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Economic outlook

Contents

The front cover depicts the national motif on the Austrian 1 cent coin: a gentian flower.

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Preface

The Finnish economy has been contracting since the first half of 2012 and the outlook for the immediate years ahead remains poor. The direction of the economy has already been mostly poor for the past 5 years and growth forecasts have on several occasions had to be revised downwards. Problems in the economy that were previously thought to be temporary, cyclical phenomena have now been shown as more permanent and structural in nature.

Exports are still around one fifth smaller than the level they were before the onset of the international financial crisis in autumn 2008. Besides the condition of the international economy, a key cause of the weakness of Finland's export performance is the contraction of important industrial sectors – the electronics and paper industries – a trend that shows no signs of turning. Exports have also suffered from weakening cost-competitiveness, particularly as a consequence of an exceptionally rapid rise in wages in 2008 and 2009.

With exports fading, overall demand has been reliant on domestic demand, particularly with household consumption rising. With income development across the economy as a whole weak due to the problems with exports, domestic demand has increasingly been funded with debt: both household and general government expenditure have been higher than income. The current account has gone into deficit, meaning the entire economy is accumulating net debt.

As the economy contracted in 2012, unemployment began to grow once more. The deterioration in the employment situation could have long-term consequences, particularly for young people at the start of their working life. The recession of the early 1990s permanently weakened the employment position of young people just entering working life at that time.

According to the Bank of Finland forecast, general government will continue to accumulate more debt in the immediate years ahead if there are no new expenditure cuts or tax increases. Although government finances have already been consolidated substantially since the present government took office, debt has continued to accumulate on account of the disappointing growth figures, and the government's aim of halting the rise in the debt ratio looks unlikely to be realised without additional measures.

While the growth problems in the economy have turned out to be more persistent than previously expected, the general government deficit has also turned out to be largely structural. Thus, it will not be corrected merely by a cyclical recovery in the economy. Moreover, beginning in the second half of the present decade, population ageing will increasingly overshadow the outlook for general government. The risk is that Finland will drift onto a path of fading economic growth, persistently high unemployment and deteriorating public finances.

To avoid the threat of fading growth, the Finnish economy needs to be overhauled. The country's basic strengths remain intact and provide a good point of departure for overhauling

the economy. A skilled population, functioning infrastructure and efficient administrative and justice systems need to be channelled into generating economic growth and employment. To enable this, Finland requires stronger international competitiveness and structural reforms to boost the potential output of the economy.

The key component of competitiveness is cost-competitiveness, improvements to which will require moderate wage settlements for several years ahead. In addition to this, the international competitiveness of Finnish output is also fundamentally affected by the capacity of the national economy more broadly. Continuous development of competence across the population as a whole is an important prerequisite for competitiveness.

Increasing labour supply in the different phases of working life is perhaps the most important goal of structural reform. Steps needs to be taken to help older workers extend their working life, but it is equally important to secure opportunities for young people to enter the labour market. The latter will require action by both government and labour market organisations.

As the population ages, it is also important to improve productivity in publicly funded services, particularly health and care services. In addition, it should be possible to further develop the tax system in a direction supportive of economic growth.

Reforms to increase competition in service sectors and construction would similarly boost potential output. Increasing competition would boost output and employment and would at the same time moderate price rises. Competition could be increased in different sectors by developing and in some cases removing government regulation.

The potential output of the economy and the economic wellbeing of individuals can also be supported through reforms targeted at the housing market. Perhaps the most important need for reform is in regard to the amount of land available for construction. Growth in the amount of available building land, and hence in the supply of housing, would subdue rises in house prices and rents in growth centres. This would support the mobility of labour and hence employment. At the same time it would boost output and employment in the construction sector. Due to their planning monopoly, the actions of local government hold the key to both housing policy and increasing competition in retail trade.

Structural reforms to boost potential output in the economy would show their full effect only over time. However, they would immediately improve confidence in the future of the Finnish economy. Thus, already in the short term, they could support companies' decisions on investment and recruitment, which are currently limited by uncertainty over the future.

7 June 2013

Erkki Liikanen

Bank of Finland forecasts

This issue of the Bank of Finland Bulletin presents the Bank's macroeconomic forecast, which is prepared by the Monetary Policy and Research Department. The forecast report examines recent developments in the economy and the outlook for the present calendar year and the next two years ahead. The focus is on the Finnish economy. The forecast itself describes the most probable developments in the economy, while the attached risk assessment discusses the uncertainties relating to the forecast.

The forecast is prepared as part of the Eurosystem staff projections for future macroeconomic developments in the euro area.[1] Accordingly, the underlying forecast assumptions and assessments of future developments in the international economy are the same as in the Eurosystem staff projections. The assumption is for interest rates to develop according to market expectations and for exchange rates to remain unchanged during the forecast period.

The forecast for the Finnish economy and the related risk assessment are prepared using a macroeconomic model developed at the Bank of Finland and a large body of other data and assessments of economic developments.[2]

The Bank of Finland macroeconomic forecast and the related separate articles are published in the June and December editions of the Bank of Finland Bulletin. The European Central Bank publishes summaries of the Eurosystem staff projections in the June and December editions of the ECB Monthly Bulletin.

[1] *The Eurosystem comprises the European Central Bank plus the national central banks of countries in the euro area, including the Bank of Finland.*

[2] *The forecast uses the latest version of the Bank of Finland's macroeconomic model, Aino. The basic features of the model are described in the article 'An estimated general equilibrium model for forecasting' by Elisa Newby, Jukka Railavo and Antti Ripatti, Bank of Finland Bulletin 3/2011, Economic outlook, p. 58–66.*

Executive summary

Finland's GDP stopped growing and began to contract in 2012.[1] According to a flash estimate, GDP also contracted in the first quarter of 2013. In the Bank of Finland forecast, GDP will contract by 0.8% overall in 2013, but will begin to grow gently before the end of the year. Growth will, however, continue to be slow in 2014, despite strengthening growth on global markets. Finland's GDP growth will begin to approach its long-term trajectory only in 2015, with growth of 1.4%. The pre-financial-crisis level of GDP in 2008 will not be recaptured during the forecast period 2013–2015.

Private consumption, which has propped up domestic demand, will contract in 2013 and only begin to grow again in 2014. Household purchasing power will weaken in 2013–2014, and private consumption will not pick up again properly until 2015.

Employment will develop weakly in the immediate years ahead. The unemployment rate will rise to 8.6% in 2014, and there will be no significant improvement in 2015. Unemployment growth will be limited by a contraction in the working-age population in the years covered by the forecast.

Housing construction declined in 2012 and will contract further in 2013. There will also be a lower level of fixed investment in 2013, as the economic outlook for non-financial corporations has not significantly improved. Investment is still predominantly focused on replacement investment, as companies have a lot of spare capacity. As world growth picks up the outlook for investment will also improve and investment will begin to grow in 2014.

Slower growth in Finland's export markets in 2012 led to a contraction in exports. Imports declined even more, as, in addition to a decline in the export industry's demand for intermediate goods, domestic demand for imported goods also declined. Finland's foreign trade growth will still be weak in 2013, but will strengthen due to the pull of the export markets in 2014–2015. The current account will remain in deficit, equal to 1.2% of GDP in 2015.

Inflation according to the harmonised index of consumer prices (HICP inflation) will slow to 2.3% in 2013, as energy prices have stopped rising and domestic demand is fading. The inflationary impact of indirect taxation has also declined somewhat from 2012, despite an increase in VAT at the start of 2013. The rise in consumer prices will slow further to 1.9% in 2014, although higher excise duties will serve to push up prices. In 2015, inflation will slow to 1.7%.

Due to the GDP contraction, the general government fiscal balance will improve only slightly, despite consolidation measures. Lower employment and weaker private consumption will significantly reduce tax revenues. The general government deficit will barely improve, and will stand at 2.2 % of GDP in 2015. General government debt will continue to grow, and in 2015 will equal 62% of GDP.

The government nevertheless continues to enjoy strong confidence on

[1] The forecast is based on the statistical data available on 21 May 2013.

the international financial markets, and the forecast does not assume any weakening in this confidence. The key risk to the forecast trend is, in fact, if the markets were to change their view of Finland's ability to restore its debt to a sustainable trajectory. In such a situation, central and local government debt-servicing costs could grow much faster than forecast.

Economic growth could also be slower than forecast if the private sector were to strengthen its balance sheets closer to pre-recession levels. If households spend less and increase their savings close to long-term average savings, domestic demand will be well below the forecast level. Continued postponement of investment by businesses would have a similar outcome.

With regard to the international economy, there is a more clearly discernible possibility of developments being more positive than forecast. The risk of a renewed exacerbation of the financial and debt crisis has not disappeared, but the probability is less. Recovery in the US housing market and anti-deflationary measures in Japan could lead to a stronger recovery in demand in these countries, which would stimulate faster growth in the global economy and boost the economic outlook in Finland as well.

Table 1.

Forecast summary

Supply and demand

	2012	2011	2012	2013[f]	2014[f]	2015[f]
	At current prices EUR billion	Volume, % change on previous year				
Gross domestic product	194.5	2.8	–0.2	–0.8	0.7	1.4
Imports	78.4	6.1	–3.7	0.8	2.8	4.6
Exports	77.3	2.9	–1.4	1.2	3.5	4.7
Private consumption	109.5	2.3	1.6	–0.9	0.2	1.2
Public consumption	48.3	0.4	0.8	0.8	0.1	0.4
Private fixed investment	32.7	7.7	–3.4	–3.6	2.0	3.9
Public investment	5.0	2.9	0.5	0.4	–0.1	0.0

Key economic indicators

	2011	2012	2013[f]	2014[f]	2015[f]
% change on previous year					
Harmonised index of consumer prices	3.3	3.2	2.3	1.9	1.7
Consumer price index	3.4	2.8	1.7	1.9	1.9
Wage and salary earnings	2.7	3.5	1.7	1.9	2.6
Labour compensation per employee	2.0	3.0	2.0	2.1	2.6
Productivity per person employed	1.8	–0.6	0.3	0.9	1.3
Unit labour costs	0.2	3.6	1.7	1.1	1.3
Number of employed	1.0	0.4	–1.1	–0.2	0.2
Employment rate, 15–64-year-olds, %	68.6	69.0	68.5	68.7	69.0
Unemployment rate, %	7.8	7.7	8.5	8.6	8.3
Export prices of goods and services	4.3	1.4	–0.5	1.0	1.5
Terms of trade (goods and services)	–1.9	–2.1	–0.2	–0.1	0.1
% of GDP, National Accounts					
Tax ratio	43.4	43.5	44.4	44.6	44.6
General government net lending	–1.1	–2.3	–2.5	–2.5	–2.2
General government debt (EDP)	49.0	53.0	56.9	59.8	61.8
Balance on goods and services	–0.7	–0.6	–0.5	–0.3	–0.2
Current account balance	–1.5	–1.9	–1.5	–1.3	–1.2

f = forecast
Sources: Statistics Finland and Bank of Finland.

Economic outlook

Recent developments

Downward trend in GDP has continued for a year now

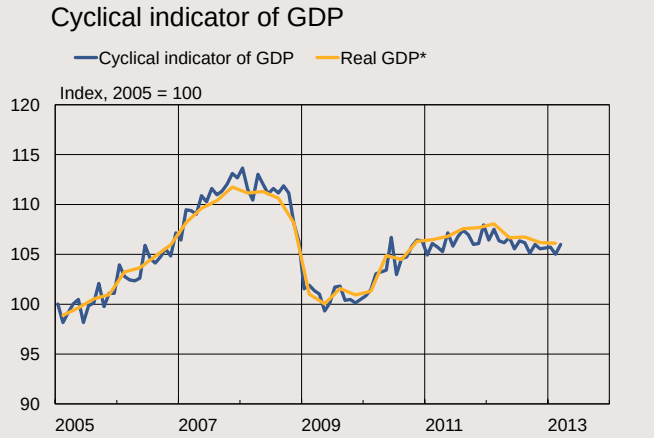
According to advance data from Statistics Finland, Finnish GDP was down by 0.2% in 2012 (Chart 1). In the first quarter of 2013, GDP declined by 0.1% from the previous quarter, according to Statistics Finland's flash estimate of the National Accounts.[1] GDP has now been weak for a whole year. Year on year, real GDP was 2% down in the first quarter of 2013.

On the supply side, the weak economic developments have been reflected in a contraction of real industrial output since the turn of 2012 (Chart 2). In the industrial sector, the decline in 2012 was most pronounced in electrical engineering and electronics. Output growth in the chemical industry also began to fade towards the end of 2012. Output in the metal industry (excl. electrical engineering and electronics) and the forest industry remained broadly unchanged from the year before throughout 2012, but has edged down during the first few months of 2013. Similarly to industrial output, exports, too, have been weak. Finnish exports declined in 2012, in respect of both goods and services.

Looking at the demand side, the decline in GDP witnessed in 2012 reflected a contraction in domestic demand. The volume of both housing construction and other new construction plunged in the course of 2012 (Chart 3). Growth in household spending varied considerably in 2012, reflecting exceptional factors, such as changes in the tax on cars. In the latter half of the year, real retail trade

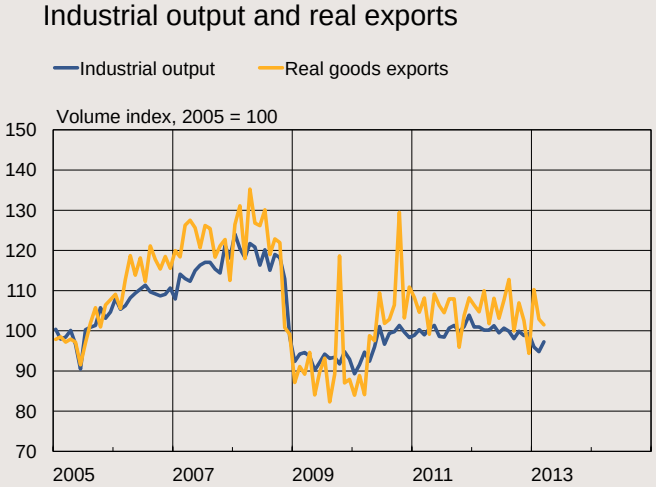
[1] Advance data on the first quarter of 2013 published on 5 June 2013 is discussed in Box 1.

Chart 1.



Seasonally adjusted data
*The figure for the first quarter of 2013 is based on Statistics Finland's flash estimate.
Source: Statistics Finland.

Chart 2.



Seasonally adjusted data
Sources: Statistics Finland and National Board of Customs.

Chart 3.

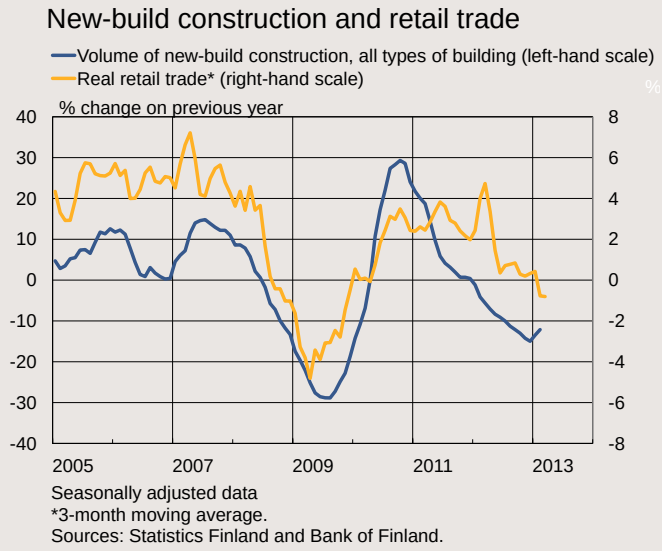
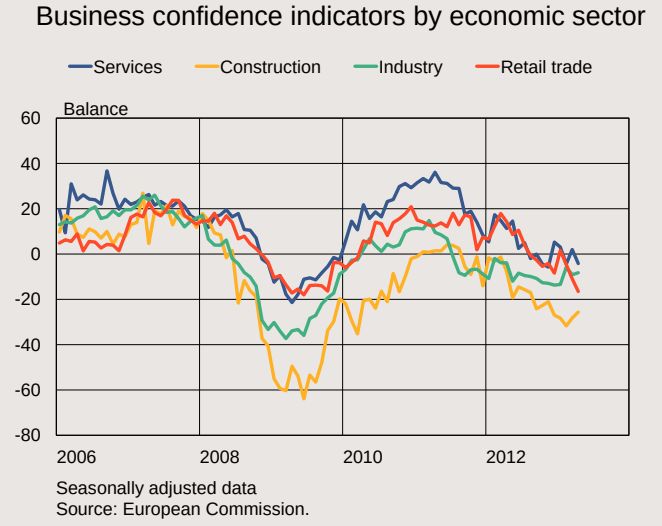


Chart 4.



remained level with the figure of the previous year. GDP in 2012 was also depressed by the running down of inventories.

Indicators signal lower-than-usual business confidence in economic developments across all sectors of the economy. The fall in confidence does, nevertheless, seem to have come to a halt and a slight restoration of confidence in, for example, industry has been witnessed since the end of 2012 (Chart 4).

The business cycle indicator of the Confederation of Finnish Industries released in May still points to a conservative near-term outlook for Finnish companies. Industrial output and services sales are expected to expand slightly over the next six months. In early 2013, the volume of new incoming orders has fallen overall within industry and construction alike. By contrast, new orders have slightly increased in the paper industry.

However, the consumer confidence indicator has weakened in the early months of 2013. Consumers' assessment of their own finances and Finnish economic developments are bleaker than average.

The contraction in GDP has also reduced demand for labour. The number of employed began to decrease in summer 2012, and was around 22,000 lower in April 2013 than a year earlier, while the trend unemployment rate stood at 8.2%, or 0.6 percentage points higher than a year earlier.[2] The decline in the number of employed has

[2] The impact of demographic factors on the supply of labour is discussed in Box 3.

been most pronounced in industrial workplaces.

Inflation slowed in the early part of the year

Inflation as measured by the harmonised index of consumer prices (HICP inflation) amounted to 3.2% in Finland in 2012. In recent months, HICP inflation has fallen close to 2½% despite the VAT rate increase (Chart 5). Overall, the impact on inflation of the tax hikes introduced at the start of 2013 amounts to approximately 0.7 of a percentage point. In early 2013, services and food prices posted the strongest growth.

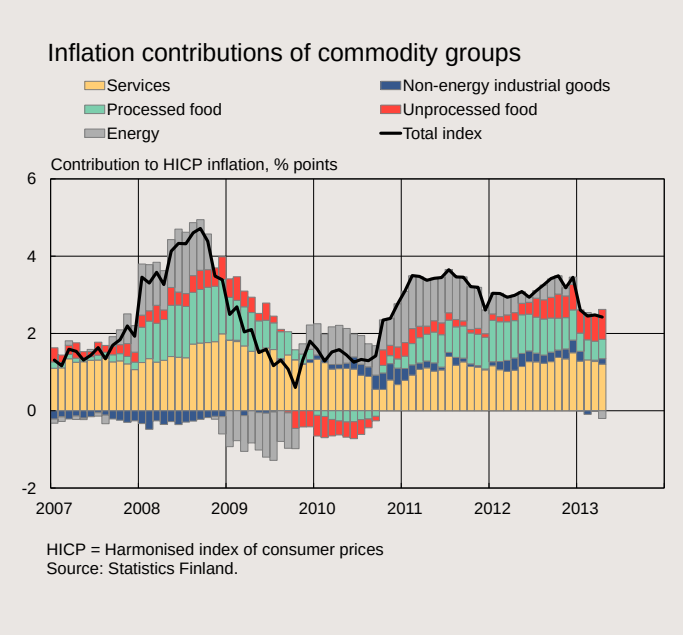
The prices of processed foods rose on average by 3.2% year on year in the first quarter of 2013. Unprocessed foods (including fresh produce such as meat, fish, fruit and vegetables) appreciated in the first quarter of 2013 at a rate of 9.6%. The price increases on unprocessed foods are attributable to both crop failures due to bad weather and higher producer prices due to a fall in domestic meat production.

In the first quarter, the growth rate for services prices has remained at 3.3% year on year, unchanged from the year before. Growth in services prices was driven especially by rents, which climbed by over 3% in early 2013. The cost of rental housing has been pushed up not only by higher house prices and increased demand for rental apartments, but also by increased property maintenance expenses due to rising wage and energy costs. Another item that has significantly contributed to the rise in services prices is restaurant and cafeteria services, whose prices have continued to increase at a rate above 5% in early 2013. The rise in services prices is, in turn, moderated by a decline in the prices of telecommunication services.

Growth in energy prices flattened out at the beginning of 2013, as the price of crude oil dropped and the rise in the excise duties on transport fuels fell out of the calculation of annual inflation. Both fuel and electricity prices trended slightly down at the start of the year.

The consumer price inflation of non-energy industrial goods fell back to 0.2% in the first quarter of 2013. This deceleration was especially related to a fall of 0.4% in the prices of semi-durable consumer goods, such as clothes, footwear and toys. Similarly, the prices of consumer durables, such as

Chart 5.



HICP = Harmonised index of consumer prices
Source: Statistics Finland.

Box 1.

National accounts for the first quarter of 2013

On 5 June 2013, Statistics Finland published preliminary quarterly national accounts data containing the latest statistical data on Finnish economic developments in the first quarter of 2013 and revised data on quarterly developments in 2012.

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

According to the most recent quarterly national accounts, seasonally adjusted real GDP contracted in the first quarter of 2013 by 2.2% year on year and 0.1% quarter on quarter. According to the flash estimate published in May, real GDP growth in the first quarter was –1.8% year on year and –0.1% quarter on quarter.

Following adjustment, the GDP growth rates for the last quarter of 2012 were revised down by 0.2 of a percentage point from the preliminary estimates. Real GDP contracted in the last quarter of 2012 by 0.7% on the third quarter. The estimated carry-over effect for 2013 amounts to –0.9%. According to the preliminary data released in March, the carry-over effect for 2013 was –0.7%.

The rate of private consumption growth in the first quarter of 2013 was 0.3% up on the previous quarter. Private investment and public investment grew by 0.4% and 1.0%, respectively, from the previous quarter. Overall, the contribution of domestic demand to GDP growth amounted to 0.3 of a percentage point.

In the first quarter of 2013, exports picked up by 0.9% from the previous quarter, whereas imports fell back by 3.0%. The contribution to GDP growth from net exports was, therefore, 1.6 percentage points in the first quarter.

The rate of growth in aggregate demand exceeded growth in aggregate supply in the first quarter. Inventory adjustments and statistical discrepancies reduced GDP growth by 2.0 percentage points.

National Accounts data for the first quarter of 2013 points to a decrease in the number of employed and hours worked by 0.9% and 2.4%, respectively, compared with the corresponding period in the previous year. Given that real total output fell by 2.2%, growth in labour productivity per working hour was almost zero. The annual growth rate for compensation per employee slowed to 1.1% year on year.

The most recent quarterly national accounts data signal a similar economic development for the early part of 2013 to the indicator data previously published. Quarterly GDP growth was flat at –0.1%, unchanged from the flash estimate published in May. In the course of 2012, economic growth came to a standstill and began to recede, while growth in domestic demand moderated and export developments were subdued.

cars and household appliances, have posted a slow downward trend.

Finland's economic foundations weakened

Recent developments in the Finnish economy bear witness to structural changes in the economy and problems related thereto. The brisk growth in GDP witnessed in the early 2000s mainly reflected a strengthening of the electrical engineering and electronics industry and robust productivity growth in the sector, as well as the favourable development of external demand. Both the output volume and the output capacity of key Finnish export sectors, ie the electronics and paper industries, have contracted substantially as a result of rapid restructuring in these sectors. The financial crisis added further momentum to this process of change. In recent years, GDP growth has been sustained by domestic demand.

The recent contraction of domestic demand does, in fact, reveal a weakness in the fundamentals for growth in the economy: in the context of falling industrial output capacity and decreasing investment, growth that rests on the indebtedness of households and the public sector is not sustainable. The erosion of industrial investment also raises concerns over the capacity of the Finnish export industry to meet a potential increase in foreign demand in the future.

Operating environment

International economy and Finland's export markets

During the early months of 2013 developments in the international economy have been as subdued as expected. The outlook is overshadowed by the sluggishness of international trade growth and the recession and fragility of confidence in the euro area. In China, the United States and Japan, growth has continued throughout the early months of the year, but at a slightly slower pace than expected. There have been two divergent trends in GDP growth: in the euro area activity has declined, but outside Europe growth has continued.

During the early months of the year, the economic indicators have suggested continued growth in the global economy. Outside the euro area, industrial and service sector confidence has remained supportive of growth. Within the euro area, confidence is fragile and there remains major uncertainty over the direction of the economy. Unemployment has increased in almost all euro area countries, with average unemployment across the area as a whole of over 12% in March.

The forecast for the international economy is based on the assumption that sufficient policy measures can be taken to deal with the crisis of confidence in the euro area and the crisis can be permanently resolved. The forecast assumes euro area governments will honour their commitments over general government consolidation and structural reforms to bolster growth.

With governments striving to fulfil the deficit targets in their stability programmes, fiscal policy will remain rather tight. The fiscal tightening that governments are forced to introduce to boost confidence and secure the sovereign bond markets will weaken the short-term outlook for growth. Strengthening the credibility of fiscal policy will, however, allow a reduction in the general level of interest rates in the crisis countries. This is an essential prerequisite for an improvement in the position of the private sector. The substantial indebtedness of the crisis countries can, however, be reduced only gradually.

Economic outlook for the major economic regions

In the first quarter of 2013, euro area GDP contracted by 0.2% from the previous quarter. The German economy grew slightly, but France, Italy and Spain all experienced a decline in activity. For the immediate quarters ahead, both private consumption and investment in the euro area are forecast to contract at the same time as sluggish world trade growth and weak competitiveness in many countries put a brake on export growth. Fiscal consolidation and measures to increase debt-sustainability will also serve to slow the pace of growth. In 2013, economic activity in the euro area will on average be slightly down on 2012. Growth is forecast to get underway in the autumn and accelerate somewhat toward the end of the year. Subdued domestic demand and slower export growth will exacerbate the already weak employment situation in many euro area countries.

In the United States, private consumption and investment growth were weakened at the end of 2012 by uncertainty over the direction of fiscal policy. In the first quarter of 2013, growth was slowed by the fiscal consolidation measures introduced at the beginning of the year. Private consumption growth in spring and early summer is expected to be lacklustre on account of tax increases and expenditure cuts, but it is expected to pick up towards the end of the year as household balance sheets become stronger. Household indebtedness in the United States has already come down to the level of 2004, while wealth has begun to grow due to a vigorous recovery in asset prices. At the same time corporate profits have been at a record high.

The Japanese economy scarcely grew at all between the final quarter of

Table 2.

Growth in GDP and world trade

% change on the previous year

GDP	*2012*	*2013f*	*2014f*	*2015f*
United States	*2.2*	*1.9*	*2.6*	*3.0*
*Euro area**	*–0.5*	*–0.6*	*1.1*	
Japan	*2.0*	*1.5*	*1.4*	*0.9*
Asia excl. Japan	*5.9*	*6.3*	*6.9*	*6.8*
World	*3.0*	*3.0*	*3.8*	*4.0*
World trade	*2.9*	*3.1*	*5.9*	*6.8*
*Finland's export markets***	*2.5*	*2.4*	*4.9*	*6.0*

** Eurosystem staff projections for macroeconomic developments in the euro area for the years 2013–2014.*
*** Crowth 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.*
f = forecast
Source: Eurosystem.

2012 and the first quarter of 2013. The Japanese Government and the Bank of Japan have carried out measures targeted at ending the deflation that has been continuing for a decade and a half already. Measured by the nominal trade-weighted index, the external value of the Yen has come down by around 20% since the end of September 2012, and the Nikkei 225 share index has over the same period risen by around 70%. Deflation has so far continued, but inflation expectations have grown strongly in recent months. The repeated stimulus packages have led to continuous budget deficits in Japan and to record levels of public debt. The growth forecast for the Japanese economy has been adjusted upwards since the December forecast on account of the stimulus package introduced by the new government. The fiscal and monetary stimulus will boost domestic consumption, while devaluation of the Yen will boost net exports.

In the first quarter of 2013, the Chinese economy grew 7.7% relative to a year earlier and 1.6% on the previous quarter, which was a slower pace than expected in December. This was primarily due to the slowness of growth in investment demand. This is, however, expected to take off in the coming months, as major investment projects were launched in March and bank lending has been growing briskly. Well over half of the GDP growth in the first quarter was due to domestic consumption demand. The strong consumption and weak investment growth meant a change in the structure of the economy, with a slight increase in the importance of consumption as a driver of growth. The decline in the rate of investment is, however, slow, and it will take years until it approaches internationally familiar levels. The Chinese economy is forecast to grow an average of around 8% per annum in 2013–2015. Chinese import volumes are growing faster than world trade and supporting recovery in the global economy.

Russia's economic growth was weaker than expected in the first quarter of 2013, at just 1% year-on-year. The value of imports was only a few percent up, and the volume of exports more-or-less unchanged on a year earlier. Investment activity was sluggish, and consumer expectations weakened. The assumption of a decline in the price of oil is gradually depressing growth. The rise in public sector salaries is likely to slow, and there is an effort to hold the real increase in pensions in line with the pace of growth in the economy. These and other public expenditures are limited by a budget rule whereby expenditure is linked to the price of oil in preceding years. Growth in the Russian economy is estimated to slow to just under 3½% per annum in 2013–2015.

International trade growth will continue to be slow in the immediate quarters ahead. The weak confidence is still visible in household and corporate decisions over the purchase of consumer durables and capital goods. The forecast for world trade has, in fact, been adjusted downwards in respect of both 2013 and 2014. At the

end of the forecast period in 2015, however, world trade will return to its longer-term average growth trajectory, according to the forecast.

The slightly more subdued forecasts for the next few years regarding the global economy and international trade relative to the previous forecast also suggest weaker growth in Finland's export demand than previously estimated. Finland's export markets will continue to grow more slowly than average growth in world trade, as import growth in the advanced economies that are important to Finnish exports is weaker than the average growth in imports worldwide.

Commodity and foreign trade prices

Commodity prices (excl. oil) are expected to decline slightly throughout the forecast period. The forecast assumes that the price of Brent crude will develop in line with the futures prices current on 15 May 2013. According to these, the dollar price of crude oil will be around 16% lower at the end of the forecast period than in the first quarter of 2013. In the forecast, the world market prices of food are expected to remain relatively stable throughout the forecast period, in line with current futures prices.

The expected decline in commodity prices will be reflected in the export prices of countries of key importance for Finnish exports. The forecast assumption of stability in the external value of the euro going forward means that the euro-denominated rise in the price of the export prices of Finland's competitors will be slower during the forecast period than previously forecast.

Interest and exchange rates

According to a forecast assumption based on market expectations, the 3-month Euribor should remain more or less at the current level of 0.2% until the end of 2013. In 2014, it will rise slightly, and in the final quarter of 2015 it will be 0.6% (Chart 6).

The long-term interest rate, ie Finland's 10-year government bond rate should remain at the present level of 1.6% until the third quarter of the current year and rise thereafter, reaching around 2.4% at the end of the forecast period in the final quarter of 2015. Thus the yield curve will steepen slightly, meaning the difference between long and short rates will broaden during the forecast period. The external value of the euro is assumed to remain

Chart 6.

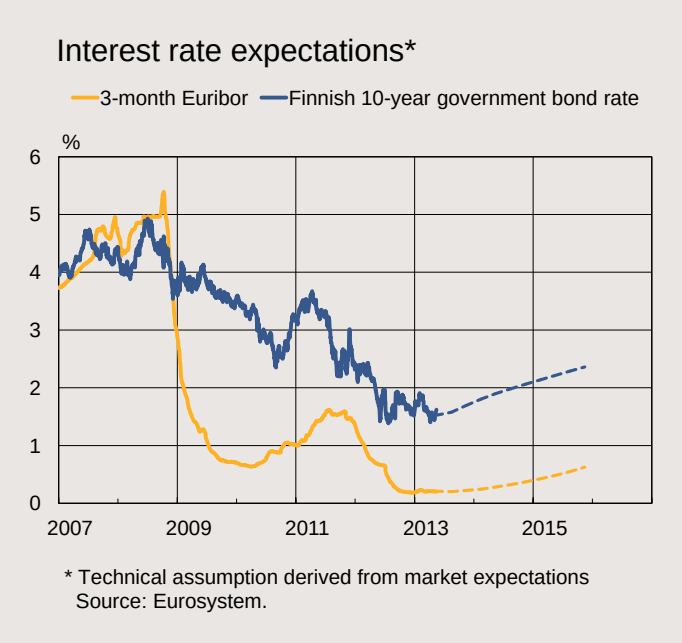


Table 3.

Forecast assumptions

	2011	2012	2013[f]	2014[f]	2015[f]
Finland's export markets[1], % change	6.9	2.5	2.4	4.9	6.0
Oil price, USD/barrel	110.9	112.0	105.5	100.0	96.2
Euro export prices of Finland's trading partners, % change	4.5	3.1	–2.0	1.1	1.4
3-month Euribor, %	1.4	0.6	0.2	0.3	0.5
Yield on Finnish 10-year government bonds, %	3.0	1.9	1.6	1.9	2.2
Finland's nominal competitiveness indicator[2]	103.0	100.1	101.6	101.7	101.7
US dollar value of one euro	1.39	1.28	1.31	1.31	1.31

[1] 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.
[2] Narrow plus euro area, 1999Q1 = 100
f = forecast
Sources: Eurosystem and Bank of Finland.

unchanged throughout the forecast period (Table 3).

The interest rate assumptions in the forecast are derived from market expectations current on 15 May 2013. 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.

Financial markets

Since autumn 2012 the euro area financial markets have stabilised and the division into core and peripheral countries has eased. Access to funding for both banks and governments has become easier, although it is still harder than before the crisis. Moreover, many banks in the crisis countries remain dependent on central bank funding.

Although the potential threat of the euro area debt crisis flaring up again as a consequence of a sudden crisis in confidence has not disappeared, the greatest financial market risks now relate to the subdued economic outlook in the euro area. If the weak economic trend continues, the volume of loan losses and problem loans will be reflected in growth in euro area banks' loan losses, and bank profitability will decline further.

The European Central Bank supported the conditions for economic growth at its May meeting by lowering its key policy rate to 0.5%. Despite the low level of interest rates, the stocks of both household and corporate loans in the euro area have grown sluggishly. The debt crisis has forced banks to devote increasing attention to their capital and liquidity positions. As a result, many banks have been forced to reassess and reprice the risks of their corporate loans. For SMEs in particular, credit conditions remain tight in many euro area countries. Demand for corporate loans also declined, with little investment activity and companies improving their balance sheets. In order to stimulate the corporate loan market, the ECB has, in cooperation with other European authorities, begun to investigate ways to facilitate banks'

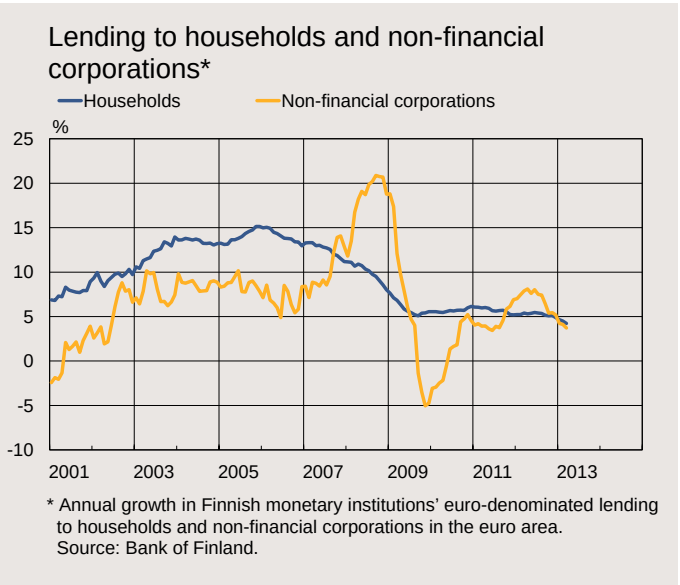
securitisation of their corporate loans, thereby allowing them to sell them on.

The Finnish financial system has remained stable throughout the debt crisis.[3] Market funding is readily available, and risk premia on bonds have narrowed. Banks have issued large amounts of covered bonds, in particular.

The risk-bearing capacity of banks operating in Finland remains good, but the sluggishness of the economy and the low level of interest rates have eroded profitability. The situation has been somewhat eased by growth in the interest margins on both corporate and household loans. The sluggishness of economic growth, and particularly the fading of investment demand, cast a shadow over the near-term outlook for the banks, limiting corporate demand for credit in Finland, too.

[3] The condition of the Finnish financial system is dealt with in detail in the previous issue – Bank of Finland Bulletin 2/2013: Financial stability.

Chart 7.



Compared with other euro area countries, the funding situation for small companies in Finland is still good. In Finland, too, however, the interest margins on corporate loans have grown most in respect of small loans, and access to credit for SMEs is slightly weaker than for large enterprises.[4]

The weakening trend in the availability of credit for SMEs has a number of causes. Of these, the most significant is probably the general growth in credit risks caused by the weakening economic outlook, which has made banks adopt more cautious lending policies. Banks are also paying greater attention than before to their capital adequacy and hence the management of their risk-weighted assets. To an extent this is due to the higher standards for capital adequacy demanded by the markets, but current regulatory reforms could also be significant.

Growth in the stock of household loans has slowed to around 5%, compared with around 6% a year earlier (Chart 7). The interest margins on housing loans have been growing since 2011, but the decline in market interest rates meant the average interest on new housing loans in March 2013 was still at an historically low 1.98%. Weak income development and the uncertain economic outlook have, however, begun to subdue house sales and, therefore, household demand for credit. Nominal house prices are still rising slightly, but the upward trend in real prices already turned into a slow decline during 2012.

[4] Pylkkönen & Savolainen (2013) The situation of SME finance in Finland. Bank of Finland Bulletin 2/2013: Financial stability.

In 2011, one in ten of Finnish households with debt had debts totalling over 3 times their annual disposable income. The proportion has doubled in the past ten years. Low interest rates and stable development of household incomes have, however, supported households' ability to service their debts, for which reason loan losses on housing loans have been small. However, if the recession were to become prolonged and unemployment grow significantly, Finland, too, would see an increase in credit defaults.

Fiscal policy assumptions

Finland's fiscal policy stance has been in a process of gradual consolidation ever since 2011. The Government Programme drawn up in 2011 contained agreement on central government consolidation measures totalling EUR 2.5 billion over the period of the new parliament, with measures divided more or less evenly between revenue and expenditure. Due to the deteriorating economic situation, the 2012 government discussion on spending limits agreed a total of EUR 1.2 billion of additional consolidation measures for 2013–2015. The government's midterm budget review, ie the spring 2013 government discussion on spending limits, included agreement on several further consolidation measures targeting both revenue and expenditure. In net terms, these new measures are, however, much less substantial than the earlier ones.

The most significant single measure decided at the March 2013 spending limits discussion was a reduction in corporation tax from 24.5% to 20% from the beginning of 2014. This will reduce central and local government tax revenues by a total of around EUR 900 million, approximately 0.5% of GDP.

At the same discussions, the parties in the governing coalition also agreed to tighten taxation of capital income and cut support for business. Taken together, these measures will strengthen government finances by a good EUR 600 million, or around 0.3% of GDP. The government also agreed increases to a number of indirect taxes. Excise duties on tobacco, alcohol, sweets and non-alcoholic beverages will be raised in 2014 and 2015. Electricity taxation will also be tightened from the beginning of 2014. In total, the increases in indirect taxation will amount to around EUR 350 million, or 0.2% of GDP. In addition, the government already decided earlier to raise the duty on vehicle fuels from the beginning of 2014. The position of businesses will be eased somewhat by the decision to reduce the size of the already agreed windfall tax on energy production.

The government expenditure cuts timed for the forecast period will focus largely on central government transfers to local government. The savings targeted total upwards of EUR 500 million per annum, or almost 0.3% of GDP, over the years 2013–2015. Expenditure savings aimed at the different branches of administration will moderate growth in central government consumption expenditure. In addition, growth in local government

consumption and investment expenditure is assumed to slow as the municipalities seek to adjust their expenditure in response to the weakened economic situation. The municipalities are expected to raise their local tax rates in 2014 and 2015 in line with the long-term average rises.

The forecast takes no account of possible cost savings from structural reforms, due to the uncertainties relating to their assessment. Similarly, possible additional income from measures to combat the grey economy are also not taken into account.

Interest on central and local government debt is assumed to follow the trend in 10-year Finnish government bond yields. The yield percentage on the pension funds will more or less follow the reduced yield trend for government bonds and thus be smaller than in previous years. Social security contributions will grow, particularly in 2014, and they are assumed to grow by a total of around 0.4% over the forecast period, relative to GDP.

General government EDP debt[5] will be increased in 2013 and 2014 by crisis management assistance to the European Financial Stability Facility (EFSF). Overall, this will increase Finland's debt by some EUR 1 billion, or around 0.5 of a percentage point relative to GDP. As of 2012, a total of EUR 2.7 billion in assistance channelled through the EFSF, equal to around 1.4% of GDP, has been entered as EDP debt. The forecast also assumes there will be no privatisation of government assets.

Chart 8.

Non-financial corporations

The pace of growth in world trade faded to just 3% in 2012, only half the pace of the previous year. Demand in Finland's export markets grew even more slowly, at around 2.5%. Finnish exports of goods and services contracted by 1.4% in 2012 (Chart 8). Both items contracted at more or less the same pace. Since 2008, Finnish exports have grown considerably more slowly than the average for countries in the euro area. At the end of 2012, exports from the euro area were averaging 12% more than at the beginning of 2008. Over the same

[5] General government EDP (Excessive Deficit Procedure) debt refers to gross nominal consolidated general government debt. EDP debt is a key concept in reporting and fiscal policy monitoring under the EU's Stability and Growth Pact. The figure for the consolidated debt does not include mutual debt between the different segments of general government (central government, local government and the social security funds).

period, Finnish exports had contracted by over 7%.[6]

World trade growth will still be lacklustre in 2013, and growth in Finland's export markets will not gather pace from the previous year. Internationally, however, the economic cycle is expected to pick up in the second half of 2013, and in 2014 growth in Finland's export markets is expected to accelerate to around 5%.

Exports of Finnish goods and services will grow only slightly in 2013. Exports respond to demand growth in the export markets with a delay of around half a year, and in 2014 Finland's export growth will accelerate to around 3.5%. Over half of Finnish exports go to EU countries, where demand for capital and intermediate goods will grow slowly on account of unused capacity and subdued investment. Finnish exports will pick up in 2015 along with growth in the export markets. During the forecast period, the GDP share of exports will still remain smaller than before the recession.

Industrial raw material prices fell almost 16% in 2012, and there was also a strong drop in the pace of rise in the price of oil. Oil futures indicate the price of oil is expected to decline throughout the forecast period. Export prices for Finnish exporters' key competitors will decline in 2013 and rise at below 2% per annum in 2014–2015. Finland's export prices will also decline in 2013 due to the fall in oil and other commodity prices, and will thereafter rise at around 1.5% per annum in 2014–2015.

[6] Recent developments in Finland's goods exports are examined in Box 2, below.

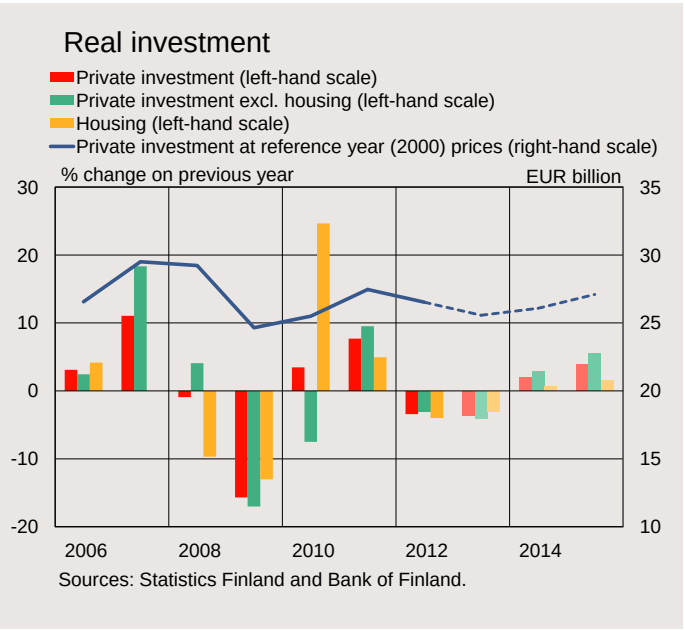
Weaker growth outlook for companies producing for the domestic market

Sluggish domestic demand meant the domestic market remained a demanding operating environment for companies producing for it in 2012. Retail trade growth slowed in 2012 with the fading of growth in real household incomes. Services output in 2012 was up from the previous year.

Increases in indirect taxes in 2013–2014 will drive inflation and undermine development of household purchasing power. Declining employment and real incomes will weaken household consumption in 2013, which will impact negatively on demand for the products of companies producing for the domestic market. In contrast, population ageing will increase demand for health and social services throughout the forecast period.

Investment in housing construction contracted by 4% in 2012. New-build construction was down almost 10%, and the number of building permits granted declined dramatically. Despite record-low interest rates that are expected to remain low, the current uncertainty and the decline in household purchasing power are slowing recovery in housing investment. Investment in housing will contract further this year and grow only slowly in the latter part of the forecast period (Chart 9). Construction of business premises and other construction will also be sluggish, due to the weak outlook for business output.

Chart 9.



Capital investment growth will pick up towards the end of the forecast period

Confidence in the Finnish business community was weak in 2012 amid a contraction in industrial output. The capacity utilisation rate declined and is now below its long-term average level. With the decline in housing investment and only upwards of a 1% rise in investment in machinery and equipment, private investment overall declined by around 1% in 2012 (Chart 9).

Capital investment will continue to contract in 2013. According to an investment survey by the Confederation of Finnish Industries, investment is still weighted predominantly towards repairs and renovations, and the uncertain outlook for demand means investment in expanding manufacturing capacity will account for an exceptionally small share of total investment.

Capital investment will begin to grow gradually in early 2014. Recommencement of investment during the forecast period will be bolstered by the availability and favourable price of funding, a gradual strengthening of external demand and a reduction in corporation tax from the beginning of 2014. The private sector investment ratio will be around 17% during the forecast period, which is considerably lower than before the financial crisis.

Declining demand for labour

The number of people in employment began to decline in the second half of 2012, and in the first quarter of 2013 the number of employed was 23,000 less than a year earlier. In addition, the number of people temporarily laid off rose in 2012. Employment declined particularly in construction and industrial output, but grew in sectors producing publicly funded services. The sluggish output foreshadows a decline in demand for labour in the private sector in 2013–2014, with a slight increase towards the end of the forecast period.

Labour productivity growth will accelerate gradually in the forecast period, being boosted by the decline in the number of employed at the beginning of the period. As the pace of output growth picks up in 2015, productivity growth will begin to return close to its estimated long-term balance.

Despite productivity growth, labour costs will grow faster than productivity. Unit labour costs will grow 1.7% in 2013, 1.1% in 2014 and 1.3% in 2015. The pace of growth in

Box 2.

Geographical and product structures of Finnish goods exports have changed

At the beginning of the new millennium, Finnish goods exports showed stronger growth than the economy overall. However, with the onset of the recession in 2008 nearly one-third of goods exports were curtailed and the value of exports has not been restored since, despite the recovery in world trade. One explanation offered for the slow pace of recovery has been the changes in the geographical and product structures of Finnish exports. The following analysis of developments in Finnish goods exports by country and product category is based on the foreign trade statistics of the National Board of Customs.

The value of goods exports started to trend upwards in 2004, with the rate of growth hitting more than 17% in 2006 (Chart A). However, this growth came to a halt in 2008, and in 2009 the value of exports plunged by more than 31%. In 2010 and 2011, roughly half of the collapse in the value of exports witnessed in 2009 was restored.

Roughly 70% of Finnish goods exports go to Europe and just under 50% of these are bound for the euro area. The euro area's share of Finnish exports has been steadily declining throughout the reference period (Chart B). The shares of the Middle East and North America have also contracted.

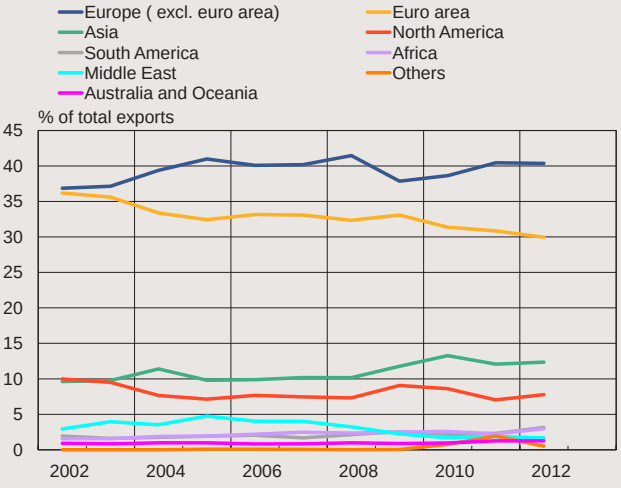
Chart A.

Developments in the value of Finnish goods exports

Source: National Board of Customs.

Chart B.

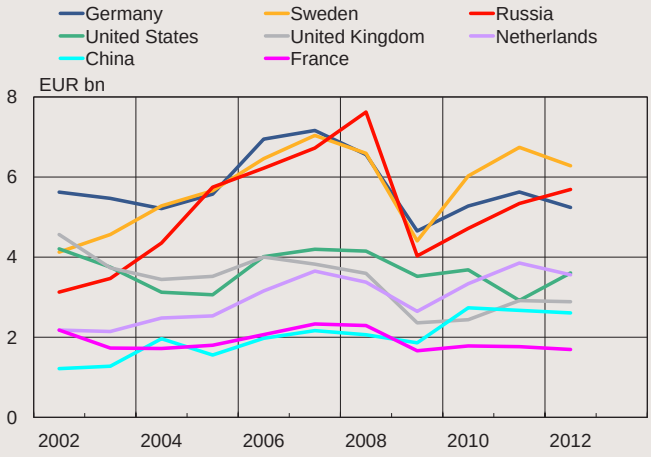
Geographical breakdown of the value of goods exports



Sources: National Board of Customs and calculations by the Bank of Finland.

Chart C.

Value of goods exports to key export markets



Source: National Board of Customs.

In the reference period, Europe-bound exports have made the strongest contribution to growth in the value of Finnish goods exports. In the peak years of goods export growth between 2004 and 2007, expansion of goods exports to both European non-euro area countries and euro area countries was especially pronounced. Nearly half of the 31% drop in the value of goods exports experienced in 2009 was related to a reduction in goods exports to non-euro area Europe, while one third was due to a contraction in exports to the euro area.

Finnish goods exports focused on neighbouring areas

In 2002, Finland's five key export markets were Germany, Sweden, Russia, the United States and the United Kingdom (Chart C). Of these countries, Germany and Sweden have continuously ranked among the three key export markets. Over the years 2002–2008, growth in the value of goods exports to Russia was stronger than to other countries. In contrast, the United Kingdom has since 2009 been overtaken by the Netherlands. China and France also each contributed more than 5% to the value of Finnish goods exports during the reference period.

The changes in export data by country reflect the structure of products exported to these countries. Over the years 2005–2008, the value of exports to both Germany and Russia was especially boosted by an increase in the value of motor vehicle and mobile phone exports, but exports of both of these products quickly came to a standstill in 2009. The major changes in the value of exports to Sweden, in turn, reflect changes in the value of exports of refined oil products and metals. In the reference period, changes in the value of US-bound exports mainly mirror changes in exports of refined oil products and cruise ships. The fall in the value of exports to the UK reflects the erosion of mobile phone exports, whereas the value of other goods exports has remained broadly unchanged. Towards the end of the reference period, exports to China have been driven especially by exports of raw material commodities.

New product structure of goods exports

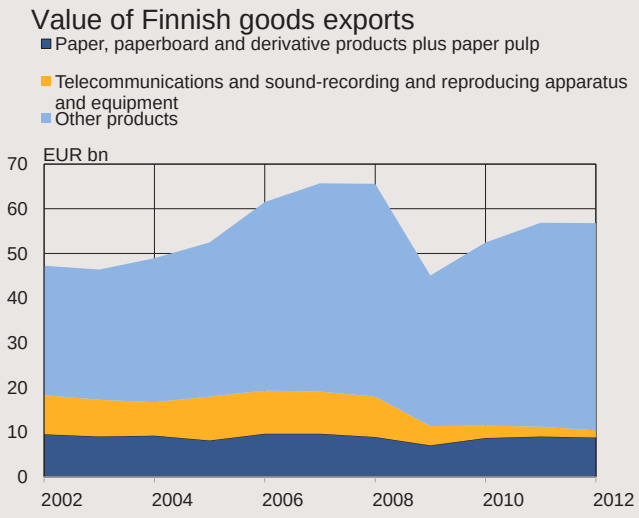
The value of goods exports was 20% higher in 2012 than in 2002. However, compared with the record year of 2008, the value of goods exports had declined by 13%. The product structure of Finnish goods exports has changed over the reference period (Chart D). At the start of the reference period, telephone and other telecommunications equipment represented the major product group, accounting for roughly 17% of total export value in 2002–2005. However, their share began to decline in 2006. In 2012, the export value of telephone equipment had fallen below 19% of the 2002 level, while their contribution to total export value

had plunged to just under 3%, or EUR 1.6 billion. The contribution of telephone and other telecommunications equipment exports to nominal GDP was 0.8% in 2012.

Another major export sector struggling with reconstruction, ie the paper industry, has succeeded in keeping its export value broadly stable since 2000. In the reference period, the export value of the paper industry fell by only 8%. Considering that nominal GDP increased by 25% over the same period, the GDP share of paper industry exports fell from 6½% to 4½%.

The export value of all other products increased by 60% between 2002 and 2012. Consequently, the GDP contribution of the exports of other sectors grew over the same period from 20% to roughly 24%, despite the decline in exports in the wake of the financial crisis in 2009. In the reference period, growth in the export value of other products reflects especially the export value of metal products (iron, steel and non-ferrous metals) and products of the chemical industry, which has almost doubled. In addition, the export value of oil products has expanded strongly during the past few years. In 2012, the export value of other products was only 3% lower than in 2008.

Chart D.



Source: National Board of Customs.

unit labour costs will slow in 2014, but the cost-competitiveness of Finnish output will not improve.

Households

Consumer confidence both in Finland's economy and in consumers' personal economic prospects has since mid-2011 been weaker than its long-term average. Despite this, private consumption has grown favourably relative to the prevailing circumstances. It was still enough to partially cushion the decline in economic growth in 2012, when there was a contraction in export and investment demand. During spring 2013, consumer confidence in the economy has weakened again (Chart 10), and this has been reflected in slower growth in retail sales.

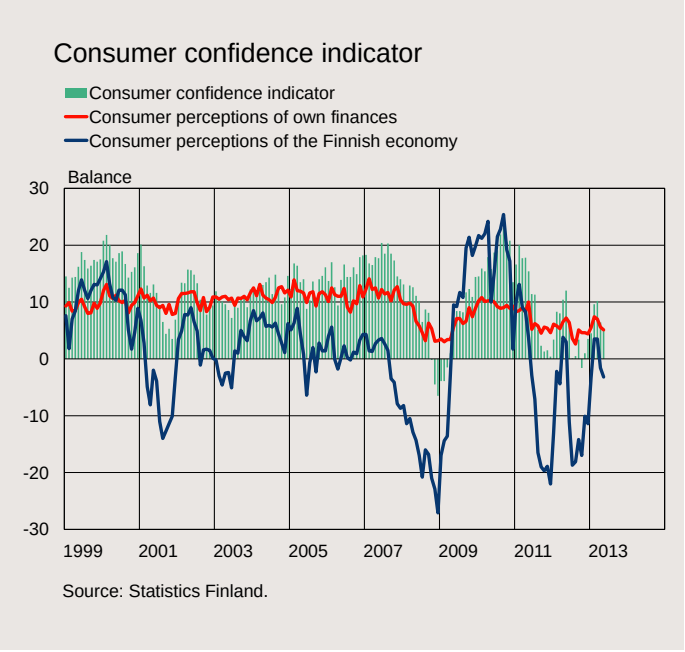
In 2013, household consumption will decline due to the deteriorating employment situation and sluggish development in wage-earners real earnings. Employment began to contract midway through 2012. In 2013, the number of employed will fall by 27,000 and will remain around the same level in 2014–2015.

Nominal earnings will rise in both 2013 and 2014 by almost 2%. With consumer prices rising at approximately the same pace, real earnings will remain more or less unchanged. As the number of employed goes down, households' real aggregate earnings will decline in 2013 by almost 1%. Only in 2015 will a brisker rise in earnings, slower inflation and a slight increase in employment push households' real earnings growth into clearly positive territory.

Disposable household income will also be cut in 2013 by tightening taxation. Such measures will include higher tax on capital income as well as income tax increases due to there being no adjustment of the tax schedules to take account of inflation. Moreover, a one percentage point increase in value-added tax at the beginning of 2013 will further reduce households' purchasing power.

All in all, disposable household income will grow this year and next nominally by the upside of 1% and contract in real terms by almost the same amount. Due to the sluggish development of real incomes, private consumption will contract in 2013 by almost 1%. In 2014, growth in real disposable household income will still be around zero, and only in 2015 will income begin to grow in real terms.

Chart 10.



Private consumption will grow only marginally in 2014 and by 1% in 2015.

The household savings rate fell dramatically in 2012, with consumption growth still relatively brisk despite the sluggish growth in incomes. The savings rate entered negative territory for the first time since 2008. In 2013, household consumption and disposable income will contract hand-in-hand, leaving the savings rate unchanged. In 2014, the savings rate will decline slightly, entering negative territory in 2015 (Chart 11).

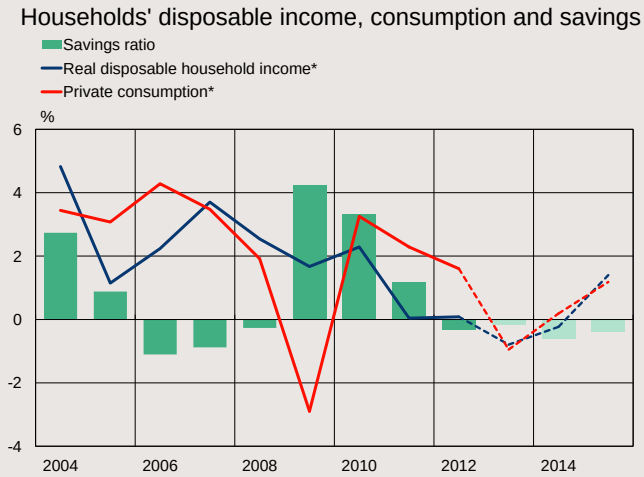
Households have continued to accumulate debt despite the weak development of the economy. In 2012, the ratio of household debt to disposable income rose to 119%. The low level of interest rates has kept debt-servicing costs low relative to disposable income.

After the outbreak of the financial crisis in the third quarter of 2008, house prices fell until the first quarter of 2009, since when they have returned to an upwards trajectory. The low interest rates on housing loans and short supply of new housing relative to the growing demand, particularly in growth centres, will sustain the slow rise in housing prices through the immediate years ahead, too.

GDP and employment

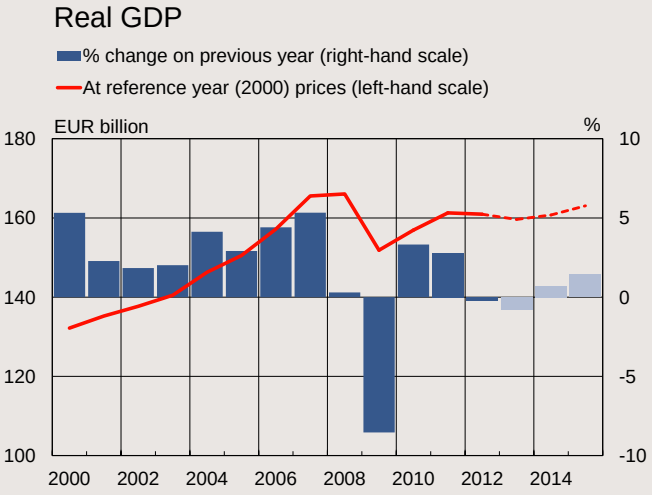
Finland's economy contracted considerably in 2012. According to Statistics Finland's flash estimate, GDP in the first quarter of 2013 was 2% smaller than a year earlier and will contract by 0.8% overall in 2013 (Chart 12). The

Chart 11.



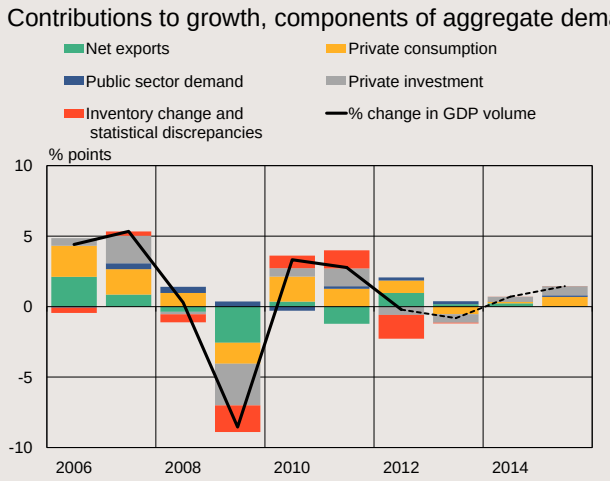
Households = households and non-profit institutions serving households
* % change on previous year
Sources: Statistics Finland and Bank of Finland.

Chart 12.



Sources: Statistics Finland and Bank of Finland.

Chart 13.



The chart is merely indicative. The GDP growth contribution of each demand item has been calculated on the basis of its volume growth and its value share in the previous year. The figures for 2013–2015 are forecasts.
Sources: Statistics Finland and Bank of Finland.

Finnish economy will begin to grow at a slow pace of 0.7% in 2014, but GDP growth will begin to approach its long-term trajectory only in 2015, with growth accelerating to 1.4%. GDP will not recapture its 2008 level during the forecast period.

In the years following the financial crisis, economic growth has been sustained by domestic demand, particularly private consumption (Chart 13). In 2013, private consumption will, however, begin to contract as household purchasing power weakens. Developments in all the other component items of aggregate demand will also be sluggish. However, towards the end of the forecast period, both export demand and investment will begin to recover slowly and the economy will gradually return to a more stable growth path.

Goods and services exports contracted in 2012 and will not yet grow at a very fast pace this year, as world growth will accelerate only in 2014. By 2015, export growth will, however, gradually pick up, to close to 5%. Due to sluggish export growth and the contraction in private consumption, growth in the exports of goods and services will be slow in 2013, which will decrease the current account deficit. The current account will, however, remain in deficit throughout the forecast period. The weakening trend in the terms of trade will come to a halt during the forecast period, and in 2015 there will be a slight improvement.

Private consumption will contract in 2013 and only begin to grow again in the second half of 2014 as the number of employed begins to rise again. Consumer purchasing power will weaken amid a decline in employment and only small pay rises in both 2013 and 2014. The household savings ratio will remain negative throughout the forecast period, and, despite general government consolidation measures, public consumption will increase slightly throughout the period.

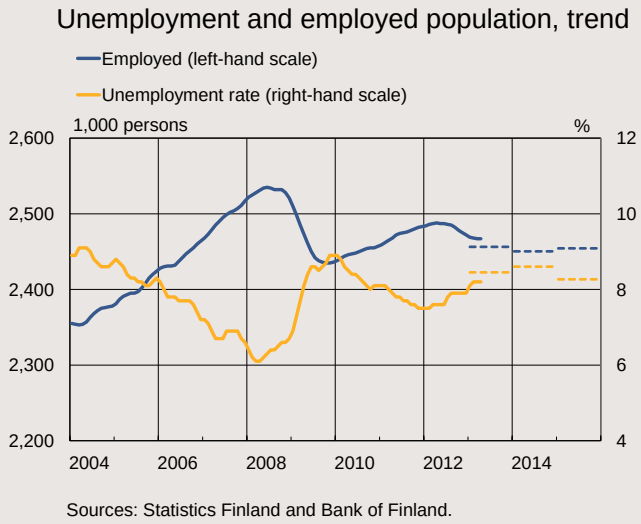
Investment demand will continue to decline in 2013, in response to the uncertain economic outlook, as both housing construction and private non-residential investment contract. As the economy returns to a growth trajectory, private investment will gradually gather pace in 2014. Investment typically recovers from a recession only with a lag, relative to the improvement in export demand. Now investment is recovering earlier than in a usual business cycle, in parallel with exports.

This is partly due to the changes in corporate taxation that were part of the government decision on spending limits taken in spring 2013. Housing construction will begin to accelerate gradually in the first half of 2014.

The number of employed began to decline already in the second half of 2012, due to the sluggish economy, and in 2013 employment will continue to weaken, by around 1% (Chart 14). Since beginning of the financial crisis, jobs have been lost in manufacturing and construction, but new jobs have come in public services, particularly in nursing and health care services. But here too, the number of jobs began to decrease in the first quarter of 2013, and due to the weak economic situation of local government, labour demand will not increase in the immediate years ahead.

The number of employed will begin to increase gradually in the first half of 2014, but the level of 2012 will not be reached during the forecast period. The labour force, too, will continue to contract, due to population ageing.[7] There is a risk that labour force participation will decrease, not only among older age cohorts but also among the young. A protracted recession would mean that some young people will be permanently excluded from the labour market.[8] The unemployment rate will rise to 8.5% in 2013. It is expected to recede again in 2015 as economic growth returns to normal and the labour force contracts as a result of people exiting the labour market into retirement.

Chart 14.



Corporate profitability will improve only moderately in the forecast period, but companies are still expected to avoid large-scale redundancies of skilled labour. Job losses will thus remain small, relative to the weakness of the economy. The divergent trends in employment and output will, however, be reflected in slower productivity growth (Chart 15). In 2013 and 2014, productivity growth will still be close to 0.5% on average, and the pace will approach its long-term average of 1.5% only in 2015.

The subdued pace of growth in productivity in recent years is mainly due to weaker productivity growth in manufacturing. Productivity has plummeted particularly in the

[7] On the impact of ageing on the labour force, see Box 3 below.

[8] See Kinnunen & Mäki-Fränti 'Labour supply and population cohorts: effect of the business cycle on labour market attachment', below p. 61.

Box 3.

Demographic factors obscuring the picture of labour supply

In recent years, demographic shifts, and particularly the gradual exit of baby-boomers from the labour force, have hampered the interpretation of labour market developments. Population shares have been undergoing rapid change, the differences in labour force participation rates (LFPRs) between age cohorts are large and, in addition, the LFPR for older cohorts has trended upwards, making it hard to identify the overall impact of these determinants on labour market data. At the same time, it has also become hard to clearly identify labour market development trends related to the business cycle.

As those born at the end of the 1940s have already mostly retired, their large share of the working-age population (aged 15–74) has reduced the average LFPR. The magnitude of the changing population structure for average LFPRs can be measured by disaggregating the change in the LFPR into variation due to the changing age structure and variation within cohorts. The role of the changing population structure in the evolution of the LFPR is remarkable.[1]

The changing population structure has been reducing the LFPR since the early 1990s. The effect of population structure on the annual change in the rate was small until the end of the decade, but in the first post-millennium decade this effect expanded to –0.3 of a percentage point, already reaching –½ of a percentage point in 2011 and 2012.

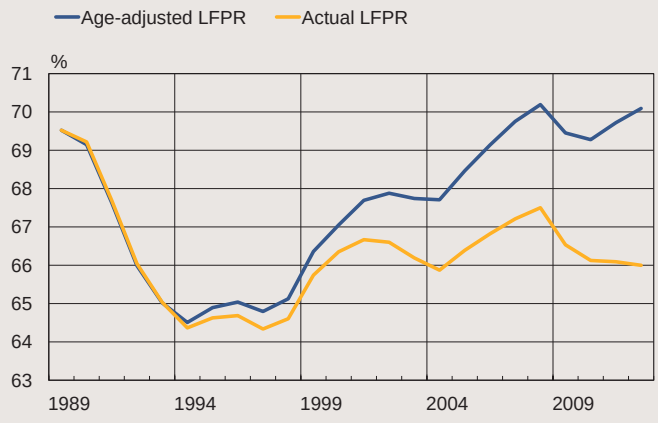
If the LFPR is examined since the beginning of the 1990s excluding the effects of demographic change, the overall picture of labour supply changes considerably (Chart). An analysis of the LFPR based on developments within age groups suggests that labour market participation was already in 2005 nearly as high as prior to the recession of the 1990s. Annual variation also changes to some extent. For example, the mini-recession in the early 2000s did not cause the age-adjusted LFPR to decline. This type of examination also makes the development of the LFPR in 2012 appear much more favourable than suggested by the statistical data.

Demographically adjusted data provide a different picture of the average LFPR from official labour market statistics as regards the employment effects of the economic crisis. In 2008–2012, the LFPR declined by 1.2 percentage points compared with the situation in

[1] *For more details on the calculation, see Kinnunen & Orjasniemi (2013) 'Työvoiman tarjonta – tilastoluvut ja väestörakenteen muutos'. Kansantaloudellinen aikakauskirja 2/2013 ('Labour supply – statistical data and demographic change'. Finnish Economic Journal 2/2013, forthcoming).*

Chart.

Official and age-adjusted labour force participation rate



Sources: Statistics Finland and calculations by the Bank of Finland.

2007. Meanwhile, the demographically adjusted 'counterfactual' LFPR rose by 0.3 of a percentage point (Table). Thus population ageing had lowered the LFPR by 1.6 percentage points.

The significant negative contribution of demographic shifts to the LFPR during the financial crisis is due, mainly, to the diminishing size of the cohorts of prime working age. As the LFPR for these cohorts is higher than for others, the change in cohort size is highly relevant to the labour force.

The positive effect from the internal evolution of age groups is due almost entirely to a rise in the LFPR for over-55-year-olds. The LFPR for under-44-year-olds has declined, while their population share has decreased. There are no major differences between genders. However, the LFPR for women under 35 years of age has fallen by more than that for men. On the other hand, the LFPR for women aged 55–64 has risen faster than that for men.

During the financial crisis, one basic labour market trend has been a declining LFPR for young cohorts. The demographically adjusted contraction in the LFPR for under-35-year-olds has lowered the LFPR in the economy by 0.7 of a percentage point. This is offset by an increase of 0.9 of a percentage point in the LFPR for those aged over 55. We can estimate that, if the LFPR for baby-boomers had evolved as the LFPR for the preceding generation after 2007, there would have been about 20,000 fewer persons in the labour force in 2012 than there actually were. Similarly, if under-35-year-olds had participated in the labour force as in 2007, there would have been an additional 25,000 persons in the labour force in 2012.

The primary objective of economic policy has already for a long time been to increase labour supply. These examinations emphasise the fact that demographic shifts may materially distort the picture of labour market dynamics. For policy choices, it is particularly important to see not only the role of age-related factors but also the underlying trends. The challenge to increase the labour force is considerable due to the marked decline in young people's labour force participation during the economic crisis.

Table.

Determinants of change in labour force participation rates 2007–2012, % points

Group		*Change in population share*	*Change in LFPR*	*Other factors*
Men	*15–24*	*–0.1*	*–0.1*	*0.0*
	25–34	*0.2*	*–0.2*	*0.0*
	35–44	*–0.7*	*0.0*	*0.0*
	45–54	*–0.4*	*0.2*	*0.0*
	55–64	*0.1*	*0.2*	*0.0*
	65–74	*0.1*	*0.1*	*0.0*
Women	*15–24*	*–0.1*	*–0.1*	*0.0*
	25–34	*0.2*	*–0.3*	*0.0*
	35–44	*–0.7*	*–0.1*	*0.0*
	45–54	*–0.4*	*0.0*	*0.0*
	55–64	*0.2*	*0.4*	*0.0*
	65–74	*0.0*	*0.2*	*0.0*
Total		*–1.6*	*0.3*	*0.1*

Change in LFPR –1.2%.

Sources: Statistics Finland and calculations by the Bank of Finland.

manufacture of electrical and electronics products, but productivity growth has been weak also in the forestry and metals industries. Productivity is well below the level of 2008 not only in manufacturing but also in public services (Chart 16).

The productivity level of 2008 will be recaptured only towards the end of the forecast period. In terms of the labour market, the weak growth in productivity is an indication that there may still be capacity underutilisation in the corporate sector. If the recession drags on and companies begin to cut costs, they may be tempted to cut their labour force more drastically. Correspondingly, a pick-up in the economy will not be reflected fully in employment if companies have an unutilised reserve of labour at their disposal. As a result, the unemployment rate may remain high for some time.

Chart 15.

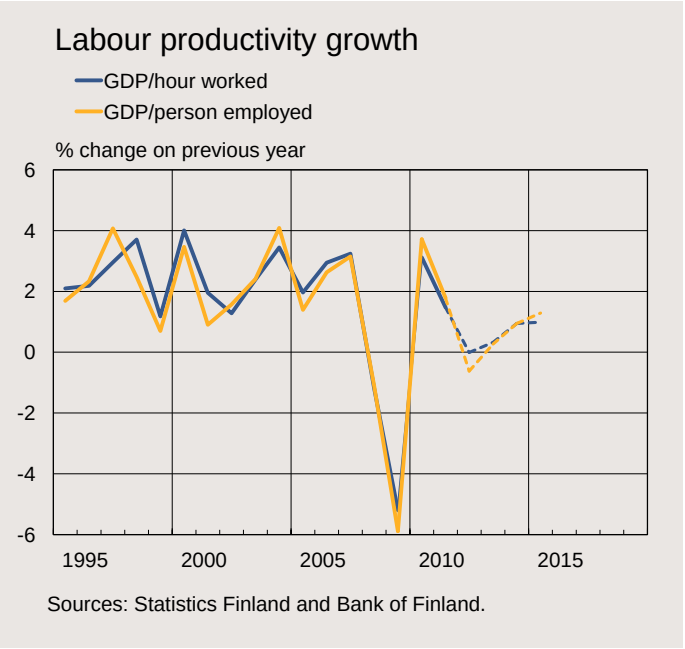
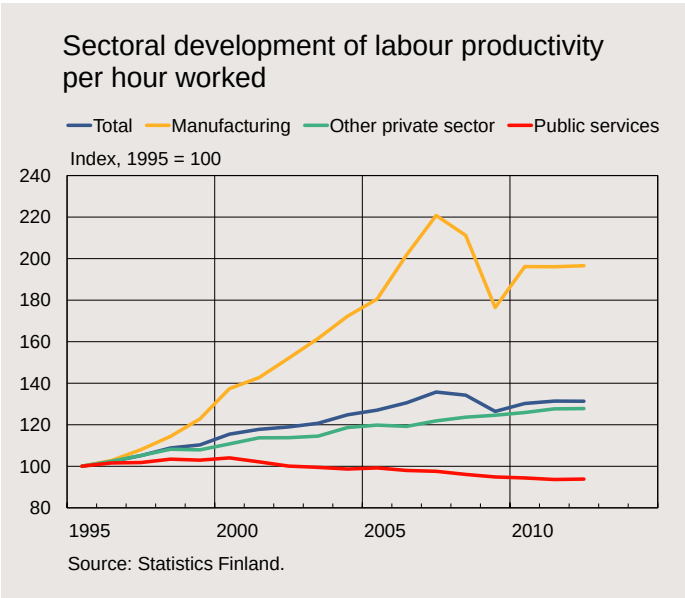


Chart 16.



Public finances

Due to the downturn in total output in 2012, the general government financial balance deteriorated substantially more than was previously assessed. The general government deficit deepened to 2.3% of GDP, increasing by over 1 percentage point from 2011 (Table 4). The balance of central and local government finances deteriorated markedly, as revenue growth moderated and expenditure grew at a substantially faster pace than nominal GDP. Corporate tax accruals, in particular, and income on assets contracted sharply, while unemployment-related expenditure increased strongly.

The central government financial balance deteriorated to –3.8% of GDP. The local government deficit deepened also, to over 1% of GDP, ie close to the

Table 4.

General government financial balance and debt, % of GDP

% of GDP	*2011*	*2012*	*2013f*	*2014f*	*2015f*
General government net lending	***–1.1***	***–2.3***	***–2.5***	***–2.5***	***–2.2***
Central government	***–3.4***	***–3.8***	***–3.3***	***–3.0***	***–2.7***
Local government	***–0.6***	***–1.1***	***–1.2***	***–1.3***	***–1.3***
Social security funds	*2.8*	*2.6*	*2.0*	*1.9*	*1.9*
General government debt (EDP)	***49.0***	***53.0***	***56.9***	***59.8***	***61.8***
Central government	*42.0*	*43.1*	*46.0*	*47.8*	*49.0*
Total tax ratio	*43.4*	*43.5*	*44.4*	*44.6*	*44.6*
GDP, % change	*2.8*	***–0.2***	***–0.8***	*0.7*	*1.4*

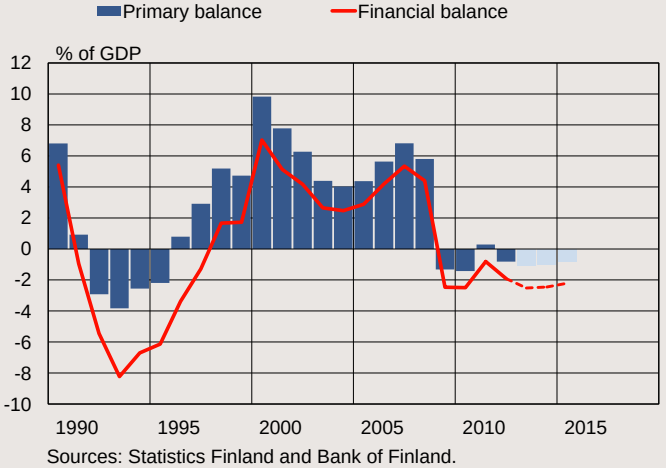
f = forecast
Sources: Statistics Finland, State Treasury and Bank of Finland.

level last recorded during the mid-1990s. The surplus on the social security funds contracted, due to a decrease in income on assets and rapid growth in pension expenditure.

Despite the tightening of fiscal policy, the significantly deteriorating economic situation will substantially constrain the effectiveness of fiscal consolidation. Due to the deteriorating economic situation, the general government financial balance will barely improve in the immediate years ahead. Consequently, the general government deficit will remain high in the review period, amounting to 2.2% of GDP in 2015. The central government deficit will contract to 3% of GDP in the review period, on the back of tax increases and expenditure savings. At the same time, however, the surplus on the pension funds will decline considerably and the local government position will weaken further.

Fiscal tightening will reduce the central government deficit by almost 1 percentage point of GDP in 2013. However, as a result of declining total output and muted tax base dynamics, tax receipts will only grow modestly (Chart 17). Weak dynamics in tax bases

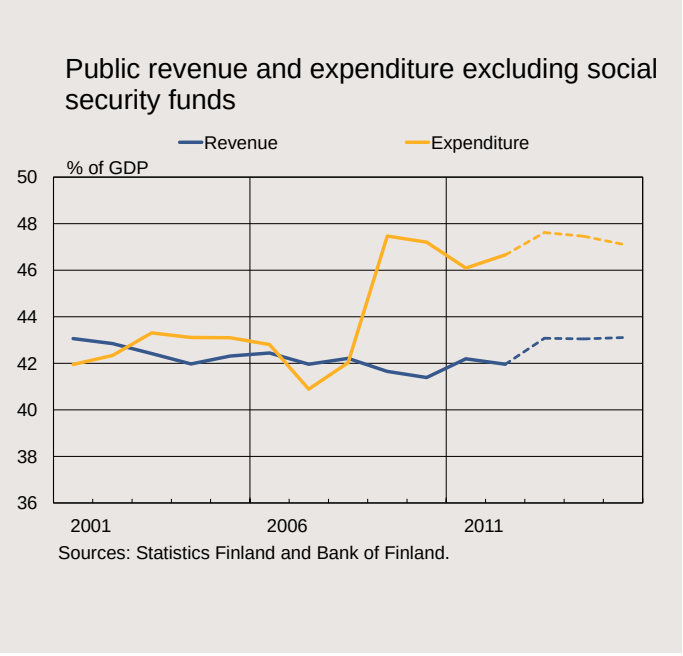
Chart 17.



pivotal to tax receipts, ie a substantial deterioration in employment and a more moderate nominal growth in private consumption, will materially impair the effectiveness of central government consolidation measures.

Modest growth in tax receipts in the early part of 2013 is also evidenced by the Tax Administration's monthly cash figures. Corporate tax accruals, in particular, have continued to decline during the early months of the year, but tax revenues on earnings and capital income have also grown only mutedly. In addition, fading private consumption growth is reflected in indirect tax receipts. For instance, VAT accruals have grown only slightly, despite an increase in VAT rates at the beginning of 2013.

Chart 18.



Central and local government expenditure growth will fade in 2013, with weaker growth in employee compensation and investment expenditure (Chart 18). Central government expenditure growth will also be dampened by agreed expenditure savings, such as cuts in central government transfers to local government. However, the slower growth in consumption and investment expenditure will not significantly dampen total expenditure growth, as expenditure related to pensions and unemployment will increase at a rapid pace. Pension expenditure will be boosted by a substantial increase in the number of pension recipients and sizeable index increments in 2013.

All in all, the central government deficit will contract in the review period by over 1 percentage point, to 2.7% of GDP in 2015. Taxation will only tighten marginally in 2014 and 2015. The reduction in the corporate income tax rate in early 2014 will cut tax receipts by about 0.5 of a percentage point relative to GDP. However, the agreed expenditure savings and a slight cyclical improvement will strengthen central government finances in 2014 and 2015. The primary balance will continue to post a deficit throughout the review period and will stand at –0.8% of GDP in 2015.

The position of local government is estimated to weaken somewhat further in 2014, as the agreed cuts in central government transfers to local government will reduce local government income. However, total expenditure by local government will

grow at a significantly slower pace than before, as municipalities adjust their activities to the weaker income dynamics. Growth in total expenditure by local government will moderate to just over 3%.

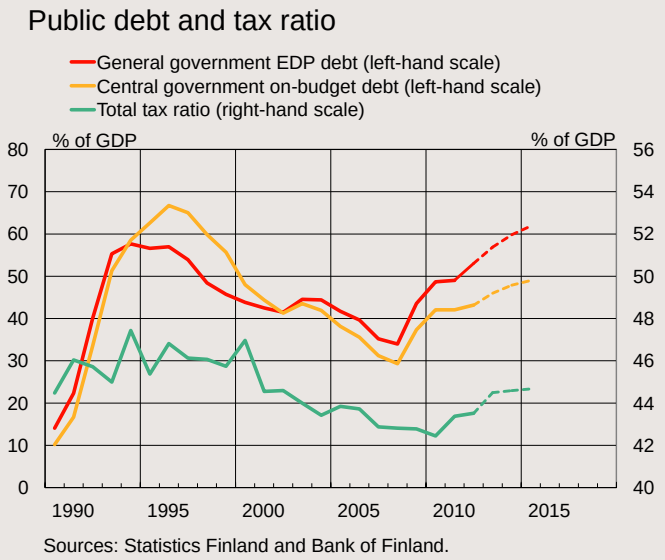
The surplus on the pension funds will contract gradually to around 2%, as increases in pension contributions will not be enough to compensate for the rapid rise in pension expenditure and lower return on pension fund investments. Pension expenditure will grow by 6% on average per annum in the review period.

In 2013, the tax ratio will rise, influenced by tightening indirect taxation (Chart 19). Income taxation will also tighten, as adjustments to tax scales to compensate for inflation and higher earnings will not be implemented. In 2014 and 2015, the tax ratio will remain roughly at the level of 2013.

Expenditure will grow significantly faster than GDP throughout the review period. The expenditure ratio will rise to 57.8% by 2015, increasing by a total of 1.9 percentage points from 2012. The rise in the expenditure ratio will be particularly striking in 2013, with expenditure growth substantially exceeding nominal GDP growth.

Due to growth in central and local government debt, the consolidated general government EDP debt will grow at a brisk pace and the debt ratio will rise to almost 62% in 2015. Consequently, at the end of the review period, the general government debt ratio will exceed the 60% reference value specified in the Stability and Growth Pact (SGP). Central government on-budget debt will also rise further in the review period. However, the level of on-budget debt will be significantly lower than the level of EDP debt, due to its smaller coverage (see Box 4). The general government deficit, in turn, is estimated to remain comfortably below the 3% reference value of the SGP in the immediate years ahead.

Chart 19.



Box 4.

Composition of Finland's public debt

Finland's general government has continued to accumulate debt at a rapid pace since the recession year 2009. Even so, Finland's public debt is still among the smallest in the euro area. In response to the European economic crisis and the following sharp increase in general government debt accumulation, the framework for European economic policy cooperation has been strengthened in recent years and the related rules have been considerably tightened.

The rules pertaining to European fiscal policy cooperation and coordination are defined in the Stability and Growth Pact (SGP). One of the key rules of the reinforced SGP concerns public debt. General government debt is regarded as excessive if it exceeds the reference value of 60% of GDP. In such a case, the country concerned must take sufficient action to bring its debt ratio back to a sustainable level within a given deadline.

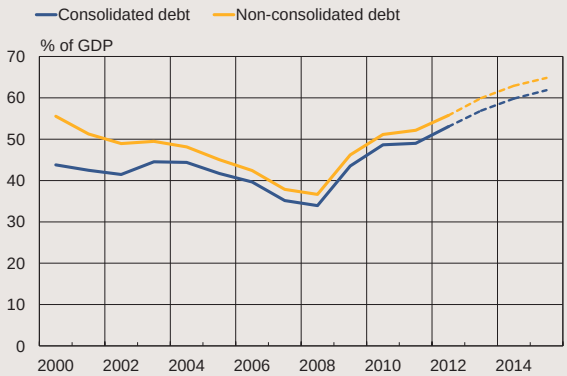
In connection with strengthening the rules, the sanctions have also been tightened. If an excessive debt is deemed to exist and the country has not, despite the European Commission's instructions and requirements, taken corrective action to restructure its economic policy within the given deadline, the Commission may, as a measure of last resort, impose a fine amounting at maximum to as much as 0.5% of the country's GDP.

Finland's general government debt is among those threatened with exceeding the 60% reference value in the immediate years ahead. It is therefore useful to examine how the various debt concepts differ from each other and what factors, besides central and local government financial imbalances, increase debt. In this context, the rapid rise in general government debt and deteriorating fiscal conditions in Finland have gained increasing attention in economic policy debate.

There are several ways to define public debt. The key criterion of debt used in the European fiscal framework is general government consolidated debt at nominal value, or EDP (Excessive Deficit Procedure) debt. This refers to the combined debt of central government, local government, joint municipal authorities and the social security funds, excluding intra-debt items. In Finland, EDP debt figures for central government, local government and the social security funds are calculated by Statistics Finland. Only central government and the municipalities are significantly indebted in Finland, and the consolidation item consists mainly of pension

Chart A.

Consolidated and non-consolidated general government EDP debt



Sources: Statistics Finland and calculations by the Bank of Finland.

fund investments in Finnish government bonds. The concept of non-consolidated EDP debt refers to debt that includes debt items between the sub-sectors of general government (Chart A).

Central government EDP debt is a broader concept than basic debt related to the funding of the Budget (on-budget debt). On-budget debt can be regarded as debt that central government borrows in reality on the market and that generates direct interest expenses to central government. Meanwhile, in addition to on-budget debt, central government EDP debt also includes imputed debt not directly connected with the funding of the Budget. Such items include government guarantees, life-cycle projects and collateral relating to debt management by central government. On the other hand, debt pertaining to extra-budgetary funds is included in both the basic on-budget debt and central government EDP debt. Statistics Finland calculates EDP debt for Finland in accordance with Eurostat's decisions and guidelines.

According to the State Treasury, the stock of on-budget debt (ie debt of central government institutions and funds) was EUR 83.9 billion at the end of 2012, while consolidated central government EDP debt was EUR 90.6 billion. Hence, there is a difference of about EUR 6.7 billion (over 3% of GDP) between the concepts of central government EDP debt and on-budget debt. The difference has increased especially sharply in recent years (Chart B).

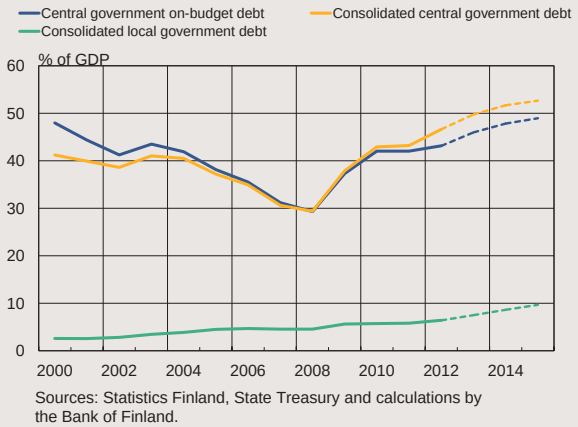
A key factor that increases EDP debt is the guarantees granted to the European Financial Stability Facility (EFSF). In 2012, a total of EUR 2.7 billion was included in EDP debt as crisis management-related measures. Based on a decision by Eurostat, guarantees granted to the EFSF are recorded in debt at the time a country takes out financial support from the facility. EDP debt will still grow by about 0.5 of a percentage point relative to GDP due to the guarantees already decided on. Crisis management measures under the European Stability Mechanism (ESM), the successor of the EFSF, are not included in EDP debt.

One material factor whose importance has been on the increase in recent years relates to the management of central government debt. Central government receives collateral deposits from derivatives contracts used in risk management, which are recorded in EDP debt. A third key factor is the nuclear waste management fund to which nuclear power companies make payments for costs arising from nuclear waste management. The capital of the fund is regarded as central government debt. At present the fund capital totals over EUR 2 billion.

Public investment, such as road and infrastructure projects,

Chart B.

Consolidated central and local government EDP debt and central government on-budget debt



Sources: Statistics Finland, State Treasury and calculations by the Bank of Finland.

is often carried out through public-private partnership (PPP) projects, where a private company is usually responsible for the execution of the whole project. In most PPP projects a private service provider is also responsible for maintenance, which can take from many years to many decades. One of the advantages of PPP projects is that their execution does not require large initial investment from central or local government, with all costs normally being distributed as service costs for the whole contract period. The costs of the project are, however, recorded in central government EDP debt.

Debt of extra-budgetary universities and the state-owned investment company Solidium are also included in central government EDP debt, and from the beginning of 2013 so is the debt of the national broadcasting company YLE. At present, however, these items have only a minor impact on growth in central government EDP debt. Coins in circulation also increase EDP debt by over 0.2 of a percentage point relative to GDP. Other possible factors increasing EDP debt include securitisation operations and circulation of liabilities not belonging to the public sector, but these factors are not material for Finland at present.

Consolidated local government EDP debt has also increased rapidly in recent years. In 2012, it stood at EUR 12 billion (about 6% of GDP), while non-consolidated local government EDP debt amounted to EUR 13.4 billion. Hence, the internal debt of the local government sector totalled EUR 1.4 billion. The consolidation item has been EUR 1–1.5 billion in recent years. Besides central government, local government also has life-cycle projects, which are recorded in local government EDP debt.

From 2008 to 2012, central government EDP debt increased by about EUR 7 billion on average per annum. Over these four years, consolidated central government debt grew by over EUR 36 billion. Local government EDP debt also grew strongly over the same period, by about EUR 4 billion. Hence, total general government EDP debt increased by over EUR 40 billion, ie about 20% of GDP. The increase of debt has been strong, as in 2008 general government debt totalled EUR 63 billion. If general government EDP debt increases in the next few years at roughly the same pace as in the past few years, EDP debt will almost double by 2015 and will exceed the 60% reference ratio set out in the Stability and Growth Pact.

External balance

Finland's current account has been in deficit now for two years in a row, having weakened substantially since the early years of the new millennium. Indeed, the era of exceptionally large current account surpluses would seem to be over. During the forecast period, the current account will improve somewhat, but will remain clearly in deficit. Thus the Finnish economy will continue to accumulate external debt during the forecast period.

In 2012, the current account deficit was EUR 3.6 billion. In the current year it will contract slightly, to around EUR 3 billion, or 1.5% of GDP (Chart 20). Of this total, the deficit on the goods and services account will be around EUR 1 billion, or 0.5% of GDP.[9] The rest of the deficit will accrue from current transfers abroad.

The current account deficit will shrink by around EUR 2.6 billion during the forecast period, equal to 1.2% of GDP in 2015. The contraction in the deficit is due to the sluggishness of domestic demand, which will subdue import growth. The current account will also be bolstered by a gradual increase in exports in response to the recovery in international trade.

The terms of trade – the relation between export and import prices – will remain more or less unchanged through the forecast period. The declining trend in the terms of trade that continued throughout the past decade already came to a halt in 2012. In 2013–2015,

Chart 20.

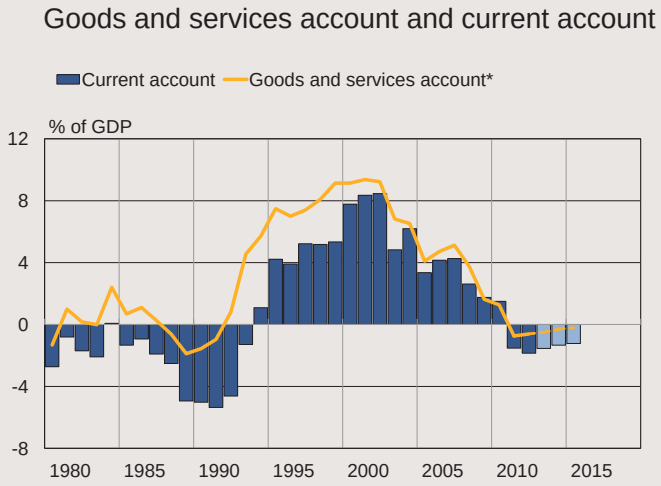
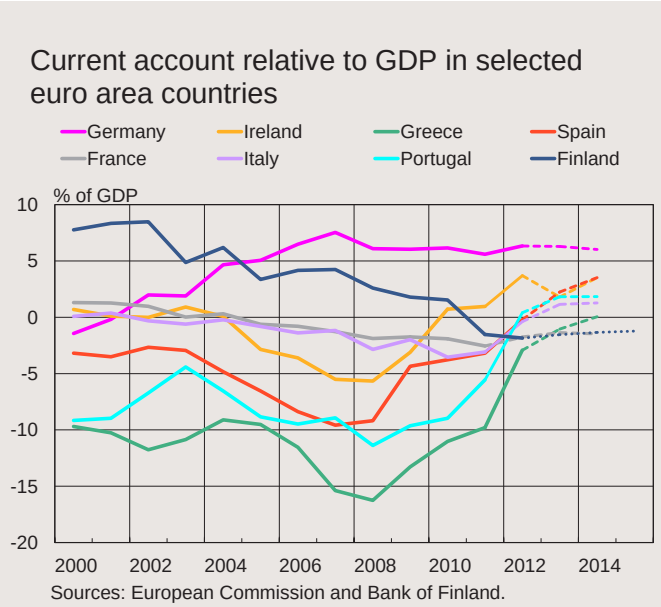
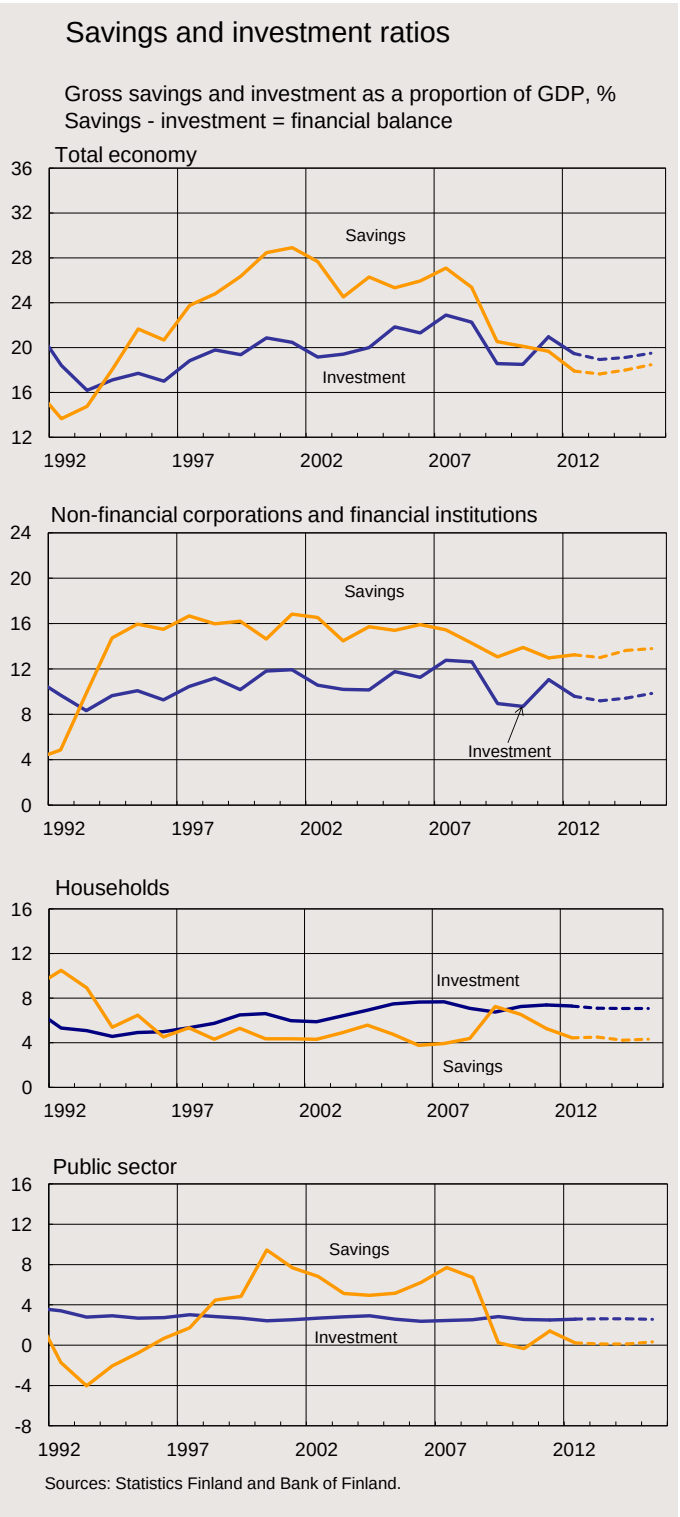


Chart 21.



[9] Box 5 presents an alternative way to examine the balance of exports in goods and services.

Chart 22.



price developments in raw materials and industrial goods will continue to be moderate, with the rise in both import and export prices averaging just 1% per annum in the forecast period.

The annual deficit on the current transfers account will remain unchanged throughout the forecast period, at approximately EUR 2 billion. The income account, too, is expected to remain essentially unchanged in net terms, as corporate earnings are expected to develop similarly both in Finland and abroad.

Compared with the situation in many euro area countries, Finland's current account trend is clearly out of step (Chart 21). Finland's current account has weakened substantially, whereas the current accounts of the crisis countries, in particular, have rapidly improved.

Viewed sector by sector, the current account deficit stems from the weak financial position of both the household sector and the public sector (Chart 22). The low level of interest rates will ensure household investment savings remain negligible in the forecast period. Public sector investment savings will also remain weak throughout the forecast period.

Non-financial corporations have a funding surplus, a consequence of their low investment ratio. During the forecast period, business profitability will improve slightly, but the investment ratio will barely rise at all. Hence corporate sector investment savings will increase and the current account deficit contract somewhat.

Box 5.

Foreign trade statistics based on value added reallocate country-specific trade surpluses and deficit

Technological advances, liberalisation of international trade and lower transportation costs have facilitated an increasingly extensive geographical distribution of production. The fact that companies' production activities are no longer typically located in only one country has boosted international trade in intermediate goods and services. According to OECD estimates, in 2009, intermediate inputs represented 56% of global goods trade and 73% of services trade, such as software. As intermediate goods may cross borders several times in the various stages of the production process, the value of intermediate goods is recorded multiple times in foreign trade statistics based on gross value.

The recording of intermediate goods on a gross basis makes it impossible to conclude from conventional foreign trade statistics based on customs statistics in which country the value added of products is generated. This problem does not, however, occur in the new statistics on foreign trade in value added (TiVA), where the aim is to trace the added value generated by each sector and country at the different stages of the production process of a product. Value added is calculated as the difference between the export price of a product and the cost of domestic and foreign intermediate goods and raw materials used in its manufacture.

The following analysis is based on the joint OECD-WTO database on *Trade in Value Added*, which was first released in January 2013. The database presents indicators for 57 economies and 32 sectors on the value added in exports and imports covering the years 1995, 2008 and 2009.[1] The OECD-WTO database gives a more accurate picture than the conventional gross-based foreign trade statistics in the following three areas: country-specific trade surpluses and deficits are reallocated, export output's dependency on imported inputs is highlighted and the significance of production chains as channels of contagion for disturbances becomes apparent.

Global imbalances and bilateral trade balances

The OECD-WTO statistics on foreign trade in value added provide a different picture of trade flow imbalances than the statistics calculated on a gross basis. Foreign trade statistics calculated using the value-added method redistribute the bilateral trade surpluses and deficits, even though the total balance of trade of a country is naturally the same as shown by trade flows calculated on a gross basis.

The differences can be illustrated with the following hypothetical example. Let us assume that tyres are manufactured in Russia for the Finnish market. Crude rubber needed for the manufacture of tyres is imported to Russia from Vietnam at a cost of EUR 50. Production costs in Russia total EUR 40, and a ready-made tyre is sold to Finland at a price of EUR 90. Calculated on a gross basis, Finland's balance of trade with Russia is the difference between the value of exports and imports, in which case the balance of trade in the trade in tyres shows a deficit of EUR 90 for Finland. If calculated on a trade in value added basis, the trade deficit with Russia is only EUR 40, as the value-added method accounts also for the import of intermediate inputs from Vietnam. Accordingly, Finland's balance of trade with Vietnam shows a deficit of EUR 50, calculated with the value-added method, whereas on a gross basis, the trade balance is zero.

[1] *For a description of the database and the methodology, see http://www.oecd.org/industry/ind/measuringtradeinvalue-addedanoecd-wtojointinitiative.htm.*

Table.

Hypothetical example of Finland's trade balance with Russia and Vietnam in the trade of tyres

Finland's balance of trade	*Russia*	*Vietnam*	*World*
Gross	*–90*	*0*	*–90*
Value added	*–40*	*–50*	*–90*

Sources: OECD and WTO.

For a country that is located at the end of the production chain and is exporting final products, the balance of trade calculated on a gross basis is usually in surplus relative to a trade partner that purchases the final products, whereas calculated with the value-added method, the bilateral surplus is typically smaller. If a country is at the beginning or end of global production chains – exports unprocessed raw materials or imports final products – gross-basis statistics do not differ from statistics on trade in value added.

On a value-added basis, the United States' trade deficit with China is 25% smaller than on a gross basis. The final products are assembled in China, usually from components manufactured in other countries. The manufacturing price of high technology products is, however, recorded in full as exports of Chinese high technology, even when the products are only assembled in China and, for example, the necessary software is designed in the United States. Hence the value of high technology exports does not actually reflect the importance of the technology industry to the Chinese economy.

Exports are dependent on imports

Statistics on trade in value added highlight the dependency of export production on imported inputs, as value added is also calculated for imported inputs – like the import of raw rubber from Vietnam in the above example – and the value added is deducted from the value of gross exports. The value of a country's gross exports can thus be divided into value added generated domestically and value added generated abroad.

In a world of multi-stage supply chains and owner structures, a trade policy that restricts companies' entry into the market for foreign intermediates will weaken their competitiveness and the whole country's competitive position. Because products are transferred across borders within a company for further processing, import duties on intermediate inputs do not encourage companies to invest in a country that is imposing the restrictions, even if the purpose of the restrictions was to protect the domestic manufacturing sector from foreign competition.

The spread of disturbances along the production chain

Statistics prepared on a value-added basis provide more detailed information on the spreading of disturbances in foreign trade than do gross statistics, because trade figures calculated on a value-added basis show the contagion channels of possible shocks, for example between countries that produce raw materials and final products and that do not engage in bilateral trade. These countries – like Vietnam and Finland in the above example – are nevertheless interlinked via the global production chain.

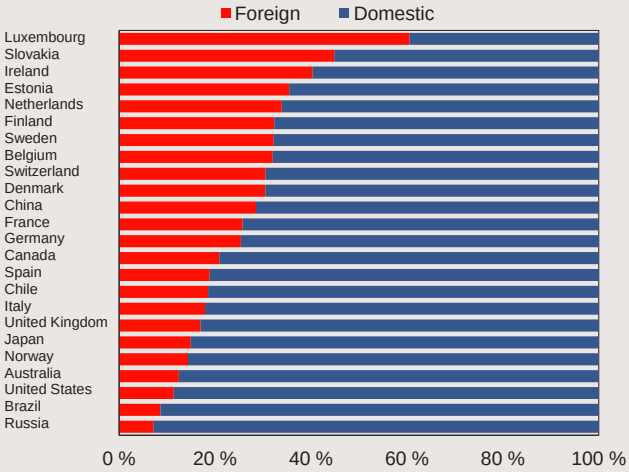
World trade has in recent decades become more sensitive to changes in the demand for final products that are rapidly channelled through global supply chains. As the production of raw materials, the manufacture of intermediate goods and final products and product development all take place in different countries, the value of foreign trade has grown at a faster pace than the global economy as a whole, particularly in recent decades. Statistics on foreign trade in value added reveal the global supply chains and may help decision-makers choose the correct policy options.

Of the value of Finnish gross exports, one third is of foreign content

Finland belongs to a group of small and developed open European economies of whose gross exports a significant share contains added value of foreign origin (Chart A). The higher the foreign content of exports, the more important imports are for exports and the higher the integration of the countries into global value chains. Of the value of Finland's gross exports, 68% is of domestic content and 32% of foreign content. In raw-material-producing countries operating in upstream production, the foreign content in the value of gross exports is only approximately 10%.

Chart A.

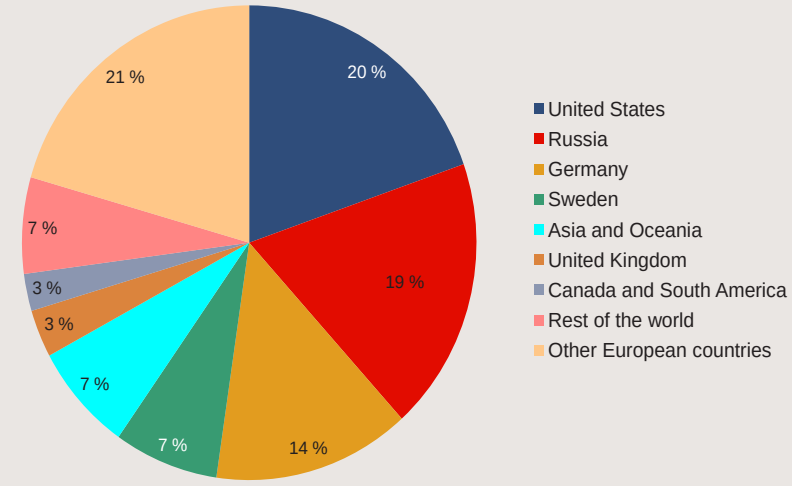
Share of domestic and foreign content in the value of gross exports by selected countries, 2009



Sources: OECD and WTO.

Chart B.

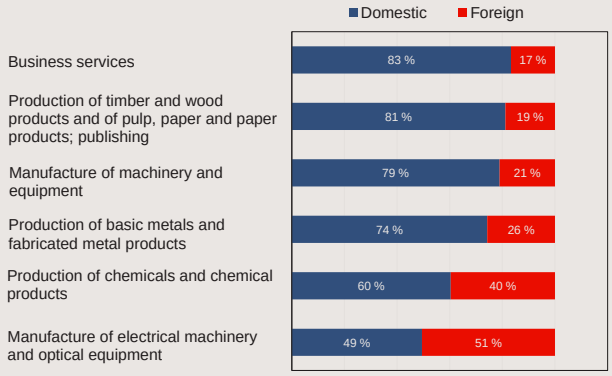
Foreign content of Finnish exports by country, 2009



Sources: OECD and WTO.

Chart C.

Share of domestic and foreign content in gross exports by sector, 2009



Sources: OECD and WTO.

Over half of the foreign content of Finnish gross exports in 2009 was generated in three countries: the United States, Russia and Germany (Chart B). There are, however, large cross-sector differences as to linkages with supply chains (Chart C). Of the sectors being examined, the highest foreign content – over 50% of the value of gross exports –in 2009 was in the export of electrical machinery and optical equipment. The United States and Germany were the biggest sources of the value added in the sector. The foreign content in the manufacture of basic metals and fabricated metal products as well as the chemicals industry corresponds to approximately 45% of the value of the sectors' gross exports. In these industries, by far the largest foreign content in the exports originates in Russia. In contrast, of the total value of forest industry exports, only one fifth originated abroad and of the value of the export of machinery and equipment, a quarter was of foreign origin.

The foreign content of total manufacturing exports was on average one third of the gross value of exports in 2009. In contrast, the foreign content of total services exports was less than half of the corresponding figure for manufacturing. For example, of the value of the export of business services, 85% is of Finnish origin.

The new OECD-WTO statistics also enable an examination of the share of Finnish value added in the gross exports of various countries. In percentage terms, Finland appears to be an important trade partner for Estonia, as 5% of the foreign content in the latter's gross exports originated in Finland in 2009. Of the foreign content in Sweden's gross exports, 4% originates in Finland. In absolute terms, the Finnish content in Sweden's gross exports was in 2009 as high as the Swedish content in Finland's gross exports.

Statistics on foreign trade in value added complement conventional gross-based statistics

Export statistics calculated on a value-added basis do not replace gross-based foreign trade statistics, but provide an alternative way of assessing the importance of foreign trade for countries that are, like Finland, integrated into global value chains. Statistics on foreign trade in value added are laborious to prepare and gross-based export and import statistics are used in compiling them. Moreover, the new statistics do not, at least for the time being, provide a disaggregation by goods, nor are they available as time series. The new statistics are also not useful for cyclical analysis, due to the long lag in publication.

Export and import statistics calculated on a value-added basis do, however, reveal the complexity of foreign trade and production processes that conventional statistics do not show.

Wage and price trends

Moderate rise in wages

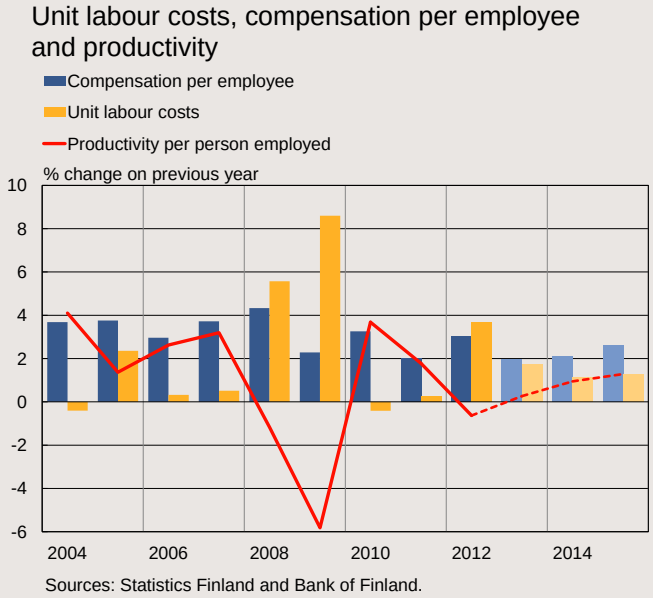
The fading of demand will slow the rise in costs and prices during the forecast period. Growth in wage and salary earnings will ease to under 2.0% per annum in 2013–2014. In 2015, as the economy picks up, earnings growth will accelerate to 2.6%.

The increase in negotiated wages in 2012 was mainly based on the framework agreement concluded towards the end of 2011. The social partners agreed on a pay rise of 2.4% in 2012 and 1.9% in 2013. They also agreed on a one-off payment which was made mainly in the first half of 2012. As a result, negotiated wages increased in 2012 by a total of 2.9%.

Due to the one-off payment, negotiated wages will rise in 2013 at an average rate of about 1.7%, and the weak cyclical situation will contain wage drift. In the first years of the forecast period, real earnings will remain more or less unchanged. In 2015, real earnings will grow by almost 1%.

Average wages will rise at a faster pace than earnings in 2014–2015, as payroll growth in 2014 will be pushed up by higher social security contributions and the pick-up in the economy will be reflected in an increase in the number of hours worked. As a result, compensation per employee will grow by just over 2% per annum in 2013–2014 and nearly 3% in 2015 (Chart 23). Growth in labour productivity will remain slow in 2013–2014, at less than 1% per annum. Due to the moderate level of pay rises, however, growth in unit labour costs will be much slower in the forecast period than in 2011–2012.

Chart 23.

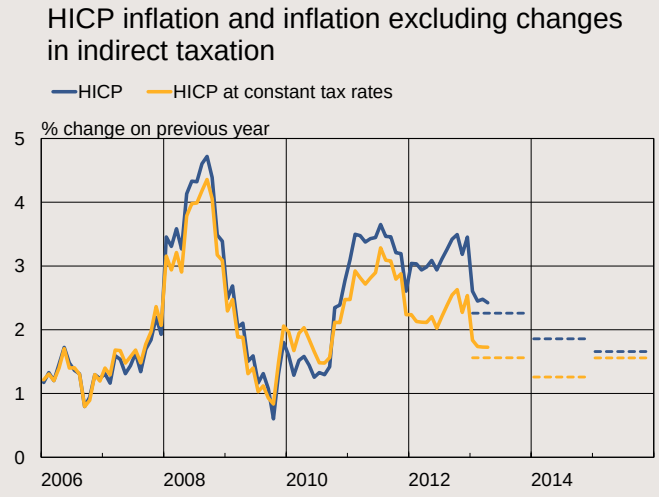


Inflation to slow further

Inflation as measured by the harmonised index of consumer prices (HICP inflation) slowed in the first quarter of 2013. Inflation will slow further, to 2.3%, in 2013 (Chart 24).

Rises in indirect taxes have been having an exceptionally large inflationary impact since 2011, and the government's spending limits decisions indicate indirect taxes will continue to rise in 2014 and, to a lesser extent, also in 2015. In 2014, the inflationary impact of the changes in indirect taxes

Chart 24.



will be some 0.6 of a percentage point, but inflation will nevertheless slow to 1.8%.

The price of energy will decline slightly in 2013, due to lower world market prices of crude oil, and, according to market expectations, the downward trend in crude oil prices will continue. The trend in energy prices will therefore slow inflation in 2013. Excise duties on electricity and transport fuels will rise in 2014, which will push in the opposite direction.

Service prices continue to rise at a fairly rapid pace, and will rise by 2.7% in 2013. The increase is due to a change in the VAT rate and a protracted rise in housing costs. Rents and maintenance fees have risen at a significantly faster pace than overall inflation. In addition, growth in labour costs and the higher price of energy have had an influence on service prices. The significance of these factors will decrease in 2014 and the upward trend will slow.

Food prices have already risen for three consecutive years at a faster pace than the average increase in prices. The upward trend has been reinforced by the hike in value-added tax in 2013, the rise in excise duties on alcohol and tobacco in 2012 and the higher duties on sweets and non-alcoholic beverages in 2011 and 2012. In addition to the changes in taxation, poor farming conditions for fresh food and supply constraints have served to push up food prices. The prices of unprocessed food will rise by a good 7% in 2013, but the pace of increase will slow in 2014. Processed food prices will be pushed up in 2014 by changes in the duties on alcohol, tobacco and non-alcoholic beverages and in 2015 by higher duties on sweets.

The prices of industrial goods (excl. energy) have been rising at a slow pace for quite some time already. This has been particularly true for consumer durables such as cars and entertainment electronics, where prices have risen very moderately or even decreased. The 1% hike in VAT did not yet have the expected upward impact on the prices of industrial goods in the first quarter of 2013. As a result, the pace of increase in industrial goods prices will be slower in 2013 than in 2012, at approximately 0.6%.

Inflation as measured by the national consumer price index (CPI inflation) slowed to 1.7% in the first quarter of 2013, from 2.8% in 2012. The slower rate of CPI inflation is a

Box 6.

Finnish inflation above euro area average

Inflation in Finland has for some time been higher than the euro area average – taxes do not explain the difference

During monetary union, since the beginning of 1999 until April 2013, the rate of inflation has been virtually the same in Finland and the euro area as a whole: in Finland 2.0% and in the euro area 2.1%. Inflation developments have, however, been mixed. In the early years of monetary union, inflation in Finland was on average half a percentage point lower and the price level in Finland approached the euro area average, but since 2007 inflation in Finland has been half a percentage point higher than the euro area average. This trend is problematic, as Finland already has the highest prices in the euro area.

The differences in price levels can be partly explained by taxes, for example relatively high VAT rates in Finland. Changes in taxation do not, however, explain the difference in price dynamics. Beginning with the data for 2006, the HICP has been used to calculate a sub-index adjusted for changes in taxation, in which the computational impact of tax changes has been deducted from the inflation rate. Based on this measure, the difference between inflation in Finland and the euro area as a whole is nearly as large as in the main index. During the economic crisis, many other countries have also raised their taxes.

What explains the difference in inflation rates?

The difference in inflation rates is mainly due to service prices, particularly those of housing services (Chart A). The harmonised index of consumer prices (HICP) does not take into account changes in residential property prices or the interest rates on housing loans, unlike the national consumer price index (CPI). Of the other costs of owner occupation, the index does, however, include maintenance fees, water and waste fees as well as repair work and materials related to housing maintenance. The large impact of housing on HICP inflation is, however, due to rents.

Since 2007, rents in Finland have risen an average 3.3% per annum, and in the euro area as a whole, 1.7%. The higher pace of increase in Finland is due to developments in the housing market. In Finland, residential property prices have not declined, unlike in some euro area countries. Residential property prices in Sweden have followed a fairly similar pattern as those in Finland, whereas rents have risen less, at 2.3% per annum during the period under review. In Finland, rents are partially driven by the shortage of rental housing in growth centres. Rents have also been affected by the rise in housing maintenance costs. A rise in the price of a basic need such as housing may also be reflected in the labour market as larger wage claims. In addition, housing market rigidities may decrease labour mobility, which will have an impact on unemployment.

The other important components of service prices are restaurant and cafe services, telecommunications services and transportation services. The prices of restaurant and cafe services have risen in Finland at a higher pace than in the euro area as a whole. These service prices have been affected particularly by changes in the excise duties on alcohol; in recent years, changes in VAT, too, have exerted both upward and downward pressures on prices. The trend in the prices of transportation services has been broadly similar to that across the euro area. Telecommunications prices in Finland have declined at an even higher pace than the euro area average, indicating the competitive pressures in the sector.

In many service industries, the price of labour has a major impact on costs. The price of Finnish labour has in recent years risen more than in competitor countries, and this is reflected in the prices and costs of the domestic closed sector. The passing of pay rises through into prices and the upward pressures on future pay rises due to the higher prices would create a negative spiral.

Competition matters

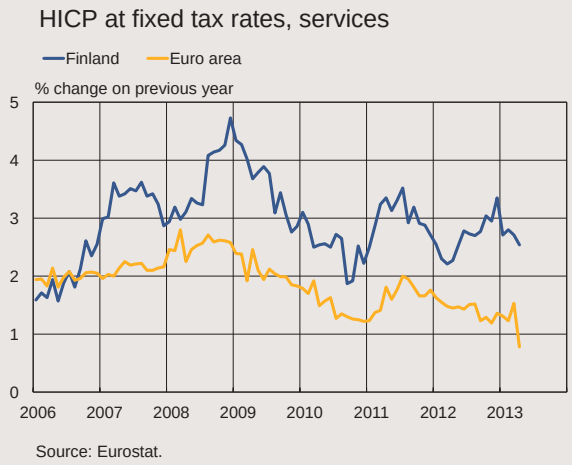
In addition to service prices, another factor contributing to the difference

between average inflation in Finland and across the euro area as a whole is the rise in food prices. In Finland, VAT on food was cut by 7 percentage points in 2009 and raised by 1 percentage point in July 2010 and again in January 2013. Moreover, alcohol and tobacco are classified under the food component in the HICP, and changes in excise duties are therefore reflected in the development of the overall food component. Price developments excluding changes in taxes still differ from developments in the euro area indicator: in 2007–2013, food prices in Finland rose an average 3.1% per annum, and in the euro area as a whole, 2.3% (Chart B). Following Finland's entry into the EU, food prices in Finland increased for a long time at a slower pace than in the euro area as a whole, and the price level approached the levels in other European countries. Now this trend seems to have come to a halt.

Competition plays a significant role in price developments. The Finnish food chain is largely characterised by a small number of actors, which may lead to weak competitive pressure. Partly due to imports, the manufacturing and trade sectors are able to invite their suppliers to bid, as a result of which the pressure will be ultimately on the primary producers. The profitability of primary production has an impact on the volume of domestic production, and fluctuations in the volumes may be reflected in the domestic price level, depending on global supply conditions. For example, the acceleration in prices in 2012 was partly due to the contraction of domestic meat production. Meanwhile, efforts by the competition authorities to ensure a level playing field in the industry caused a strong hike in the prices of dairy products.

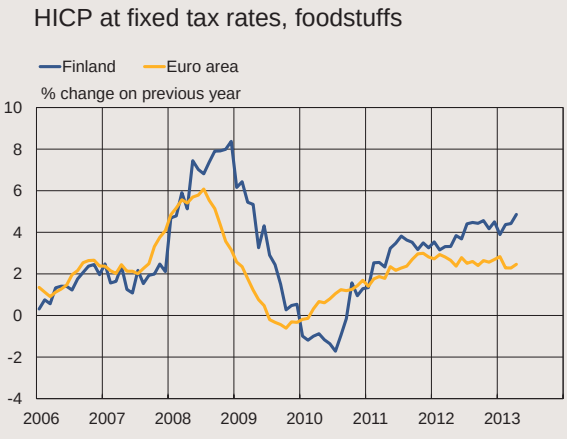
The grocery retail sector in Finland has a high concentration rate. The impact on prices is not straightforward, as the size of retail chains may improve cost efficiency but also weaken competition on the market. New tools for the competition authorities, which are currently going through the legislative process, may promote competition, if used correctly.

Chart A.



Source: Eurostat.

Chart B.



Source: Eurostat.

result of the decline in interest rates on housing loans and consumer credit. After 2013, the difference in the two inflation indicators will narrow as the impact of the decrease in interest rates unwinds.

Inflation may be slower than expected if the subdued growth in real earnings has a larger than expected downward impact on private consumption. A delay in the turn of the economy may further erode non-financial corporations' and households' confidence in the performance of the economy, which would be reflected in a contraction in aggregate demand.

Inflation may be faster than expected if the cost impacts of earlier wage settlements are passed on to consumer prices. Moreover, lagged effects of changes in indirect taxes and other cost pressures may lead to higher-than-expected inflation. The prices of oil and other commodities may trend upward, contrary to current forecast assumptions, if world growth turns out to be faster than expected.

Risk assessment

Risks to the international economy have declined

The picture of the international economy is less marked with risks than in the past couple of years. The risk of a renewed escalation of the financial and debt crisis has not disappeared, but the likelihood has diminished, coupled with a more obvious possibility of better international economic performance than projected in the baseline forecast.

The improvement in confidence that began on the euro area financial markets in the latter half of 2012 has continued. In particular, the concern that fiscal consolidation in the most heavily indebted countries would prove politically impossible has abated, at least for the short term. Nevertheless, the risk of a renewed escalation of the euro area crisis remains the biggest external threat to Finland's economic environment.

In the immediate years ahead, the euro area will need to look for a balance between two risks. On one hand, for the favourable developments on the financial markets to continue will require crisis countries' commitment to sufficiently ambitious fiscal consolidation programmes. If consolidation measures prove insufficient, confidence on the financial markets may falter again, which would have an obvious negative impact on euro area growth. On the other hand, public spending cuts have a downward impact on growth in the short term, which will increase social and political challenges in the affected countries and, via this channel, may call the credibility of the stabilisation programmes into question.

Minimising the economic and social costs of the austerity measures will require as efficient as possible mobility of production factors from fading sectors to growth sectors. This, in turn, will require sufficiently well-functioning structures in the labour and product markets and in the public finances. In fact, if structural reforms are insufficient, this will pose a

significant risk to the recovery of the crisis countries and, thereby, to solving the whole euro area debt crisis in a sustainable manner.

Impaired access to finance by small and medium-sized enterprises (SMEs) has become a specific problem that is blocking improvement in the employment situation of the crisis countries. Unlike large companies, which can obtain financing on relatively easy terms directly from the capital markets, funding for smaller enterprises is almost entirely reliant on bank credit, which has become more difficult to access in the crisis countries. Credit supply has in part been tightened by the fact that macroeconomic risks are reflected in customers' creditworthiness, but the scarcity of bank capital may be another factor hampering the availability of finance in the crisis countries in particular. There is a risk that, if sufficient finance for SMEs cannot be safeguarded, growth and employment in the crisis countries may be weaker than anticipated and the public finances will not be strengthened in the manner hoped for.

The possibility of more favourable trends than envisaged is increasingly visible in international economic performance. In the United States, a discernible recovery in the housing market is supporting domestic demand and may trigger stronger-than-expected self-reinforcing dynamics in the economy. Similarly in Japan, policy measures aimed at suppressing deflation may also lead to a stronger-than-expected recovery in the economy. A more vigorous rebound in domestic demand in the United States and Japan would speed up growth in the global economy as a whole, improving economic prospects in Finland, too.

The foundations of Finland's public finances have been eroded

The domestically driven challenges in the Finnish economy have become more prominent as the downturn drags on. In particular, general government debt accumulation has continued at an alarming pace. Amid weakening economic growth, fiscal consolidation measures have not been sufficient to stabilise the trend in debt accumulation. The consolidation measures have also remained more moderate than in many other euro area countries. According to the forecast, general government debt will rise to more than 60% of GDP and the target in the Government Programme for stabilising the government debt ratio will not be met. Moreover, the general government deficit will exceed the medium-term threshold of 0.5% of GDP laid down in the Stability and Growth Pact and the national legislation based on the Treaty on Stability, Coordination and Governance.[10]

The Finnish government continues to enjoy strong confidence on international financial markets. Finland's credit rating is the strongest in the euro area and, as a consequence, government borrowing is cheap. The forecast

[10] Act on the implementation of the legislative provisions of the Treaty on Stability, Coordination and Governance in the Economic and Monetary Union and the application of the Treaty as well as on the requirements concerning the long-term framework for public finances (869/2012).

envisages no weakening in this confidence. Even so, the economic buffers – such as strong public finances and external surplus – that backed confidence in Finland's solvency in the crisis years have now been exhausted. The pace of Finnish government debt accumulation is already rapid by European standards, competitiveness has weakened and the economic situation as a whole is clearly more fragile than before. Thus, Finland's ability in terms of its public finances and economy to withstand new economic setbacks has markedly deteriorated.

In this situation, it is not self-evident that the market's confidence in Finland's strong solvency will be maintained. If this confidence were to falter, it would increase the costs for the country's public debt, raise the price of funding for the Finnish banking sector and lead to an overall tightening of monetary conditions in the country. This would depress asset values, increase prudence among economic agents and cause economic activity to weaken, perhaps substantially. In order to maintain confidence, it is important for Finland to continue structural reforms to improve the public finances over the long term.

Another downside risk relates to savings by Finnish households. As export performance in recent years has remained modest, demand in the Finnish economy has mainly been sustained by relatively robust growth in consumption. The forecast expects no change in this respect. With regard to the cyclical situation, the household savings ratio will remain low, which is in general related to rather optimistic views of future economic trends. However, if households become more cautious in their spending and increase their savings close to the average long-term level, home market demand will remain substantially lower than forecast and growth distinctly more subdued than predicted.

There is also a downside risk to employment. The employment situation has not worsened to such an extent as the weak performance of the economy might suggest. Expectations of a rebound in economic activity may have encouraged firms to hoard labour. In the forecast, unemployment growth will remain moderate, with resultant slow productivity growth. However, if the economic outlook fails to improve, firms may be tempted to downsize staff in order to cut costs.

For the longer-term growth prospects in the economy, the main risk is that prolonged unemployment will reduce young people's labour force participation. Signs of this are already discernible, particularly among young men.[11] Given that the potential labour force is also otherwise diminishing, problems in attachment to the labour market would cause significant growth and welfare losses far into the future.

Positive trends in the Finnish economy relate primarily to the above-mentioned possibility of an overall recovery in the international economy, which would strengthen Finnish exports

[11] See Kinnunen & Mäki-Fränti 'Labour supply and population cohorts: effect of the business cycle on labour market attachment', below, p. 61.

and investment and thereby support the employment situation and growth in tax receipts. Such a pattern is sketched in the attached alternative scenario, where demand in the export markets increases and the investment climate is more favourable than in the baseline forecast. According to the scenario, a simultaneous pick-up in investment would significantly strengthen the effects of export recovery on economic growth. Rebounding investment would also increase general government tax receipts, reducing the deficit from the projected level.

Box 7.

Alternative scenario: Demand in export markets picks up at the same time as conditions for corporate investment improve

The Bank of Finland's baseline forecast foresees considerably slower growth in both exports and investment than before the financial crisis. Demand in Finland's export markets and hence exports will begin to recover gradually at the end of 2013, but investment will gather momentum only with a lag of six months.

The subdued export and investment performance is due to both structural and cyclical factors. Finland's two large export-driven sectors – the forest industries and the electrical engineering and electronics industry – are undergoing structural change, which the financial crisis has accelerated. These two sectors accounted for approximately 40% of manufacturing investment and a third of Finland's goods exports in 2011. A contraction in the sectors' exports and investments substantially reduces Finland's overall exports and investment. For example, investment by the forest industries has collapsed to a quarter of the level at the beginning of the new millennium. More than 80% of electrical engineering and electronics output continues to be exported, but the value of the sector's goods exports has dropped to 10% of the level prior to the downturn.

Of cyclical factors, the uncertainty created by the financial crisis over future economic activity both in Finland and in countries key to Finland's exports is eroding the growth outlook for Finnish exports and investment. Over half of Finnish goods and services exports go to EU countries, where the demand outlook for the immediate years ahead is weak. In addition, during and since the economic downturn, Finnish export firms have been losing market share at an accelerating pace, signalling problems in Finland's cost-competitiveness. There is a danger that both export and output losses will remain permanent and neither domestic nor foreign investment will be allocated to Finland even if the world economy picks up.

Despite the depressed export and investment outlook, several international comparisons have assessed Finland's business environment as being competitive, particularly with regard to institutional factors.[1] Even so, new corporate production or business models, such as service concepts, have not yet compensated for the gap left by the forest industries and electronics. In order for the structural change to gain momentum, a pick-up in both demand and investment activity is needed, in which case capital and labour resources would also migrate to new sectors more quickly. Finland certainly has investment potential.

Making use of the Bank of Finland's macroeconomic model, Aino, this alternative calculation illustrates two scenarios where economic performance is more positive than in the baseline forecast. In the first scenario, the growth impulse is entirely external in nature. The scenario foresees a stronger-than-anticipated rebound in the global economy and about 2 percentage points faster growth in demand in the export markets in 2014 and 2015 than envisaged in the baseline forecast. Growth in export market demand is assumed to stem from improving business confidence in countries to which Finland exports. More robust demand accelerates the rise in world trade prices in 2014–2015 to a level about 0.8 of a percentage point higher than the baseline projection.

[1] *World Economic Forum (2012) The Global Competitiveness Report 2012–2013; European Commission (2011) Annual Report on EU Small and Medium-sized Enterprises 2010/2011.*

In the second scenario, as well as the recovering export markets, growth is also boosted by improved conditions for investment in Finland. The improvement in the conditions for investment is technically implemented in the model by lowering the value of the parameter determining the Aino model's investment adjustment costs by an average of 1% a year between 2014 and 2020.[2] Adjustment costs in investment can be assumed to decline if, for example, access to finance improves or the start-up of new investments and the expansion of physical or human capital are otherwise eased.

Growing demand in the export markets and easier conditions for investment do not come as a complete surprise to economic agents; rather, they are able to prepare for forthcoming changes. Exchange rates are assumed to remain unchanged, with nominal wages following the trend in negotiated wages according to the baseline forecast in 2013.

In the first scenario, the boost in the export markets has only limited and short-term effects on economic activity. By 2020, GDP is only 0.2% higher than in baseline developments. In 2015, exports grow nearly 2% faster than the baseline forecast suggests.

The first scenario only foresees a temporary pick-up in investment, with growth moderating as early as 2015 to a slower pace than in the baseline forecast. Growth in export and investment demand increases demand for raw materials and intermediate goods, which provides a boost to imports.

Stronger growth in overall demand steps up the pace of increase in prices. Private consumption expenditure rises annually more than 1 percentage point faster than in the baseline forecast. Domestic output growth increases labour demand, leading to a higher number of employed than the baseline forecast predicts. Subdued increases in real wages also support growth in the number of employed. In contrast, by 2012, the capital stock is only around a full 1% up on the baseline figure.

In the second scenario, where the adjustment costs in investment also decrease, economic growth is faster than in the first scenario, with GDP 2.5% higher in 2020 than suggested by the baseline forecast. Investment growth is more rapid and more long-lasting than in the baseline forecast or the first scenario. By 2020, the volume of private investment is more than 10% higher than in the baseline forecast. Exports post only little growth compared with the first scenario, mainly due to a fall in export prices. Imports grow more quickly than in the first scenario, as demand for capital goods increases. However, following a period of seven years, imports and exports are both nearly 7% up on the baseline forecast.

As the expansion of production requires additions to the capital stock, the resources of the economy are mainly allocated to investment rather than consumption, with private consumption growing only marginally faster than in the baseline forecast or the first scenario. As a result of the higher level of investment, the capital stock in 2020 is more than 4% higher than in the forecast.

Inflation in the second scenario is lower than in the first scenario. Smaller adjustment costs in investment enhance efficiency in the economy, causing prices in private-sector production to increase more slowly than in the first scenario. Labour demand in the second scenario grows faster than in the first scenario or the baseline forecast. With inflation slowing, real wages rise more quickly than in the first scenario or the baseline forecast. However, average labour productivity growth decelerates in the first years, in particular, because of a

[2] *Adjustment costs in investment are a common feature in New-Keynesian general equilibrium models. The lower the level of investment in the previous period, the higher the cost of launching new investment during the current period. Lower adjustment costs can be thought to foster new greenfield investment, in particular.*

steep upturn in the number of employed.

According to the alternative scenario, the faster-than-foreseen pick-up in demand in the export markets does not materially improve Finland's economic outlook in the immediate years ahead; rather the domestic economic environment also needs to underpin growth. During the economic downturn, Finland has witnessed the disappearance of a sizeable volume of production capacity that will not be restored in its earlier form. To drive economic growth, Finland needs new growth areas, and investment is key to accumulating the physical and human capital necessary for new goods and services production.

Table A.

Alternative scenario: Growing demand in export markets

	2013	2014	2015	2020 deviation, %
GDP, % change				
Baseline forecast	–0.8	0.7	1.4	
Alternative scenario	–0.3	0.9	1.3	
Difference	0.5	0.2	–0.2	0.2
Imports, % change				
Baseline forecast	0.8	2.8	4.6	
Alternative scenario	2.3	5.7	5.9	
Difference	1.6	2.9	1.3	3.2
Exports, % change				
Baseline forecast	1.2	3.5	4.7	
Alternative scenario	1.0	5.1	6.6	
Difference	–0.2	1.6	1.9	3.6
Private consumption, % change				
Baseline forecast	–0.9	0.2	1.2	
Alternative scenario	–0.3	0.6	1.0	
Difference	0.6	0.5	–0.2	0.2
Private investment, % change				
Baseline forecast	–3.6	2.0	3.9	
Alternative scenario	1.4	4.5	2.4	
Difference	5.0	2.5	–1.5	–0.8
Price of private sector output, % change				
Baseline forecast	1.2	1.5	1.8	
Alternative scenario	1.6	2.6	3.1	
Difference	0.4	1.1	1.3	2.9
Private consumption deflator, % change				
Baseline forecast	1.9	1.8	1.8	
Alternative scenario	2.2	2.7	2.9	
Difference	0.3	1.0	1.1	2.5
Average wages, % change				
Baseline forecast	2.1	2.2	2.6	
Alternative scenario	2.1	3.4	4.3	
Difference	0.0	1.1	1.7	3.2
Real average wages, % change				
Baseline forecast	0.2	0.5	0.8	
Alternative scenario	–0.1	0.6	1.4	
Difference	–0.3	0.2	0.6	0.7
Employed (1,000 persons)				
Baseline forecast	2,456	2,450	2,454	
Alternative scenario	2,466	2,473	2,480	
Difference	9.9	22.5	25.6	0.2
Average labour productivity, % change				
Baseline forecast	0.3	0.9	1.3	
Alternative scenario	0.3	0.6	1.0	
Difference	0.1	–0.4	–0.3	0.0
Net stock of fixed capital, private sector, % change				
Baseline forecast	1.3	1.1	1.2	
Alternative scenario	1.4	1.6	1.7	
Difference	0.2	0.5	0.4	1.3
Unit labour costs				
Baseline forecast	1.8	1.4	1.8	
Alternative scenario	2.1	3.2	3.8	
Difference	0.3	1.8	2.0	3.8

Sources: Statistics Finland and Bank of Finland.

Table B.

Alternative scenario: Growing demand in export markets, investment up

	2013	2014	2015	2020 deviation, %
GDP, % change				
Baseline forecast	–0.8	0.7	1.4	
Alternative scenario	–0.3	1.0	1.5	
Difference	0.5	0.3	0.0	2.5
Imports, % change				
Baseline forecast	0.8	2.8	4.6	
Alternative scenario	2.4	5.9	6.5	
Difference	1.6	3.1	1.9	6.8
Exports, % change				
Baseline forecast	1.2	3.5	4.7	
Alternative scenario	1.1	5.3	6.7	
Difference	–0.1	1.9	2.1	6.7
Private consumption, % change				
Baseline forecast	–0.9	0.2	1.2	
Alternative scenario	–0.4	0.6	1.1	
Difference	0.5	0.4	–0.1	1.3
Private investment, % change				
Baseline forecast	–3.6	2.0	3.9	
Alternative scenario	1.6	5.2	4.3	
Difference	5.2	3.2	0.4	10.4
Price of private sector output, % change				
Baseline forecast	1.2	1.5	1.8	
Alternative scenario	1.4	2.3	2.9	
Difference	0.2	0.9	1.1	–0.7
Private consumption deflator, % change				
Baseline forecast	1.9	1.8	1.8	
Alternative scenario	2.1	2.5	2.7	
Difference	0.2	0.7	1.0	–0.6
Average wages, % change				
Baseline forecast	2.1	2.2	2.6	
Alternative scenario	2.1	3.2	4.3	
Difference	0.0	1.0	1.7	1.7
Real average wages, % change				
Baseline forecast	0.2	0.5	0.8	
Alternative scenario	–0.1	0.7	1.5	
Difference	–0.2	0.3	0.7	2.2
Employed (1,000 persons)				
Baseline forecast	2,456	2,450	2,454	
Alternative scenario	2,466	2,474	2,483	
Difference	10.0	23.3	28.8	1.6
Average labour productivity, % change				
Baseline forecast	0.3	0.9	1.3	
Alternative scenario	0.4	0.7	1.1	
Difference	0.1	–0.3	–0.2	0.9
Net stock of fixed capital, private sector, % change				
Baseline forecast	1.3	1.1	1.2	
Alternative scenario	1.5	1.6	1.8	
Difference	0.2	0.5	0.6	4.3
Unit labour costs				
Baseline forecast	1.8	1.4	1.8	
Alternative scenario	2.1	3.0	3.8	
Difference	0.2	1.6	2.0	1.6

Sources: Statistics Finland and Bank of Finland.

Changes from the previous forecasts

The overall picture provided by the present Bank of Finland forecast for the performance of the Finnish economy is gloomier than that presented in the forecast released in December 2012. The level of GDP growth forecast for 2013 is 1.2 percentage points lower than in the December forecast.

The change in the forecast outlook can be divided into two parts. On one hand, weaker-than-expected GDP growth in 2012 will slow annual growth in 2013 by about 0.8 of a percentage point. Meanwhile, the assessment of quarter-on-quarter growth rates for 2013 has been revised down by 0.4 of a percentage point. The forecast for GDP growth in 2014 has been revised down by 0.8 of a percentage point. Half of this change is explained by weaker growth in 2013, half by a deteriorated outlook for 2014.

The change towards a more negative outlook stems particularly from weaker prospects for domestic markets. Uncertainty about the economic outlook and the negative turn in disposable income are eroding Finnish households' willingness to consume, which also causes a deterioration in the operating environment for companies producing for the domestic market.

The changes in the economic operating environment of both Finland's export markets and the domestic economy will lead to slower economic growth in 2013 and 2014 than was forecast in December. In the present forecast, growth in Finland's export markets is estimated to be about 0.5 of a percentage point weaker in 2013, and about 1 percentage point weaker in 2014 than foreseen in the December forecast. According to the present forecast, Finnish exports will grow 0.8 of a percentage point slower in 2014 than was forecast in December.

Private consumption growth will be an average 1 percentage point lower in 2013 and 2014 than was forecast in December. In 2013–2014, households' willingness to consume will be reduced by a contraction in the number of employees – by an average of 20,000 persons more than was forecast in December – and 0.7 of a percentage point slower growth in earnings.

Despite the protraction of the European debt crisis, market expectations concerning the level of euro area interest rates have remained unchanged. Due to the

Table.

Current and December 2011 forecast

	2012	*2013*	*2014*	*2015*
GDP, % change	*–0.2*	*–0.8*	*0.7*	*1.4*
December 2012	*0.3*	*0.4*	*1.5*	
Inflation (HICP), %	*3.2*	*2.3*	*1.9*	*1.7*
December 2012	*3.1*	*2.4*	*1.6*	
Finland's export markets, % change	*2.5*	*2.4*	*4.9*	*6.0*
December 2012	*2.7*	*2.9*	*6.0*	
Current account, % of GDP	*–1.9*	*–1.5*	*–1.3*	*–1.2*
December 2012	*–1.3*	*1.3*	*–1.3*	
General government net lending, % of GDP	*–2.3*	*–2.5*	*–2.5*	*–2.2*
December 2012	*–1.3*	*–1.0*	*–0.8*	
General government dept, % of GDP	*53.0*	*56.9*	*59.8*	*61.8*
December 2012	*53.6*	*55.9*	*57.4*	

weaker outlook for export and domestic markets, private investment is forecast to grow in 2013–2014 an average 2.8 percentage points slower than forecast in December. Investment in housing construction will also grow more slowly than anticipated in December. The lower investment curve and slower growth in private consumption will also weigh on imports, which will grow in 2013–2014 about 0.8 of a percentage point slower than estimated in the December forecast. The current account deficit relative to GDP is forecast to deepen in 2013 from the December forecast.

The general government financial balance will deteriorate markedly relative to the December forecast. The deficit is forecast to be 1.5 percentage points larger in 2013 than foreseen in the December forecast, ie 2.5% of GDP. In particular, general government expenditure relative to GDP will grow at a faster pace than in the December forecast. The weak economic outlook for the next few years will keep the general government balance in deficit. In 2014, the deficit will be 1.7 percentage points larger than in the previous forecast. At the end of the forecast period, consolidated general government debt will be almost 62% of GDP.

In 2014, general government debt relative to GDP will be 2.4 percentage points larger than in the December 2012 forecast. In addition to the deepening annual deficits, the debt ratio has risen especially due to weaker economic growth. The majority – ie 1.4 percentage points – of the rise in the debt ratio is explained by lower GDP levels in 2012–2014 than envisaged in the previous forecast.

Labour supply and population cohorts: impact of the business cycle on labour market attachment

31 May 2013

People of different age react in the labour market differently to cyclical trends and changes in social security and pension provision. The labour force participation rate for even same-age people has not remained unchanged over a long period of time. Cohorts born in the 1950s and 1960s and entering working life in the 1970s and 1980s have the highest labour force participation rate. However, the participation rate for younger people has begun to fall. Young people's absence from the labour market can in part be explained by longer times of study. But the weakness of the business cycle and tightness of the labour market are also reducing labour supply among young men, in particular. Structural change in the economy has increasingly gained momentum during the financial crisis, and the employment situation has deteriorated particularly in male-dominated industrial sectors. There is a risk that the labour market will face a generation of 'recession males' in the same way as following the recession of the 1990s there were 'recession females', whose labour force participation rate remained lower than average for a long time.

Reactions to cyclical fluctuations and structural factors in the labour market are strongest at the extremes of the age distribution. Accordingly, in the past two decades, the age-specific labour force participation rate (LFPR) has fluctuated most among the youngest and oldest cohorts. As soon as the dip in the LFPR caused by the recession years of the early 1990s was overcome, the LFPR for older cohorts in particular rose at best to a level about 30 percentage points higher than at the outset. Growth in the LFPR for older people was especially rapid in the first post-millennium decade. By contrast, participation in the labour market by cohorts aged under 30 has not yet reached its pre-recession level.

In the present article, we examine how structural and cyclical factors in the economy have affected participation in the labour market by men and women of different ages in recent decades.[1] On the basis of the results, we then seek to assess how labour market participation will develop in the immediate years ahead. Male and female LFPRs are modelled using a cohort-based approach rather than age-specific variation, meaning that the examination focuses on factors having an impact on the LFPR for men or women born in a certain year. This enables us to take into account the fact that the LFPR for the same cohort may vary over a long period of time, depending on the year of birth of the cohort.

Not only cohort-specific differences are interesting, but also how the reactions of people of different age to the business cycle and the overall labour market situation differ.

Labour market behaviour is affected by a variety of institutional factors, such as the educational level of different cohorts or incentives to enter or opt out of the labour force. Of these factors, a separate analysis is undertaken below of whether the unemployment pipeline to early retirement has had an effect on the LFPR for older cohorts.

According to a study conducted at the Bank of Finland,[2] cohorts entering

[1] This article is a summary of the writers' analysis of the same topic that will appear (in Finnish only) in the Bank of Finland's BoF Online series in June 2013.

[2] Kinnunen & Mäki-Fränti (2011).

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the labour market later typically have a higher LFPR than older cohorts, which also partly compensates for a decline in the potential labour force due to population ageing. A higher level of education, in particular, has caused LFPRs to trend upward. As well as the level of education, the employment situation at the time of entering the labour market may have long-term effects on each cohort's subsequent labour market status. Earlier research results suggest[3] that the recession in the 1990s forced women in particular out of the labour market in Finland. By contrast, the financial crisis in 2008–2009 and the resultant economic downturn appear to have impacted more on male-dominated sectors and thus on male employment and labour market participation.

The employment situation at the time of entering the labour market may have long-term effects on each cohort's subsequent labour market status.

The business cycle, too, may be reflected in labour market status. For the youngest cohorts, continuing studies may be a sensible alternative to participation in the labour market, if finding a job is more difficult than usual. On the other hand, with the weakening of the business cycle, the oldest cohorts are often the first to be threatened with redundancy, especially if the weak cyclical situation causes firms to renew their output and personnel structures.

Data and methodology

Cohort-specific variation in LFPRs is analysed here by 1-year cohort and separately for each gender. The cohorts were born in 1930–1988, ie the youngest were aged 15–18 and the oldest 64–68.[4] The observations cover the years 1989–2012. The LFPR is accounted for by a cohort-specific and age-group-specific constant term, the job vacancy rate (the number of unfilled job vacancies as a proportion of the labour force) and the number of long-term unemployed as a proportion of all unemployed.

The job vacancy rate, ie the number of unfilled job vacancies as a proportion of the labour force, illustrates the business cycle from the perspective of the tightness of the labour market. The proportion of unemployed job seekers that are long-term unemployed, in turn, reflects structural problems in the labour market. Long-term unemployment that remains high regardless of unfilled vacancies points to mismatch problems in the labour market. In addition, there are two independent dummy variables, of which the first controls for the effect of the recession years at the beginning of the 1990s. The recession can be assumed to have provoked a larger shock to the functioning of the labour market than variables for normal cyclical variation in the economy are able to capture. The other dummy variable controls for the implications that access to the unemployment pipeline to early retirement has on the LFPR.

Ageing affects male labour market participation more

The age effect indicates the impact of age on the LFPR, after controlling for

[3] Kinnunen & Grönqvist (2009).

[4] By way of comparison, the same models were also estimated separately using a more concise sample (those born in 1940–1970) that included mainly cohorts in prime working age. Hence the youngest (between 15 and 18) and the oldest (between 64 and 68) cohorts were excluded.

cohort (year of birth) and business-cycle effects.[5] The cohort-specific constants for men and women are presented relative to the age effect of each gender's cohort in prime working age, with the age effect assigned a value of 1 (Chart 1). The LFPR is at its highest for men at the ages of 30–39, but for women only at the ages of 40–49, following the period of childbirth. Female participation in the labour market is less dependent on age than for males, whose ageing can be observed to start reducing participation activity as early as around 45 years of age. However, irrespective of gender, the LFPR for both the youngest and the oldest cohorts remains distinctly lower than for cohorts in prime working age, as expected.

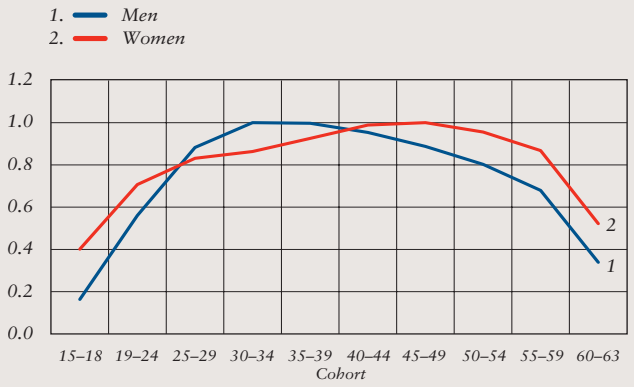
LFPR effect of year of birth strongest for those born in the 1950s and 1960s

The LFPR is lowest for both those born earliest and those born latest (Chart 2). As in the case of age effects, the levels of cohort effects for men and women born in the same year cannot be compared with each other. Even so, the cohort effect appears to have evolved in broadly the same way over a long period of time, irrespective of gender.

The cohort effect on employment seems to be largest for those born in the 1950s and 1960s and entering working life in the 1970s and 1980s. However, an examination of those born in the 1970s and 1980s points to a diminishing cohort effect. The difference in the LFPR for cohorts born latest vis-à-vis those

Chart 1.

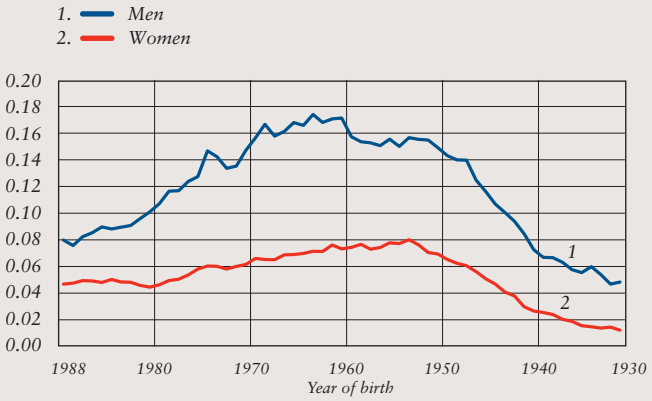
Effect of age on LFPR



**In the chart, a value of 1 is assigned to the variable for the cohort with the highest LFPR.*
Source: Bank of Finland calculations.

Chart 2.

Effect of year of birth on LFPR



Source: Bank of Finland.

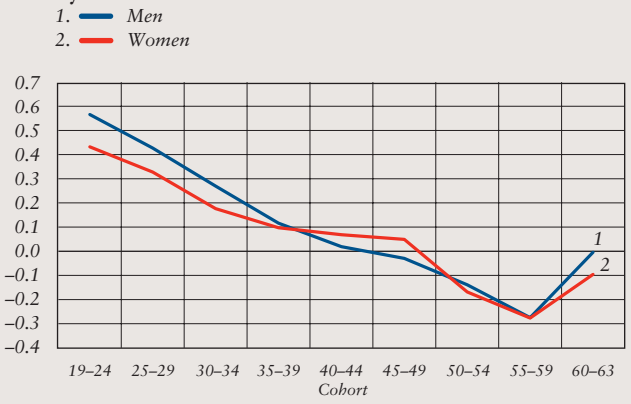
[5] The age effect was calculated by a model assuming that all cohorts react to the business cycle and long-term unemployment in the same way.

born in the 1960s and 1950s is larger for men than for women.

Young people's smaller cohort effects may be explained by the deep recession in the 1990s. Many born at the beginning of the 1970s entered the labour market during the recession or the phase of exit from recession. Accordingly, the average effects of the recession on the LFPR for all cohorts at the beginning of the 1990s are captured by using a separate recession dummy variable for which the model assigns negative and statistically significant values, as expected. The recession dummy variable does not account for effects on labour supply other than those taking hold during the recession years. However, the recession may also have had long-sustained effects on working lives. Difficulties in entering and remaining attached to the labour market may have left a permanent trace on an individual's later working life.

Chart 3.

LFPR elasticities with regard to the business cycle by cohort



Source: Bank of Finland.

The small cohort effects of those born in the 1980s differ from earlier estimation results.[6] The difference with earlier results partly stems from different cyclical variables in the models. In the cohort-based model, the business cycle is illustrated by the proportion of job vacancies of the labour force. It reflects the labour market situation better than the output gap employed in earlier analyses, which includes variation independent of cyclical labour market performance. The estimation of the cohort effect is thus more reliable.

Another explanation for the lower participation in the labour market of those born in the 1970s and 1980s may be the prolongation of times of study. Early completion of studies may have become less tempting following a reform of the student financial aid scheme that reduced the share of student loan in the financing of studies and increased the share of student grant. On the other hand, times of study have lengthened because students increasingly work while studying, which, in turn, raises the LFPR.

Young people respond more strongly to the business cycle

Elasticities estimated by cohort in respect of the job vacancy rate (Chart 3) indicate how differently the LFPR for various cohorts responds to cyclical changes in the labour market.

The business cycle has the strongest reflection in the labour market participation of the youngest people of working-age, and irrespective

[6] Kinnunen & Mäki-Fränti (2011).

of gender the elasticity of the LFPR falls steadily towards zero along with age in moving to those of prime working age. Labour market participation of those around 50 years of age appears to be fully independent of the cyclical situation on the labour market.

Prevalence of long-term unemployment affects the employment situation of those in the middle of their working lives

The prevalence of long-term unemployment has a stronger effect on the labour supply of cohorts in prime working age and older cohorts (Chart 4). Especially for women, long-term unemployment hits hardest the cohorts in prime working age. The female LFPR responds to long-term unemployment only in respect of over-34-year-olds, while the reaction for males already begins to be visible from the age of 25.

Exit from the labour market influenced by the unemployment pipeline to early retirement

The LFPR for older working-age cohorts is reduced by the possibility to exit the labour market via the unemployment pipeline to early retirement.[7] This option both persuades those out of work to exit the labour market and lowers demand for older cohorts of working age. The presence of the unemployment pipeline to early retirement tempts employers to first make older employees redundant, especially in a weak business cycle where it is difficult for the redundant to find new jobs.

[7] For example, according to Kyyrä & Ollikainen (2008), of the unemployed in the unemployment pipeline in 1995–1996, about half had withdrawn from the labour market to wait for retirement.

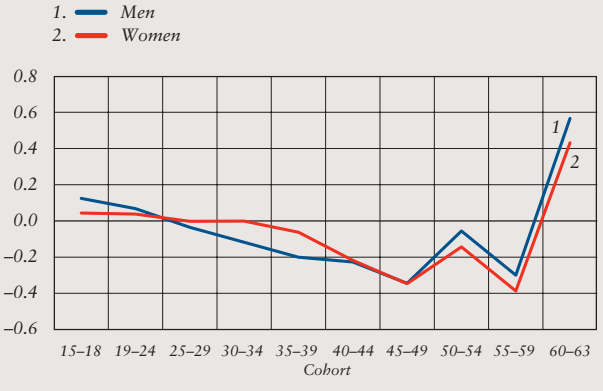
The model accounts for the possibility of accessing the unemployment pipeline to early retirement by using a cohort-specific dummy variable, which is assigned a value of 1 in the case of 55–59-year-olds in those years when the cohort is eligible for the unemployment pipeline. The model assigns negative and statistically significant values to the variable denoting the unemployment pipeline to early retirement, ie the possibility to access the pipeline is connected with an earlier exit from the labour market.

Evolution of the labour force participation rate until 2020

The future evolution of the LFPR for the working-age population (Chart 5) is explored by taking account of forecasts for the number of job vacancies and long-term unemployment. Making use of the forecasts, cohort-specific

Chart 4.

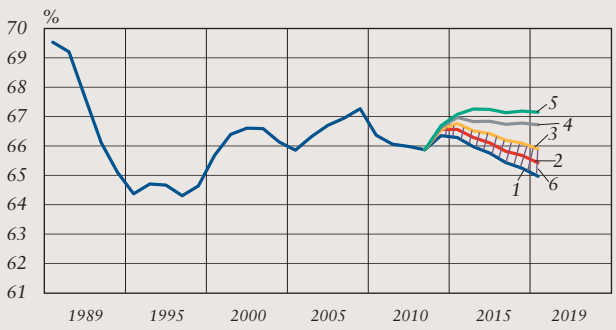
LFPR elasticities with regard to long-term unemployment, by cohort



Source: Bank of Finland.

Chart 5.

Male and female LFPR: actual development and scenario until 2020



Sources: Statistics Finland and calculations by the Bank of Finland.

scenarios are calculated first, and – weighted by the population shares of different cohorts – produce the aggregation of the average LFPR.

The baseline scenario foresees a 2 percentage point decline in the labour force participation rate

In the baseline scenario, the proportion of job vacancies of the labour force remains at the level of 2012. The current slow economic growth is not assumed to be a passing cyclical phenomenon; rather, a process of adjustment to a longer period of slow economic growth is under way. Nevertheless, historically, the proportion of job vacancies of the labour force remains stable and reasonably good.

The baseline scenario also foresees the proportion of the jobless who are long-term unemployed remaining at the initial level. Consequently, there is no material change in the functioning of the labour market during the forecast period. A further assumption is that working lives would continue to lengthen according to trend, even if no changes to the earnings-related pension scheme were made in addition to the decisions already taken. The scenario gradually raises the LFPR for the group aged 60–63 to the level of those aged 55–59 by 2030. For the length of working lives, this corresponds to a situation where the retirement-age expectancy becomes about one year longer by 2030. The assumption for longer working lives roughly corresponds to the estimates of a rising retirement age by the Finnish Centre for Pensions in 2011.[8]

According to the baseline scenario, the LFPR for 15–74-year-olds would fall at an even pace, by a total of 2 percentage points, by the end of the decade (Chart 5). Date of birth affects male employment, in particular. The cohorts of men born in the 1970s and 1980s reach their prime working age during this decade, and for these cohorts the cohort effect on the LFPR is lower than for those born in the 1950s and notably in the 1960s, whose share of the working-age population diminishes. The effect of date of birth on female LFPRs is also at its highest for those born around the 1960s, although the difference vis-à-vis those born in the 1970s and 1980s is smaller than for men.

[8] Risku et al. (2011).

Alternative trends contribute positively to labour force participation rate

The study looked at four separate alternative scenarios that assume more favourable labour market performance than in the baseline scenario. The alternative trends are as follows:

- The cohort effect of those born at the end of the 1970s and in the 1980s reaches the same level as the effect of those born in the middle of the 1970s. Accordingly, the effects of the economic downturn on the labour supply of the youngest age groups are assumed to be temporary.
- Labour demand increases, and growth in the number of job vacancies especially attracts to the labour market representatives from young cohorts.
- Long-term unemployment declines to the level that prevailed prior to the economic downturn.
- The unemployment pipeline to early retirement is abolished entirely in 2015.

The difference between two curves in Chart 5 illustrates the effect of an individual scenario on the LFPR. Consequently, the upper curve describes the combined effects of all scenarios compared with baseline developments. The LFPR at the end of the review period would then be a good 2 percentage points higher than the baseline (Chart 5). The LFPR for all cohorts would rise, but the strongest growth in labour supply would be seen for the youngest cohorts.

The hatched area in Chart 5 refers to the combined effect on the LFPR from an improved business cycle and a greater cohort effect of the young. The total LFPR would increase by 1 percentage point. Half a percentage point of the increase would be due to the cohort effect of cohorts born after the mid-1970s, and an increase in job vacancies would raise the average LFPR by about another half a percentage point. Increased labour demand would be reflected in the LFPRs for young cohorts, in particular. Participation in the labour market by cohorts in prime working age and cohorts approaching retirement responds less to cyclical trends on the labour market.

In particular, a reduction in long-term unemployment would curb the crowding out of the labour market of those in prime working age. If, for example, the proportion of the jobless who are long-term unemployed could, via intensification of labour market activity, be reduced to 15% in 2013, the average LFPR would increase by almost 1 percentage point compared with the baseline by 2020 (Chart 5).

In particular, a reduction in long-term unemployment would curb the crowding out of the labour market of those in prime working age.

Of the alternative scenarios, abolishment of the unemployment pipeline would reduce the cumulative decline in LFPRs by about 0.5 of a percentage point by 2020 (Chart 5). Abolishment of the pipeline concerns 55–59-year-olds, and the assumption is for a one-off removal for all. This would increase said cohort's average LFPR compared with the baseline.

Some young people may be permanently crowded out of the labour market

The cohort analysis shows that cohorts born in the 1950s and 1960s and

However, the economic downturn may be forcing some of the young permanently out of the labour market.

entering working life in the 1970s and 1980s have the highest LFPR. The LFPR for younger people has begun to fall, especially in the case of men. The decline in the LFPR for young working-age people may be a temporary phenomenon that will disappear as soon as the economy gradually resumes growth. However, the economic downturn may be forcing some of the young permanently out of the labour market. As the labour force contracts simultaneously merely due to ageing, the average LFPR in this case would fall about 2% by 2020. Consequently, the forecast for labour supply in the years ahead appears gloomier than foreseen in the Bank of Finland's estimate two years ago. At that time, a higher LFPR for younger cohorts was still assumed to compensate for the effects of an ageing labour force.

Young men's withdrawal from the labour market can only in part be explained by longer times of study. Another underlying force is the labour market situation. Male labour market status, in particular, has been impaired by the deteriorating employment situation in male-dominated industrial sectors in recent years. The industrial sector's declining GDP contribution is not only due to the weakness of the business cycle, but also to the economy's structural change, fuelled further by the financial crisis.

It is possible that withdrawal by the young from the labour market will be mitigated as soon as cyclical conditions improve, the need for labour increases and the employment situation for young people gets better. Moreover, population ageing will increase the need for labour in public services irrespective of the business cycle, which will also facilitate many young persons' attachment to the labour market.

In addition to the young, labour market participation for those in prime working age and those approaching retirement should also be supported. Alleviating long-term unemployment by addressing labour market structures could raise the LFPR by nearly 1 percentage point, as suggested by our results. The impact on the LFPR of abolishing the unemployment pipeline to early retirement would be nearly half a percentage point.

A great deal of uncertainty is related to estimates and the relevant scenarios. Nevertheless, these examinations include a message for economic policymakers. They highlight the risk that the labour market will face a cohort of 'downturn males' in the same way as following the recession of the 1990s there were 'recession females' whose LFPR remained lower than average for a long time. If the attachment of young people to the labour market is as weak as shown by the scenarios, potential economic growth will be lower than previously predicted.

Keywords: labour supply, cohort analysis, recession

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Sector-specific labour cost developments from the perspective of the industrial sector's cost structure

29 May 2013

Labour costs in economic segments producing intermediate goods for the manufacturing sector have grown significantly faster in Finland than in competitor countries in 1999–2011. The relatively rapid pace of growth in labour costs has passed through into intermediate goods prices, which has contributed to weakening the competitiveness of the exports industry.

The cost-competitiveness of Finnish manufacturing has declined in recent years. Due to strong productivity developments, unit labour costs in manufacturing have grown at a slower pace than in Finland's trading partners. Relative to the value of output, however, industrial labour costs have grown by about 20% during monetary union compared with Finland's trading partners.[1] Manufacturing profitability has declined partly due to unfavourable developments in end-product prices. In addition, the prices of intermediate inputs used in industry have risen faster than end-product prices. The share of intermediate inputs (ie goods and services) in manufacturing output is considerable, at around 75%.[2]

About a third of intermediate goods used in manufacturing comes from other domestic sectors, over a third from abroad and less than a third from other domestic manufacturing. This article discusses labour cost developments in nine domestic non-industrial sectors that produce intermediate inputs for manufacturing industry. For purposes of international comparison, we have produced a trade-weighted index of wage developments in these sectors in Finland's competitor countries.

The article begins with a review of labour cost developments in domestic non-industrial sectors relative to Finland's trading partners. Cost pressures from labour cost developments on the production of intermediate inputs are examined on the basis of unit labour costs and income share of labour. Examination of producer prices of business-to-business services provides an indication of how these cost pressures have passed through to intermediate goods prices and thereby to costs for the users of intermediate goods. Finally, the article outlines the impact of the use of intermediate inputs on the industrial sector's cost structure by looking at the use of intermediate goods in the various industrial subsectors.

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Average wages in the closed sector have risen more in Finland than in competitor countries

For comparison of labour cost developments, this analysis draws on compensation per employee in 1999–2011 calculated mainly on the basis of annual national accounts data.[3] This data has been used to calculate an index in which country-specific data has been

[1] Kajanoja, L. (2012) Finland's competitiveness and its measurement. Bank of Finland Bulletin 5/2012: Economic outlook.

[2] The relevance of intermediate goods to competitiveness has been studied in, for example, the Research Institute of the Finnish Economy's (ETLA) analysis by Mankinen, R – Nikula, N – Rantala, O (2012) Kustannuskilpailukyvyn mittausmenetelmien uudistaminen ('New methods for the measurement of cost competitiveness'). Prime Minister's Office Publications 3/2012.

[3] Eurostat data except for USA, for which data from the Bureau of Economic Analysis (BEA) has been used. Compensation per employee comprises wages and salaries plus employers' social security contributions.

converted into euro and weighted by Finland's foreign trade weights for 2011. The data used is Eurostat data pertaining to Finland's 19 trading partners.[4]

In Finland, compensation per employee has grown across the economy as a whole by almost 7% relative to competitor countries in 1999–2011 (Table 1). From the perspective of the consumption of intermediate inputs in manufacturing, labour cost growth relative to competitor countries has been equally significant in the non-industrial sectors as a whole. In the closed sector, labour cost growth as weighted by the use of intermediate inputs in Finnish manufacturing has been 6.8% relative to competitor countries.

In manufacturing, compensation per employee has grown at almost the same pace as in competitor countries. These statistics, however, provide a more favourable picture of developments than the labour cost index, according to which labour costs per hour worked have increased much faster in Finland than in competitor countries also in manufacturing.

Of the non-industrial sectors, the most important sectors for

[4] In this analysis, the competitor countries are AT, BE, DE, DK, EE, ES (2000–), FR, GR (2000–), IE, IT, LU, NL, NO, PT, SE, SI, SK, UK and USA.

Table 1.

Changes in average wages* and unit labour costs in Finland relative to competitor countries in 1999–2011, and use of intermediate inputs in manufacturing**

	Average wages, %	*Unit labour costs, %*	*Consumption of domestic intermediate goods by manufacturing (2010), % share*
Sectors, total	*6.8*	*–1.4*	*100.0*
Agriculture, forestry and fishing	*–3.8*	*9.7*	*9.2*
Industry: Mining and quarrying, other industrial activity	*–0.2*	*–12.7*	*53.2*
of which: Manufacturing	*0.2*	*–9.6*	*45.2*
Construction	*6.1*	*8.8*	*1.4*
Wholesale and retail trade; Transportation and storage; Accommodation and food service activities	*12.0*	*1.8*	*19.7*
Information and communication	*8.3*	*1.8*	*3.2*
Financial and insurance activities	*–4.6*	*41.5*	*1.7*
Real estate activities	*–2.7*	*1.8*	*1.3*
Professional, scientific and technical activities; Administrative and support service activities	*8.9*	*21.6*	*7.5*
Public administration and defence; Compulsory social security; Education; Human health and social work activities	*9.8*	*24.4*	*2.5*
Other service activities	*2.9*	*6.1*	*0.3*

** Compensation per employee.*
*** Unit labour costs comparison excludes data for USA.*

Sources: Eurostat, BEA and calculations by the Bank of Finland.

consumption of intermediate inputs in Finnish manufacturing are the sectors wholesale and retail trade, transportation and storage, and accommodation and food service activities (Chart 1). In this sector group, labour costs rose by 12% in Finland relative to competitor countries in 1999–2011. Of the competitor countries, Germany differs from many other countries for the slow rise in labour costs. Developments in Finland diverge from other countries particularly in 2008–2009, due to a rise in compensation per employee. Developments in Sweden – but also in the trade-weighted index – are also affected by exchange rate changes.

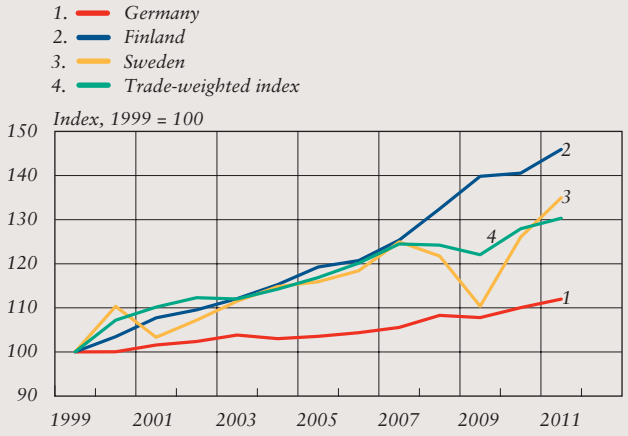
Another sectoral group important in terms of use of intermediate inputs in industry comprises the sectors professional, scientific and technical activities[5] and administrative and support service activities. In this sector group, labour costs grew by 8.9% relative to competitor countries in the review period (Chart 2). In these activities, compensation per employee was already growing at a faster pace in Finland than in competitor countries in the early 2000s, but the difference increased further in 2008–2009.

Agriculture and forestry are also important in terms of intermediate inputs. This is explained by the use of wood in the forest industries and agricultural inputs in the food industry.

[5] The sector professional, scientific and technical activities includes eg legal and accounting activities, activities of head offices, management consultancy activities, architectural and engineering activities, technical testing and analysis, scientific research and development, advertising and market research, design activities, translation, rental and leasing activities, security services and property management.

Chart 1.

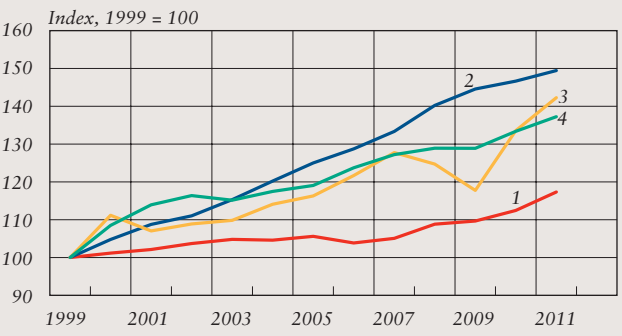
Compensation per employee: trade, transportation, storage and accommodation



Sources: Eurostat and calculations by the Bank of Finland.

Chart 2.

Compensation per employee: professional activities, administrative and support service activities



Sources: Eurostat and calculations by the Bank of Finland.

Labour cost growth in agriculture and forestry has been slightly slower in Finland than in competitor countries. In, for example, Sweden and Germany, however, it has been slower than in Finland. In agriculture and forestry, growth in compensation per employee does not pass through to intermediate product prices in the same way as to the prices of goods and services in more labour-intensive sectors, since the income share of labour relative to the sector's value added is smaller; for example, in 2011 it was only about 25%.

In the information and communication sector, labour costs have risen by over 8% relative to competitor countries in 1999–2011. In construction, Finnish labour costs grew sharply vis-à-vis competitor countries in 2008. The difference has decreased slightly since, but wage costs are still over 6% higher than in competitor countries in relation to 1999. In public services, too, labour costs have grown at a much faster pace in Finland than in competitor countries.

Costs per hour worked have risen faster than average wages

Compensation per employee depicts actual labour costs. Besides the cost of a work hour, compensation per employee is also affected by the number of hours worked. However, there are no internationally comparable data available on hours worked according to activity sectors. The labour cost index, which measures the change in average labour costs per hour worked, is available and is useful in augmenting the picture of relative developments in labour costs.

The labour cost index is a quarterly indicator calculated as the ratio of labour costs to hours worked.[6] In the key services activities, the cost of work as measured by the labour cost index has increased at a somewhat slower rate relative to competitor countries in 2000–2011 than suggested by compensation per employee (Table 2). By contrast, in manufacturing, labour costs have risen significantly faster in Finland than in competitor countries according to the index.

The almost 10% rise in manufacturing labour costs relative to competitor countries is partly explained by the selection of the base year. Manufacturing data can be complemented with older labour cost statistics, according to which labour costs per hour worked in Finnish manufacturing have still grown by over 6% vis-à-vis competitor countries in 1999–2011.[7] The sizeable difference relative to average wages may be explained by eg short-term layoffs which affect hours worked but not the number of employees.[8]

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[6] Since 2007 the index has been calculated on the basis of a sample study. At EU-level, the labour cost index has been available since 2000, although the figures are not comprehensive until 2007. At the level of economic segments, data is not available in precisely the same way as for compensation per employee. Data for administrative and support service activities are only available as of 2007. However, this sector is included in the sector professional, scientific and technical activities, under compensation per employee (Table 2). Differences in statistical compilation methods may affect the comparability of country-specific indices. For the United States, the country comparison is based on data for compensation per employee.

[7] No data is available for a corresponding comparison for other sectors.

[8] Historical labour cost index data prior to 2007 have been construed by combining other statistical data, which can skew the results.

Table 2.

Labour cost index and compensation per employee: change in Finland relative to competitor countries, 2000–2011

	Labour cost index	*Compensation per employee, %*
Private sector	*10.5*	*–*
Manufacturing	*9.9*	*4.3*
Construction	*14.1*	*11.7*
Wholesale and retail trade; Transportation and storage; Accommodation and food service activities	*10.2*	*16.0*
Information and communication	*23.9*	*12.0*
Financial and insurance activities	*–11.2*	*3.6*
Real estate activities	*36.1*	*1.0*
Professional, scientific and technical activities	*10.4*	*12.8*

Sources: Eurostat and calculations by the Bank of Finland.

The relevance of labour costs to segments producing intermediate goods varies

The impact of labour cost developments on intermediate goods prices depends on the significance of labour costs in total production costs, labour productivity developments and the pricing power of the producer of intermediate inputs. Changes in labour costs are not necessarily passed through to prices if productivity rises at the same pace, ie if unit labour costs do not increase.

Unit labour costs, measured as the ratio of labour costs to the volume of value added, increased across the economy as a whole less in Finland than in competitor countries in 1999–2011 (Table 1). This is explained solely by developments in industrial unit labour costs. Finnish unit labour costs have grown considerably relative to competitor countries in professional, scientific and technical activities as well as in administrative and support service activities. In trade, transportation and storage as well as in agriculture and forestry, unit labour costs have in turn grown more moderately than suggested merely by labour cost developments.

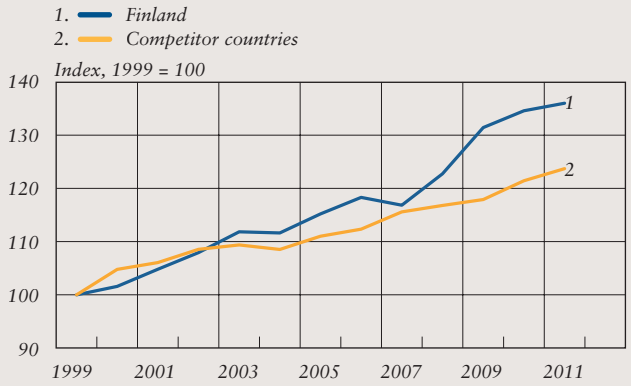
As a whole, unit labour costs have grown in the closed sector by over 9% relative to competitor countries, when sector-specific changes are calculated as a weighted average of the use of intermediate goods in Finnish manufacturing (Chart 3).[9]

The relevance of labour cost growth can also be assessed in terms of developments in corporate profitability. The labour share of income illustrates the significance of labour costs in a sector's value added and thereby, conversely, the sector's profitability. Another measure illustrating the significance of labour costs is the ratio of

[9] The impact of the exceptionally high growth rate of unit labour costs in financial and insurance activities on unit labour cost growth in the whole closed sector is about 1 percentage point.

Chart 3.

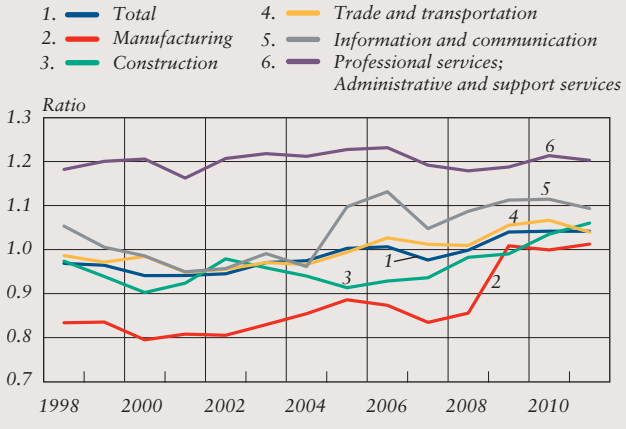
Unit labour costs in segments of the closed sector* producing intermediate goods



** Segments summed and weighted by shares of intermediate inputs in industry*
Sources: Eurostat and calculations by the Bank of Finland.

Chart 4.

Labour share of income in Finland relative to competitors' trade-weighted average, by sector



Sources: Eurostat, BEA and calculations by the Bank of Finland.

compensation per employee to output, which also takes into account the share of intermediate inputs in output. High intermediate inputs and relatively low value added may denote that a sector's own labour costs are not of high relevance to the price formation of end products.

The labour share of income has grown strongly in recent years, especially in the industrial sector. In other sectors, the changes have been noticeably more moderate. In the years following the financial crisis, ie in 2009–2011, however, the labour share has been higher than in competitor countries in most Finnish sectors, while the situation had been the opposite prior to the crisis (Chart 4).

The labour share has been noticeably higher in Finland than in competitor countries in the sector professional, scientific and technical activities (incl. administrative and support services). In these activities, the labour share has averaged 70% in Finland in 1999–2011, compared with 59% in competitor countries. In Sweden, the labour share equals the level in Finland, while in Germany, for example, it is only 45%. The high level in Finland may be explained by the fact that within this sectoral group, activities in Finland have concentrated on jobs of low value added and the level of productivity has been low compared with eg Germany. A higher labour share denotes that growth in labour costs exerts more pressure on the prices of these services. The share of labour costs in total output is also higher in this sectoral group in Finland than in eg Germany and Sweden (Table 3).

In the trade sector and in transportation and storage profitability relative to competitor countries has weakened in 2009–2010. Over the long term, profitability has fluctuated around the average of competitor countries. In the review period, the average labour share has been 61% in these sectoral groups both in Finland and in competitor countries. In Germany it was 65% and in Sweden 67%, but the trend has been downwards in both countries. In 2009–2011, the labour share in Finland rose to the levels recorded in Germany and Sweden.

Viewed from a broader perspective, labour costs in relation to total output are of relatively low relevance in agriculture and forestry, mining and especially in real estate activities. The share of labour costs in output was also lower in manufacturing than in Germany and Sweden in 2011, which is an implication of a higher share of intermediate inputs in Finnish manufacturing.

Partly because wages have risen faster than in competitor countries and also faster than labour productivity, the labour share has increased in most Finnish sectors in recent years to higher levels than in competitor countries on average. In other words, corporate profitability has weakened. There are – even considerable – differences in levels and developments between sectors. In sectors in which the labour share has also traditionally been high, growth in labour costs has probably had a stronger impact on goods and services prices.

Prices of intermediate inputs in industry have risen faster in Finland

There is little statistical data available on the prices of intermediate inputs produced by non-industrial sectors for the industrial sector. One method to

Table 3.

The share of labour costs in output, 2011

%	*Finland*	*Sweden (2010)*	*Germany*
Sectors, total	*25.6*	*28.5*	*26.5*
Agriculture, forestry and fishing	*12.5*	*19.1*	*12.4*
Mining and quarrying	*11.6*	*9.7*	*33.0*
Manufacturing	*14.7*	*16.5*	*19.1*
Construction	*24.5*	*34.4*	*28.6*
Wholesale and retail trade	*31.9*	*39.6*	*34.9*
Transportation and storage	*25.0*	*20.6*	*24.8*
Accommodation and food services	*29.9*	*32.3*	*28.7*
Information and communication	*30.2*	*27.0*	*28.1*
Financial and insurance activities	*31.9*	*30.5*	*25.1*
Real estate activities	*2.7*	*5.3*	*3.0*
Professional, scientific and technical activities	*40.6*	*35.0*	*31.4*
Administrative and support services	*43.0*	*39.5*	*31.0*

Sources: Eurostat and calculations by the Bank of Finland.

assess prices is to analyse the value of sector-specific output in the national accounts data in relation to its volume. Another possibility is to use producer price indices of services.

A comparison of services producer prices[10] shows that business-to-business services prices rose faster in Finland than in competitor countries in 2006–2008 (Chart 5).

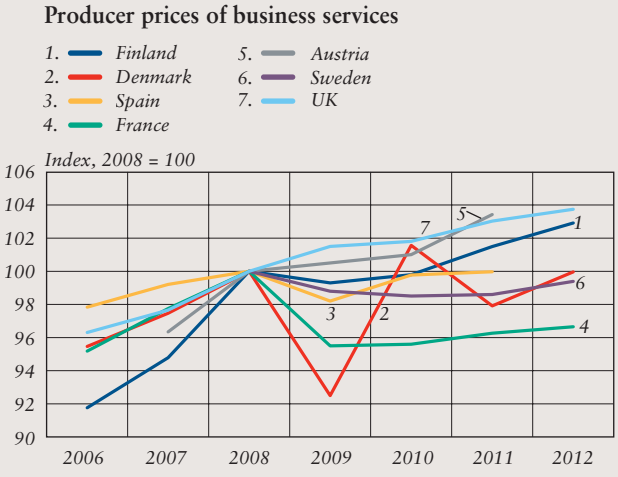
As a whole, business service prices grew in Finland by 2% on average per annum in 2006–2012. Sector-specific price developments show they rose most in the sectors in which labour costs also grew faster (Table 4).

The price of sector-specific output in accordance with the national accounts – calculated as the ratio of output value to output volume – has grown at a much faster rate in most non-industrial sectors than in manufacturing. In private services, the price of output increased in 1999–2011 by over 13% relative to the price of output in manufacturing. At a more precise sectoral level, the average annual growth rate of output prices stood at 3.4% in professional, scientific and technical activities, 2.8% in administrative and support services, 2.3% in transportation and storage and 1.1% in trade. In manufacturing, output prices grew by just 0.7% on average per annum. Hence, the faster growth in prices of intermediate inputs produced by the closed sector may have contributed to the weakening of manufacturing profitability.

[10] There is relatively little comparable data available on producer prices of business-to-business services: time series are short and data is only available for a few countries.

Chart 5.

Producer prices of business services



Source: Eurostat.

Structure of intermediate inputs varies in different industries

Private sector developments in the 2000s were characterised by the creation of value chains, specialisation in core activities and outsourcing of other activities. These developments were reflected in increased consumption of intermediate inputs in manufacturing. At the same time, the structure of intermediate inputs changed. The share of imported inputs in manufacturing output grew from 23% to 30%. Use of intermediate goods produced by the domestic manufacturing sector within the manufacturing sector contracted from 25% to 20% of output. Use of domestic intermediate inputs produced by non-industrial sectors remained below 22% relative to output in 2000–2008, but increased to 24% in

2010, due to the contraction of the electronics industry. These developments have led to increased exposure of the manufacturing sector to cost developments in other sectors. Compared with the euro area and Sweden, however, manufacturing in Finland consumes somewhat less domestic intermediate goods produced by other sectors.

Cost pressures caused by the closed sector for industrial subsectors depend on the scope and structure of intermediate inputs in these subsectors. Within the manufacturing sector, utilisation of intermediate inputs varies significantly depending on the nature of the sector. In the food industry and in wood and paper, consumption of non-industrial intermediate inputs is relatively high due to the use of domestic raw materials. Oil refinery, in turn, relies on imported inputs, since it depends on imported raw materials. Consumption of imported inputs is also high in the manufacture of motor vehicles, the electronics industry and manufacture of basic metals.

Labour costs in the closed sector have risen the most in services used extensively by the manufacturing sector. The resulting potential cost pressures are, however, passed on divergently to the various manufacturing subsectors. Professional, scientific and technical activities, including administrative and support services, produce services particularly for the electronics industry, manufacture of machinery and equipment and the food industry. Services of trade, transportation and storage are, in turn, most used in the paper industry. Hence, growth of labour costs in the closed sector affects the most those manufacturing subsectors that are currently undergoing structural change, ie the electronics and paper industries.

Table 4.

Average annual change in business service prices, 2006–2012

%	*Finland*	*Sweden**	*France*	*UK*
Business services, total	*2.0*	*–0.2*	*0.3*	*1.1*
Road transportation	*4.4*	*2.8*	*2.3*	*2.4*
Cargo handling	*1.4*	*1.9*	*1.0*	*2.4*
Storage	*1.8*	*2.5*	*1.1*	*2.9*
Postal and courier services	*3.1*	*2.8*	*1.5*	*1.3*
Telecommunications	*–3.7*	*–*	*–4.1*	*–3.2*
Professional, scientific and technical services	*3.4*	*–*	*0.8*	*2.4*
Security services	*4.5*	*5.7*	*2.1*	*1.4*
Cleaning services	*2.5*	*2.1*	*2.4*	*1.8*

** Data for Sweden 2008–2012.*

Source: Eurostat.

Growth in labour costs contributes to weakening competitiveness in the export industry

Measured by all indicators, labour costs in sectors producing intermediate goods for the manufacturing sector have grown at a faster pace in Finland than in competitor countries during monetary union. The most notable differences have been recorded in sectors of high importance in the production of intermediate inputs for manufacturing, such as trade, logistics and various support services. Labour cost growth has passed through to business services prices, which have risen in recent years faster in Finland than in some competitor countries and also faster than manufacturing output prices. Hence, growth in labour costs in the closed sector has also contributed to the weakening of cost-competiveness in the export industry.

Keywords: labour costs, competitiveness

Articles and boxes

Articles

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.

Financial crisis and monetary policy targets. Juha Kilponen, Jarmo Kontulainen and Antti Suvanto. Bank of Finland Bulletin 1/2013.

Global integrated monetary and fiscal model. Mika Kortelainen. Bank of Finland Bulletin 1/2013.

The transformation of global energy markets. Laura Solanko and Lauri Vilmi. Bank of Finland Bulletin 1/2013.

Fiscal sustainability projections for Finland. Helvi Kinnunen, Petri Mäki-Fränti and Hannu Viertola. Bank of Finland Bulletin 5/2012.

Finland's competitiveness and its measurement. Lauri Kajanoja. Bank of Finland Bulletin 5/2012.

Bursting of the housing price bubble and the economic policy challenges for Spain. Hanna Freystätter. Bank of Finland Bulletin 4/2012.

Fiscal policy cyclicality and sovereign risk premia. Juha Kilponen. Bank of Finland Bulletin 4/2012.

How have emerging economies changed global price trends? Heli Simola. Bank of Finland Bulletin 4/2012.

An assessment of housing price developments against various measures. Jarkko Kivistö. Bank of Finland Bulletin 3/2012.

Market share of Finnish goods exports contracted sharply since 2000. Seppo Orjasniemi and Terhi Ravaska. Bank of Finland Bulletin 3/2012.

Long-term growth forecast for the Finnish economy. Helvi Kinnunen, Petri Mäki-Fränti, Elisa Newby, Seppo Orjasniemi and Jukka Railavo. Bank of Finland Bulletin 3/2012.

Countercyclical capital buffers in Finland. Karlo Kauko. Bank of Finland Bulletin 2/2012.

Monetary policy transmission and debt accumulation in the euro area. Harri Hasko. Bank of Finland Bulletin 1/2012.

Euro area economic policy coordination: what has been done, and why? Samu Kurri. Bank of Finland Bulletin 1/2012.

Quantitative easing of monetary policy. Lauri Vilmi. Bank of Finland Bulletin 1/2012.

Finnish households' economic margin. Petri Mäki-Fränti. Bank of Finland Bulletin 5/2011.

Analysis of the macroeconomic effects of population ageing using a general equilibrium model. Helvi Kinnunen and Jukka Railavo. Bank of Finland Bulletin 5/2011.

Fiscal policy responses of euro area countries to the economic crisis. Helvi Kinnunen and Maritta Paloviita. Bank of Finland Bulletin 4/2011.

Central banking and balance sheet risks. Tuomas Välimäki. Bank of Finland Bulletin 4/2011.

Macroprudential policy tools. Juhana

Hukkinen and Karlo Kauko. Bank of Finland Bulletin 4/2011.

Long-term supply of labour. Helvi Kinnunen and Petri Mäki-Fränti. Bank of Finland Bulletin 3/2011.

An estimated general equilibrium model for forecasting. Elisa Newby, Jukka Railavo and Antti Ripatti. Bank of Finland Bulletin 3/2011.

Bank of Finland's forecast errors in 2004–2010. Elisa Newby and Seppo Orjasniemi. Bank of Finland Bulletin 3/2011.

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- The link between economic growth and the unemployment rate has changed (p. 30–32).
- Finland's public financies (p. 36–40).

Bank of Finland Bulletin 3/2012, Economic outlook

- National Accounts for the first quarter of 2012 (p. 11).
- Finnish services exports still narrowly based (p. 21–23).
- Productivity developments reflect sectoral, structural and cyclical factors (p. 30–32).
- Current account decline based on several factors (p. 37–38).

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- Corporate profitability by sector in Finland (p. 24–26).
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Alternative scenarios

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- Alternative scenario: Households strengthen their financial position by adjusting demand. Bank of Finland Bulletin 3/2012, Economic outlook (p. 43–45).
- Alternative scenario: debt crisis escalates into global recession. Bank of Finland Bulletin 5/2011, Economic outlook (p. 54–57).
- Alternative scenario: an increase in domestic wage and price pressures. Bank of Finland Bulletin 3/2011, Economic outlook (p. 43–46).

Forecast tables

1. Balance of supply and demand, at reference year 2000 prices

% change on previous year

	2011	2012	2013f	2014f	2015f
GDP at market prices	2.8	–0.2	–0.8	0.7	1.4
Imports of goods and services	6.1	–3.7	0.8	2.8	4.6
Exports of goods and services	2.9	–1.4	1.2	3.5	4.7
Private consumption	2.3	1.6	–0.9	0.2	1.2
Public consumption	0.4	0.8	0.8	0.1	0.4
Private fixed investment	7.7	–3.4	–3.6	2.0	3.9
Public fixed investment	2.9	0.5	0.4	–0.1	0.0

2. Contributions to growth[1]

	2011	2012	2013f	2014f	2015f
GDP, % change	2.8	–0.2	–0.8	0.7	1.4
Net exports	–1.2	1.0	0.2	0.2	0.0
Domestic demand excl. inventory change of which	2.7	0.5	–0.9	0.5	1.4
– Consumption	1.4	1.1	–0.3	0.3	0.7
– Investment	1.3	–0.6	–0.6	0.3	0.6
Inventory change + statistical discrepancy	1.3	–1.7	0.0	0.0	0.0

[1] *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

Index, 2000 = 100, and % change on previous year

	2011	2012	2013f	2014f	2015f
GDP at market prices	117.5	120.8	123.5	126.1	128.9
	3.1	2.8	2.2	2.1	2.2
Imports of goods and services	114.9	118.9	118.5	119.9	121.5
	6.3	3.6	–0.4	1.1	1.4
Exports of goods and services	100.6	102.0	101.4	102.5	104.0
	4.3	1.4	–0.5	1.0	1.5
Private consumption	120.9	124.1	126.5	128.7	131.0
	3.5	2.7	1.9	1.8	1.8
Public consumption	147.7	153.1	158.3	162.9	167.5
	4.0	3.7	3.3	2.9	2.9
Private fixed investment	118.1	123.4	125.8	128.4	131.3
	2.6	4.5	1.9	2.1	2.2
Public fixed investment	129.5	136.0	138.9	141.8	144.8
	3.6	5.0	2.1	2.1	2.1
Terms of trade (goods and services)	87.6	85.7	85.6	85.5	85.6
	–1.9	–2.1	–0.2	–0.1	0.1

4. Balance of supply and demand, at current prices

EUR million and % change on previous year

	2011	2012	2013[f]	2014[f]	2015[f]
GDP at market prices	189,489	194,469	197,186	202,678	210,120
	6.0	2.6	1.4	2.8	3.7
Imports of goods and services	78,644	78,445	78,759	81,897	86,822
	12.8	–0.3	0.4	4.0	6.0
Total supply	268,133	272,914	275,945	284,575	296,942
	7.9	1.8	1.1	3.1	4.3
Exports of goods and services	77,251	77,261	77,778	81,291	86,397
	7.3	0.0	0.7	4.5	6.3
Consumption	151,171	157,805	160,844	164,538	169,598
	5.4	4.4	1.9	2.3	3.1
Private	104,994	109,531	110,567	112,725	116,065
	5.8	4.3	0.9	2.0	3.0
Public	46,177	48,274	50,277	51,813	53,533
	4.4	4.5	4.1	3.1	3.3
Fixed investment	37,196	37,755	37,304	38,724	40,920
	10.0	1.5	–1.2	3.8	5.7
Private	32,448	32,743	32,169	33,488	35,574
	10.5	0.9	–1.8	4.1	6.2
Public	4,748	5,012	5,135	5,236	5,346
	6.5	5.6	2.5	2.0	2.1
Inventory change + statistical discrepancy	2,515	93	19	22	26
% of previous year's total demand	1.3	–0.9	0.0	0.0	0.0
Total demand	268,133	272,914	275,945	284,575	296,942
	7.9	1.8	1.1	3.1	4.3
Total domestic demand	190,882	195,653	198,167	203,284	210,544
	8.1	2.5	1.3	2.6	3.6

5. Balance of supply and demand

% of GDP at current prices

	2011	2012	2013[f]	2014[f]	2015[f]
GDP at market prices	100.0	100.0	100.0	100.0	100.0
Imports of goods and services	41.5	40.3	39.9	40.4	41.3
Exports of goods and services	40.8	39.7	39.4	40.1	41.1
Consumption	79.8	81.1	81.6	81.2	80.7
Private	55.4	56.3	56.1	55.6	55.2
Public	24.4	24.8	25.5	25.6	25.5
Fixed investment	19.6	19.4	18.9	19.1	19.5
Private	17.1	16.8	16.3	16.5	16.9
Public	2.5	2.6	2.6	2.6	2.5
Inventory change + statistical discrepancy	1.3	0.0	0.0	0.0	0.0
Total demand	141.5	140.3	139.9	140.4	141.3
Total domestic demand	100.7	100.6	100.5	100.3	100.2

6. Prices

Index, 2000 = 100, and % change on previous year

	2011	2012	2013f	2014f	2015f
Harmonised index of consumer prices, 2005 = 100	114.2	117.8	120.4	122.7	124.7
	3.3	3.2	2.3	1.9	1.7
Consumer price index, 2005 = 100	113.4	116.6	118.6	120.8	123.1
	3.4	2.8	1.7	1.9	1.9
Private consumption deflator	120.9	124.1	126.5	128.7	131.0
	3.5	2.7	1.9	1.8	1.8
Private investment deflator	118.1	123.4	125.8	128.4	131.3
	2.6	4.5	1.9	2.1	2.2
Exports of goods and services deflator	100.6	102.0	101.4	102.5	104.0
	4.3	1.4	–0.5	1.0	1.5
Imports of goods and services deflator	114.9	118.9	118.5	119.9	121.5
	6.3	3.6	–0.4	1.1	1.4
Value added deflators					
Value added, gross at basic prices	118.8	121.9	124.0	126.2	128.9
	2.8	2.6	1.7	1.8	2.1
Private sector	110.4	112.9	114.2	115.9	118.0
	2.5	2.2	1.2	1.5	1.8
Public sector	165.0	172.3	178.9	184.8	190.8
	4.3	4.4	3.9	3.3	3.2

7. Wages and productivity

% change on previous year

	2011	2012	2013f	2014f	2015f
Whole economy					
Index of wage and salary earnings	2.7	3.5	1.7	1.9	2.6
Compensation per employee	2.0	3.0	2.0	2.1	2.6
Unit labour costs	0.2	3.6	1.7	1.1	1.3
Labour productivity per employed person	1.8	–0.6	0.3	0.9	1.3

8. Labour market

1,000 persons and % change on previous year

	2011	2012	2013f	2014f	2015f
Labour force survey (15–74-year-olds)					
Employed persons	2,473	2,483	2,456	2,450	2,454
	1.0	0.4	–1.1	–0.2	0.2
Unemployed persons	208	207	227	231	221
	–7.0	–0.9	9.7	1.7	–4.1
Labour force	2,681	2,690	2,683	2,681	2,676
	0.3	0.3	–0.2	–0.1	–0.2
Working-age population (15–64-year-olds)	3,539	3,524	3,507	3,491	3,478
	–0.4	–0.4	–0.5	–0.4	–0.4
Labour force participation rate, %	66.1	66.0	65.7	65.5	65.1
Unemployment rate, %	7.8	7.7	8.5	8.6	8.3
Employment rate (15–64-year-olds), %	68.6	69.0	68.5	68.7	69.0

9. General government revenue, expenditure, balance and debt

% of GDP

	2011	2012	2013f	2014f	2015f
General government revenue	53.9	53.7	55.0	55.1	55.2
General government expenditure	55.0	56.0	57.5	57.6	57.4
General government primary expenditure	53.6	54.6	56.0	56.1	56.0
General government interest expenditure	1.4	1.5	1.4	1.4	1.4
General government net lending	–1.1	–2.3	–2.5	–2.5	–2.2
Central government	–3.4	–3.8	–3.3	–3.0	–2.7
Local government	–0.6	–1.1	–1.2	–1.3	–1.3
Social security funds	2.8	2.6	2.0	1.9	1.9
General government primary balance	0.3	–0.8	–1.1	–1.0	–0.8
General government debt (EDP)	49.0	53.0	56.9	59.8	61.8
Central government debt	42.0	43.1	46.0	47.8	49.0
Tax ratio	43.4	43.5	44.4	44.6	44.6

10. Balance of payments

EUR million

	2011	2012	2013f	2014f	2015f
Exports of goods and services (SNA)	77,251	77,261	77,778	81,291	86,397
Imports of goods and services (SNA)	78,644	78,445	78,759	81,897	86,822
Goods and services account (SNA)	–1,393	–1,184	–981	–606	–425
% of GDP	–0.7	–0.6	–0.5	–0.3	–0.2
Investment income and other items, net (+ statistical discrepancy)	92	–902	–528	–539	–526
Current transfers, net	–1,594	–1,516	–1,532	–1,566	–1,633
Current account, net	–2,896	–3,602	–3,042	–2,711	–2,584
Net lending, % of GDP					
Private sector	–0.4	0.4	1.0	1.1	1.0
Public sector	–1.1	–2.3	–2.5	–2.5	–2.2
Current account, % of GDP	–1.5	–1.9	–1.5	–1.3	–1.2

11. Interest rates

%

	2011	2012	2013f	2014f	2015f
3-month Euribor[1]	1.4	0.6	0.2	0.3	0.5
Average interest rate on new loans	3.2	2.3	1.9	2.1	2.4
Average rate of interest on deposits	1.0	0.8	0.4	0.4	0.5
Bank lending rate, average	2.6	2.3	1.7	1.8	2.0
Yield on Finnish 10-year government bonds[1]	3.0	1.9	1.6	1.9	2.2

[1] Technical assumption derived from market expectations.

12. International environment

Eurosystem staff projections

	2011	2012	2013[f]	2014[f]	2015[f]
GDP, % change on previous year					
Whole world	3.9	3.0	3.0	3.8	4.0
USA	1.8	2.2	1.9	2.6	3.0
Euro area[1]	1.5	–0.5	–0.6	1.1	
Japan	–0.5	2.0	1.5	1.4	0.9
Imports, % change on previous year					
Whole world	6.2	2.9	3.1	5.9	6.8
USA	4.8	2.4	1.9	5.9	6.9
Euro area[1]	4.3	–0.7	–0.7	3.8	
Japan	5.9	5.3	0.7	3.3	4.2
Index, 2000 = 100, and % change on previous year					
Import volume in Finnish export markets	176.8	181.2	185.5	194.5	206.1
	6.9	2.5	2.4	4.9	6.0
Export prices (excl. oil) of Finland's trading partners, national currencies	116.7	117.2	116.7	118.1	119.7
	2.6	0.4	–0.4	1.2	1.4
Export prices (excl. oil) of Finland's trading partners, in euro	101.8	105.0	103.0	104.1	105.5
	4.5	3.1	–2.0	1.1	1.4
Industrial raw materials (excl. energy), HWWA index, in US dollars	243.4	204.8	187.6	188.3	198.1
	14.4	–15.8	–8.4	0.4	5.2
Oil price, USD per barrel[2]	110.9	112.0	105.5	100.0	96.2
	39.3	0.9	–5.8	–5.2	–3.8
Finland's nominal competitiveness indicator[2,3]	103.0	100.1	101.6	101.7	101.7
	–0.5	–2.9	1.5	0.1	0.0
US dollar value of one euro[2]	1.39	1.28	1.31	1.31	1.31
	5.0	–7.7	2.0	–0.2	0.0

[1] *Eurosystem staff projections for macroeconomic developments in the euro area prepared for the years 2013–2014.*
[2] *Technical assumption derived from market expectations.*
[3] *Narrow plus euro area, 1999 Q1 = 100.*

Organisation of the Bank of Finland

3 June 2013

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