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### Economic outlook

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#### Editor-in-Chief

Erkki Liikanen

The forecast was prepared by the Monetary Policy and Research Department under the direction of Juha Kilponen, Head of Forecasting.

#### Authors

Juha Itkonen	Petri Mäki-Fränti
Juuso Kaarevirta	Seppo Orjasniemi
Juha Kilponen	Heidi Schauman
Helvi Kinnunen	Hannu Viertola
Jarkko Kivistö	

#### Assistants

Anna Marin  
Reijo Siiskonen

The article 'Financial stability' was prepared by the Financial Markets and Statistics Department.

#### Authors

Jyrki Haajanan	Eero Savolainen
Kimmo Koskinen	Jukka Topi
Helinä Laakkonen	Eero Tölö
Hanna Putkuri	

#### Assistants

Nina Björklund  
Simo Kalatie

#### Translating and editing

Bank of Finland Language and Publication Services

#### Subscriptions

Email: [BoFPublications@edita.fi](mailto:BoFPublications@edita.fi)

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#### Bank of Finland

PO Box 160  
FI-00101 HELSINKI  
Phone National 010 8311,  
International +358 10 8311

Fax: +358 9 174 872

[www.bof.fi](http://www.bof.fi)

The front cover depicts the national motif on the Portugal 20 cent coin: Portuguese castles and coats of arms and the royal seal of 1142.

# Editorial

The difficult economic situation has continued in 2014. The factors hampering the economy are largely of a sort that will not be rapidly corrected. The Finnish economy is forced, in a weakened condition, to confront a situation in which the size of the working-age population is declining rapidly and the population share of the elderly is growing.

The performance of the Finnish economy is lagging well behind most countries in the euro area. Finland's real GDP is still a good 5% smaller than immediately before the onset of the international financial crisis in 2008.

The trend in domestic demand has not been as weak as the GDP trend since the onset of the financial crisis, due to monetary and fiscal stimulus. The difficulties in the economy have been related, above all, to exports. During the past three years the loss of export income has been reflected more than previously in domestic demand. The decline in employment has, however, been focused primarily on export industries.

Since the onset of the international financial crisis, Finnish exports have declined by approximately one fifth, which is more than in any other advanced economy. The decline in exports has been due both to specific problems in the electronics and forest industries and to a general decline in cost-competitiveness, in addition to the weak trend in the global economy.

Production costs in Finland have been pushed up by an approximately 10% rise in average wages relative to the euro area average since 1999, when the common currency was adopted. Most of the difference has come since 2007. Unit labour costs have also risen by approximately the same amount across the economy as a whole relative to the euro area average.

Cost developments in the domestic market sector have in recent years undermined the profitability of export production. Manufacturing industry, which produces around four fifths of Finland's exports, devotes annually the same amount of money to its own pay costs as to the purchase of intermediate production inputs from other domestic sectors. It is specifically outside manufacturing industry that the rise in wages and prices has been much faster than in key comparable countries, and this has significantly hampered industry's capacity to compete in exports.

Since 2009, the scope for economic growth has also been weakened by a reduction in the size of the working-age population (i.e. 15–64-year-olds). This is now declining at around ½% per annum, and demographic forecasts suggest rapid decline will continue for almost another 10 years still.

In addition to this contraction in the working-age population, the possibilities for growth are also weakened by the ongoing change in the economy's production structure. The decline in production for export has meant a contraction in the GDP contribution from sectors with rapid productivity growth. In the coming years, population ageing will increase demand for health and care services, increasing the GDP share of low productivity growth sectors. Growth in labour productivity will be muted.

It does, indeed, look as if economic growth will now be sluggish for a prolonged period. When, in addition, the general government deficit and debt have in recent years become larger, the long-term sustainability of the public finances is not ensured. Economic policy must be harnessed to turn things around and create an improved

outlook for growth, employment and the public finances.

Creating this stronger trend will require major decisions in many areas of policy both now and in the years ahead. The best research information and international experiences should be drawn upon to inform the solutions.

One area of decision-making relates to a reduction in production costs relative to Finland's trading partners. The collective pay agreement in autumn 2013 was an important step in slowing the rising level of costs. It is not, however, yet leading to an improvement in cost-competitiveness, as pay rises are also slow in most of Finland's trading partners.

Control of costs could benefit from e.g. working hours arrangements to improve productivity. In difficult situations, there would also appear to be advantages in a broader-than-present use of company-specific, job-saving solutions. Moreover, in the years ahead it would make sense to introduce a permanent procedure in wage formation in which the wage-paying capacity of the export sector would set the frame for increases in negotiated wages in other sectors of the economy as well.

In addition to the foregoing, there is also a need for implementation across a broad front of structural reforms to improve the prospects for growth. Research outcomes would suggest that such reforms can be carried out by removing regulatory controls that limit competition, particularly in private service sectors, using a range of means to increase labour supply and taking steps to boost the supply of housing. The prospects for growth can also be improved through such reforms to social and health care services that can moderate growth in costs and improve productivity.

Furthermore, innovation policy should be further developed by drawing on the best research in the field.

Improving the state of the public finances is one of the prerequisites of a favourable trend in the economy. Progress can be made by carrying through the aforementioned structural reforms. Even in the best case, however, the main impact of such reforms will only be felt several years in the future. It is therefore essential to continue the process of fiscal consolidation in the immediate years ahead.

Fiscal consolidation must be carried out in such a way that it does not deny the economy the capacity to grow and generate new employment. As the general government revenue base looks like it is going to be weak for a prolonged period and the total tax ratio in Finland is exceptionally high, expenditure savings will be unavoidable.

The Government has made important policy initiatives on structural reforms to improve the sustainability of the public finances, the most significant of these being pension reform. There have also been essential decisions taken on fiscal consolidation.

The weak trend in the economy and the bleakness of the long-term outlook do, however, mean that the next and subsequent parliaments will still have much to do to bring the Finnish economy onto a sustainable growth trajectory that can secure employment and fund jointly agreed welfare services.

8 December 2014



Erkki Liikanen

# Economic outlook

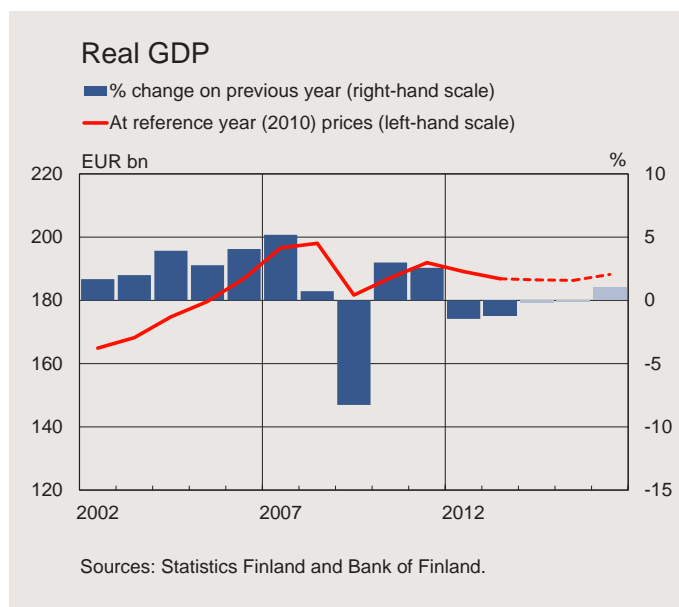
## I Forecast and risk assessments

### *Return to growth will be sluggish*

Finland's GDP will continue to be lacklustre through 2014–2016. There will be a contraction of 0.2% in 2014, and, although output will begin to grow very slightly during the course of the next year, real GDP in 2015 will still be 0.1% down on the previous year (Chart 1). After four years of unbroken contraction, the economy will return to weak growth of 1.0% in 2016. Such a prolonged period of contraction in the Finnish economy and subsequent slow growth is exceptional both historically and internationally.

Economic forecasts have actually overestimated Finland's economic growth more or less consistently throughout the current recession. The present forecast continues the now familiar pattern of having to adjust downwards the growth estimates

Chart 1.



presented in earlier forecasts. The Bank of Finland's summer 2014 forecast envisaged zero growth in the current year, but with the pace picking up during the course of the year to reach 1½% in 2015 (Table 1). The risks to

Table 1.

Forecast comparison: current and June 2014 forecasts

	2013	2014	2015	2016
GDP, % change	-1.2	-0.2	-0.1	1.0
June 2014	-1.4	0.0	1.4	1.5
Inflation (HICP), %	2.2	1.3	1.0	1.4
June 2014	2.2	1.2	1.3	1.5
Finland's export markets, % change	2.0	2.4	3.0	4.7
June 2014	2.1	3.8	4.7	5.3
Current account, % of GDP	-1.4	-1.5	-1.7	-1.7
June 2014	-1.1	-0.6	-0.2	-0.3
General government net lending, % of GDP	-2.4	-2.6	-2.2	-2.2
June 2014	-2.4	-2.6	-1.6	-1.4
General government debt (EDP), % of GDP	56.0	59.3	61.7	63.8
June 2014	57.0	60.3	61.6	62.9

Sources: Statistics Finland and Bank of Finland.

The June forecast was based on ESA95 national accounting. The present forecast has been prepared on the basis of ESA2010 accounting data.

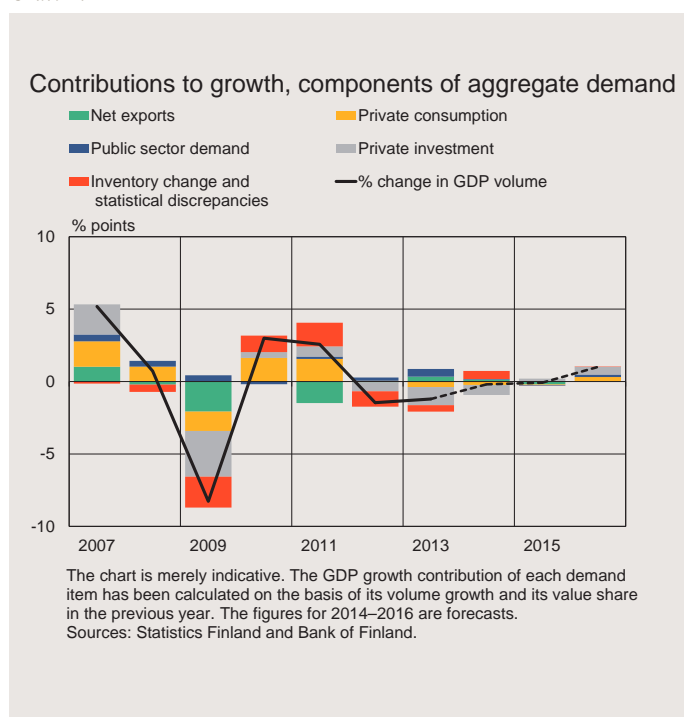
this forecast were considerable. The risks highlighted in the June forecast have now largely materialised. The period of slow inflation in the euro area has continued, and growth has been slower than forecast in June. The Ukraine crisis and rouble depreciation have undermined trade with Russia. Fiscal policy measures have turned out to be insufficient, and Finland's credit rating has been lowered. Moreover, industrial productivity development has continued to be weak, which in the previous forecast, too, was considered a risk to growth.

All demand factors are weak at the beginning of the forecast period (Chart 2). Domestic demand will continue to decline this year (2014) and next (2015). There will be some contraction

in household consumption and a more marked contraction in private investment. Net foreign trade will not support growth in the forecast period, as imports will grow at more or less the same pace as exports. Both will still be contracting in 2014, but in 2015 foreign trade will show slight growth. The declining GDP share of export industries means the contribution of export income to domestic demand will be less than it used to be even towards the end of the forecast period, when exports will already have begun to grow. In 2016, output growth will accelerate, driven primarily by investment.

The ongoing change in the structure of output, which has been a feature of the economy for several years already, will continue, and the accumulated losses in output will not be recovered even after the forecast period. The Bank of Finland has also lowered its previous estimate of the potential output growth, to around 1%.<sup>1</sup> Growth will continue to be sluggish for a prolonged period.

Chart 2.



<sup>1</sup> For more details on the long-term growth outlook, see the article 'Finland's long-term growth potential deteriorated', below.

Table 2.

Forecast summary						
Supply and demand						
	2013	2012	2013	2014 <sup>f</sup>	2015 <sup>f</sup>	2016 <sup>f</sup>
	At current prices EUR billion	Volume, % change on previous year				
Gross domestic product	201.3	-1.5	-1.2	-0.2	-0.1	1.0
Imports	78.8	1.3	-2.5	-0.4	1.9	3.1
Exports	76.9	1.2	-1.7	-0.1	1.4	3.1
Private consumption	111.0	0.1	-0.7	-0.4	-0.1	0.6
Public consumption	50.2	0.7	1.5	-0.1	-0.2	0.7
Private fixed investment	34.3	-3.3	-6.8	-4.0	1.2	3.2
Public investment	8.4	1.6	4.4	1.8	0.1	-0.4
Key economic indicators						
		2012	2013	2014 <sup>f</sup>	2015 <sup>f</sup>	2016 <sup>f</sup>
<b>% change on previous year</b>						
Harmonised index of consumer prices		3.2	2.2	1.3	1.0	1.4
Consumer price index		2.8	1.5	0.9	1.1	1.2
Wage and salary earnings		3.2	2.1	1.4	0.8	1.2
Labour compensation per employee		2.8	2.0	1.9	1.5	1.6
Productivity per person employed		-1.9	-0.1	0.3	0.1	0.7
Unit labour costs		4.7	2.2	1.6	1.4	0.9
Number of employed		0.4	-1.1	-0.5	-0.2	0.3
Employment rate, 15–64-year-olds, %		69.0	68.5	68.4	68.6	69.0
Unemployment rate, %		7.7	8.2	8.5	8.5	8.2
Export prices of goods and services		1.2	-0.8	-0.5	1.0	1.1
Terms of trade (goods and services)		-1.3	0.3	-0.6	0.1	-0.1
<b>% of GDP, National Accounts</b>						
Tax ratio		42.9	44.0	44.1	44.5	44.5
General government net lending		-2.1	-2.4	-2.6	-2.2	-2.2
General government debt (EDP)		53.0	56.0	59.3	61.7	63.8
Balance on goods and services		-1.4	-1.0	-1.0	-1.2	-1.2
Current account balance		-1.9	-1.4	-1.5	-1.7	-1.7
<i>f = forecast</i>						
Sources: Statistics Finland and Bank of Finland.						

Box 1.

## What do confidence indicators tell us about the short-term growth outlook for the Finnish economy?

*Confidence indicators reflecting the expectations of economic agents offer information on the present state of the economy and possible developments in the near future. The relationship between confidence indicators and economic growth has continued unchanged since the financial crisis. Taken as a whole, these indicators anticipate growth at or close to zero for the end of the current year.*

In forecasting economic development, we can draw on the confidence indicators produced by the European Commission, which reflect corporate and consumer expectations over future economic developments. The indicators are based on questionnaires that ask a broad range of questions on respondents' views on economic trends. Perhaps the most

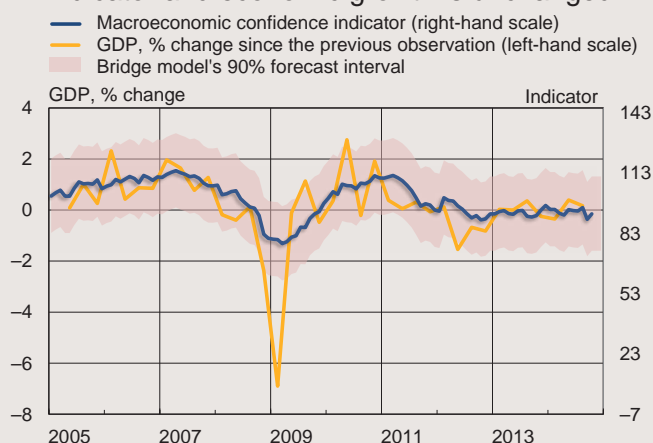
commonly used confidence indicator is the macroeconomic Economic Sentiment Indicator, which combines the views of both consumers and non-financial corporations (Chart).<sup>1</sup>

### *Macroeconomic confidence indicator continued to track economic developments since the crisis*

Confidence indicators communicate changes in sentiment among economic agents, and they are extensively used in following economic trends. However, the interpretation of confidence indicators is not straightforward, as by themselves they do not indicate the scale of economic growth. The relationship between confidence indicators and growth can, however, be estimated with the help of bridge models. These are simple statistical time series models that seek to explain the current change in quarterly GDP through the indicator values. Thus bridge models allow indicator values to be used to calculate a forecast for the change in GDP.

Chart.

### Correlation between macroeconomic confidence indicator and economic growth is unchanged



*The right-hand scale has been calibrated, based on bridge model parameter estimates, in such a way that the curve for the confidence indicator can be interpreted as forecasting economic growth. The pink area corresponds to a 90% forecast interval, which depicts the uncertainty of the forecast derived from the indicator.*

<sup>1</sup> The macroeconomic confidence indicator is indexed in such a way that the time series average calculated from 1990 to the end of the preceding year is given a value of 100 points, and 10 points on the scale corresponds to a single standard deviation in the series. This means that almost 68% of observations fit between 90 and 110 points.



The relationship between changes in GDP and the macroeconomic confidence indicator can be illustrated by entering values for both variables on the same chart. On the chart, the change in GDP is depicted on the left-hand scale (red value) and the value of the macroeconomic confidence indicator on the right-hand scale (blue value). The right-hand scale is adjusted on the basis of bridge model parameter estimates in such a way that the value of the confidence indicator can be interpreted as a forecast of economic growth. The index value of the indicator's value can be read from the right-hand scale and the corresponding forecast for economic growth from the left-hand scale. The pink area corresponds to a 90% forecast interval, which depicts the level of uncertainty in the growth forecast derived from the indicator.

The chart reveals that, with the exception of the steep drop at the beginning of 2009, the macroeconomic confidence indicator has followed changes in

GDP reasonably well. Since the financial crisis, it has been suggested that the crisis may have influenced the correlation between developments in the economy and the confidence indicators. We can see from the chart that the financial crisis has not had any (at least significant) effect on the correlation between the macroeconomic confidence indicator and developments in the economy.<sup>2</sup>

Moreover, the chart shows that a forecast made on the basis of a single indicator is very imprecise, a factor reflected in the width of the forecast interval.

#### *Confidence indicators anticipate zero growth towards year's end*

The National Accounts for the final quarter of 2014 will not be published until 2015, but based on confidence indicators we can already make a rough forecast of final quarter GDP.

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<sup>2</sup> This correlation can be examined statistically using the Chow test, which assesses whether a structural break has occurred in the relationship between the variables. The result of the test gave no cause to assume the relationship had changed.

The bridge model estimated for the macroeconomic confidence indicator forecast a 0.1% quarter-on-quarter contraction in GDP in the final quarter. Similarly, a bridge model and forecast based thereon can also be estimated for sub-indices depicting confidence among consumers and private sectors of the economy. The consumer confidence indicator forecast a 0.7% contraction, and the confidence indicator for service sectors a 0.1% contraction in the final quarter. Meanwhile, the industrial confidence indicator forecast 0.3% growth, and the indicator for the construction sector 0.2% growth in GDP.

It is, however, worth emphasising that forecasts based on individual indicators are notably imprecise and should be used with particular care. Despite this, as part of a broader analysis they can enrich the picture we have of the economic cycle and aid in monitoring developments in the economy.

*Weak earnings development and concerns over the future subdue consumer demand*

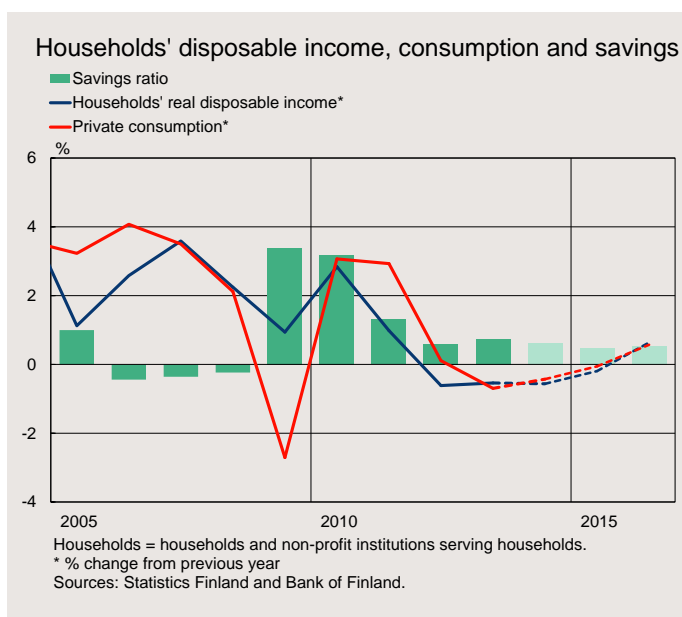
There will be no increase in household purchasing power during the forecast period. Growth in aggregate wages will be weak in 2014 and 2015 as the number of people employed declines and the objective of improving cost-competitiveness keeps growth in nominal earnings slow relative to previous developments (Chart 3). In 2016, there will be a marked increase in both earnings and the number of employed. During the forecast period, household purchasing power will be eroded by tighter taxation, particularly at local government level.

When earnings development is weak, the importance of pension income in household income formation increases further still. Although the index increments to pensions will be small in 2015 and 2016, the increasing numbers

of pension recipients will boost pension income's share of gross household income to 17% in 2016. As recently as 2005, pension income accounted for around 13% of all household income. As the ratio of income transfers to aggregate incomes grows further in the immediate years ahead, disposable incomes and private consumption will not be as sensitive as before to fluctuations in wages, and hence to fluctuations in the economic cycle.

During the forecast period, household consumption will be lowered by uncertainty over the future and the low savings ratio, which has already been declining for several years. Household indebtedness has remained substantial relative to income growth. This being so, households' ability to sustain their level of consumption by saving less is relatively weak. In the forecast, savings will remain around ½% of disposable income. Real private consumption will decline 0.4% in 2014 and only return to slight growth in 2016.

Chart 3.



*Individual projects sustain investment growth*

Capital investment by non-financial corporations is low. Demand is weak, uncertainty over the future high, and in many sectors even the present production capacity is not fully utilised. During the forecast period, any increase in productive capital will come primarily from individual projects currently being planned in the forest industries. There will be cautious growth in capital investment in 2015 and 2016, and at the end of the forecast period real investment will still be

around EUR 2 billion below the level of 2011 (Chart 4).

Housing investment, too, will be reduced by the weak demand outlook. Despite the low level of interest rates, housing demand will not begin to grow more substantially until 2016, when the economy more generally will strengthen. Hence construction of new housing will be sluggish in 2014 and 2015. Construction activity will, however, be sustained by the continued brisk pace of renovation work. Moreover, production of rental accommodation will grow with the help of government support, while housing demand will gain from the tightness of the market for rental accommodation. Return on investment in rental housing has remained competitive relative to other investments.

*Exports to lag behind pace of growth in export markets*

Developments in foreign trade will be modest during the forecast period. Both imports and exports will contract somewhat in 2014 but will thereafter begin to grow very slightly (Chart 5). Both will grow around 1% in 2015, and the pace of growth will pick up to over 3% in 2016 as the upward trend in the export markets strengthens. During the forecast period the growth impact of net exports will be approximately zero.

Although export growth will gather strength, it will still be sluggish compared with the period preceding the economic crisis and the trend to which we were accustomed in Finland in previous years. During the forecast

Chart 4.

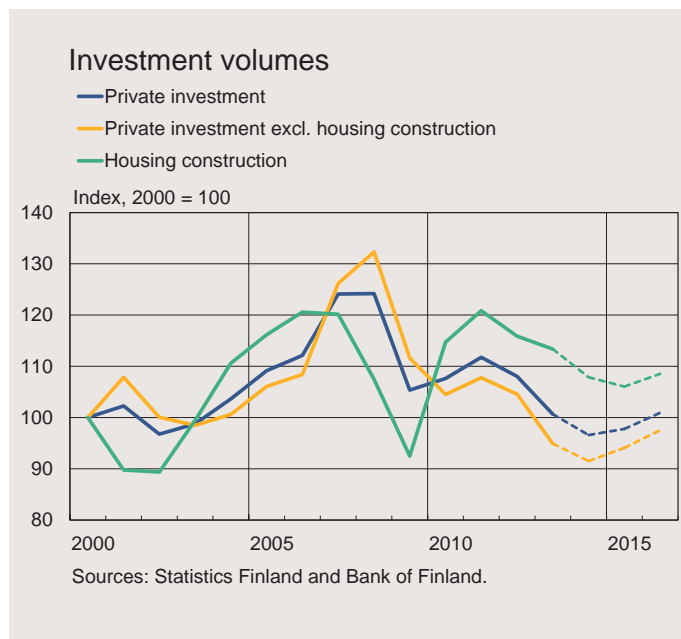


Chart 5.



period, export growth will lag well behind growth in the export markets. In part, this reflects the growing share of the emerging economies in global markets, a process that has been

Chart 6.

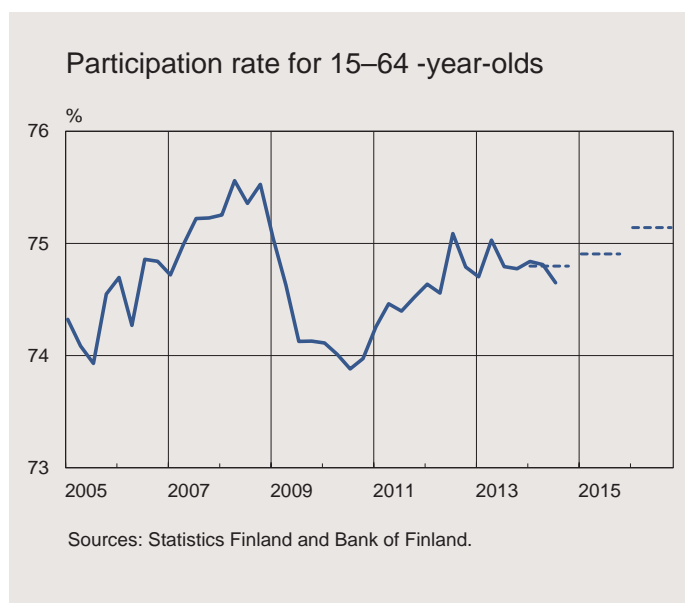


Sweden.<sup>2</sup> An examination of the weaker export trend reveals that Finnish output is predominantly in sectors with the weakest demand outlook internationally.

The depreciation of the euro since summer 2014 has given a relative advantage to exports from Finland and the rest of the euro area. Weakening developments in the Russian economy and depreciation of the rouble cast a shadow over the outlook for Finnish exports.

Finland's export prices will decline somewhat in 2014, but will rise again in 2015 and 2016 by around 1% per annum. Export prices will rise at more or less the same pace as the estimated rise in export prices among Finland's competitors. Hence the forecast does not anticipate any improvement in the price-competitiveness of Finnish exports (Chart 6).

Chart 7.



*Labour market trend will continue to be muted*

The number of people employed in Finland will decline slowly in 2014 and 2015, continuing the trend of recent years. The weak economic trend will still be reflected to only a limited extent on the labour market compared with previous economic downturns. This is partly because job losses have been concentrated primarily in high-productivity sectors and on output involving lower-than-average labour density. Viewed from another angle, employers have been compensating for

underway for some time already. On the other hand, since 2008 Finnish exports have grown more slowly than those of, for example, Germany and

<sup>2</sup> For more detail on the development of export market shares, see Bank of Finland Bulletin 3/2014, Box 3 'Product structure of Finnish exports becomes less favourable'.

the scarcity of investment by retaining their work force.

As the baby-boom cohorts begin to retire, there will be a marked decline in the size of the working-age population during the forecast period. The number of 15–64-year-olds will decline each year, although at the same time their participation rate will rise (Chart 7).<sup>3</sup>

The unemployment rate will remain at around 8.5% throughout the forecast period (Chart 8). The unemployment rate does not, however, tell the whole truth about the condition of the labour market, as there is a constant flow out of the labour market by people who have stopped searching for work due to the poor labour market situation. There is a risk that the relatively moderate labour market response in the recession years presages future growth that will generate few new jobs.

The weak economic and employment trend will subdue pay pressures. Nominal earnings will grow only 1.3% in 2014, and growth thereafter will continue at more or less the same pace. The rise in negotiated wages will continue to be moderate irrespective of the continuation of the Compact for Growth and Jobs. Upward pressures will be reduced by the weak trend in GDP and sluggish labour demand. The slow pace of rise in negotiated wages means real earnings will barely grow at all during the forecast period. Productivity growth will also be lame. In 2014 and 2015 productivity will scarcely grow at all, and thereafter it will

<sup>3</sup> The participation rate depicts the population share of the labour force, i.e. the employed and unemployed.

Chart 8.

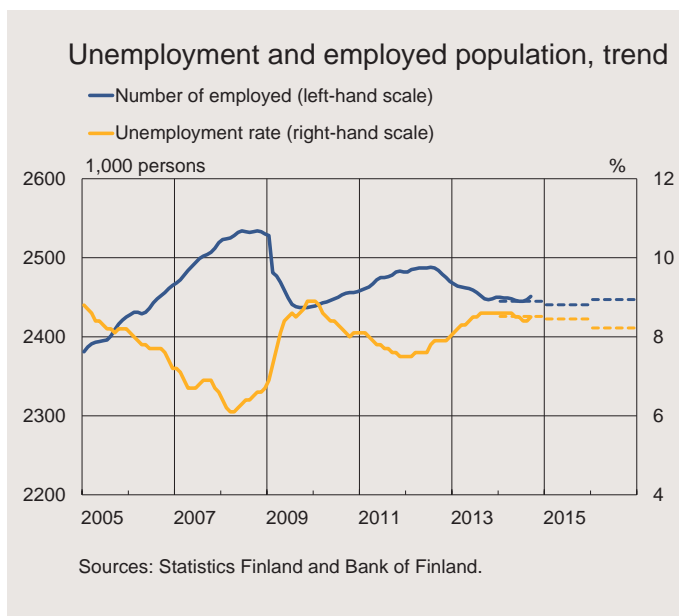
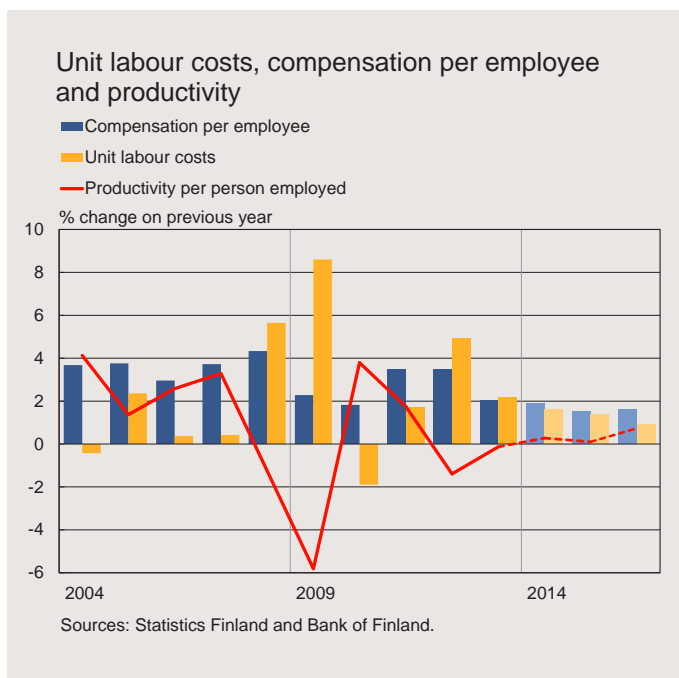


Chart 9.



grow by less than 1% in 2016. Unit labour costs will rise relatively slowly in the forecast period (Chart 9). In 2014,

the rise will be 1.6%, whereafter the pace will ease to under 1% in 2016.

*Inflation will slow, but less than the euro area average*

Inflation according to the harmonised index of consumer prices (HICP) will slow to 1.3% in 2014, and further, to 1.0% in 2015. As GDP growth accelerates, inflation will gather pace to 1.4% in 2016 (Chart 10).

During the forecast years, inflation will be sustained particularly by rising services prices. Labour costs are an important component of services prices. The slower rise in unit labour costs will ease the upward pressure on consumer prices, but the tightness of the housing market in growing urban areas will sustain the rising trend in rents.

The rapid rise in food prices will slow during the course of 2014, as the upward pressure on consumer prices from commodity prices and other costs will be weak in the forecast period. Electricity and fuel prices will decline in 2014, and the downward trend in energy prices will gather strength further in 2015. Taken as a whole, industrial goods prices will rise very slowly in 2014, and the sluggish trend in private consumption will keep price rises very moderate in 2015 as well.

Increases in indirect taxation will fuel inflation by 0.5 of a percentage point in 2014, but by just 0.3 of a percentage point in 2015.

*Current account will remain in deficit*

During the forecast period, the current account will post a substantial deficit, despite the weakness of domestic demand (Chart 11). The June 2014 Bank of Finland forecast still considered the deficit would be declining. The external

Chart 10.

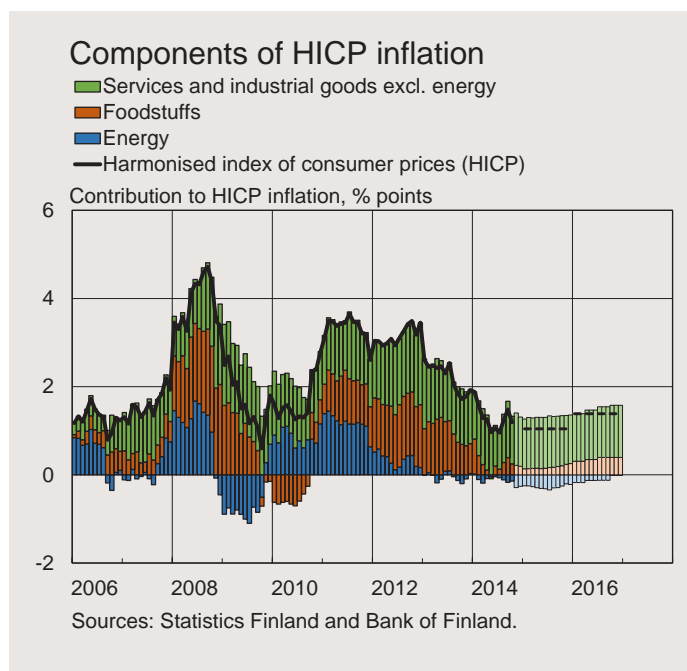
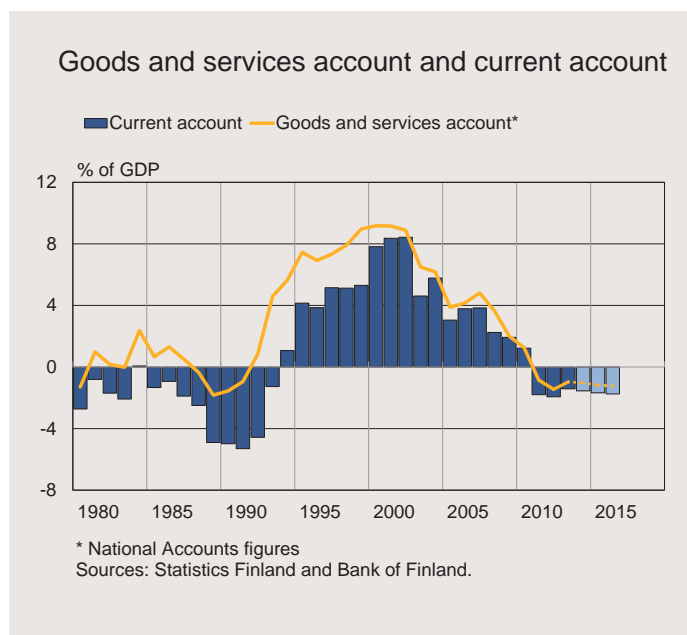


Chart 11.



balance will be cyclically weakened by the general slow pace of growth in the export markets and the particular problems of Finland's trade with Russia, which will reduce exports of goods and services particularly in 2014 and 2015.

The current account deficit is due specifically to the weakness of savings (Chart 12). Thus, the deficit has not been caused by the funding of an expansion in production capacity. The investment ratio will be particularly low in 2014 and 2015. The corporate sector will continue to enjoy a funding surplus throughout the forecast period. The household sector will remain in deficit, and domestic consumption will continue to be funded throughout the forecast period by the sustained accumulation of more central and local government debt as well as erosion of the surplus on the earnings-related pension funds.

*General government balance will not be restored*

Finland's public finances will be weaker in 2014–2016 than previously forecast. The forecast for GDP has been adjusted downwards, and the Government's fiscal policy will tighten less in 2015 than was planned in spring 2014. The general government structural deficit relative to GDP will in the current year (2014) exceed 1%, when under the fiscal compact law that came into force on 1 January 2013 the medium-term objective for the general government fiscal position is  $-\frac{1}{2}\%$ . The structural deficit will deepen further during the forecast period, to 1.5% as the cyclical situation improves.

Chart 12.

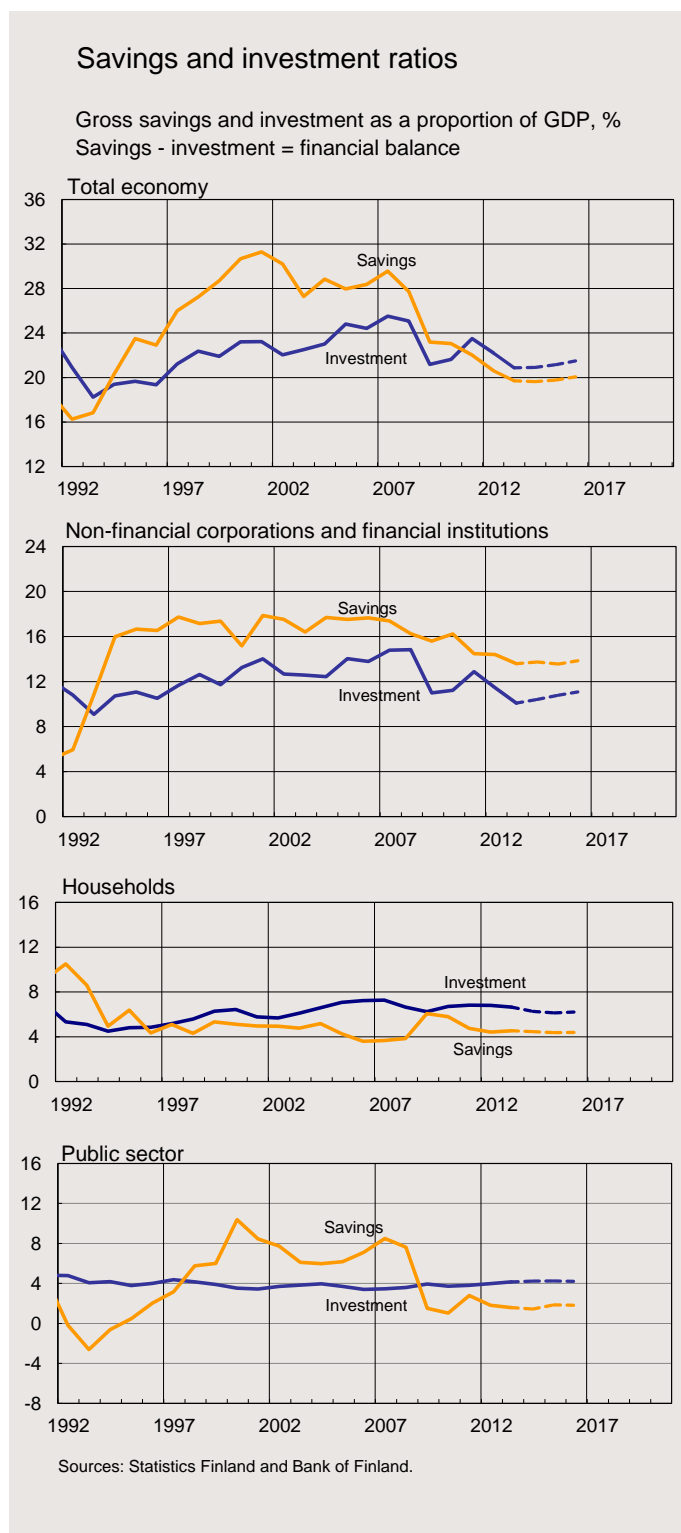
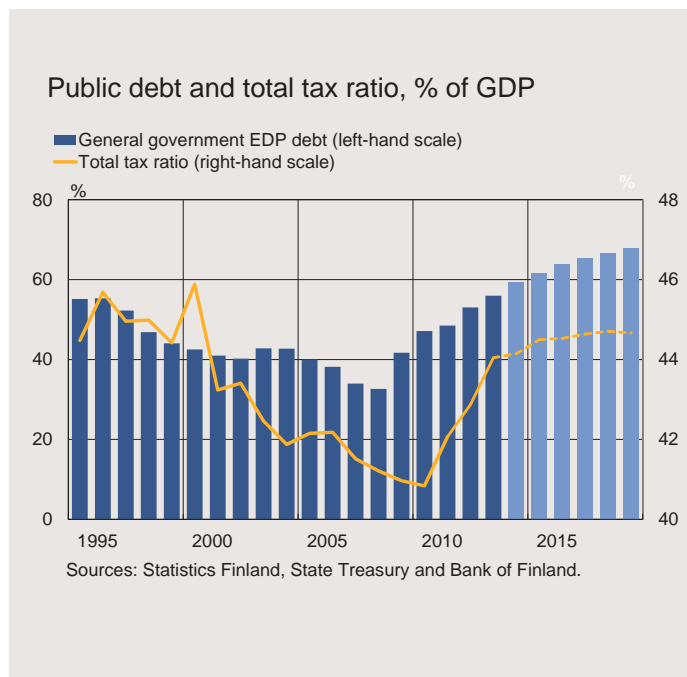


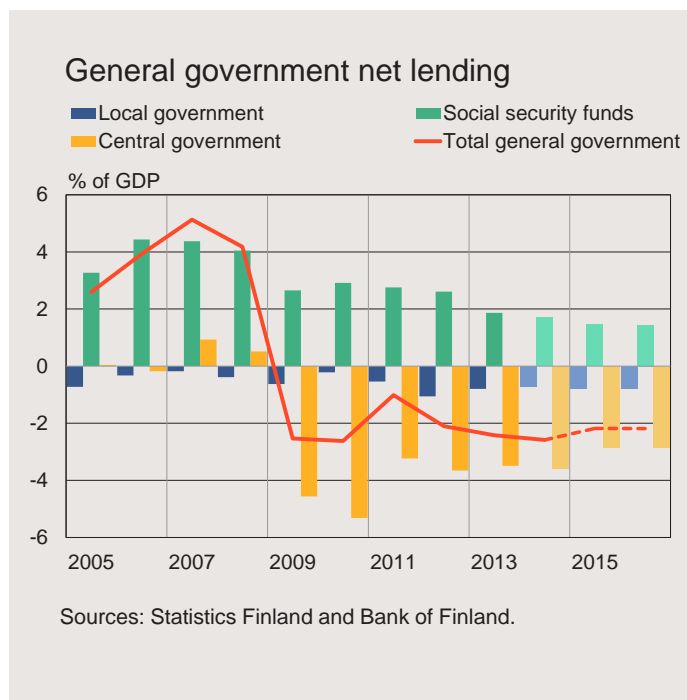
Chart 13.



The prolonged general government deficit has meant rapid growth in public debt, and there is currently no sign of this trend being turned around (Chart 13). Between 2013 and 2016, the GDP ratio of the debt will grow by almost 8 percentage points. In 2016, the debt ratio will clearly exceed the 60% threshold set in the EU's Stability and Growth Pact.

In 2014, the general government deficit will deepen to 2.6% of GDP (Chart 14). Growth in tax revenues will be sluggish, as the fall in the corporate tax ratio will reduce the tax yield and the yield from indirect taxation will grow less than in previous years on account of the sluggishness of private consumption. Public expenditure will grow faster than revenues, as there will still be a strong increase in social transfers. The increased public expenditures will be restrained by only moderate growth in employee compensation.

Chart 14.



The central government deficit will contract substantially in 2015 due to expenditure cuts and tax increases, but without further new measures it will remain unchanged in 2016. Local government finances will remain in deficit in 2014–2016. Central government savings measures will cut into central government transfers to local government, to which the municipalities have responded by increasing their local income taxes and restricting growth in expenditure. Real public consumption will contract in 2014–2015 but begin to grow again in 2016. Brisker public investment will be supported by a range of infrastructure



projects and growth centres' investment in their increasing demand for services. Real public investment will decline slightly in 2016 due to the weak general government financial balance. Growth in pension and unemployment expenditure will weaken the surplus on the social security funds throughout the forecast period, despite increases to social security contributions in 2014 and 2015. The total tax ratio will rise in the forecast years to 44.5%.

#### *Risk assessment and economic policy challenges*

##### *Risks*

The forecast for a moderate contraction in Finnish output in 2014 and 2015 and a slow recovery in 2016 is based on the view that imports by the countries Finland exports to will grow briskly and gain further momentum in 2016. Nevertheless, international developments are surrounded by significant risks.

Geopolitical tensions add to the uncertainty. The situation is strained in both Russia/Ukraine and the Middle East and North Africa. An escalation of the conflicts could impact the world economy via many different channels. The uncertainty will reduce risk appetite for economic agents and hold back investment growth, in particular, as the start of already planned investment projects is postponed and new ones are not embarked upon. Precautionary saving could also increase and dampen private consumption. In addition, lower risk appetite has the potential for reducing asset prices and widening loan margins

for non-financial corporations and financial institutions. This will ultimately be translated into higher debt-servicing costs for non-financial corporations and households. From Finland's point of view, weaker economic activity, especially in Russia, will have significant implications for Finnish exports.

Risk factors due to the financial crisis are also still present in the euro area, although the situation has recently been calmer. Higher risk premia could act as a constraint on the slow recovery seen in some euro area countries.

The need for structural reforms in Europe is a dominant view, but the reforms have not progressed in all countries as hoped for. Implementation of the European Commission's investment programme could accelerate recovery in European economies, which would also have a favourable impact on demand for Finnish exports.

A further weakening of the euro's exchange rate is an upside risk for the forecast. The falling oil price is another positive factor for the world economy insofar as it reflects growing supply. But the declining oil price is not an unmixed blessing for Finland, as it is negative for the Russian economy, thereby reducing Russian imports. The alternative scenario (see Box 3) provides an estimate of the impact of the lower oil price on the forecast. According to the scenario, a 20% fall in the price of crude oil would already bring Finland's GDP growth into slightly positive territory in 2015, despite lower Russian imports.

In **Finland**, subdued economic activity may lead to a self-reinforcing

negative spiral and to a weakening of financial market confidence. The deteriorating external balance and public sector indebtedness also expose Finland's economic performance to external shocks.

In view of the challenges facing the public finances and the growth outlook, Finland's credit rating has remained high. Although the impact from Standard & Poor's rating downgrade has so far been modest, negative news in Finland's external operating environment could lead to a tightening of financial conditions in Finland. Stricter financial conditions would essentially hamper access to finance for small and medium-sized enterprises, in particular, and would raise the cost of finance in circumstances where corporate profitability has weakened to very low levels by historical standards (see Box 6).

Such a spiral could also be triggered by the near-term choices of domestic economic policy. Public debt accumulation could be faster than expected if economic policy choices are based on an overly optimistic view of the state and future performance of the Finnish economy, and if fiscal consolidation measures are not initiated in time.

#### *Economic policy challenges*

Finland's economic policy is facing difficult questions. Choices need to be made in a situation where the uncertainty around international

economic activity has increased, the level of production costs in Finland has remained higher than in competitor countries, the external balance has deteriorated and the long-term growth outlook is bleak. The structural policy programme, on which fiscal consolidation has been built, is advancing slowly. The pension reform reduces the sustainability gap, but the simultaneous weaker economic performance increases the gap so that the Budget shows a shortfall of nearly 4 % to be bridged.

In a situation where the weakness of the economy is increasingly structural and the current account is in deficit, strengthening domestic demand via cyclical measures weakens the overall balance of the economy. Stimulation of demand would lift the level of prices and, via this channel, erode the economy's price competitiveness. The result would be the same if the tax burden in the economy were increased further.

Growth can be bolstered by labour market reforms, but these need to be supported by other measures, too. A higher degree of competition in sheltered sectors allied to cost cutting would enhance Finland's price competitiveness, strengthen the export sector and improve the external balance. Weak economic growth will probably reduce wage pressures automatically, but cost increases can also be reined in by various decisions to strengthen the dynamics of the labour market.

Box 2.

### Alternative scenario: Lower oil price boosts economic growth

In recent years, oil price developments have diverged from forecasts due to numerous unforeseen events. The price of crude oil has edged down by nearly 30% since June 2014. This is thought to be due, on one hand, to waning demand amid lower economic growth and, on the other hand, to increased oil production. In the forecast, the price of oil is based on market expectations current on 13 November 2014, which suggest a mild upturn in the first half of 2015. Oil price movements and global economic growth have historically been closely interrelated. If the price of oil continues to fall, this will strongly stimulate the global economy.

This alternative scenario looks at a situation where the price of oil is 20% lower than the baseline, starting from the last quarter of 2014. The implications of the lower oil price are many and diverse. On one hand, the falling price curbs rises in production costs on a global scale, thus spurring global

growth. On the other hand, the declining oil price weakens the Russian economy, thereby sharply cutting back Russian imports. As trade with Russia accounts for a significant part of Finland's export market, the effects of the lower oil price on growth in demand for Finnish exports are more moderate than the corresponding effects on our most important trading partners.

The sliding oil price reins in rises in domestic production costs and consumer prices and, by extension, speeds up growth in domestic demand. The scenario assumes identical deceleration in production cost rises both in Finland itself and in Finland's export markets. Consequently, Finland's export price performance barely differs from that of its competitors. The lower oil price is strongly reflected in import prices, whose decline translates into an improvement in the terms of trade.

In the alternative scenario, the 20% fall in the oil price boosts GDP growth in Finland

by 0.6 of a percentage point in 2015 and 2016. Higher output increases labour demand, which accelerates payroll growth. Faster economic growth is not significantly reflected in average wage increases, as considerably lower inflation fuels rises in real pay and improves purchasing power. A better employment situation stimulates private consumption growth by slightly more than one percentage point in 2015–2016.

The impact of the falling oil price on GDP growth during the forecast period is dampened by strongly rebounding imports relative to exports. In the alternative scenario, the import content of domestic consumption and investment widens in response to lower import prices, and higher growth in domestic demand provides a considerable boost to expanding imports. Despite improving terms of trade, the scenario points to a slightly widening trade deficit.

Table.

**Alternative scenario: key outcomes**

	2014	2015	2016
<i>GDP, % change</i>			
<i>Baseline forecast</i>	-0.2	-0.1	1.0
<i>Alternative scenario</i>	0.0	0.5	1.6
<i>Difference</i>	0.2	0.6	0.6
<i>Private consumption, % change</i>			
<i>Baseline forecast</i>	-0.4	-0.1	0.6
<i>Alternative scenario</i>	0.0	1.8	2.0
<i>Difference</i>	0.3	1.9	1.4
<i>Private investments, % change</i>			
<i>Baseline forecast</i>	-4.0	1.2	3.2
<i>Alternative scenario</i>	-3.7	1.7	3.0
<i>Difference</i>	0.6	0.5	-0.2
<i>Exports, % change</i>			
<i>Baseline forecast</i>	-0.1	1.4	3.1
<i>Alternative scenario</i>	0.1	2.2	3.7
<i>Difference</i>	0.2	0.9	0.6
<i>Imports, % change</i>			
<i>Baseline forecast</i>	-0.4	1.9	3.1
<i>Alternative scenario</i>	-0.1	4.0	4.1
<i>Difference</i>	0.3	2.1	1.0
<i>Private consumption deflator, % change</i>			
<i>Baseline forecast</i>	1.7	1.5	1.4
<i>Alternative scenario</i>	1.8	0.6	1.1
<i>Difference</i>	0.1	-0.9	-0.3
<i>Employed persons, 1,000 persons</i>			
<i>Baseline forecast</i>	2,445	2,440	2,447
<i>Alternative scenario</i>	2,452	2,484	2,507
<i>Difference</i>	7	43	59

Source: Bank of Finland calculations.

Box 3.

### Forecast assumptions

The growth outlook for the global economy remains fairly weak and growth will accelerate only slowly (Table A). The differences between countries have, however, increased. In the United States, economic growth will be relatively strong in the immediate years ahead, whereas the growth outlook for Europe is weak. Europe's growth outlook is overshadowed by geopolitical tensions and increasing uncertainty, which will both weigh particularly heavily on investment. In contrast, the growth-inhibiting impact of general government consolidation is receding. The differing economic trends of the major economic regions means the monetary policy cycles of the different regions are also slightly out of sync, but monetary policy in the major economic regions remains accommodative, with low interest rates.

While before the financial crisis world trade was growing at approximately twice the pace of the economy, since the crisis trade has only grown at the same pace as the economy. Trade growth has been expected to strengthen, but there may have been changes in the structures of world trade (e.g. a shortening of international production chains) on account of which economic growth no longer supports trade

growth to the extent it did before the crisis. World trade growth will therefore remain much slower than assumed in June 2014.

Relative to the developments in world trade, growth in Finland's export markets has in recent years been slower. This trend will continue in the immediate years ahead, as the outlook for economic growth has deteriorated, particularly in key areas for Finnish exports, such as the euro area, Russia and Sweden. The sluggish growth in the export markets will be compensated to some degree by the depreciation of the euro and the consequent improvement in the price-competitiveness of Finnish exports.

World market prices of commodities, and energy in particular, have fallen markedly in recent months (Table B). The fall in commodity prices has been due to both supply and demand factors. Demand for raw materials has been affected by the weakening of economic growth in both Europe and China. At the same time, the supply of some commodities has increased. For example, there has been a substantial increase in the output of crude oil in the United States. Moreover, the unrest in North Africa and the Middle East has had less impact than expected on oil production in these areas. In 2015, world market prices for commodities will begin to rise, but the level of prices will still be

Table A.

#### Growth in GDP and world trade

% change on the previous year

GDP	2013	2014 <sup>f</sup>	2015 <sup>f</sup>	2016 <sup>f</sup>
United States	2.2	2.2	2.9	2.9
Euro area	-0.4	0.8	1.0	1.5
Japan	1.5	0.9	1.2	1.0
Asia excl. Japan	6.0	6.1	6.3	6.2
World	3.2	3.3	3.7	3.9
World trade	2.8	2.9	4.0	5.2
Finland's export markets*	2.0	2.4	3.0	4.7

\* Growth in Finland's export markets equals growth in imports by countries to which Finland exports, on average, weighted by their respective shares of Finnish exports.

<sup>f</sup> = forecast

Source: Eurosystem.

Table B.

## Forecast assumptions

	2012	2013	2014 <sup>f</sup>	2015 <sup>f</sup>	2016 <sup>f</sup>
Finland's export markets <sup>1</sup> , % change	2.5	2.0	2.4	3.0	4.7
Oil price, USD/barrel	112.0	108.8	101.0	85.1	88.0
Euro export prices of Finland's trading partners, % change	3.0	-2.9	-0.9	1.1	1.3
3-month Euribor, %	0.6	0.2	0.2	0.1	0.1
Yield on Finnish 10-year government bonds, %	1.9	1.9	1.5	1.2	1.4
Finland's nominal competitiveness indicator <sup>2</sup>	100.1	102.6	103.8	102.9	102.9
US dollar value of one euro	1.28	1.33	1.33	1.25	1.25

<sup>1</sup> Growth in Finland's export markets equals growth in imports by countries to which Finland exports, on average, weighted by their respective shares of Finnish exports.

<sup>2</sup> Narrow plus euro area, 1999Q1 = 100

f = forecast

Sources: Eurosystem and Bank of Finland.

much lower than has been customary in recent years and was assumed in the previous Bank of Finland forecast.

The forecast assumes interest rates will develop in line with financial market expectations and exchange rates will remain unchanged throughout the forecast period. According to the forecast assumption based on market expectations, the 3-month Euribor will remain very low in the forecast period, standing at 0.1% in 2016. The yield on Finnish 10-year government bonds will rise slowly, reaching 1.4% in the final quarter of 2016.<sup>1</sup>

<sup>1</sup> The interest rate assumptions in the forecast have been derived from market expectations current on 14 November 2014. The interest and exchange rate assumptions are purely technical and do not anticipate the monetary policy decisions of the Governing Council of the European Central Bank or estimates of equilibrium exchange rates.

Box 4.

## Finland's public finances

Finland's public finances have posted a deficit since 2009. At the end of 2013, the accumulated debt of central and local government totalled EUR 113 billion, i.e. 56% of GDP, or almost EUR 50 billion more than at the end of 2008. On the back of very weak economic developments, the general government deficit will remain high and public debt will continue to accumulate in 2014–2016, unless additional consolidation measures are undertaken swiftly. The cyclically adjusted structural deficit will also increase.

In the absence of substantial new consolidation measures, the general government structural deficit and the debt-to-GDP ratio will exceed in the forecast period the criteria set in the context of EU fiscal coordination. Towards the end of the current decade, Finland's general government deficit is already at risk of exceeding the 3% reference value. The agreed pension reform may be assumed to lead to longer working careers and improve the long-term sustainability of the public finances. Even so, fiscal sustainability has not improved materially, since both the short- and the long-term outlooks for economic growth have deteriorated. Therefore, the risk of Finland's public finances becoming over-indebted has substantially increased.

There are several factors underlying the deterioration in fiscal imbalances. Real GDP has contracted due to weak developments in the global economy, ongoing industrial restructuring, the shrinking size of the working-age population and deterioration in cost-competitiveness. As output growth has continuously remained slower than expected, policy measures targeted at softening the output and employment losses have become a burden on the public finances.

Despite consolidation measures in recent years, Finland's public finances have deteriorated, as economic developments have continuously remained weaker than forecast. If implemented as planned, the envisaged economic restructuring measures will improve the fiscal balance, but the effects may largely be expected only after many years.

### *General government structural balance exceeds EU thresholds*

During the forecast period the general government structural deficit will exceed the threshold of –1%, signalling significant deviation from the medium-term objective, and it will deepen further thereafter. The growth in the deficit is influenced by the declining surplus in the earnings-

related pension system. This is due to the rapid increase in pension expenditure in the immediate years ahead and the moderate growth in premium income in the context of slow economic growth. Consequently, the pension reform will in practice curtail pension expenditure growth only marginally in the current decade. Even though population ageing will not affect central and local government finances much in the present decade, the deficits of these two sectors will creep upward, too, in an environment of slow economic growth.

All in all, calculated on the basis of current income and tax bases, the general government deficit would deepen to 2.7% of GDP by 2020 (Table). This would also constitute the structural deficit, since output is then assumed to be at a level determined by the potential output of the economy and to grow at a pace determined by productivity and labour supply.

### *Fiscal sustainability problems have not lessened*

If the structural deficit remains around 3%, public debt will continue to accumulate at a rapid pace in the 2020s. Fiscal sustainability will begin to deteriorate, with expenditure on health care, social services and education

Table.

## General government deficit and debt 2012–2020

% of GDP	2012	2013	2014 <sup>f</sup>	2015 <sup>f</sup>	2016 <sup>f</sup>	2017 <sup>f</sup>	2018 <sup>f</sup>	2019 <sup>f</sup>	2020 <sup>f</sup>
General government net lending	-2.1	-2.4	-2.6	-2.2	-2.2	-2.0	-2.1	-2.4	-2.7
Central government	-3.7	-3.5	-3.6	-2.9	-2.9				
Local government	-1.1	-0.8	-0.7	-0.8	-0.8				
Social security funds	2.6	1.9	1.7	1.5	1.4				
General government structural balance	-0.7	-1.2	-1.3	-0.9	-0.8	-0.6	-0.7	-0.9	-1.2
Structural balance, % of potential GDP	-1.3	-0.9	-1.0	-1.1	-1.6	-1.5	-1.8	-2.2	-2.7
General government debt (consolidated, EDP)	53.0	56.0	59.3	61.7	63.8	65.5	66.7	67.8	68.9
Total tax ratio, % of GDP	42.9	44.0	44.1	44.5	44.5	44.6	44.7	44.7	44.6

Sources: Statistics Finland and Bank of Finland.

increasing until the 2040s and pension expenditure growing until the mid-2030s. Moreover, as the long-term growth outlook has weakened and structural unemployment is assessed to remain high, the sustainability gap in general government finances will remain sizeable, despite the positive impact of the pension reform – if implemented as planned.<sup>1</sup>

Compared with the Bank of Finland's sustainability analysis published in December 2013, the structural unemployment rate will remain about ½ of a percentage point higher. Economic growth, especially in

the 2020s and 2030s, will also be slower than assumed a year ago. However, interest rate expectations have been revised downward by ½ of a percentage point. If implemented as planned, the pension reform will boost labour input and ease pension expenditure. The evaluation of fiscal sustainability builds on the assumption that the number of pensioners will decline in the same proportion as the Finnish Centre for Pensions (ETK) expects the reform to increase employment.<sup>2</sup> The pension replacement ratio under the pension reform agreement is also assumed to develop as estimated by the ETK.

With the given assumptions and the estimate on the structural deficit for 2020, the general government sustainability gap

will remain around 4%. A year ago it was forecast at 4½%. The pension reform is assessed to reduce the sustainability gap by about 1 percentage point, while the weaker point of departure and more moderate economic growth, in turn, contribute to a deepening of the sustainability gap compared with the previous forecast. In addition, it must be stressed that the pension reform may affect the sustainability gap even less than presented here.<sup>3</sup> In the feature article at the end of this publication the effects of the pension reform are also estimated on the basis of the general equilibrium model. Measured by the total tax ratio, according to the model calculation the reform would cause a reduction of about 1.4

<sup>1</sup> The sustainability projection that extends the scenario running up to 2020 is based on the European Commission's new assumptions regarding e.g. structural unemployment and interest rates. (See The 2015 Ageing Report. Underlying assumptions and projection methodologies. European Economy 8/2014.) The economic growth assumption is the same as the Bank of Finland's long-term growth projection for the 2020s and 2030s (see the article 'Finland's long-term growth potential has weakened' at the end of this Bulletin).

<sup>2</sup> See 'Alustava vaikutusarvio vuoden 2017 eläkeuudistusta koskevasta neuvottelutulosesta' ('Tentative assessment of the outcome of the 2017 pension reform discussions'). Finnish Centre for Pensions. 30 September 2014.

<sup>3</sup> If, for example, structural unemployment increases as working careers lengthen, this would significantly reduce the impact of the pension reform. For instance, a rise of 1 percentage point in the unemployment rate would deepen the sustainability gap by 0.7 of a percentage point.



percentage points in the need to raise the tax ratio by 2040.<sup>4</sup>

### *Substantial need for fiscal consolidation*

The estimate for fiscal developments up to the end of the current decade is naturally a scenario surrounded by many uncertainties. However, it is clear that, even to meet the criteria under the EU Stability and Growth Pact (SGP), Finland's public finances need to be strengthened during the next parliamentary term.

According to the forecast, the structural deficit in public finances will grow and diverge in 2014–2016 from the objective of 0.5% set out in the national legislation required for ratification of the EU Fiscal Compact (hereinafter the Fiscal Compact Act). Since the cyclical situation is expected to normalise by 2016, the structural deficit should be reduced towards the objective specified in the Fiscal Compact Act. It is also likely that, in 2016, general government debt will exceed the 60% threshold set out in the SGP, even when taking into account Finland's participation in the solidarity operations between EU Member States. Thereafter, the commonly-agreed rules require a halt to the growth in debt.

Compared with previous assessments, the situation has

<sup>4</sup> In the model simulations, labour taxation will balance the public finances, meaning when the pension reform dampens the need to raise taxes, it thereby also boosts employment and economic growth.

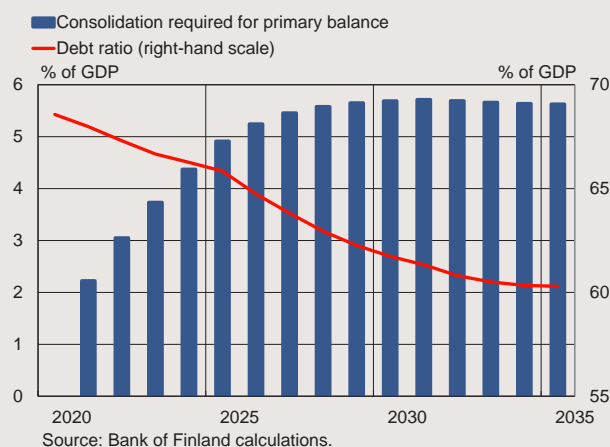
deteriorated insofar as correcting fiscal imbalances cannot be postponed to the extent that was previously considered possible. If, for example, the public finances were not strengthened during the next parliamentary term, it would require intense consolidation in the 2020s to bring the general government debt ratio onto such a downward path as would stabilise the ratio to around 60% in the course of a relatively long period, i.e. by the beginning of the 2030s (Chart A). The general government primary balance would have to be strengthened by a total of almost 6 percentage points relative to GDP over about 7 years. Bringing the debt ratio down would necessitate, at the very start of the decade, consolidation measures of almost

5 percentage points relative to GDP. This would correspond to an aggregate fiscal consolidation of about EUR 12 billion.

Because of the magnitude of the required consolidation, it is evident that full implementation of the autumn 2013 structural policy programme is crucial for the soundness of Finland's public finances. On the other hand, since the implementation and effects of restructuring measures are surrounded by a high degree of uncertainty, the fiscal stance should be set with the key emphasis on long-term consolidation. In adjusting the fiscal stance, increasing account should be taken of the Finnish economy not returning to its historical long-term growth path. For this reason, in steering public finances in the long term, the most

Chart A.

### Cumulative consolidation requirement to stabilise debt ratio at 60%



prominent role should be given to expenditure policy, particularly the central government spending limits framework and consolidation of local government finances.

*Spending limits should be connected to long-term challenges and revenue base dynamics*

The framework of central government spending limits has brought consistency in practical budget policy and has, in times of stable economic conditions, prevented unexpected revenue windfalls from leading to permanently higher expenditure. Adherence to the spending limits contributed markedly to the rapid decline in the debt ratio in 2000–2008.

The persistently poor economic developments relative

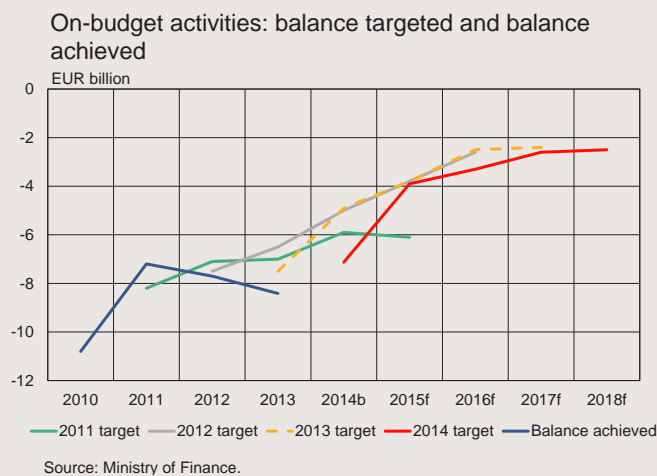
to forecasts during the current recession have, however, revealed the weakness of the spending limits framework. If public revenue grows noticeably slower than estimated, adhering to the spending limits – or even cutting them – does not sufficiently support strengthening the public finances. In this sense, expenditure policy has relaxed automatically in recent years, since revenue growth has been weaker than envisaged when the spending limits were set. For example, in 2012, in connection with the central government spending limits, revenue for 2013 was estimated to amount to EUR 1.5 billion higher than the actual outcome (Chart B). The expenditure estimate was exceeded by EUR 0.4 billion, and the actual budget deficit was almost EUR 2 billion higher than

forecast (Chart B). Similarly, the revenue estimate made in 2013 for 2014 will, according to the third supplementary budget, fall short of the actual outcome by EUR 1.1 billion, whereas actual expenditure will be EUR 1 billion higher than estimated.

The administrative-branch-specific spending limits spanning over several years guide public spending in the long term. For this reason, setting the level of the spending limits plays a key role in managing public expenditure. In a situation where general government debt accumulation needs to be curbed in the long term, the spending limits should also systematically reflect this objective. In managing expenditure, the steering of local government expenditure is also important. The plan for the public finances specified in the related Government Decree and the financial steering system for local government introduced in the new Local Government Act impose a more stringent fiscal balance rule on municipalities. However, the results of the new steering system will not be visible until some years ahead. Furthermore, developing a system for cost control in the context of the reform of social and health care services is only at the planning stage.

The consolidation targets set for central government finances under the spending limits procedure have largely been shifted onto local

Chart B.



government. Cuts in central government transfers to local government have not reduced total public expenditure in the same proportion, leading instead to local government debt accumulation and municipal tax increases. Thus, at the aggregate general government level, taxation has been tightened more than expenditure has been reduced. Discretionary expenditure cuts have been about 1% of GDP in 2012–2014, while the total tax ratio has risen by over 2 percentage points. Tightening of municipal taxation undermines citizens' regional equality.

The developments witnessed in recent years highlight how important it is that rules for the public finances are not set independently of real economic developments. Therefore, the spending limits system should be strengthened with a control mechanism that would ensure that expenditure relative to GDP does not increase during the budget planning period from the level specified at the beginning of the government term. Such a control mechanism would help to significantly ease the effects of uncertainty relating to economic forecasts on the balance of the public finances. Setting the spending limits in nominal terms would also improve cost control

and increase the transparency of the system.

#### *Stabilisation of public finances requires both expenditure cuts and restructuring*

The rapid increase in the debt ratio, excessive structural deficit and persistently low economic growth require substantial consolidation of the public finances. Already cutting the structural deficit to ½% would require additional savings of EUR 2 billion. Reversing debt accumulation during the forecast period would require additional savings of EUR 3 billion. If the consolidation measures are not taken in the next parliamentary term, bringing the debt ratio onto a downward path in a situation where growth in expenditure on long-term care services is accelerating would require substantial savings throughout the 2020s. It would require, at the very start of the decade, fiscal consolidation of over 2 percentage points relative to GDP. Even thereafter, maintaining the downward path would require further savings averaging about ½% of GDP per annum.

In scaling and timing consolidation measures, choices need to be made, in practice, as regards the extent to which the emphasis is on restructuring measures and the extent to which

it is on immediate expenditure cuts. On one hand, it is clear that without restructuring measures it will be very difficult to achieve sustainability in the public finances. On the other hand, the structural policy programme agreed by the Government a year ago has progressed more slowly than anticipated in the case of reforms other than the pension reform. There is also a risk that the effects of restructuring measures already implemented will not measure up to expectations.

Finland's credit rating has remained strong when considering the country's fiscal challenges and growth prospects. The ample liquidity on the financial markets has enabled rapid debt growth without a marked rise in financing costs. In an environment of slow economic growth, it has been justifiable to compromise with consolidation measures. However, in view of the developments forecast for the immediate years ahead and the expected weakness of long-term growth, the public finances must be consolidated during the next parliamentary term considerably more than has been the case since 2011, when there was a shift from fiscal easing to fiscal tightening.

## II Recent developments

### *GDP and employment*

Real GDP contracted in 2013 for the second consecutive year, with a nominal GDP decline of 1.2%. Exports, which have typically been the main driver of growth, were lacklustre, and the ratio of imports to exports was high, so that the GDP contribution from net exports remained small. Even private consumption, which has underpinned growth in recent years, contracted substantially. Fixed investment continued to decline sharply.

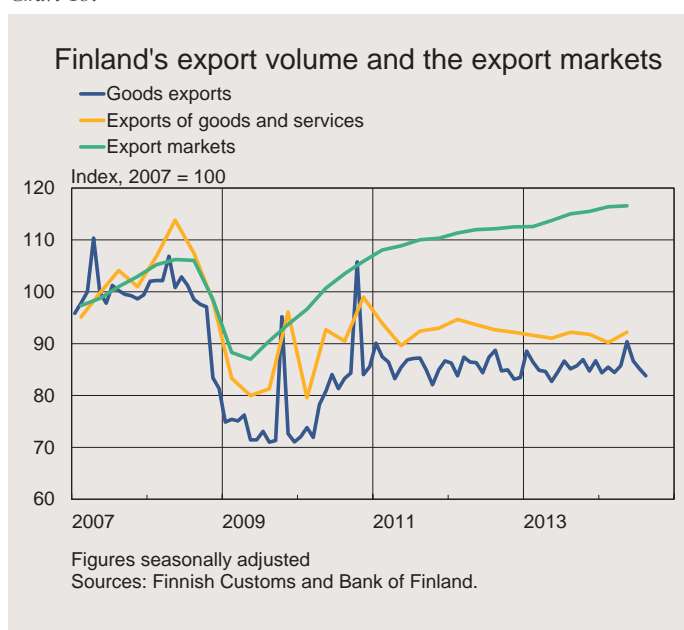
Finland's exports have been stagnating for several years, lagging well behind growth in the export markets (Chart 15). The weak trend in exports stems from several factors. Industrial restructuring, i.e. the smaller share of ICT and the forest industries, has substantially reduced industrial

production capacity. In addition, the composition of Finnish exports is relatively one-sided, with the focus particularly on capital goods. Global demand for capital goods has been muted and companies' willingness to invest has been low for quite some time. In addition to the industrial restructuring and weak global demand, incentives to invest have also faded due to uncertainties about the outlook for output growth. Consequently, the investment ratio has declined in several economies. In addition, the relaxation of monetary policy seen globally has not induced investment to the extent assumed.

With the weak export dynamics, companies in Finland, too, have not increased their production capacity, and investment has remained modest. With respect to the outlook for GDP growth, it is of concern that the sluggishness of total demand and investment, which has continued for several years, has already started to erode the capital stock (Chart 16). The capital stock has contracted in both forest and manufacturing industries and electrical engineering and electronics. The contraction in fixed investment has pushed down the investment ratio by over 3 percentage points since 2008. In fact, the investment ratio has declined much faster in Finland than the euro area average.

Domestic factors have recently played an increasingly more important role in Finland's GDP and export competitiveness. Export competitiveness, in particular, has eroded in recent years due to the noticeably faster growth in unit labour costs in Finland than in competitor countries. This is

Chart 15.



explained by slower growth in labour productivity in the private sector and relatively rapid growth in compensation per employee. At the same time, the shrinking of the working-age population and the decline in the average participation rate have started to affect the prospects for output growth. Working-age population and the average participation rate have contracted for several years in a row.

Aggregate demand has also been constrained by private consumption. Higher taxes and increasing unemployment, in particular, have weighed on consumer purchasing power. Uncertainty about jobs has recently increased, eroding consumer confidence. Confidence in the Finnish economy has recently been far below the long-term average (Chart 17). The downturn in the Russian economy may also have influenced consumers' gloomier perceptions of the Finnish economy. The weakness of household expectations about the future and fading purchasing power have been reflected in reduced private consumption and a decline in the savings ratio. The savings ratio has nevertheless remained slightly positive.

GDP continued to contract through the first half of 2014. The overall trend in foreign trade has also been relatively weak in the first half of 2014. In September, the volume of Finnish goods exports remained roughly at the level of 2010. Moreover, the trend in services exports has also been insufficient to turn total exports up, since services exports are often linked with goods exports.

Chart 16.

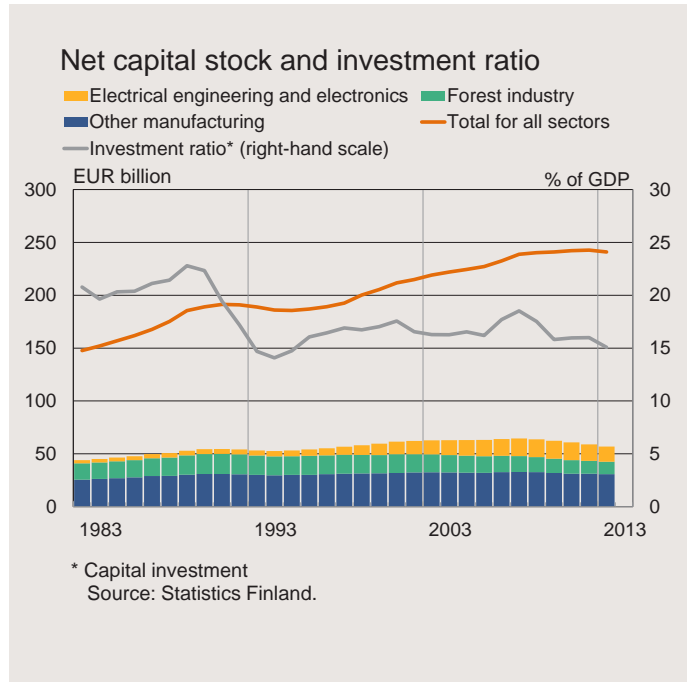
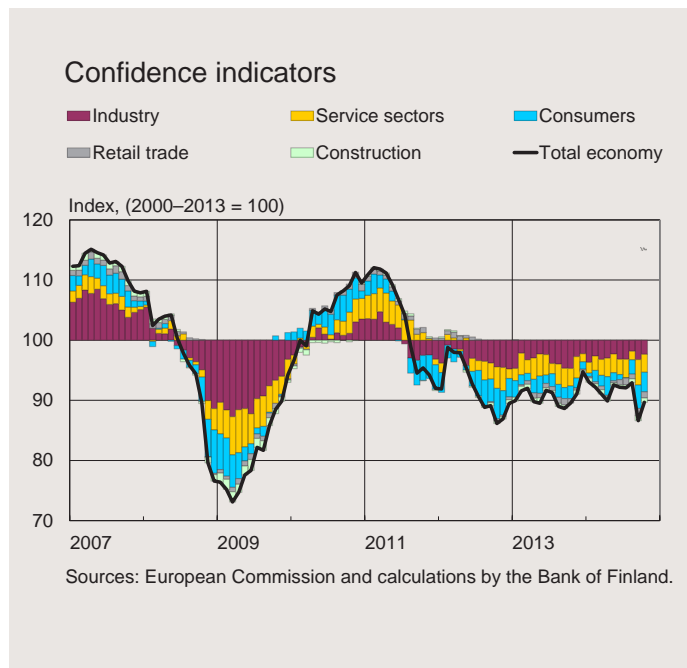


Chart 17.



Box 5.

## Corporate profitability declined

Analysis of corporate performance yields information on the growth outlook for the economy. Only profitable business generates investment, boosts output and creates jobs. Corporate profitability depends on a number of factors, including end-product prices, remuneration of production factors and intermediate goods prices. Corporate profitability typically declines in an economic downturn, as adjustments in production factor utilisation and costs cannot keep pace with contraction in demand.

At company level, business profitability is generally analysed by the measures of operating profit margin and rate of return on assets (ROA). At the levels of economic activity and the aggregate corporate sector, profitability can be estimated using National Accounts data, by relating operating surplus to output.

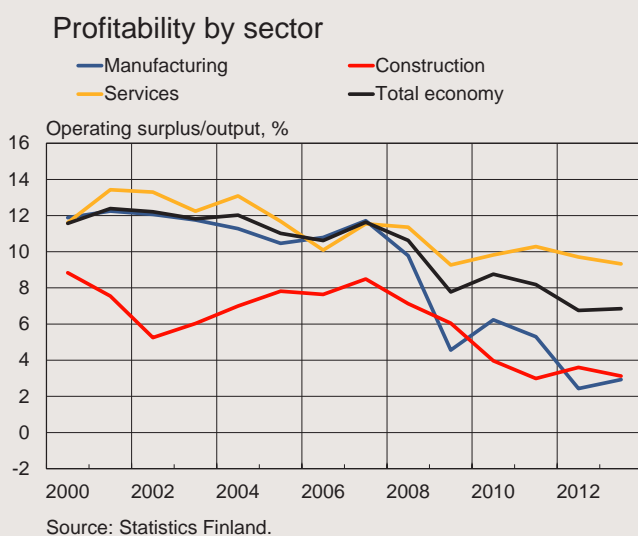
Corporate profitability in Finland was relatively good at the beginning of the 2000s. In the industrial sector, profitability improved from the 1990s,

particularly due to the success of the electrical engineering and electronics industry. Because of its high sensitivity to economic fluctuations, the construction sector has shown more variation in profitability than the industrial sector. The most stable financial performance has been recorded in services, where average profitability has declined by about 2 percentage points since the financial crisis.

In 2000–2008, the operating profit margin in the manufacturing industry as a whole was over 10%. Improvements were recorded in profitability starting from the latter half of the 1990s, especially in electrical engineering and electronics. In this sector, the ratio of operating surplus to output was about 20% during Nokia's years of success in 2000–2008, compared to an average of 7% in other sectors of the metal industry.

From 2010 onwards, profitability in manufacturing and construction has been noticeably lower than in previous decades. The period of recession that began in 2012 has weakened manufacturing profitability further, driven by losses recorded in the electrical and engineering industry and profitability in the forest industry declining noticeably from its previous level.

Chart.



Since 2010, the ratio of operating surplus to output for the forest industry has remained below 3%. In both the chemical and the metal industry (excl. electrical engineering and electronics), profitability has been about 2 percentage point lower in the current decade than in 2000–2007.

All in all, the National Accounts-based analysis shows that corporate profitability in Finland has deteriorated considerably during the recession years. This has been reflected in all sectors of economic activity, most notably in the forest industries as well as electrical engineering and electronics.

Companies have reacted to lower profitability by reducing their labour force. In 2013, the wages bill and employment contracted in all sectors of economic activity (excl. primary production and services funded by public funds). In industry, the shedding of labour has also continued in 2014. There are reasons to expect that there will be no notable additional investment in industry before a significant improvement in profitability. The waning corporate profitability may also constrain the flow of credit to corporations and raise the cost of financing.

The modest dynamics in foreign trade in 2014 also explain the contraction in industrial output volumes since the end of 2013. Industrial confidence has not recovered much in recent months, either. Confidence has remained noticeably below the long-term average for several years. Production expectations are slightly brighter than at the beginning of the year, but on the other hand, order book expectations are still rather bleak. Confidence in the services sector has also been weak recently, due to the sluggishness of domestic demand and retail trade.

#### Prices

Inflation as measured by the harmonised index of consumer prices (HICP inflation) has slowed in Finland for the past two years. In October

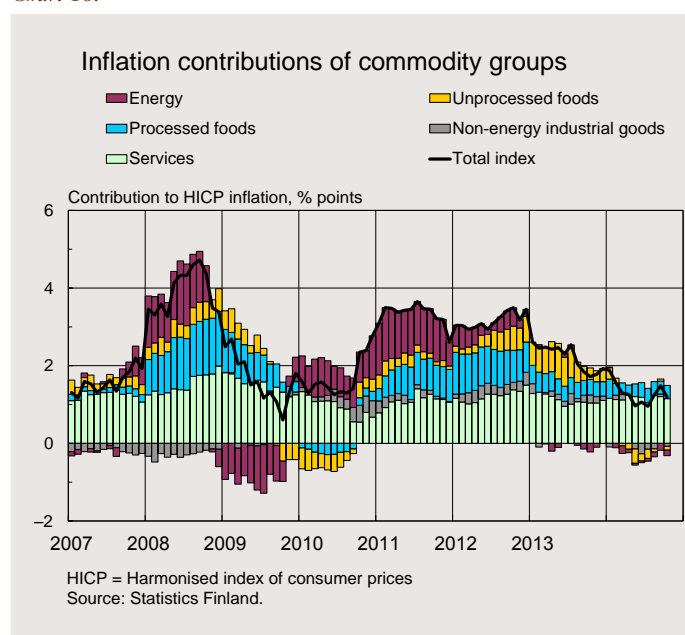
2014, consumer prices were 1.2% higher than a year earlier (Chart 18). The high rate of inflation in Finland compared with other euro area countries has been sustained particularly by the rise in services and processed food prices. On the other hand, inflation has been dampened by a decline in the prices of energy and unprocessed food, as well as weak developments in the prices of industrial goods.

Services prices have risen at a rapid pace, despite the long recession. For the past three years, they have increased by some 3% per annum. Housing services have pushed up overall inflation by 0.2 of a percentage point, while rents, which are also classified as services, have contributed 0.3 of a percentage point to the rise. Taken together, they explain over one third of consumer price inflation. In the service sector, a significant decline was recorded only in the prices of air and water transport.

Driven by higher taxes, processed food prices were 2.2% higher than a year earlier. Tobacco product prices, which are classified under the item processed food, rose by 8%, due to the hike in excise duties. Consumer prices were also pushed up by the higher excise duties on alcohol and sweets. On the other hand, there was a decline in the prices of dairy and cereal products.

The domestic consumer prices of unprocessed foods depend largely on fluctuations in the world market prices for foods. Prices fluctuate strongly as a result of e.g. weather conditions. Unprocessed food price inflation has been on a downward trend over the

Chart 18.





## Wages and taxation main factors behind rise in prices

The price level in Finland has in recent years increased considerably faster than in the euro area on average. Between 2009 and 2013, prices rose by 8.1%, i.e. some 2% per annum (Chart). Below, we examine how much of the price increases in Finland in recent years has been due to discretionary factors, e.g. non-wage labour costs and tighter taxation.

Price developments can be examined using various methods. A key measure describing price changes in the economy is the price of GDP, which is based on the National Accounts. This measure, i.e. the GDP deflator, is a considerably more extensive indicator of price changes than the consumer price index. The GDP deflator is a measure of changes in the prices of all the products and services produced in Finland. Excluding some exceptional years, developments in the GDP deflator closely reflect changes in the consumer price index.

Nominal GDP, i.e. the product of volume and price, can be defined as the sum of employee compensation, net taxes, operating surplus – incl. mixed income – and depreciation of fixed capital, whereas the GDP deflator can be expressed as the sum of income per unit of output by dividing the income items by real GDP. Employee compensation can be broken down into

wages, salaries and bonuses paid to employees as well as employers' social security contributions, i.e. non-wage labour costs. Net taxes, in turn, refer to excise and import duties minus subsidies. The most significant revenues from output are value added tax and various types of excise duty.

When changes in the price level of Finnish output are broken down in the manner described above, we find that growth in employee compensation has been the primary factor driving inflation in the current century. Taxation is another significant factor behind inflation developments, particularly in recent years.

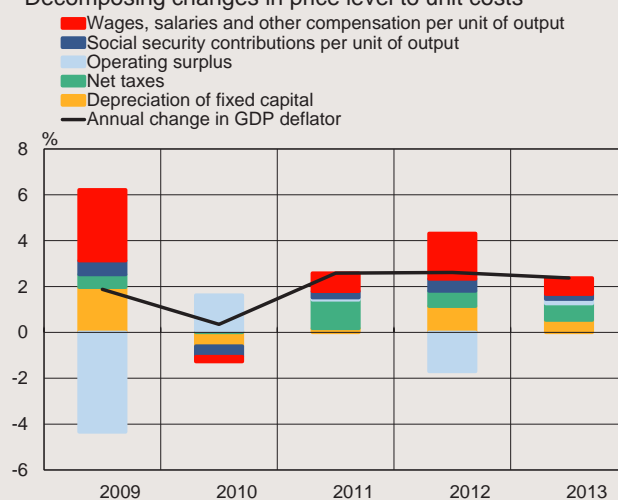
In 2009–2013, wages drove up prices by on average 0.8 of a

percentage point per annum. Approximately 40% of overall inflation in the period after 2009 is thus explained by wage increases.

In the rise in prices since 2009, employers' social security contributions appear to have played only a minor role as a factor driving up the price level. In the review period, growth in non-wage labour costs has pushed up prices by only 0.1% per annum. And some one third of the rise in the price level is explained by tighter taxation. The tightening of taxation has boosted prices by 0.7% on average per annum. In other words, taken together, taxation and social security contributions have driven up the price level as much as wages, i.e., by 0.8% per annum.

Chart.

### Decomposing changes in price level to unit costs



Source: Bank of Finland calculations.

past year, and in October recorded a negative growth rate of 1.5%. Prices have been dampened by an exceptionally good harvest, which has lowered the animal feed costs of meat production, while the ban on food exports to Russia has increased supply of fruits and vegetables in the EU.

The prices of energy products have been trending downward for almost two years. The world market price of crude oil has fallen strongly since June 2014, and this has also begun to affect consumer prices of energy, which were in October 1.8% lower than a year earlier. The drop in the price of crude oil is due to the weakening outlook for the global economy, the increase in oil production particularly in the United States, and the appreciation of the US dollar.

The average pace of increase in industrial goods prices has slowed for the past three years and turned negative in the past year. In October, the prices of industrial goods (excl. energy) fell by 0.3%. Inflation has been dampened by the prices of consumer durables, particularly cars and electronics products, which were 1.7% lower than a year earlier. In contrast, the prices of nondurable and semi-durable goods were slightly higher than a year earlier.

Rises in indirect taxes have pushed up consumer prices and sustained the rapid pace of inflation in recent years. Due to the hikes in indirect taxes, inflation in 2014 was 0.5 of a percentage point higher than compared with a scenario with no rises in indirect taxes. Prices have been pushed up particularly by the hikes in alcohol, tobacco and energy taxes.

#### *Finland – the most expensive country in the euro area*

Compared with the euro area average, domestic inflation in Finland has been high in recent years. In 1999, when Finland joined the euro area, domestic prices were the highest amongst the member states. At first, prices developed at a slower-than-average pace, and the price level in Finland approached the euro area average. Since 2007, Finnish inflation has, however, been above the euro area average.

The impact of higher inflation on relative prices can be examined by comparing the cross-country price developments in baskets of goods that were originally of the same value (Chart 19). An examination of a Finnish and German basket of goods that was in 2007 of the same price in both countries, reveals that in October 2014 the price of the Finnish basket was 6% higher than that of the German basket. Correspondingly, compared with an average basket of goods in the euro area, the Finnish basket of goods was over 5% more expensive, even though the price of the basket was in 2007 the same in Finland and the euro area. As long as Finnish inflation remains above the euro area average, the relative difference in price levels will continue to grow. This will erode Finnish competitiveness and weaken consumer purchasing power further.

A comparison of price level indices shows that in 2013, the purchasing power of the euro was in Finland 16% weaker than in the euro area on average. In other words, a basket of goods that was in Finland worth EUR

100, cost EUR 84 in the euro area on average.<sup>4</sup>

The relatively high rate of inflation in Finland has been mainly due to the upward trend in services prices. In particular, rents and the prices of housing services have risen at a rapid pace in Finland. The prices of restaurant and cafeteria services have also risen more rapidly than in the euro area on average.

#### Public finances

Finland's public finances have posted a deep deficit since 2009. Factors underlying this development include weak growth in the funding base and fiscal stimulus measures. The structural deficit has also deepened due to the baby-boom generation reaching retirement age in recent years.

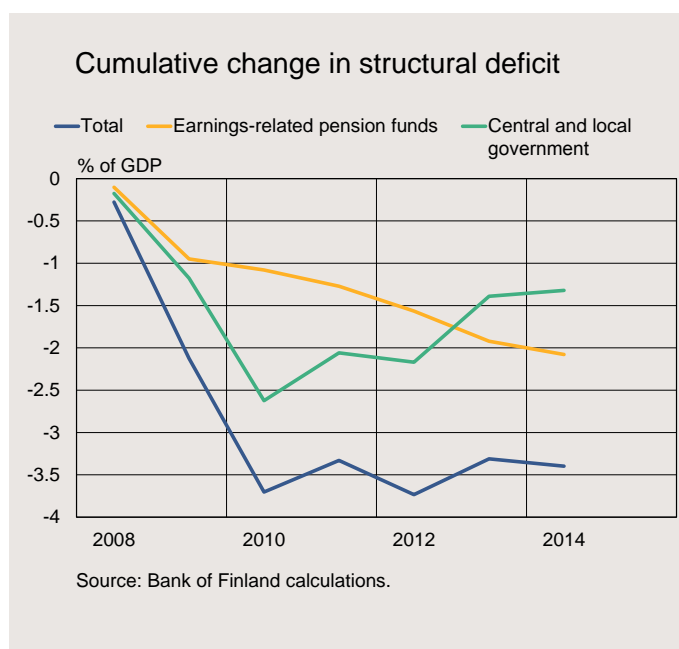
Fiscal policy was supportive of demand especially in 2009, when economic growth plunged unprecedentedly. Taxes on wages and salaries were considerably eased at that time. The general government structural deficit deepened in 2010, too, growing in two years by a total of 3½ percentage points (Chart 20). A gradual fiscal tightening was commenced in 2011. The spending limits discussions held over the present parliamentary term led to a curbing of central government expenditure growth, tighter taxation and increases in social security contributions. Local government consolidation measures have also progressed, but have been

<sup>4</sup> It should be noted that the basket of goods used in the calculation of the price level index prepared by Eurostat does not fully correspond with the basket of goods in the ECB's harmonised index of consumer prices.

Chart 19.



Chart 20.



modest compared with the central government measures.

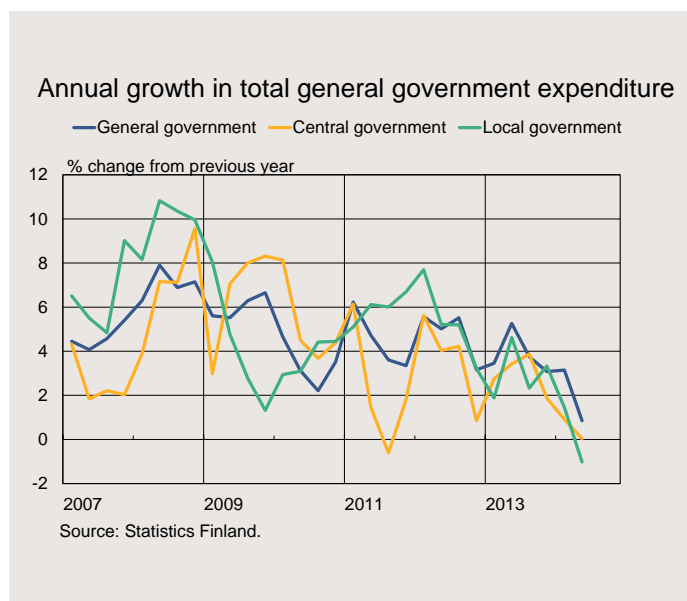
Despite the austerity measures, the general government structural deficit has improved only marginally since 2010. Thus, fiscal policy has not been tightened if viewed at the level of general government. This has been due to a rapid rise in public expenditure, despite savings decisions. Pension expenditure, in particular, has continued to grow at a brisk pace, and the structural surplus on pension funds has gradually contracted by over 2 percentage points. In practice, the government consolidation measures have only halted the weakening of the structural balance in the public finances. This has been the case even though the combined structural deficit in central and local government finances has contracted by almost 1½ percentage points of GDP since 2010.

Since 2008, general government has posted a deficit of over 2% of GDP each year. The only exception has been 2011, when the deficit stood at 1%. In 2013, the general government deficit was 2.4% of GDP. Consolidated general government EDP debt increased to 56% of GDP. Tax revenue growth was curbed by a moderation in private demand and the weak employment situation.

Growth in taxes and tax-like revenue has also remained muted in the first half of 2014. The main reason for this has been the reduction in corporate tax to 20%, agreed in the spring 2013 spending limits discussions. However, this development is partly compensated by the increase in tax revenues on earnings and capital income, as these taxes have been raised at the same time. According to the Tax Administration's monthly statistics, tax revenue on earnings and capital income has increased in October 2014 by over 4% from a year earlier. Growth in the revenue from VAT has been muted, as the weakness of private consumption and poor retail sales performance has curtailed growth in indirect tax revenues. All in all, tax revenue growth has been modest during 2014.

Central and local government expenditure growth appears to have slowed in the first half of 2014 compared with the previous year (Chart 21). General government total expenditure increased in the first half of the year by 2% from a year earlier. Growth in general government employee compensation has also moderated. In particular, employee

Chart 21.



compensation in local government has contracted, declining in the first half of 2014 by 0.6% from the corresponding period a year earlier. In addition to employee compensation, purchased services have also grown more moderately. All in all, general government consumption expenditure increased in the first half of 2014 by only 0.8% from a year earlier. At the same time, public investment expenditure declined by 1.1%.

#### *Labour market*

The baby-boom cohorts have a major impact on the balance of labour resources. The number of 15–64-year-olds contracted markedly during 2014 and was 12,000 less in the third quarter of 2014 than at the beginning of the year. However, the number of 15–64-year-olds in the labour force during the third quarter was at the previous year's level for the same quarter.

Employment has improved only marginally during the year, and in the third quarter the number of employed was broadly unchanged from the previous year. With respect to the structure of employment, it is noteworthy that the number of employed has contracted continuously in the industrial sector. In the third quarter of 2014 the number of people employed in industry was down about 5% from the previous year, while compared with the situation just before the onset of the financial crisis in 2008, the drop was about 23%.

New jobs have been created during the recession particularly in social and health care services and certain

segments of private services. In 2014, social and health care services employed on average about 20,000 persons more than in 2008. Employment growth in this sector has gradually waned, with municipalities forced to adjust expenditure. Of private sector services, employment in trade began to recede in 2013.

Unemployment growth moderated in the early part of 2014 compared with the previous couple of years. In the third quarter, the trend unemployment rate stood at 8.6%, unchanged from the previous year.

Estimating the size of labour reserves is currently more challenging than normal. The unemployment rate is not high considering the economic situation, but a significant share of the unemployed are hard to employ, i.e. people falling in the category of structurally unemployed persons. According to estimates of the Ministry of Employment and the Economy and Statistics Finland, as much as half of the unemployed as recorded in the Ministry's unemployment statistics are structurally unemployed.

Structural unemployment is due to e.g. regional, professional and age mismatches. The fact that structural unemployment has increased is also suggested by the Beveridge curve, which has moved slightly outward (Chart 22).

According to the statistics of the Ministry of Employment and the Economy, the number of long-term unemployed in July was close to breaching 100,000, increasing by 16,000 from a year earlier. In fact, the growth in long-term unemployment

### Change in age structure compensates for labour supply impact of population ageing

The ongoing and exceptionally rapid process of population ageing in Finland threatens to decrease labour supply if the labour force participation rate (LFPR) of the working-age population does not increase. However, population ageing is also changing the age structure of the labour force. The youngest and oldest age cohorts of the working-age population will contract in the next few decades, whilst the number of persons in prime working age, i.e. those aged 35–54, will increase (Chart A). The change in the age structure can affect the potential output of the economy not only via labour supply, but also via labour productivity.

As workers become older, their ability to learn new skills and adapt to new work tasks and working methods may weaken. This may have a negative effect on labour productivity. However, if work tasks do not change markedly, the higher skills levels may also boost labour productivity. In fact, both the LFPR and labour productivity are typically at their highest among persons of prime working age.

This box analyses the effects of age structure on potential output on the basis of developments in the effective labour force (Chart B).

The effective labour force has been calculated as a weighted sum of the number of persons in

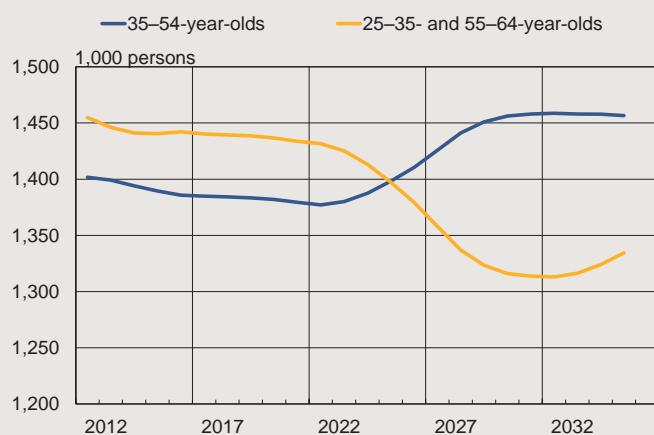
different 10-year age cohorts. The weights have been calculated by multiplying the average labour productivity of an age group by the age group-specific participation rate. Labour force productivity is assumed to reflect wage level dynamics, and so differences in age group-specific productivity levels are estimated with the help of average wages in each age group. Wage developments vary significantly between age groups, and wages are typically at their highest amongst 35–54-year-olds. Hence, the calculation is based on the assumption that labour productivity, too, peaks among the prime working-age population.

The LFPR is typically higher among 35–54-year-olds than among younger or older age groups, meaning that growth in the relative share of this age group raises the average LFPR, even if age-specific LFPRs remain unchanged. Both the LFPRs and the age group-specific wage differences have been fixed at the level of 2014.

The size of the working-age population (15–74-year-olds) will contract in 2014–2035 at most by 3 percentage points from the level at the outset. The working-age population will reach its lowest level at the end of the 2020s, after which it will begin to increase gradually. However, in 2035 the number of

Chart A.

#### Forecast trend of working-age cohorts

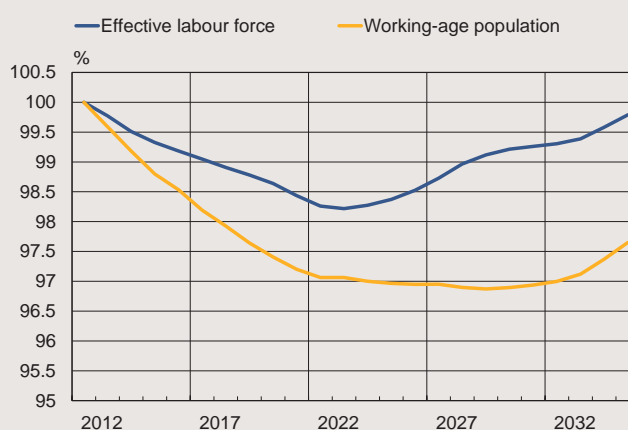


Source: Statistics Finland.

people of working age will still be 2.5% lower than at the outset. The effective labour force will also contract at first, with shrinking sizes of not only the youngest and oldest age groups but also of 45–54-year-olds. The effective labour force will reach its lowest point in the mid-2020s, declining by about 2 percentage points from the outset. However, as the number of 35–54-year-olds begins to grow and the contraction in the youngest and oldest age groups comes to a halt, the size of the effective labour force will begin to grow so that, by the mid-2030s, it will have broadly returned to the level prevailing at the outset. The difference between the sizes of the working-age population and the effective labour force will become significant in cumulative terms. The advantageous change in the age structure of the working-age population is almost sufficient to compensate for the negative impact on economic growth of the contracting number of working-age persons. According to a long-term growth calculation, the change in the age structure will boost potential output and economic growth by 0.1% per annum.<sup>1</sup>

Chart B.

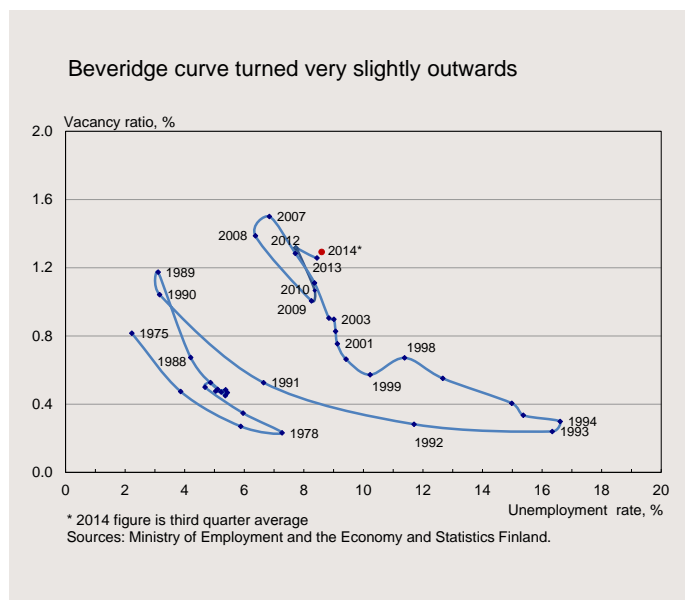
### Trend in working-age population and effective labour force 2014–2035



Source: Bank of Finland calculations.

<sup>1</sup> The long-term growth calculation is presented in the feature article 'Finland's long-term growth potential has deteriorated'.

Chart 22.



may have led to part of the labour force withdrawing from the labour market.

While the share of the hard-to-employ in the unemployed population has increased, the population that has withdrawn from the labour force may include a larger number of working-age persons who have exited the labour market only temporarily to wait for a cyclical improvement. This is particularly suggested by the fall in the labour force participation rate for prime-age workers (30–39-year-olds) during the recession.<sup>5</sup> The fact that hidden unemployment has increased is also indicated by the number of unemployed as recorded by the Ministry of Employment and the Economy, which is 100,000 higher than the number of unemployed recorded in

<sup>5</sup> Developments in labour supply are discussed in more detail in the feature article 'Finland's long-term growth potential has deteriorated'.

Statistics Finland's Labour Force Survey. According to the latter, the number of disguised unemployed totalled in autumn about 140,000.

#### *Financial markets and financial factors*

The results of the comprehensive assessment of euro area banks conducted under the lead of the European Central Bank removed some of the uncertainty surrounding the condition of banks. Although access to funding has become easier for banks, growth in the stock of corporate and household loans has been slow, and, in response, the European Central Bank has implemented new monetary policy measures to support lending by banks. In both the euro area as a whole and in Finland, the major risk facing banks is the persistence of slow economic growth, which erodes corporate profitability and increases credit risks.

All the banks operating in Finland passed the comprehensive assessment of the European Central Bank with flying colours, and their capital adequacy remains sound. Notwithstanding that credit constraints do not appear to have been a significant source of slower growth in Finland over the past few years, in Finland, too, growth in the stock of corporate loans came to a standstill in early 2014 (Chart 23).<sup>6</sup> While suggesting some tightening of credit access and conditions, survey findings also reveal that the sluggish

<sup>6</sup> See Box 8 (overleaf) ['What factors explain Finland's double-dip recession?'] for an account of the causes of the recession. The calculations presented show that the tight financial conditions have not posed a significant constraint on Finland's economic growth in recent years.



growth in loans outstanding primarily reflects low demand for corporate loans rather than the existence of supply constraints. The demand for long-term loans, especially, has faltered in response to the negligible level of investment. However, concurrently, non-financial corporations' need for working capital and hence demand for short-term credit has increased amid the prevailing weak economic conditions.

Finnish households' access to credit continues to be good, and housing loan margins remain narrow compared with the euro area average. Household lending growth is held back by a fading housing market, while nominal house prices have turned downwards. In the third quarter of 2014, prices of old houses posted an average decline of 1%, nationwide, year on year. In real terms, house prices have stagnated or even fallen since 2010, at the national level. House prices relative to earnings level or rents are common valuation measures on the housing market (Chart 24). In relation to these variables, house prices have been approaching their long-term average, and this, at least, does not point to any significant over-pricing on the Finnish housing market.

Growth in household debt has come to a standstill at a little below 120% of disposable income, which is still a moderate figure compared with other Nordic countries. Nevertheless, the number of highly indebted households has gone up in Finland, too, and indebtedness data released by Statistics Finland indicates that there

Chart 23.

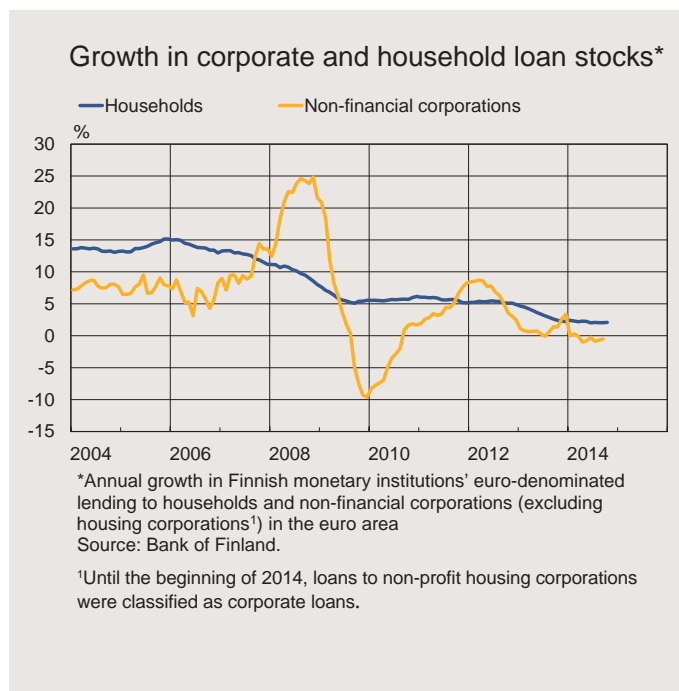
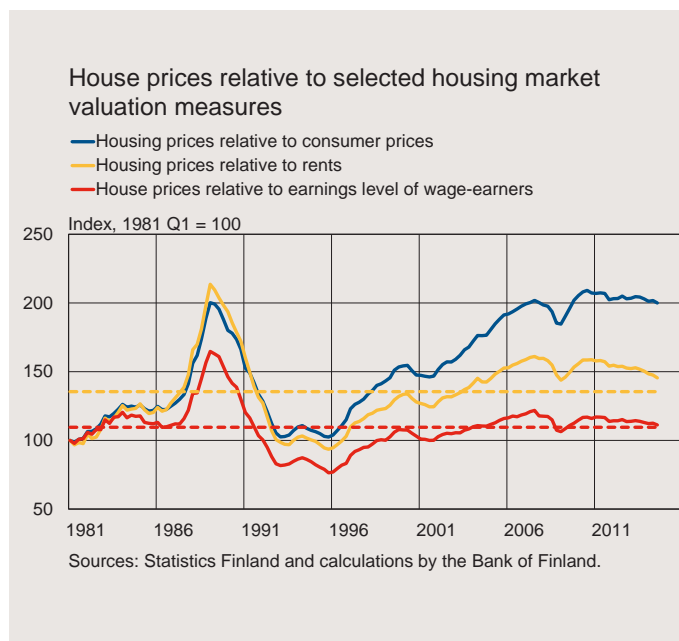


Chart 24.



### What factors explain Finland's double-dip recession?

It seemed at first that the post-financial-crisis recession would be a fleeting phenomenon, given that Finland's GDP – after a big dip in 2009 – already grew by 3% in 2010. However, GDP returned to a downward trajectory in 2012, and the contraction in the economy is currently expected to continue until 2015. The calculation presented below delivers an estimate of factors explaining Finland's double-dip recession (Chart). The calculation is based on a structural VAR (SVAR) model estimated for the Finnish economy and designed to account for GDP development by

means of various shocks<sup>1</sup> to the economy. This shock decomposition allows us to assess to what extent the recession is due to weak international economic performance and increased financial market uncertainty and to what extent the underlying driving forces are purely domestically generated factors.

The SVAR model comprises nine variables, divided into external and domestic. All the external variables affect the domestic ones but are determined

<sup>1</sup> Gulan, A. – Haavio, M. – Kilponen, J (2014) *Kiss me deadly: From Finnish great depression to great recession*. Bank of Finland discussion papers 24/2014. Bank of Finland.

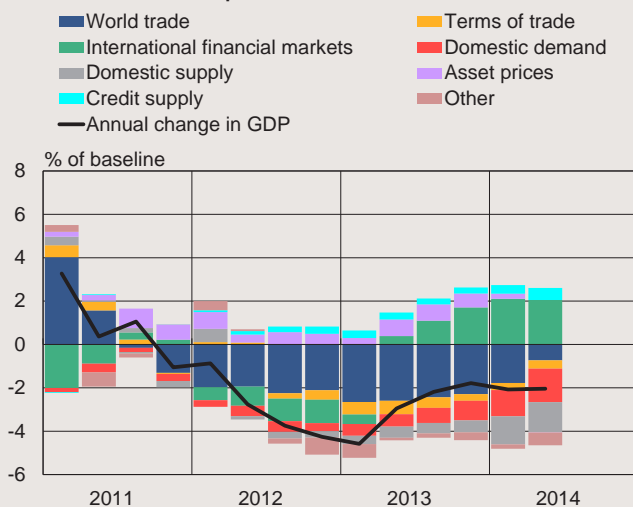
independently thereof. The external variables include world trade volume, an indicator for global financial stress (the CISS index) and Finland's terms of trade. The variables for the domestic economy comprise GDP, a GDP deflator, household and corporate loan stock growth, bank loan losses, interest rate spreads on new loans and a variable combining the OMX share index and housing price developments.

The Finnish economy resumed a downtrend amid weakening export markets. Subdued world trade dynamics posed the most significant barrier to economic growth in Finland until the end of 2013. Terms of trade shocks have also dampened GDP growth since mid-2012. A terms of trade shock illustrates the impact on export demand of the Finnish export industry's deteriorating price-competitiveness. The shock decomposition does not allow examination of how structural problems of individual sectors of industry, such as the ICT or the forest industries, contributed to the sluggishness of Finnish exports. Even so, world trade shocks also reflect these structural factors.

Increased uncertainty continued to affect the international financial markets until autumn 2012, when the ECB

Chart.

#### Shock decomposition of GDP for 2011–2014



Source: Bank of Finland calculations.

committed itself to conducting significant support purchases on the euro area sovereign bond market, as and when necessary. The ECB's decision led to an immediate reduction in financial market uncertainty, but the shock decomposition suggests the easing of financial market stress was not reflected in Finland's economic growth until the beginning of 2013.

Domestic demand and supply shocks had already been hampering economic growth since early 2011, but they assumed a bigger role than international shocks at the beginning of 2014. Domestic demand shocks mirror, in particular, the deceleration in private consumption that was already observed in 2012. It is possible to interpret negative domestic supply shocks as an increase in

the level of domestic costs or as a deceleration in total factor productivity growth, for example.

Of domestic asset prices, the model variables captured housing prices and share prices, whose shocks were combined into an asset prices variable. According to the model, the development of asset prices supported GDP growth throughout the review period. Surveys have pointed to estimates that banks' stricter lending policies would constrain the operating conditions in Finland of small enterprises, in particular. However, according to the shock decomposition, domestic financial conditions have not restricted economic growth, at least not at the level of the economy as a whole.

The second double-dip recession phase that began in 2011 differs by nature from the

collapse in the economy that followed the financial crisis of 2008. At that time, Finland's economic growth was weighed down not only by weak export market performance but also by uncertainty on the international financial markets. The significance of financial market uncertainty became increasingly apparent, as it had done previously, e.g. in connection with the mini recession of 2001 caused by the burst of the IT bubble.

It has long been possible to attribute the protracted recession of 2008–2014 mainly to the weakness of the international economy. Recently, however, the role of domestic supply and demand factors has become increasingly apparent.

are low-income households among the highly indebted households. Finnish households do not possess any significant financial assets as a buffer against sudden economic difficulties. Moreover, many of the most highly indebted households have negative net assets. Negative net assets render households more vulnerable in a situation where they are forced to sell their home in the face of unemployment.

In October, the credit rating agency Standard & Poor's downgraded the sovereign credit rating of Finland from AAA to AA+. So far, this downgrading has not had a direct impact on Finland's access to credit or the price of credit. In 2014, Finnish central government's estimated gross borrowing needs amounted to around EUR 18 billion, of which net borrowing was around EUR 7 billion. In 2014, the average maturity

of government bonds was around 6 years, against 4 years in 2009. Similarly, the sovereign debt yield has fallen in the post-crisis years. The effective yield on Finland's sovereign debt was 1.9% in 2013, against 4.0% in 2007.

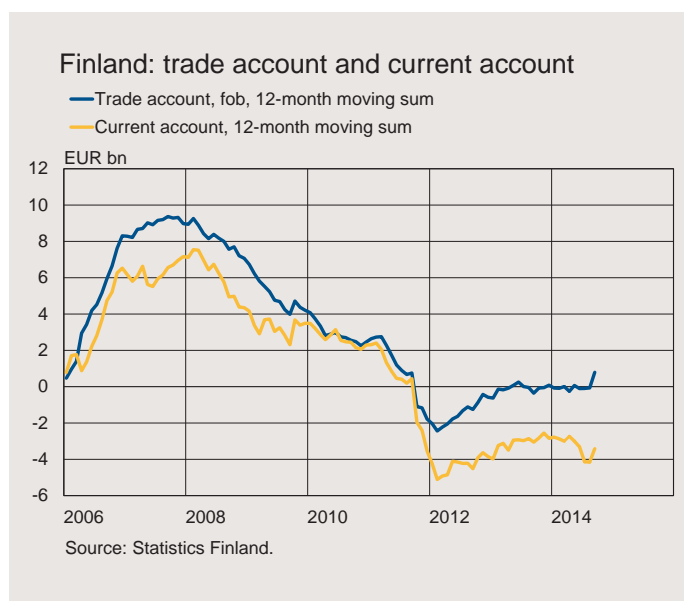
#### *External balance*

The external balance of the Finnish economy weakened markedly in 2011 and 2012, when the surplus of EUR 2 billion on the goods account turned into a deficit of a similar size (Chart 25). Goods trade has subsequently strengthened, broadly achieving balance, but the current account deficit has remained close to EUR 4 billion. In recent years, the current account deficit has been due, in part, to the negative services account, on which the deficit has deepened particularly in the past two years. The services account deficit reflects the impact of tourism, among other factors. By contrast, current account investment income has become clearly positive in net terms. Accordingly, investment expenses paid abroad have been smaller than investment income received.

The negative current account that has persisted for several years has also begun to erode Finland's net international investment position, which has contracted by a good EUR 30 billion since 2011.

In September 2014, both the current account and the trade account showed a surplus in response to a strong increase in the value of goods exports. In addition, the value of goods imports remained distinctly lower than that of exports.

Chart 25.



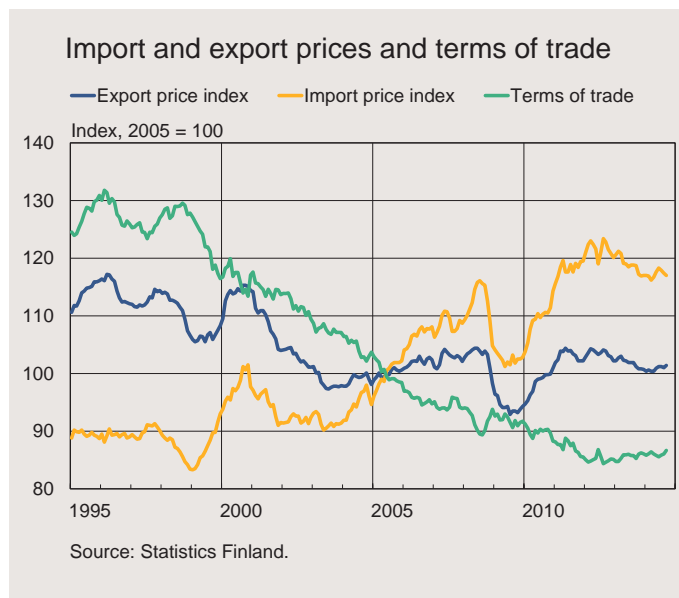
A protracted deterioration in the terms of trade is largely attributable to the strong increase in import prices (Chart 26). As for export prices, they have been depressed by, among other factors, the falling prices of the electronics and forest industries and subdued demand for capital goods globally. However, the protracted deterioration in the terms of trade, i.e. the relationship between export and import prices, would appear to have come to a halt in 2012. Crude oil and other commodity prices have stopped increasing and resumed a downward trajectory, which has turned the rising trend in import prices into a substantial fall. In addition, as export prices have decreased more moderately than import prices in recent years, the terms of trade have actually slightly improved.

#### *Global economy and Finland's export markets*

Developments in Finland's export markets have been muted in recent years. World economic growth after the financial crisis has largely been driven by emerging economies. Growth in advanced economies has been depressed by the winding down of high levels of debt, as consumers and non-financial corporations have been paying theirs off. Owing to high public debt ratios, most countries have been unable to provide a fiscal stimulus.

Uncertainty still weighs on investments in the real economy. The prolongation of the recession and long-term supply factors, such as the ageing population and the lower pace of growth in productivity, weaken

Chart 26.



growth expectations. Increased geopolitical risks have also heightened uncertainty among non-financial corporations, notably in Europe. The continued exceptionally accommodative monetary policy has not stimulated euro area investment or consumption so far.

The divergence in growth between the advanced and emerging economies has narrowed to some extent during the past couple of years. Economic activity has strengthened particularly in the **United States**, where growth has accelerated mainly on account of private consumption. Consumption growth is bolstered by improvements in the employment situation, stronger consumer confidence and a rapid reduction in household debt from pre-crisis readings. Investment demand is dampened by the paucity of housing construction, which is in turn explained

by the large quantity of completed housing units. US fiscal policy has continued to follow a relatively tight stance.

**Euro area** economic growth picked up momentarily but, during the course of 2014, has been slower than forecast. Debt reduction in many euro area households is still a work in progress, and unemployment has remained high, which acts as a further constraint on private consumption growth. As economic growth has been sluggish, investment demand has been muted despite low interest rates. The objective of reining in public debt accumulation has forced euro area countries to pursue tight fiscal policies.

Developments in euro area exports have been underpinned to some extent by depreciation of the euro. Exchange rate depreciation is of particular significance for countries with open economies.

In **Japan**, the tripartite economic policy programme of 'Abenomics' has lent some support to long-term growth prospects, but growth remains subdued. An increase in consumption tax, implemented as part of the programme, has held back private consumption growth in recent months.

Of the emerging economies, **China** has seen its growth slacken slightly but still remain at more than 7%. Rather than lacklustre growth in its export markets, China's growth has been constrained by domestic structural problems. The productivity of new investments has declined, as the capital stock is already high, the labour force is growing older and environmental

problems, too, are already curbing growth. In addition, high levels of central and local government debt pose a threat to financial stability.

**Russian** economic growth in 2014 has been held in check by the economic sanctions imposed in response to the Ukrainian crisis and by the growing uncertainty, which has reduced foreign investment in Russia. The Russian economy's dependence on raw material exports makes it increasingly vulnerable, and the lower price of oil has reduced export earnings. Rouble depreciation has significantly cut imports.

#### *Commodity prices*

Commodity prices have declined amid subdued world economic trends. In particular, the world market price of crude oil has fallen strongly since June 2014. In November, the price of North Sea Brent crude dropped markedly below USD 80 per barrel, when a barrel still cost more than USD 110 in the summer (Chart 27). In euro terms, the price has declined somewhat more moderately, because of simultaneous euro depreciation vis-à-vis the dollar.

The falling oil price reflects both supply and demand factors. Growth in US oil production, which commenced three years ago following mobilisation of shale oil fields, has continued its strong momentum. Moreover, in the Middle East and North African crisis regions, oil exports have been larger than expected despite the instability of production conditions. Meanwhile, Saudi Arabia and other OPEC countries have not responded to the declining oil

price by cutting oil supply, as they previously have. The crude oil price has also been depressed by weak demand, which is a consequence of the deteriorating long-term growth prospects of the Western economies and the recent deceleration of Chinese growth rates. The falling dollar price for oil has, in part, mirrored the appreciation of the dollar exchange rate, meaning that the decline of the euro-denominated oil price has remained milder.

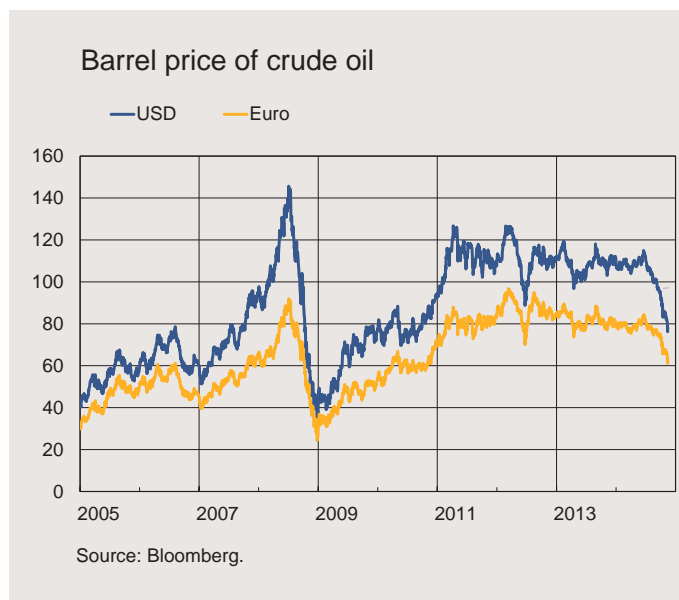
In addition to energy, other industrial raw material prices have also continued to slide slowly, owing to the weakness of demand. World market prices of most metals with a key role in production have decreased. Food prices have returned to their downward trajectory after world markets recovered from poor crops at the same time as embargos on Russia increased supply in the EU.

#### *Exchange and interest rates*

The euro has depreciated against the US dollar from its peak of spring 2014. In November 2014, the euro exchange rate fell below USD 1.25, when the euro was worth nearly USD 1.40 back in the spring. The weakening of the euro exchange rate reflects gradual monetary tightening in the United States and continued monetary accommodation in the euro area. On the other hand, inflation in the United States has been higher than in the euro area during the past twelve months.

The rouble has depreciated steadily relative to the euro during the past two years, but in autumn 2014 its value literally collapsed. Previously, making

Chart 27.



use of support purchases and sales, the Bank of Russia sought to steer the exchange rate, which remained close to RUB 40 per euro for a long time. The uncertainty caused by the Ukraine crisis, the plunging oil price and fading economic growth in Russia all put downward pressure on the rouble, and in November 2014 the Bank of Russia renounced its intervention and allowed the rouble to float. Towards the end of November, one euro was already trading at almost RUB 60.

Exchange rates have, on average, developed favourably for the Finnish export sector since spring 2014. Finland's nominal competitiveness indicator, which measures average developments in exchange rates weighted by their respective shares of Finland's foreign trade, began to decline following two years of steady increase. The weaker euro supports Finnish

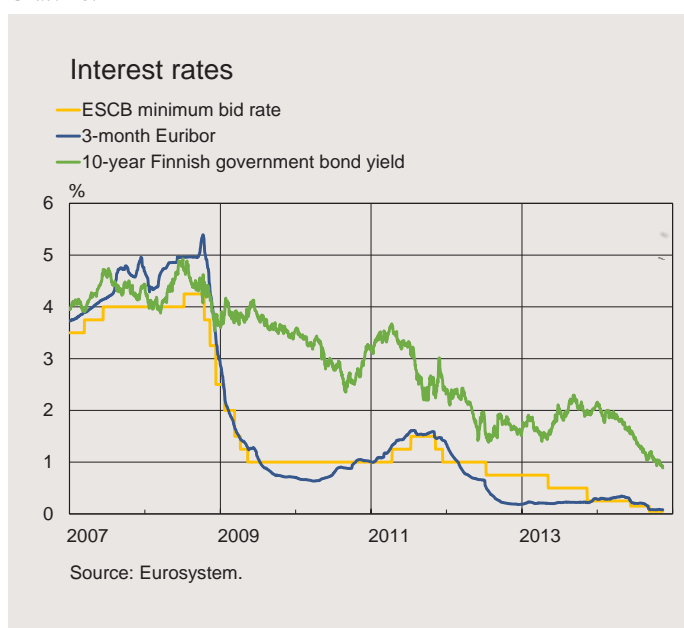
exporters' price competitiveness but, on the other hand, erodes consumers' purchasing power by raising the euro prices of goods imported from outside the euro area.

Throughout summer and autumn 2014, the European Central Bank (ECB) has eased monetary policy in an effort to support economic growth (Chart 28). The key policy rate was lowered to 0.05%, and the deposit rate on banks' holdings with the central bank has been negative since June. In its forward guidance, the ECB has emphasised that the interest rates will remain at their present levels for an extended period of time. In addition to rate cuts, the ECB has conducted a number of non-standard monetary policy measures that increase market liquidity and thereby support bank lending to non-financial corporations and households.

Euribor rates have followed the ECB policy rate and remained historically low. During the autumn, the three-month Euribor fell below 0.1%. The low level of interest rates has kept households' interest expenditure low and bolstered the debt-servicing capacity of mortgage borrowers with housing loans tied to market interest rates.

Benchmark government bond yields have decreased. Finland's 10-year government bond yield dropped below 1% in November. In October, the credit rating agency Standard & Poor's downgraded the Finnish government rating, but the news was no real surprise on the markets and therefore did not lift government bond yields. On account of lower yields, the government's annual debt-servicing costs have remained low despite the higher debt.

Chart 28.





Box 9.

## National accounts for the third quarter of 2014

On 5 December 2014, Statistics Finland published preliminary quarterly national accounts data on Finnish economic developments in the third quarter of 2014.

The Bank of Finland's macroeconomic forecast presented in this publication is based on the quarterly national accounts published by Statistics Finland in September, a flash estimate for the third quarter released in November and extensive indicator data on economic developments.

According to the most recent quarterly national accounts, real GDP in the third quarter of 2014 increased by 0.1% year on year and 0.2% quarter on quarter.

According to the flash estimate published in November, real GDP in the third quarter was the same year on year and 0.2% higher quarter on quarter. Growth in the second quarter of 2014 was 0.4% on the previous quarter, or an upward revision of 0.2 of a percentage point from the previous estimate.

The rate of private consumption growth in the first half of 2014 was slower than previously estimated. Private investment also grew more sluggishly than had been released earlier. By contrast, export growth was clearly stronger than

previously estimated, in both the first and the second quarter.

Of demand components, notably higher net exports supported GDP growth in the third quarter. Exports were 0.1% down on the previous quarter and 1.1% up on the year before. Goods exports increased, but services exports fell back. Imports, in turn, fell by 1.1% quarter on quarter and 2.9% year on year.

Private investment decreased by 1.0% quarter on quarter and 4.4% year on year. The contraction in investment was broadly based. For example, investment in machinery and equipment was 0.1% down quarter on quarter and 9.5% year on year. Investment in housing construction was 1.2% down on the previous quarter.

Private consumption grew by 0.7% quarter on quarter. Consumption of services and consumer durables increased from the previous quarter, but other consumption components declined.

Value added at basic prices recorded quarter-on-quarter growth of 0.1% in the third quarter. Output contracted particularly in the chemical industry and in construction. Value added in services was increased especially by the expansion of the information and communications sector.

Manufacture of electrical and electronics products also improved on the previous quarter.

Labour input grew slightly. The number of people in employment declined by 0.3%, while the number of hours worked increased by 0.6% quarter on quarter. Compensation per employee was 0.5% up on the previous quarter.

The most recent quarterly national accounts data signal a slightly more favourable economic development for 2014 than the indicator data previously published. However, economic growth has not returned to a clear upward trajectory during the year. Growth in domestic demand continues to be weak, and exports have not returned clearly to growth.



# Financial stability

21 December 2014

The most significant risks to financial stability in the euro area stem from the global financial markets and the real economy. The long period of positive risk sentiment has pushed risk premia to very low levels, particularly on the markets for high yield bonds. At the same time, the risks of mispricing have also increased in other categories of assets, such as the stock and real estate markets. Rapid changes in the search for yield could lead to extensive corrections in prices, which could be intensified by a weakening of market liquidity. In addition to market risks, financial stability in the euro area is subject to risks relating to even slower than expected growth in the real economy.

In Finland, the real economy is still a significant source of uncertainty from the perspective of financial stability. The protracted recession has been reflected in a gradual slowdown in the housing market and household borrowing. The risk-bearing capacity of banks operating in Finland has remained strong overall and the quality of balance sheets is good,

## Financial market risk appetite not reflected in growth

The period of subdued growth in the European real economy has turned out to be longer than expected. In the Bank of Finland's forecast for the international economy published in September 2014, the growth outlook for the immediate years ahead is also moderate. EU21 GDP is expected to grow by 1.1% in 2014, and in the next two years by on average 1.8% per annum. Global growth is, however, expected to

considering the challenging operating environment. Downward risks related to the economic and credit cycle and structural vulnerabilities in the banking sector underline the importance of adequate capital and liquidity buffers.

Macroprudential policy is taking shape in Finland as the new Credit Institutions Act gives the Board of the Financial Supervisory Authority access to new binding policy instruments. Tools for preventing structural systemic risks are, however, still in short supply. At the current stage of the business and financial cycle, imposing tighter capital requirements on banks with the help of macroprudential instruments must be approached with care.

In the euro area, the banking union is nearly ready to respond to the challenges posed for it. The Single Resolution Mechanism (SRM) will have to build credibility as a new EU institution and show that it is able to function even in the event of an extensive market disruption.

be more rapid, remaining close to 3.5% in the next three years.

Euro area growth showed some signs of slowing in autumn 2014, which, together with other factors such as geopolitical uncertainty, caused turbulence on the international financial markets. This was reflected in e.g. a decline in share prices and growth in risk premia as well as volatility in the main economic regions (Chart 1). Volatility and valuation levels have since returned close to what they were

before the turbulence in economic areas other than the euro area and Japan, where the impact of uncertainty is still being felt, particularly on the stock market.

Despite the period of instability in the early autumn, investors' risk appetite has been exceptionally good for quite some time already. Risk appetite on the financial markets depends on confidence in future growth and is therefore positive for economies recovering from financial crisis. Investors' risk appetite is being sustained not only by expectations of future growth but also by the accommodative monetary policy conducted by the central banks in the major economic regions. Abundant global liquidity and the low level of interest rates will attract investors in search of yield to shift from lower-risk investments to higher-risk investments because of the higher yield.

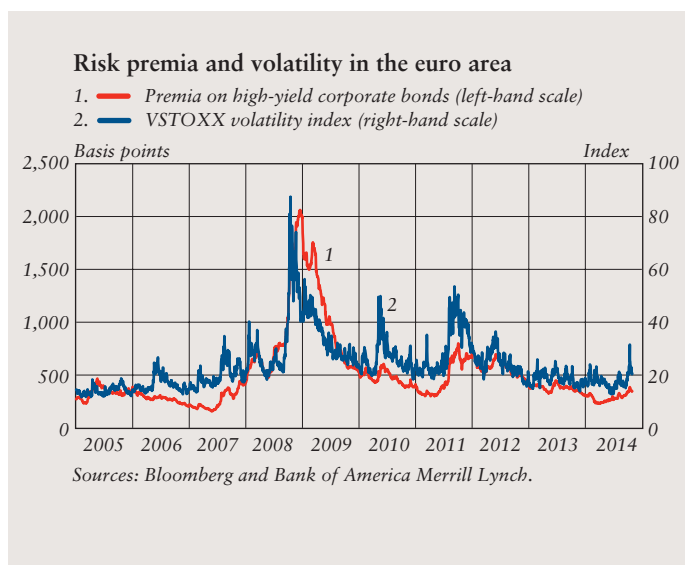
*A global correction in securities prices, triggered by a sudden change in the search for yield, is currently considered as the most significant systemic risk.*

This has pushed down the yield requirement on high-risk investments, too, to record low levels. Companies are increasingly using the bond markets as a source of finance, due to the rapid growth of demand and because banks have cut lending. This has significantly boosted the size of the corporate bond markets. For example, the size of the corporate bond market in the euro area has doubled, to over EUR 1,000 billion, since the financial crisis.

If the expectations of economic growth held by investors and seekers of finance do not meet, risk-taking on the financial market is not translated into real economic growth, being reflected instead mainly in the prices of assets such as shares, bonds and housing. As a result, price bubbles may be created in the market, and if the expectations turn out to be overoptimistic, these bubbles will burst. If, time after time, the recovery of the real economy in the advanced economies turns out to be slower than expected, there will be growing concern that expectations on the financial markets are overly optimistic. A global correction in securities prices, triggered by a sudden change in the search for yield, is hence currently considered as the most significant systemic risk on the international financial markets.

The impact of price corrections may be intensified by the weakening of liquidity on the secondary markets. Structural changes on the financial markets have weakened the liquidity of the secondary markets, via both higher demand and lower supply. For example, the yield from market-making has

Chart 1.



decreased in recent years as competition has tightened and low volatility has eroded the income from trading. Thus, the incentives for market-making have diminished. This has been reflected in a decrease in the number of market-makers and the size of the trading books.

Asset pricing on the markets becomes problematic when too many investors want to simultaneously buy or sell a security and market-makers are unable to provide the liquidity required by the markets. The possibility of excess supply or demand is increased by the correlation of investment strategies, which is caused by the shortage of investments that generate a return and the growing popularity of global fund investment. Some of the practices and structures of the money market or investment funds may expose the funds to liquidity risks, as many funds allow investors to withdraw assets within a very short time frame. An abrupt and strong increase in redemptions may force funds to realise their investments rapidly, further amplifying price fluctuations.

If investors have a common view on market movements, market liquidity may also decrease in securities that are traditionally considered as liquid, e.g. shares or government bonds of safe countries. A loss of market liquidity may rapidly cause extremely large price movements, even though in normal circumstances changes in the prices of liquid or lower-risk securities would probably remain temporary. In the case of illiquid high-yield corporate bonds, the situation could be different and the impacts on prices more permanent.

#### *Euro area banks resilient to negative shocks*

The comprehensive assessment conducted by the European Central Bank, consisting of an asset quality review and a stress test of the 130 largest banks in the euro area, has been completed. The results show that the majority of the banks would be able to withstand without difficulty even extensive financial market turbulence and a global recession of the real economy. A capital shortfall was found at 25 banks, twelve of which have already covered the shortfall. The rest of the banks have submitted to the ECB their plans for covering their capital shortfalls.

Even though the capital base of euro area banks is sufficient to withstand negative shocks, the current operating environment poses them a challenge. A protracted period of sluggish economic growth combined with low interest rates is demanding for the banks due to its negative impact on their profitability, via both an increase in credit risk and weaker profits.

The profitability of banks in the crisis countries is also strained by the still very high funding costs and the high share of nonperforming loans in the loan stock. This applies particularly to the countries that have suffered most from the euro area debt crisis, i.e. Greece, Ireland and Cyprus. There, the share of nonperforming loans in the loan stock is already as high as 25–40% (Chart 2). A large volume of nonperforming loans may weaken a bank's lending capacity and may therefore have a negative impact on the real

*The profitability of banks in the crisis countries is strained by their considerable funding costs and large amount of nonperforming loans.*

Chart 2.

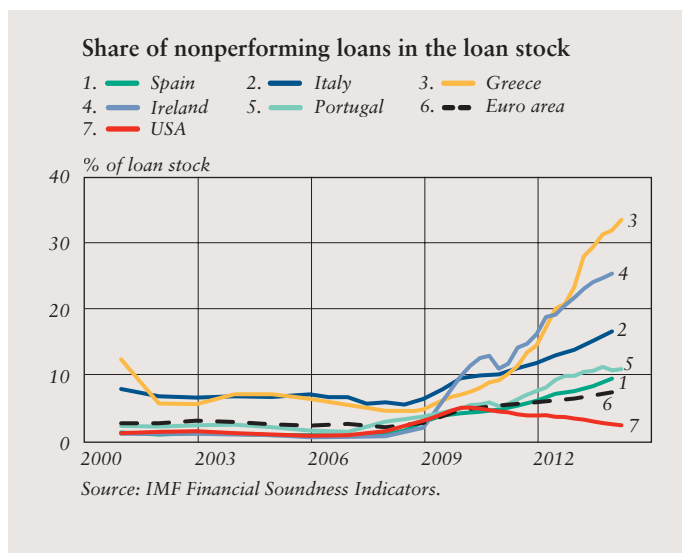
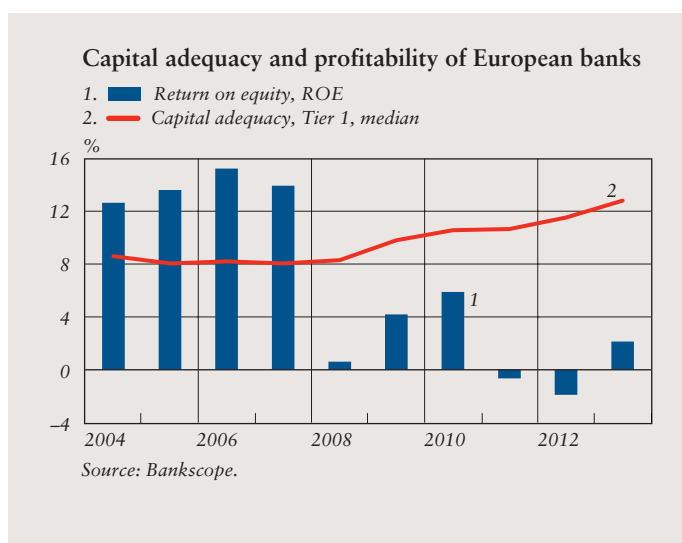


Chart 3.



economy. An increase in nonperforming loans is an indication of higher loan losses, which means that the bank may face problems in the future. For banking sector profitability and euro area growth it is therefore important to achieve a reduction in the volume of nonperforming loans.

In the case of some banks, profitability is also being eroded by legal costs and fines imposed by the authorities due to past business misconduct. Banking sector profitability has been weak for quite some time, and because of the moderate outlook the situation will not change significantly in the near future (Chart 3). Due to protracted profitability problems, some banks may have to consider changes in their business models.

In addition to weak profitability and credit risks caused by the condition of the real economy, banks are also sensitive to market risks. Bank balance sheets include large amounts of government bonds, and therefore they could suffer from changes in the values of government bonds if risk premia were to rise rapidly. Banks' situation is, however, alleviated by the increase in their risk-bearing capacity, capital adequacy having improved considerably in recent years (Chart 3).

If the risks on the international markets were to materialise, they would undoubtedly have a negative impact on Finland as well as internationally. The Finnish financial system is strongly interconnected with the Nordic banking sector, and the fact that the Nordic banks ranked among the best in the stress test is therefore a positive sign of the risk-bearing capacity of these banks. Because of the close ties between the domestic and European financial markets, the impact of significant corrections in the risk premia on debt securities or asset valuations on the global financial markets would also be felt in Finland. The materialisation of

risks on the international financial markets may also be reflected in Finland via the real economy if the instability on the financial markets were to have a negative impact on global growth. In addition, Finnish commercial banks are still dependent on foreign market-based funding, and disruptions in the operation of the markets could have an impact on banks' funding.

### **Risk assessment for the domestic operating environment**

#### *The domestic real economy still a source of uncertainty*

The Finnish economy has continued to grow at a sluggish rate. The economic outlook is proving slow to improve and the domestic real economy will remain one of the major sources of uncertainty for financial stability. The long-term growth prospects for the economy have also weakened.<sup>1</sup>

Risks relating to the Finnish economic and credit cycle in the immediate years ahead are on the downside, i.e., if the risks materialise, they would further dampen the business cycle. Weaker-than-expected economic growth, which would lead to e.g. higher unemployment, tighter financing conditions, and a significant decline in asset prices, would burden the financial system in the form of higher loan losses and reduced availability of and demand for finance. This would reduce consumption and investment, further

weakening the conditions for economic recovery.

#### *SMEs' financing conditions in Finland have deteriorated but are still among the best in the euro area*

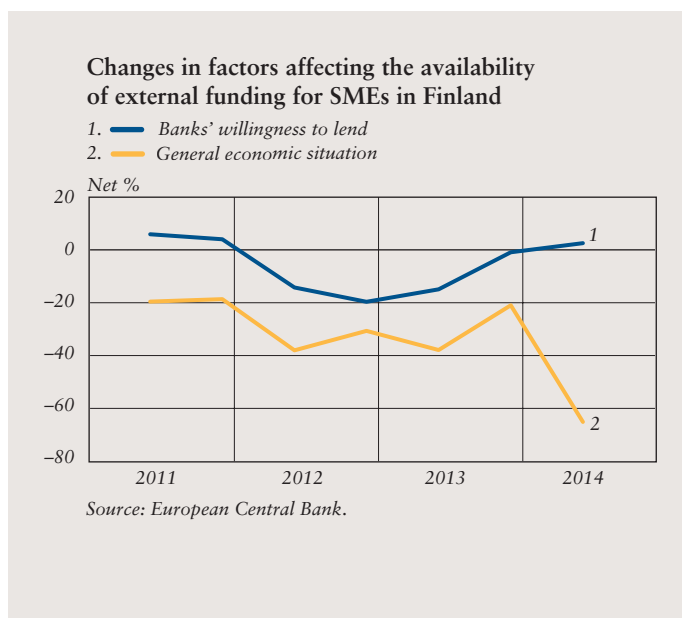
Corporate interest-bearing debt relative to GDP has remained relatively stable in the current decade, at slightly under 60% (Chart 7). The structure of debt has changed somewhat, as debt securities, particularly bonds, have increased and overseas loans have decreased. The role of Finnish financial institutions and general government as providers of finance to non-financial corporations has remained unchanged.

The ECB survey on enterprises<sup>2</sup> shows that the availability of bank loans to SMEs has deteriorated in Finland. A lower percentage of companies reported that they had received the full amount of bank loan they had applied for. In addition, there was also an increase in the percentage of companies reporting that they had rejected the loan application because of the excessive costs of borrowing. The share of companies facing obstacles to obtaining bank loans has doubled from a year earlier, standing at 9% in April–October 2014. An increase was witnessed particularly in the percentage of companies not even applying for a loan in expectation of rejection. The percentage of these 'discouraged' companies has nearly tripled in a year, to 4% in the latest survey. In addition, nearly a half of companies reported

<sup>1</sup> For more information on the forecast for the Finnish economy, see the articles 'Economic outlook' and 'Long-term growth outlook for Finland deteriorated'.

<sup>2</sup> Survey on the access to finance of SMEs in the euro area (SAFE). The latest observations in this biannual survey are based on data compiled between April and June 2014.

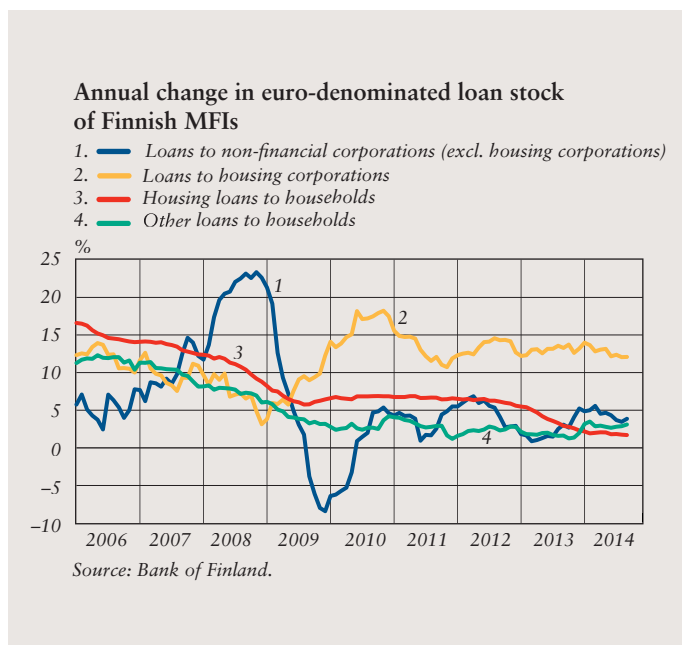
Chart 4.



that they were subject to more stringent collateral requirements.

The picture provided by the survey on corporate finance is consistent with the subdued outlook for the Finnish economy. The survey results show that the weakening of the general economic situation is the factor that has contributed most strongly to the deterioration in the availability of external financing for SMEs. In contrast, banks' willingness to provide credit has remained more or less unchanged (Chart 4). Despite the recent deterioration, the financing conditions of Finnish SMEs are still better than in the euro area on average, according to most indicators. For example, the obstacles to obtaining bank loans in Finland are still the lowest in the euro area after Belgium and Austria.

Chart 5.



*Downturn also reflected in housing and housing loan markets*

The weakness of the Finnish economy has been reflected in the gradual slowdown in the housing market and household borrowing. The pace of growth in the stock of housing loans granted to households has slowed gradually, to approximately 1.7% in September 2014 (Chart 5). Households' drawdowns of new euro-denominated housing loans have decreased, and, based on current economic forecasts, demand for credit is expected to continue to be sluggish. The decrease in borrowing has been accompanied by a decline in consumer confidence and increasing caution in financial decisions. Households' debt-servicing capacity has nevertheless remained



good on average, due to the low level of interest rates and, in view of the economic situation, the moderate level of unemployment.

Housing prices in real terms have declined gradually in Finland and are currently 4.4% lower than in autumn 2010 and roughly at the level of their peak in 1989 (Chart 6). The moderate decline is consistent with the protracted recession and the gradual slackening of demand for credit. At the same time, the regional divergence in housing prices has continued, as house prices in Helsinki and certain other regional centres have been supported by internal migration, weak housing supply and the low level of interest rates. Outside the growth centres, the decline in house prices has in some areas been notably stronger than the average for the country as a whole.

House prices have also fallen in recent years relative to wage and salary earnings and rents. Based on these general indicators of housing market valuations, relative house prices are approaching their long-term average (Chart 6). Before the recession in 2009, relative prices increased for a prolonged period, but at a slower pace than before the recession in the early 1990s.

Because of the earlier stronger growth in lending and rise in house prices, the household debt ratio is historically high. Household debt, including loans via housing corporations, totalled EUR 128.9 billion at the end of June 2014. Debt levels have risen both relative to households' disposable income (119.5%) and relative to the size of the Finnish economy (63.6% of

Chart 6.

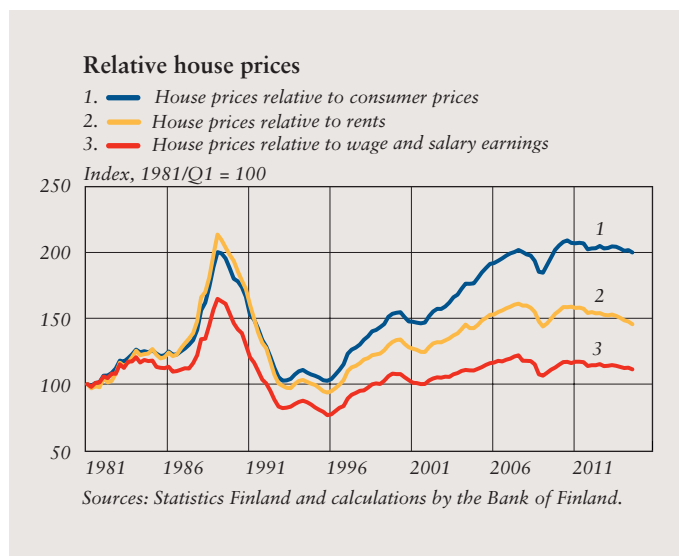
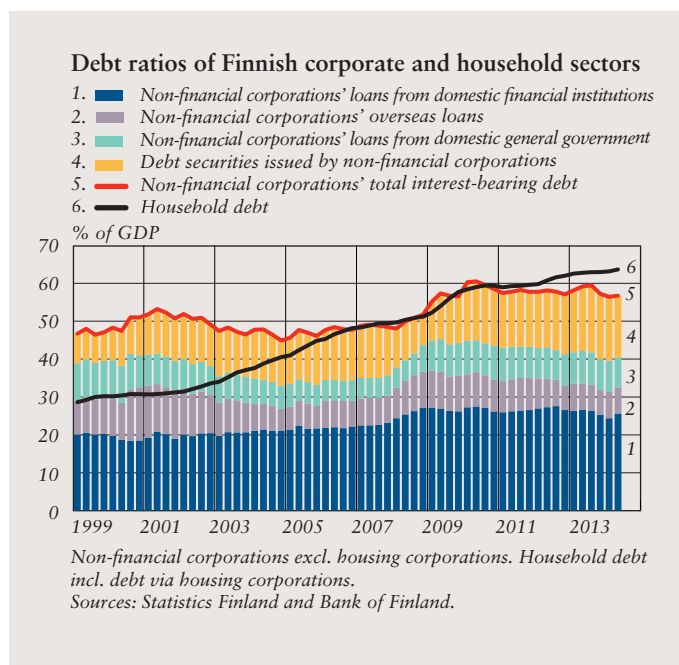


Chart 7.



GDP) (Chart 7). An increasing share of household debt is housing-related, which increases the financial system's vulnerability to possible disruptions on

the housing market. High debt ratios may, via households' consumer behaviour, also have an impact on the real economy.

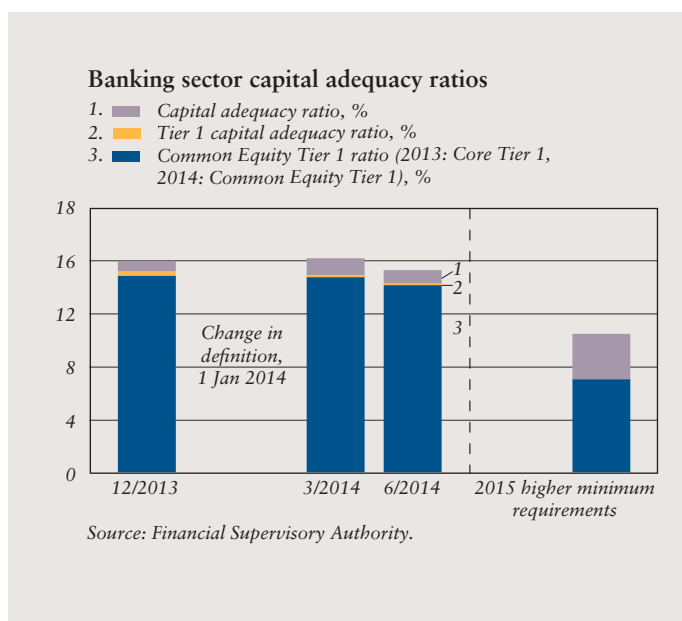
*Banks' risk-bearing capacity strong in a challenging operating environment*

The capital adequacy of the Finnish banking sector is solid overall. At the end of June 2014, the banking sector's Common Equity Tier 1 (CET1) ratio was 14.1% and the total capital adequacy ratio 15.3% (Chart 8). Capital adequacy ratios were down slightly compared with the situation at the end of 2013, due mainly to corporate restructuring in the second quarter of 2014. However, due to the entry into force of the EU's new capital adequacy regulations, the new capital adequacy ratios are not fully comparable with the previous ones.

All the banks already fulfil the capital conservation buffer requirement of 2.5%, which will come into force on 1 January 2015. The new requirement will raise the requirement for the Common Equity Tier 1 capital ratio to 7%, and the new total capital ratio requirement will be 10.5% of risk-weighted assets.<sup>3</sup> The new capital requirement is included in the Credit Institutions Act, which entered into force in August 2014 and implements the Capital Requirements Directive. This, in turn, is based on the overall global reform of banking regulation (Basel III).

The Finnish banks included in the comprehensive assessment by the European Central Bank and the stress test by the European Banking Authority (EBA) maintained good levels of capital adequacy, including under the adverse macroeconomic scenario.<sup>4</sup> In the adverse scenario, Finnish banks' Common Equity Tier 1 capital ratio declined but remained higher than the average for the assessed banks, and the aggregate adjustment to capital ratios was on average level. In the stress test, the main effects on capital adequacy were due to growth in risk-weighted assets and impairments. In Finland, the comprehensive assessment included Danske Bank Plc (Finland), Nordea

Chart 8.



<sup>3</sup> Information on the financial position of banks and the other parts of the financial sector is also available in the Financial Supervisory Authority's analysis 'Financial position and risks of supervised entities 2/2014' (30 September 2014).

<sup>4</sup> In the stress test scenario for 2014–2016, Finland's real GDP shrinks by 4.2%, consumer prices decline by 0.7%, unemployment rises to 11.2%, house prices fall by 18% and commercial property prices by 10.4%. ESRB (17 April 2014) EBA/SSM stress test: The macroeconomic adverse scenario.

Bank Finland Group and OP-Pohjola Group.<sup>5</sup>

Banks have not encountered problems in acquiring market-based funding, and risk premia have come down. Despite the declining trend in the banking sector's loan-to-deposit (LTD) ratio, commercial banks are still dependent on mainly foreign market-based funding. Banks' exposure to disruptions in the acquisition of funding is alleviated by their strong liquidity buffers: in June 2014, over 80% of banks' market funding was accounted for by liquid assets. Finnish banks' position is relatively good also in respect of the liquidity coverage ratio (LCR) requirement of 60% included in the Capital Requirements Regulation. The LCR standard will be introduced in 2015 and will tighten gradually to reach 100% by 2019.

The maturities of banks' debt financing have lengthened in anticipation of the introduction of the requirement for the net stable funding ratio (NSFR). The lengthening of maturities has been facilitated by the shift in debt instruments from certificates of deposit to bonds. Covered bonds, in particular, have been an inexpensive source of funding for banks, and they already account for over 60% of banks' bond issues. The collateral pool of covered bonds issued by Finnish banks consists mainly of housing loans granted in Finland, covering approximately half of the stock of housing loans.

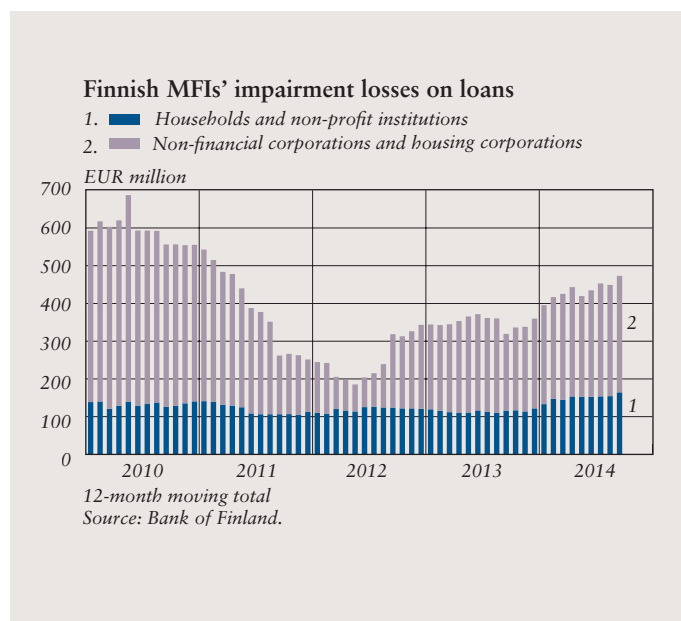
<sup>5</sup> For more information, see FIN-FSA press release 11/2014 (26 October 2014).

The quality of bank balance sheets and profitability have remained good, despite the weakness of the Finnish economy. Net interest income continued to recover gradually, and in January–June 2014 was approximately 6% up on a year earlier. Net fee income increased by 34% and net income from insurance by 11%. Impairment losses on loans and other receivables increased slightly but remained small relative to the stock of loans (Chart 9).

The importance of banks' risk-bearing capacity is underlined in a weak economic environment coupled with high debt ratios for households and general government. In the potential risk scenario, the problems of the real economy would become protracted or worsen, affecting the quality of bank credit, as a result of which growth in impairments, higher

*The importance of banks' risk-bearing capacity is underlined in a weak economic situation coupled with high debt ratios for households and general government.*

Chart 9.



risk weights on assets and higher funding costs could weaken banking sector profitability and capital adequacy. Even if a possible decline in house and other asset prices associated with a weakening economy would not necessarily cause significant direct loan losses for banks, the indirect impact via the real economy could still be considerable.

The special features of the Finnish banking sector are its high degree of concentration and interconnectedness with the other parts of the Nordic banking sector. The largest banks are systemically important entities in channelling funds to the real economy, and their ability to finance profitable projects even in a challenging operating environment is therefore particularly important. Of the three largest banks, two are owned by Nordic parent banks, and their financial risks thereby also depend indirectly on the risks of their Nordic banking groups.<sup>6</sup>

### Financial system policy

*It's time banking union redeemed the hopes invested in it*

Banking union is almost completed and ready to meet the challenges it was set up to tackle. Banking union is in many respects a historic structure, as never before has banking supervision or resolution of banks been based on a pan-European mandate and joint responsibility. The European Central Bank took over banking supervision on

4 November 2014, immediately following disclosure of the comprehensive assessment and stress test results. Meanwhile, the Single Resolution Mechanism will be fully operational at the beginning of 2016. However, preparatory work is going on all the time, and, for instance, the Single Resolution Board will begin to function on 1 January 2015. In addition, legal provisions concerning resolution plans will enter into force at the same time. By contrast, the deposit guarantee scheme will be based, at least for the time being, on national deposit guarantee funds.

The comprehensive assessment has been regarded as a kind of starting shot for banking union. The assessment results were favourably received, and the immediate future will show the practical impact of the assessment on the operation of banks and financial markets. In addition to capital shortfalls, the comprehensive assessment also raised other matters, as expected, that need to be remedied as soon as possible. The assessment revealed, among other things, the existing wide spectrum of differences in valuation practices and definitions applied to balance sheet items across Member States. Definitions of common equity Tier 1 capital, for example, differ markedly from country to country. There are differences in how deferred tax assets, goodwill, holdings in insurance entities and sovereign exposures recognised under available-for-sale financial assets are treated for the calculation of common equity Tier 1 capital. The differences will be

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<sup>6</sup> The macroprudential risks of the Nordic financial system are discussed in more detail in a previous issue of this publication, *Financial Stability 2/2014*, p. 35–36.

removed with the full entry into force of the new capital regulations after a transitional period, no later than by 2019, but, from the viewpoint of a level playing field for banks and their comparability, faster adoption of uniform practices would be desirable.

*Single Resolution Mechanism to play a key role in the future*

Banking supervision and the deposit guarantee scheme are important elements in safeguarding financial stability. The Single Resolution Mechanism (SRM) will, however, be the key to resolving bank problems if and when these arise in the future. The resolution framework (Bank Recovery and Resolution Directive and SRM Regulation) enables an orderly winding-up of large problem banks operating on international financial markets, without destabilising the financial system. Previously, fears of financial market disruptions and widespread recourse to government support mechanisms distorted investor involvement in bearing the burden of bank resolution (bail-in), and taxpayers have too often had to foot the bill for bank rescues. The resolution framework changes the situation, and in the future owners and creditors will bear the primary responsibility for banks' problems.

*Cross-border resolution becomes more efficient*

The resolution framework operates most reliably within the borders of a single country. The functioning of resolution procedures in an interna-

tional context can be improved by harmonising national laws (like the Bank Recovery and Resolution Directive within the EU). Harmonised legislation enables cooperation between authorities in different countries, while not yet obliging them to cooperate. The Single Resolution Mechanism was established to remedy the situation and to allow for an approach to taking centralised resolution measures with the aim of finding the best possible outcome from the viewpoint of financial stability. The SRM is the response to addressing bank problems that emerge between euro area countries. There is no corresponding framework for handling problems of banking groups with operations outside of banking union countries. In the case of large multinational banks whose business extends the world over in the form of a subsidiary structure, resolving their problems in a way that delivers the best overall outcome remains a challenging task.<sup>7</sup>

*Implementation of bail-in also presents challenges*

Implementation of bail-in can be regarded as the main and most important element of the resolution framework. This largely enables the burden-sharing of losses of a failed bank among shareholders and creditors. The application of the bail-in tool produces a fairer end-result than public bank support, for which the costs are borne by the government (and taxpayers). Even so, implementation of

*In the future, owners and creditors will bear the primary responsibility for banks' problems.*

<sup>7</sup> See the Financial Stability Board's report on progress in crisis resolution (2014).

bail-in may also involve challenges if domestic savers and pensioners will have to participate in sharing the costs (via investment funds and pension insurance companies).

The configuration is different when large banks with cross-border operations are resolved. As serious problems emerge, authorities have been inclined to favour domestic creditors at the expense of foreign investors or to take measures that otherwise violate the position of other creditors.<sup>8</sup> The new resolution framework effectively prevents derogations from agreed rules, and the end result is more readily predictable for investors and markets.

The new legislative framework for resolution raises judicial questions. Contracting parties must be able to trust that responsibilities and obligations remain the same throughout the contract period. Creditors who originally invested in normal bank debt instruments will face a new situation if the debt is converted into equity in the resolution process. Investors may want to put the validity of retroactive legislation to the test during the transitional period. Also shareholders whose holdings are valued at zero in the process may question the actions taken by the resolution authorities.

Implementation of bail-in may mean involvement of parties that could hamper decision-making and further progress in the resolution process. Existing creditors may want to get rid of their holdings of a bank's debt instruments after resolution actions

against the bank has been initiated. Buyers are often those who are ready to take on new types of risk or willing to participate in the bank's reorganisation process. Typical new creditors can be e.g. hedge funds or vulture funds. These do not generally aim at safeguarding financial stability or delivering the best possible outcome for all parties, but rather at maximising their own interests.

The right timing of resolution measures is therefore decisive. Too early intervention in a bank's operations increases the likelihood of legal action. By contrast, acting too late increases costs for a larger group of creditors and adds to the risk of abrupt investor reactions.

The Single Resolution Mechanism provides the EU with an effective and well-functioning procedure for bank resolution and ensures that the resolution rules are consistently applied in the euro area and other Member States participating in banking union. Through its operation, the SRM must build up its credibility as a new EU institution and show that it is capable of functioning also in the event of a wider financial market disruption.

### **Macroprudential policy taking shape**

In Finland, macroprudential policy based on binding requirements for banks is currently being launched. The new European banking legislation<sup>9</sup> and the Finnish law for its national transposition in the form of the revised Credit Institutions Act, effective since August 2014, provide the Board of the

<sup>8</sup> E.g. Iceland and Cyprus.

<sup>9</sup> EU Capital Requirements Regulation (575/2013) and Capital Requirements Directive (2013/36/EU).

Financial Supervisory Authority (FIN-FSA) with access to macroprudential instruments designed to prevent and mitigate systemic risks affecting the financial system.

One new key macroprudential tool to combat cyclical systemic risks, arising from e.g. excess credit growth, is the countercyclical capital buffer, on whose imposition the FIN-FSA Board will make a decision on a quarterly basis, starting from the beginning of 2015. Pursuant to the Credit Institutions Act, FIN-FSA – in cooperation with the Ministry of Finance and the Bank of Finland – will assess before making a decision whether it is necessary to impose or change the countercyclical capital buffer requirement.

Imposition of the countercyclical capital buffer requirement is primarily based on the deviation of the credit-to-GDP ratio from its long-term trend and on other factors signalling cyclical systemic risks. A Ministry of Finance Decree provides in detail for the factors that will need to be taken into account when the requirement is imposed or changed.

To prevent cyclical systemic risks from building up on the housing market, in particular, the FIN-FSA Board may impose, based on the EU Capital Requirements Regulation, requirements that affect capital charges on lending secured by real estate, including requirements that increase risk weights on lending for house purchase.<sup>10</sup> In addition, with effect from July 2016, the FIN-FSA Board will be

<sup>10</sup> See, in particular, Articles 124, 164 and 458 of the EU Capital Requirements Regulation.

entitled to tighten the maximum loan-to-value (LTV) ratio (loan cap) for housing loans to restrict the amount of a housing loan relative to the fair value of collateral submitted for the loan at the time of take-up.

During the course of the current year, the Bank of Finland, in cooperation with FIN-FSA, has developed its macroprudential analysis, which lays the basis for the authorities' regular assessment of the impact of cyclical systemic risks and macroprudential tools and, hence, for decisions on deployment of the tools. Further development of the analysis will continue, with particular emphasis on systemic risks in the housing market and on instruments aimed at their mitigation.

How effective and useful the cyclical macroprudential tools that now become available will prove in safeguarding financial stability will be seen in the coming years. The toolkit will need to be upgraded where necessary, also taking into account international experiences of macroprudential policy and changes in EU legislation.

#### *Tools to prevent structural systemic risks inadequate*

The new regulatory package still offers a rather limited set of vehicles for mitigating long-term systemic risks and vulnerabilities related to financial system structures. Systemically important credit institutions will be subject to additional capital requirements, based on specific criteria, from the beginning of 2016. These additional requirements will enable the reduction

*The Bank of Finland, in cooperation with FIN-FSA, has developed its macroprudential analysis as the basis for decisions on deploying the tools.*

of systemic risks caused by serious problems that arise within individual banks or banking groups and threaten the entire banking and financial system, and hence the economy as a whole.

If structural systemic risks were to originate from fragile structures of the entire banking system rather than individual institutions, Finland would have no macroprudential tools in place exactly fitting such a situation. To take account of these types of systemic risk, among others, the EU Capital Requirements Directive provides for a systemic risk buffer requirement that could be imposed on banks, but this tool had not been introduced at the time the Credit Institutions Act was revised. In accordance with the Government bill on the Credit Institutions Act, the Ministry of Finance will examine whether there is a need to enable imposition of a systemic risk buffer requirement in Finland, too.

If a substantial increase in systemic risks is observed, the FIN-FSA Board may, under Article 458 of the EU Capital Requirements Regulation, propose implementation of macroprudential measures regarding capital and liquidity requirements, among other steps. However, the measures provided for in said Article can be applied only under specific conditions and on a fixed-term basis. If the conditions are not met, the Council may reject the measures on a proposal from the Commission.

#### *National macroprudential tools also have cross-border implications*

Given the close integration of financial sectors across countries within the EU in particular, macroprudential policy needs to pay attention not only to the impact of the measures within an individual country but also to their transmission between countries. If, for example, additional requirements imposed by macroprudential authorities on bank lending within a particular market area were to differ depending on a bank's home state, the effectiveness of the policy could suffer and banks' competitive position could be distorted.

In order to increase the effectiveness of macroprudential policy and to maintain a level playing field for banks, EU legislation in part requires and in part enables the application of macroprudential measures decided by a single country to banks in other countries. If, for example, the FIN-FSA Board were to set the countercyclical capital buffer requirement on exposures located in Finland at 2.5% or a lower level, the EU Capital Requirements Directive would obligate each Member State to ensure that a corresponding requirement concerning Finnish exposures is imposed on banks operating in that country (and on their branches operating in Finland). On a reciprocal basis, Finnish bank exposures in another Member State would be subject to the countercyclical capital buffer requirement imposed in the country in question.

The need to apply macroprudential requirements set in one country to



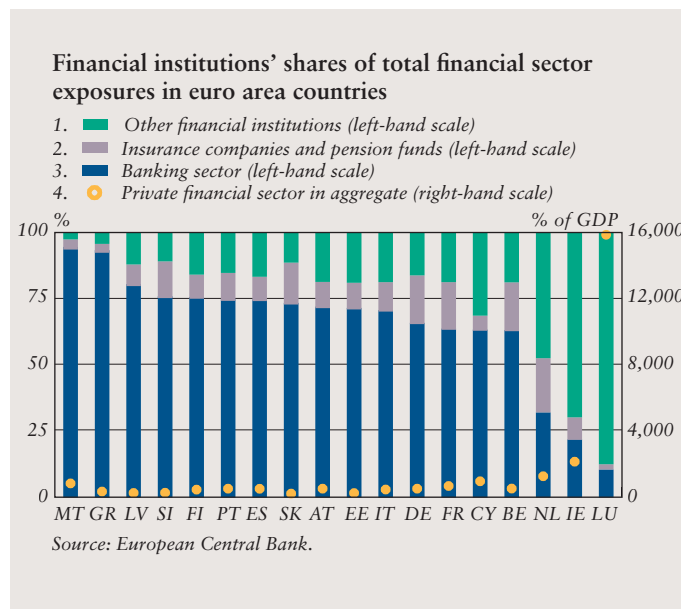
banks in another country largely depends on the policy tool employed. If a requirement – such as the counter-cyclical capital buffer requirement – is aimed at reining in lending within a single country’s entire banking sector, cross-border application will be warranted. If, by contrast, the FIN-FSA Board wanted to impose an additional requirement on a single, large systemically important Finnish bank in order to limit related risks, imposition of the requirement would be possible without contribution from other countries.<sup>11</sup> EU authorities are currently considering in a European Systemic Risk Board working group how the cross-border implications of macroprudential policy should be taken into account and how different policy tools should be applied across borders.

### Financial system uncertainties require a strong capital base

Systemic risks and vulnerabilities affecting the Finnish financial system – such as the historically still fairly high levels of household debt and relative house prices – and uncertainties related to overall economic activity underscore the importance of strong capital adequacy in the banking sector.

The need for strong capital positions is also amplified by many structural features of the Finnish banking system. Compared with most other euro area countries, banks play a major role in financial intermediation in Finland (Chart 10), they are closely

Chart 10.



linked with other banks both in Finland and abroad, and the banking system is also highly concentrated. For these reasons, a banking crisis or other serious problems in banks could seriously hamper financial intermediation in the economy. At the same time, the Finnish banking sector’s vulnerability to external problems is increased by the fact that Finnish banks finance a relatively small proportion of their lending with customer deposits, which makes them increasingly dependent on potentially unstable market funding.

The ECB’s comprehensive assessment confirmed that the largest banks operating in Finland are in good shape and well-capitalised. It is important that adequate levels of capital continue to be in place so as to ensure banks’ ability to operate in difficult conditions and act as financial intermediaries for the economy. The capital conservation buffer requirement

*The need for strong capital positions is also amplified by many structural features of the Finnish banking system.*

<sup>11</sup> Additional capital requirements on systemically important banks can be set from the beginning of 2016.

of 2.5%, entering into full force in Finland at the beginning of 2015, will help support this objective. However, it will be necessary at a later stage to separately consider as to whether the capital requirements on banks should be tightened further for structural reasons.

Macroprudential tools of a cyclical nature primarily enable the imposition of additional requirements on banks, for example if lending accelerates to exceptional levels or if systemic risks are otherwise deemed to have grown. If, by contrast, lending decelerates or other signs point to cyclical risks materialising and threatening to damage the economy, macroprudential requirements imposed earlier may be revoked.

The presence of imbalances, especially rapid credit growth, in the Finnish financial system would have justified the tightening of bank capital requirements by cyclical macroprudential tools in the middle of the first post-millennium decade if such tools had

been available at that time. Now that macroprudential tools have become available in a situation where the outlook for the real economy is bleak and the credit cycle subdued, the tightening of bank capital requirements – e.g. via the countercyclical capital buffer requirement or other cyclical tools – should be viewed with caution. As such, stricter requirements would help maintain the adequacy of bank capital. However, if banks did not release their voluntary capital buffers to increase their capital ratios in response to the tightening requirements, they would either have to raise more capital or reduce their risk-weighted assets by, for example, cutting down their lending or redirecting it to lower-risk targets. In the worst case, the fragile credit cycle could weaken further still, thus creating barriers to economic recovery.

*Keywords: macroprudential policy, banks, banking union, financial system, financial markets, stability*

# Finland's long-term growth outlook has deteriorated

14 November 2014

The prolongation of the recession, accumulation of public debt and ageing of the population are eroding the growth potential of the Finnish economy. Potential output growth is expected to remain below 1% over the next 25 years.

The prolonged recession, industrial restructuring and faster-than-predicted accumulation of general government debt are depressing the growth potential of the Finnish economy. What makes this particularly problematic is that the potential for growth is weak for demographic reasons, too. Even before the prolongation of the recession, growth was projected to remain much slower than that witnessed in Finland in recent decades.

In spring 2012, the Bank of Finland estimated an average annual growth rate of just under 1½% for approximately the next 20 years.<sup>1</sup> This is roughly consistent with the most recent official estimates, i.e. the European Commission projections and Ministry of Finance calculations, the latter primarily used for the fiscal sustainability analysis.

The recession, which is already in its fourth year, has had several implications for Finland's growth prospects. The loss of growth potential since 2008 reflects a reduction in labour supply, subdued corporate investment and a decline in the corporate resources devoted to research and product development.

<sup>1</sup> See Kinnunen – Mäki-Fränti – Newby – Orjasniemi (2012) Long-term growth forecast for the Finnish economy. Bank of Finland Bulletin 3/2012. Bank of Finland.

The present article explores the growth outlook for the economy for the next two decades. The calculations are largely based on a growth accounting framework whereby the evolution of production inputs capture the changes in production structure and labour market developments. In addition, we employ the Aino model to simulate the growth effects of pension reform and fiscal consolidation measures. The time horizon of the model simulations extends as far as the start of the 2040s.

## Prolonged recession has eroded growth base

The deterioration in Finland's growth prospects reflects factors identified as a common source of lower potential growth in advanced economies. The failure of economic growth to pick up despite the low interest rates has been attributed to e.g. demographic ageing, lower return on education and higher inequality, but above all to the accumulation of general government debt in these economies.<sup>2</sup>

Since 2008, growth in **productive capital** has been historically sluggish in Finland. Investment volumes have not been high enough to compensate for capital consumption and depreciation, resulting in a contraction in the capital stock. The net capital stock in manufacturing declined by around 12% between 2008 and 2013. The contraction in the capital stock has been particularly pronounced in the forest industries, amounting to around



*Juha Kilponen  
Head of Division  
Monetary Policy and  
Research*



*Helvi Kinnunen  
Senior Adviser  
Monetary Policy and  
Research*



*Petri Mäki-Fränti  
Senior Economist  
Monetary Policy and  
Research*

<sup>2</sup> For a discussion on so-called secular stagnation, see e.g. [http://www.voxeu.org/sites/default/files/Vox\\_secular\\_stagnation.pdf](http://www.voxeu.org/sites/default/files/Vox_secular_stagnation.pdf).

*Finland's industrial base has deteriorated more during the present financial crisis than during the Finnish depression of the 1990s.*

one fifth, while the figure in electrical engineering and electronics was 15% over the corresponding period. Across the economy as a whole, the net capital stock has hardly increased since 2008, and even declined in 2013 (Chart 1). Thus, Finland's industrial base has deteriorated sharply during the recession, much more so than during the Finnish Great Depression of the 1990s, when the contraction in net manufacturing capital stock was, at most, around 2% in 1993–1995.

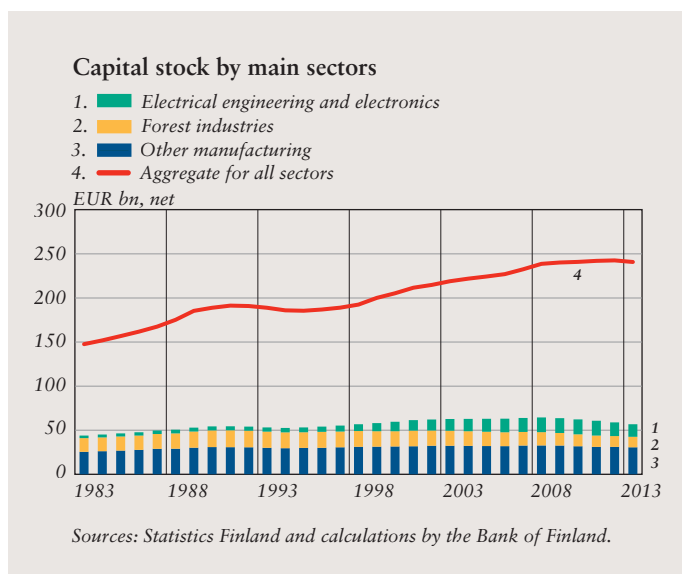
In **labour supply**, the economic crisis is reflected in a decline in the labour force participation rate (LFPR). In 2013, the LFPR was 2 percentage points lower than in 2008. Remaining outside the labour force has become unusually common. Recently, a new phenomenon has emerged, with the fall in the LFPR for cohorts who have generally remained active in the labour market irrespective of business cycle

conditions. Notably, the decline in the LFPR for 30–34-year-olds has been stronger than average, over 4 percentage points. Similarly, a downward trend is noticeable in the LFPR for 35–39-year-olds (Chart 2). The broad picture on the labour market is that as the unemployment spell lengthens the higher is the proportion of unemployed job-seekers who do not engage in an active job search. The difference between registered data (Ministry of Employment and the Economy) and survey data (Statistics Finland) has grown exceptionally wide, as hidden unemployment has risen. The deterioration in the employment situation is also reflected in higher underemployment.

Developments in **total factor productivity growth** have been exceptionally muted historically, with total factor productivity declining markedly in the midst of the recession (2008). Whereas total factor productivity growth was spurred by the expansion of the electrical engineering and electronics industry, as well as other industrial changes, in the years following the 1990s depression, it has performed weakly since the global financial crisis. According to the European Commission's forecast, growth in total factor productivity will continue to be subdued, on average, for economies across the EU.

Growth prospects are dampened further by slower expansion in research and product development in Finland and other EU economies alike (Chart 3). With the rapid deterioration in general government finances, the increase in

Chart 1.



spending on R&D came to a halt in 2011, and public spending on R&D has trended downwards since. Companies' own R&D efforts have also waned as the recession has persisted.

Average productivity in the economy is depressed by an increase in the share of social welfare and health care services in the total economy. In the recession years, the importance of these mainly publicly funded services for average labour productivity was still relatively modest. However, the future increase in the share of these services will slow down average productivity developments.

Many countries witnessed a surge in both private and public-sector debt ratios before the onset of the global financial crisis. In response, households, non-financial corporations and the public sector face the need for balance sheet adjustments, which will curb economic growth. In Finland, the need for debt consolidation primarily applies to general government finances, whereas there have not been clear signs of household over-indebtedness. As for non-financial corporations, some balance sheet adjustment has been undertaken, but debt ratios have remained relatively low despite subdued output growth.

### Developments in growth factors

In what follows, we adopt a growth accounting approach to identify the contribution to economic growth from a variety of factors. This approach is consistent with the Bank of Finland's growth decomposition analysis performed in spring 2012. For the

Chart 2.

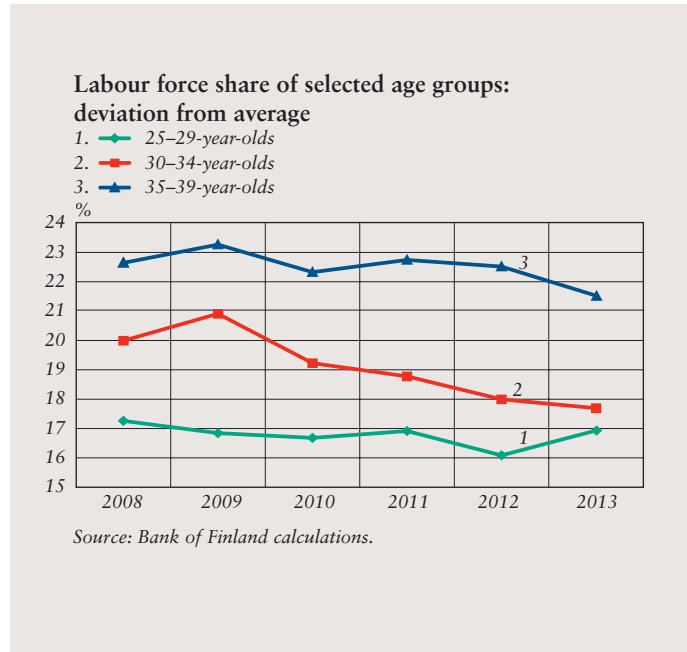
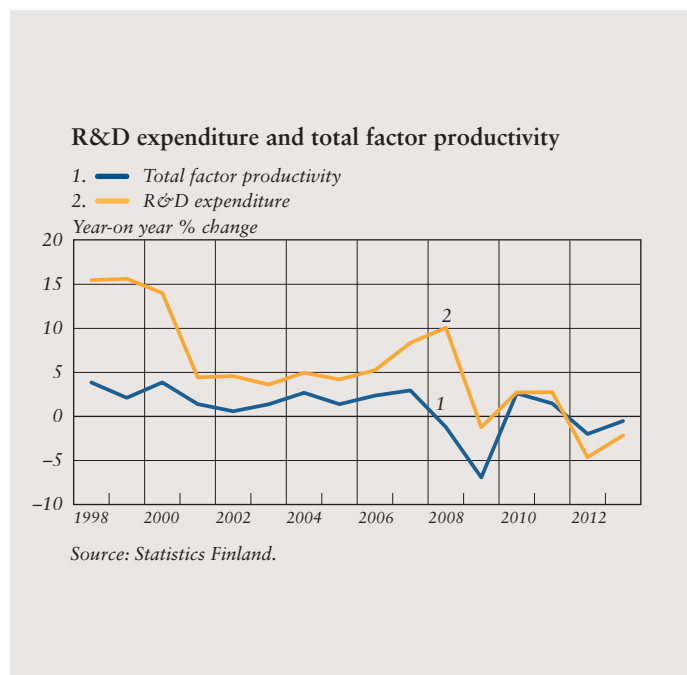


Chart 3.



purposes of this analysis, the economy is broken down into three sectors: general government, manufacturing and non-manufacturing private activities. The sectoral breakdown allows for the capture of differences in the growth rates for labour, capital and productivity across the three sectors of the economy.

The model is employed to generate a baseline scenario, which is supplemented by two alternative scenarios. The first alternative scenario assumes that the rise in the LFPR following the 2014 pension reform will be consistent with the recent estimate of the Finnish Centre for Pensions. The second, adverse scenario is based on an assumption that the prolongation of the recession will force part of the labour force out of the labour market permanently.

### **Growth in labour supply stronger than previously predicted**

The labour supply forecast is based on the population forecast released by Statistics Finland in 2012, and the changes in the LFPR have been projected using a cohort-specific forecast model.<sup>3</sup> Using the population forecast and labour force share model, the LFPR (of 15–74-year-olds) is estimated to increase from the current level by around 1 percentage point as we enter the 2030s. The number of people employed would then be 40,000 higher than in 2004–2013, on average. The estimate of labour supply has been

<sup>3</sup> See Kinnunen – Mäki-Fränti (2013) Labour supply and population cohorts: impact of the business cycle on labour market attachment. Bank of Finland Bulletin 3/2013. Bank of Finland.

revised up from the 2012 forecast. The 2012 forecast was based on the 2009 population forecast, which provided a lower estimate of net immigration than the 2012 population forecast.

In the baseline scenario, the LFPR is expected to increase slightly as we enter the 2020s. Furthermore, the increase in the share of people of prime working age with better-than-average productivity in the total labour force will offset some of the effects of population ageing.<sup>4</sup> Consequently, the size of the labour force will remain practically unchanged in effective terms until the start of the 2030s. In the growth accounting analysis, the differences between the changes in the size of the effective and the real labour force have been accounted for by an upward adjustment of annual total factor productivity growth by 0.1 of a percentage point rather than by an adjustment of the size of the labour force.

In addition to the overall size of the labour force, economic growth is also affected by how the labour force is distributed between the different sectors of the economy. In the public sector, labour productivity growth is assumed to improve substantially compared with past experience, but to remain slow at only around 0.1–0.2% per annum.

Amid sluggish productivity performance, labour demand in the public sector closely mirrors output growth in public services, which, in turn, reflects a growing need for services to accommodate an ageing

<sup>4</sup> For a description of the method employed to calculate effective labour force, see Box 7.

population. The calculation assumes that the volume of service production in other than age-related services remains unchanged from 2014. The remaining portion of the labour force is used in industrial and other private production. Under these assumptions, average growth in the public sector labour force will be 0.3% per annum over the years 2014–2030, while the private sector labour force will remain broadly unchanged.

A key determinant of labour supply is whether the recession will leave a permanent mark on the LFPR. In the worst case, some of those in prime working age may be permanently crowded out of the labour market if labour market conditions remain subdued. Cohort-specific analyses and recent developments on the labour market point to two phenomena that raise concern over developments in the long term. The LFPR for the cohorts born at the end of the 1970s and in the 1980s, who currently participate in the labour market, has been lower than average irrespective of the business cycle. Another finding from the cohort-specific studies is that, in response to the prolongation of unemployment, 45–59-year-olds have a relatively high probability to crowd out of the labour market. Both of these factors tend to reduce labour market participation.

### **Productivity developments subdued**

Growth in the manufacturing capital stock will remain slow, due to subdued investment in manufacturing. A considerable portion of the manufacturing jobs that were lost during the recession

will not be recovered for a long time. From 2016 on, the capital stock is expected to increase at an annual rate of 0.1%. This is much less than foreseen in the previous long-term growth forecast released 2 years ago. Growth in the capital stock will pick up slightly towards the end of the forecast horizon. According to the calculation, the annual growth rate for the capital stock in other private production will average 1.2%.

The public sector capital stock has grown around ½% per annum since 1995. The pace has, however, not been even, as part of public investment has been undertaken to smooth out business cycles. Public sector investment is expected to grow slightly during 2014–2032. Improvements in public sector productivity are conditional on additional investments in e.g. machinery and equipment. As growth in the capital stock is expected to outpace employment growth, public sector capital formation will make a positive contribution to growth.

The longer the horizon of the analysis, the stronger the dependence of the economic growth rate on developments in total factor productivity. During the past 40 years, total factor productivity in the Finnish economy has increased by more than 3% per annum, on average. In the 2012 long-term projections, the rate of total factor productivity growth was expected to slow down significantly but to remain around 1% over the next two decades. This estimate, too, has now been revised down to a modest 0.2 of a percentage point per annum, on

*Over the long term, the growth rate of the economy will depend on developments in total factor productivity.*

*Economic growth will depend on improvements in private sector labour productivity.*

average, for the years 2014–2020 and around 0.5% for 2021–2030.

In response to the longer-than-expected recession, the outlook for total factor productivity growth has deteriorated EU-wide. According to the European Commission, average growth in total factor productivity will be 0.8% in the EU countries as a whole, and 0.7% in Finland, over the years 2013–2060. The estimate of total factor productivity growth for Finland presented in this article is still slightly more modest than that of the European Commission. The difference is explained above all by structural realignment in the economy and subdued productivity performance in the public sector. Both EU-wide and in Finland, growth in total factor productivity is also constrained by the muted developments in the capital stock. Especially investments in intangible assets, such as R&D, and immaterial rights, but also in organizational development, are crucial to the performance of total factor productivity.

Productivity in general government hinges on growth in capital intensity. Total factor productivity in the public sector is expected to continue to decline slightly, albeit less than in the immediate past.

### **Economic growth clearly losing momentum**

Following the sluggish economic developments in recent years, the rate of real GDP growth in Finland remained well below the long-term trend growth rate in the past ten-year period 2004–2013. A further moderation in economic growth is foreseen in the next two

decades. Average GDP growth is projected to be around 0.8% in 2014–2020 and to pick up to a little over 1% in the 2020s (Table 1). Hence, over the years 2014–2030 economic growth will lag nearly 0.5 of a percentage point behind the growth rate projected by the Bank of Finland in 2012. The downward revision of the forecast for the first ten-year period is partly attributable to the weaker-than-expected situation at the outset, which is also reflected in the short-term growth forecast.

In both the ten-year periods, economic growth will depend on improvements in private sector labour productivity (Table 1). Although labour output in the public sector is expected to increase notably in 2014–2020, its contribution to GDP growth will remain modest. The growth impact of labour productivity in the private sector will be 0.9% in 2014–2020 and 1.4% over the next ten-year period, with growth in capital intensity and growth in total factor productivity making a roughly equal contribution to labour productivity. In the public sector, weak growth in total factor productivity will be offset by an increase in capital intensity.

Concentration of production in sectors with below-average productivity growth will contribute to the moderation of output growth in the economy as a whole over the forecast horizon (Chart 4). Improvements in within-sector productivity will also fall back relative to the past ten-year period. In the 2020s, improvements in productivity will have an upward effect

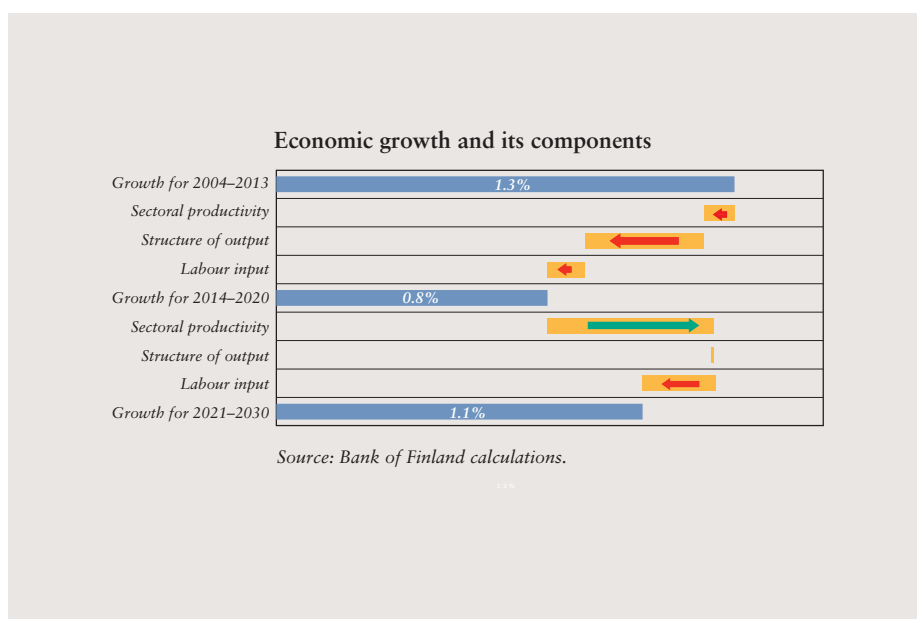


Table 1.

Average trend growth by sector and its components			
	2004–2013	2014–2020	2021–2030
<b>Total economy, %</b>			
GDP	1.3	0.8	1.1
Labour input	0.4	0.3	0.1
Labour productivity	0.9	0.5	1.0
Total factor productivity	0.4	0.1	0.5
Capital intensity	0.5	0.4	0.5
<b>Private sector, %</b>			
Output	1.7	1.0	1.3
Labour input	0.4	0.1	-0.1
Labour productivity	1.3	0.9	1.4
Total factor productivity	0.7	0.4	0.8
Capital intensity	0.6	0.5	0.6
<b>Public sector, %</b>			
Output	-0.4	0.6	0.5
Labour input	0.4	0.5	0.2
Labour productivity	-0.8	0.2	0.3
Total factor productivity	-1.0	-0.2	-0.2
Capital intensity	0.2	0.4	0.5

Source: Bank of Finland calculations.

Chart 4.



on growth, whereas the slow increase in labour input will have a further downward effect.

The baseline scenario is supplemented by a sensitivity analysis based on two alternative assumptions of labour supply developments. This explores the impact on the forecast of both long-term unemployment and the 2014 pension reform. It turns out that the results of the baseline scenario are not very sensitive to these alternative assumptions.

More persistent long-term unemployment would translate into a moderation in economic growth of around 0.2 of a percentage point in 2014–2020. In addition to reducing labour input, long-term unemployment will also decrease average labour productivity by exhausting some of the labour reserves in high-productivity sectors. However, in the projections, the growth effects of long-term unemployment do not extend as far as 2021–2030.

The pension reform would have an equal but opposite effect, resulting in an increase in total labour input. While the production of publicly funded services will remain unchanged, the higher supply of labour will enhance the scope for expansion in private production and boost average labour productivity growth. Provided that the productivity gains from the pension reform are in line with the projections, economic growth will pick up by around 0.1% per annum, on average, over the years 2020–2030.

The deterioration in growth prospects also has adverse implications

for general government finances. The medium-term projections which build on the Bank of Finland's forecast foresee a deepening of the fiscal deficit together with the surge in ageing-related spending. A reversal of the upward trend in the debt ratio calls for adoption of substantial fiscal consolidation measures (see Box 4, above).

In order to obtain a more complete picture of the impact of the pension reform and other structural measures on economic growth and the required fiscal adjustment, the effects of structural reforms on e.g. wage formation and the response of economic agents to fiscal adjustment measures are incorporated into the analysis.

To this end, we will now explore the Aino model simulations that also capture the effects of the macrodynamics of the economy.

#### **Analysis of the pension reform and other structural reforms using a general equilibrium model**

The pension reform and other structural measures, such as savings in local government spending and progress with the social welfare and health care reform, have broader implications for the economy than what can be captured with mechanical sustainability analysis and with growth accounting framework. To identify these other channels, the demographic parameters of the Aino model, i.e. pension funds and key fiscal rules, were calibrated so as to generate the same debt and fiscal revenue paths in the baseline as in the fiscal sustainability calculation. The

analysis extends as far as the beginning of the 2040s.<sup>5</sup>

The **impact assessment of the pension reform** is based on the assumption that both central government and pension fund tax rules will contribute to budgetary stabilisation so as to allow the central government debt-to-GDP ratio and the ratio of pension funds to payroll to move close to the target level balance by 2040. In the simulation, the pension reform effect is accounted for mechanistically by assuming a postponement of the retirement age in line with the new agreement. The calculation also captures the changes in the pension replacement rate projected by the Finnish Centre for Pensions.

The simulation finds that adoption of the pension reform would reduce the upward pressure on the overall tax rate by around 1.5 percentage points by 2040. This is slightly more than the result of the mechanistic sustainability calculation.

The key macroeconomic gains delivered by the pension reform arise from slower growth in labour costs in response to an increase in labour supply and a lower upward pressure on taxes. This will improve cost-competitiveness, thus fuelling export growth. The lower cost pressures are also reflected in a moderation of growth in public consumption. The employment rate will rise by around 1 percentage point. Notwithstanding the improvement in

employment, the increase in private consumption will remain relatively modest. However, investment growth will pick up, spurring an increase in the capital stock. Overall, the positive growth effects of the pension reform will remain small. It would increase GDP growth by less than 0.1 of a percentage point compared with the baseline. In other words, over a 25-year-horizon, GDP would increase 1.7% more than the baseline in response to the pension reform.

In the following analysis, we will explore the macroeconomic effects of not only the pension reform but also the structural policy programme, assuming that the municipalities (local government) are successful in making spending cuts to achieve their savings targets of EUR 2 billion. The calculation assumes that the savings in spending will be in place by 2019.

Further, if the municipalities are able to agree on changes in the expenditure framework to accommodate the savings of EUR 2 billion set out in the structural reform package without changes in the taxation structure, this would further reduce the need to tighten taxation. Together, the pension reform and the local government savings package would lower the upward pressure on taxation by more than 3 percentage points by 2040 (Table 3).

The simulations find that the measures would reduce labour costs, and the employment rate would rise by close to 1½ percentage points. The ratio of public spending to GDP would decline by more than 1 percentage

*The pension reform will reduce the pace of growth in labour costs.*

<sup>5</sup> The model was simulated from 2007 onwards under the assumption that economic agents have knowledge of fiscal policy decisions, demographic developments and the pension reform. The long-term equilibrium of the model was calibrated to reflect the situation in 2007–2013.

Table 2.

Long-term effects of the pension reform				
	2015–2020	2021–2030	2031–2040	2040***
GDP*	0.05	0.05	0.06	1.71
Private consumption*	0.06	0.04	0.05	1.44
Exports*	0.01	0.04	0.05	1.10
Labour input*	0.05	0.05	0.06	1.73
Capital stock*	0.05	0.04	0.06	1.47
Pension expenditure/GDP**	-0.10	-0.37	-0.60	-0.64
Public consumption/GDP**	-0.02	-0.08	-0.20	-0.26
Pension funds/payroll**	0.35	0.98	1.37	1.38
Public debt/GDP**	-0.21	-0.70	-1.39	-1.60
Employment rate**	0.09	0.44	0.89	1.06
Labour costs**	0.10	-0.73	-1.89	-2.36
Inflation	0.00	-0.10	-0.10	-1.36
Income tax rate**	-0.11	-0.47	-1.18	-1.49
Pension contribution**	-0.24	-0.87	-1.22	-1.21
Overall tax rate**	-0.15	-0.63	-1.25	-1.46
<i>Effects expressed as % or % point deviations from the baseline</i>				
*) Annual growth				
**) Average deviation from the baseline during the period				
***) Deviation from the baseline				
Source: Bank of Finland calculations.				

point compared with the baseline, while GDP growth would be a little under 3% above the baseline. However, the growth contribution of the package would still be moderate.

Overall, the model simulations demonstrate that the pension reform and adjustments in local government spending would make a significant contribution to fiscal balance and foster economic growth. At its best, these measures could place general government on a much more sustainable footing. If the benefits delivered by the structural reforms are passed through in full to contain tax

increases, they will strengthen the competitiveness of the economy and provide for an acceleration of export-driven growth. Given the external indebtedness of the economy as a whole, all measures that support export growth improve overall balance of the economy.

However, the simulations also show the failure of these structural reforms to create such dynamics in the economy as to facilitate a pronounced acceleration in GDP growth. The delivery of sustainable economic growth that is driven by exports and investments rather than accumulation

Table 3.

Combined effect of pension reform and EUR 2 billion savings in local government spending				
	2015–2020	2021–2030	2031–2040	2040***
GDP*	0.07	0.09	0.08	2.73
Private consumption*	0.14	0.08	0.07	2.87
Exports*	0.03	0.08	0.06	2.21
Labour input*	0.05	0.08	0.06	2.16
Capital stock*	0.10	0.08	0.08	2.86
Pension expenditure/GDP**	-0.11	-0.52	-0.83	-0.87
Public consumption/GDP**	-0.14	-0.63	-0.98	-1.07
Pension funds/payroll**	0.25	0.08	0.78	1.02
Public debt/GDP**	-0.42	-1.81	-3.04	-3.16
Employment rate**	0.09	0.53	1.14	1.34
Labour costs**	0.10	-2.27	-4.28	-4.81
Income tax rate**	-0.29	-1.77	-3.55	-4.08
Pension contribution**	-0.35	-1.08	-1.41	-1.38
Overall tax rate**	-0.30	-1.54	-2.79	-3.10
<i>Effects expressed as % or % point deviations from the baseline</i>				
*) Annual growth				
**) Average deviation from the baseline during the period				
***) Deviation from the onset				
Source: Bank of Finland calculations.				

of domestic debt would seem to warrant further measures. Achievement of a solid growth base requires productivity improvements in both the public and the private sectors.

### Significant fiscal adjustment necessary amid slowing economic growth

The growth outlook for Finland has been weakened by the recession. In response to shifts in the industrial structure, the share of output taken by high productivity sectors has declined, which threatens to undermine the long-term potential output of the

economy. Fixed investment, including immaterial investment, has also trended down. Whereas the Bank of Finland in spring 2012 projected that economic growth will hover around 1½% over the next few decades, the present calculations arrive at a potential growth estimate of 1% per annum.

The adverse outlook for labour input growth mirrors labour market conditions. Workers of prime labour market age who used to remain on the labour market irrespective of business cycle conditions have increasingly abandoned their job search as their period of unemployment has dragged

on. Economic growth is constrained by an increase in demand for public services driven by an ageing population. In the longer term, however, potential growth is supported by a decline in the labour force share of the youngest and oldest segments of the working-age population. The pension reform will increase the labour force and, hence, boost economic growth, but to a relatively modest extent. A key issue in terms of total factor productivity is that the expansion of service production means an increasing share of the labour force will be engaged in sectors of lower-than-average productivity.

Sluggish economic growth, higher ageing-related expenditure and a surge in the debt ratio following the recession imply that there is a significant need for fiscal consolidation in the economy. The Aino model simulations of the impact of the pension reform and savings in local government expenditure especially highlight the labour-cost effects on economic developments. The simulations show that, at their best, the reforms may result in a significant increase in the output share of exports and expansion of production capacity. Hence, the reforms may improve the economic sustainability of the growth base. As a counter-balance, the effect on private consumption growth would be negligible.

*Keywords: recession, growth, general government, productivity, pension reform*

# Articles and boxes from previous publications

## Articles

*The need for and impacts of structural policy in the euro area.* Marko Melolinna. Bank of Finland Bulletin 4/2014.

*Why are euro area banks' credit standards still tight?* Eeva Kerola. Bank of Finland Bulletin 4/2014.

*Implementation of monetary policy at the zero lower bound – and below.* Minna Kuusisto and Elisa Newby. Bank of Finland Bulletin 4/2014.

*Large worker flows in the Finnish economy.* Heidi Schauman, Juuso Vanhala and Matti Virén. Bank of Finland Bulletin 3/2014.

*From Finnish Great Depression to Great Recession.* Adam Gulan, Markus Haavio and Juha Kilponen. Bank of Finland Bulletin 3/2014.

*How should the countercyclical capital buffer requirement be applied?* Karlo Kauko, Jukka Topi and Jukka Vauhkonen. Bank of Finland Bulletin 2/2014.

*Economic policy options in conditions of weak growth and low inflation.* Juhana Hukkinen. Bank of Finland Bulletin 1/2014.

*Two targets, one instrument: steering interest rates and preserving financial stability with Eurosystem credit operations.* Tuomas Välimäki. Bank of Finland Bulletin 1/2014.

*Japan's inflation expectations as a measure of the success of Abenomics.* Niko Herrala and Seija Parviainen. Bank of Finland Bulletin 1/2014.

*Structural reforms in the economy and fiscal sustainability.* Helvi Kinnunen, Petri Mäki-Fränti and Jukka Railavo. Bank of Finland Bulletin 5/2013.

*Financial cycles, monetary policy and macro-prudential policy in the euro area.* Hanna Freystätter, Hanna Putkuri and Jukka Vauhkonen. Bank of Finland Bulletin 4/2013.

*Liquidity regulation makes a comeback.* Karlo Kauko. Bank of Finland Bulletin 4/2013.

*Fiscal multipliers revisited.* Pasi Ikonen, Tuomas Saarenheimo and Matti Virén. Bank of Finland Bulletin 4/2013.

*Foreign trade statistics based on value added challenge the traditional picture of international trade.* Elisa Newby. Bank of Finland Bulletin 4/2013.

*Labour supply and population cohorts: impact of the business cycle on labour market attachment.* Helvi Kinnunen and Petri Mäki-Fränti. Bank of Finland Bulletin 3/2013.

*Sector-specific labour cost developments from the perspective of the industrial sector's cost structure.* Jarkko Kivistö. Bank of Finland Bulletin 3/2013.

*The situation of SME finance in Finland.* Pertti Pylkkönen and Eero Savolainen. Bank of Finland Bulletin 2/2013.

*Finland must be prepared to impose systemic capital requirements on banks.* Jukka Vauhkonen and Hanna Westman. Bank of Finland Bulletin 2/2013.

## Boxes

### *Bank of Finland Bulletin 3/2014, Economic outlook*

- National accounts for the first quarter of 2014 (p. 12).
- Deepening of Ukraine crisis would slow growth (p. 13–14).
- Product structure of Finnish exports becomes less favourable (p. 23–24).
- Investment recovering only slowly (p. 25–26).
- Total factor productivity and R&D expenditure growing more slowly (p. 31–33).
- Impact assessment of the government decision on spending limits (p. 37–38).
- The rise in average wages and weak productivity developments have pushed up inflation (p. 43–44).

### *Bank of Finland Bulletin 5/2013, Economic outlook*

- National accounts for the third quarter of 2013 (p. 11).
- Employment effects of structural change in manufacturing sector (p. 12–13).
- Weak economic trend reflected more in employment than unemployment (p. 25–26).
- Finland's public finances (p. 30–34).
- Outlook for Finland's cost-competitiveness (p. 40–41).

### Alternative scenarios

- Alternative scenario: financial tightening would lower GDP growth significantly. Bank of Finland Bulletin 3/2014, Economic outlook (p. 47–48).
- Alternative scenario: improved corporate profitability. Bank of Finland Bulletin 5/2013, Economic outlook (p. 44–46).

- Alternative scenario: Demand in export markets picks up at the same time as conditions for corporate investment improve. Bank of Finland Bulletin 3/2013, Economic outlook (p. 53–55).



# Forecast tables

## 1. Balance of supply and demand, at reference year 2010 prices

<i>% change on previous year</i>					
	2012	2013	2014 <sup>f</sup>	2015 <sup>f</sup>	2016 <sup>f</sup>
<i>GDP at market prices</i>	-1.5	-1.2	-0.2	-0.1	1.0
<i>Imports of goods and services</i>	1.3	-2.5	-0.4	1.9	3.1
<i>Exports of goods and services</i>	1.2	-1.7	-0.1	1.4	3.1
<i>Private consumption</i>	0.1	-0.7	-0.4	-0.1	0.6
<i>Public consumption</i>	0.7	1.5	-0.1	-0.2	0.7
<i>Private fixed investment</i>	-3.3	-6.8	-4.0	1.2	3.2
<i>Public fixed investment</i>	1.6	4.4	1.8	0.1	-0.4

## 2. Contributions to growth<sup>1</sup>

	2012	2013	2014 <sup>f</sup>	2015 <sup>f</sup>	2016 <sup>f</sup>
<i>GDP, % change</i>	-1.5	-1.2	-0.2	-0.1	1.0
<i>Net exports</i>	-0.1	0.3	0.1	-0.2	0.0
<i>Domestic demand excl. inventory change</i>	-0.3	-1.1	-0.9	0.1	1.0
<i>of which:</i>					
– <i>Consumption</i>	0.2	0.0	-0.3	-0.1	0.5
– <i>Investment</i>	-0.6	-1.1	-0.6	0.2	0.5
<i>Inventory change + statistical discrepancy</i>	-1.1	-0.4	0.6	0.0	0.0

<sup>1</sup> Bank of Finland calculations. Annual growth rates using the previous year's GDP shares at current prices as weights.

## 3. Balance of supply and demand, price deflators

<i>Index, 2010 = 100, and % change on previous year</i>					
	2012	2013	2014 <sup>f</sup>	2015 <sup>f</sup>	2016 <sup>f</sup>
<i>GDP at market prices</i>	105.3	107.8	109.4	111.1	112.6
	2.6	2.4	1.5	1.6	1.3
<i>Imports of goods and services</i>	108.8	107.5	107.6	108.5	109.9
	2.5	-1.1	0.1	0.8	1.3
<i>Exports of goods and services</i>	105.7	104.8	104.3	105.3	106.5
	1.2	-0.8	-0.5	1.0	1.1
<i>Private consumption</i>	106.3	109.0	110.9	112.5	114.1
	3.0	2.6	1.7	1.5	1.4
<i>Public consumption</i>	108.3	110.1	111.9	113.5	114.8
	4.0	1.7	1.7	1.4	1.1
<i>Private fixed investment</i>	106.5	107.6	109.1	111.1	112.7
	3.8	1.1	1.4	1.8	1.5
<i>Public fixed investment</i>	107.5	109.0	109.9	111.8	113.8
	3.9	1.4	0.9	1.7	1.8
<i>Terms of trade (goods and services)</i>	97.1	97.4	96.9	97.0	96.9
	-1.3	0.3	-0.6	0.1	-0.1

#### 4. Balance of supply and demand, at current prices

<i>EUR million and % change on previous year</i>					
	2012	2013	2014 <sup>f</sup>	2015 <sup>f</sup>	2016 <sup>f</sup>
<i>GDP at market prices</i>	199,069	201,341	203,957	207,040	211,866
	1.1	1.1	1.3	1.5	2.3
<i>Imports of goods and services</i>	81,764	78,812	78,555	80,688	84,239
	3.8	-3,6	-0.3	2.7	4.4
<i>Total supply</i>	280,833	280,153	282,513	287,728	296,105
	1.9	-0.2	0.8	1.8	2.9
<i>Exports of goods and services</i>	78,881	76,866	76,452	78,261	81,615
	2.3	-2.6	-0.5	2.4	4.3
<i>Consumption</i>	157,709	161,263	163,415	165,659	168,885
	3.6	2.3	1.3	1.4	1.9
<i>Private</i>	109,026	111,046	112,439	114,070	116,322
	3.1	1.9	1.3	1.5	2.0
<i>Public</i>	48,683	50,217	50,976	51,589	52,563
	4.7	3.2	1.5	1.2	1.9
<i>Fixed investment</i>	44,305	42,647	41,945	43,112	44,860
	1.2	-3.7	-1.6	2.8	4.1
<i>Private</i>	36,409	34,290	33,361	34,373	35,996
	0.3	-5.8	-2.7	3.0	4.7
<i>Public</i>	7,896	8,357	8,585	8,739	8,864
	5.6	5.8	2.7	1,8	1.4
<i>Inventory change + statistical discrepancy % of previous year's total demand</i>	-62	-623	701	697	746
	-0.9	-0.2	0.5	0.0	0.0
<i>Total demand</i>	280,833	280,153	282,513	287,728	296,105
	1.9	-0.2	0.8	1.8	2.9
<i>Total domestic demand</i>	201,952	203,287	206,061	209,467	214,490
	1.7	0.7	1.4	1.7	2.4

#### 5. Balance of supply and demand

<i>% of GDP at current prices</i>					
	2012	2013	2014 <sup>f</sup>	2015 <sup>f</sup>	2016 <sup>f</sup>
<i>GDP at market prices</i>	100.0	100.0	100.0	100.0	100.0
<i>Imports of goods and services</i>	41.1	39.1	38.5	39.0	39.8
<i>Exports of goods and services</i>	39.6	38.2	37.5	37.8	38.5
<i>Consumption</i>	79.2	80.1	80.1	80.0	79.7
<i>Private</i>	54.8	55.2	55.1	55.1	54.9
<i>Public</i>	24.5	24.9	25.0	24.9	24.8
<i>Fixed investment</i>	22.3	21.2	20.6	20.8	21.2
<i>Private</i>	18.3	17.0	16.4	16.6	17.0
<i>Public</i>	4.0	4.2	4.2	4.2	4.2
<i>Inventory change + statistical discrepancy</i>	0.0	-0.3	0.3	0.3	0.4
<i>Total demand</i>	141.1	139.1	138.5	139.0	139.8
<i>Total domestic demand</i>	101.4	101.0	101.0	101.2	101.2

## 6. Prices

<i>Index, 2010 = 100 and % change on previous year</i>					
	2012	2013	2014 <sup>f</sup>	2015 <sup>f</sup>	2016 <sup>f</sup>
<i>Harmonised index of consumer prices, 2005 = 100</i>	117.8	120.4	121.9	123.2	124.9
	3.2	2.2	1.3	1.0	1.4
<i>Consumer price index, 2005 = 100</i>	116.6	118.3	119.4	120.7	122.2
	2.8	1.5	0.9	1.1	1.2
<i>Private consumption deflator</i>	106.3	109.0	110.9	112.5	114.1
	3.0	2.6	1.7	1.5	1.4
<i>Private investment deflator</i>	106.5	107.6	109.1	111.1	112.7
	3.8	1.1	1.4	1.8	1.5
<i>Exports of goods and services deflator</i>	105.7	104.8	104.3	105.3	106.5
	1.2	-0.8	-0.5	1.0	1.1
<i>Imports of goods and services deflator</i>	108.8	107.5	107.6	108.5	109.9
	2.5	-1.1	0.1	0.8	1.3
<i>Value-added deflators</i>					
<i>Value added, gross at basic prices</i>	105.0	107.3	108.8	110.2	111.6
	2.8	2.2	1.4	1.3	1.2
<i>Private sector</i>	103.9	106.3	107.8	109.2	110.5
	2.2	2.4	1.4	1.3	1.2
<i>Public sector</i>	109.6	111.3	112.9	114.4	116.0
	4.9	1.6	1.5	1.3	1.4

## 7. Wages and productivity

<i>% change on previous year</i>					
	2012	2013	2014 <sup>f</sup>	2015 <sup>f</sup>	2016 <sup>f</sup>
<i>Whole economy</i>					
<i>Index of wage and salary earnings</i>	3.2	2.1	1.4	0.8	1.2
<i>Compensation per employee</i>	2.8	2.0	1.9	1.5	1.6
<i>Unit labour costs</i>	4.7	2.2	1.6	1.4	0.9
<i>Labour productivity per employed person</i>	-1.9	-0.1	0.3	0.1	0.7

## 8. Labour market

<i>1,000 persons and % change on previous year</i>					
	2012	2013	2014 <sup>f</sup>	2015 <sup>f</sup>	2016 <sup>f</sup>
<i>Labour force survey (15–74-year-olds)</i>					
<i>Employed persons</i>	2,483	2,456	2,445	2,440	2,447
	0.4	-1.1	-0.5	-0.2	0.3
<i>Unemployed persons</i>	207	219	228	225	219
	-0.8	6.0	3.8	-1.0	-2.7
<i>Labour force</i>	2,690	2,676	2,672	2,666	2,666
	0.3	-0.5	-0.1	-0.3	0.0
<i>Working-age population (15–64-year-olds)</i>	3,524	3,508	3,491	3,478	3,468
	-0.4	-0.5	-0.5	-0.4	-0.3
<i>Labour force participation rate, %</i>	66.0	65.5	65.2	64.8	64.9
<i>Unemployment rate, %</i>	7.7	8.2	8.5	8.5	8.2
<i>Employment rate (15–64-year-olds), %</i>	69.0	68.5	68.4	68.6	69.0

## 9. General government revenue, expenditure, balance and debt

% of GDP					
	2012	2013	2014 <sup>f</sup>	2015 <sup>f</sup>	2016 <sup>f</sup>
General government revenue	54.2	55.4	55.6	56.0	55.9
General government expenditure	56.3	57.8	58.2	58.1	58.1
General government primary expenditure	54.9	56.6	57.0	56.9	56.8
General government interest expenditure	1.4	1.3	1.2	1.3	1.3
General government net lending	-2.1	-2.4	-2.6	-2.2	-2.2
Central government	-3.7	-3.5	-3.6	-2.9	-2.9
Local government	-1.1	-0.8	-0.7	-0.8	-0.8
Social security funds	2.6	1.9	1.7	1.5	1.4
General government primary balance	-0.7	-1.2	-1.3	-0.9	-0.8
General government debt (EDP)	53.0	56.0	59.3	61.7	63.8
Central government debt	42.2	44.6	47.4	49.3	51.1
Tax ratio	42.9	44.0	44.1	44.5	44.5

## 10. Balance of payments

EUR million					
	2012	2013	2014 <sup>f</sup>	2015 <sup>f</sup>	2016 <sup>f</sup>
Exports of goods and services (SNA)	78,881	76,866	76,452	78,261	81,615
Imports of goods and services (SNA)	81,764	78,812	78,555	80,688	84,239
Goods and services account (SNA)	-2,883	-1,946	-2,103	-2,427	-2,624
% of GDP	-1.4	-1.0	-1.0	-1.2	-1.2
Investment income and other items, net (+ statistical discrepancy)	412	1,614	1,485	1,493	1,500
Current transfers, net	-1,385	-2,518	-2,542	-2,537	-2,579
Current account, net	-3,856	-2,850	-3,161	-3,470	-3,703
Net lending, % of GDP					
Private sector	0.2	1.0	1.0	0.5	0.4
Public sector	-2.1	-2.4	-2.6	-2.2	-2.2
Current account, % of GDP	-1.9	-1.4	-1.5	-1.7	-1.7

## 11. Interest rates

%	2012	2013	2014 <sup>f</sup>	2015 <sup>f</sup>	2016 <sup>f</sup>
3-month Euribor <sup>1</sup>	0.6	0.2	0.2	0.1	0.1
Average interest rate on new loans <sup>2</sup>	2.3	2.2	2.0	1.9	1.9
Average interest rate on the stock of loans <sup>2</sup>	2.3	1.8	1.8	1.7	1.7
Average interest rate on the stock of deposits <sup>3</sup>	0.8	0.5	0.4	0.3	0.3
Yield on Finnish 10-year government bonds <sup>1</sup>	1.9	1.9	1.5	1.1	1.4

<sup>1</sup> Technical assumption derived from market expectations.

<sup>2</sup> Finnish credit institutions' loans to households and non-financial corporations (excl. overdrafts, credit card credits and repurchase agreements).

<sup>3</sup> Finnish credit institutions' deposits from households and non-financial corporations.

## 12. International environment

<i>Eurosystem staff projections</i>					
	2012	2013	2014 <sup>f</sup>	2015 <sup>f</sup>	2016 <sup>f</sup>
<i>GDP, % change on previous year</i>					
World	3.4	3.2	3.3	3.7	3.9
USA	2.1	2.2	2.2	2.9	2.9
Euro area	-0.6	-0.4	0.8	1.0	1.5
Japan	1.5	1.5	0.9	1.2	1.0
<i>Imports, % change on previous year</i>					
World	2.9	2.8	2.9	4.0	5.2
USA	3.3	1.1	3.5	4.7	5.5
Euro area	-0.9	1.4	3.3	3.7	4.9
Japan	5.3	3.3	7.0	1.4	2.3
<i>Index, 2010=100 and % change on previous year</i>					
<i>Import volume in Finnish export markets</i>					
	110.2	112.3	115.1	118.6	124.2
	2.5	2.0	2.4	3.0	4.7
<i>Export prices (excl. oil) of Finland's trading partners, national currencies</i>					
	103.2	102.2	102.5	102.7	104.0
	0.4	-1.0	0.3	0.2	1.3
<i>Export prices (excl. oil) of Finland's trading partners, in euro</i>					
	108.0	104.8	103.9	105.0	106.3
	3.0	-2.9	-0.9	1.1	1.3
<i>Industrial raw materials (excl. energy), HWWA index, in US dollars</i>					
	96.3	93.6	89.3	84.3	87.4
	-15.8	-2.7	-4.6	-5.5	3.6
<i>Oil price, USD per barrel<sup>1</sup></i>					
	112.0	108.8	101.0	85.1	88.0
	0.9	-2.8	-7.2	-15.7	3.4
<i>Finland's nominal competitiveness indicator<sup>1,2</sup></i>					
	100.1	102.6	103.8	102.9	102.9
	-2.9	2.5	1.2	-0.8	0.0
<i>US dollar value of one euro<sup>1</sup></i>					
	1.28	1.33	1.33	1.25	1.25
	-7.7	3.4	0.1	-6.1	0.0

<sup>1</sup> Technical assumption derived from market expectations.

<sup>2</sup> Narrow plus euro area, 1999 Q1 = 100

# Organisation of the Bank of Finland

1 January 2015

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The Financial Supervisory Authority, headed by Anneli Tuominen, operates in association with the Bank of Finland.

Suomen Pankki  
Bank of Finland  
PO Box 160  
**FI-00101** HELSINKI  
FINLAND



Bella Green



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