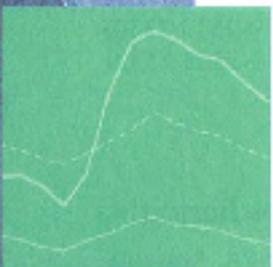


September 17, 2013



**Economic Forecast  
2013–2014**



**Exports will  
recover and  
recession ease  
as European  
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**Economic Forecast 2013–2014**

## Exports will recover and recession ease as European investment picks up

*The Labour Institute for Economic Research forecasts that Finland's GDP will contract by 0.6 per cent this year. As recently as last March, we predicted GDP growth of 0.6 per cent. The weaker-than-expected development is attributable to the prolonged recession in Europe and the consequent sharp contraction of investment as well as a more pronounced slowdown in growth in our neighbouring countries Russia and Sweden than anticipated. This has curbed our exports, which have also been hit by the temporary slowdown in economic growth in some developing countries of key importance from the standpoint of our exports. The vulnerability of the industrial structure – as reflected in the steep drop in Nokia's market share and the downward trend in the demand for paper – have certainly played a role, but they have not been the main factors behind the downturn of the economy back into recession in 2012–2013.*

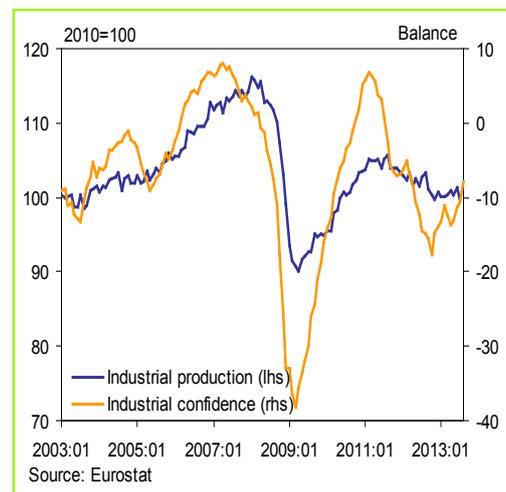
*The improvement in the global economy will provide a boost to the Finnish economy already toward the end of this year. In the second quarter of this year the euro area climbed out of a slump that lasted continuously for about one and a half years. The economic development of the EU as a whole has been even better than that in the euro area. In the past few months economic growth has accelerated also in China, Japan, and Brazil. In some developing countries, however, economic growth has still slowed down, at least temporarily, as the financial flows from developing countries have turned toward Europe, the US and Japan, lured by rising interest rates and improved economic prospects. From the standpoint of Finnish exports, it is also positive that investment will start to recover in Europe and the wider global economy. Finland's gross domestic product will grow by 2.1 per cent next year. The forecast is thus 0.3 percentage points lower than in March. Because the economic growth is largely driven by exports, it will not create jobs nor significantly decrease the public sector's fiscal deficit during the forecast period.*

### European debt crisis will subside and economic growth will pick up

The European Central Bank's (ECB) announcement that it was prepared to support the eurozone crisis countries by means of bond purchases under certain conditions has begun to ease the financial turmoil in Europe's crisis countries already since last August. This is evidenced by the decline in long-term interest rates on the crisis countries' government bonds. This has also lowered the cost of corporate financing. Possibilities for companies to raise funds directly from the capital markets have improved and the availability of bank loans to small and medium-sized companies has improved. For example, the terms on household consumer loans have improved.

The financial crisis of European countries and the difficult situation in the crisis countries' banks are not, however, completely over. A significant part of the large banks have been shored up to such an extent that they no longer constitute a threat to the financial markets. But a number of European banks are still so weak in terms of their capital structure that they will need a capital injection or controlled bankruptcy. Improving the regulation of financial markets in order to foster stability and predictability is far from complete.

### Industrial confidence and industrial production in euro area 2003:01–2013:08



The easing of the financial crisis has strengthened the real economy of the euro area in different ways. First, customers' access to financing and its terms have improved in the crisis countries and the customer base of crisis banks. Second, the risk of a collapse in the euro area and the associated open banking crisis has significantly decreased, which has encouraged businesses to invest and households to consume in the crisis countries and elsewhere. In the euro area and the non-EU countries this has been reflected in the moderate improvement of both business and household confidence already in the first few months of this year. Subsequently, in recent months confidence has started to strengthen again. The upturn in the domestic demand of the euro area and the EU was reflected in the second quarter of 2013, when private consumption and especially investment began to grow again.

The euro area grew in the first quarter of this year by 0.3 per cent from the previous quarter. Compared to the same quarter last year, the change in GDP was still -0.5 per cent. The Labour Institute for Economic Research predicts that the euro area's GDP this year will remain 0.3 per cent lower than last year, but next year the growth will be already 1.3 per cent. The corresponding figures for the total EU growth figures are 0.1 and 1.6 per cent, respectively. Of the major EU member states, both Germany and the United Kingdom will continue to grow next year at a rate of a little over two per cent. Of the southern European countries, the crisis countries Spain, Italy and Portugal are pulling out of recession and will grow slightly. Only Greece, Cyprus and Slovenia will be in recession next year as well. As regards Finland's neighbours, Sweden's GDP will grow next year by 2.2 per cent, fuelled by an expansionary fiscal policy. In Estonia and especially in the other Baltic countries and Poland the growth will still be significantly faster than in the rest of Europe.

From the standpoint of Finnish exports a favourable development is that eurozone investments will pick up next year to 1.6 per cent. This year they will still fall by almost 4 per cent. The eurozone unemployment rate will rise to 12 per cent this year and fall to 11.5 per cent next year.

### Euro area fiscal policy still tight this year

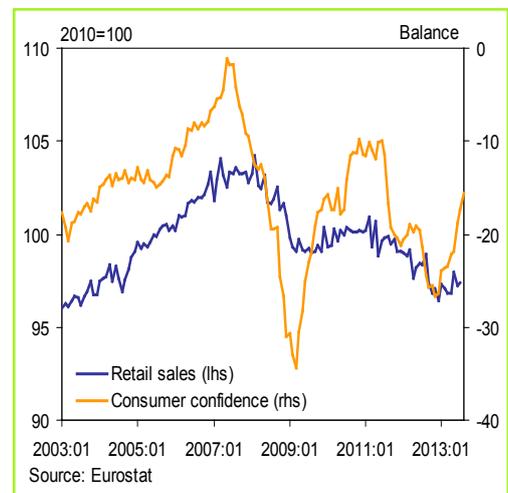
The euro area's fiscal policy was at its tightest last year. This year fiscal policy is still fairly stringent as well. Thus the European Commission has estimated that the euro area's structural (cyclically adjusted) deficit will decline this year by 0.5 percentage points. Next year, fiscal policy will be eased compared to this year and the structural deficits are not expected to decline by more than a few tenths of a per cent on average.

The gradual easing of fiscal policy is reflected in eurozone public consumption expenditures: after decreasing by about half a per cent in 2012, they will remain this year at approximately last year's level and grow by 0.4 per cent next year. Although fiscal policy will be relaxed somewhat with respect to spending, it will still continue to be relatively restrictive.

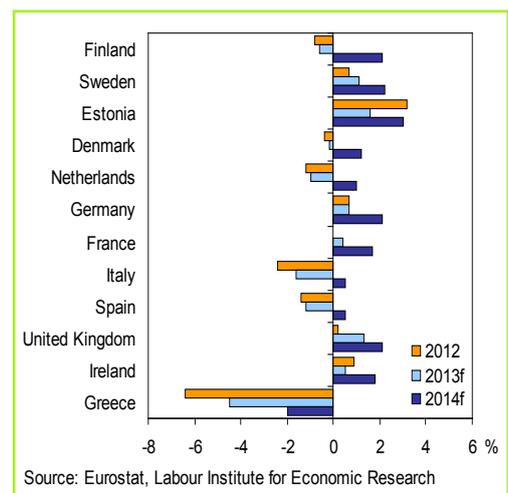
Of the eurozone countries, France, Italy and Spain will seek to make some compromises this year and next regarding their announced programmes to stabilize public finances. This effort to bolster their economies, which are in recession or just recovering, can be regarded as justified. The European Union's stricter control of the fiscal policies of its member countries when deficits exceed the 3 per cent ceiling (Spain and France) or the national debt relative to GDP is excessive (Italy), however, makes it difficult to postpone austerity measures until economic growth is well established.

Germany's public finances began to run a surplus already last year, giving it far more leeway in fiscal policy than other countries. German fiscal policy in 2013 and 2014 will be slightly stimulatory judging

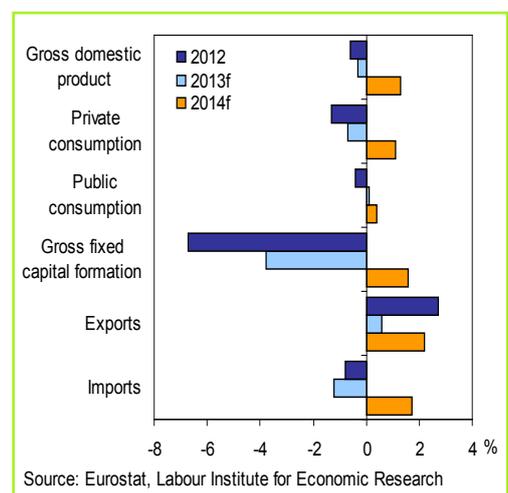
### Consumer confidence and retail sales in euro area 2003:01–2013:08



### GDP growth rates in 2012, 2013 and 2014



### Eurozone economic growth 2012–2014



among other things by the fact that government consumption is expected to increase faster than the rest of the economy (GDP) and that the public sector's surplus is no longer expected to grow appreciably.

The tightest reins on fiscal policy have been witnessed in the euro countries that have received crisis funding (Greece, Portugal, Ireland, Cyprus). Of these countries, Greece and Cyprus are still in recession this year and their governments' strict stability programmes are not expected to be eased.

Of the non-euro area EU countries, the UK's fiscal policy is widely seen as the most stringent. Despite this, the economy will grow more rapidly than elsewhere in Western Europe. Sweden, on the other hand, will follow a very expansionary stance next year, which is why its economy can be expected to get back on its growth path faster than, for example, Finland's economy.

### Eurozone inflation 1.5 per cent

The rate of increase in the harmonized index of consumer prices in the euro area will slow down this year a percentage point from last year's 2.5 per cent. Producer prices have remained nearly unchanged and labour costs per hour worked increased in the beginning of this year at the same rate as last year. The external value of the euro relative to the dollar is expected to remain at the current level. Eurozone inflation will remain at 1.5 per cent also next year.

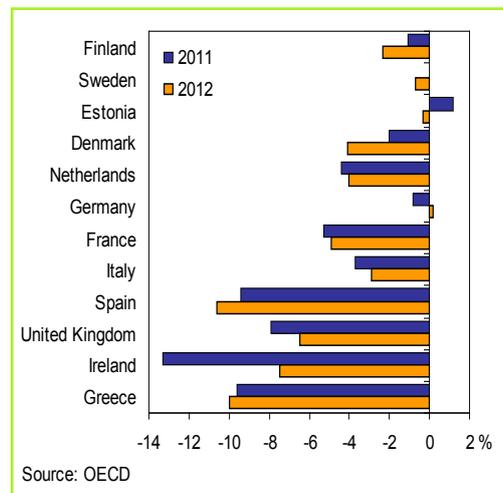
### ECB key interest rate to remain low

The European Central Bank lowered its key interest rate in May by a quarter of a percentage point to 0.50 per cent. In August, Draghi told the President of the Governing Council to expect interest rates to remain at the current level or below for a long time. The ECB's own inflation forecast for 2013 is 1.5 per cent and 1.3 per cent for 2014, which has given rise to discussion in the Governing Council on a further reduction of the key interest rate. This would require, however, the ECB's deposit rate to be negative, which so far has not been desired. On the other hand, the ECB is concerned that bank lending to the private sector has continued to fall. The ECB will try to improve the situation by relaxing the collateral requirements on its loans.

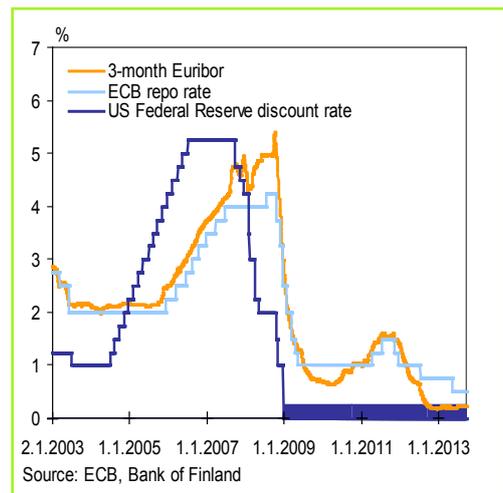
The ECB is discontinuing its quantitative easing programme and so far a new one has not been announced, which entails the gradual normalization (i.e. tightening) of the Euribor market. This means, among other things, that that the short-term market rates below the key interest rate will gradually rise, even if the key interest rate is not be increased at all, and even if it is expected to be reduced further. The market expectation is that the key rate will begin to be raised in late 2014. In this case, Euribor interest rates will be much higher than the current level. The average annual 3-month interest rate is forecast to rise from 0.2 per cent this year to 0.5 per cent next year

Even if the ECB lowered its key interest closer to zero, this is not expected to have a significant impact on the real economy. More important is how the ECB's new strategy of announcing its monetary policy in advance – such as the promise of keeping interest rates low for a long time – is formulated and what effect it will have on short- or long-term market interest rates. As regards the latter, there has already been a considerable change in direction after the Federal Reserve began in late spring seriously to consider discontinuing its own quantitative easing. This has resulted in an upward spiral of long-term government bond rates in Europe, and this is expected to continue also next year. For example, the German long-term interest rate is expected to remain slightly below two per cent on average, while Finland's corresponding rate will rise appreciably above two per cent.

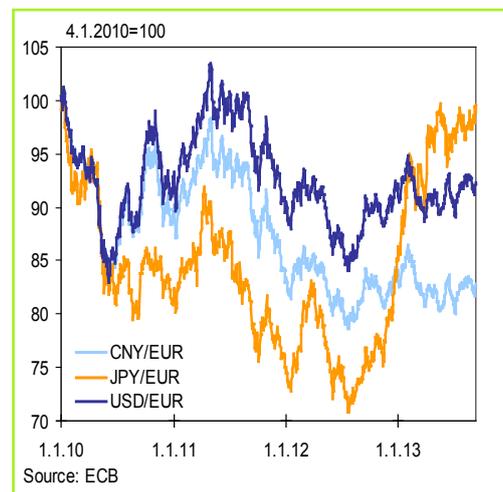
### Public sector deficit-to-GDP ratio in 2011 and 2012



### Short-term interest rates 2.1.2003–13.9.2013



### Exchange rates 4.1.2010–12.9.2013



## Oil prices falling slowly

Crude oil prices (Brent) began to rise in the summer due to the deterioration of the situation in the Middle East and they are now at about the average level of last year, i.e. a little over 110 dollars a barrel. The price peak is not expected to be particularly high or long-lasting. On average, the price of oil this year will remain slightly below last year's level and next year it will be 106 dollars.

The prices of many other raw materials have recently fluctuated only slightly or declined. However, there is a slight increase visible in the futures prices of metals, which reflects the expectations of the global economic recovery. So far, the signs of raw material costs increasing are too weak to expect a surge of inflation like the one experienced last decade.

## U.S. economic growth will accelerate next year

Last year's economic growth in the US was revised upwards in August by 0.6 percentage points to 2.8 per cent. This year, however, growth is expected to remain at 1.7 per cent, above all due to budget cuts becoming permanent. Economic growth has been maintained by a faster rise in exports than imports, industrial production growth, as well as a solid increase in consumption of consumer durables and housing investment. Relatively good consumer confidence and declining household debt servicing costs indicate continuing growth. Growth was also supported by the fact that tightening measures at the state and local level have eased a little. The unemployment rate fell to 7.3 per cent in August, but it would be considerably higher if not so many had discontinued their job searches.

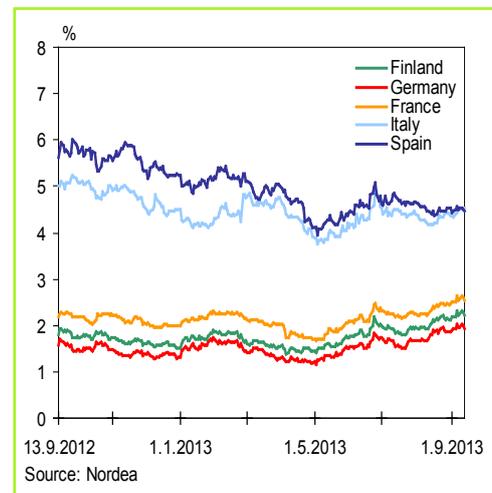
**Table 1. International economy**

	Share of world GDP (%)	GDP growth (%)		
		2012	2013f	2014f
United States	18.9	2.8	1.7	3.0
Eur-17	13.7	-0.6	-0.3	1.3
Germany	3.8	0.7	0.7	2.1
France	2.7	0.0	0.4	1.7
Italy	2.2	-2.4	-1.6	0.5
EU27	19.4	-0.4	0.1	1.6
Sweden	0.5	0.7	1.1	2.2
United Kingdom	2.8	0.2	1.3	2.1
China	14.9	7.8	7.5	7.5
India	5.6	3.8	3.0	4.5
Japan	5.6	2.0	1.5	2.5
Russia	3.0	3.9	1.8	3.0
Brazil	2.8	0.9	3.2	4.5

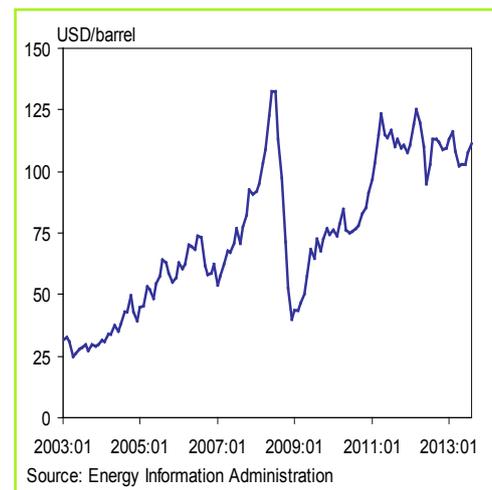
Source: BEA, BOFIT, Eurostat, IMF, Labour Institute for Economic Research

Considerable uncertainties are associated with predicting US economic growth from here onwards, such as the duration of the budget cuts, the need to increase the federal debt ceiling and the Federal Reserve's timetable for discontinuing its government bonds purchase scheme. The US economy is forecast to grow by 3 per cent in 2014. The growth is accelerated by the upturn in the world economy and, above all, the fact that no new budget cuts are expected. The forecast also assumes that monetary policy will remain moderate and will not lead to a substantial increase in interest rates. The Federal Reserve should convince both households and businesses that it will not snuff out the recovery prematurely.

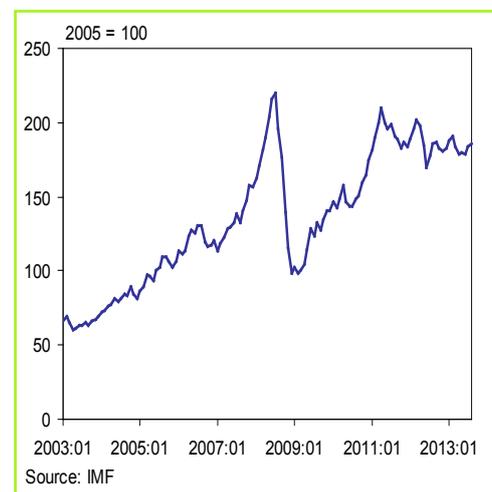
## Government bond yields 13.9.2012–12.9.2013



## World market price of crude oil (Brent) 2003:01–2013:08



## All commodity price index 2003:01–2013:08



## China's 7.5 per cent growth

China's slowdown from last year's 7.8 per cent economic growth continued in the first half of this year. The growth strategy of the new Chinese leadership is now aimed at a goal of achieving 7.5 per cent growth. The biggest threat to this target being achieved is the burden of banks' non-performing loans, which have ballooned by about 50 per cent compared to the beginning of last year. So far, however, it is believed that the country's authorities will be able to handle this debt bomb, or postpone it into the future one way or another.

Recently, China's exports have started to gain momentum, industrial production is growing faster than before, and private consumption is also picking up. The rate of inflation is going to remain at about 2.5 per cent this year, well below the 4 per cent target. The central bank has sought to curb the rise in real estate prices, but despite the interest rate peak which occurred in the summer, the effects have been minimal. A large amount of direct foreign investment is flowing into the country once again and lending outside the banking system has also started to increase. The country's leaders can be expected to stick to the new growth strategy, so they will most likely approve the 7.5 per cent target for next year also.

## Japan's easing of monetary policy working

Japan's economic growth slowed in the beginning of this year, but it picked up in the second quarter to 1.2 per cent. During the year as a whole its GDP will grow by 1.5 per cent. An already approved law according to which VAT has to be tightened by three percentage points in April next year and again by two percentage points in October 2015 has been seen as a threat to Japanese economic growth. Providing, however, that the VAT does not become a stumbling-block for economic growth, Japan may reach two and a half per cent growth next year.

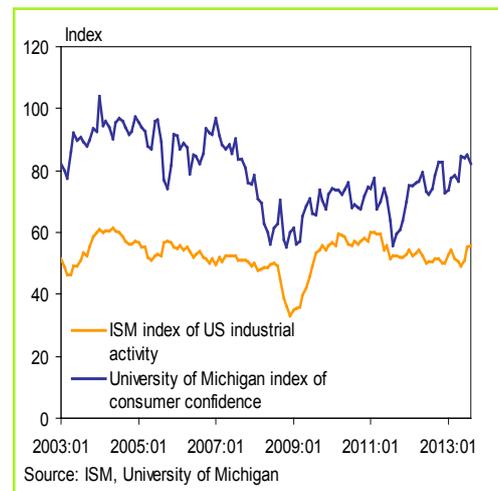
## Russia performing below expectations

Russia still reached 3.9 per cent growth last year, but in the first half of this year growth was well below expectations, averaging only 1.6 per cent. The country's leadership has set a target of 5 per cent growth, changed the head of the central bank and called for stimulative measures, but so far the effects have just not been visible. Oil price developments will also not benefit Russia. Debt, however, is still low in the country, so investment and consumption may recover with the upturn in the global economy. In addition, a good agricultural harvest is expected this year. Annual economic growth will reach 1.8 per cent. Next year, it will accelerate to 3.0 per cent, which for Russia is still a clearly lower figure than in recent years.

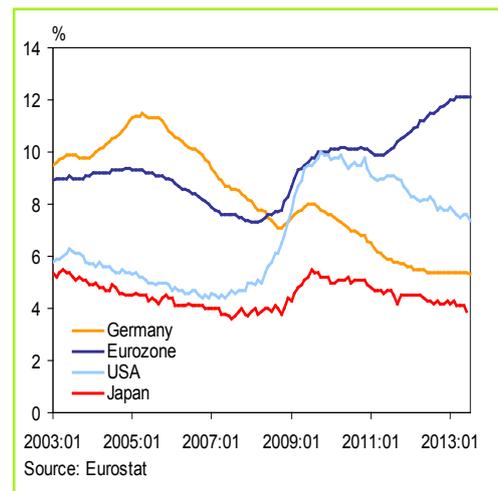
## Brazil has already pulled out of its slump

Brazil's economic growth was only 0.9 per cent last year, but it started to pick up and reached 3.3 per cent in the second quarter of this year. This trend is attributable to a strong recovery in investment, but more recently exports have also shown signs of improvement. As a raw materials producer Brazil will benefit rapidly from the upswing in the global economy as well as a weakening of the country's currency, the real. Annual economic growth will be 3.2 per cent, accelerating to 4.5 per cent in 2014.

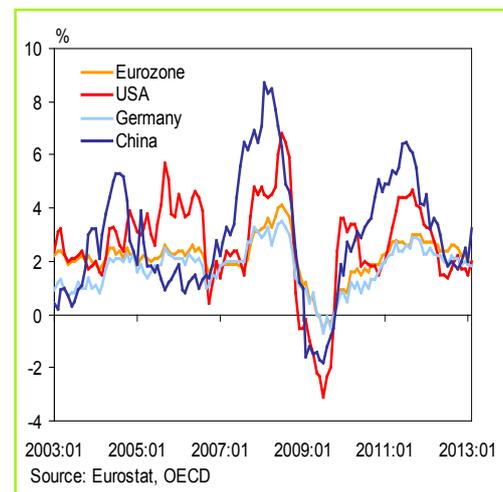
## US economic indicators 2003:01–2013:08



## Unemployment in assorted countries 2003:01–2013:07



## Inflation in assorted countries 2003:01–2013:08



## Weakening of the rupee will help India

India has also experienced a significant slowdown in economic growth, which subsided to 2.7 per cent in the first half of this year from last year's 3.8 per cent, far from the nearly 10 per cent level of recent years. This figure refers to the growth of the volume of market-priced GDP. Recently, the country's currency, the rupee, has depreciated as have many other emerging economies' currencies. This will bolster India's exports. Economic growth will be three per cent this year, picking up to 4.5 per cent next year in line with the development of the world economy.

## Upswing in Finnish exports

In the first half of this year, the volume of Finland's goods exports has been below the level of last year. According to Finnish Customs statistics the decline has been one per cent while according to the Quarterly National Accounts of Statistics Finland the decrease has been more than 3 per cent. Towards the end of the year, favourable international economic developments will begin to boost Finnish goods exports, although they will still remain 1.5 per cent lower than last year. Exports of services will increase about one per cent, as the negative effect of Nokia starts to fade. Total exports will shrink this year by 0.8 per cent.

Next year, demand for Finnish exports will increase in our export markets. Goods and services exports will grow by 4 per cent from the previous year. It is evident that export growth in the processing industry (chemical forest industry, basic chemicals and metal processing) will begin to accelerate first, while the machinery and equipment industry as well as the electro-technical industry dependent on international cyclical development will not accelerate until later next year. Electronics industry exports are largely service exports and they are no longer declining appreciably because the worst phase of the collapse in Nokia's product sales is almost over. Data processing services oriented towards service exports as well as technical services are obvious growth areas, and the exports of the former are partly making up for Nokia's shortfall.

Due to the effects of weak domestic demand and the modest development of exports, both goods and services imports will decline significantly this year. Total import volume this year will remain 2.4 per cent lower than last year. Next year, the rebounding of domestic demand and exports will boost import growth to 2.6 per cent.

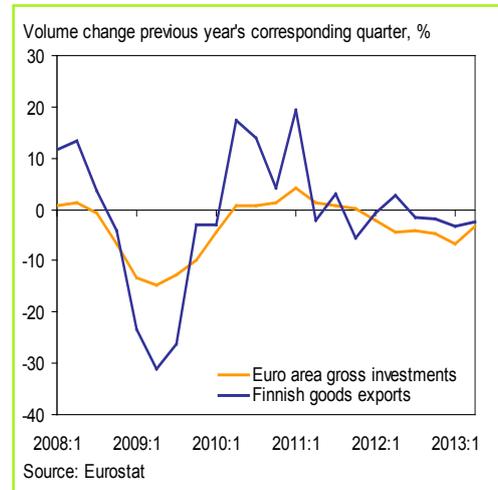
Finland's balance of trade will remain close to zero this year. Next year, Finland will run a trade surplus of more than 200 million euros. The services balance deficit will fall this year, but it will still remain quite high. Next year there will also be a surplus of 300 million euros in the services. Due to the deficit of the balance on factor income, the current account will still run a deficit of 1.5 billion euros next year. This year the deficit is 2.3 billion euros.

Total export and import prices will fall this year by about half a percentage point. Next year the terms of trade will no longer weaken appreciably for Finland, because both import and export prices are rising by about the same margin, i.e. about one and a half per cent from this year.

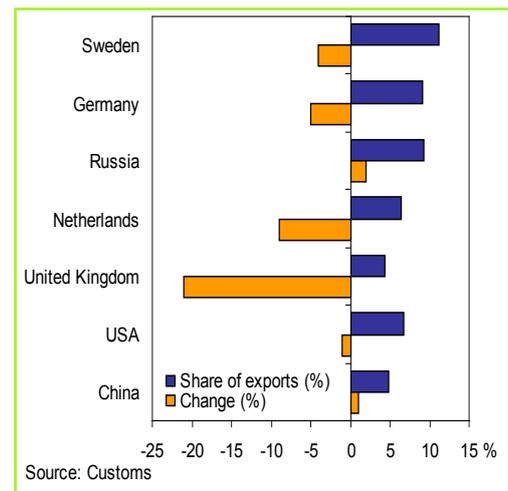
## Industry growing faster than rest of economy for first time in a long while

Manufacturing output, which fell last year by as much as 8.4 per cent, will decline further this year by nearly 4 per cent. Next year, growth of

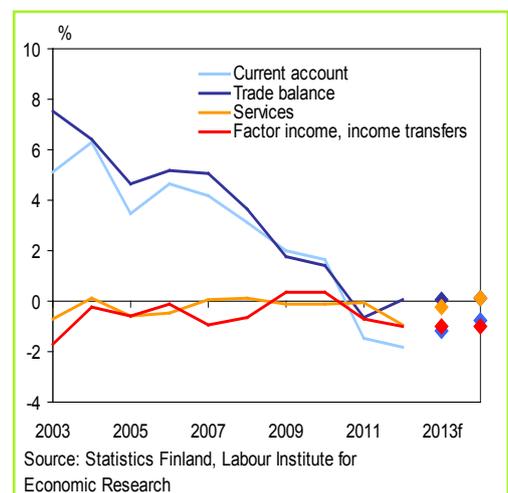
## Demand for investment goods and Finnish exports 2008:1–2013:2



## Finnish merchandise exports in January–June 2013



## Current account surplus relative to GDP by components 2003–2014



slightly over 3 per cent will be achieved as exports begin to recover. The deep slump in construction is also receding. Last year construction fell by almost 5 per cent. Although construction will begin to pick up towards the end of this year, its output will fall one percentage point from last year. Next year the sector will expand by a few per cent. Indirectly, the recovery of construction bolsters industrial production. Due to the forest industry, primary production will increase this year by 4.5 per cent from last year. Next year, its growth is projected to be one per cent.

Of the service sector, only real estate, public and business services will grow this year. The wholesale and retail trade has contracted owing to low investment and the slow growth of private consumption mirroring the weak employment situation and the timing of the car tax coming into effect. Next year, all service sectors will grow, but the decline in the real purchasing power of the average wage earner is curbing growth. Owing to the acceleration of exports, output growth will pick up the most in technological services and information services.

### Finnish inflation remaining low

The rate of inflation this year will fall slightly short of our 1.8 per cent forecast last spring – the rise of consumer prices will remain at 1.6 per cent, providing there are no surprises in the end of the year, for example, in oil prices. While food prices climbed an average of no less than 6.3 per cent in January–July from last year’s level, the cost of housing remained almost unchanged and in many other subcategories of the consumer price index the rise was very modest. The impact of the VAT and excise duty increases implemented in the beginning of the year on this year’s inflation was about 1.0 percentage points.

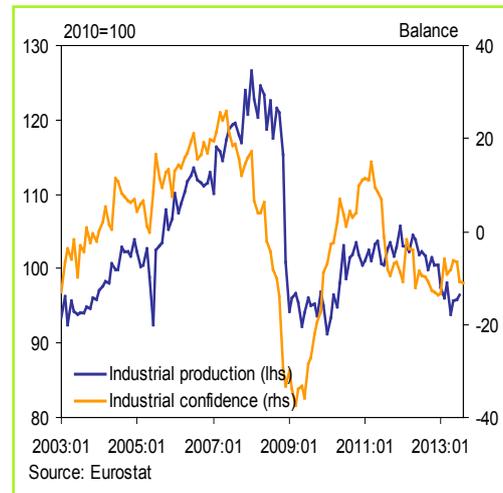
In the beginning of next year, a number of increases in indirect taxes affecting the rate of inflation will go into effect. Alcohol and tobacco tax increases alone will raise the consumer price index by over half a percentage point. Taxation will also increase with respect to soft drinks, electricity and transport fuel. The total impact of taxation increases on inflation is around 0.8 percentage points. If implemented, the moderate wage settlement will slow down next year’s inflation to some extent. On the other hand, a slight positive impact from housing expenses on the inflation rate is anticipated. Thus, also next year inflation is expected to be about 1.6 per cent, i.e. close to the euro area average.

### Construction picking up next year

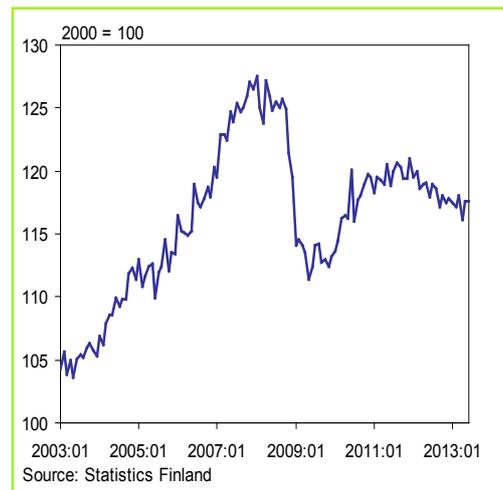
Total investment declined last year by about one per cent. Construction declined sharply, more than five per cent, but machinery and equipment investment increased by 13.9 per cent. Total investment declined in the first two quarters of this year, by 2.2 per cent in the first quarter and 1.3 per cent in the second quarter in comparison to the previous year. However, the change in investment in the current year is relatively small as a whole, i.e. it will fall by 1.2 per cent. In contrast, next year investment will experience already fairly solid growth of 2.8 per cent.

Of the subcategories of investment, housing construction fell in each quarter of last year in comparison to the previous year. In the first quarter of this year, housing construction still declined compared to last year, but increased by 1.8 per cent in the second quarter. Building permit data and building starts do not, however, predict a significant growth spurt in residential construction yet. The volume of residential building as a whole will decrease quite modestly this year and increase very slightly next year.

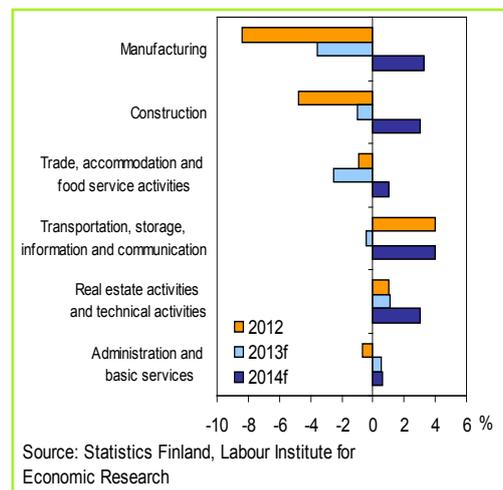
### Industrial confidence and industrial production in Finland 2003:01–2013:08



### Trend indicator of output 2003:01–2013:06



### Change in production volume by sector 2012–2014



Non-residential building construction declined sharply last year. This year the decline has continued, but at a much slower pace. In the first quarter the decline was 14 per cent and 7.3 per cent in the second quarter. Next year non-residential building construction will start to expand once again. Civil engineering construction fell substantially last year as activity weakened towards the end of the year. The decline will continue this year at a 3 per cent annual rate, but next year civil engineering construction will grow one per cent.

**Table 2. Demand and supply**

	2012 Bill. €	2012 Percentage change in volume (%)	2013f	2014f
Gross Domestic Product	192.5	-0.8	-0.6	2.1
Imports	79.8	-1.0	-2.4	2.6
Total supply	272.3	-0.9	-1.1	2.2
Exports	78.1	-0.2	-0.8	4.0
Consumption	156.9	0.3	0.4	0.6
private	108.5	0.2	0.2	0.8
public	48.3	0.6	1.0	0.3
Investment	37.7	-1.0	-1.2	2.8
private	32.7	-1.3	-1.2	3.5
public	5.0	0.9	-1.7	-1.5
Change in stocks <sup>1</sup>	-0.4	-1.2	-1.4	0.4
Total demand	272.3	-0.9	-1.1	2.2

<sup>1</sup> Volume change is in percentage points of GDP.

Source: Statistics Finland, Labour Institute for Economic Research

Despite the bleak economic outlook, machinery and equipment investment increased last year by 13.9 per cent. They have also increased during the first half of this year, although growth in the second quarter was slower than in the first. As regards the whole year, machinery and equipment investment will increase this year by five per cent. Next year, the improving outlook will maintain machinery and equipment investment growth at the same level.

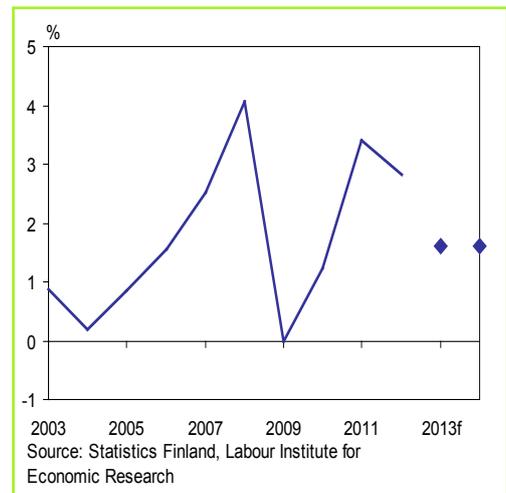
Overall, the level of private investment is projected to decline this year by 1.2 per cent and to grow by 3.5 per cent next year. Public investment will contract 1.7 per cent this year and a further 1.5 per cent next year.

### Employment to remain unchanged next year

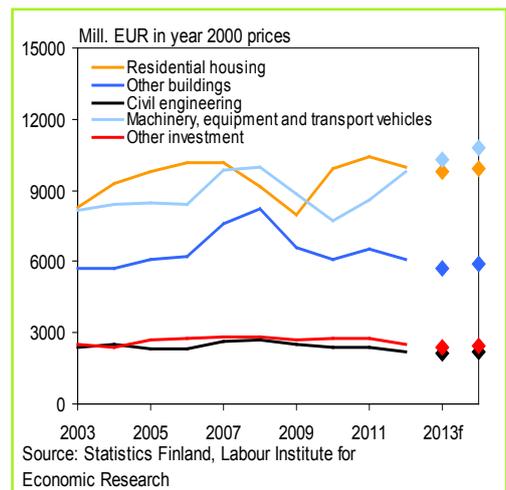
Employment grew slightly last year, i.e. 0.4 per cent. During 2013 the number of employed has so far declined in all months of the year on a year-on-year basis, although the decline in the labour force participation rate has dampened the rise of unemployment. The poor development of production in the current year will lead to a steady but moderate decline in employment. The average annual decrease in employment is 0.7 per cent. Next year, employment will improve, but very slowly, on average by 0.3 per cent.

The share of the working-age population in the labour force has declined in the first quarter. In most months, it has dropped in comparison to the same time a year earlier. As the economic outlook becomes brighter, people will return to the labour force. Thus, the size of the labour force will increase by 0.3 per cent next year due to the joint impact of the rise in the labour force participation rate and population growth. As a result of changes in employment and the size of the labour force, the unemployment rate will climb this year to an average of 8.1 per cent, remaining unchanged next year.

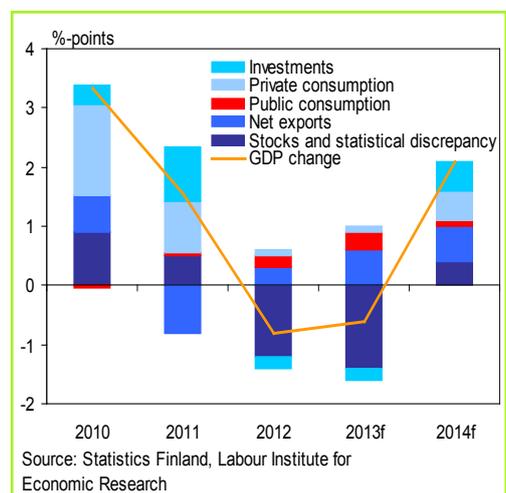
### Change in consumer prices 2003–2014



### Investments 2003–2014



### Production growth subcategories 2010–2014





The adjustment of labour inputs in the economy takes place not only via employment but also through changes in the number of hours worked. Working hours are easier to adjust than employment, and typically hours worked decline more than jobs initially in an economic downturn, but as production returns to growth again, they also begin to increase before employment figures. As growth proceeds, before long the development turns vice versa: employment increases more than the number of hours worked. In 2012 the number of hours worked remained almost unchanged from the previous year. The adjustment this year will take place also in working hours, and they will be reduced by more than persons employed, i.e. 1.1 per cent. Next year the number of hours worked will grow faster than employment, i.e. 0.5 per cent.

**Table 3. Key forecasts**

	2012	2013f	2014f
Unemployment rate (%)	7.7	8.1	8.1
Unemployed (1 000)	207	217	218
Employed (1 000)	2483	2465	2472
Employment rate (%)	69.0	68.8	69.1
Inflation, consumer price index (%)	2.8	1.6	1.6
Wages, index of wage and salary earnings (%)	3.2	2.1	1.1
Real disposable income of households (%)	0.1	0.3	0.7
Current account surplus (Bill. €)	-3.6	-2.3	-1.5
Trade surplus (Bill. €)	0.1	0.1	0.2
Central government financial surplus			
Bill. €	-6.6	-6.4	-5.6
% / GDP	-3.4	-3.3	-2.7
General government financial surplus			
Bill. €	-3.4	-4.6	-3.6
% / GDP	-1.8	-2.3	-1.8
EDP debt			
% / GDP	53.6	56.9	57.7
Tax rate (%)	44.1	44.9	45.0
Short-term interest rates (3-month Euribor)	0.6	0.2	0.5
Long-term interest rates (10-year gov't bonds)	1.9	1.9	2.4

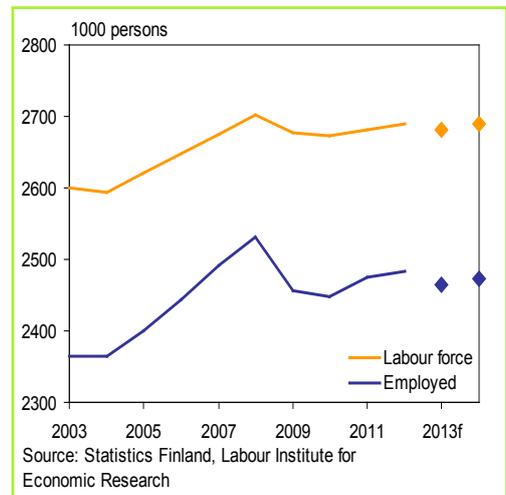
Source: Bank of Finland, Statistics Finland, Labour Institute for Economic Research

Economic growth and decline are also reflected in productivity growth. Productivity growth has been weak since 2008, with the exception of 2010. Last year productivity deteriorated again when work input did not change, even though production declined. This year the 0.6 per cent fall in GDP and the 1.1 per cent decline in hours worked represents only 0.5 per cent productivity growth per hour worked. In 2014, productivity will grow a little faster, i.e. 1.6 per cent.

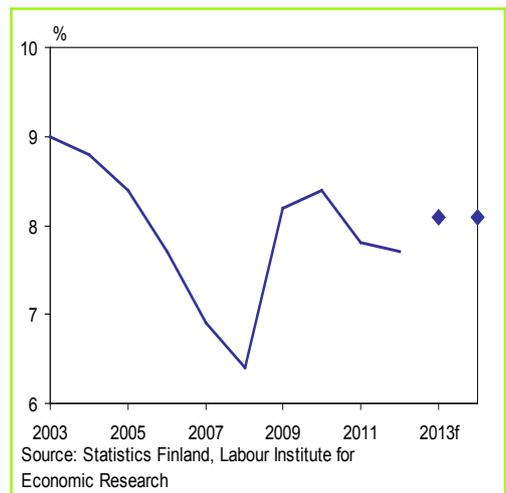
**Rise in earnings slows down**

Real earnings will continue to rise this year at about the same pace as last year, i.e. half a per cent. Nominal earnings growth has slowed do-

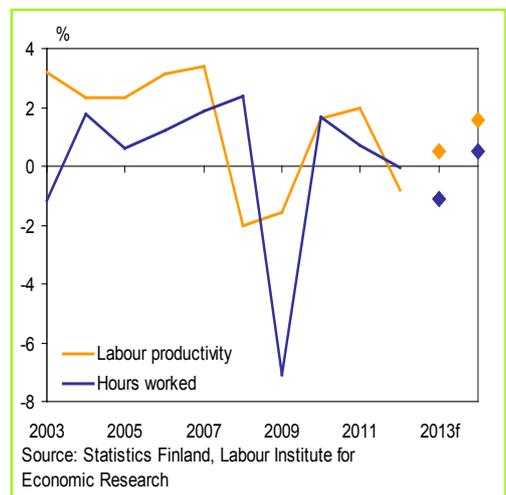
**Supply of labour and employment 2003–2014**



**Unemployment rate 2003–2014**



**Change in labour productivity and hours worked 2003–2014**



wn, but inflation has also subsided at the same rate. Low inflation thus supports the development of real wages as well as purchasing power.

Average earnings are expected to rise this year by 2.1 per cent, i.e. about one percentage point slower than last year. This development reflects the fact that the salary increases in the ongoing second year of the current labour market agreement are lower than in the first year. The second year of the wage settlement allows a pay hike of 1.9 per cent while in the first 13-month period it was 2.4 per cent. In addition to the higher increase of contract wages, last year included a one-off payment of 150 euros. Weak economic growth will keep wage drift modest. Average earnings are expected to rise this year at the same pace as the earnings index.

Some of the collective agreements signed in accordance with the framework agreement are due to expire this autumn. The labour market organizations agreed in late August on a new comprehensive settlement, which set out the future earnings development. The settlement called the Pact for Employment and Growth calls for low pay increases and hikes in pension contributions over the next few years. The first phase of the contract is for two years and will include two contract wage increases, the first of which is denominated in euro and the second is a percentage increase. The first increase, 20 euros per month or an equivalent hourly wage increase, will be implemented four months after the beginning of each sector's collective agreement. The other increase is 0.4 per cent, which will enter into force one year after the first agreed increase. In the forecast earnings are expected to develop in accordance with this comprehensive settlement.

In accordance with the new settlement, contract wage increases will not take effect until spring and in different sectors at different times, depending on the timing of the collective bargaining agreements. Owing to the very moderate wage policy, earnings are expected to rise next year by 1.1 per cent. The increase in euros means a relatively faster rise in pay for low-income workers than high-income workers. Wage drift is expected to increase slightly as a result of the low contract wage increases and the pick-up in economic activity. Average wages are expected to increase somewhat faster than the earnings index, due to a modest rise in overtime. The rise in earnings will remain slower than inflation and the real earnings will decrease by 0.5 per cent.

### Moderate wage settlement will boost employment by 6000–12000 persons

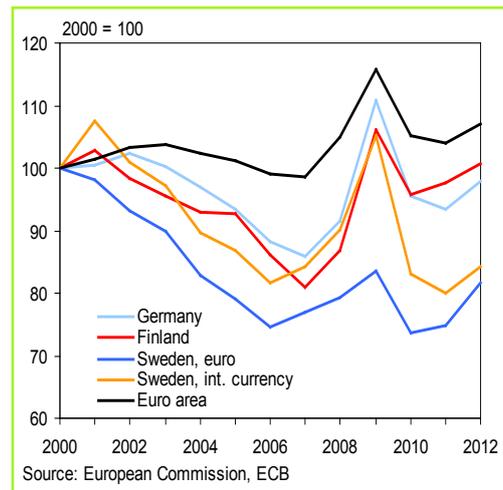
The still unconfirmed wage settlement for coming years is clearly one that supports employment. We have estimated the employment and GDP impact of the wage settlement using PT's macroeconomic model. If it is assumed that between 2014 and 2015 wage increases are one percentage point smaller than "normal", the wage settlement will boost employment at its peak (in 2015) by 12,000 people. The long-term effect is 6000 man-years. The effect on GDP in the short run (2015) is very small and in the long run 0.8 per cent.

The positive employment effect of the wage settlement occurs when the demand for labour increases in net terms. It is evident that the demand for labour is growing most strongly in the export industries. At least initially, the demand for labour rises in the domestic sector as prices have not yet fallen in response to lower wages. The impact on the demand for goods brought about by the weakening of purchasing power in domestic sectors will dampen the strengthening of the demand for labour. Initially, private consumption reacts negatively to a reduction in wages, because the prices have not yet fallen. This offsets the impact of strengthening of exports on GDP. When the domestic price level eventually falls, what remains is mostly the GDP impact of strengthening exports so that GDP also finally begins to grow.

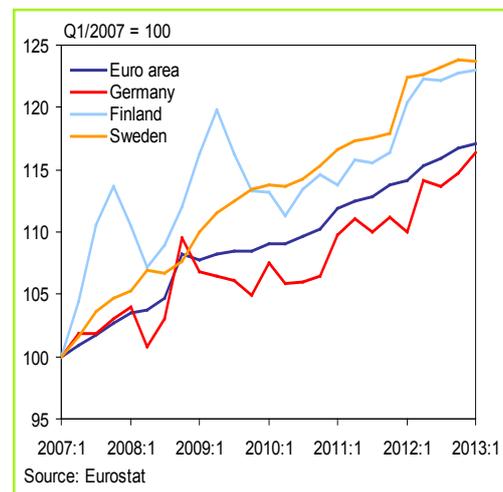
### Changes in level of earnings and consumer price index and real earnings 2003–2014



### Manufacturing unit labour costs 2000–2012



### Labour cost index (manufacturing) 2007:1–2013:1



## Household income development remaining modest

Last year, the real purchasing power of households remained more or less at the level of the previous year, and a similar trend will continue this year. Nominal income growth is anaemic, but slow inflation supports the present level of purchasing power.

This year earnings growth will slow down and the employees' hours worked will contract. Together, these mean a clear slowdown in wage bill growth, which will remain at one per cent. Property and entrepreneurial income development will also be subdued. However, the growth of pension income continues to be strong since there are more pensioners and employment pensions were increased by nearly three per cent in the beginning of the year. Other social benefits are increased by an extra adjustment of basic benefits for inflation carried out in the beginning of the year, taking into account the effects of the hike in VAT.

Direct taxes paid by households will increase by about 4 per cent. This is influenced, on the one hand, by the fact that this year a public broadcasting tax was introduced, while simultaneously the TV license fee gathered from households was eliminated. The reform of the magnitude of half a billion euros can be seen as a tightening of income taxation and decline in private consumption. Income taxation is also tightened by the solidarity tax, i.e. a new category of central government taxation for persons with high income, and the absence of inflation adjustments and the rise of the average municipal tax rate. Social insurance contributions will increase at approximately the pace as wage income, since pension contributions will remain unchanged this year. Total household disposable income is expected to increase by 1.9 per cent in nominal terms and in real terms by 0.3 per cent.

Next year, total household purchasing power is estimated to strengthen slightly more than this year, although the growth of earnings growth is slowing down. Purchasing power is supported by the estimated half per cent growth of labour input, and property and entrepreneurial income are also expected to pick up somewhat from this year. Pension income will continue to support the combined purchasing power of households, even if its growth will slow down slightly as index adjustments for inflation will remain smaller next year than those for this year. Inflation adjustments will be made to the central government income tax rates, but the projected increase in the average municipal tax rates will lead to a slight tightening of income taxation. Earnings-related pension contributions will also increase. Total household disposable nominal income is expected to grow by 2.3 per cent and real purchasing power by 0.7 per cent.

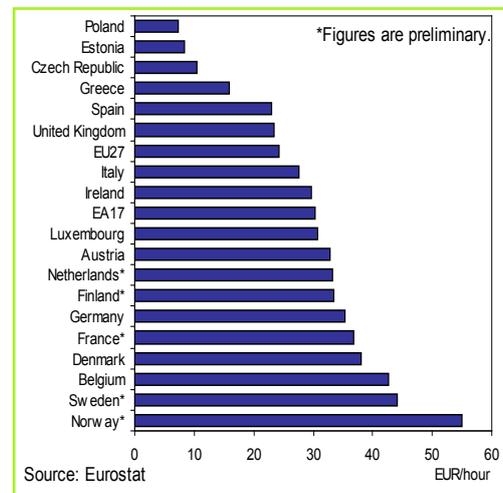
## Modest income formation dampening private consumption

Private consumption growth almost came to a halt last year. In clear contrast with the first preliminary data, there was an increase of only 0.2 per cent last year. The subdued consumption is attributable to both modest income development and weakened consumer confidence. Consumer expenditures, for instance, on transport vehicles, newspapers, magazines, alcohol, and tobacco, as well as recreational and cultural services decreased.

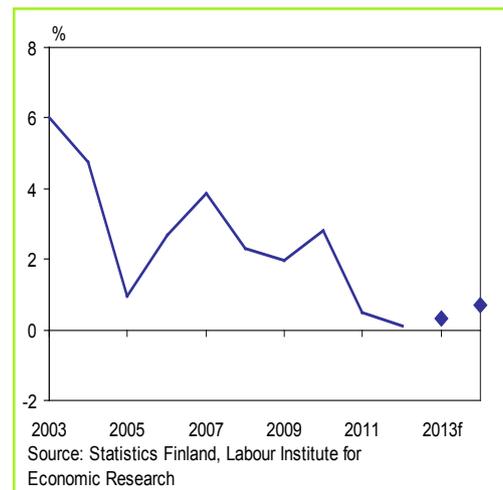
Behind this trend is a prolonged period of weak income growth, as real household purchasing power has hardly risen since 2010. In 2011 growth in consumption was based mainly on the decline of the savings ratio, but last year, the savings ratio remained at the one per cent level of the previous year. The household indebtedness ratio (loans in relation to disposable income) continued to increase by a couple of percentage points to 117 per cent.

Private consumption will continue to be modest also this year. Private consumption is expected to grow this year by 0.2 per cent, i.e.

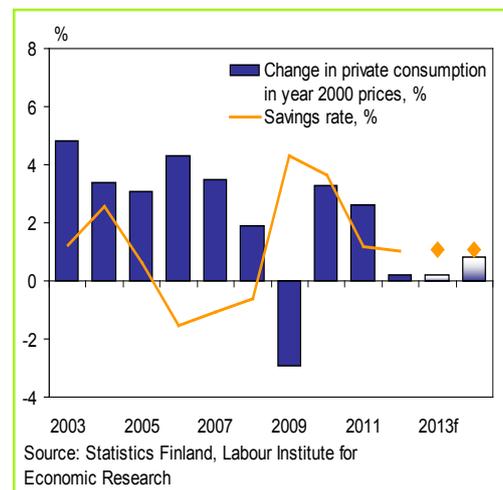
## Industrial labour costs 2012 (euro/hour)



## Change in households' real disposable income 2003-2014



## Private consumption and savings rate 2003-2014



the same rate as the real purchasing power of households. The prospects for the wholesale and retail trade are significantly weaker than before, but according to data from the beginning of the year the development of services indicates a small increase in consumption.

Income growth exceeding growth in consumption would require strengthening consumer confidence, but so far this confidence has still been weak. Expectations concerning Finland's economy and unemployment development have remained pessimistic and estimates about personal finances cautious.

Private consumption is expected to increase at the same rates as household income also next year. Private consumption will pick up a little then, while the disposable income of households will grow as employment experiences a slight upturn. The development of employment is also of key importance in terms of strengthening consumer confidence. Private consumption is forecast to grow by 0.8 per cent. The savings ratio will remain near one per cent in both years of the forecast period.

### Central government finances improving slowly

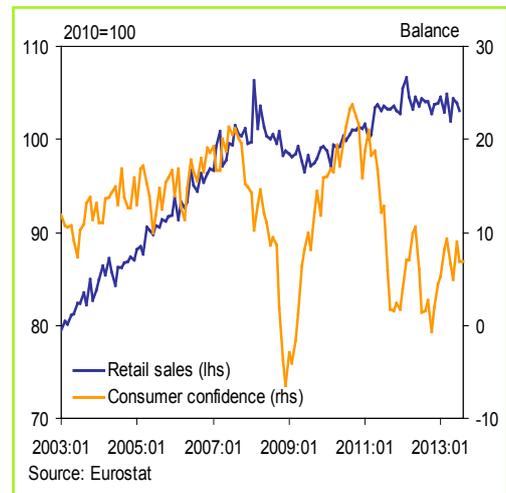
Raising the VAT by one per cent early this year will increase central government tax revenues from production and imports. The vehicle tax was also raised at the same time. These tax hikes will combine to boost central government tax revenues by almost a billion euros this year. On the other hand, the growth of the tax base is sluggish. Total indirect taxes of the central government will grow by 4.5 per cent this year.

Alcohol, tobacco, fuel and soft drink taxes will be raised early next year. The fiscal impact of the increases is approximately 415 million euros. As the growth of the value of private consumption is also picking up slightly, the central government's production and import tax revenues will increase at a rate of 4.7 per cent next year.

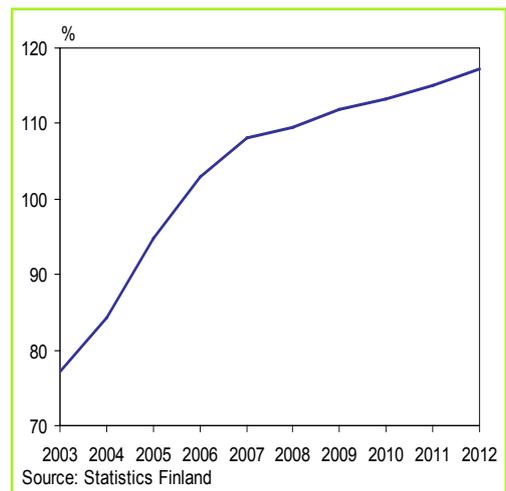
The central government's direct tax revenue will be increased by the public broadcasting tax going into effect this year, which will not, however, have an net impact on the central government finances as a whole, as it can be seen as simultaneously increasing government consumption expenditures. Refraining from making inflation adjustments raises effective income tax rates, which contributes in part to direct tax revenue received by the central government. Also, the adoption of the so-called solidarity tax as well as the tightening of inheritance taxes and increased taxation of large pensions will increase central government tax revenues. The fiscal impact of these changes is 100 million euros on an annual level. A new bank tax was introduced that will increase central government tax revenue by about 130 million euros. Also a more broad-based and higher income transfer tax came into effect in the beginning of March. As regards corporate taxation, a tax break was adopted regarding research and development operations and depreciation deductions were raised in industry, but simultaneously the right to deduct interest expenses was limited, the total impact of which is an approximately 130 million euro easing of taxation. Tax base growth will nevertheless be slow this year as the growth of the wage bill is very modest. All in all, direct taxes received by the central government are projected to increase 7 per cent this year.

If the comprehensive incomes policy settlement is realized, the central government will make a 1.5 per cent inflation adjustment to income taxes next year, so the effective income tax rate will remain on this year's level. This will have a 175 million euro downward impact on the central government's direct tax revenue. The most important measure next year, however, is the 4.5 percentage point decrease of the corporate income tax rate, which will have a fiscal effect of 870 million euros. At the same time, the taxation of dividend income will be tightened and its structure reformed. As regards listed companies, 85 per cent of their dividends will be treated as individuals'

### Consumer confidence and retail sales in Finland 2003:01–2013:08



### Household debt ratio 2003–2012



### Functional distribution of income in business activities 2003–2012



taxable income for tax purposes while the previous limit was 70 per cent. The taxation of dividends from other non-listed companies will also be changed. The changes in taxation of dividends are estimated to boost the central government's tax revenues by approximately EUR 300 million.

The tax changes and the moderate acceleration of the growth of the wage bill are expected to increase the central government's direct tax revenues by 2.8 per cent next year.

The growth in central government consumption expenditure will accelerate this year since the Finnish Broadcasting Company is considered to belong to the central government sector in the National Accounts. If the impact of the Finnish Broadcasting Company is disregarded, increases in public consumption expenditure will be very moderate this year and next year. At the same time the revenue sharing paid to the municipalities by the central government are increasing moderately, by 3 per cent this year and 1.5 per cent next year. The central government's financial position this year will remain more or less at last year's level but next year it will improve. The EDP deficit is estimated at 6.4 billion this year (last year it was 6.6 billion) and the next year it is projected to decline to 5.6 billion.

### Little relief in sight for municipalities

The figures regarding local government finances will continue to be weak this year. Growth is slow on the municipalities' revenue side: tax revenues are projected to grow by 2.4 per cent and central government's revenue sharing by 3.0 per cent this year. In many municipalities, the tax rate was increased this year and the same will continue the next year, when the municipal tax is projected to rise by an average of 0.25 percentage points. Municipalities are also raising their property tax rates. Next year the growth of municipal tax revenues will indeed accelerate slightly so that municipal direct taxes are projected to grow by 3.5 per cent. This is partly affected by the more rapid wage bill growth than in the ongoing year. The central government has decided to take strict control over the municipalities and the grip will be tightened next year, at which point revenue sharing is projected to increase by only 1.5 per cent.

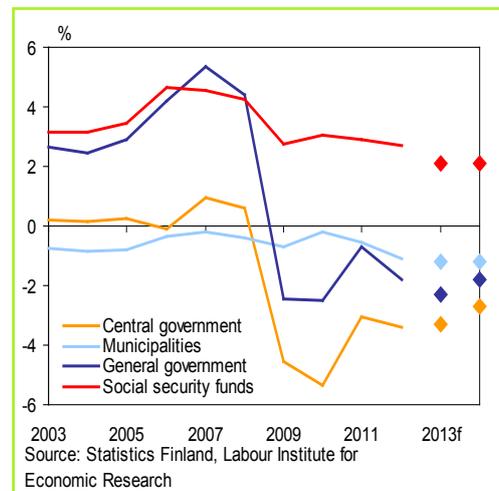
The situation of municipalities will be eased slightly by the recent comprehensive wage settlement, the moderate wage increases of which will curb pressures on expenditures next year. A municipal government deficit of 2.3 billion is forecast for both this year and next.

The contributions received by employment pension institutions will grow this year at the same rate as the wage bill since rates for employment pension contributions were kept unchanged. Accordingly, pension contribution income will increase very moderately. Next year, on the other hand, both employee and employer pension contributions are forecast to rise by 0.4 percentage points, which together with the growth of the wage bill will boost the growth in the income from contributions. On the expenditure side, both years will see steady growth as more baby boomers retire. Owing to the slowdown in inflation, modest inflation adjustments owing to low inflation will nevertheless curb the growth in pension expenditures next year. Overall, the surplus of the employment pension and social security funds will be 4.1 billion euros this year and 4.4 billion euros next year. The surpluses will remain well below last year's 5.2 billion euro level.

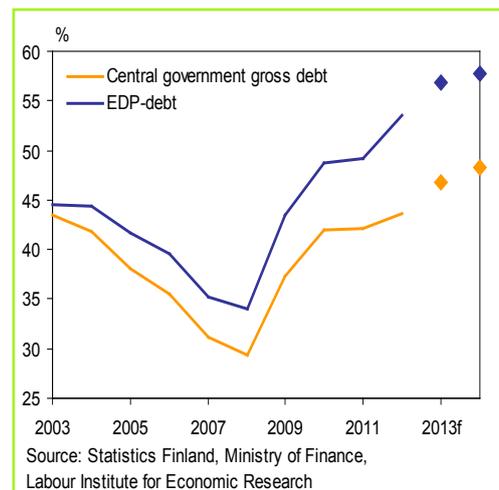
### Financial position of general government will weaken this year

There have been widespread calls for the government this summer to implement simulative measures as economic conditions appear weaker

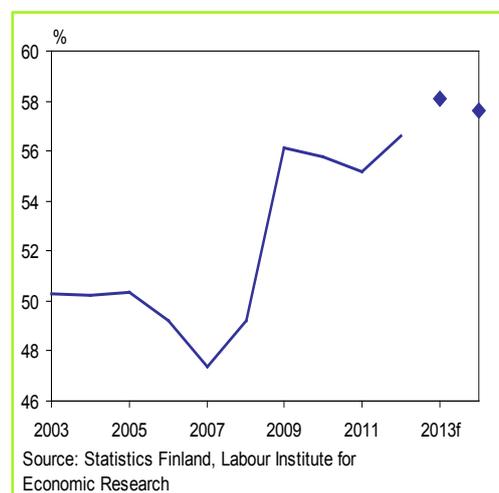
### General government financial surplus as percentage of GDP 2003–2014



### Central government gross debt and general government EDP-debt as percentage of GDP 2003–2014



### Public expenditures as percentage of GDP 2003–2014



than previously estimated. In its supplementary budget the government indeed proposed increased spending worth 100–170 million euros (the precise figure depends on the method of calculation), which is intended to foster growth. The figure includes EUR 75 million of expenditure increases for basic infrastructure maintenance and mould repair projects. In addition it was proposed that Finavia receive a capital injection of 200 million euros, the purpose of which is to support the expansion of the Helsinki–Vantaa airport and to facilitate development of regional airports. The government called these spending increases “pin-pointed stimulus”.

On the revenue side, however, this year has focused mainly on hikes. This year’s increase in VAT, the refraining from making inflation adjustments, and the public broadcasting tax will raise total taxes as a percentage of GDP by 0.8 percentage points to 44.9 per cent. Next year, the tax ratio will remain close to this year’s level at 45.0 per cent. The ratio of total expenditures to GDP will increase this year, owing largely to the shift of the Finnish Broadcasting Company to the public sector in the National Accounts. The expenditure ratio will rise from last year’s 56.6 to 58.1 per cent this year. Next year, the expenditure ratio will decrease slightly as the economy grows faster than public spending, so that the expenditure ratio will be 57.6 per cent.

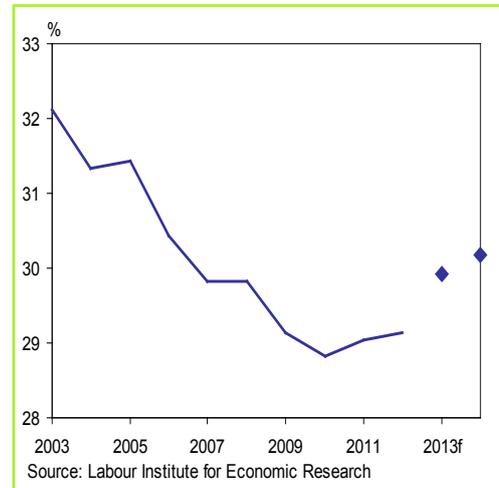
The financial position of the public sector as a whole will deteriorate this year. The worst development occurs in the central government. Thus the public sector’s EDP deficit this year is 2.3 per cent of GDP, while last year it was 1.8 per cent. Next year the public sector’s financial position will improve slightly and general government’s EDP deficit is forecast to be 1.8 per cent of GDP. Despite this, the central government’s debt ratio will rise this year and next. The whole public sector’s EDP debt-to-GDP ratio will rise, but remain below the 60 per cent ceiling during the forecast period.

### Finland’s fiscal policy has supported employment

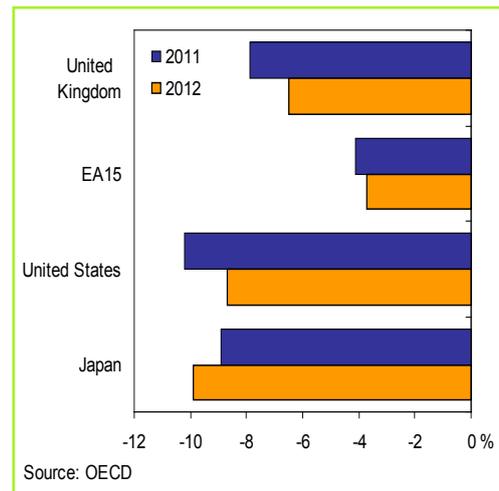
Finland’s economic policy this year has been relatively neutral. Taxes have been tightened, with the result that the total taxes as a percentage of GDP will climb from that of the previous year by 0.8 percentage points, but this has been offset by the growth of public spending, which has not been cut at the same rate as GDP has fallen. Thus, the ratio of government expenditure to GDP is rising this year from last year’s 56.6 per cent to 58.1 per cent. Of this 0.25 percentage points is attributable to the adoption of the YLE public broadcasting tax, which technically increases public consumption at the expense of private consumption. Also next year, fiscal policy will remain relatively neutral as taxes are not rising on net basis and the growth rate of public spending will already be lower than the rate of growth of the total economy. It can be said that the employment situation in Finland, particularly as measured by the unemployment rate, has remained considerably better than elsewhere in Europe because we have avoided suddenly hitting the fiscal policy brakes. In the weak economic climate, this has meant that the public sector’s fiscal deficits, particularly that of the central government, has not been cut in line with the government’s programme. The goal that the public deficit should have been reduced without weakening employment is not realistic in the short term.

Deep concerns about the fiscal balance are reflected in the government’s recent structural policy programme. The government estimates that the Finnish public sector’s sustainability gap is 4.5 per cent of GDP or more than EUR 9 billion. It is noteworthy that the estimated sustainability gap has declined since 2010 by only 0.5 percentage points, even though the tax burden has been tightened considerably, so that total taxes as a percentage of GDP have increased since 2010 by 2.3 percentage points. The increase in the public deficit or its remaining large is primarily due to the weak economic situation.

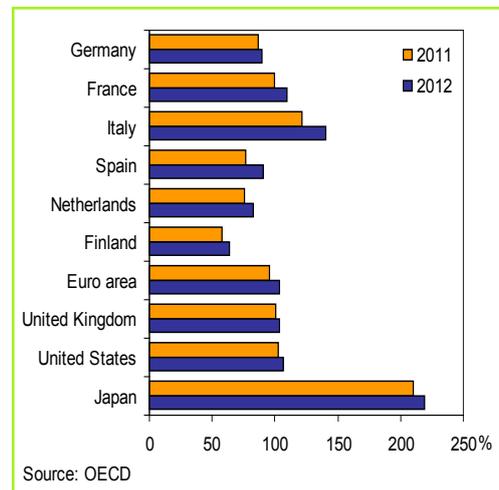
### Wage earners’ income tax rate 2003–2014



### Public sector deficit-to-GDP ratio in 2011 and 2012



### Public debt relative to GDP in 2011 and 2012



It nevertheless seems that the Finnish recession and industry's problems are deemed to be permanent, which has increased the Ministry of Finance's estimate of the structural deficit. The recent assessment of Finland's sustainability gap by the Ministry of Finance and the government can be regarded as using a "head in the bushes" approach since it does not give any weight to the impact of international economic developments on the Finnish economy. On the other hand, the government's pessimism can nonetheless be justified since we cannot know the extent to which Finland's problems can be explained by the structural weaknesses of its industry and the extent to which they are attributable to weak international market conditions.

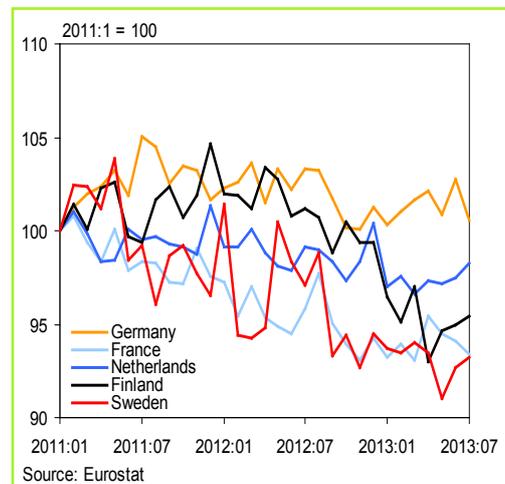
The government's sustainability gap calculations have also been affected by its estimates of longer working careers. On the one hand, the calculations are based on the assumption that shifting into retirement is not occurring at a significantly later age. The prolongation of a 25-year-old person's retirement expectancy even longer than the government's goal is deemed to be explained largely by technical issues or the fact that persons nearing retirement age previously receiving unemployment pensions are now receiving additional days of unemployment benefits. A more coherent way to assess the exiting from employment would be to classify also persons nearing retirement age receiving additional days of unemployment benefits after the basic 500-day spell of unemployment as "pensioners", since these persons nearing retirement age are treated in a similar manner as those in the early retirement scheme. The number of persons receiving additional days of benefits has declined dramatically since 2005, for which reason also the actual exiting from the workforce has been postponed considerably. Another sensible way of evaluating the exiting into retirement is to look at the development of the unemployment rate in different age cohorts. After all, from the standpoint of the sustainability gap it is indeed relevant whether, for example, a person over 60 years old is gainfully employed or retired. The adjacent chart shows, for example, the steep ascent of the employment rate of persons aged 55–64 years old compared to younger age groups, which indicates the genuine lengthening of working careers.

### Quality of services under pressure

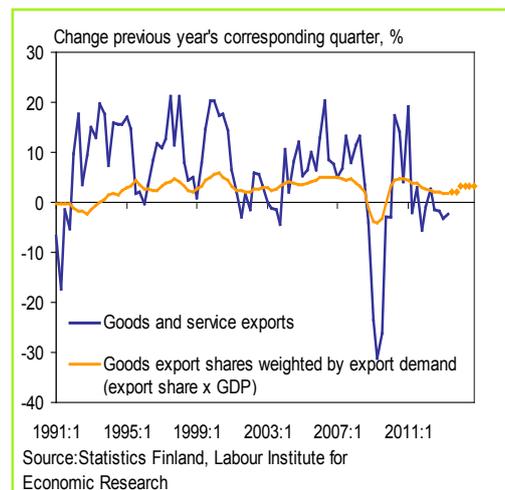
The government's structural policy programme includes a number of sound proposals supporting work and trying to keep people active in the labour force. Also making pre-school education compulsory and extending the length of compulsory education, which will raise the educational level and stimulate economic growth in the long term, can be considered prudent. Similarly, efforts to cut municipal spending in certain respects cannot be rejected, because the local government has expanded significantly in relation to the total economy.

The estimates of the impact of the structural programme can nevertheless be considered misleading in some respects. For example, the requirement that municipalities should save an additional one billion euros on top of the one billion euros decrease in expenditures stemming from the scaling back of their obligations can be considered problematic from the standpoint of maintaining a certain standard of services. After all it is possible that austerity measures implemented by Finland's autonomous municipalities will lead to a decline in the level of education and health care, which will have a negative impact on productivity and growth. Also the goal set for the municipalities of raising their quality-unadjusted productivity by 0.5 per cent a year, can easily lead to deterioration of quality. But the situation is not as bad as it seems in this respect. If conditions improve, the new governments can always fix old decisions. This was the case in the 1990s, when among other things excessive education cuts were rescinded after the economy started to rebound strongly. ■

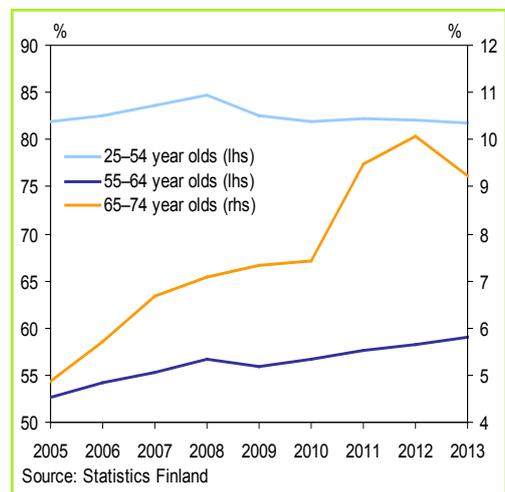
### Industrial production 2011:01–2013:07



### Changes in Finnish exports and export demand 1991:1–2014:4



### Employment rates 2005–2013, 2nd quarter





## Impact of government's structural policy programme on employment

On August 29, 2013 the government agreed on structural reforms aimed at prolonging working careers by two years and reducing structural unemployment rate by one percentage point. According to the Ministry of Finance's own calculations this would mean the number of employed would grow by nearly 150 000 people. Most of the job growth will come from extending the duration of employment by 1.5 years at the end of the working career. The structural reform package contains a large number of more or less concrete measures aimed at increasing the supply of labour. The real impact of many of the reforms on the labour supply is difficult to quantify. The reforms include making pre-school education compulsory and the extending the length of compulsory education.

Efforts are made to reduce breaks in the working careers among other things by limiting the eligibility for job alternation leave and dividing the child home care allowance between both parents. If use of the child home care allowance remains at current levels, its reform would have no impact on labour supply. It is likely, however, that at least in the short term use of child home care allowance will decrease since men will not use their own share.

Today, more than 90 per cent of parents taking care of their children at home and receiving the home care allowance are mothers. If men's use of the home care allowance does not increase, the impact of the reform on labour supply is similar to shortening the duration of the home care allowance. The labour supply of mothers of young children has been shown to react very sensitively to financial incentives to work (Kosonen, 2013). In the short term, women are likely to return back to work more quickly, but the impact on employment might be just a few thousand persons.

The reform of the child home care allowance is not likely to generate significant savings in the public finances in the short run since the need for day-care services will also increase. The simultaneous implementation of another reform limiting the subjective eligibility of non-working parents' children to half a day of day-care may free up some day-care places for children ending their spell of home day care. In the longer term, shorter breaks in women's working careers may improve tax revenues and pension contributions. It is also possible that in the longer term, the use of home care allowance should be divided more evenly between the parents.

The elimination of disincentives to work is intended to increase the supply of labour. The most significant factors with respect to eliminating disincentives to work are the amounts of exempt income with respect to housing benefits and unemployment compensation, i.e. the amount of wage income that is not included in incomes testing. The exempt portion of income with respect to the housing allowance is 400 euros per month for a maximum period of six months after finding employment. In conjunction with the labour market organizations' Pact for Employment and Growth it was decided to set the exempt portion of income with respect to earnings-related unemployment benefits at 300 euros

per month. The same exemption is likely to apply also to the basic daily allowance and labour market support.

The exemption is intended to reduce employment tax rates, reduce disincentives to work and make it easier to accept temporary work. Some of the unemployed do not necessarily benefit from the exemption if unemployment compensation and housing benefits are completely offset by lower welfare benefits. The biggest incentive benefits are experienced by those unemployed who are not eligible for welfare benefits because of their earnings-related unemployment benefits or spouse's income. If the incentive effects remain small, the impact on the supply of labour will be insignificant.

It may be a difficult to have a large-scale impact on employment by eliminating the disincentives. This is due to the fact that even though, for instance, almost a third of the unemployed single parents are trapped by disincentives, the number of single parents relative to the total population is small (Kärkkäinen 2011). Thus, the impact of different types of incentive packages may remain smaller than, for example, the effect of tax cuts targeted at low-income workers (Hakola, Uusitalo et al. 2007). Exemptions as regards unemployment compensation and housing benefits may reduce the incentives to move from part-time to full-time work. Doing part-time or temporary work may nevertheless encourage people to seek full-time employment (Kyyrä 2010).

The intention is also to boost the employment rate by making the operations of employment offices more efficient and apply sanctions in a systematic fashion to those refusing to accept work or participate in activation measures. The government's structural policy programme mentions that the employment effects of these measures will be monitored. If employment goals are not achieved with current and newly decided schemes, decisions on additional measures may be taken during the government's term in office. In this respect, it is problematic that many of the new measures may have an impact on employment only in the longer run.

Without a well-implemented experimental design is also very difficult to separate the effects of reforms on employment from other effects. A large part of the structural reform programme will be finalized in the autumn. After the precise proposals are made we will be able to make more accurate predictions of how the reforms will affect work incentives and employment. Based on current knowledge, the desired employment effects of the reforms seem somewhat over-optimistic. ■

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## Effects of economic growth on purchasing power of example families

The model family calculations of the Labour Institute for Economic Research (PT) assess the impact of wages, income transfers, taxation and tax-like payments on the purchasing power of six different example families. Housing loan and rent expenses are also taken into account in the calculations to the extent that they affect the tax deductions and income derived from income transfers. The calculations are based on the proposed and realized changes in income taxation, social insurance contributions and social security. This year the period for the family model calculations has been increased by three years so it covers the years 2008-2014. Key information for the model family calculations in the year 2014 are shown in the appendix of this document.

The model families are the same as last year, and they have been selected to describe Finnish households in as versatile fashion as possible. The wage earners in the calculations represent the median incomes of their gender and their job title or education. The median gross income has been revised upwards to take into account holiday pay and bonuses. The median incomes for the years 2008-2012 have been obtained from Statistics Finland's private sector and municipal sector monthly salary statistics.

Gross incomes in 2013 and 2014 are based on PT's forecasts. Earnings are expected to rise in 2013 by 2.1 per cent in accordance with the forecast for the earnings index. In 2014 wages are expected to grow by 0.7 per cent owing to the impact of wage increases going into effect at the end of 2013. In addition, the August 2013 comprehensive wage settlement agreed on a 20 euro a month increase that will begin four months after the agreement goes into force. In the example family calculations, this increase is expected to raise employees' gross income starting in May 2014.

One member of the retired couple in the example family calculations receives an earnings-related pension. Data on the average earnings-related pension are based on statistics from KELA (Social Insurance Institution) for the years 2008-2012. In 2013 the employment pension in the calculations is expected to rise as much as the revised pension index in January 2013. In 2014 the employment earnings-related pension is expected to rise by about 1.8 per cent in accordance with PT's pension index forecast.

Benefits linked to the national pension index are expected to rise by 1.7 per cent in 2014 in accordance with PT's forecast for the national pension index. In the example family calculations these benefits include labour market benefits and income support as well as the national pension and guaranteed pension. As regards child benefits, there will be no increase in the index in 2013-2014, which will affect the purchasing power of three example families.

It is assumed that all families have paid for the TV license during 2008-2012. The payment is included in

taxes and tax-like payments. This allows us to gauge the impact of the YLE public broadcasting tax adopted in 2013 on families' income in a sensible way.

Of the six model families, three live in rental housing and the other three in owner-occupied housing. In two cases the owner-occupied housing is debt-free while one family has a housing loan. The cost of servicing the housing loan is based on statistics on the average interest rates on new housing loans obtained from the Bank of Finland for the period 2008-2012. For 2013 and 2014, the average interest rates are based on PT's forecast. The calculations for 2014 have taken into account the reduction of the interest deduction on housing loans to 75 per cent. Rental housing data for the years 2008-2012 are based on Statistics Finland's quarterly rent statistics, taking into account the size of the flats and the number of rooms. Rent is based on average figures for the whole country, taking into account all forms of financing. In 2013 and 2014 rent is expected to develop in accordance with PT's forecast for the rise in the rent index, which is 3.5 per cent in both years.

In the model family calculations each household has its own rate of inflation. Family-specific inflation is obtained for different structures of consumption baskets using assorted inflation rates for each commodity group included in the baskets. The consumption baskets are the same as in the previous year, and they are derived from Statistics Finland's 2006 Household Budget Survey, which is the most recent of its kind. The commodity group-specific inflation rates for the period 2008-2012 are based on Statistics Finland's Consumer Price Index while those for 2013-2014 are based on PT's forecasts.

## Family descriptions

### White collar couple with high income

The family is a childless couple belonging to AKAVA (Confederation of Unions for Professional and Managerial Staff). The man has an MBA and the woman has studied law. Monthly wages in 2013 are 7026 euros and 5507 euros. The family lives in owner-occupied housing with no debt.

### White collar family, 2 children

The parents of the white collar family are an engineer and a nurse, both of whom belong to STTK (Finnish Confederation of Professionals). The monthly wages in 2013 are 3722 euros and 3131 euros. The family lives in owner-occupied housing with a mortgage of 150,000 euros.

### Blue collar family, 2 children

The parents of the blue collar family are a truck driver and a store sales person, both of whom are members of SAK (Central Organization of Finnish Trade Unions). Monthly wages in 2013 are 2397 euros and 2241 euros. The family lives in a rented flat (80 square metres).

### Low-wage single parent's family, 1 child

The family consists of a single parent mother working in the private sector as a cleaner. Her monthly wage in 2013 is 2044 euros. The family receives housing benefits and child support. The family lives in a rented flat (60 square metres).

### Single unemployed

The household consists of one unemployed person, who receives labour market support, housing benefits and welfare aid. He lives in a rented flat (40 square metres).

### Retired couple

The household consists of two retired persons, one of whom receives an employment pension and the other a national pension and a guarantee pension. The couple lives in owner-occupied housing with no debt.

### Families' nominal disposable income development

The model family calculations indicate that the nominal disposable income of all the families will increase in 2012 and 2013. Growth is generally more moderate than the average for 2009-2012. In 2014 income growth will be significantly slower than in the previous year. Disposable income will increase the most in the case of the retired couple (about 28 euros) and the least in the case of the high income couple (about 16 euros). One of the most important reasons for the slowdown in income growth in 2014 is the slowdown in the growth of the gross income of the model families. This deceleration stems from moderate wage increases, which are relatively smaller for high income earners. Also benefits linked to the employment pension and national pension indices will increase more slowly in 2014.

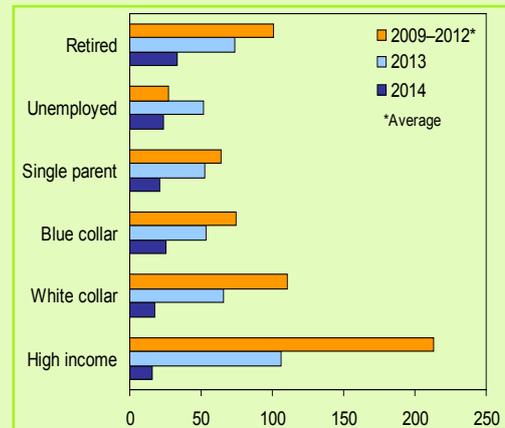
Another major cause of the slowdown in disposable income growth in 2014 is the relative increase in taxes and tax-related payments. Taxes as a percentage of gross income will rise for each model family. This is attributable to hikes in municipal taxes and social insurance contributions. In addition, in the case of the white collar family the reduction in tax deduction for interest on housing loans is one factor reducing disposable income.

### Family-specific inflation

The inflation rates of all families in 2013 will range between 0.3 and 2.1 per cent. In 2014 the inflation of most families will rise, ranging between 0.9 and 2.5 per cent. Overall, the model families' inflation will be lower in 2013 and 2014 than the average for the years 2009-2012. Major individual consumer product categories that will raise all families' inflation in 2013 and 2014 are food and transport. On the other hand, cheaper clothing and footwear as well as communication will curb the inflation of all families. Moderate price trends with respect to cultural and leisure services will dampen family-specific inflation.

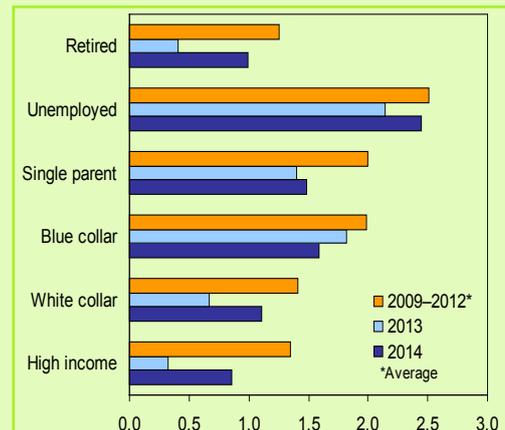
There are major differences in the family-specific inflation figures between families. The differences arise from the different structures of the families' consumption baskets. The single most important difference in the structure of the consumption baskets is the form of housing. In 2013 and 2014, the cost of owner-occupied housing will dec-

### Nominal change in disposable income in 2009–2012, 2013 and 2014



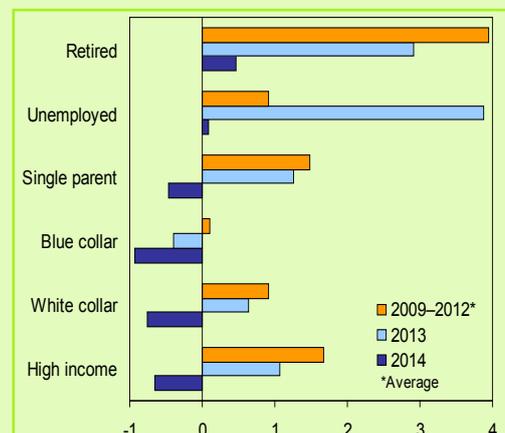
Source: Statistics Finland, Labour Institute for Economic Research

### Family-specific inflation rates in 2009–2012, 2013 and 2014



Source: Statistics Finland, Labour Institute for Economic Research

### Relative change in real income in 2009–2012, 2013 and 2014



Source: Statistics Finland, Labour Institute for Economic Research

rease, while rental housing will be more expensive. This will strain in particular the unemployed, single parent and blue collar households, but it will benefit the retired, high income and white collar households. The decline in cost of owner-occupied housing is greater in 2013 than in 2014, for which reason the inflation of the retired, high income and white collar households will be significantly lower in the latter year.

### Families' real income changes

Family-specific changes in real income in euros are obtained by adjusting nominal disposable incomes for family-specific inflation. The change in the model families' real income in 2013 will range between -0.4 and +3.9 per cent. Only the real income of the blue collar family will fall. It should be noted that the YLE tax introduced in 2013 will benefit the unemployed, retired and single parent households, boosting the real income of the unemployed person in particular. In 2014, the real income development of all households except the retired couple will be negative, ranging between -0.9 and +0.2 per cent. The largest drops in real income will be experienced by the blue collar, white collar and high income households. Real income development in 2013 and 2014 will for the most part be more moderate than the average for the years 2009–2012.

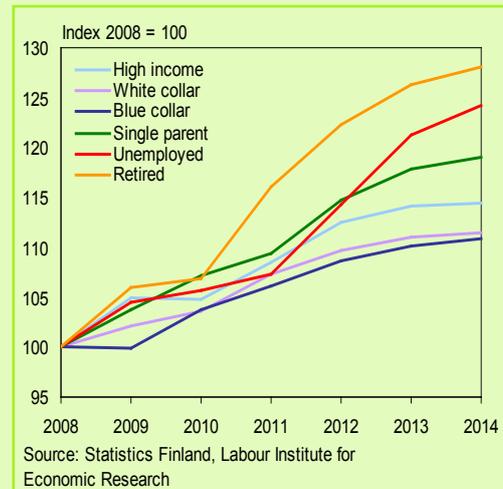
### Families' purchasing power development 2008–2014

The disposable income of families and the family-specific inflation rates differ significantly from each other in our analysis extending back to the year 2008. In terms of the development of nominal disposable income the retired family and the unemployed person have fared the best. The retired couple has been helped especially by the guarantee pension that entered into force in 2011. The development of the unemployed person in terms of nominal income looks fairly good. This is attributable in particular to the almost 22 per cent increase in labour market support in 2012 and the introduction of the YLE public broadcasting tax in 2013. It should also be noted that annual increases in rent have actually increased the nominal income of the unemployed person receiving welfare benefits. The nominal income of the blue collar family has experienced the weakest development.

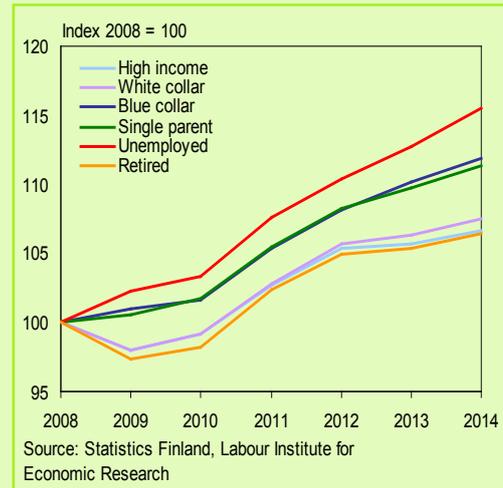
The unemployed person has faced the highest inflation of any example family since 2008. The blue collar family and the single-parent family have also faced relatively high inflation. A major difference comes from the fact that these three families live in rented housing, while the white-collar, high income and retired families own their dwellings. Owner occupied housing has become cheaper in recent years due to the decline in interest rates on housing loans. Rental housing, on the other hand, has become more expensive each year during the period 2008–2012. The high inflation of the unemployed person is also affected by rapid increases in prices of food, alcoholic beverages and tobacco.

Real, i.e. inflation-adjusted, disposable income has developed by far the most favourably in the retired family. The retired family has been helped by both the favourable development of nominal income and low inflation. The blue collar family's development has been weak. In fact, the disposable income of the blue collar family used as an example is lower than in 2008 on an inflation-adjusted basis. Other types of families are between these extremes, experiencing about five per cent growth from 2008 to 2014. However, since 2009 the trend is not very favourable for any other type of family except the unemployed person. ■

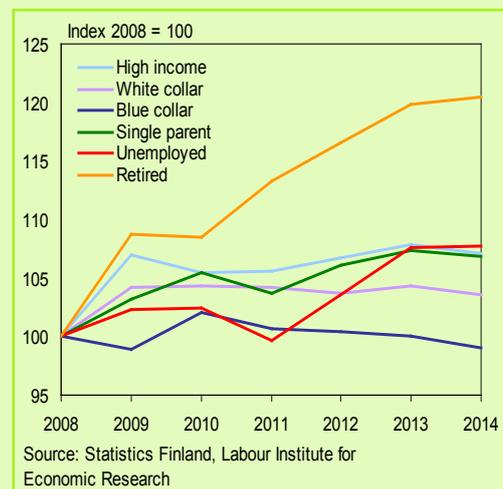
### Relative change in nominal income in 2008–2014



### Household-specific inflation in 2008–2014



### Relative change in real income in 2008–2014



**Appendix table 1. Example family calculation assumptions**

	2013	2014
<b>Income transfers and taxation</b>		
Unemployment compensation and labour market aid (€/month)	698	709
Welfare income basic component (€/month)	477	485
Maximum amount of earned income deduction (€/year)	970	1000
Maximum deduction in municipal taxation (€/year)	2880	2910
Housing loan interest deduction	80 %	75 %
Increase in central government income tax scales	0 %	1,5 %
<b>Social insurance contributions</b>		
Medical care insurance of insured persons	1,30 %	1,37 %
Daily disability compensation of employees	0,74 %	0,85 %
Unemployment insurance	0,60 %	0,50 %
Employment pension insurance, under age 53	5,15 %	5,55 %
Employment pension insurance, over age 53	6,50 %	6,90 %
<b>Forecast of Labour Institute for Economic Research</b>		
Earnings level index change	2,1 %	1,1 %
Rent index change	3,5 %	3,5 %
Municipal tax rate change, percentage points	0,14	0,25
Employment pension index change	2,8 %	1,8 %
Average interest rate on new housing loans	2,0 %	2,0 %
National pension index change	2,8 %	1,7 %

Source: Ministry of Health and Social Affairs, Tax Administration, Unemployment Insurance Fund, Labour Institute for Economic Research

**Appendix table 2. High income white collar couple's income development**

	2008	2009	2010	2011	2012	2013	2014
Gross income (€/month)	11030	11389	11343	11779	12275	12533	12648
Income transfers received (€/month)	0	0	0	0	0	0	0
Taxes incl. TV permit (€/month)	4237	4265	4229	4409	4629	4781	4880
Disposable income (€/month)	6793	7124	7114	7370	7646	7752	7768
Share of taxes out of gross income	38,4	37,5	37,3	37,4	37,7	38,2	38,6

Source: Statistics Finland, Labour Institute for Economic Research

**Appendix table 3. White collar family's (2 children) income development**

	2008	2009	2010	2011	2012	2013	2014
Gross income (€/month)	6020	6194	6312	6541	6713	6854	6929
Income transfers received (€/month)	211	211	211	211	219	219	219
Taxes incl. TV permit (€/month)	1615	1690	1742	1802	1873	1948	2006
Disposable income (€/month)	4615	4714	4780	4950	5059	5125	5143
Share of taxes out of gross income	26,8	27,3	27,6	27,6	27,9	28,4	28,9

Source: Statistics Finland, Labour Institute for Economic Research

**Appendix table 4. Blue collar family's (2 children) income development**

	2008	2009	2010	2011	2012	2013	2014
Gross income (€/month)	4302	4172	4367	4463	4543	4638	4698
Income transfers received (€/month)	211	211	211	211	219	219	219
Taxes incl. TV permit (€/month)	1046	919	980	996	996	1037	1072
Disposable income (€/month)	3467	3464	3597	3678	3766	3820	3845
Share of taxes out of gross income	24,3	22,0	22,5	22,3	21,9	22,4	22,8

Source: Statistics Finland, Labour Institute for Economic Research

**Appendix table 5. Small income single parent family's (1 child) income development**

	2008	2009	2010	2011	2012	2013	2014
Gross income (€/month)	1777	1813	1962	1993	2002	2044	2072
Income transfers received (€/month)	341	355	313	324	399	414	423
Taxes incl. TV permit (€/month)	388	374	419	424	416	420	437
Disposable income (€/month)	1730	1794	1855	1893	1985	2038	2059
Share of taxes out of gross income	21,8	20,6	21,4	21,3	20,8	20,6	21,1

Source: Statistics Finland, Labour Institute for Economic Research

**Appendix table 6. Single unemployed person's income development**

	2008	2009	2010	2011	2012	2013	2014
Gross income (€/month)	527	551	551	553	674	698	710
Income transfers received (€/month)	344	361	359	368	319	338	353
Taxes incl. TV permit (€/month)	115	122	110	111	129	119	124
Disposable income (€/month)	756	790	799	811	864	916	939
Share of taxes out of gross income	21,7	22,1	20,0	20,0	19,2	17,1	17,4

Source: Statistics Finland, Labour Institute for Economic Research

**Appendix table 7. Retired couple's income development**

	2008	2009	2010	2011	2012	2013	2014
Gross income (€/month)	2187	2307	2327	2505	2636	2715	2763
Income transfers received (€/month)	0	0	0	0	0	0	0
Taxes incl. TV permit (€/month)	367	378	383	393	411	416	430
Disposable income (€/month)	1820	1929	1944	2112	2225	2299	2332
Share of taxes out of gross income	16,8	16,4	16,5	15,7	15,6	15,3	15,6

Source: Statistics Finland, Labour Institute for Economic Research