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# Economic Survey

Winter 2017

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Economic Prospects



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## PREFACE

This Economic Survey offers projections of economic developments in 2017–2019. 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 national accounts data for 2016 published by Statistics Finland in July 2017 and on other public statistical sources available by 14 October 2017.

Helsinki December 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 |
| HWI | 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**

After a year of robust expansion, Finnish economic growth will slow down to about two per cent in the forecast period. In the next few years, the economy will be supported by both foreign trade and domestic demand. Growth in exports will slow down in accordance with the trends in the world trade and economic growth will no longer be supported by net exports as strongly as before. Household demand will be subdued by slower growth in disposable income. Even though there will also be a slowdown in the growth of private investments, investments to GDP ratio will exceed 19% for the first time in many years.

Wages will rise more rapidly in 2018 and 2019. Unit labour costs will continue to increase, albeit more slowly than in our competitors, and there will be a further improvement in the competitiveness of Finnish industries. Labour productivity will increase more rapidly than in the past few years. Economic expansion will boost employment and unemployment will fall. The employment rate will reach almost 71% in 2019.

General government deficit will shrink and the indebtedness rate will slow down. However, the deficits will persist, despite rapid economic growth.

## **Global economy on a growth path**

Growth in the global economy is broad-based and especially in the euro area, the outlook has improved. Acceleration of the economic growth has also boosted world trade, which is now growing at a significantly faster pace than the global GDP. World trade is growing faster than the global GDP, when compared with the trends in the past few years. However, the gap is still narrower than in the first decade of the

2000s. The improved economic outlook for the major economies also means that investment goods now account for a larger share of the world trade.

Strong growth in the euro area is continuing, economic confidence remains high and investments are almost at the same level as before the financial crisis. The employment situation remains good but in the United States and many other countries, wages are growing at a modest rate, which means that purchasing power is almost stagnant and inflation is expected to remain low. Despite this, consumers in many countries are optimistic about the economy.

### **Rapid economic growth is set to continue**

Finnish GDP is expected to grow by 3.1% in 2017. Supported by a higher employment, private consumption will continue to grow, there are still no signs of a slowdown in housing construction and companies have made substantial investments in production capacity. Growth in world trade and economic expansion in most of our main export markets have helped Finnish exports to recover.

In the first half of the year, unemployment declined at a very slow rate but it is now shrinking more rapidly. More rapid economic growth has been accompanied by a significantly higher employment rate even though there have also been major improvements in labour productivity. Inflation will remain low even though it will pick up towards the end of the year as energy prices are increasing.

In 2018, economic growth is expected to slow down to 2.4%. During the autumn, there have more signs that the economic growth is continuing. These include an increase in new industrial orders and a continuing construction boom in growth centres. Sluggish demand, which for years discouraged companies from expanding production no longer seems to worry industries as in the past. Business tendency surveys conducted by the Confederation of Finnish Industries suggest that the positive economic cycle is continuing.

Driven by demand, exports will grow strongly in 2018 and Finland will no longer lose market shares. Exports will be further boosted by improvements in the cost competitiveness of Finnish companies. Exports will continue to be driven by exports of goods. Net exports will support growth throughout the forecast period even though imports of production inputs will also increase. Imports will be boost-

ed by the demand for production inputs and by domestic demand for investments and consumption demand.

In 2018, private consumption will be strengthened by higher earnings and a higher employment rate. However, disposable income of households will not grow as rapidly as in 2017 because a higher inflation will cause private consumption to grow more slowly.

All types of investment, also including research and development, will grow. Faster economic growth, export expansion, low interest rates and positive trends in the global economy are all important factors ensuring the continuing growth of private investments in Finland. Rapid growth in housing construction is continuing.

There are good prospects for a higher employment rate in 2018. The number of job vacancies is very high and as the Finnish GDP is expected to grow at a reasonable pace throughout the forecast period, demand for labour will also remain steady. Growth in employment will pick up and is set to reach one per cent in 2018.

Prices will rise in 2018 in a broad range of different product categories but the increases in the prices of services will have the greatest impact on overall inflation. Moderate increases in oil prices, stronger US dollar and low but rising interest rates are also expected to boost inflation during the forecast period. Tax increases will accelerate inflation by as much as 0.4 percentage points.

In 2018, earnings will increase by 2%, assuming that most of the coming wage settlements will be in accordance with those concluded in industries. Wage drifts are expected to remain below average because of local settlements and company-specific items.

In 2019, Finnish GDP is expected to grow by 1.9%. Private consumer demand will be the biggest factor behind the slower growth. This is because households' disposable income will grow more slowly than in 2018. Faster inflation will slow down the growth of disposable income even though, at the same time, it is supported by higher employment.

With an increase in production investments, such as the large projects in the forest industry, private investments will continue to grow at a steady rate. The employment rate will continue to improve, albeit at a slightly slower pace than in 2018. The rate of increase in consumer prices will stabilise at 1.5% in 2019.

## **Economic growth will not eliminate general government deficit**

Steady economic growth will improve general government finances. Economic upturn increases tax revenue, which in turn strengthens both central government and local government finances. However, the structural imbalances in public finances will persist. Despite rapid economic growth, general government revenue will not be enough to cover the expenditure.

Central government in particular will remain substantially in deficit. Also in local government finances expenditure exceeds the revenue. For many years, social security funds have generated large surpluses but as the population is ageing, social security expenditure has grown and the surpluses have decreased substantially over the past seven years. Pension expenditure will continue to grow at a rapid rate, which means that the surpluses in the social security funds will be further reduced.

For the first time in many years, public debt to GDP ratio declined in 2016. Rapid GDP growth will cause the debt ratio to shrink, and it is expected to fall just below 60% in 2019. With slower economic growth and a continuous increase in age-related expenditure, there is a danger that the debt ratio will start growing again in the next decade.

## **Risks inherent in the economic growth**

Most of the risks inherent in the global economy are still skewed to the downside. A monetary policy, in which the emphasis has been on quantitative easing, has increased liquidity in the financial market and the combination of high asset prices and indebtedness is causing concern. Expected rises in interest rates will add to the burdens of government debt servicing. The European banking system is now more tolerant of risks but there are still worrying risk concentrations in individual EU Member States that may exceed their risk bearing capacity.

The most important of the positive risks is the faster than expected economic growth in the industrialised countries, especially in Europe and especially if countries continue to implement structural reforms supporting the growth.

In the Finnish economy, the risks are in balance. Private consumption may increase more rapidly than forecast if there are positive surprises in the employment rate and consumer confidence remains high. At the same time, however, if for some reason there is a decline in consumer confidence and households start saving or if capacity problems start denting demand, costs increase and inflation starts to pick up, private consumption may remain lower than forecast. Possible delays in the large projects planned for the next few years are the main reason for uncertainty in investments. Value added generated by exports also involves a positive risk if service exports with high domestic value added grow more rapidly than expected.

**Table 1. Key forecast figures**

|                      | 2016   | 2014                | 2015 | 2016 | 2017*** | 2018*** | 2019*** |
|----------------------|--------|---------------------|------|------|---------|---------|---------|
|                      | EUR bn | change in volume, % |      |      |         |         |         |
| GDP at market prices | 215.6  | -0.6                | -0.0 | 1.9  | 3.1     | 2.4     | 1.9     |
| Imports              | 79.4   | -1.3                | 3.2  | 4.2  | 3.5     | 3.5     | 3.6     |
| Total supply         | 295.0  | -0.8                | 0.9  | 2.5  | 3.2     | 2.7     | 2.4     |
| Exports              | 76.8   | -2.7                | 0.8  | 1.0  | 6.8     | 4.5     | 4.5     |
| Consumption          | 170.8  | 0.4                 | 1.1  | 1.6  | 1.3     | 1.3     | 0.9     |
| private              | 119.1  | 0.8                 | 1.7  | 1.8  | 1.8     | 1.6     | 1.3     |
| public               | 51.7   | -0.5                | -0.0 | 1.2  | 0.1     | 0.6     | 0.1     |
| Investment           | 46.4   | -2.6                | 0.7  | 7.2  | 5.6     | 4.1     | 4.1     |
| private              | 37.9   | -3.4                | 2.2  | 7.9  | 6.8     | 4.4     | 4.7     |
| public               | 8.6    | 0.9                 | -5.2 | 3.9  | 0.8     | 2.7     | 0.9     |
| Total demand         | 294.7  | -0.8                | 1.1  | 2.1  | 3.0     | 2.5     | 2.2     |
| domestic demand      | 217.9  | -0.1                | 1.2  | 2.5  | 1.7     | 1.7     | 1.3     |

**Table 2. Other key forecast figures**

|  | 2014 | 2015 | 2016 | 2017** | 2018** | 2019** |
|--|------|------|------|--------|--------|--------|
| GDP, EUR bn  | 205  | 210  | 216  | 225    | 234    | 243    |
| Services, change in volume, %                      | -0.4 | 0.2  | 1.3  | 3.0    | 2.1    | 1.5    |
| Industry, change in volume, %                      | -0.2 | -1.6 | 1.1  | 4.6    | 2.7    | 3.2    |
| Labour productivity, change, %                     | 0.1  | 0.1  | 1.2  | 2.6    | 1.4    | 1.4    |
| Employed labour force, change, %                   | -0.4 | -0.4 | 0.4  | 0.7    | 1.0    | 0.6    |
| Employment rate, %                                 | 68.3 | 68.1 | 68.7 | 69.4   | 70.3   | 70.7   |
| Unemployment rate, %                               | 8.7  | 9.3  | 8.9  | 8.6    | 8.1    | 7.7    |
| Consumer price index, change, %                    | 1.0  | -0.2 | 0.4  | 0.8    | 1.4    | 1.5    |
| Index of wage and salary earnings, change, %       | 1.4  | 1.4  | 0.9  | 0.2    | 2.0    | 2.0    |
| Current account, EUR bn                            | -2.6 | -2.1 | -3.0 | -2.8   | -3.0   | -3.1   |
| Current account, relative to GDP, %                | -1.3 | -1.0 | -1.4 | -1.2   | -1.3   | -1.3   |
| 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), %  | 1.5  | 0.7  | 0.4  | 0.5    | 0.9    | 1.4    |
| General government expenditure, relative to GDP, % | 58.1 | 56.9 | 55.8 | 53.9   | 52.8   | 52.0   |
| Tax ratio, relative to GDP, %                      | 43.9 | 44.0 | 44.1 | 43.1   | 42.1   | 41.9   |
| General government net lending, relative to GDP, % | -3.2 | -2.7 | -1.8 | -1.2   | -1.3   | -0.8   |
| Central government net lending, relative to GDP, % | -3.8 | -3.0 | -2.7 | -2.3   | -2.1   | -1.4   |
| General government gross debt, relative to GDP, %  | 60.2 | 63.6 | 63.1 | 61.1   | 60.2   | 59.2   |
| Central government debt, relative to GDP, %        | 46.3 | 47.6 | 47.5 | 47.1   | 46.7   | 46.0   |

## ALTERNATIVE CALCULATIONS FOR FISCAL ADJUSTMENT ON THE BASIS OF FISCAL RULES

As a result of the rapid economic growth, Finland's general government debt to GDP ratio is declining for the first time in many years. Despite steady economic growth, the deficits in Finland's public finances are expected to persist in the coming years. The debt ratio will, however, continue to fall because general government debt will grow more slowly than the GDP.

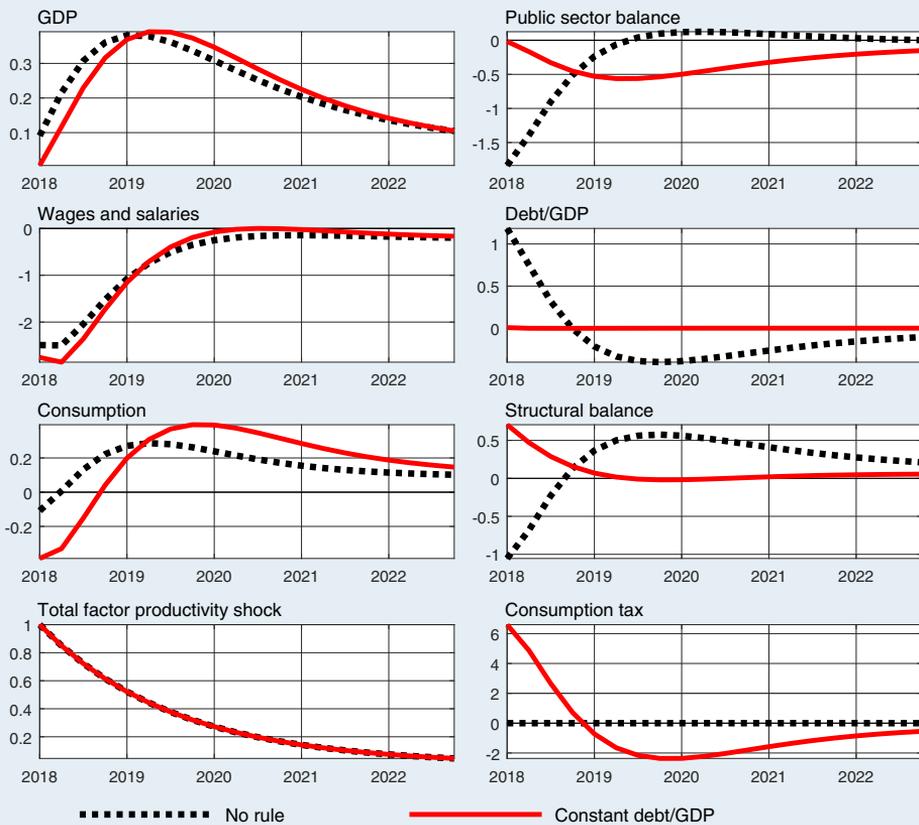
The state of public finances can also be examined on the basis of structural balance in which consideration is given to the difference between economic growth and potential output growth as well as structural factors that weaken general government finances. For example, the growth of ageing-related pension and care expenditure will also weaken the structural balance even if there were no decisions to increase expenditure. According to an estimate published by the Ministry of Finance in September 2017, the structural balance has strengthened in recent years, partly as a result of adjustment measures, but it is forecast to weaken again in the next few years as the output gap is closing and age-related expenditure continues to increase. However, when the structural deficit is examined, it should be noted that there are considerable uncertainties regarding the way in which it is measured. The estimates of the output gap play an important role in the calculation of the structural deficit.

Fiscal rules can help to ensure the stability of public finances. Finland is committed to the common fiscal rules of the EU. Under the Treaty on the Functioning of the European Union, general government debt should be kept under 60% (and the deficit under 3%) of the GDP. Furthermore, under the preventive arm of the Stability and Growth Pact, a medium-term objective (MTO) has been set for the structural deficit. The MTO set for Finland's structural deficit is currently 0.5% of the GDP. In other words, the structural deficit should not be more than 0.5% of the GDP.

In this box, the calculations produced using the macro model (Kooma model) of the Ministry of Finance Economics Department are examined. The calculations are based on a range of different fiscal rules. The review period starts from the beginning of 2018 and continues until the year 2022. The findings are reported as deviations from the baseline, which may for example be the assessment of Finland's economic outlook presented by the Ministry of Finance Economics Department in this publication. In the examination, the following rules are applied to the management of public finances: (i) general government debt will be kept at 60% of the GDP; (ii) fluctuations in the structural balance are eliminated; and (iii) general government debt will remain constant (no new debt is taken or no debts are repaid, compared with the base year). As shown by the calculations, different rules impact the economy in different ways. The purpose of the calculations is to examine the functioning of the rules in different situations in which the economy is hit by unexpected shocks.

According to the calculations, a positive shock of one per cent affecting total factor productivity (TFP) will boost economic growth by making the production process more efficient. At first, the technology change will mean that people work less because higher productivity will, for a short period, lower the utilisation rate of production factors, which will manifest itself as a negative output gap. For this reason, liquidity constrained households will reduce their consumption. Public finances will be pushed into deficit, mainly because of shrinking earned income tax revenue. As a result of stronger economic growth and low prices, a substantial proportion of the households will start consuming more and new investments will be made. Higher demand will also gradually strengthen public finances because the tax revenue will also increase as a result.

In the first calculation, the productivity shock described above will be allowed to impact the economy without fiscal rules (see the 'dashed black line' in Figure 1).



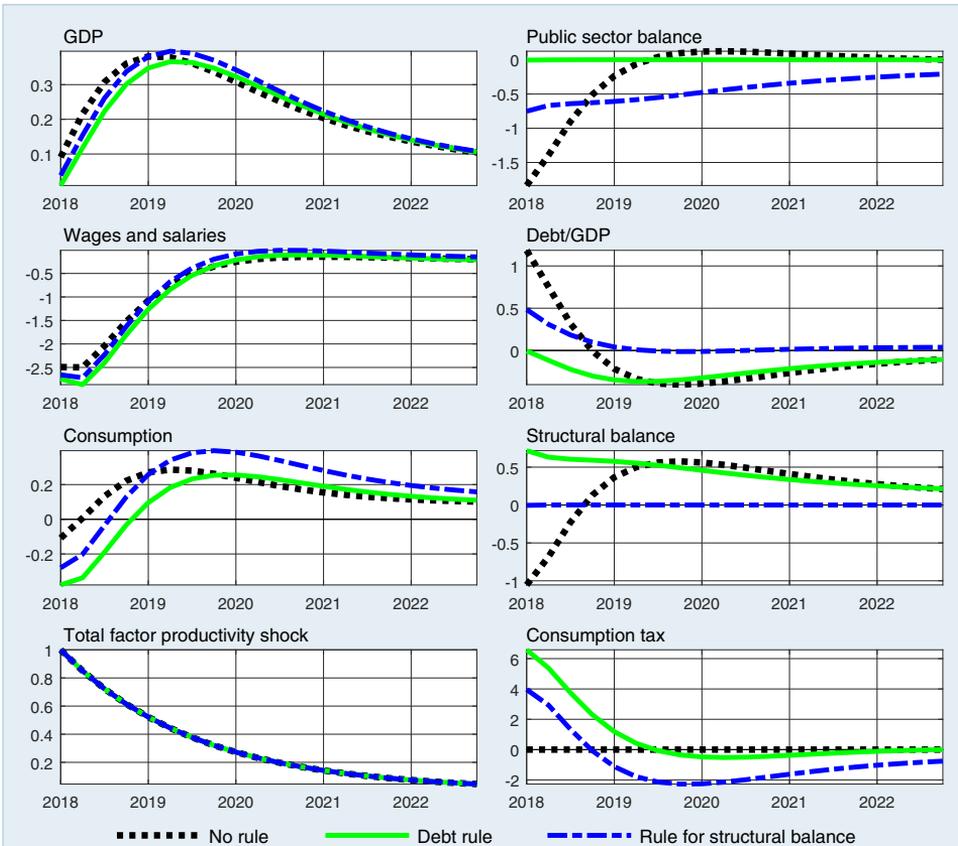
The same figure also shows the economic impacts of the same shock when the calculations are based on the fiscal rule in which general government debt relative to GDP must remain constant over time (see the 'dashed red line' in Figure 1). In the calculation, the debt to GDP ratio is 60%. When combined with changes in taxation, this rule will result in higher (lower) taxes on consumption when the debt to GDP ratio is set to increase (decline). In the calculation, the productivity shock will push the public sector into deficit relative to the baseline, which will result in higher taxes on consumption. However, taxes only need to be raised for a fairly short period because as the output increases, the debt ratio will decline and it may even be possible to reduce taxes so that the debt can be kept at 60% of the GDP. Higher taxes on consumption will reduce consumption, which has an impact on output and other factors. Wage earners are able to compensate some of the changes in purchasing power arising from fiscal policy measures by means of wage elasticity. As a result, the wage bill will decline (increase) as taxes on consumption are raised (cut).

By applying the rule in which the debt to GDP ratio remains constant, public finances will remain in deficit relative to the baseline for the whole duration of the review period. This is because the total productivity shock will help the economy grow faster than the baseline. In the first year, the structural balance<sup>1</sup> is slightly stronger than the baseline because the output gap resulting from the total productivity shock has not yet closed. The debt to GDP ratio will only remain constant if the taxes on consumption are about 3% higher in the first year and after that between 1 and 2% lower than in the baseline ensuring fiscal balance.

The second calculation shows the impacts of the total productivity shock in a situation where the rule keeping the debt constant (unbroken green line) and the rule keeping the structural balance at a level set out in the baseline (dashed blue line) are applied. In the model, structural balance is defined so that the actual balance in the economy is adjusted to the output gap existing at the time. In the model, output gap is defined with the help of the capital utilisation rate and the employment situation. The idea behind the rule keeping structural balance constant is to strengthen general government balance during a period of rapid economic growth and weaken it during a period of slow growth.

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<sup>1</sup> In this box, structural balance is defined on the basis of a method that is less complex than the one used by the Ministry of Finance in other calculations, in which the structural balance is defined on the basis of the production function methodology jointly developed by the European Commission and EU Member States.



The calculation shows that the rule keeping the amount of debt constant will increase taxes more (about 4%) during the first year than under the structural balance rule, relative to baseline (2%). This is because the first rule (debt rule) prohibits additional borrowing in which case the debt ratio will decline relative to baseline as the economy grows more rapidly than the baseline. In this situation, output and private consumption will grow more slowly than if the rule was not applied. However, on the other hand, if the structural balance rule is applied, the economy and consumption will grow slightly more than if the debt rule is applied. This is because the taxes on consumption will remain lower. At first, the debt to GDP ratio will increase, a result of the negative output gap. The structural balance rule will keep public finances in deficit throughout the review period.

When defined using the change in the structural balance, the rule keeping the structural balance constant will lead to a neutral fiscal policy, irrespective of the economic cycle. At the same time, however, the rule keeping the debt ratio constant will result in a procyclical fiscal policy. The rule keeping the debt constant will, in the case of a shock similar to the selected one, lead to a situation where output is always slightly lower than in a situation where the rule correcting the structural balance is applied. This is because there is no additional borrowing.

# 1 Economic outlook

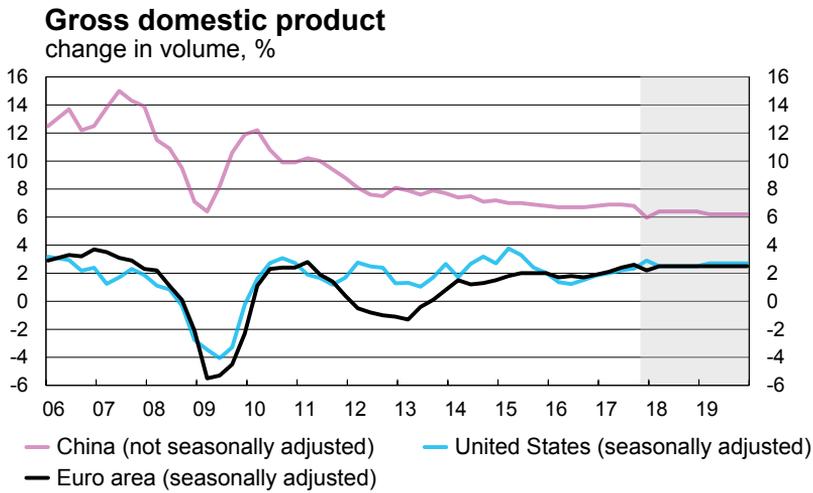
## 1.1 Global economy

### **The global economy remains on a growth path**

The positive outlook in the global economy has strengthened during 2017. Especially in Europe, growth has been faster than expected. Growth in the global economy is broad-based. In many countries, both exports and domestic demand have recovered. Unemployment has declined but the modest growth in wages has not yet led to a faster inflation.

The United States economy has continued to grow at a rapid pace during the second half of 2017 and indicators suggest that the growth will continue. There has been a particularly strong growth in new industrial orders even though in export orders, the expectations are more cautious. Inflation is still expected to remain at moderate levels. The assumption is that the modest growth in nominal wages is caused by sluggish productivity growth and oversupply of labour. In the short term, the planned tax reform would considerably weaken the budgetary position of general government.

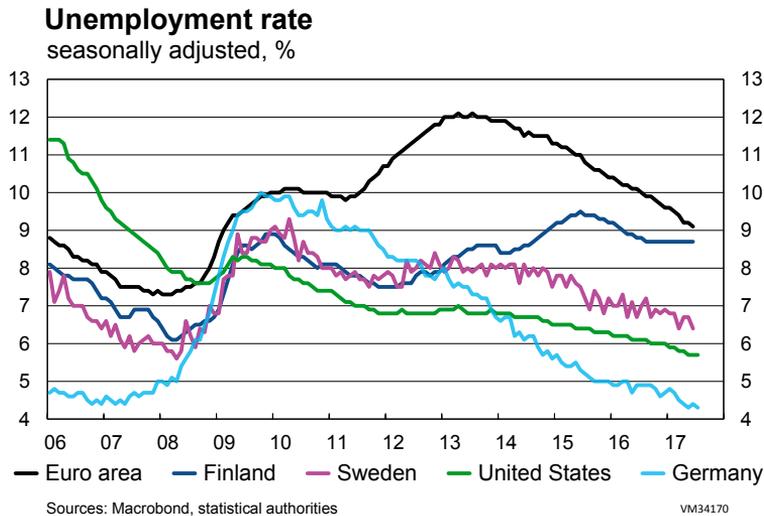
Strong growth in the euro area is continuing, economic confidence remains high and investments are now almost at the same level as before the crisis. The employment situation remains good but as in the United States, wages in many countries are only growing at a modest rate, which means that purchasing power is almost stagnant and inflation is expected to remain low. Despite this, consumers in many countries are optimistic about the economy.



In Germany, the economic growth is above the country’s potential growth trend, which is reflected in a tighter labour market and in wages that are rising faster than in other countries. In France, too, the economy is now on a growth path and the indicators suggest that the growth will accelerate. However, consumer confidence in France remains weaker than elsewhere in the euro area. The French government is planning labour market and tax reforms to improve the employment situation and boost the country’s growth potential. The Italian economy is picking up after a long period of modest growth. The country’s industry is more optimistic about the future than the service sector. Non-performing loans may threaten the profitability of the Italian banking sector and the parliamentary elections next spring have aroused concern about the direction of the country’s economic policy.

In Britain, the economic outlook is still overshadowed by the uncertainty generated by Brexit. Weakening of the British pound against other main currencies has boosted inflation and in November, the Bank of England raised its key interest rate despite sluggish growth. In the Nordic area, economic growth remains strong but the overheating of the housing market is causing concern, especially in Sweden.

In Japan, the economic outlook is positive and a gradual recovery from a long recession is gaining strength. Private consumption is supported by wage trends and positive expectations. Inflation remains low, however, and no changes are expected in the monetary policy boosting growth. The increase in the consumption tax rate, which is expected to be introduced in autumn 2019, will strengthen general government finances but will cast a shadow on private consumption.



Services were the main factor contributing to the rapid economic growth in China during the first half of 2017. Growth in private investments is slowing down but private consumption is growing at a steady rate. Increasing indebtedness of households is the main factor behind the growth in private sector indebtedness. In the long term, economic growth is still expected to slow down and shift from exports to consumption.

The Russian economy is still dependent on the production and prices of oil and natural gas. These sectors have remained sluggish during the year in review. Higher oil prices have, however, given them a boost during the second half of 2017. The Russian economy has been growing at a rapid pace during 2017 but in the long term the prospects are overshadowed by a one-sided production structure and structural problems in the labour market.

India has enjoyed rapid economic growth in recent years but there was a temporary slowdown in 2016, which was caused by a currency reform and the introduction of a goods and services tax. Next year, the economy is expected to start growing again at a rate experienced before 2016. Widespread poverty, huge unofficial labour markets and serious environmental problems in large cities are some of the problems facing India.

The outlook for Brazil has improved after a record-deep recession. Structural reforms are expected to boost the country's growth potential, which will also have a positive impact on other Latin American economies. The difficult political situation in South Africa is weakening confidence, which also means that the region's economies will recover more slowly.

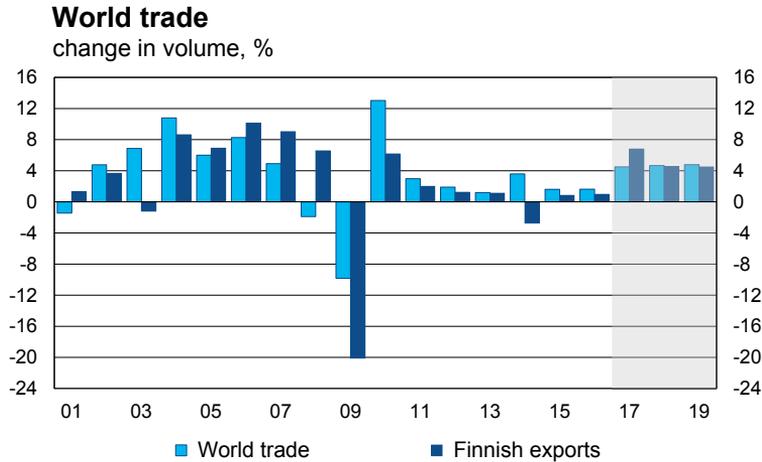


Economic growth has also pushed up prices for energy products and raw materials. The decisions of the main oil producing countries to limit production until the end of 2018 will help to keep crude oil prices steady.

Faster economic growth and gradual normalisation of the monetary policy will mean that the main market rates will increase in the next few years. The modest outlook for core inflation will, however, dampen this trend. Compared with the situation a few years ago, interest rates on government loans are low and only modest increases in them are expected in the coming years.

### World trade has grown more rapidly than expected

Driven by emerging economies, world trade grew at an extremely rapid pace during the second half of 2016. This spring, the growth in Asia slowed down but indicators suggest that there will again be brisk growth during the second half of 2017. Improved economic outlook for the major economies also means that investment goods now account for a larger share of the world trade. World trade is growing faster than the global GDP, when compared with the trends in the past few years. However, the gap is still narrower than during the first decade of the 2000s.



### Risks are still skewed to the downside

The risks to the trends described above are still skewed to the downside. Geopolitical tensions have not markedly escalated and the expectations concerning the impacts of protectionism on the global economy now mainly arise from the developments in the North American Free Trade Area. Nevertheless, there are still substantial risks in the global economy. Monetary policy, in which the emphasis has been on quantitative easing, has increased liquidity in the global economy and the combination of high asset prices and indebtedness is causing concern. Expected rises in interest rates will add to the burdens of government debt servicing.

Steady economic growth in the euro area may lead to a situation where structural reforms increasing growth potential are considered less urgent. However, the economic outlook is still overshadowed by longer-term challenges, such as the ageing of the population and sluggish productivity growth.

Faster than expected economic growth in industrial countries, especially in Europe, is probably the most important of the positive risks. If the implementation of the structural reforms helping to boost growth will continue, this risk gains importance. World trade may also be set for a faster than expected growth if the living standards, and thus also the consumer demand, in the emerging economies will grow more rapidly than forecast.

**Table 3. Gross domestic product**

|                | 2014                | 2015 | 2016 | 2017** | 2018** | 2019** |
|----------------|---------------------|------|------|--------|--------|--------|
|                | change in volume, % |      |      |        |        |        |
| World (PPP)    | 3.2                 | 3.3  | 3.2  | 3.7    | 3.8    | 3.8    |
| Euro area      | 1.0                 | 2.2  | 1.8  | 2.3    | 2.5    | 2.5    |
| EU             | 1.4                 | 1.6  | 1.7  | 2.2    | 2.3    | 2.2    |
| Germany        | 1.6                 | 1.5  | 1.9  | 2.3    | 2.5    | 2.5    |
| France         | 0.2                 | 1.2  | 1.2  | 1.8    | 2.1    | 2.2    |
| Sweden         | 2.0                 | 3.9  | 3.3  | 3.2    | 3.0    | 2.9    |
| United Kingdom | 2.9                 | 2.2  | 1.8  | 1.4    | 1.3    | 1.2    |
| United States  | 2.4                 | 2.6  | 1.5  | 2.4    | 2.5    | 2.7    |
| Japan          | -0.1                | 1.1  | 1.0  | 1.4    | 1.2    | 1.1    |
| China          | 7.3                 | 6.9  | 6.7  | 6.6    | 6.4    | 6.2    |
| Russia         | 0.6                 | -3.7 | -0.2 | 1.5    | 1.4    | 1.4    |

Sources: Eurostat, statistical authorities, IMF, MoF

**Table 4. Background assumptions**

|   | 2014  | 2015  | 2016 | 2017** | 2018** | 2019** |
|---|-------|-------|------|--------|--------|--------|
| World trade growth, %                                 | 2.8   | 2.0   | 1.6  | 4.5    | 4.7    | 4.8    |
| EUR/USD   | 1.30  | 1.10  | 1.10 | 1.14   | 1.10   | 1.02   |
| Industrial raw material price index, EA, € (2015=100) | 112.6 | 100.1 | 96.3 | 114.6  | 120.3  | 133.0  |
| Crude oil (Brent), €/barrel                           | 76.4  | 48.6  | 41.0 | 48.0   | 57.8   | 64.9   |
| 3-month Euribor, %                                    | 0.2   | 0.0   | -0.3 | -0.3   | -0.2   | 0.0    |
| Government bonds (10-year), %                         | 1.5   | 0.7   | 0.4  | 0.6    | 0.9    | 1.4    |
| Export market share (2000=100) <sup>1</sup>           | 91.2  | 90.2  | 89.9 | 91.9   | 91.7   | 91.5   |
| Import prices, %                                      | -1.6  | -4.0  | -1.9 | 4.1    | 2.9    | 2.8    |

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

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

## 1.2 Foreign trade

Finland's foreign trade has recovered rapidly during 2017. Both exports and imports have grown faster than expected. Growth in world trade and economic expansion in most of the Finnish main export markets have been the main factors boosting foreign trade in 2017.

## 1.2.1 Exports and imports

Finnish exports have picked up substantially in 2017. There was brisk growth in the exports of both goods and services during the first three quarters of the year. World trade has been growing faster than in the past few years, which has also helped to boost Finnish exports. Demand in the main export markets has rebounded. Exports of goods to the euro area grew during the first half of the year, but there have also been signs of recovery in the trade with Russia, and China is taking an increasing share of the Finnish exports. During 2017, there has been growth in all traditional export sectors, such as paper, metal and chemical industries products as well as heavy engineering.

The volume of goods exports increased by 9.1 % in the first three quarters of the year 2017, compared with the same period in 2016. According to Finnish Customs, there has been growth in all main export categories. According to the latest figures, there was also brisk growth (+8.6 %) in the exports of services during the first three quarters of the year. Services account for almost one third of all Finnish exports and the share is expected to remain unchanged in the short term. Overall growth in export volumes was almost 8.8 %.

According to the national accounts published in July, imports grew by 4.4 % in 2016 and the growth has continued in 2017. According to the statistics compiled by the Finnish Customs, imports of goods increased by almost 8 % between January and September, when measured with the volume index. Growing investments and the imports of intermediate products used by export industries are boosting the imports of goods and this trend is expected to continue in the coming years. As in exports, there is also a broad range of different items boosting the growth of goods imports. Intermediate and industrial products are the most important of them.

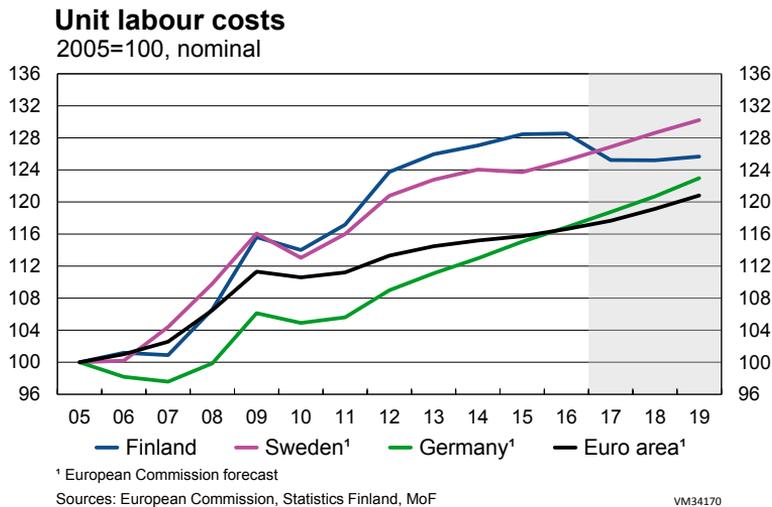
**Table 5. Foreign trade**

|                               | 2014                       | 2015 | 2016 | 2017** | 2018** | 2019** |
|-------------------------------|----------------------------|------|------|--------|--------|--------|
|                               | <b>change in volume, %</b> |      |      |        |        |        |
| Exports of goods and services | -2.7                       | 0.8  | 1.0  | 6.8    | 4.5    | 4.5    |
| Imports of goods and services | -1.3                       | 3.2  | 4.2  | 3.5    | 3.5    | 3.6    |
|                               | <b>change in price, %</b>  |      |      |        |        |        |
| Exports of goods and services | -0.4                       | -0.6 | -0.7 | 2.8    | 1.7    | 1.9    |
| Imports of goods and services | -1.6                       | -4.0 | -1.9 | 4.1    | 2.9    | 2.8    |

## 1.2.2 Prices and current account

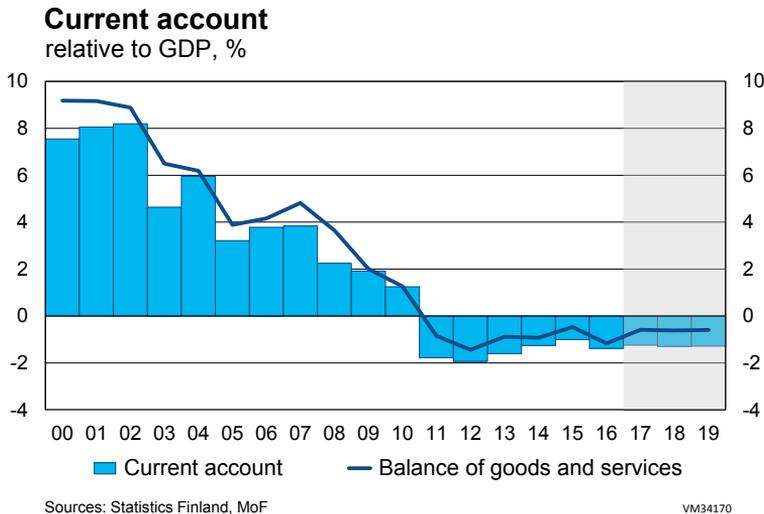
Both import and export prices declined in 2016 but the terms of trade improved because import prices declined more than export prices. Prices of oil and raw materials were the main factor behind the year-on-year decline. During the first three quarters of 2017, there was a substantial increase in import prices, compared with the same period in 2016. This was mainly the result of changes in the prices of oil and raw materials. Pricing of oil and raw materials will boost import prices during the forecast period but in the coming years, the prices will increase at a more moderate rate. Strengthening of the US dollar may, however, cause import prices to go up at the end of the forecast period. This means that higher import volumes and prices rises will boost the value of imports throughout the forecast period.

Changes in import and export prices partially depend on the same factors because prices of energy will cause both import and export prices to increase during the forecast period. However, in overall terms, changes in export prices will be more modest than the changes in import prices. This means that the terms of trade will weaken during the forecast period as import prices will increase more rapidly than export prices. Trends in unit labour costs, which has a major impact on the conditions for exports, will remain modest even though wages will increase in 2018 and 2019.



Growth in world trade will provide a better basis for Finland's exports during the forecast period even though the trade between emerging economies is the main factor driving the growth in world trade. Finland is, however, no longer losing market shares. Driven by export demand, there will be brisk growth in Finnish exports in 2018 and 2019. However, the growth will be slower than in 2017 because the start level is relatively high. The goods to services ratio is expected to remain unchanged, which means that exports will continue to be driven by exports of goods. This means that the imports of production inputs will also grow. Imports will be boosted by the demand for production inputs and by domestic demand for investment and consumption goods.

Finland's trade balance will improve slightly in 2017 as a result of the strong export performance. However, the balance of services will remain substantially in deficit. Despite stronger export growth, Finland's current account will remain in deficit during the forecast period because imports will also grow. The deficit in the service account and the redistribution of income account, and the fact that import prices are increasing more rapidly than export prices, are the main reasons for the current account deficit.



The negative risks in the forecast mainly concern the trends in the world markets and, consequently, export demand. However, most of the potential risks that arise from protectionism concern the North American market. At the same time, faster than expected growth in the developed economies, especially in the euro area, may improve Finland's export prospects. On the other hand, the positive risks in the forecasts are also connected with changes in the geographical distribution of the exports. A growing proportion of Finnish exports has been going to China in recent years. Finnish exports, most of which now go to developed countries, may be boosted by the growth of the emerging economies. Value added generated by exports also involves a positive risk if service exports with high domestic value added grow more rapidly than expected.

**Table 6. Current account**

|  | 2014   | 2015 | 2016 | 2017** | 2018** | 2019** |
|--|--------|------|------|--------|--------|--------|
|  | EUR bn |      |      |        |        |        |
| Balance of goods and services            | -1.9   | -1.0 | -2.5 | -1.1   | -1.3   | -1.4   |
| Factor incomes and income transfers, net | -1.3   | -2.0 | -0.9 | -1.7   | -1.7   | -1.7   |
| Current account                          | -2.6   | -2.1 | -3.0 | -2.8   | -3.0   | -3.1   |
| Current account, relative to GDP, %      | -1.3   | -1.0 | -1.4 | -1.2   | -1.3   | -1.3   |

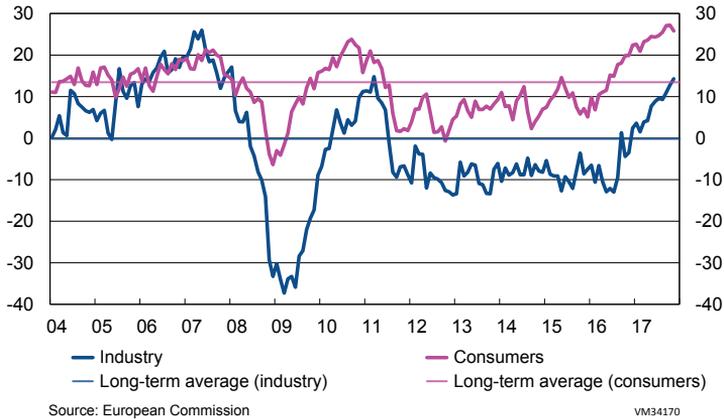
## 1.3 Domestic demand

### 1.3.1 Private consumption

#### Consumption continues to grow more slowly

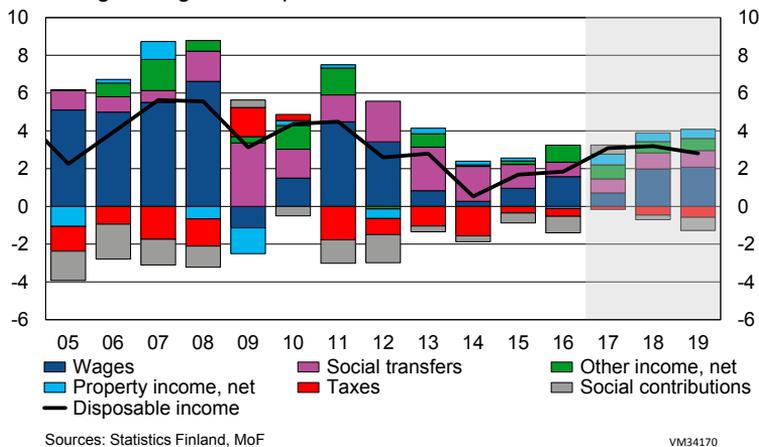
Growth in private consumption continues steadily. The improved employment situation and reduced taxation support the growth in household disposable income in 2017. The disposable real income will grow by more than 2%, as regardless of increasing energy prices, inflation will only accelerate a little. The Consumer Survey indicates that confidence in a positive economic outlook has clearly improved in the past year, and boosted by household confidence, private consumption will also grow in the next few years.

**Industry and consumer confidence**  
balance, seasonally adjusted



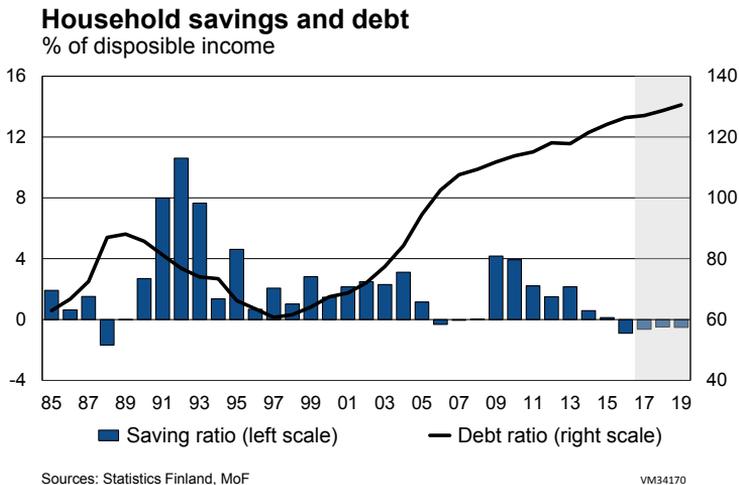
In addition to an increased earnings level, growth in private consumption will also be supported by the improving employment situation in 2018, as a result of which the growth in the sum of wages and salaries will accelerate to 3%. Household disposable income will grow even faster than in 2017. Social transfers will continue to grow, as pensions account for almost half of current transfers. However, accelerating inflation will slow down the growth in household disposable real income, decelerating the growth of private consumption.

**Households' disposable income**  
change and growth impact, %



In 2019, the sum of wages and salaries will continue to rise as the income level and employment growth continues, albeit more slowly than in 2018. Real income growth will be more sluggish due to the rising inflation, which will further slow down the increase in private consumption.

The household savings rate has fallen almost without interruption since 2010 and was as low as -0.9% in 2016. The fall in the savings rate is also reflected in the growth of household indebtedness, which in 2016 climbed to over 126% of disposable income. The household savings rate will remain in negative territory during the forecast horizon, despite the slowdown of consumption growth. 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.



The risks associated with growing consumption are well balanced. Household consumption may increase more than anticipated if household confidence rises and the outlook for improving the savings rate is not realised. On the other hand, the outlook for household purchasing power may be less positive than predicted if the anticipated improvement in employment rate is not realised or inflation accelerates further.

### 1.3.2 Public consumption

The public consumption to GDP ratio will drop during the outlook period as the value of GDP will increase more rapidly than government consumption expenditure. The largest items of consumption expenditure by government are personnel expenses and goods and services purchased. Public consumption will be reduced by the Competitiveness Pact and adjustment measures, in particular.

Local government consumption accounts for approximately two thirds and central government for less than one third of public consumption, while consumption by social security funds makes up the remainder. The proportion of central government consumption has declined steadily from 31% at the beginning of the millennium to 27%, whereas the proportion of local government consumption has increased from 62% to nearly 66% during this period. While the proportion of social security funds has varied slightly, it has remained at approximately 7% during the period under review

**Table 7. Consumption**

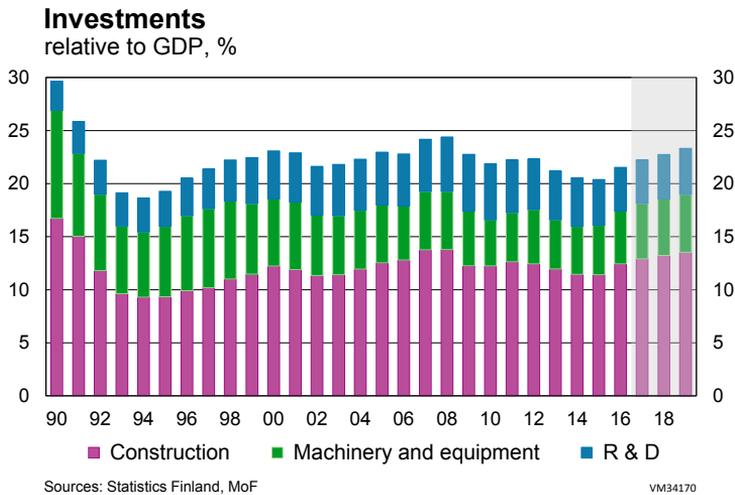
|  | 2016<br>share,<br>% | 2014                | 2015       | 2016       | 2017**     | 2018**     | 2019**     |
|--|---------------------|---------------------|------------|------------|------------|------------|------------|
|  |                     | Change in volume, % |            |            |            |            |            |
| Private consumption                                      | 100.0               | 0.8                 | 1.7        | 1.8        | 1.8        | 1.6        | 1.3        |
| Households   | 95.3                | 0.6                 | 1.9        | 1.9        | 1.9        | 1.6        | 1.3        |
| Durables   | 8.1                 | 1.9                 | 2.8        | 5.8        | 4.6        | 2.9        | 2.1        |
| Semi-durables  | 7.9                 | 0.3                 | 0.9        | 2.4        | 1.6        | 1.5        | 0.9        |
| Non-durable goods  | 25.7                | -0.2                | 0.7        | 0.6        | 1.1        | 1.2        | 1.1        |
| Services   | 52.7                | 0.4                 | 1.3        | 1.7        | 1.9        | 1.6        | 1.3        |
| Consumption by non-profit institutions                   | 4.7                 | 3.8                 | -2.0       | 1.0        | 0.5        | 0.5        | 0.5        |
| Public consumption                                       | 100.0               | -0.5                | 0.0        | 1.2        | 0.1        | 0.6        | 0.1        |
| <b>TOTAL</b>   |                     | <b>0.4</b>          | <b>1.1</b> | <b>1.6</b> | <b>1.3</b> | <b>1.3</b> | <b>0.9</b> |
| Individual consumption expenditure in general government |                     | -0.5                | 0.9        | 0.2        | -0.1       | 0.8        | 0.4        |
| Total individual consumption expenditure                 |                     | 0.4                 | 1.5        | 1.5        | 2.4        | 1.2        | 1.1        |
| Households' disposable income                            |                     | 0.5                 | 1.7        | 1.8        | 3.1        | 3.2        | 2.8        |
| Private consumption deflator                             |                     | 1.3                 | 0.3        | 0.9        | 0.9        | 1.4        | 1.5        |
| Households' real disposable income                       |                     | -0.8                | 1.4        | 0.9        | 2.1        | 1.8        | 1.3        |
|  |                     | %                   |            |            |            |            |            |
| Consumption as proportion of GDP (at current prices)     |                     | 80.0                | 79.7       | 79.2       | 77.3       | 76.4       | 75.6       |
| Household savings ratio                                  |                     | 0.6                 | 0.1        | -0.9       | -0.6       | -0.5       | -0.5       |
| Household debt ratio <sup>1)</sup>                       |                     | 121.5               | 124.2      | 126.4      | 127.0      | 128.7      | 130.6      |

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

### 1.3.3 Private investment

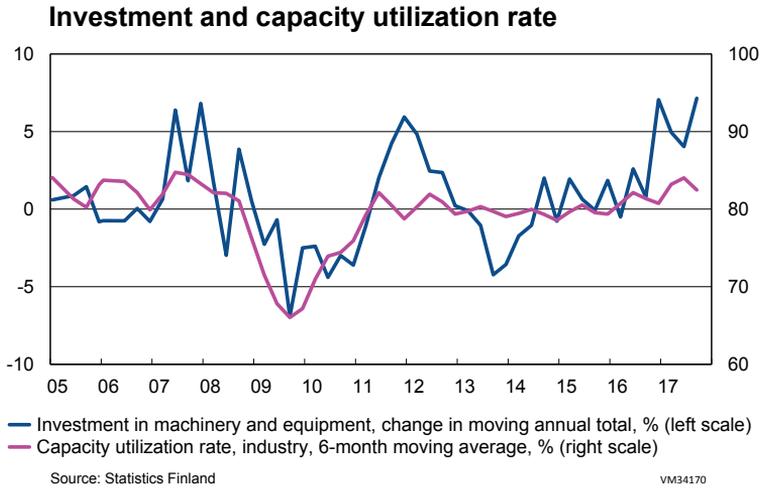
#### Increasingly brighter outlook

In 2016, investments put the Finnish economy onto a growth trajectory. Private investment has continued to develop strongly in 2017, and all investment types, including investments in research and development, are growing. The stronger economic growth in Finland, increased exports and interest rates that remained low have been significant factors underpinning private investment growth. Boosted by a positive international outlook, the solid growth of private investment is also expected to continue in 2018 and 2019. During the forecast horizon, the annual growth in private investment will be on average 5%. For the first time in a long period, private investment relative to GDP will increase to more than 19% towards the end of the forecast horizon.



The Competitiveness Pact has accelerated the increase in companies' operating surplus, which helps to fund investments. Investments in the EU have recovered close to their levels before the financial crisis, boosting the demand for investment goods manufactured in Finland. Growth in exports pushes up investments, especially in manufacturing, which is investing in machinery, equipment and transport equipment as well as intangible capital.

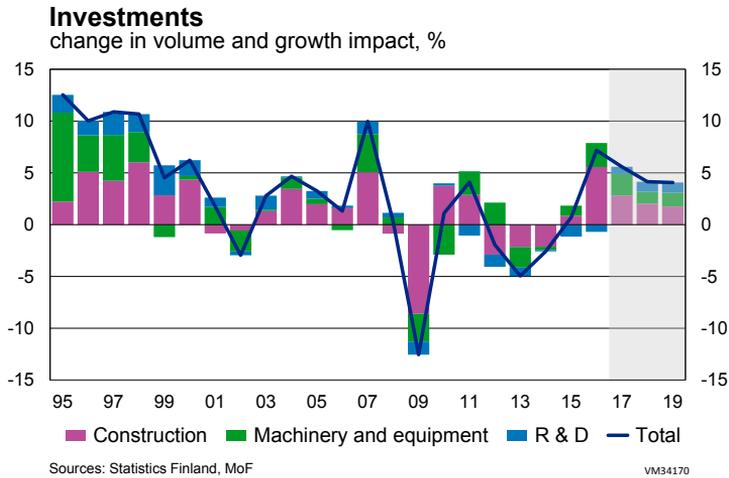
In 2017, the volume of construction investments, in particular, as well as investments in machinery, equipment and transport equipment has been high. No levelling out is in



sight in the cyclical position of residential housing construction. Additionally, the new construction regulations to enter into force in early 2018 are expected to push up the number of permits applied for and granted in late 2017 and, correspondingly, new starts in 2018. In non-residential building construction investments, the growth has been more even and is gradually slowing down. The outlook for the next few years remains bright. New international and other investors have emerged in the housing and real estate market, which has increased the number of building projects started. Households' intentions to purchase housing are also more solid. Renovation building is expected to develop steadily at an annual rate of approximately 2% during the period under review.

Considering the cyclical position, the State-subsidised housing production is high. The prices of residential housing construction investments increased by 3.4% year on year during the first three quarters of 2017, whereas the building cost index only went up by 0.4%. This indicates a cyclical tightening.

A number of major industrial projects are being planned, and the forecast assumes that one of these will be launched in 2019. This assumption makes the forecast for building construction, residential housing construction and investments in machinery and equipment, among other things, more positive. Civil engineering is expected to continue its growth over the next few years at an annual rate of approximately 2 to 2.5%. Investments in research and development will also pick up compared to previous years. According to the forecast, these investments will grow by approximately 5% in the next few years. Towards the end of the period under review, the relation to GDP of research and development investments will be over 4%.



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

|  | 2016         | 2014               | 2015       | 2016       | 2017**     | 2018**     | 2019**     |
|--|--------------|--------------------|------------|------------|------------|------------|------------|
|  | share,<br>%  | Change in volume,% |            |            |            |            |            |
| Buildings  | 47.7         | -5.4               | 2.1        | 9.9        | 5.5        | 3.7        | 3.2        |
| Residential buildings                              | 28.6         | -6.5               | 2.0        | 10.5       | 5.3        | 4.7        | 1.3        |
| Non-residential buildings                          | 19.1         | -3.7               | 2.3        | 9.0        | 5.7        | 2.2        | 6.1        |
| Civil engineering construction                     | 10.1         | 4.1                | -0.9       | 10.2       | 2.1        | 2.5        | 2.2        |
| Machinery and equipment                            | 23.2         | -1.6               | 4.4        | 10.1       | 9.0        | 4.9        | 5.7        |
| R&D-investments*                                   | 19.1         | -0.5               | -5.2       | -3.3       | 3.6        | 5.2        | 5.3        |
| <b>Total</b>                                       | <b>100.0</b> | <b>-2.6</b>        | <b>0.7</b> | <b>7.2</b> | <b>5.6</b> | <b>4.1</b> | <b>4.1</b> |
| Private  | 81.6         | -3.4               | 2.2        | 7.9        | 6.7        | 4.5        | 4.7        |
| Public   | 18.4         | 0.9                | -5.2       | 3.9        | 0.8        | 2.7        | 0.9        |
|  |              | %                  |            |            |            |            |            |
| <b>Investment to GDP ratio (at current prices)</b> |              |                    |            |            |            |            |            |
| Fixed investment                                   |              | 20.6               | 20.4       | 21.5       | 22.2       | 22.7       | 23.3       |
| Private  |              | 16.4               | 16.5       | 17.6       | 18.3       | 18.8       | 19.4       |
| Public   |              | 4.2                | 3.9        | 4.0        | 3.9        | 3.9        | 3.9        |

\* Includes cultivated assets and intellectual property products

### 1.3.4 Public investment

The public investment to GDP ratio will remain close to the long-term average, although public investment is expected to grow slightly in the next few years. The largest items of public investment will be civil engineering investments (30%), other construction investments (30%) as well as research and development investments (25%). The level of public investment will remain high due to such factors as a brisk rate of hospital construction, investments in the Government's key projects and transport route repairs as well as the counties' ICT system development.

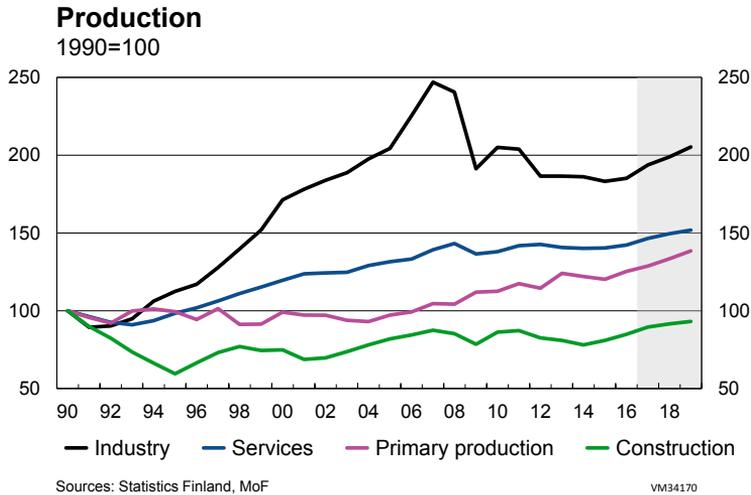
Local government investments account for more than half of public investment, while central government investments account for less than half. The proportion of social security funds is very small. The proportion of central government investment has declined from 53% at the beginning of the millennium to 45%, whereas the proportion of local government investment has increased from 47% to nearly 55% during this period.

## 1.4 Domestic production

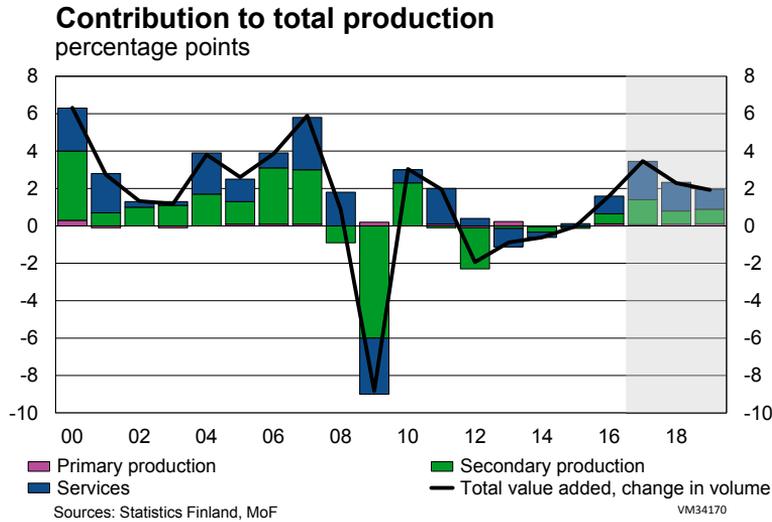
### 1.4.1 Total output

#### **Strongest economic growth in half a decade**

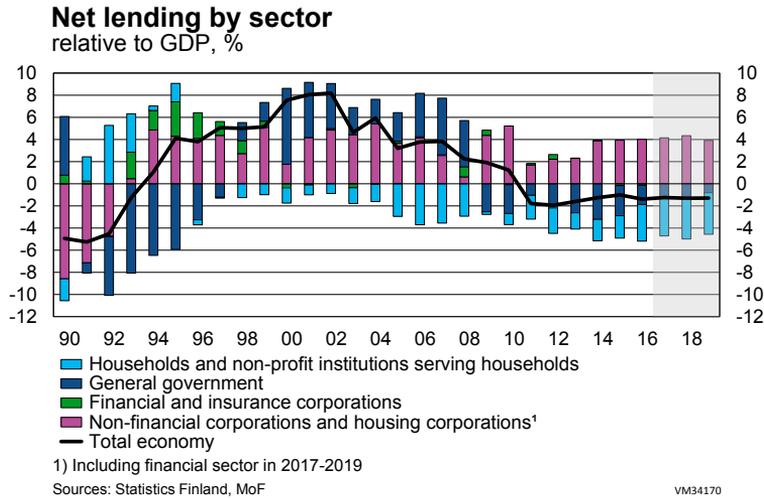
The increase in the gross value added for the economy in the first nine months of 2017 was nearly 4%. Economic growth was based on increased output in many industries since value added rose year on year across all main industries on the back of improved domestic and international demand. The strongest growth was recorded in manufacturing and construction, especially the technology industry with a 7% increase in its output. Services and primary production also showed a strong growth in excess of 3%. The value added in the financial and insurance sector grew by more than 10%. Other industries showing a strong growth included business services driven by demand for planning and design, and transport, which was boosted by demand for logistics. Output in many industries still remains below pre-financial crisis levels, but the most notable exceptions to this are chemical industry, real estate and business services.



During the autumn, there have been more signs of continuing economic growth. They include a significant increase in new orders in manufacturing and turnover in private service production as well as a continuing construction boom in growth centres. The lack of demand that restricted production opportunities for many years appears to hold enterprises back much less these days. Only a year ago one in three or four manufacturing, construction or service enterprises reported that shortage of demand was slowing output growth, but only one in four or five respondents to this fall's survey reported insufficient intermediate or final product demand. In real estate services, ICT services, construction and the technology industry in particular, a shortage of skilled labour is already hampering growth opportunities considerably more commonly than the demand level. In manufacturing, a shortage of capacity is also a larger obstacle to growth than a year earlier, particularly in the textile, clothing and forest industries. As a predictable result of this and other reasons, enterprises in these industries have announced expansions of existing capacity.



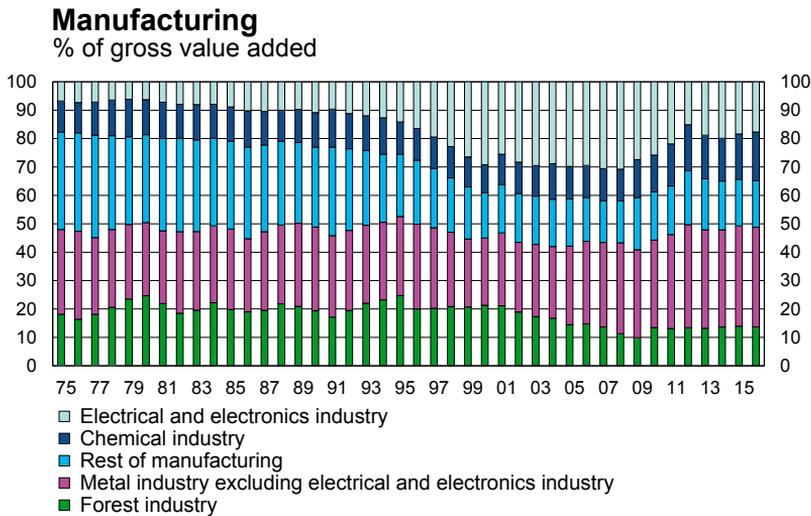
Despite obstacles to output growth, gross value added for the economy is picking up speed. Growth is being driven by an increase in orders illustrating strong international demand in manufacturing, progress made in numerous private and public construction projects started, and growth in service production. Although the period of fastest growth seen in early 2017 appears to be over, the business tendency surveys of the Confederation of Finnish Industries (EK) indicate that the positive trend will still continue at least in early 2018. In addition, the forecast’s background assumptions concerning acceleration in the growth of world trade and global economy support export-oriented industrial production and therefore, indirectly, business services. Strengthened imports of Finland’s most important trading area, Europe, are good news for Finnish industries manufacturing investment and intermediate products. Due to broad-based growth and very strong first months of the year, gross value added for the economy will grow by 3.5% this year. The growth rate will level off in 2018 and 2019, but total output will still increase by around 2% per year during those years.



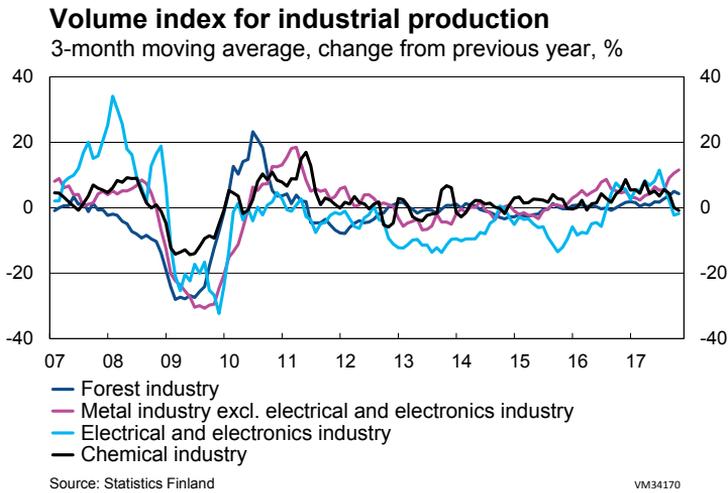
## 1.4.2 Secondary production

### A positive outlook for manufacturing in the near future

Manufacturing is experiencing its strongest upturn in seven years. The growth in output was 5% from January to September. In the first half of the year, the strong growth continued steadily in all main sectors. The forest industry growth rate accelerated due to increases in the mechanical forest industry as well as in pulp and paperboard production. In particular, orders for transport equipment will uphold production in the metal industry for years to come. Energy supply was the only sector with a year-on-year decline in value added.



Most of Finland’s industrial production comprises raw materials and investment goods for export, the demand for which has improved as the global economy and trade have picked up and capacity utilisation has been increased by economic growth. Finnish unit labour cost competitiveness also improved in early 2017. This is reflected in the large number of new orders received by manufacturing companies, with a year-on-year increase of 14% in the first ten months of the year. The highest number of orders has been won by the shipbuilding industry, but increasing order books have also been reported by the chemical and forest industries. The outlook for output in the second half of the year is therefore positive.

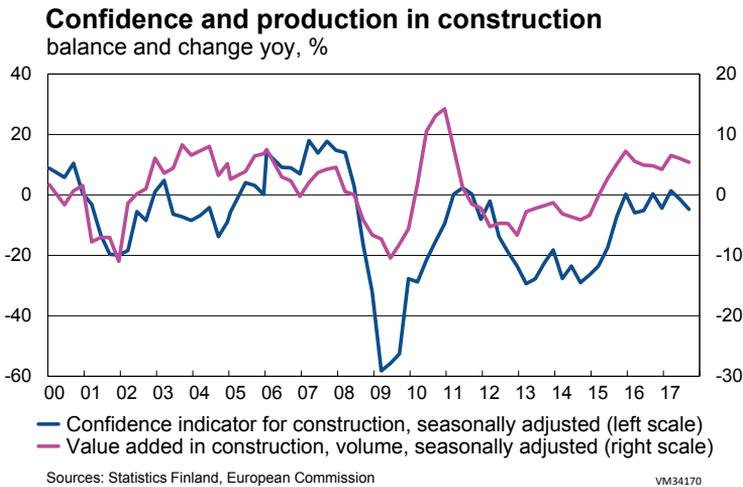


Business tendency surveys indicate that the best prospects for growth are in the chemical and food industries. In forest industry, output is pushed up by increased demand for pulp, paperboard and sawn timber. Additionally, capacity increase in Äänekoski will support forest industry output growth starting from next year. Overall, industrial output will increase by 4.5% this year due to the strong development early in the year and the new orders received.

In the coming years, export demand will increase as world trade growth accelerates and imports are expected to grow in 2018 and 2019 in the European market in particular, which is important for Finnish enterprises. Increased production capacity and efforts made by enterprises to improve the competitiveness of their products will boost industrial output in the years ahead. The growth of value added in manufacturing is set to stabilise at around 3% in 2018 and 2019. Despite this growth, the volume of industrial output in 2019 will remain almost one-sixth lower than in the peak year of 2007.

## Growth in construction levelling out

In early 2017, construction output increased by almost 6% as there were several major construction projects underway at the same time. Growth is also promoted by the diversity of construction. Migration is increasing housing demand in growth centres, and municipalities are investing in health care and educational facilities. Enterprises have also launched capacity expansion and replacement projects, which can be seen in commercial, office as well as agricultural construction. However, levels of new construction are higher in growth centres than outside them, which means that growth is unevenly distributed across the regions. The need for repair construction is high, particularly as regards residential and office buildings.



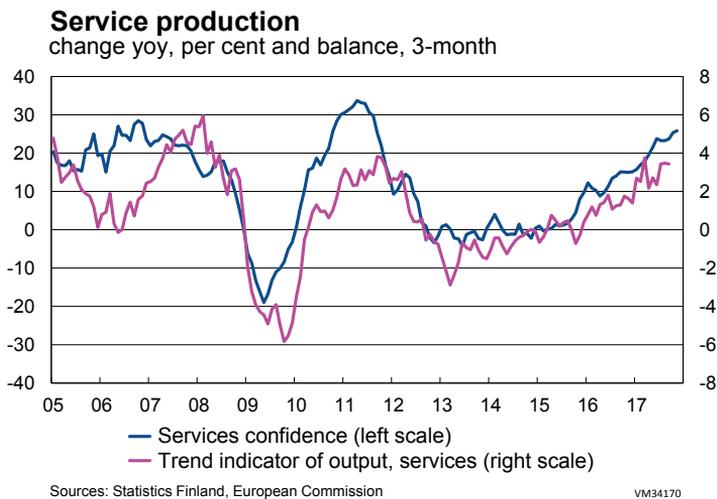
The outlook for construction output still remains quite bright. There is diverse demand for the various building categories, and enterprises thus perceive their order books as stronger than normal. The strong demand has also reduced the number of unsold housing units. Furthermore, government investment in transport infrastructure is boosting civil engineering works. Indeed, growth is increasingly held back by a shortage of skilled labour. Supported by ongoing construction projects, the increase in construction output this year will exceed the increase seen last year and stand at over 5%.

Construction will remain buoyant in growth centres in both 2018 and 2019, but the number of new starts will no longer increase as much as in recent years, slowing down the rate of growth. In the 2018–2019 period, the focus will be on a few major construction projects and the annual increase in construction value added will be around 2%. Growth will drive construction output in 2017 above the level achieved in 2007.

### 1.4.3 Services

#### Broad-based growth in services

Service production has been increasing continuously for the past two years. In the first nine months of 2017, the value added in services exceeded last year's figures by more than 3%. This growth was also broad-based, as an increase was recorded in both public and private service production between January and September. The fastest-growing fields were financial and insurance activities as well as business services. Consumer service sales have also increased despite the modest development in purchasing power.



The cyclical position of private services is strong. Sales are on the increase and are generally expected to continue to grow in early 2018. Nevertheless, lack of demand is an equally important obstacle to growth in service industries as shortage of skilled labour. The best conditions for growth can be found in information and communication services. Brisk sales are also expected in trade, finance and insurance as well as accommodation and catering service activities. The increase of value added in services this year will be 3% year on year.

The conditions for growth in the service sector will be supported by increased demand in manufacturing and other industries. Consumer-driven services will suffer from the modest development of purchasing power, but international demand will increase service production directly or indirectly serving foreign demand. Next year and the year after will only see a slight slowdown in service production growth from this year, with the future annual growth rate averaging around over 1.5%.

**Table 9. Production by industry**

|  | 2016 share, % <sup>1)</sup> | 2014 | 2015 | 2016 | 2017** | 2018** | 2019** | Average 2016/2006 |
|--|-----------------------------|------|------|------|--------|--------|--------|-------------------|
|  |                             |      |      |      |        |        |        |                   |
| Industry                                 | 20.3                        | -0.2 | -1.6 | 1.1  | 4.6    | 2.7    | 3.2    | -1.9              |
| Construction                             | 6.8                         | -3.6 | 3.7  | 4.9  | 5.3    | 2.2    | 1.6    | 0.1               |
| Agriculture and forestry                 | 2.7                         | -1.7 | -1.4 | 4.2  | 2.7    | 3.6    | 3.8    | 2.4               |
| Industry and construction                | 27.1                        | -1.0 | -0.3 | 2.0  | 4.8    | 2.5    | 2.8    | -1.5              |
| Services                                 | 70.2                        | -0.4 | 0.2  | 1.3  | 3.0    | 2.1    | 1.5    | 0.7               |
| Total production at basic prices         | 100.0                       | -0.6 | 0.0  | 1.6  | 3.5    | 2.3    | 1.9    | 0.0               |
| GDP at market prices                     |                             | -0.6 | 0.0  | 1.9  | 3.1    | 2.4    | 1.9    | 0.2               |
| Labour productivity in the whole economy |                             | 0.1  | 0.1  | 1.2  | 2.6    | 1.3    | 1.4    | 0.1               |

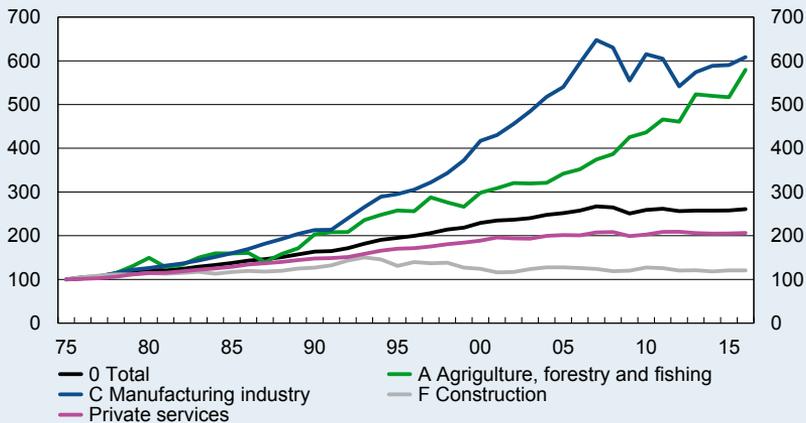
<sup>1)</sup> Share of total value added at current prices.

### THE MYSTERY OF CONSTRUCTION PRODUCTIVITY

The growth of labour productivity in the Finnish construction industry has been weaker than in any other private sector industry since the 1980s. Even services, which traditionally have been considered a low-productivity industry, have improved their productivity more than construction. In fact, labour productivity in construction decreased in the 1990s and has been on par with the 1980s level in recent years.

#### Labour productivity by industry

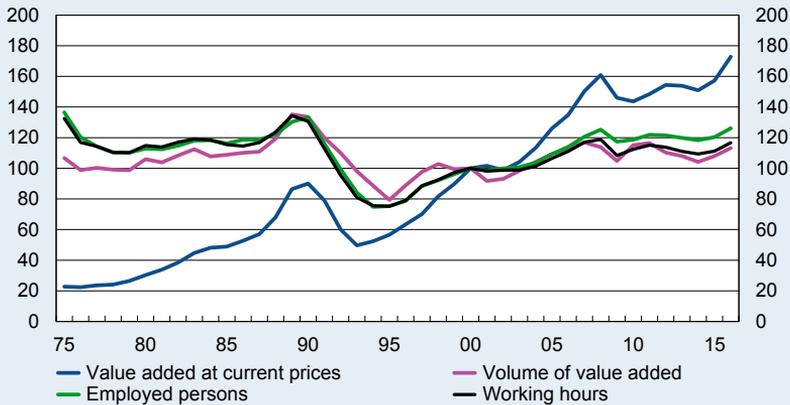
1975=100



Sources: National Accounts, Statistics Finland

The poor productivity development in construction is not exclusively a Finnish phenomenon. Similar trends have also been observed in other European countries (excluding Belgium) and the United States.

**Value added in construction, employment and working hours**  
2000=100

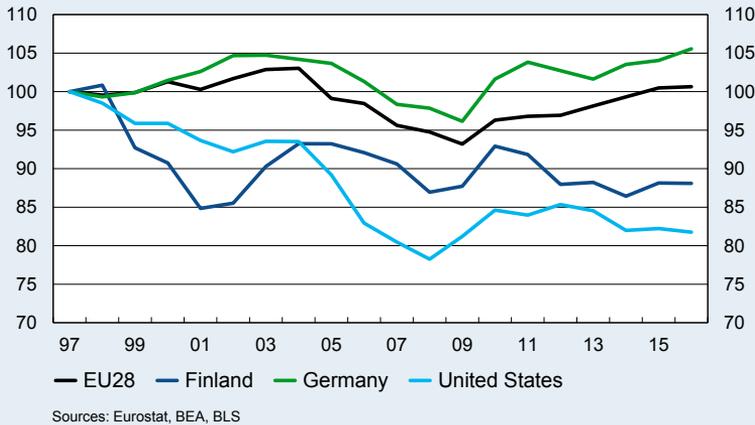


Sources: National Accounts, Statistics Finland

Since the 1990s, the decrease in construction productivity in Finland has slightly exceeded the EU average. In the United States, this decrease has been even stronger than in Finland.

One reason for the poor productivity development in construction may be the difficulty of assessing quality. The value added of construction at current prices in Finland has increased rather rapidly. The national accounts indicate that this growth has mostly been due to increased prices, and the growth in volume that measures change in quality and quantity has been significantly slower.

**Labour productivity in construction**  
 volume of value added per working hour, 1997=100



Compared to other industries, the difference between value added at current prices and volume of value added, or the change in the implicit price of value added, is particularly great in construction.

**Average annual change in value added 1995–2016**

|                   | At current prices | Volume | Price  |
|-------------------|-------------------|--------|--------|
| Manufacturing (C) | 2.7 %             | 3.0 %  | -0.3 % |
| Construction (F)  | 5.8 %             | 1.3 %  | 4.5 %  |
| Private services  | 4.9 %             | 2.7 %  | 2.2 %  |

The implicit price of value added in construction has increased by an average of 4.5% a year since 1994, whereas the prices have decreased by 0.3% a year in manufacturing and increased by 2.2% a year in private services.

During this period, working hours have increased on average by 2.1% a year, and the number of the employed by 2.5% a year in construction. As the volume of construction has only increased by 1.3% a year, the productivity of construction has consequently declined by about one per cent a year. If the same volume of quantitative performances per working hour had been produced all the time (for example cubic metres in new buildings), the volumes would have also had to grow by 2.1% a year if the quality had remained unchanged. The decline in productivity indicates either that the volume of quantitative performances per working hour on construction sites is continuously diminishing, or that fully accounting for the improved quality of construction in estimates of volumes has not been possible.

It does not seem plausible that construction sites would continuously produce less of a performance of the same quality per working hour. On the other hand, it is quite possible that higher quality requirements are slowing down the work performance. In other words, more working hours are required to build or renovate a building of the same size today than 20 years ago as the quality requirements are higher. The improved quality should increase the volume of output and value added and thus also improve the measured productivity. Consequently, it appears that the evaluation of price and volume should be improved, especially in statistics on value added in construction.

Additionally, the construction sector has currently adopted relatively fewer process-like work methods, although these have significantly improved productivity in industry. This may in part be because construction sector companies are on average much smaller than those in the industrial sector, and there are more than twice as many construction sector companies than industrial companies. Often, each new project's construction site is a newly organised activity, which means that previous innovations that have improved performance are not disseminated effectively enough. On the other hand, when compared to industry the construction sector is a very regulated sector, where it has not been deemed profitable to invest in innovation in the manner due to constantly changing regulation. Construction is an important sector with regard to national employment and income formation, and thus its regulation should be developed also from the perspective of performance.

The construction sector does not seem to have made use the development of its production practices such as information technology. According to statistics, the contribution of research and development investments to the productivity of the construction sector has been zero on average in 1995-2016. whereas this improved productivity in industry on average by 0.8 percentage points a year. It is possible though that this result too is bias due to the aforementioned difficulty of listing quality and quantity in statistics.

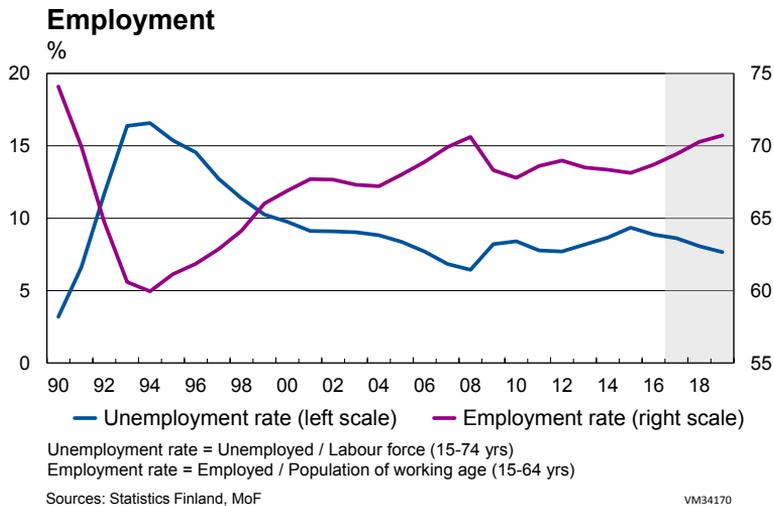
## 1.5 Labour force

### Employment set to rise faster in 2018

The extensive and quick strengthening of economic activity has improved employment during 2017. The number of employed persons grew by 0.7% from the year earlier. Despite the extended working hours specified in the Competitiveness Pact, working hours have not increased more than this.

The number of job vacancies has increased notably during 2017: According to Statistics Finland, there were 12% more job vacancies during the first three quarters of 2017 than the previous year. Steadfast economic growth and increased demand for labour will see the employment rate rise in 2017 to 0.7% more than the previous year, meaning the employment rate will climb to 69.4 per cent.

According to the Labour Force Survey by Statistics Finland, unemployment has fallen very slowly, the unemployment rate trend was 8.5% in October. The slow fall in the unemployment rate is at least in part due to the disguised unemployed as well as other people outside of the labour force becoming active in jobseeking, which is normal as the economy improves. The projected unemployment rate for 2017 is 8.6%.



There are considerably good prospects for further growth in 2018 and 2019. The number of job vacancies is at a very high level according to both Employment Service Statistics published by the Ministry of Economic Affairs and Employment and the Job Vacancies Statistics published by Statistics Finland. According to the EU's confidence indicators, the employment expectations of companies are at their highest in Finland since 2011. The GDP's reasonably fast continuous growth will maintain the demand for labour force during the outlook period. Growth in employment will pick up in 2018 to 1.0% and employment will increase another 0.6% in 2019. The employment rate will reach 70.7 per cent in 2019.

The activation of persons outside the labour force in jobseeking will continue to slow down the decrease of the unemployment rate in 2018, but not as strongly as it has this past year. Correspondingly, the large number of underemployed persons slow down both the increase of the employment rate and the decrease of the unemployment rate, if some of the job vacancies are filled by underemployed persons and the number of newly employed persons does not grow. Unemployment will thus remain considerably high for the entire outlook period in spite of stronger economic growth. The unemployment rate will fall to 8.1 per cent in 2018 and further to 7.7 per cent in 2019.

According to the Employment Service Statistics compiled by the Ministry of Economic Affairs and Employment, the number of unemployed and long-term unemployed has decreased swiftly in 2017 in all age groups. However part of this decrease is simply due to register information being corrected. According to the Ministry of Economic Affairs and Employment, it is thought that information on as many as 20,000-30,000 people has now been updated in the Employment Service Statistics on the basis of interviews conducted with the unemployed every three months. It is expected that strong economic growth will see the number of long-term unemployed and the structurally unemployed continue to shrink in coming years although at a slower pace than in 2017.

The labour supply will not limit the growth of employment during the outlook period, as the combined number of unemployed and disguised unemployed is still very high. Even so, a shortage of labour is already evident in certain professions. According to the Business Tendency Survey published by the Confederation of Finnish Industries (EK) and the Employment Outlook by Occupation published by the Ministry of Economic Affairs and Employment there is a shortage of construction and real estate service professionals as well as social and healthcare sector experts.

**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 | 4 115  | 4 127  | 4 138  |
| change                                | 9                             | 6     | 7     | 6      | 12     | 11     |
| Population of working age (15-64 yrs) | 3 491                         | 3 476 | 3 463 | 3 451  | 3 441  | 3 436  |
| change                                | -17                           | -15   | -13   | -12    | -10    | -5     |
| Employed (15-74 yrs)                  | 2 447                         | 2 437 | 2 448 | 2 466  | 2 490  | 2 506  |
| of which 15-64 yrs                    | 2 386                         | 2 368 | 2 379 | 2 396  | 2 418  | 2 430  |
| Unemployed (15-74 yrs)                | 232                           | 252   | 237   | 233    | 219    | 208    |
|                                       | %                             |       |       |        |        |        |
| Employment rate (15-64 yrs)           | 68.3                          | 68.1  | 68.7  | 69.4   | 70.3   | 70.7   |
| Unemployment rate (15-74 yrs)         | 8.7                           | 9.4   | 8.8   | 8.6    | 8.1    | 7.7    |
|                                       | 1,000 persons per annum       |       |       |        |        |        |
| Immigration, net                      | 18                            | 12    | 16    | 17     | 17     | 17     |

## 1.6 Incomes, costs and prices

### 1.6.1 Wages and salaries

In 2017, the income level developed predominantly according to the Competitive-ness Pact negotiated by labour market organisations. Negotiated wages were not increased and public sector holiday bonuses were cut by 30%. The combine effect of these factors meant that negotiated wages shrunk an estimated average of 0.3%. Other factors than negotiated wages are expected to increase incomes by 0.5%. Thus, it is expected that nominal earnings will increase by 0.2% in 2017.

The overall increase in the sum of wages in 2017 has been clearly faster than could have been anticipated on the basis of the growth of earnings and employment. This is primarily due to the employment of wage-earners increasing considerably faster than the employment of entrepreneurs. Additionally, cuts to holiday bonuses were timed in various statistics in different ways, which has made it difficult to compare wage statistics. The total sum of wages in the economy has been projected to grow 2.3% in 2017.

Negotiations on pay rises for 2018 and 2019 will take place industry-specifically. On the basis of the negotiated agreement reached on 30 October 2017 by Technology Industries Finland and the Industrial Union, wages can be agreed on locally. If an agreement is not reached on local wage settlements, negotiated wages will be increased starting on 1 January 2018 with a 1.1% general wage increase and a 0.5% company-specific item as well as a 0.9% general wage increase starting on 1 January 2019 and a 0.7% company-specific item.

The forecast assumes that wage agreements in other industries will mainly follow the level indicated by manufacturing industry. Wage drifts are expected to remain below average because of local settlements and company-specific items.

Earnings will increase by 2.0% in 2018 and 2019. This continues to be slower than the average rise in earnings in the 2000s, and in line with a high rate of unemployment. The total sum of wages in the economy has been predicted to grow by 3.0% in 2018 and 2.6% in 2019.

**Table 11. Disposable income**

|   | 2016        | 2014      | 2015  | 2016  | 2017** | 2018** | 2019** | Average |
|---|-------------|-----------|-------|-------|--------|--------|--------|---------|
|   | share,<br>% | change, % |       |       |        |        |        |         |
| Compensation of employees                           | 58.8        | 0.3       | 1.0   | 1.7   | 0.8    | 2.2    | 2.3    | 2.4     |
| Wages and salaries                                  | 47.6        | 0.4       | 1.0   | 1.5   | 2.3    | 3.0    | 2.6    | 2.5     |
| Employers' contributions to social security schemes | 11.2        | -0.2      | 1.3   | 2.5   | -5.6   | -1.4   | 1.0    | 2.1     |
| Property and entrepreneurial income, net            | 25.2        | 6.4       | 6.3   | 6.5   | 14.1   | 8.8    | 7.1    | 0.8     |
| Taxes on production and imports minus subsidies     | 16.0        | 1.0       | 0.2   | 5.7   | 1.9    | 2.0    | 2.5    | 3.3     |
| National income                                     | 100.0       | 1.8       | 2.1   | 3.5   | 4.3    | 4.0    | 3.7    | 2.1     |
| Disposable income                                   |             | 1.8       | 2.2   | 3.6   | 4.4    | 4.1    | 3.8    | 2.1     |
| Gross national income, EUR bn                       |             | 207.3     | 211.2 | 217.8 | 227.3  | 236.4  | 245.2  |         |

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

|   | 2014      | 2015 | 2016 | 2017** | 2018** | 2019** | Average<br>2016/2006 |
|---|-----------|------|------|--------|--------|--------|----------------------|
|   | change, % |      |      |        |        |        |                      |
| Index of negotiated wage rates                              | 0.7       | 0.6  | 0.6  | -0.3   | 1.6    | 1.6    | 2.1                  |
| Wage drift, etc.  | 0.7       | 0.8  | 0.5  | 0.5    | 0.4    | 0.4    | 0.6                  |
| <b>Index of wage and salary earnings</b>                    | 1.4       | 1.4  | 1.1  | 0.2    | 2.0    | 2.0    | 2.7                  |
| Real earnings <sup>1)</sup>                                 | 0.4       | 1.6  | 0.5  | -0.6   | 0.6    | 0.5    | 1.1                  |
| Average earnings <sup>2)</sup>                              | 1.2       | 1.4  | 0.7  | 1.5    | 2.1    | 2.1    | 2.2                  |
| Labour costs per unit of output whole economy <sup>3)</sup> | 0.9       | 1.1  | 0.1  | -2.6   | 0.0    | 0.4    | 2.3                  |

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

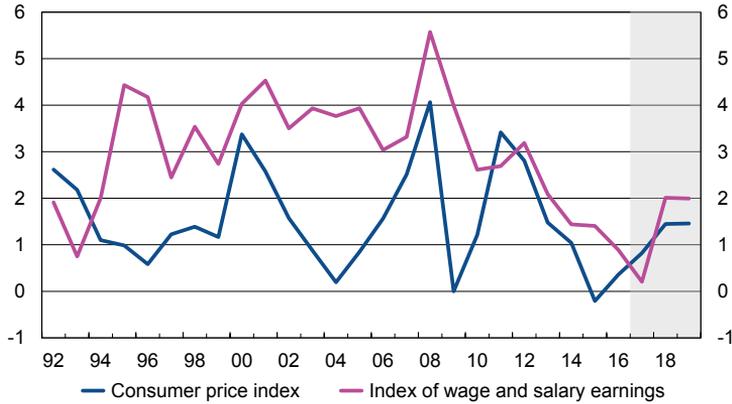
<sup>2)</sup> Computed by dividing the national wage bill by the number of hours worked by wage and salary earners. The figures are affected by structural changes in the economy.

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

## 1.6.2 Consumer prices

In the third quarter of 2017, consumer prices rose by 0.7% of what they had been a year before when measured on the national consumer index. The increase in consumer prices accelerated in late 2016 and early 2017, but slowed once again in the second and third quarter of 2017. The impact of energy prices on inflation is significant, as the price of crude oil has risen notably from its lowest levels. Service prices rose by 1.4% during the first three quarters of 2017 from what they were a year ago, and the corresponding figure for refined foods was 0.4%. During the third quarter of 2017, the prices of fresh foods were at the same level as at the same time the previous year. On the other hand, the prices of goods continued to fall by 1.0% during the first three quarters of 2017 from what they were the previous year.

**Consumer price index and index of wage and salary earnings**  
change from previous year, %



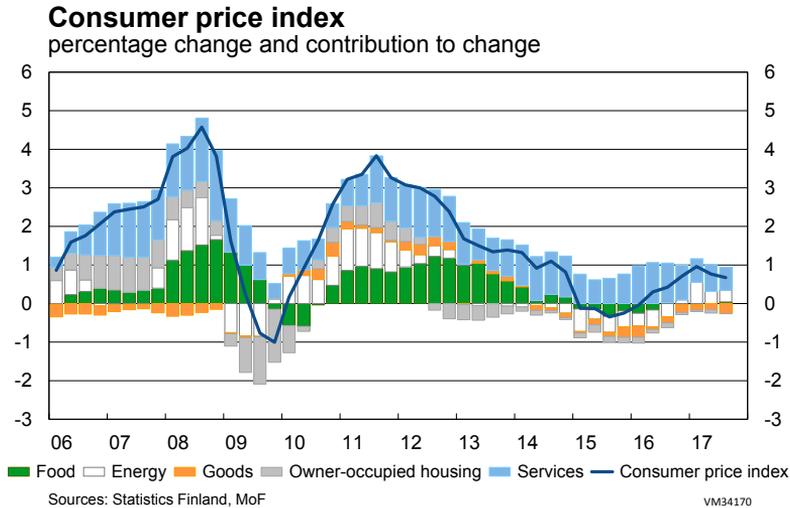
Sources: Statistics Finland, MoF

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The projected inflation for 2017 is 0.8% measured by the national Consumer Price Index. Inflation is being accelerated in 2017 especially by the clear rise in the price of crude oil from what it was last year. The average barrel price of oil is projected to be around 8 euros higher in 2017 compared to the median of 40 euros seen in 2016. The second-round effects of oil price hikes will drive up other prices as well. The impacts of energy prices on inflation are projected to remain considerable, but somewhat more moderate than this year – also in 2018 and 2019.

Service prices are expected to rise at a rate of 1.5% in 2017, which is notably slower than in 2016. This is influenced by the wage settlement for 2017 as well as the slowing of rises in rents. Accelerated service inflation has been observed in 2017 for example in the restaurant, cafe and other meal service sector. In 2018 and 2019, service prices will rise by about 2% per year. This will be influenced such things as wage settlement reached in autumn 2017.

The price development of foods has remained moderate in 2017 due for example to the elimination of the sweets tax and the careful price development of food industry raw materials. Factors that influence the prices of goods include import prices, which have taken starting rising in 2017 after a long decline. However, the prices of goods are expected to decrease in 2017 for the fourth consecutive year. Changes to current taxation will increase the speed of inflation in 2018 by an estimated 0.3–0.4 percentage points. Inflation will be accelerated especially by price increases to tobacco and alcohol taxes.



In 2018, measured by the national Consumer Price Index, inflation is expected to rise by 1.4 as economic growth continues. The corresponding figure for 2019 will be 1.5%. Prices will rise in coming years more broadly in a range of different product categories but the increases in the prices of services will continue to have the greatest impact on overall inflation. Moderate increases in oil prices, a stronger US dollar and low (but rising) interest rates are also expected to boost inflation during the forecast period.

The Euro area's inflation measured with a harmonised Consumer Price Index was approximately 1.4% in the third quarter of 2017. With the exception of a rise in energy prices and its indirect impacts, inflation has remained moderate. Gradually strengthening economic growth in the euro area has not yet been enough to increase inflation, as for example a high rate of unemployment has kept pay rises moderate. According to a projection by the European Central Bank's experts, the euro area's inflation will be 1.5 % in 2017, 1.4 % in 2018 and 1.5 % in 2019. In the Ministry of Finances projection Finland's comparable growth figures in the harmonised Consumer Price Index will be 0.9 % in 2017, 1.4 % in 2018 and 1.5 % in 2019.

## 2 Public finances

### 2.1 General government finances

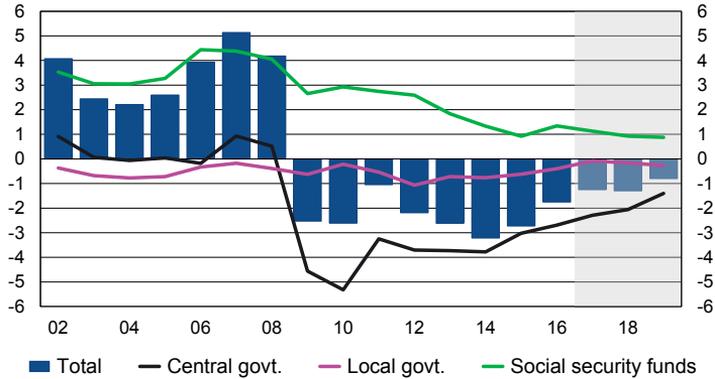
The general government's deficit has decreased starting from the middle of the decade. First the deficit shrunk due to consolidation measures taken by the Government and later also due to positive economic cycle. Development will continue in the same manner in coming years, but the deficit will shrink at very slow pace. Public finances will remain in deficit for the remainder of the decade.

The favourable economic cycle will not in itself eliminate the structural problems of public finances. The change of the population's age structure and the retirement of larger age groups, which began in the 2010s, will increase pension expenditure. The increase in pension expenditure will shrink the surplus of earnings-related pension schemes. In the coming decade the greatest growth pressure is in the health care and long-term care expenditure.

The general government debt to GDP ratio started to decline in 2016. By 2019, the debt ratio will shrink to just under 60 per cent. However, in nominal terms the debt will continue to grow and at the end of the decade it will be approximately just under 144 billion euros. When entering the 2020s, debt levels will be high for which reason the latitude of general government finances will be more limited than previously if a new recession should arise.

The tax rate will decrease notably in coming years. The decrease in the tax rate is mainly explained by the Competitiveness Pact and its related tax cuts. The expenditure rate will also decrease notably. The state budget's stringent spending limits will mean that expenditure growth will remain slow and unemployment-related expenditures will shrink as employment improves.

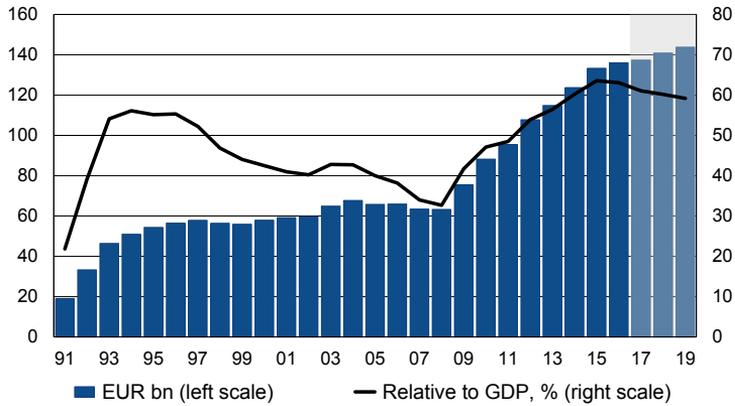
### The financial balance of general government relative to GDP, %



Sources: Statistics Finland, MoF

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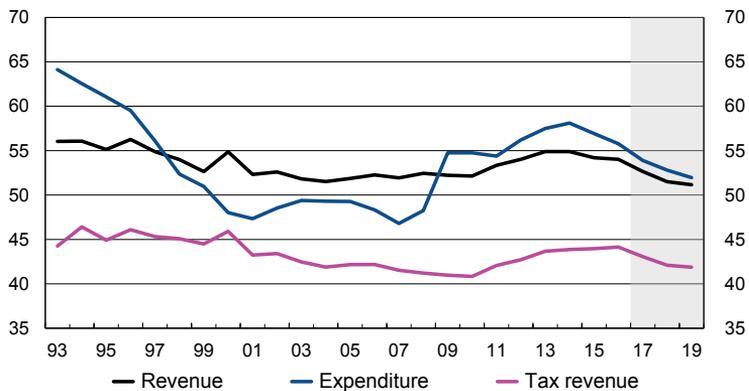
### General government debt



Sources: Statistics Finland, MoF

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



Sources: Statistics Finland, MoF

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**Table 13. General government finances<sup>1)</sup>**

|  | 2014         | 2015         | 2016         | 2017**       | 2018**       | 2019**       |
|--|--------------|--------------|--------------|--------------|--------------|--------------|
|  | EUR billion  |              |              |              |              |              |
| Current taxes                                | 33.8         | 34.8         | 35.6         | 37.1         | 37.7         | 39.3         |
| Taxes on production and imports              | 29.6         | 29.7         | 31.1         | 31.3         | 32.1         | 32.8         |
| Social security contributions                | 26.3         | 27.0         | 28.0         | 27.5         | 28.0         | 28.9         |
| Taxes and contributions, total <sup>2)</sup> | 90.1         | 92.2         | 95.2         | 96.9         | 98.5         | 101.7        |
| Other revenue <sup>3)</sup>                  | 23.2         | 22.1         | 21.8         | 22.5         | 22.7         | 23.3         |
| of which interest receipts                   | 2.1          | 2.1          | 1.9          | 1.9          | 2.0          | 2.1          |
| <b>Total revenue</b>                         | <b>112.8</b> | <b>113.6</b> | <b>116.5</b> | <b>118.4</b> | <b>120.5</b> | <b>124.3</b> |
| Consumption expenditure                      | 50.7         | 51.1         | 51.7         | 51.5         | 52.7         | 54.0         |
| Subsidies                                    | 2.7          | 2.8          | 2.7          | 2.7          | 2.7          | 2.7          |
| Social security benefits and allowances      | 40.3         | 41.6         | 42.3         | 43.1         | 44.2         | 45.3         |
| Other current transfers                      | 6.1          | 5.8          | 5.6          | 5.5          | 5.4          | 5.5          |
| Subsidies and current transfers, total       | 49.0         | 50.2         | 50.6         | 51.3         | 52.4         | 53.5         |
| Capital expenditure <sup>4)</sup>            | 9.3          | 9.0          | 9.0          | 9.6          | 9.9          | 10.2         |
| Other expenditure                            | 10.4         | 9.0          | 8.8          | 8.8          | 8.6          | 8.6          |
| of which interest expenses                   | 2.5          | 2.4          | 2.3          | 2.2          | 2.1          | 2.1          |
| <b>Total expenditure</b>                     | <b>119.4</b> | <b>119.3</b> | <b>120.2</b> | <b>121.2</b> | <b>123.6</b> | <b>126.2</b> |
| <b>Net lending (+) / net borrowing (-)</b>   | <b>-6.6</b>  | <b>-5.7</b>  | <b>-3.8</b>  | <b>-2.8</b>  | <b>-3.0</b>  | <b>-1.9</b>  |
| Central government                           | -7.8         | -6.3         | -5.8         | -5.2         | -4.8         | -3.4         |
| Local government                             | -1.6         | -1.3         | -0.9         | -0.2         | -0.4         | -0.7         |
| Employment pension schemes                   | 3.4          | 2.7          | 2.4          | 2.0          | 1.9          | 1.6          |
| Other social security funds                  | -0.7         | -0.8         | 0.5          | 0.6          | 0.3          | 0.5          |
| <b>Primary balance <sup>5)</sup></b>         | <b>-6.2</b>  | <b>-5.3</b>  | <b>-3.3</b>  | <b>-2.4</b>  | <b>-2.9</b>  | <b>-2.0</b>  |

<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.

**Table 14. Main economic indicators in general government**

|   | 2014        | 2015        | 2016        | 2017**      | 2018**      | 2019**      |
|---|-------------|-------------|-------------|-------------|-------------|-------------|
|   | % of GDP    |             |             |             |             |             |
| Taxes and social security contributions       | 43.9        | 44.0        | 44.1        | 43.1        | 42.1        | 41.9        |
| General government expenditure <sup>1)</sup>  | 58.1        | 56.9        | 55.8        | 53.9        | 52.8        | 52.0        |
| <b>Net lending</b>                            | <b>-3.2</b> | <b>-2.7</b> | <b>-1.7</b> | <b>-1.2</b> | <b>-1.3</b> | <b>-0.8</b> |
| Central government                            | -3.8        | -3.0        | -2.7        | -2.3        | -2.1        | -1.4        |
| Local government                              | -0.8        | -0.6        | -0.4        | -0.1        | -0.2        | -0.3        |
| Employment pension institutions               | 1.7         | 1.3         | 1.1         | 0.9         | 0.8         | 0.7         |
| Other social security funds                   | -0.3        | -0.4        | 0.2         | 0.3         | 0.1         | 0.2         |
| Primary balance <sup>2)</sup>                 | -3.0        | -2.5        | -1.5        | -1.1        | -1.2        | -0.8        |
| General government debt                       | 60.2        | 63.6        | 63.1        | 61.1        | 60.2        | 59.2        |
| Central government debt                       | 46.3        | 47.6        | 47.5        | 47.1        | 46.7        | 46.0        |
| General government employment,<br>1000 person | 626         | 619         | 614         | 610         | 609         | 605         |
| Central government                            | 139         | 133         | 131         | 130         | 128         | 127         |
| Local government                              | 477         | 475         | 473         | 469         | 470         | 468         |
| Social security funds                         | 11          | 11          | 11          | 11          | 11          | 11          |

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

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

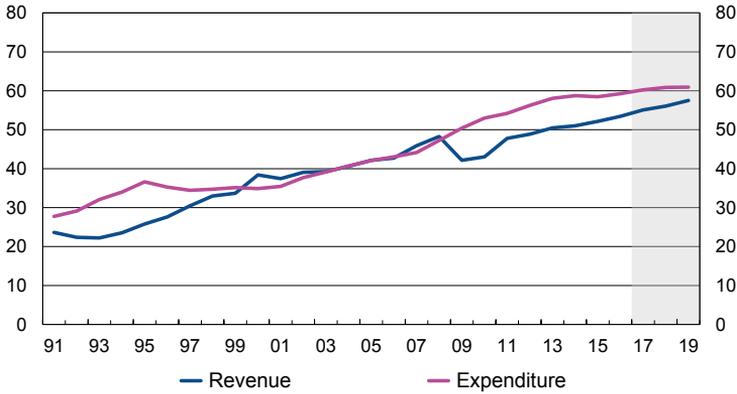
## 2.2 Central government

The central government deficit will continue to decrease during the outlook period. Good economic cycle supports growth in tax revenue, but on the other hand the favourable growth of tax revenue will be hindered in 2017 and 2018 by discretionary tax cuts. An exceptionally large one-off measure has increased tax revenue in 2017. The central government deficit recorded in the national accounts will still be quite large in 2019. The central government's nominal debt will continue to grow although at a slower pace. The debt to GDP ratio will decline.

The central government's expenditure will decrease during the outlook period due to the consolidation measures outlined in the Government Programme, the increase in annual working time and temporary cuts to holiday bonuses outlined in the Competitiveness Pact, and a decrease in costs related to asylum seekers. The central government's interest expenditure will also remain exceptionally low. The

central government's expenditure will be increased during the outlook period by the Government's key projects, transport infrastructure maintenance, the development of the counties' ICT systems and procurements by the Finnish Defence Forces.

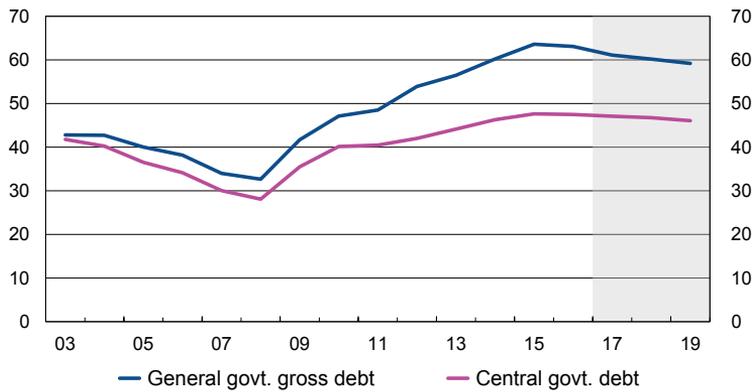
**Central government revenue and expenditure**  
EUR bn



Sources: Statistics Finland, MoF

VM34098

**General government debt**  
relative to GDP, %



Sources: Statistics Finland, MoF

VM34098

**Table 15. Central government<sup>1)</sup>**

|  | 2014        | 2015        | 2016        | 2017**      | 2018**      | 2019**      |
|--|-------------|-------------|-------------|-------------|-------------|-------------|
|  | EUR billion |             |             |             |             |             |
| Current taxes                              | 12.6        | 13.0        | 13.7        | 14.5        | 14.8        | 15.5        |
| Taxes on production and imports            | 29.6        | 29.7        | 31.1        | 31.3        | 32.1        | 32.8        |
| Taxes total <sup>2)</sup>                  | 42.7        | 43.3        | 45.3        | 46.7        | 47.6        | 49.0        |
| Other revenue <sup>3)</sup>                | 8.8         | 9.2         | 8.6         | 8.9         | 9.0         | 9.2         |
| of which interest receipts                 | 0.3         | 0.3         | 0.3         | 0.3         | 0.3         | 0.3         |
| <b>Total revenue</b>                       | <b>51.5</b> | <b>52.5</b> | <b>53.9</b> | <b>55.6</b> | <b>56.6</b> | <b>58.2</b> |
| Consumption expenditure                    | 13.7        | 13.7        | 14.1        | 14.0        | 14.3        | 14.6        |
| Subsidies and current transfers, total     | 38.2        | 38.2        | 38.8        | 39.8        | 40.1        | 39.9        |
| to general government                      | 26.2        | 26.2        | 27.1        | 28.1        | 28.4        | 28.1        |
| Interest expenses                          | 2.4         | 2.3         | 2.2         | 2.1         | 2.0         | 2.0         |
| Capital expenditure <sup>4)</sup>          | 4.9         | 4.7         | 4.7         | 4.9         | 5.0         | 5.2         |
| <b>Total expenditure</b>                   | <b>59.2</b> | <b>58.9</b> | <b>59.7</b> | <b>60.7</b> | <b>61.5</b> | <b>61.6</b> |
| <b>Net lending (+) / net borrowing (-)</b> | <b>-7.8</b> | <b>-6.3</b> | <b>-5.8</b> | <b>-5.2</b> | <b>-4.8</b> | <b>-3.4</b> |
| Primary balance <sup>5)</sup>              | -5.7        | -4.4        | -3.9        | -3.4        | -3.2        | -1.8        |

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

<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.

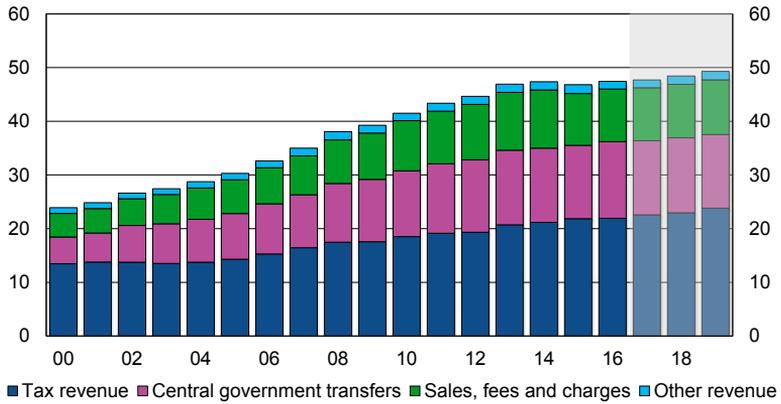
## 2.3 Local government

The strengthening of the local government's budgetary position over the past few years will continue in 2017. The local government's consumption expenditure has been decreased by the Competitiveness Pact's measures, a cut in pension contributions by municipal employers as well as by consolidation measures outlined by the Government. Additionally municipalities and joint municipal authorities have continued to improve the effectiveness of their activities and to adjust their budgets by limiting the growth of expenditure. An upturn in the growth of tax revenue has increased local government revenue. Especially corporate tax revenue has proved to be exceptionally good in 2017.

The local government deficit will increase slightly in 2018 and 2019 as consumption and investment expenditure grow more than revenue. Consumption expenditure will be increased due for example to increased care and treatment costs related to the population growing older, an increase in earnings in the municipal sector as well as a cut to early childhood education charges at the beginning of 2018. Additionally, the local government's investment needs and repair backlog will remain considerable. Hospital construction projects will continue at a brisk pace as municipalities and joint municipal authorities have been granted a significant amount of special permits for large investments. Local government debt will continue its moderate growth during the outlook years.

In recent years the main focus of municipalities' and joint municipal authorities' fiscal adjustment efforts has been on curbing expenditure growth. Increases in municipal tax rates have been very moderate. In 2018, the average municipal income tax rate will decrease by 0.04 percentage points to 19.86 per cent. The drop will be due in large part to Helsinki's tax cut. Additionally, property tax revenue will be smaller than expected, because the Government cancelled its plan to implement larger cuts to minimum property tax rates. Non-recurring factors account for the exceptionally good growth of corporate tax revenue in 2017. These factors will not have an impact in coming years. For this reason, corporate tax revenue will fall in 2018.

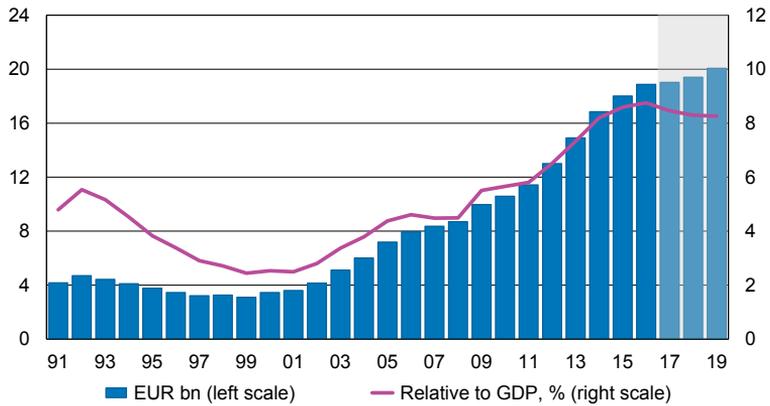
### Local government revenue EUR bn



Sources: Statistics Finland, MoF

VM34098

### Local government debt



Sources: Statistics Finland, MoF

VM34098

**Table 16. Local government<sup>1)</sup>**

|  | 2014        | 2015        | 2016        | 2017**      | 2018**      | 2019**      |
|--|-------------|-------------|-------------|-------------|-------------|-------------|
|  | EUR billion |             |             |             |             |             |
| Taxes and social security contributions          | 21.2        | 21.9        | 22.0        | 22.6        | 23.0        | 23.8        |
| of which municipal tax                           | 18.2        | 18.6        | 18.7        | 18.9        | 19.2        | 19.9        |
| corporate tax                                    | 1.4         | 1.7         | 1.5         | 1.9         | 1.9         | 2.0         |
| real estate tax                                  | 1.5         | 1.6         | 1.7         | 1.8         | 1.8         | 1.9         |
| Other revenue <sup>2)</sup>                      | 18.5        | 18.5        | 19.0        | 18.6        | 18.9        | 18.8        |
| of which interest receipts                       | 0.2         | 0.3         | 0.3         | 0.3         | 0.3         | 0.3         |
| transfers from central government                | 13.8        | 13.7        | 14.3        | 13.8        | 14.0        | 13.7        |
| <b>Total revenue</b>                             | <b>39.6</b> | <b>40.3</b> | <b>40.9</b> | <b>41.2</b> | <b>41.9</b> | <b>42.6</b> |
| Consumption expenditure                          | 33.4        | 33.8        | 34.0        | 33.9        | 34.7        | 35.5        |
| of which compensation of employees               | 21.7        | 21.7        | 21.5        | 20.8        | 21.0        | 21.4        |
| Income transfers                                 | 3.1         | 3.2         | 3.3         | 2.6         | 2.6         | 2.6         |
| of which social security benefits and allowances | 1.3         | 1.3         | 1.4         | 0.8         | 0.7         | 0.7         |
| subsidies and other transfers                    | 1.7         | 1.7         | 1.7         | 1.7         | 1.7         | 1.8         |
| interest expenses                                | 0.1         | 0.1         | 0.1         | 0.1         | 0.1         | 0.1         |
| Capital expenditure <sup>3)</sup>                | 4.7         | 4.6         | 4.5         | 4.9         | 5.0         | 5.2         |
| <b>Total expenditure</b>                         | <b>41.2</b> | <b>41.6</b> | <b>41.8</b> | <b>41.3</b> | <b>42.3</b> | <b>43.3</b> |
| <b>Net lending (+) / net borrowing (-)</b>       | <b>-1.6</b> | <b>-1.3</b> | <b>-0.9</b> | <b>-0.2</b> | <b>-0.4</b> | <b>-0.7</b> |
| Primary balance <sup>4)</sup>                    | -1.7        | -1.4        | -1.0        | -0.3        | -0.5        | -0.8        |

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

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

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

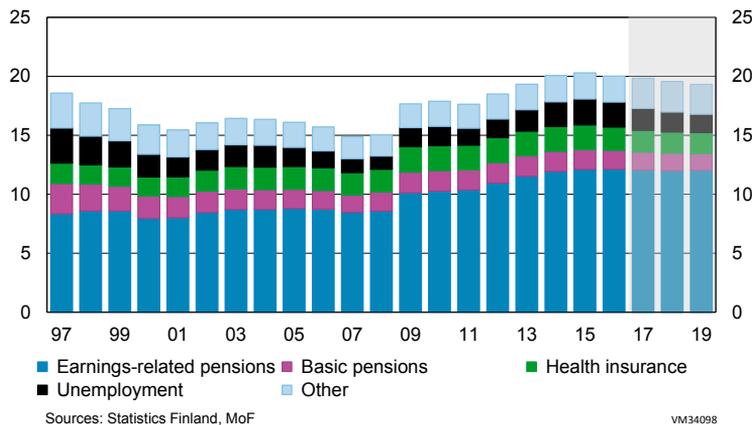
<sup>4)</sup> Net lending before net interest expenses.

## 2.4 Social security funds

The surplus of earnings-related pension schemes fell to 1.1 per cent relative to GDP in 2016, compared to an average of just over 3 per cent in the first decade of the 2000s. The gradual decline of the earnings-related pension schemes' surplus will continue during the outlook period and in 2019, the surplus will be slightly over 0.5% relative to GDP. The shrinking of the surplus is due to a rapid increase in earnings-related pension expenditure, and the increase in pension contributions and property income will not be able to compensate for this completely. The increase in earnings-related pension expenditure is due to the increase in the number of pensioners and the average increase in the pension level. Pension schemes' revenue from property income will return to moderate growth during the outlook period. In addition, the growth in revenue from pension contributions will accelerate slightly due to the moderate acceleration of growth in the sum of wages and salaries. Contribution revenue is also increased by the 0.4 percentage point increase in the private-sector pension insurance contribution made at the beginning of 2017. It has been agreed that the contribution will remain at its current level (24.4%) also in 2018 and 2019.

Other social security funds consist mainly of the Social Insurance Institution (Kela) and the Unemployment Insurance Fund, which are responsible for the provision of basic security and for earnings-related unemployment security, respectively. After running deficits for the two previous years, last year other social security funds posted a surplus of 0.2% relative to GDP. This was on the back of a one percentage point increase in the unemployment insurance contribution from the beginning of 2016 and a halt to unemployment security expenditure growth. The surplus of other social security funds is expected to strengthen slightly in 2017 as unemployment expenditure is reduced by improved employment. In 2018, the surplus will shrink when both unemployment insurance contributions and health insurance contributions fall. In 2019, the surplus will begin to rise again as unemployment continues to fall. Government saving measures will curb the growth in expenditure by other social security funds during the outlook period, but Government income transfers to other social security funds will be deducted in nearly the same way. In the light of the outlook, the Unemployment Insurance Fund will be able to repay its entire debt and accrue funds in its business cycle buffer to cover possible future unemployment expenditure.

### Benefits, allowances and medical care reimbursements relative to GDP, %



**Table 17. Finances of social security funds<sup>1)</sup>**

|  | 2014        | 2015        | 2016        | 2017**      | 2018**      | 2019**      |
|--|-------------|-------------|-------------|-------------|-------------|-------------|
|  | EUR billion |             |             |             |             |             |
| Investment income                          | 3.5         | 3.4         | 3.5         | 3.5         | 3.8         | 4.0         |
| Social security contributions              | 26.3        | 26.9        | 27.9        | 27.5        | 27.9        | 28.9        |
| of which contributions paid by employers   | 17.9        | 18.2        | 18.8        | 17.7        | 17.5        | 17.7        |
| contributions paid by insured              | 8.4         | 8.7         | 9.2         | 9.8         | 10.4        | 11.2        |
| Transfer from general government           | 13.9        | 14.3        | 14.6        | 15.9        | 16.0        | 15.8        |
| Other revenue                              | 0.6         | 0.5         | 0.5         | 0.5         | 0.5         | 0.5         |
| <b>Total revenue</b>                       | <b>44.2</b> | <b>45.2</b> | <b>46.5</b> | <b>47.5</b> | <b>48.2</b> | <b>49.3</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        | 38.0        | 39.0        | 39.9        |
| Other outlays                              | 3.2         | 3.7         | 3.4         | 3.3         | 3.4         | 3.4         |
| <b>Total expenditure</b>                   | <b>41.5</b> | <b>43.3</b> | <b>43.6</b> | <b>44.9</b> | <b>46.1</b> | <b>47.2</b> |
| <b>Net lending (+) / net borrowing (-)</b> | <b>2.7</b>  | <b>1.9</b>  | <b>2.9</b>  | <b>2.5</b>  | <b>2.2</b>  | <b>2.1</b>  |
| Earnings-related pension schemes           | 3.4         | 2.7         | 2.4         | 2.0         | 1.9         | 1.6         |
| Other social security funds                | -0.7        | -0.8        | 0.5         | 0.6         | 0.3         | 0.5         |
| Primary balance <sup>2)</sup>              | 1.2         | 0.5         | 1.6         | 1.3         | 0.8         | 0.7         |

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

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





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