year. The earned income and capital income tax forecast assumes that index adjustments will be carried out in 2018–2021 to ensure that the tax burden on labour does not increase as a result of higher earnings levels.

Revenue from corporate income tax paid by businesses on their profits is shared between central government and local government. The corporate income tax projection assumes that the tax base will develop in line with the national accounts operating surplus. Corporate income tax revenue has developed positively in recent years, and this strong development will continue over the forecast horizon. Central government revenue from corporate income tax will increase as the share of corporate income tax revenue apportioned to local governments is transferred to central government in 2019. There will be no changes to corporate tax bases in 2017–2021.

The tax base for withholding tax on interest income consists mainly of household income from interest-bearing deposits. Revenue from withholding tax on interest has fallen sharply in recent years due to low interest rates. It is expected that revenue from withholding tax on interest will only begin to edge up towards the end of the forecast horizon as interest rates start rising.

### **Indirect taxes**

The most important source of indirect tax revenue is VAT. In 2016 VAT revenue in the national accounts amounted to around EUR 20 billion. VAT revenue growth was bolstered by households' rising consumption expenditure. From the beginning of 2018 VAT on imports will be levied by Finnish Tax Administration instead of Customs.

Prime Minister Sipilä's Government is committed in its programme to gradually lower the motor car tax through to 2019. The motive behind the decision to phase in these tax changes rather than implement the reform in one fell swoop is to avoid disruptions to the car sales market, a sharp decline in stock values and unfair effects on consumer asset values. Revenue from the motor car tax will fall over the outlook period. The vehicle tax is a time-based tax that is levied on an ongoing basis in 12-month periods on passenger cars, vans and heavy goods vehicles. Revenue from the vehicle tax is relatively stable. The vehicle tax was increased from the beginning of 2017.

There have been numerous changes in energy taxation in recent years. Fuel taxes were raised from the beginning of this year. Revenue from other excise duties is usually highly stable, assuming there are no tax base changes. The tobacco tax has been progressively raised from the beginning of 2016, and the tax hikes will continue through to 2019. It is thought that changes to the basis of taxation will slightly increase revenue from excise du-

ties over the planning period compared with a situation where there are no tax hikes. It is thought that excise duty bases will mainly decrease due to the steering effect of taxation.

**Table 21. Central government on-budget revenue**

|   | 2016<br>provi-<br>sional<br>financial<br>accounts | 2017<br>budget<br>incl. sup-<br>plementa-<br>ry budget | 2018**      | 2019**      | 2020**      | 2021**      | 2021/2017**<br>annual<br>change,<br>% |
|---|---|--|-------------|-------------|-------------|-------------|---------------------------------------|
|   |   |  | EUR billion |             |             |             |                                       |
| Total tax revenue estimates                     | 41.8  | 41.7   | 42.8        | 56.3        | 58.5        | 60.4        | 8                                     |
| Income and wealth taxes <sup>1</sup>            | 13.3  | 13.1   | 13.7        | 25.4        | 27.0        | 28.3        | 20                                    |
| Taxes based on turnover                         | 18.1  | 18.1   | 18.6        | 20.3        | 21.0        | 21.6        | 3 1/2                                 |
| Excise duties                                   | 7.2   | 7.2  | 7.3         | 7.3         | 7.3         | 7.2         | 0                                     |
| Other taxes                                     | 3.3   | 3.2  | 3.2         | 3.3         | 3.3         | 3.3         | 0                                     |
| Miscellaneous revenue                           | 5.6   | 5.3  | 5.4         | 5.4         | 5.5         | 5.6         | -0                                    |
| Interest income and profit<br>entered as income | 1.6   | 2.5  | 2.8         | 1.9         | 1.9         | 1.8         | 5 1/2                                 |
| <b>Total revenue estimates</b>                  | <b>49.5</b>                                       | <b>49.9</b>  | <b>51.3</b> | <b>64.0</b> | <b>66.3</b> | <b>68.3</b> | <b>7</b>                              |

<sup>1</sup> Incl. YLEtax from 2013 onwards (on average 500 EUR million per year).

**Table 22. Impact of discretionary tax measures on general government tax revenue**

|  | 2016        | 2017  | 2018** | 2019** | 2020** | 2021** |
|--|-------------|-------|--------|--------|--------|--------|
|  | EUR million |       |        |        |        |        |
| Earned income taxes                    | -515        | -805  | -150   | -386   | -345   | -356   |
| Average increase in municipal tax rate | 36          | 0     | 0      | 0      | 0      | 0      |
| Investment income tax                  | 51          | 2     | -9     | 0      | 0      | 0      |
| Corporate tax                          | 122         | 105   | 0      | 0      | 0      | 0      |
| Other direct taxes                     | 25          | -1    | -34    | -40    | 0      | 0      |
| Value-added tax                        | 0           | -156  | -200   | 0      | 0      | 0      |
| Energy taxes                           | 103         | 116   | 0      | 47     | -2     | 0      |
| Other indirect taxes                   | 94          | 140   | 70     | 68     | 34     | 0      |
| Social security contributions          | 552         | -1013 | -51    | -53    | 429    | -23    |

### 2.2.3 On-budget accounts and national accounts

The development of central government debt cannot always be directly inferred from the budget deficit. In 2016 the budget deficit stood at EUR 4.9 billion, but the State Treasury took out new loans worth just EUR 2.5 billion. This difference was exceptionally wide last year. There were several reasons for the difference between the deficit and change in debt, the most important of which was the reduction of central government cash funds by EUR 1.2 billion.

In 2016 the national accounts deficit stood at EUR 5.9 billion, one billion higher than the on-budget deficit. For the past three years the national accounts deficit has been larger than the on-budget figure; prior to that the opposite was true for a few years. No direct inferences can be drawn from central government on-budget finances regarding the corresponding national accounts figures.

There are several reasons for the discrepancy between the fiscal budget and national accounts. National accounts are accrual based, whereas fiscal budget figures are based partly on cash accounting. National accounts make timing adjustments for taxes, subsidies and EU payments. For the latter, the adjustments last year amounted to EUR 0.3 billion. The regional government reform will require a remarkable timing adjustment in 2019.

Interest outlays in the national accounts are clearly higher than on-budget interest expenditure. This is mainly due to the fact that national accounts interest payments, in contrast to the on-budget figures, do not include the downward effect of interests on derivative instruments. By using derivatives, the State Treasury has managed to achieve often quite significant reductions in the real interest payments made from the State Budget. In the national accounts, derivative contracts are recorded as financial transactions that have no effect on fiscal balance.

One significant difference comes from the use of deferrable appropriations. These are two or three-year grants that are entered in the budget for one year only. In the national accounts, deferrable appropriations are entered on the basis of their use. The net effect of deferrable appropriations can vary widely from year to year.

Another significant difference between the on-budget net financing requirement and the national accounts fiscal balance comes from financial investments. Financial investments such as central government loans and share purchases are entered in the State Budget as expenditures. Loan repayments, revenue from share sales, etc., are accordingly entered on the revenue side. In the national accounts, these items are usually entered as financial transactions, which do not affect central government's fiscal balance as reported in the national accounts.

The national accounts concept of central government is much broader than the on-budget concept, which is also reflected in differences between financial positions. In addition to on-budget entities, the national accounts concept also includes extrabudgetary funds (excluding the State Pension Fund), universities, property companies, the Finnish Broadcasting Company YLE, VTT Technical Research Centre, and Solidium. Classifications of various public units are revisited from time to time. In 2017, for instance, Finpro and the new State Business Development Company Vake Oy are classified in the central government sector.

**Table 23. On-budget balance and central government net lending<sup>1)</sup>**

|   | 2015        | 2016        | 2017**      | 2018**      | 2019**      |
|---|-------------|-------------|-------------|-------------|-------------|
|   | EUR billion |             |             |             |             |
| On-budget surplus (+)/deficit (-) <sup>2)</sup>           | -4.7        | -4.9        | -5.1        | -4.1        | -4.2        |
| Privatization proceeds (net proceeds from equity sales)   | 0.3         | -0.1        | 0.1         | -1.1        | -0.2        |
| Financial investment, net                                 | -0.6        | -0.8        | -0.6        | -0.5        | -0.5        |
| Revenue surplus in off-budget units                       | -0.9        | -0.1        | -0.3        | -0.3        | -0.3        |
| Cash/accrual basis adjustment                             | 0.0         | -0.4        | 0.0         | 0.0         | 0.9         |
| Other adjustment items <sup>3)</sup>                      | -0.5        | 0.4         | -0.1        | 1.0         | 0.2         |
| <b>Central government net lending (+) /-borrowing (-)</b> | <b>-6.3</b> | <b>-5.9</b> | <b>-6.0</b> | <b>-5.0</b> | <b>-4.1</b> |

<sup>1)</sup> In national accounts terms.

<sup>2)</sup> Incl. government debt servicing.

<sup>3)</sup> Incl. debt cancellations, profit on reinvested foreign direct investments, super dividends

## 2.3 Local government

According to preliminary national accounts figures the local government sector showed a deficit of 0.5% to GDP last year. The deficit was slightly smaller than the year before. Consumption expenditure increased only marginally, largely because the 2017 cuts to holiday bonuses were for the most part entered on an accrual basis in 2016 accounts and because local governments persisted with their fiscal adjustment efforts. Cost levels also increased very moderately, which contributed to slow the growth of consumption expenditure. Investment expenditure decreased for the first time in 10 years.

Local government tax revenue declined somewhat due to reduced corporate income tax revenue, which in turn was due to the expiry at year-end 2015 of the five percentage point increase in the apportionment of corporate income tax revenue paid to local governments. Central government transfers to local governments, on the other hand, were up, among other reasons because of the revision of the distribution of costs between central and local gov-

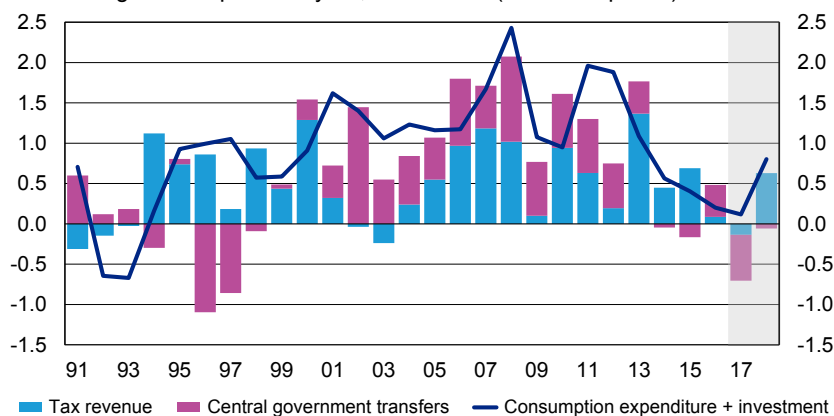
ernment, in which basic prices and finances are adjusted to reflect actual costs. In 2016 this revision was made for a four-year period. From now on, the distribution of costs will be revised annually in accordance with the Act on Central Government Transfers to Local Government.

In 2017 the local government deficit will remain unchanged from last year. Upward pressure on consumption expenditure will be curbed by the Government’s fiscal adjustment measures as well as by the cuts to holiday bonuses and employer contributions under the Competitiveness Pact. Investment will return to moderate growth in 2017 as maintenance and repairs of the existing building stock continue to require substantial investment. Furthermore, the construction of hospitals has continued to increase despite legislation in summer 2016 which was designed to restrict social and health care investment.

In 2017 local government tax revenue will be dented by weak earnings growth as a result of a 30% cut to holiday bonuses, high structural unemployment and other factors. Furthermore, the average municipal tax rate was raised by just 0.05 percentage points at the beginning of the year, which will increase municipal tax revenue by less than EUR 50 million. Revenue from tax on real property will increase this year as a result of government actions that will increase real property tax revenue by EUR 75 million in 2017.

Local government benefit expenditure will fall substantially as the payment of basic income support was transferred from local government to the Social Insurance Institution Kela from the beginning of the year. However, this has very limited impact on local government net lending because central government transfers to local government will be reduced accordingly in 2017. Challenges involved in the transfer of income support payment, however, have forced local authorities to grant preventive social assistance as a stop-gap measure early in the year.

**Local government taxes, central government transfers, consumption expenditure and investment**  
change on the previous year, EUR billion (at current prices)



Sources: Statistics Finland, MoF

## **Health, social services and regional government reform will change local government finances**

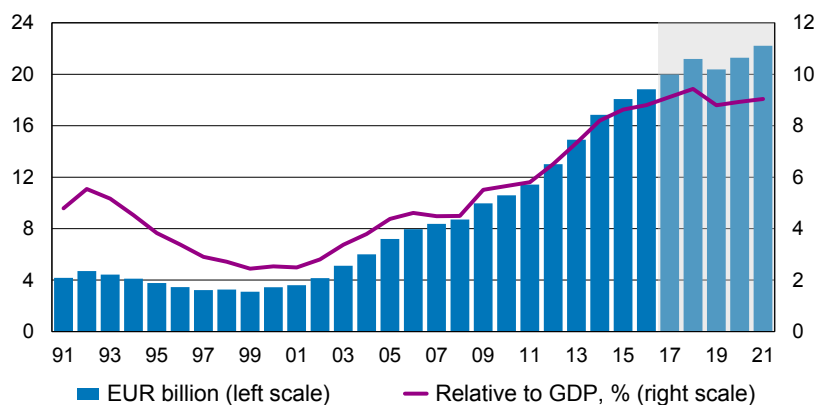
In the next few years the financial position of local governments will remain more or less unchanged. However, the health, social services and regional government reform will reduce expenditure pressures and strengthen local government finances from 2019 onwards. The 2018–2021 outlook only considers specified and agreed relevant measures included in the spring 2017 general government fiscal plan or the 2017 budget proposal. It does not include municipalities' and joint municipal authorities' own fiscal measures planned for 2018–2021. The municipal tax rates are held constant at 2017 level. The outlook does take into account the Government's proposal for a health, social services and regional government reform (for more details, see text box on page 59).

The health, social services and regional government reform will bring significant changes to local government finances. Both total revenue and expenditure will fall sharply in 2019 as around half of the tasks and service obligations of local authorities are transferred to counties. Local governments' existing forms of revenue will remain in place, but their relative shares will change. Municipal taxes will remain the most significant form of local government revenue in volume terms, even though they will shrink to less than half their current level. In addition, around one-quarter of local government revenue from corporate income tax will be transferred to counties. The reform will have no effect on real property tax, which will consequently become a more important source of local government revenue. The relative importance of central government transfers to local government, on the other hand, will decrease as the majority of them are transferred to the counties that will assume responsibility for the respective tasks and services.

The health, social services and regional government reform will reduce local government consumption expenditure to roughly half of its current level. Changes in the population age structure have increased the need for care services and added to expenditure pressures in local government for a long time. In the future the main focus of local authorities' service provision will shift among others to education, which is not subject to the same kind of expenditure pressures due to population ageing. For this reason upward pressure on local government expenditure will be eased. As a result the local government debt ratio will stop increasing.

Local governments' social services and health care facilities will remain in their ownership. Only the assets and debts of health care districts and special welfare districts will be transferred to counties. At the same time as local government revenue falls by roughly one-half, only a small part of local government debts will be transferred to the regional government sector. This means that the local government debt burden in relative terms will increase. The relative growth of debt presents a major challenge for some municipalities that are highly indebted and face substantial investment pressures.

### Local government debt<sup>1</sup>



<sup>1</sup> Incl. health, social services and regional government reform in 2019

Sources: Statistics Finland, MoF

**Table 24. Local government <sup>1)</sup>**

|  | 2014               | 2015        | 2016        | 2017**      | 2018**      | 2019**      |
|--|--------------------|-------------|-------------|-------------|-------------|-------------|
|  | <b>EUR billion</b> |             |             |             |             |             |
| Taxes and social security contributions          | 21.2               | 21.9        | 22.0        | 21.8        | 22.4        | 10.9        |
| of which municipal tax                           | 18.2               | 18.6        | 18.7        | 18.5        | 19.0        | 7.7         |
| corporate tax                                    | 1.4                | 1.7         | 1.5         | 1.5         | 1.6         | 1.2         |
| real estate tax                                  | 1.5                | 1.6         | 1.7         | 1.8         | 1.8         | 1.9         |
| Other revenue <sup>2)</sup>                      | 18.5               | 18.5        | 18.6        | 18.2        | 18.4        | 10.5        |
| of which interest receipts                       | 0.2                | 0.3         | 0.3         | 0.3         | 0.3         | 0.3         |
| of which transfers from central government       | 13.8               | 13.7        | 14.1        | 13.5        | 13.5        | 5.8         |
| <b>Total revenue</b>                             | <b>39.6</b>        | <b>40.3</b> | <b>40.6</b> | <b>40.1</b> | <b>40.8</b> | <b>21.4</b> |
| Consumption expenditure                          | 33.4               | 33.8        | 34.1        | 34.1        | 34.7        | 16.7        |
| of which compensation of employees               | 21.7               | 21.7        | 21.6        | 21.1        | 21.2        | 11.2        |
| Income transfers                                 | 3.1                | 3.2         | 3.3         | 2.6         | 2.6         | 1.8         |
| of which social security benefits and allowances | 1.3                | 1.3         | 1.4         | 0.8         | 0.7         | 0.1         |
| subsidies and other transfers                    | 1.7                | 1.7         | 1.7         | 1.7         | 1.7         | 1.6         |
| interest expenses                                | 0.1                | 0.1         | 0.1         | 0.1         | 0.1         | 0.1         |
| Capital expenditure <sup>3)</sup>                | 4.7                | 4.6         | 4.3         | 4.5         | 4.7         | 4.1         |
| <b>Total expenditure</b>                         | <b>41.2</b>        | <b>41.6</b> | <b>41.6</b> | <b>41.2</b> | <b>42.0</b> | <b>22.6</b> |
| <b>Net lending (+) / net borrowing (-)</b>       | <b>-1.6</b>        | <b>-1.3</b> | <b>-1.0</b> | <b>-1.1</b> | <b>-1.2</b> | <b>-1.2</b> |
| Primary balance <sup>4)</sup>                    | -1.7               | -1.4        | -1.2        | -1.3        | -1.3        | -1.3        |

<sup>1)</sup> As calculated in the national accounts. Incl. health, social services and regional government reform in 2019.

<sup>2)</sup> Incl. capital transfers and consumption of fixed capital.

<sup>3)</sup> Gross capital formation and capital transfers.

<sup>4)</sup> Net lending before net interest expenses.



### **Local government accounting and national accounts: how they differ**

The closest local government accounting equivalent to the national accounts concept of net lending is the cash flow from operations and investments (financial position). The two accounting systems define sector boundaries differently, and the same goes for the timing of concepts and entries. The reasons for the differences between the cash flow from operations and investments in local government accounting and net lending in the national accounts are examined in the table below.

The most important conceptual difference stems from sector definitions. Local government accounting is concerned with local government finances as defined in the statistics on local government finances, i.e. municipalities, joint municipal authorities and municipal enterprises. Excluded from local government finances under these statistics are such operations that are conducted by an independent legal entity, for instance in the form of a limited liability company. The national accounts definition of the local government sector, on the other hand, does include such municipally-owned enterprises that are treated as units serving their parent entity.

In the national accounts, the local government sector comprises the non-market activities of local and joint municipal authorities, which are primarily financed from tax revenue and by compulsory payments. Public corporations that primarily finance their operations from sales revenue from other sectors, such as water, waste and energy management as well as port activities, are therefore classified in the national accounts in the corporations sector, outside the local government sector.

Statistics on municipal finances and national accounts have different definitions for the concept of investment expenditure. In the national accounts, acquisitions and sales of shares and equities are recorded as financial transactions and not under local government investment expenditure. Statistics on municipal finances, on the other hand, record share acquisitions as investments in fixed assets.

There are also differences in the concepts of property expenditure and incomes. In the national accounts, changes in the value of assets and liabilities are not included in income or expenditure. Therefore, municipalities' and joint municipal authorities' other financing revenue and costs (with the exception of dividends and interests) are not included in the national accounts definition of net lending.

There are also differences in the timing of entries in local government accounting and in the national accounts. In local governments' accounts, tax revenue describes the amount of tax collected during the calendar year. In the national accounts, tax revenue for the year in question is based on the tax authorities' accounts of tax remittances from February through to the end of January the following year. This is intended to take into account the timing difference between advance tax payments and remittance to government.

**Table 25. Financial position in local government accounting and local government net lending**

|   | 2015        | 2016        | 2017**      | 2018**      | 2019**      |
|---|-------------|-------------|-------------|-------------|-------------|
|   | EUR billion |             |             |             |             |
| Cash flow from municipalities' and joint municipal authorities' operations and investments                | -0.8        | -0.3        | -0.6        | -0.8        | 0.6         |
| Other than municipalities' and joint municipal authorities' net lending effect <sup>1)</sup>              | -0.5        | -0.6        | -0.6        | -0.5        | -0.6        |
| Effect of municipalities' and joint municipal authorities' operations outside the local government sector | 0.1         | 0.1         | 0.1         | 0.1         | 0.1         |
| Acquisitions and sales of shares  | 0.2         | 0.1         | 0.1         | 0.1         | 0.1         |
| Differences in concepts of property expenditure and income  | 0.0         | 0.0         | 0.0         | 0.0         | 0.0         |
| Timing differences  | 0.0         | -0.2        | -0.1        | 0.0         | -0.9        |
| Other differences <sup>2)</sup>   | -0.3        | -0.1        | 0.0         | 0.0         | -0.3        |
| <b>Local government net lending (+)/borrowing (-)</b>   | <b>-1.3</b> | <b>-1.0</b> | <b>-1.1</b> | <b>-1.2</b> | <b>-1.2</b> |

<sup>1)</sup> Corporations classified under local government but not included in statistics on municipal finances as well as Government of Åland, Association of Finnish Local and Regional Authorities, Local Government Employers and Municipal Guarantee Board.

<sup>2)</sup> E.g. differences in capital transfers and investment grants.

Source: Statistics Finland, MoF

## 2.4 Social security funds

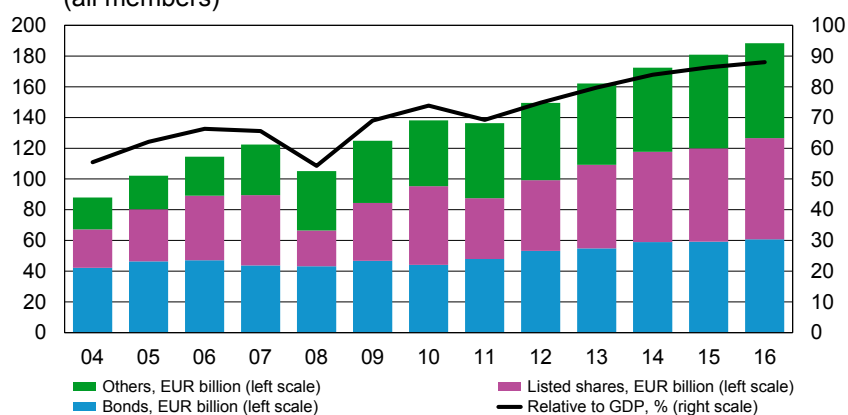
### 2.4.1 Earnings-related pension funds

The surplus of earnings-related pension funds fell to 1.1% of GDP in 2016, compared with an average of just over 3% in the first decade of the 2000s. Earnings-related pension expenditure has risen sharply in recent years with the growing number of pensioners and with the higher average level of pensions: new, starting pensions are higher than old ones in payment. The weak employment situation and slower rise in earnings have in turn dampened the growth of incomes from contributions, even though pension contribution rates have increased rapidly in recent years. Low interest rates have reduced pension funds' property income. However rising asset prices and stock prices in particular have increased the total value of pension assets to almost EUR 190 billion at year-end 2016.

The rise in the number of pensioners is gradually slowing. However, the higher average level of pensions and yearly index-linked increases to pensions mean that earnings-related pension expenditure will continue to grow at around 4% per annum in 2017–2021. At the beginning of 2017 the private sector earnings-related pension contribution was raised by 0.4 percentage points to 24.4% for 2017–2019. The latest long-term projections by the Finnish Centre for Pensions indicate that there may be slight upward pressure on this contribution level from the early 2020s.

Moderate wage increases mean that wage bill growth will remain slow despite increasing employment. This will be directly reflected in revenue from pension contributions. It is projected that pension funds' property income will turn to moderate growth during the outlook period as interest rates begin to pick up. Overall the surplus of earnings-related pension funds will fall during the outlook period from almost one per cent to less than half a per cent of GDP.

### Investment portfolio of pension funds by type of investment (all members)



Sources: The Finnish Pension Alliance TELIA, Statistics Finland, MoF

**Table 26. Finances of social security funds<sup>1)</sup>**

|  | 2014        | 2015        | 2016        | 2017**      | 2018**      | 2019**      |
|--|-------------|-------------|-------------|-------------|-------------|-------------|
|  | EUR billion |             |             |             |             |             |
| Investment income                          | 3.5         | 3.4         | 3.3         | 3.4         | 3.7         | 4           |
| Social security contributions              | 26.3        | 26.9        | 28          | 27.2        | 27.6        | 28.1        |
| of which contributions paid by employers   | 17.9        | 18.2        | 18.8        | 17.5        | 17.3        | 17.1        |
| contributions paid by insured              | 8.4         | 8.7         | 9.2         | 9.7         | 10.4        | 11          |
| Transfer from general government           | 13.9        | 14.3        | 14.6        | 15.9        | 15.7        | 15.5        |
| Other revenue                              | 0.6         | 0.5         | 0.5         | 0.5         | 0.5         | 0.5         |
| <b>Revenue</b>                             | <b>44.2</b> | <b>45.2</b> | <b>46.4</b> | <b>47.1</b> | <b>47.5</b> | <b>48.2</b> |
| Consumption expenditure                    | 3.6         | 3.7         | 3.6         | 3.6         | 3.7         | 3.8         |
| Social security benefits and allowances    | 34.7        | 35.9        | 36.6        | 38.1        | 38.9        | 39.7        |
| Other outlays                              | 3.2         | 3.7         | 3.4         | 3.4         | 3.4         | 3.4         |
| <b>Expenditure</b>                         | <b>41.5</b> | <b>43.3</b> | <b>43.6</b> | <b>45.1</b> | <b>46</b>   | <b>46.9</b> |
| <b>Net lending (+) / net borrowing (-)</b> | <b>2.7</b>  | <b>1.9</b>  | <b>2.8</b>  | <b>2</b>    | <b>1.6</b>  | <b>1.3</b>  |
| Earnings-related pension schemes           | 3.4         | 2.7         | 2.3         | 1.6         | 1.2         | 0.8         |
| Other social security funds                | -0.7        | -0.8        | 0.5         | 0.3         | 0.3         | 0.4         |
| Primary balance <sup>2)</sup>              | 1.2         | 0.5         | 1.6         | 0.9         | 0.4         | -0.1        |

<sup>1)</sup> As calculated in the National Accounts.

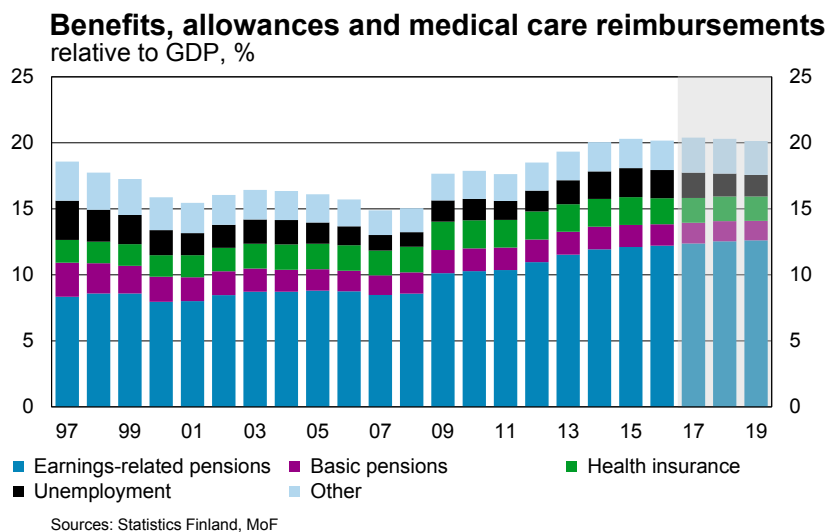
<sup>2)</sup> Net lending before net interest expenses.

### 2.4.2 Other social security funds

Other social security funds consist mainly of the Social Insurance Institution (Kela) and the Unemployment Insurance Fund, which is responsible for the provision of earnings-related unemployment security. After running deficits for the two previous years, other social security funds last year posted a surplus of 0.2% of GDP. This was on the back of a one percentage point increase in the unemployment insurance contribution from the beginning of 2016 and the end of unemployment security expenditure growth.

It is expected that over the forecast period the surplus of other social security funds will remain at last year's level and possibly improve somewhat. This is based on the assumption that unemployment security expenditure will fall somewhat as employment gradually picks up. Furthermore it is assumed that the unemployment insurance contribution will remain unchanged at its current level. If this is the case, the Unemployment Insurance Fund will be in the position to pay off its debt and possibly even accumulate buffer assets with a view to future needs.

Cuts to earnings-related unemployment security, medical and health care reimbursements, sickness and parental allowances as well as general housing allowance and student financial aid will contribute to reduce the expenditure of other social security funds. In addition, benefits tied to the national pension index were cut by 0.85% from the beginning of 2017, and in keeping with an earlier decision they will not be increased in 2018–2019. This does not, however, apply to basic income support, payment of which was taken over by the Social Insurance Institution Kela from the beginning of 2017. The savings achieved will largely be reflected in a reduced level of central government transfers to other social security funds.



**Table 27. Social security contributions rates and pension indices**

|   | 2014  | 2015  | 2016  | 2017  | 2018** | 2019** |
|---|-------|-------|-------|-------|--------|--------|
| <b>Social insurance contributions <sup>1)</sup></b> |       |       |       |       |        |        |
| <b>Employers</b>                                    |       |       |       |       |        |        |
| Sickness insurance                                  | 2.14  | 2.08  | 2.12  | 1.08  | 0.98   | 0.98   |
| Unemployment insurance                              | 2.20  | 2.33  | 2.85  | 2.40  | 2.00   | 2.00   |
| Earnings-related pension insurance                  | 17.75 | 18.00 | 18.00 | 17.95 | 17.75  | 17.35  |
| Local government pension insurance                  | 23.79 | 23.65 | 23.21 | 21.95 | 21.75  | 20.20  |
| <b>Employees</b>                                    |       |       |       |       |        |        |
| Sickness insurance                                  | 2.16  | 2.10  | 2.12  | 1.58  | 1.58   | 1.67   |
| Unemployment insurance                              | 0.50  | 0.65  | 1.15  | 1.60  | 2.00   | 2.00   |
| Earnings-related pension insurance                  | 5.85  | 6.00  | 6.00  | 6.45  | 6.65   | 7.05   |
| <b>Pensioners</b>                                   |       |       |       |       |        |        |
| Sickness insurance                                  | 1.49  | 1.49  | 1.47  | 1.45  | 1.53   | 1.59   |
| <b>Pension indices</b>                              |       |       |       |       |        |        |
| Earnings-related index (over 65)                    | 2509  | 2519  | 2519  | 2534  | 2559   | 2589   |
| National pension index                              | 1630  | 1637  | 1631  | 1617  | 1617   | 1617   |

<sup>1)</sup> Annual averages. The contributions of employers and the unemployment and employment pension contributions of beneficiaries as percentages of wages and salaries. The figures are weighted averages.

## 2.5 Long-term sustainability of public finances

It is expected that the growth of the public debt to GDP ratio will come to halt in the early 2020s, but that balance will still not be restored in public finances. The challenges of balancing public finances are greatly compounded by shifts in the population age structure that will have persistent adverse effects in the decades ahead. These changes are driving up pension expenditure as well as health care and long-term care costs to such an extent that they cannot be covered under the current tax rate. Furthermore, the age structure changes are depleting the working age population whose taxes are paying for welfare services and benefits. Population ageing is progressing earlier in Finland than in other EU countries.

The sustainability gap in public finances means that in the long term, general government revenue is insufficient to cover expenditure. A permanent imbalance between revenue and expenditure creates the danger that public debt may spiral out of control. Technically, the sustainability gap <sup>1)</sup> can be expressed as the difference between the deficit in public finances in the base year (which is currently 2021) and the level of surplus required for sustainable public finances. A sustainable level of surplus means that public finances should

show a surplus of around 2% of GDP at the start of the next decade: this would be the level at which the fiscal challenges from population ageing could be met in the decades ahead without additional adjustment. Instead of a 2% surplus, however, it is expected that public finances will show a deficit of around 1% in 2021.

The Ministry of Finance estimates that the sustainability gap will be almost 3% of GDP, or approx. EUR 7 billion in 2021 level.<sup>1</sup> This is slightly lower than the forecast last autumn. The estimate of the public finances deficit for the base year of the sustainability calculation is stronger than last autumn if the appropriation of some EUR 1 billion earmarked for new fighter jet acquisitions in 2021 is ignored.<sup>2</sup> Furthermore, the calculation does not take into account the Government Programme's long-term actions aimed at strengthening public finances, such as the reform of health care and social services. The sustainability gap estimate is obviously subject to considerable uncertainty in that the calculation is sensitive to the underlying assumptions about future development. Nonetheless the calculation provides a consistent way of analysing and overcoming the future challenges that lie ahead for public finances.

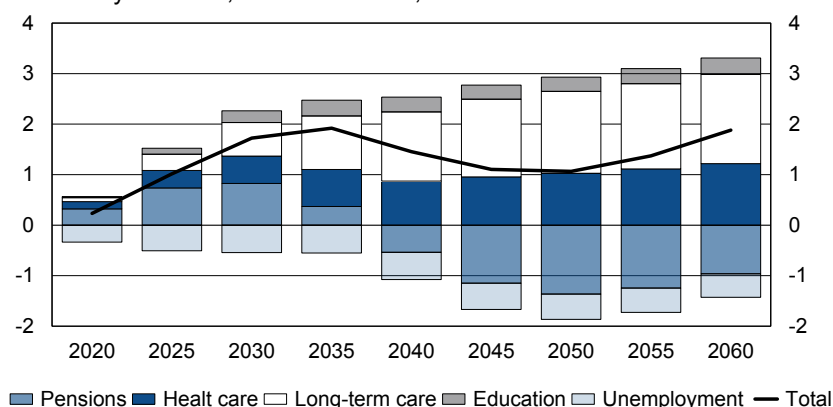
Table 30 explores the sensitivity of the sustainability gap calculation to the underlying assumptions about economic development in particular. Based on this examination assumptions about employment rate trends and productivity growth in public services have a particularly significant impact on the estimated size of the sustainability gap. By contrast a permanent acceleration of general productivity would not bring a substantial reduction in the sustainability gap. This is because in the long term, the growth of general productivity increases real earnings to the same extent across all sectors, which will also drive up public sector labour costs. If the general interest rate were to remain permanently lower than expected, interest expenditure on public debt and earnings-related pension institutions' investment revenue would probably decrease as well. As authorised pension providers' investment assets are currently higher than public debt, a lowered interest rate assumption would increase the sustainability gap to some extent.

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1 The MoF's assessment of the long-term sustainability of public finances is based on EU harmonised methods and calculation rules. The sustainability calculation is effectively a pressure projection in which developments under current legislation and practices are projected to the future with the help of the population projection, spending breakdowns by age groups, and assessments of long-term economic development. The assessment of age-related expenditure is based on a model developed by the Ministry of Social Affairs and Health for social expenditure analysis. The long-term background assumptions of the calculation (e.g. employment, productivity, interest rate and inflation) are based on those used in the 2015 report by the EU Economic Policy Committee's Ageing Working Group (The 2015 Ageing Report: Underlying Assumptions and Projection Methodologies, European Economy 8/2014). The present assessment diverges from these assumptions in two respects: the forecasts for demographic trends are based instead on Statistics Finland's 2015 population projection, and the 2017–2021 projections of economic development are based on the MoF economic forecast and medium-term outlook presented in this Economic Survey.

2 The effect of the fighter jet acquisitions on the sustainability gap has not been taken into account because as yet no firm decisions are in place and because the exact cost of the acquisitions is not known. Although this is a major acquisition estimated at EUR 7–10 billion, its effect on the sustainability gap is rather limited. It does not represent a permanent increase in expenditure, but despite the maintenance costs it is more akin to a one-off replacement acquisition.

### Change in age-related expenditure from year 2016, relative to GDP, %



The figure is compiled using the model developed by the Ministry of Social Affairs and Health for social expenditure analysis

Source: MoF

**Table 28. General government finances 2016–2060, % of GDP**

|   | 2016     | 2021  | 2030  | 2040 | 2050  | 2060  | 2060-2016 |
|---|----------|-------|-------|------|-------|-------|-----------|
|   | % of GDP |       |       |      |       |       | change, % |
| <b>Total expenditure</b>                          | 56.1     | 53.6  | 57.0  | 57.8 | 58.9  | 61.9  | 5.7       |
| of which age-related and unemployment expenditure | 30.2     | 30.4  | 31.9  | 31.6 | 31.2  | 32.0  | 1.9       |
| Pensions  | 13.8     | 14.2  | 14.6  | 13.3 | 12.5  | 12.9  | -1.0      |
| Old-age pensions                                  | 12.6     | 13.1  | 13.6  | 12.3 | 11.5  | 11.8  | -0.8      |
| Other pensions                                    | 1.2      | 1.1   | 1.0   | 1.0  | 1.0   | 1.0   | -0.2      |
| Health care                                       | 6.0      | 6.1   | 6.5   | 6.8  | 7.0   | 7.2   | 1.2       |
| Long-term care                                    | 2.3      | 2.4   | 2.9   | 3.6  | 3.9   | 4.0   | 1.8       |
| Education   | 5.7      | 5.7   | 5.9   | 6.0  | 6.0   | 6.0   | 0.3       |
| Unemployment                                      | 2.4      | 2.0   | 1.9   | 1.9  | 1.9   | 2.0   | -0.5      |
| Interest expenditure                              | 1.0      | 0.9   | 3.3   | 4.3  | 5.8   | 8.0   | 6.9       |
| <b>Total revenue</b>                              | 54.2     | 52.4  | 54.2  | 53.1 | 52.7  | 52.5  | -1.7      |
| of which: property income                         | 2.8      | 3.1   | 4.9   | 3.9  | 3.5   | 3.3   | 0.5       |
| <b>Net lending <sup>*)</sup></b>                  | -1.9     | -1.2  | -2.8  | -4.6 | -6.2  | -9.3  | -7.4      |
| of which: transfer to pension funds               | 1.1      | 0.4   | 0.6   | 0.9  | 1.6   | 1.2   | 0.1       |
| General government debt                           | 63.6     | 65.0  | 69.8  | 88.4 | 120.1 | 164.3 | 100.8     |
| General government assets, consolidated           | 129.2    | 126.6 | 107.5 | 88.5 | 82.7  | 79.6  | -49.6     |
| Pension funds' financial assets, consolidated     | 88.9     | 86.3  | 72.7  | 59.6 | 58.1  | 58.1  | -30.7     |

\*) Cyclically-adjusted net lending as of 2021.

**Table 29. Underlying assumptions**

|                            | Assumptions, % |      |      |      |      |
|----------------------------|----------------|------|------|------|------|
|                            | 2021           | 2030 | 2040 | 2050 | 2060 |
| Labour productivity growth | 0.6            | 1.4  | 1.5  | 1.5  | 1.5  |
| Real GDP growth            | 1.0            | 1.4  | 1.8  | 1.6  | 1.5  |
| Participation rate         |                |      |      |      |      |
| males (15-64)              | 77.9           | 77.5 | 77.3 | 77.5 | 77.7 |
| females (15-64)            | 75.0           | 74.9 | 75.3 | 75.9 | 76.2 |
| total (15-64)              | 76.5           | 76.2 | 76.3 | 76.7 | 77.0 |
| Unemployment rate          | 7.4            | 6.9  | 6.8  | 7.0  | 7.3  |
| Old-age dependency ratio*  | 37.7           | 43.4 | 44.6 | 46.9 | 50.7 |
| Inflation                  | 2.0            | 2.0  | 2.0  | 2.0  | 2.0  |
| Real interest rate         | 0.1            | 2.8  | 3.0  | 3.0  | 3.0  |
| Real return of asset       | 1.1            | 3.0  | 3.5  | 3.5  | 3.5  |

\* the ratio of people aged over 64 to those aged 15–64

Source: Statistics Finland, Ministry of Finance.

**Table 30. Impact of various factors on the sustainability gap**

|   | Baseline scenario<br>(spring 2017) | Change, pp. | Impact on sustain-<br>ability gap*, pp. |
|---|------------------------------------|-------------|---|
| Growth in general productivity (and real earnings)          | 1.4%                               | + 0.5       | -0.3                                    |
| Employment rate   | rises to 71.7%<br>by 2060          | + 1.0       | -0.4                                    |
| Growth of productivity of public health and social services | 0%                                 | + 0.5       | -1.2                                    |
| General government primary balance** / GDP in 2021          | -0.4%                              | + 1.0       | -1.0                                    |
| Real rate of interest on debt and real return on assets     | 3% and 3.5%                        | - 1.0       | 0.7                                     |

\* The calculations are based on autumn 2016 MoF sustainability gap calculations (impact of assumption changes are stable over different calculation rounds).

\*\* deficit excl. interest expenditure



## Appendix

### Supplementary statistics

1. Evolution of forecasts over time
2. Outturn data and forecasts used in budget process for 2012-2016, average change, %
3. National balance of supply and demand
4. Financial balance of the Finnish economy

**Table 1. Evolution of forecasts over time<sup>1)</sup>**

|  | 2016 |      |      |      | 2017** |      |      |      | 2018** |      |      |      | 2019** |
|--|------|------|------|------|--------|------|------|------|--------|------|------|------|--------|
|  | es2  | es3  | es4  | es1  | es2    | es3  | es4  | es1  | es2    | es3  | es4  | es1  | es1    |
| GDP at market prices, change in volume, %          | 1.4  | 1.1  | 1.6  | 1.4  | 1.0    | 0.9  | 0.9  | 1.2  | 1.3    | 1.1  | 1.0  | 1.0  | 1.2    |
| Consumption, change in volume, %                   | 1.0  | 0.8  | 1.4  | 1.5  | 0.2    | 0.1  | 0.5  | 0.7  | 0.4    | 0.4  | 0.4  | 0.3  | 0.6    |
| Exports, change in volume, %                       | 0.8  | 1.0  | 1.0  | 0.5  | 2.9    | 3.0  | 2.4  | 2.9  | 3.8    | 3.8  | 3.2  | 3.4  | 3.6    |
| Unemployment rate, %                               | 9.2  | 9.0  | 8.9  | 8.8  | 9.1    | 8.8  | 8.5  | 8.5  | 8.7    | 8.5  | 8.1  | 8.1  | 7.8    |
| Consumer price index, change, %                    | 0.5  | 0.4  | 0.3  | 0.4  | 1.2    | 1.1  | 1.3  | 1.2  | 1.3    | 1.3  | 1.3  | 1.3  | 1.4    |
| Central government net lending, relative to GDP, % | -2.9 | -2.8 | -2.6 | -2.7 | -2.7   | -2.8 | -2.6 | -2.7 | -2.3   | -2.3 | -2.1 | -2.2 | -1.8   |
| General government net lending, relative to GDP, % | -2.4 | -2.4 | -2.2 | -1.9 | -2.4   | -2.6 | -2.5 | -2.3 | -2.0   | -2.0 | -2.0 | -2.0 | -1.7   |
| Central government debt, relative to GDP, %        | 49.8 | 49.7 | 47.7 | 47.8 | 51.5   | 51.2 | 49.2 | 49.1 | 52.4   | 52.1 | 50.2 | 49.7 | 50.0   |

<sup>1)</sup> Economic Survey / release date: 22.6.2016 (es2), 15.9.2016 (es3), 22.12.2016 (es4) and 28.4.2017 (es1)

Sources: Statistics Finland, MoF

**Table 2. Outturn data and forecasts used in budget process for 2012-2016**

|  | Years 2012-2016          |                         | Average forecast errors                            |  |
|--|--------------------------|-------------------------|--|--|
|  | Forecast averages, % ch. | Outcome averages, % ch. | Forecast under-/over-estimation <sup>1</sup> , pp. | Magnitude of forecast error <sup>2</sup> , pp. |
| GDP (volume)                             | 1.5                      | -0.2                    | 1.7  | 1.7  |
| GDP (value)                              | 3.5                      | 1.7                     | 1.8  | 1.8  |
| Private consumption (value)              | 3.1                      | 2.3                     | 0.8  | 1.0  |
| Current account, % of GDP                | -0.4                     | -1.0                    | 0.7  | 1.3  |
| Inflation                                | 2.1                      | 1.1                     | 1.0  | 1.1  |
| Wage bill                                | 2.5                      | 1.3                     | 1.2  | 1.2  |
| Unemployment rate                        | 8.2                      | 8.6                     | -0.4   | 0.5  |
| Central government debt, % of GDP        | 47.5                     | 46.0                    | 1.5  | 1.5  |
| Central government net lending, % of GDP | -2.9                     | -3.4                    | 0.5  | 0.6  |
| General government net lending, % of GDP | -1.8                     | -2.5                    | 0.7  | 1.1  |

Forecasts are compared with March/July preliminary national accounts data.

Averages for the past five years are calculated on the basis of spring and autumn forecasts concerning the budget year.

<sup>1</sup> Over- or understimation is indicated by average forecast error. <sup>2</sup> The average of absolute error values indicates the average magnitude of forecast errors, regardless of the direction of error.

**Table 3. National balance of supply and demand, EUR million**

|                               | Current prices                              |                |                |                |                |                |
|-------------------------------|---|----------------|----------------|----------------|----------------|----------------|
|                               | 2014  | 2015           | 2016           | 2017**         | 2018**         | 2019**         |
| GDP at market prices          | 205 474                                     | 209 511        | 214 062        | 219 107        | 224 821        | 231 724        |
| Imports of goods and services | 78 393                                      | 77 810         | 78 262         | 82 371         | 86 988         | 91 530         |
| <b>Total supply</b>           | <b>283 867</b>                              | <b>287 321</b> | <b>292 324</b> | <b>301 478</b> | <b>311 809</b> | <b>323 254</b> |
|                               |   |                |                |                |                |                |
| Exports of goods and services | 76 482                                      | 77 186         | 75 677         | 79 287         | 83 559         | 87 980         |
| Consumption                   | 164 346                                     | 166 847        | 170 671        | 173 375        | 176 303        | 180 170        |
| private                       | 113 635                                     | 115 761        | 118 811        | 121 508        | 123 888        | 126 605        |
| public                        | 50 711                                      | 51 086         | 51 860         | 51 867         | 52 415         | 53 565         |
| Investment                    | 42 235                                      | 42 867         | 45 792         | 48 022         | 50 646         | 53 641         |
| private                       | 33 643                                      | 34 694         | 37 467         | 39 449         | 41 816         | 44 596         |
| public                        | 8 592                                       | 8 173          | 8 325          | 8 572          | 8 829          | 9 045          |
| <b>Total demand</b>           | <b>283 867</b>                              | <b>288 400</b> | <b>293 324</b> | <b>302 478</b> | <b>312 809</b> | <b>324 254</b> |
|                               | At reference year 2010 prices; not additive |                |                |                |                |                |
|                               | 2014  | 2015           | 2016           | 2017**         | 2018**         | 2019**         |
| GDP at market prices          | 186 552                                     | 187 053        | 189 648        | 191 868        | 193 805        | 196 164        |
| Imports of goods and services | 74 799                                      | 77 135         | 79 033         | 81 483         | 84 253         | 87 118         |
| <b>Total supply</b>           | <b>261 351</b>                              | <b>264 188</b> | <b>268 681</b> | <b>273 350</b> | <b>278 058</b> | <b>283 281</b> |
|                               |   |                |                |                |                |                |
| Exports of goods and services | 73 495                                      | 74 968         | 75 325         | 77 516         | 80 182         | 83 045         |
| Consumption                   | 148 267                                     | 149 835        | 152 140        | 153 162        | 153 683        | 154 590        |
| private                       | 103 127                                     | 104 669        | 106 775        | 107 999        | 108 761        | 109 634        |
| public                        | 45 136                                      | 45 171         | 45 381         | 45 193         | 44 960         | 44 999         |
| Investment                    | 38 694                                      | 39 102         | 41 147         | 42 281         | 43 582         | 45 019         |
| private                       | 30 885                                      | 31 681         | 33 623         | 34 688         | 35 936         | 37 382         |
| public                        | 7 801                                       | 7 418          | 7 523          | 7 592          | 7 643          | 7 631          |
| <b>Total demand</b>           | <b>261 224</b>                              | <b>265 230</b> | <b>269 560</b> | <b>274 060</b> | <b>278 570</b> | <b>283 610</b> |

**Table 4. Financial balance of the Finnish economy**

|   | 2012               | 2013        | 2014        | 2015        | 2016        |
|---|--------------------|-------------|-------------|-------------|-------------|
|   | relative to GDP, % |             |             |             |             |
| <b>Gross investment</b>   | <b>22.3</b>        | <b>21.2</b> | <b>20.6</b> | <b>20.5</b> | <b>21.4</b> |
| households and non-profit institutions                              | 6.5                | 6.2         | 5.9         | 5.7         | 6.3         |
| non-financial corporations and financial and insurance corporations | 11.8               | 10.8        | 10.5        | 10.8        | 11.3        |
| general government  | 4.0                | 4.2         | 4.2         | 3.9         | 3.9         |
| <b>Gross saving <sup>1</sup></b>                                    | <b>20.7</b>        | <b>19.7</b> | <b>19.7</b> | <b>20.0</b> | <b>20.2</b> |
| households and non-profit institutions                              | 4.5                | 5.0         | 4.2         | 3.8         | 3.1         |
| non-financial corporations and financial and insurance corporations | 14.3               | 13.2        | 14.5        | 15.1        | 15.3        |
| general government  | 1.9                | 1.5         | 1.0         | 1.1         | 1.8         |
| <b>Financial surplus</b>  | <b>-1.8</b>        | <b>-1.8</b> | <b>-1.2</b> | <b>-1.1</b> | <b>-1.7</b> |
| households and non-profit institutions                              | -2.3               | -1.5        | -1.9        | -2.1        | -3.4        |
| non-financial corporations and financial and insurance corporations | 2.6                | 2.3         | 3.9         | 3.7         | 3.6         |
| general government  | -2.2               | -2.6        | -3.2        | -2.7        | -1.9        |
| Statistical discrepancy   | -0.1               | 0.0         | 0.0         | -0.5        | -0.5        |

<sup>1</sup> Incl. capital transfers (net)