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Economic outlook



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The cover picture depicts the national motif on the Italian 2 cent coin: The Mole Antonelliana, a spire designed by Alessandro Antonelli.

Preface

The conditions for economic growth and positive employment developments in Finland have benefited in recent years from strong confidence in the responsibility and long-term perspective of economic policy decisions. The financial behaviour of households has reflected strong faith in the future. This confidence is also reflected on the international financial markets, where the availability and price of funding for the Finnish public sector and banks have remained favourable. In this regard, Finland's position since the onset of the international financial crisis has differed from that of many other countries.

Confidence is based on the fact that the Finnish Government and other social partners have managed to agree sustainable solutions when circumstances have been difficult. Continued confidence is rooted in the expectation that decisions will continue to be responsible in the future.

Important decisions were taken in spring 2012, particularly in regard to balancing central government finances, but also to help extend the number of years people spend in working life.

The economy is, however, performing more weakly than expected in the spring, and this casts a shadow over the outlook for the public finances. Thus, the decisions taken in the spring are proving to be insufficient. At the same time the outlook for exports and the foreign trade balance has remained weak.

According to the Bank of Finland forecast, the objective set out by the Government of turning the trend in the debt ratio of central government downwards by the end of the current parliamentary term will not be achieved without additional measures. Moreover, the central government

deficit will contract less than targeted. At the end of the parliamentary term, the deficit is forecast to be around 2% of GDP, while the target is 1%. At the same time, the local government deficit will actually be growing.

Particularly after 2020, the increase in age-related expenditure will lead to the general government deficit deepening again, if extra steps are not taken in time. The general deterioration in the economic situation since the spring has wiped out the effects of the decisions taken then to reduce the sustainability gap in the public finances.

On the estimate of the Bank of Finland, the sustainability gap currently stands at 4% of GDP. This is, therefore, the scale of expenditure cuts or taxation tightening required to stabilise the public debt, if structural reforms to improve sustainability are not undertaken.

The public finance sustainability problem could be significantly eased by structural reforms to boost labour supply. Central to this are measures to lengthen working life. These can be implemented both by raising the effective retirement age and by encouraging earlier entry to working life among the young. Employment can also be increased by providing incentives to those of working age to offer their labour.

The effects of population ageing in weakening the balance of the public finances and GDP growth will increase gradually during the present and next decade. They pose a challenge for economic policy that will require a determined grip on policy from both the present and future governments.

Finland's export performance in recent years has been weak, and there are no signs of any rapid improvement. In addition to

sluggish growth internationally, exports have also been weighed down by special problems in Finland's electronics and paper industries.

In addition to the above, the faster pace of pay rises in Finland than in many other countries has pushed up the costs of Finnish output. Relative to other countries, labour costs grew particularly in 2008 and 2009, due to large pay rises, and the loss in competitiveness has not yet been recovered. The growth in labour costs is one of the factors that have in recent years weakened Finnish exports and the foreign trade balance.

When measuring the international competitiveness of the open sector of the economy, the focus is often on changes in unit labour costs, ie by how much labour costs have grown relative to the volume of production. In Finland's case, however, this measurement gives an overly positive picture of the situation, as average price developments in Finland's manufacturing have been much weaker than in competing countries. The value of production has, in fact, declined relative to the volume of production. Growth in production volume does not enhance a company's capacity to pay wages unless it also boosts the value of production. The exceptional price trend has also been reflected in a weakening in the terms of trade, ie the fall in export prices relative to import prices.

Value added in manufacturing is still approximately one fifth lower than before

the onset of the international financial crisis in 2007. Profitability and companies' average capacity for paying wages have both declined. At the same time, the upward trend in wages and other costs has continued.

Improving employment in the open sector and the foreign trade balance require that the weakened situation be taken into account in the next round of pay agreements.

Economic growth in recent years has been largely based on the accumulation of debt in both the household and public sectors. The confidence enjoyed by the Finnish economy has allowed the level of debt to grow. The debt-fuelled growth of recent years cannot, however, continue much longer. That would lead sooner or later to erosion of confidence.

With early measures, Finland's public finances can still be strengthened in a controlled way. Even then, the general economic outlook is not bright, and there will still be a great deal of uncertainty.

If measures are delayed too far, the rise of pressures for sudden and hasty policy action will grow considerably. The economic and social costs would then be much higher.

11 December 2012



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

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

according to market expectations and for bilateral 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 plus a large body of other data and assessments of economic developments.²

The publication schedule for Bank of Finland macroeconomic forecasts changed in 2011 so that the forecast article 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.

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 by Elisa Newby, Jukka Railavo and Antti Ripatti, 'An estimated general equilibrium model for forecasting', Bank of Finland Bulletin 3/2011, Economic outlook, p. 58–66.

Executive summary

Finland's GDP growth has slowed strongly during 2012.¹ According to advance data, third-quarter GDP was slightly lower in 2012 than a year earlier. The Bank of Finland forecasts overall GDP growth of just 0.3% in 2012. Growth will continue to be slow through 2013 as well. According to the forecast, GDP will grow 0.4% in 2013, and only in 2014 will it reach as much as 1.5%.

In the first half of 2012, Finland's economic growth was bolstered by private consumption. In the second half of the year, consumer confidence in the economy weakened and consumption growth slowed. In 2013, household purchasing power will contract and private consumption growth come to a halt. Private consumption will begin to grow again only in 2014, when economic growth and decelerating inflation support development of real incomes.

Investment will contract in 2012 and remain at the same level through 2013. Housing construction will decline somewhat in 2012 and also remain below the level of 2011 in 2013–2014. Fixed investment in productive capacity grew in 2011, only to contract again in 2012 as the outlook for business declined. Investment in machinery and equipment continues to be weighted towards replacement investment. Growth in business investment will be slow in 2013, but will accelerate gradually in 2014 as economic growth recovers.

Despite growth in international trade, Finnish exports will be lower in 2012. They will begin to grow slowly in 2013, but their share of world trade will

continue to decline in 2013–2014. In these years, imports will grow slightly more slowly than exports, due to the sluggishness of domestic demand. The current account deficit relative to GDP will flatten out at 1.3% in 2013–2014.

Continued slow economic growth will weaken employment in 2013. Unemployment began to grow in the second half of 2012, and the unemployment rate will rise to 8.4% in 2013. Growth in unemployment will be slowed by a decline in the supply of labour due to the size of the age cohorts reaching retirement age. In 2014, unemployment will begin to contract slowly.

The slow pace of economic growth will make it harder to restore the health of public finances, and the general government fiscal balance will be much weaker than the target. In 2012, the general government fiscal balance will decline to –1.3% relative to GDP. The local government deficit will deepen, and the surplus on the earnings-related pension funds will decline. The central government deficit will remain unchanged in 2012, at a full 3% of GDP. In 2013, fiscal policy will be tightened and the central government balance improve somewhat. In 2014, the central government deficit will still be in excess of 2%, and the overall general government deficit will be equal to 0.8% of GDP.

General government debt accumulation will continue through the forecast years. Growth in central government debt will slow in 2014, but debt accumulation by local government will accelerate. General government debt will be 57.4% of GDP in 2014. Tightening taxation will push the tax rate higher, particularly in 2013. In 2014,

¹ The forecast is based on statistical data available on 21 November 2012.

the tax rate will rise to 45% of GDP, 1.7 percentage points higher than in 2011.

Consumer prices have continued to rise rapidly in 2012, mainly due to increases in indirect taxation. A value-added tax increase will push inflation up to 2.4% in 2013. Muted economic growth, a drop in the prices of energy commodities and deceleration in the pace of rise in unit labour costs will reduce inflationary pressures, and in 2014 inflation according to the harmonised index of consumer prices (HICP inflation) will be just 1.6%.

The Bank of Finland forecast contains the assumption that national and EU-level measures will succeed in stabilising economic developments in the crisis countries of Europe and that financial market confidence in the debt sustainability of these countries will be strengthened. Restoring balance in the public finances will inevitably be a slow process, which will serve to prolong uncertainty on the financial markets. If some of the crisis countries prove unable to carry through structural reforms, this could trigger a vicious circle that would spread to other euro area countries and weaken growth throughout the entire euro area.

Recent years have seen the emergence of certain problems in Finland's domestic economy that will take a long time to remedy. According to the forecast, household and general government debt accumulation will continue, the losses in price competitiveness will not be recovered, nor will the current account deficit be corrected. At the same time, important industrial sectors have contracted, probably permanently.

So far, confidence in the Finnish economy remains unshaken, and funding costs have remained low for both government and the banks. If Finland is unable to carry through measures to restore the economy to a stable path, market confidence could be shaken. This would lead to growth in funding costs, a stronger brake on domestic demand and a decline in asset prices. The problem of deficit in the public finances would deepen and unemployment would rise more than forecast.

Table 1.

Forecast summary						
<i>Supply and demand</i>						
	2011	2010	2011	2012 ^f	2013 ^f	2014 ^f
	<i>At current prices EUR billion</i>	<i>Volume, % change on previous year</i>				
<i>Gross domestic product</i>	189.4	3.3	2.7	0.3	0.4	1.5
<i>Imports</i>	78.3	6.9	5.7	-1.2	1.0	4.2
<i>Exports</i>	77.1	7.5	2.6	-1.9	1.3	4.3
<i>Private consumption</i>	105.2	3.3	2.5	0.7	-0.1	1.2
<i>Public consumption</i>	46.0	-0.3	0.4	-0.3	1.0	0.6
<i>Private fixed investment</i>	32.4	3.5	7.7	-0.9	0.4	3.5
<i>Public investment</i>	4.6	-7.7	0.6	0.4	0.5	1.3
<i>Key economic indicators</i>						
		2010	2011	2012 ^f	2013 ^f	2014 ^f
<i>% change on previous year</i>						
<i>Harmonised index of consumer prices</i>		1.7	3.3	3.1	2.4	1.6
<i>Consumer price index</i>		1.2	3.4	2.9	2.3	1.8
<i>Wage and salary earnings</i>		2.6	2.7	3.4	2.5	2.5
<i>Labour compensation per employee</i>		1.8	3.4	4.1	2.7	3.1
<i>Productivity per person employed</i>		3.7	1.7	-0.1	1.0	1.4
<i>Unit labour costs</i>		-1.9	1.7	4.3	1.7	1.7
<i>Number of employed</i>		-0.4	1.1	0.5	-0.6	0.1
<i>Employment rate, 15–64-year-olds, %</i>		67.8	68.6	69.0	68.9	69.2
<i>Unemployment rate, %</i>		8.4	7.8	7.8	8.4	8.2
<i>Export prices of goods and services</i>		4.1	4.3	1.3	1.5	1.8
<i>Terms of trade (goods and services)</i>		-1.9	-1.9	0.8	-0.4	-0.1
<i>% of GDP, National Accounts</i>						
<i>Tax ratio</i>		42.4	43.3	43.7	44.7	45.0
<i>General government net lending</i>		-2.8	-0.9	-1.3	-1.0	-0.8
<i>General government debt</i>		48.6	49.0	53.6	55.9	57.4
<i>Balance on goods and services</i>		1.3	-0.7	-0.6	-0.6	-0.6
<i>Current account balance</i>		1.5	-1.6	-1.3	-1.3	-1.3
<i>f = forecast</i>						
<i>Sources: Statistics Finland and Bank of Finland.</i>						

Economic outlook

Recent developments

GDP growth slowed

Growth in Finland's GDP has slowed steeply during 2012 (Chart 1). According to advance data from Statistics Finland, GDP in the third quarter of 2012 was 0.3% up on the previous quarter, but 0.8% down on a year earlier.¹ According to the trend indicator of output, output contracted in September by 0.5% month-on-month and 1% year-on-year. Services also contracted by 1% year-on-year, and industrial and construction output were at the previous year's level.

Growth in industrial output has already been at a standstill for about two years (Chart 2). Among major industries, chemical industry output has been rising. In the metal industry, too, production volumes have grown slightly during the current year. The downward trend in the output of the forest industries has come to a halt in 2012, but production has decreased further in electrical engineering and electronics. Similarly to industrial output, exports have also been weak. Real goods exports remain at the same level as at the beginning of 2011. Services exports have also been treading water.

The rapid deceleration in economic growth is a consequence of the dampening of demand in the domestic market. Real construction growth has decreased in both residential and other new-build construction during 2012 (Chart 3). Growth in household

consumption has fluctuated in 2012 due to exceptional factors, such as the strong variation in new car sales due to a change in car tax. However, the rate of consumption growth has clearly

Chart 1.

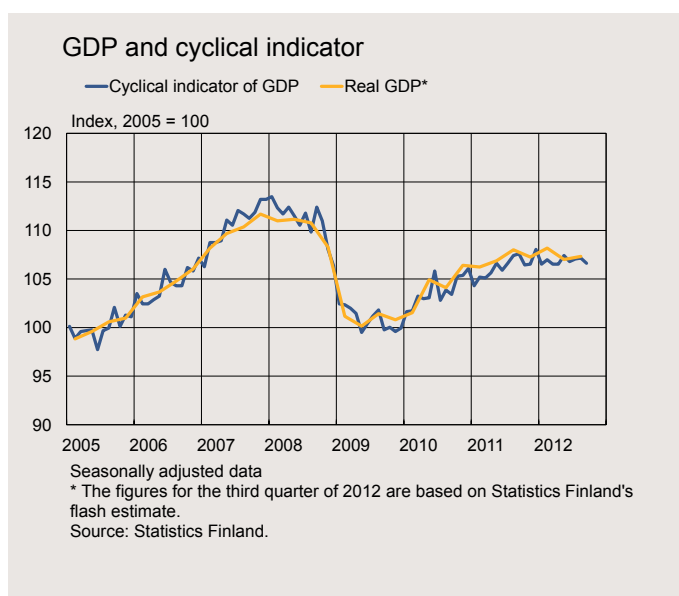


Chart 2.



¹ Advance data on the third quarter of 2012 published on 5 December 2012 is discussed in Box 1.

Chart 3.

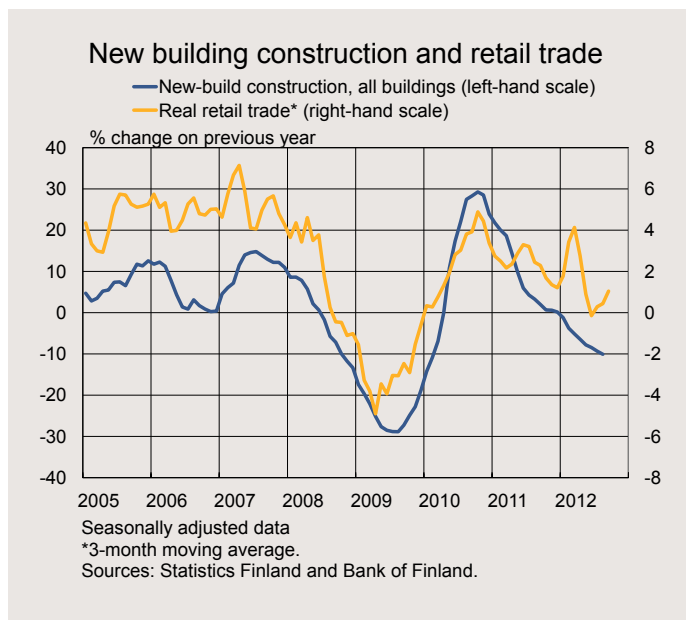
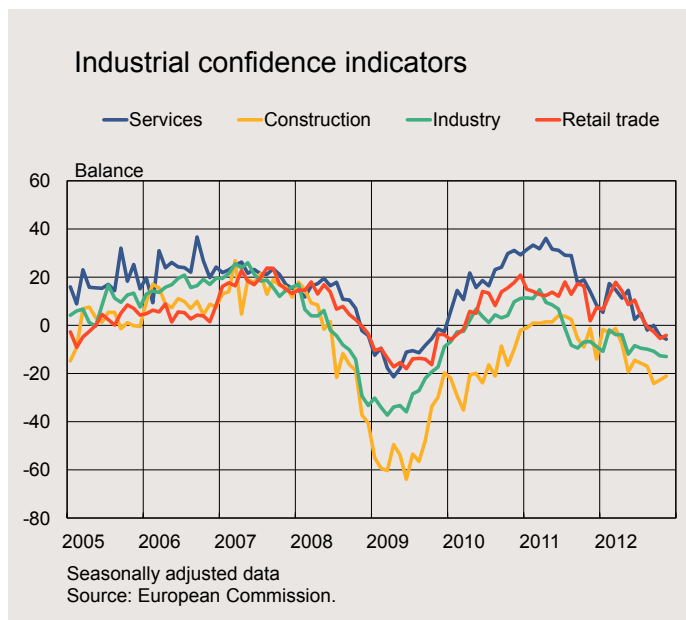


Chart 4.



decelerated, and sluggish growth in retail sales during the autumn anticipates continued slow growth in consumption in the latter half of 2012.

Confidence indicators point to weakening economic confidence in all main sectors of the economy during 2012 (Chart 4). Confidence has not been this weak since the turn of 2009 and 2010. Moreover, the consumer confidence indicator has weakened notably since the summer. Consumers' assessments of their own finances and Finnish economic developments over the next year are gloomier than before.

The business cycle indicator of the Confederation of Finnish Industries released in October also points to a further weakening in the near-term economic outlook for Finnish companies. Industrial and construction output, in particular, is expected to contract in the coming months. New industrial orders have also declined during 2012, standing in September 2012 at a much lower level than at the end of 2011. New orders have decreased particularly in the metal industry, although the downward trend has come to a halt in recent months.

The rapid deceleration of GDP growth is already reflected on the labour market. The number of unemployed has begun to increase, and in October Finland's unemployment rate stood at 7.9%, ie 0.3 percentage points higher than a year earlier. In recent months, the number of employed has also decreased somewhat.

Inflation remained rapid

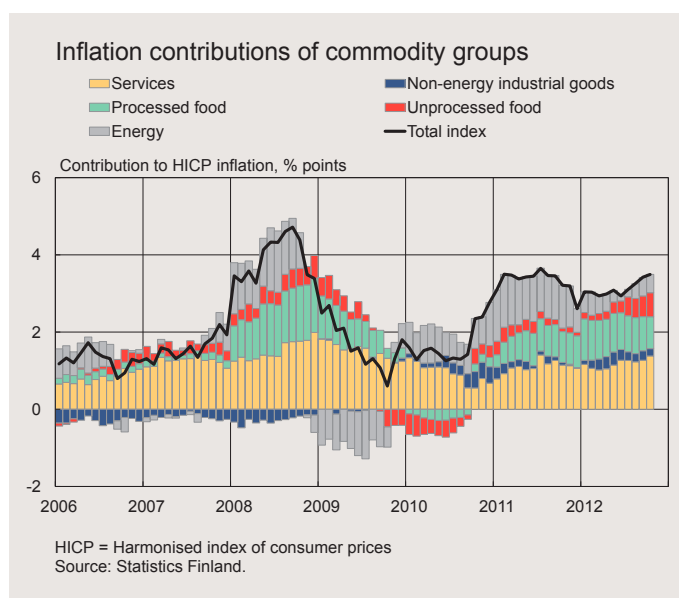
Inflation as measured by the harmonised index of consumer prices (HICP) has continued to be brisk in 2012. In the first half of the year, inflation amounted on average to 3.0%,

and it has subsequently accelerated further, particularly due to rising food and service prices (Chart 5). In the third quarter of 2012, inflation averaged 3.3%. In contrast, inflation as measured by the national consumer price index (CPI) has slowed during the year to 2.6% in October. CPI inflation has slowed largely as a result of a decline in interest rates on housing loans and consumer credit. Interest rates are not included in HICP inflation.

The hikes in indirect taxes that took place at the turn of the year have had a considerable impact on inflation in 2012. In HICP inflation, the impact of indirect taxation has amounted to almost 0.9 percentage points. The largest impact was attributable to the rise in excise duties on processed foods, but inflation was also boosted by increased VAT on newspaper and magazine subscriptions and barber/hairdresser services. There were also increases in fuel excise duties and car taxes.

As regards processed foods, inflation was driven mostly by increased taxation of alcohol and tobacco, but excise duties on sweets, ice-cream and non-alcoholic beverages were also increased at the beginning of 2012. All in all, the prices of processed foods rose during the first three quarters of 2012 on average by 6.3% from a year earlier. Unprocessed foods, including fresh produce, such as meat, fish, fruit and vegetables, appreciated in the first half of 2012 at a rate of 3.2%. In the third quarter, prices increased at a considerably higher rate, 7.9% on average. This was partly attributable to

Chart 5.



weather conditions, but pressures also emanated from a longer-term cost increase at the producer level.

After food, the second largest impact on domestic inflation was caused by a rising trend in service prices, which has accelerated during the year. In October, services were already 3.5% more expensive than a year earlier. The rise in rents has accelerated further: rents have climbed in 2012 by 3.7%. 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 significant item in services is restaurant and cafeteria services, whose prices are indirectly affected, among other things, by changes in the tax on alcohol. The rise in service prices is contained by a decline in the prices of telecommunication services, which has strengthened in 2012.

Box 1.

National accounts for the third quarter of 2012

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

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

According to the most recent quarterly national accounts, real GDP contracted in the third quarter of 2012 by 1.2% year-on-year and 0.1% quarter-on-quarter. According to the flash estimate published in November, real GDP growth in the third quarter was -0.8% year-on-year and 0.3% quarter-on-quarter.

Quarter-on-quarter growth in the first quarter of 2012 amounted to 0.3 percentage points less than previously estimated. Second-quarter growth was unchanged by the revision. Accordingly, the revised GDP growth rates for the first and second quarters of 2012 were 0.6% and -1.1% quarter-on-quarter, respectively.

Private consumption growth in the first quarter of 2012 was faster than previously estimated. Private investments decreased more than previously estimated in both the first and second quarters. Investments have decreased in every quarter this year quarter-on-quarter. Exports did not contract in the second quarter of 2012 as much as previously estimated. However, the level of exports is still stuck at the same level as at the end of 2010.

In the third quarter, exports and private consumption made the strongest contribution to GDP growth. Exports grew 2.4% on the previous quarter. Goods exports increased but services exports contracted. Private investment decreased 1.3% quarter-on-quarter. Investment in machinery and equipment increased by 2.5%, but investment in housing construction contracted by 1.2%. Non-residential construction investment was also down on the previous quarter. Private consumption growth was much improved on the previous quarter on the back of increasing demand for durable goods. Other consumption items were up 0.6% on the previous quarter.

In the third quarter, value added at producer prices declined by 0.5% quarter-on-quarter. Output was down across a very

broad front. At the sectoral level, it contracted in primary production, construction, services and retail. In manufacturing, production increased in the forest industries and the metal industry, excluding electrical and electronic products. Manufacture of electrical and electronic products was down on the previous quarter. Imports contracted by 3.7% in the third quarter quarter-on-quarter. Both goods and services imports contracted.

Despite the GDP contraction in the third quarter, labour input increased on the previous quarter as measured by both the number of employed and working hours, albeit by only 0.1%. The growth rate for overall compensation of employees also slowed to about 0.2% quarter-on-quarter.

The most recent quarterly national accounts data signal a similar development for 2012 as the statistical data published previously. Economic growth has slowed steeply during 2012. Growth in domestic demand has dampened, and export growth has been weak.

The prices of energy products have shown mixed developments. The price of electricity has decreased on average by a good 1% from the previous year, but fuel prices have risen considerably due to higher crude oil prices. The expensive petrol and diesel also reflect high refining margins and the tax hikes implemented at the beginning of 2012.

The consumer prices of industrial goods (excl. energy) have increased moderately: during 2012, the average increase has been 0.8% year-on-year. Prices of durable goods have continued to decrease, but the prices of other consumer goods have increased at a rate of 1.8%.

Operating environment

International economy and Finland's export markets

The international economy has weakened over the summer and the autumn. The outlook is overshadowed by lacklustre growth in the global economy, continued fragile confidence and the ongoing problems in the euro area. Incipient signs of improving confidence and fading market uncertainty are, however, visible in key confidence indicators, whose weakening has partially come to a halt during the autumn and in places turned into a mild upward movement.

Stock indices in Europe have also remained higher in the autumn than in the summer months, and government bond markets have witnessed declines in, for example, Spanish and Italian

bond yields, particularly in shorter maturities. However, despite nascent optimism, there are still major differences across euro area countries in the transmission of the Eurosystem's single monetary policy. Accordingly, the programme of Outright Monetary Transactions (OMTs) decided on by the Governing Council of the ECB in September is aimed to ensure the proper transmission and singleness of monetary policy.

The new growth forecasts for the global economy and international trade over the next few years are more downbeat than the international picture on which the Bank of Finland's previous forecast for the Finnish economy, published in June, was based. The latter half of 2012 and the first half of 2013 will largely be a period of subdued growth in the global economy. In the euro area, the outlook for the immediate quarters ahead is dim, and the pace of growth in emerging economies will be slower than previously expected. Thus, growth in Finland's export markets in 2012 and 2013 will be considerably more muted than expected.

The current forecast is based on the assumption that a renewed escalation of the euro area sovereign debt crisis will be avoided and confidence will gradually improve. The substantial government debt in the crisis countries and the problems regarding the credibility of their budget policies can, however, be corrected only slowly and gradually. Fiscal consolidation is assumed to weaken the growth outlook for the advanced economies in the immediate years ahead. Securing

long-term debt sustainability is, however, essential in order to maintain interest rates in the advanced economies at a sustainable level and to bring them in the crisis countries back to a level that is conducive to the health of the private sector. Signs of an improvement in economic growth and debt sustainability in countries struggling with the most severe problems can, in a best-case scenario, be expected to emerge only far into next year.

Economic outlook for the major economic regions

Euro area GDP contracted quarter-on-quarter 0.1% in the third quarter, ie slightly less than in the second quarter. Germany and France saw modest economic growth, whereas the economies of other large euro area countries contracted. In the quarters immediately ahead, both private consumption and investment are anticipated to decline in the euro area at the same time as fading world trade and many countries' weak competitiveness constrain export growth. Fiscal consolidation and measures to improve the sustainability of public debt will also dampen growth. Euro area economic activity in 2013 will, on average, remain at the same level as 2012, despite expectations of a resumption of growth in the spring and a gradual acceleration towards the end of the year. Subdued domestic demand and slower world trade growth will worsen the already weak employment situation in many euro area countries.

In the **United States**, the economy grew fairly rapidly in the third quarter,

on the back of public consumption and improved housing investment. By contrast, fixed investment in productive capacity and exports declined, driven down by the weak world economy. Household prospects have brightened somewhat in the autumn in response to higher housing and stock prices. Interest rates are low, and the Federal Reserve's October decision on quantitative easing of monetary policy continued to lower interest rates on mortgage borrowing to some extent. US growth in 2013 is expected to remain slightly slower than earlier envisaged, as the stance of fiscal policy is surrounded by uncertainty and subdued demand from the rest of the world will act as a constraint on manufacturing and investment growth.

Emerging economies, particularly **China**, are forecast to continue growing rapidly, although the pace of growth is expected to slow slightly more than previously projected. The driving forces behind the slowdown are both cyclical conditions and, over the long term, the huge size of the economy and structural factors. The deteriorating international economy has put a brake on Chinese export growth. The Chinese government has not supported economic growth as previously, as the fallout from the credit bubble caused by the earlier stimulus package and overheating of the property market narrow the room for manoeuvre for further government action.

In **Japan**, the economic outlook has become gloomier during the course of the autumn. The underlying reasons are problems related to both exports

and private consumption. The latter part of 2012 is expected to be a period of very modest growth. Export problems, the petering out of growth effects from post-tsunami reconstruction and diminishing fiscal stimulus will keep growth in 2013 more modest than previously expected. A debt-issuance programme, through which Japan already finances a larger share of government spending than through tax revenues, needs to be approved annually by the country's parliament, and this year it has been more difficult than usual to obtain approval for the programme. Owing to Japan's record high public debt – 230% of GDP in 2011 – interest rates on bonds with the longest maturities, in particular, have risen to some extent.

Russian economic growth recovered slightly in the third quarter of 2012, following a particularly weak second quarter. Divergence in domestic demand has deepened, as private consumption has continued to improve steadily in the autumn, whereas investment has declined and the flow of credit from domestic banks to companies has continued to contract. Growth is estimated to slow to a good 3½% in 2012 and 2013 on account of slow growth in the global economy and a gradual fall in the price of oil. Private consumption will remain a key factor in economic growth throughout the forecast period.

World trade growth will continue at a very slow pace over the next few quarters. An environment of weak confidence will be reflected in household and corporate purchasing

Table 1.

Growth in GDP and world trade				
% change on the previous year				
BKT	2011	2012 ^f	2013 ^f	2014 ^f
United States	1.8	2.2	1.9	2.6
Euro area*	1.5	-0.6 – -0.4	-0.9 – 0.3	0.2 – 2.2
Japan	-0.7	1.6	0.4	1.3
Asia excl. Japan	7.6	6.0	6.7	7.4
World	3.7	3.1	3.3	4.0
World trade	6.3	3.0	4.1	7.0
Finland's export markets**	6.8	2.7	2.9	6.0

* The Eurosystem staff projections for macroeconomic developments in the euro area. The uncertainty related to the estimates is illustrated by presenting them as ranges. The ranges are based on differences between estimates made in previous years and actual developments. The breadth of the ranges is the absolute values of these differences, multiplied by two.

** 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.

^f = forecast

Source: Eurosystem.

decisions on consumer durables and capital goods. Accordingly, the forecast for world trade has been revised downwards in respect of both 2012 and 2013. Towards the end of the forecast horizon in 2014, however, world trade is projected to achieve its average longer-term growth rate.

New and increasingly unfavourable growth forecasts for the global economy and international trade in the immediate years ahead will also mean weaker growth in demand for exports from Finland (Table 1). Combined imports by Finland's export markets, ie by countries to which Finland exports, are estimated to grow in 2012 and 2013 substantially less than previously expected. Moreover, Finland's export markets will grow more slowly than world trade on average, as growth in imports by advanced economies, which

are important for Finnish exports, is weaker than average import growth across the world as a whole.

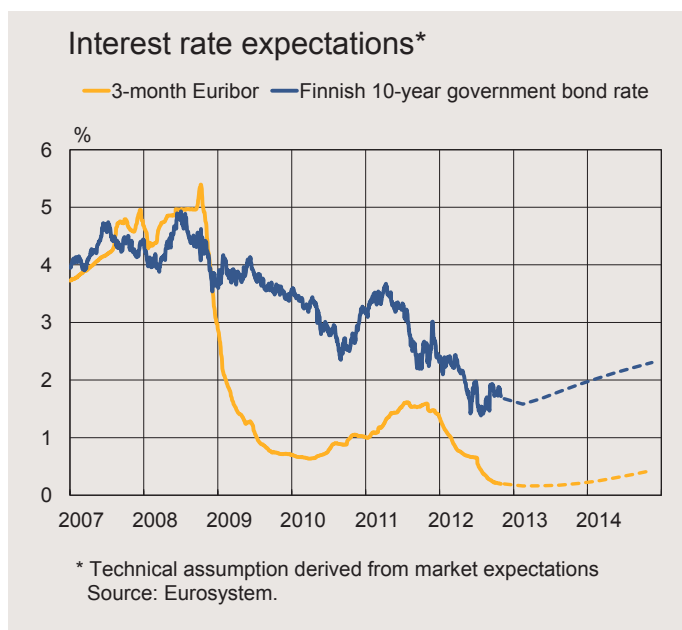
Commodity and foreign trade prices

Commodity prices (excl. oil) are expected to come down slightly in the immediate quarters ahead and to begin to rise moderately at the end of the forecast period. Behind the modest drop in prices lies slower growth in demand for raw materials, due to a slight moderation in the pace of growth in the global economy. During the summer and early autumn, world market prices for food were boosted by exceptional weather conditions and particularly drought conditions in the United States in the summer. Based on futures prices, the forecast assumption is for world market prices for food to remain fairly stable during the forecast horizon. The forecast assumes the price of Brent crude oil will

develop in accordance with the futures prices current on 16 November 2012. Under this assumption, the dollar price of crude oil at the end of the forecast period will be approximately 12% lower than in October 2012, on average.

The expected drop in commodity prices in the immediate quarters ahead will be reflected in the prices of exports to Finland's most important export markets. The depreciation in the euro that has already occurred and the forecast assumption that the external value of the currency will remain unchanged going forward will, however, mean that the pace of increase in the euro-denominated prices of Finland's export competitors will accelerate to a good 5½% this year. In the future, the euro-denominated prices of Finland's competitors will rise moderately, by slightly more than 2% in 2013 and by a good 1½% in 2014.

Chart 6.



Interest and exchange rates

According to a forecast assumption based on market expectations, the 3-month Euribor will remain more or less at its current level until the end of 2013. Thereafter it will rise slightly, to stand at 0.4% in the final quarter of 2014 (Chart 6).

Long-term interest rates, ie the yield on Finnish 10-year government bonds, will decline from an average 1.8% in October to around 1.6% in the first quarter of 2013, and thereafter rise to around 2.3% at the end of the forecast period, ie the final quarter of 2014. Thus, the yield curve will steepen somewhat, meaning the differential between long and short interest rates

Table 2.

Forecast assumptions					
	2010	2011	2012 ^f	2013 ^f	2014 ^f
Finland's export markets, ¹ % change	13.2	6.8	2.7	2.9	6.0
Oil price, USD/barrel	79.6	110.9	111.8	105.1	100.5
Euro export prices of Finland's trading partners, % change	8.0	4.4	5.6	2.3	1.6
3-month Euribor, %	0.8	1.4	0.6	0.2	0.3
Yield on Finnish 10-year government bonds, %	3.0	3.0	1.9	1.7	2.2
Finland's nominal competitiveness indicator ²	103.6	103.0	99.2	98.6	98.6
US dollar value of one euro	1.33	1.39	1.28	1.28	1.28

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.

will widen during the forecast period. The external value of the euro is assumed to remain unchanged during the forecast period (Table 2).

The interest rate assumptions in the forecast are derived from market expectations current on 16 November 2012. 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

The decisions taken by the European Central Bank (ECB) in summer and autumn 2012 on a programme of Outright Monetary Transactions (OMTs) discernibly calmed the financial markets. Risk premia on sovereign bonds of euro area crisis countries have declined, and euro area stock markets have perked up. Funding for euro area banks and non-financial corporations on the bond markets has also become easier.

However, the clear division of the euro area into countries with high credit ratings and countries with low credit ratings has remained in place, and Finland has kept its position among the strong countries. The outlook for the banking sector even in the countries with high credit ratings is impaired by decelerating economic growth, which – if protracted – threatens to increase banks' credit risks. The euro area debt crisis is not over; it could escalate again if euro area members are not sufficiently determined in pursuing reforms to remove structural imbalances in the economy and stabilise the financial sector.

The health of the financial system in Finland is satisfactory, and banks' risk-weighted capital adequacy has remained strong.² By contrast, owing to balance sheet re-arrangements among Nordic banks, the non-risk-weighted equity ratio has declined and is low by

² The Finnish financial markets are described in more detail in the article 'Financial stability' (p. 55–74, below).

international standards. Brisk growth in trading and investment income improved the profitability of large banks in particular in 2012. However, the low level of interest rates has weakened the profitability of basic banking, as deposit rates have declined more slowly than lending rates, leading to a fall in net interest income. Admittedly, higher interest rate margins have eased the situation for banks.

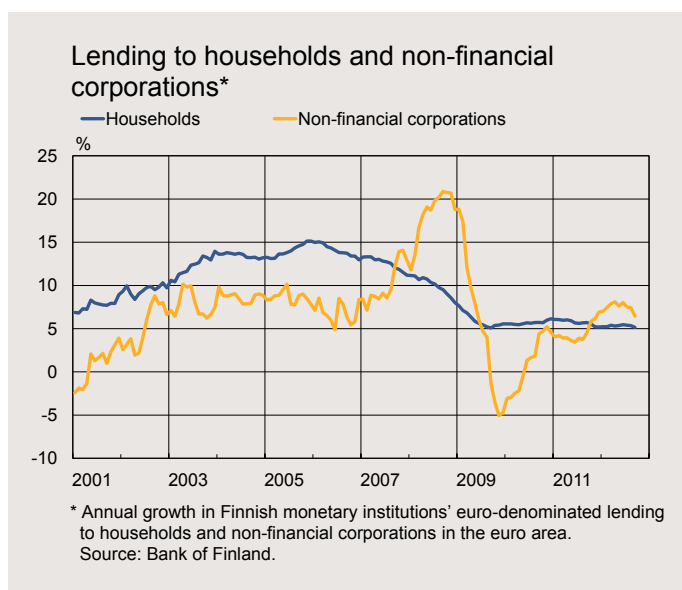
Although the situation on the Finnish financial markets is still stable, uncertainty has clearly increased during the financial crisis. Finland's near-term economic outlook is muted and the macroeconomic risks both domestically and internationally are considerable. The higher degree of uncertainty has been reflected in tighter bank lending policies. The stricter policies have so far been most visible in growing lending margins for both household and corporate loans. The tightening of

lending criteria in corporate loans can be seen especially in large new loans of over EUR 1 million, where interest rate differentials compared with corresponding loans in the rest of the euro area have narrowed sharply in the autumn.

Household credit demand has remained relatively brisk on the back of ongoing lively house purchases in 2012 (Chart 7). Despite increased uncertainty in the economy, granted housing loans continue to be large. A sample survey conducted by the Financial Supervisory Authority (FIN-FSA) revealed that the loan-to-value (LTV) ratio was over 90% in 37% of the housing loans covered by the survey.³ Accordingly, the stock of housing loans continued to grow at an annual rate of about 6% in 2012. A partial indication of the weakening macroeconomic situation is that defaults on household consumer credit have increased rapidly. As there has been almost no change in the number of defaulting persons, the defaults are concentrated on a limited group of debtors.

The growth rate in the stock of loans granted by banks to non-financial corporations has slowed in recent months, but access to finance by non-financial corporations is still good. The availability of finance for large and medium-sized enterprises is facilitated by direct acquisition of funds on the bond markets, which has increased significantly. Problems in accessing funding sources are mainly encountered by smaller enterprises. However, their

Chart 7.



³ Sample survey of housing loans 2012, 21 November 2012, Financial Supervisory Authority.

access to working capital and export finance has been eased by increased guarantee quotas from Finnvera, a specialised government-owned financing company and the official Export Credit Agency (ECA) of Finland.

Fiscal policy assumptions

A policy of fiscal consolidation has been pursued in Finland since 2011. The Government Programme included agreement on consolidation measures that will strengthen the central government finances by 1.2% relative to GDP. Measures to consolidate central government were stepped up by the decision on spending limits in spring 2012, under which further stabilisation measures of 1.2% relative to GDP were agreed. The impact of these decisions on central government will total approximately EUR 5 billion by 2016. The measures targeted at central government consolidation are almost evenly distributed between revenue and expenditure. The 2013 Budget is in line with the decision on spending limits.

In addition to the Government Programme and the decision on spending limits, the fiscal policy assumptions in the forecast are based on the Budgets for 2012 and 2013, supplementary budgets and their complementary updates. The forecast also takes into account the increases in earnings-related pension contributions effective until 2016, as agreed between the labour market confederations, and the decision in November 2012 on the annulment of increases in respect of 2013. Social security contributions will rise by a total of around 0.9% of GDP in 2012–2016.

Overall, the fiscal policy assumptions have changed only slightly compared with the Bank of Finland forecast released in June 2012. The new forecast takes into consideration the change in financing the Finnish Broadcasting Corporation (YLE), whereby a new public service broadcasting tax will replace the current television fee. This will have a technical impact on general government statistics. Previously, the television fee was included under private consumption. Migration to the new tax will reduce both disposable household income and private consumption. Similarly, it will boost central government tax receipts by 0.2% of GDP and increase public consumption expenditure by the same amount. Thus, the change will have no impact on the central government deficit or debt, but will raise tax and spending ratios.

In 2012, central government revenues will be boosted, in particular, by tightening taxes on motor vehicles and fuels as well as higher excise duties. An increase in the capital income tax rate and extension of the VAT base to include newspaper subscriptions will also add to government tax revenues. By contrast, tax receipts will be reduced by the lower corporate income taxation introduced at the beginning of 2012.

The 2013 Budget will shift the focus of taxation increasingly to indirect taxation. A substantial tightening of fiscal policy will be seen in 2013. VAT rates will be raised by 1 percentage point at the beginning of 2013, and revisions to income tax scales to compensate for higher

inflation and real earnings growth will be left undone for 2013–2014. In addition, a temporary bank tax will be used to strengthen central government finances in 2013–2015. Relative to GDP, the impact of these measures on the general government financial balance will be around 0.6%. The 2013 Budget also includes measures that will reduce corporate income tax receipts. These growth incentives targeted at companies will reduce tax revenue by about 0.1% of GDP.

A further tightening of earned income taxation will also be seen in 2014, as income tax scales are not amended. The introduction of a ‘windfall’ tax related to energy taxation and higher traffic fuel duties will also add to tax revenue.

Expenditure growth will be dampened by the spending cuts agreed for 2012–2015 in the Government Programme and the decision on spending limits. The spending cuts are mainly focused on central government transfers to local government, but cuts were also made in the expenditures of several different administrative sectors. Overall, the central government spending cuts will amount to around 1.2% of GDP.

Central government transfers to local government are assumed to increase only slowly, on average, in 2012–2014, ie at an annual pace of a good 2%. The municipal income tax percentage is assumed to rise by 0.3 of a percentage point in total in 2013–2014. In 2012, local government revenues will be reduced by a 5 percentage point decrease in the

proportion of revenue from corporation tax. The local government expenditure base is not expected to change significantly in the immediate years ahead.

In addition to deficits, funding allocated to the European Financial Stability Facility (EFSF) and capital paid to the European Stability Mechanism (ESM) will increase general government debt in 2012–2014.

Non-financial corporations

Exports to grow slowly in immediate years ahead

For several years now Finland’s exports of goods and services have performed well below the rate of growth in world trade. In the first quarter of 2012, export volumes contracted 2% relative to the same period a year earlier (Chart 8).

According to the forecast, the volume of Finnish exports will have declined by almost 2% in 2012. During the course of the year, exports have been held back by slower world trade growth coupled with the problems in the euro area. Meanwhile, restructuring in electronics and the forest industries has reduced domestic output. Another substantial influence has been the declining cost competitiveness of Finland’s manufacturing industry in recent years.⁴

According to the forecast, the international business cycle will turn upwards in the middle of 2013. Finnish exports, which are weighted towards

⁴ Finland’s competitiveness is examined in Lauri Kajanoja’s article ‘Finland’s competitiveness and its measurement’, p. 87–97 below.

capital and intermediate goods, will respond to the recovery only after a time lag, as investment demand in the advanced economies, Finland's main export markets, will continue to be fairly sluggish through 2013. Weak cost competitiveness will also serve to dampen the recovery of exports. In 2013, Finnish exports will grow by only a good 1%, while demand in the export markets will grow by over 3% (Chart 8). The recovery in world trade will quicken growth in exports of goods and services to over 4% in 2014. At the end of the forecast period, the volume of Finnish exports will still be 10% lower than the peak year of 2008.

After two years' rapid rise, the prices of industrial raw materials have fallen in 2012. There has also been a pronounced slowing in the pace of oil price rises. Industrial raw material prices will decline further in 2013, but will begin to rise again in 2014 as global growth gathers pace. Futures prices indicate the price of oil will decline in 2013–2014. Export prices will rise by under 2% per annum throughout the forecast period. Export prices of Finland's key export competitors will also rise by under 2% per annum in their national currencies throughout the forecast period. The external value of the euro will, however, weaken in 2012 relative to the previous year, whereupon Finland's export prices will rise more slowly than competitors' prices. Exchange rates are assumed to remain unchanged through 2013–2014, and the differences in export price developments between Finland and competing countries will be minor.

Chart 8.

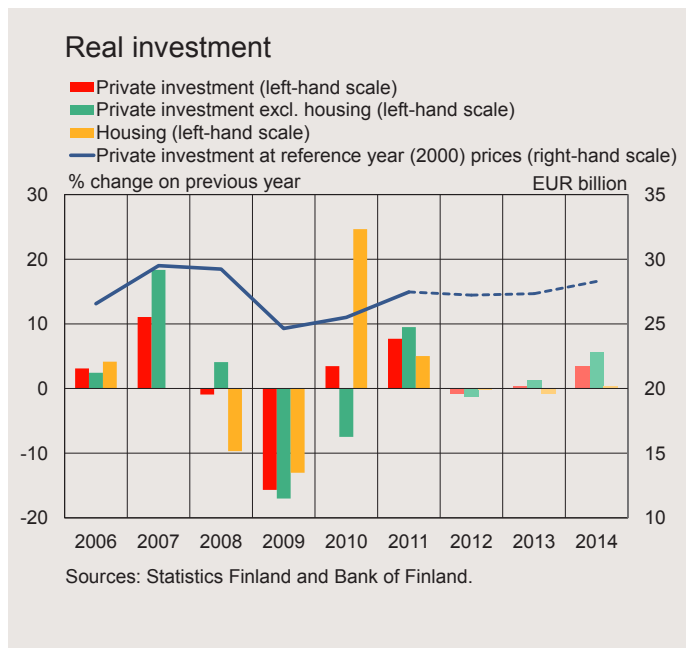


Domestic demand will fade

The outlook for companies producing goods and services for the domestic market took a turn for the worse in the first half of 2012, when domestic demand began to fade. Growth in retail trade and services output will be slower in 2012 than in 2011. Although real household incomes will contract in 2013, the declining savings ratio will hold consumption at the same level as in 2012. Demand for health care and social services will remain stable as the population ages.

Growth in housing construction has faded during 2012, reflected in a strong decline in both commencement of new projects and the granting of construction permits. The construction sector outlook has become gloomier, as the prevailing uncertainty and weak household income development will keep housing construction growth at a

Chart 9.



standstill throughout the forecast period. Moreover, construction costs will rise faster than housing prices, eroding the profitability of housing construction. According to the forecast, housing construction will contract in 2012 and 2013 by an average 0.5% per annum and grow only slowly in 2014. Other construction growth will also be fairly negligible.

Private fixed investment increased by almost 10% in 2011 (Chart 9). A particular driving factor was a 20% growth in investment in machinery and equipment. Investment began to contract again in early 2012. Manufacturing capacity utilisation rates have been falling since August and are now below their long-term average. Moreover, the large degree of uncertainty over the direction of the economy is hampering investment.

According to the forecast, business investment contracted somewhat in 2012 and will pick up again only gradually in 2013 as export demand strengthens. The private sector investment ratio will still be under 18% at the end of the forecast period.

Labour demand will weaken

Employment was still developing favourably in the early part of 2012, and in the first half of the year the number of employed was almost 20,000 persons up on a year earlier. Labour demand was growing particularly in services, in addition to which jobs in industry were no longer declining during 2012. Slower output growth during the forecast period will reduce companies' need to recruit additional labour. The number of employed will decline by almost 15,000 in 2013. In 2014, there will be a very slight increase.

Labour productivity per person employed will decline slightly during 2012, but will improve in 2013–2014. In 2012, labour costs will grow around 4%. Unit labour costs will grow even faster, due to a decline in labour productivity. Such a rapid rise in unit labour costs is large by international comparison and will further weaken cost competitiveness.

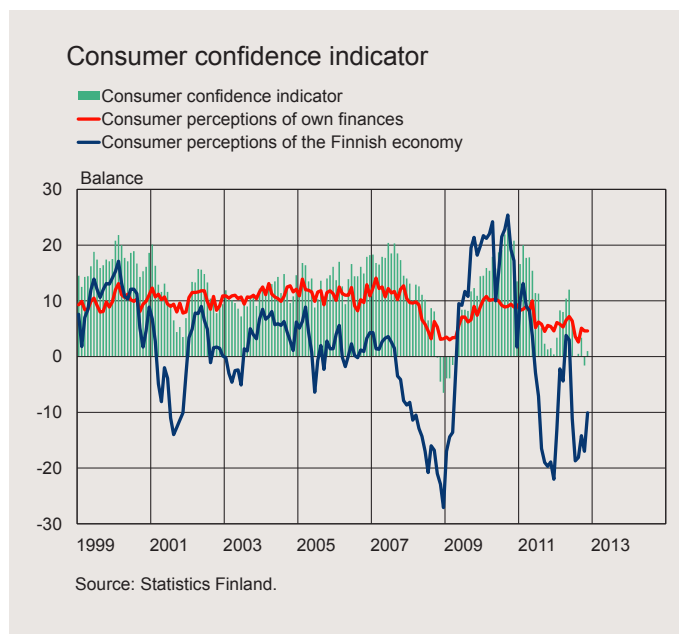
In 2013–2014, productivity growth will pick up and the rise in labour costs will slow. Unit labour costs will grow by less than 2% per annum. This will be sufficient to halt the decline in Finnish companies' cost competitiveness, but will be insufficient to boost it.

Households

The increased uncertainty surrounding developments in the global economy and the recent weakness of the Finnish economy have been reflected in household expectations over the future direction of the economy. According to Statistics Finland's consumer survey, consumers' confidence in both their own and Finland's economy deteriorated rapidly in the second half of 2012 following the improved climate of confidence experienced early in the year (Chart 10). The weakness of consumer expectations has also fed through to retail trade, where growth has been very thin. Rapid inflation has undermined household purchasing power and slowed the pace of growth in private consumption.

Employment developed favourably in the early months of 2012. However, the outlook for employment began to deteriorate in the spring. In 2012 and 2013, slow economic growth will mean weaker employment development, and the number of employed will decline by around ½%. The employment situation will not have time to improve during the forecast period, notwithstanding the economic growth forecast for 2014. Despite the weakness of employment, positive pay developments will boost wage-earners' nominal incomes in the forecast period. Wage and salary earnings per employee will grow in 2012 by slightly over 4%, and in 2013 and 2014 by an average of almost 3% per annum. Household incomes will be augmented by pension income, for which the index increments will be

Chart 10.



slightly under 3% in 2013 and around 2½% in 2014. In addition, the number of pension recipients will increase throughout the forecast period.

In 2012, disposable household income will grow nominally by almost 4%, but in 2013 the slow pace of growth in earned income coupled with stiffer taxation will subdue growth to slightly over 1%. In 2014, disposable household income will grow by around 3%.

The rapid rise in consumer prices will significantly cut household purchasing power in the current year. Although inflation will slow somewhat in 2013, disposable income will decline in real terms in 2013 by around 1%. In 2014, the development of real household incomes will accelerate as inflation eases.

Household consumption expenditure will grow in 2012 at the same pace as disposable income, and the savings ratio will therefore remain

Box 2.

Precautionary savings push up household savings ratio in a recession

With private consumption accounting for over 50% of Finland's nominal GDP, changes in household consumption and savings behaviour have a considerable impact on the economy. The link between savings and economic growth is, however, not a straightforward one: in the short term, a sudden increase in savings and drop in consumption reduce aggregate demand and cause a slowing in economic growth, but, over the long term, savings channelled into investment can boost output and cause an acceleration in growth.

The level of household savings is measured by the savings ratio, ie the ratio of

savings to disposable income.¹ Household expectations over the development of their own finances, interest rates, inflation and asset prices vary according to the economic cycle and influence their savings decisions.

Meanwhile, institutional factors, such as the social security and pension system and population structure, influence the overall level of the savings ratio for the household sector. In a country where government saves on behalf of households in

¹ The net savings ratio is calculated by subtracting households' nominal consumption expenditure from their annual nominal disposable income and dividing the resulting annual savings by the nominal disposable income.

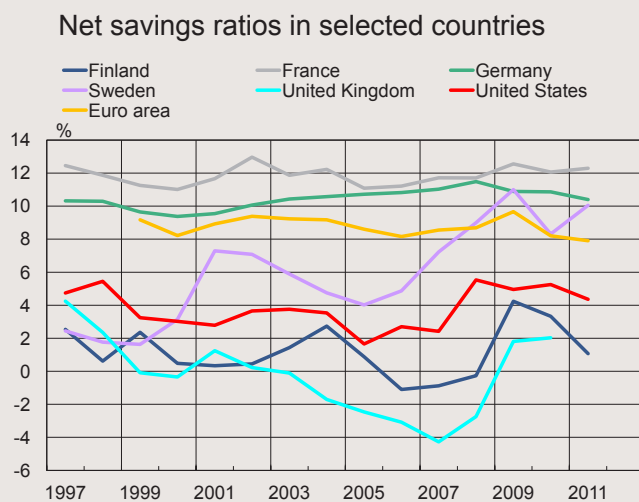
preparation for sickness or old age, households have a smaller need to save than in a country where health care and pensions are based primarily on personal savings.

Households save in order to increase their future disposable income or as a precaution against unexpected expenditure or a drop in income. According to the life-cycle hypothesis (LCH), in their consumption decisions, households take account of their aggregate income over their life and seek to achieve stable consumption throughout their life cycle, for example by saving during their working years for their future retirement. According to the LCH, saving is procyclical: during the expansion phase of the economic cycle, income growth accelerates and saving increases, whereas in the contraction phase, saving decreases (*consumption smoothing*).

According to the theory of precautionary savings, household saving is motivated by the uncertainty surrounding expected income and expenditure (*precautionary savings*). The savings ratio rises during a recession as the risk of unemployment grows and income expectations weaken.

Household sector savings ratios vary a great deal between countries (Chart 1). The differences are influenced by

Chart 1.



Source: European Commission.

factors such as the institutional structure of the economy and the age structure of the population. For example, the Finnish household savings ratio is below the euro area average because Finnish pension funds are included in the public sector, whereas in many European countries pension savings are recorded under household savings.²

Despite the difference in starting levels, the financial crisis led to a rise in the savings ratio in most advanced economies in the years 2008–2009 (Chart 1). According to a study by the International Monetary Fund (IMF), the increase in precautionary savings by households explains a substantial part of the rise in the savings ratio in the 27 advanced economies reviewed.³ During economic downswings, households become more cautious and savings are motivated by uncertainty. Irrespective of the country, the rise in the savings ratio was, according to the study, influenced most strongly by two factors: increased fluctuation in GDP growth and increased uncertainty over households' earned income and employment. According to the results of the study, an average 40% of the rise in the savings ratio in 2008–2009 was due to

the growing threat of unemployment and the contraction in GDP, once other factors, such as loan conditions, population structure and the state of the public finances, had been taken into account.

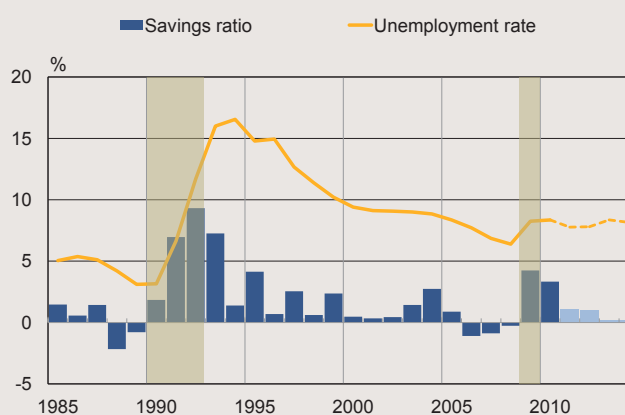
Precautionary savings also explain changes in the savings ratio for Finnish households in recent decades (Chart 2). During the recession of the early 1990s, the savings ratio rose to over 9% alongside a strong contraction in GDP and an increase in the unemployment rate to a record high. During the recession of 2009 in the wake of the financial crisis, the savings ratio in Finland rose to over 4% at the same time as GDP contracted by over 8% and the threat of unemployment grew. According to the IMF study, increased unemployment

and the drop in GDP accounted for, at a rough estimate, around half of the rise in the Finnish household savings ratio in 2009.

During economic upswings, the Finnish household savings ratio has fallen close to zero or even lower; in other words, households have used debt to finance their consumption. The reduction in savings and growth in consumption have been influenced particularly by the availability of credit and a rise in the value of household assets. The sustained low level of interest rates has made borrowing an attractive option at the same time as the income from deposits and other savings instruments has declined. The strong rise in asset prices has inflated the value of households' housing assets and equity

Chart 2.

Savings and unemployment ratios in Finland



In the chart, the years when GDP has contracted are marked with shadow. Sources: Statistics Finland and the Bank of Finland.

² OECD (2011), 'Household savings', in OECD Factbook 2011–2012: Economic, Environmental and Social Statistics. OECD Publishing.

³ Mody, A, Ohnsorge, F & Sandri, D (2012) Precautionary Savings in the Great Recession. IMF Working Paper 12/42.

investments, and households have used these as collateral on even larger loans than they had before. On the other hand, the growth in asset values has reduced the need for precautionary savings and provided an alternative to savings as a buffer against a drop in household incomes. Almost 80% of Finnish household assets are in housing. Finnish households' debt ratio has been rising ever since the turn of the millennium, with the level of debt in the first half of 2012 equivalent to 118% of annual disposable income.

Although the savings ratio in Finland rose in response to the financial crisis, it has been falling since 2010. The savings ratio is forecast to remain low throughout the forecast period. According to the forecast, unemployment will increase somewhat in 2013. Income tax will be tightened, and increases in indirect taxation will push up

prices. The household savings ratio will decline at the same time as government saves more. In 2014, economic growth will accelerate and the unemployment rate fall slightly. Household consumption expenditure will grow at the same pace as incomes, and the savings ratio will remain unchanged.

In contrast to many European countries, the savings ratio of Finnish companies and general government has been high, and this compensated the indebtedness of the household sector and kept the sum of the financial balances of the different sectors of the economy – ie the current account – in surplus until 2010.⁴ The general government

⁴ *Developments in the financial balance of households, non-financial corporations and general government are examined in the chapter 'External balance' (below, p. 41–42). The analysis of savings and investment uses the gross savings ratio, which does not take into account the depreciation of fixed capital. The gross savings ratio is therefore larger than the net figure.*

financial balance deteriorated strongly during the recession that followed the financial crisis, and the ageing of the population will undermine output and weaken future growth in disposable income. In the short term, increased saving by the household sector would reduce domestic demand and put a brake on GDP growth.⁵ Over the longer term, modest growth in the household savings ratio would support sustainable economic growth by improving the financial balance of the economy as a whole.

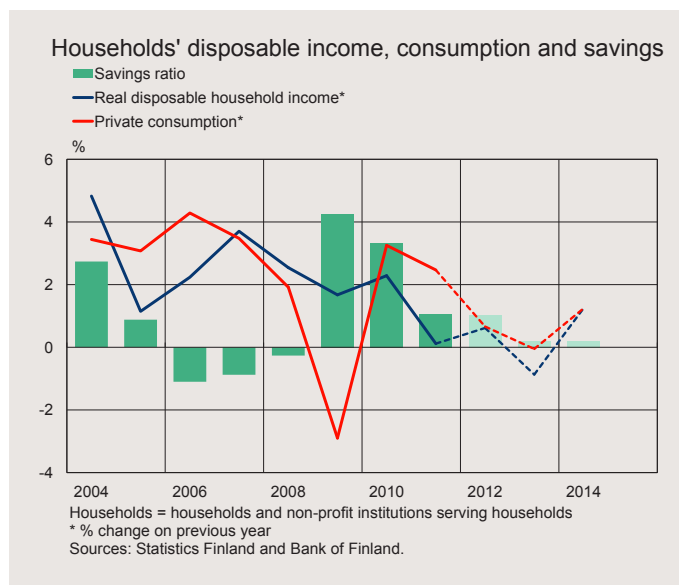
⁵ See 'Alternative scenario: Households strengthen their financial position by adjusting demand', Bank of Finland Bulletin 3/2012 *Economic outlook*, p. 43–45.

unchanged, at around 1% (Chart 11). As of the beginning of 2013, television fee payments will no longer be collected as private consumption, being replaced by a new public service broadcasting tax. This change will reduce the sum to be recorded under private consumption statistics by around ½%. The public service broadcasting tax will reduce disposable income by the same amount as household consumption expenditure, and will therefore have no effect on the household savings ratio. In 2013, private consumption expenditure will contract somewhat, and the savings ratio will fall slightly below ½%. In 2014, household consumption will grow as disposable income grows and the household savings ratio remains low.⁵

The uncertainty surrounding the sovereign debt crisis and the decline in household confidence have slightly depressed the pace of growth in the stock of household loans. Growth in the loan stock has, however, been bolstered by the favourable employment trend early in the year and the low level of interest rates. The household debt ratio has been rising ever since the turn of the millennium. If we add to households' own debt their estimated share of housing company loans, the household debt ratio in the first half of 2012 was 118%. Despite this increase in debt, the level of debt held by Finnish households is around average in international comparison. The growth in the level of debt does, however, increase the household sector's sensitivity to economic disturbances and could in the

⁵ The behaviour of the household savings ratio during recessions is examined in Box 2 (p. 24–26, above).

Chart 11.



future increase the cyclical sensitivity of the economy as a whole.

Housing prices have risen only slowly over the past year. During the forecast period, exceptionally weak growth in household income and the increase in asset transfer tax from the beginning of 2013 will subdue housing demand, also subduing the pace of rise in housing prices. On the other hand, low interest rates and the sluggishness of new-build construction will support price developments. During the forecast period, housing prices will rise very moderately. In real terms, housing prices will decline slightly in 2012–2013.

GDP and employment

Slower growth

There has been a marked slowdown in Finland's economic growth during the course of 2012. According to advance

Chart 12.

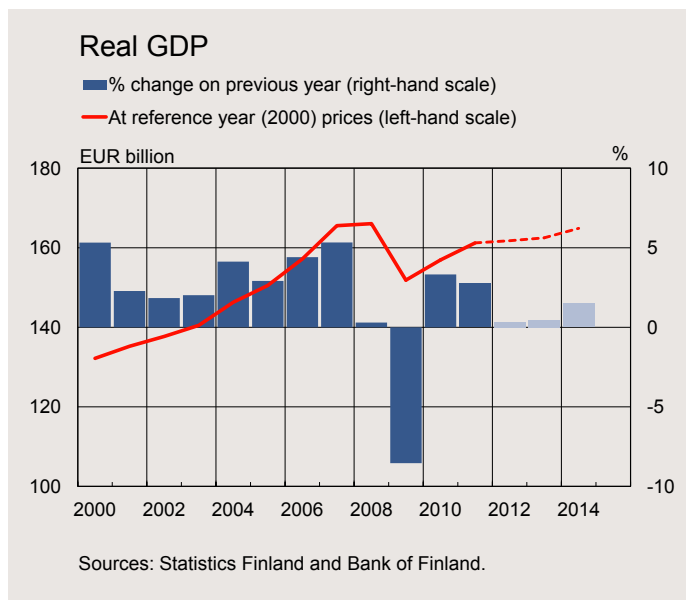
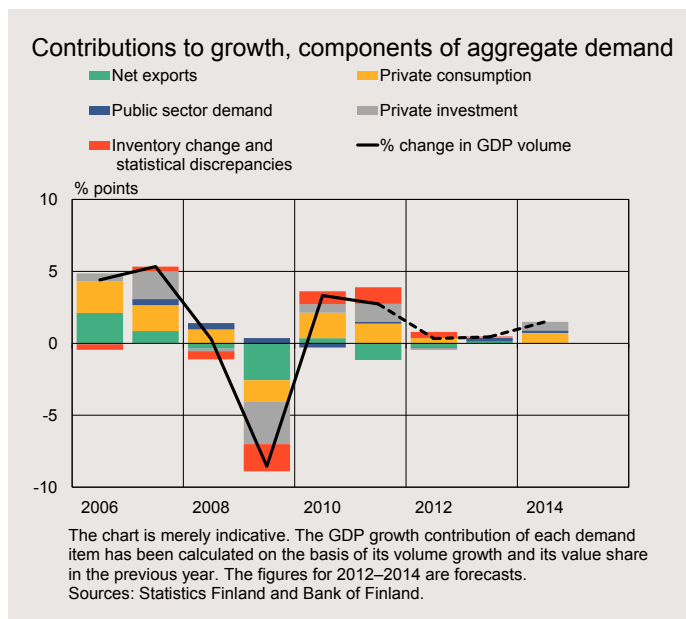


Chart 13.



data from Statistics Finland, GDP in the third quarter of the year was 0.8% smaller than a year earlier. Growth for 2012 as a whole will be just 0.3% (Chart 12). In 2013, too, growth will be almost as slow, at 0.4%, and only in 2014 will the pace of growth in the

economy accelerate to 1.5%, equal to the forecast long-term pace of growth.⁶ GDP will not have returned to the level of 2008 by the end of the forecast period in 2014.

The slowdown in economic growth will affect across the board all component items of aggregate demand (Chart 13). Private consumption growth will fade in response to the weakness of purchasing power, and increases to public consumption will be constrained by general government consolidation measures. Export growth will be subdued, with Finland's export markets continuing to grow only slowly alongside deterioration in the cost competitiveness of Finnish exporters. Investment demand will be cut particularly by fading activity in housing construction.

Exports of goods and services will contract in 2012 and grow just 1.3% in 2013. In 2014, export growth will pick up to over 4%. Slower import growth and only moderate increases in import prices mean the current account deficit will not grow further during the forecast period.

Of all the component items of domestic demand, the main contribution to economic growth has come from private consumption. Consumption growth has, however, already begun to slow, and in 2013 weakening household purchasing power will slow it further still. In 2014, a deceleration in inflation will boost growth in consumers' real incomes, and household consumption will grow a full 1%.

⁶ See Kinnunen, H, Mäki-Fränti, P, Newby, E, Orjasniemi, S & Railavo, J, 'Long-term growth forecast for the Finnish economy', Bank of Finland Bulletin 3/2012: Economic outlook, p. 69–78.

Investment demand will slow abruptly in 2013 due to fading activity in both business investment and housing investment. A decline in investment in machinery and equipment will, however, be short-lived, as replacement investment will already have reversed the trend by 2014. Housing construction will be slowed by a forecast contraction in housing demand.

Employment will weaken in 2013

Following the recession of 2009, the employment situation improved steadily until the beginning of 2012. In the third quarter of 2012, the trend in the number of employed began to decline, although the number of employed still exceeds the figures from a year ago by 10,000 persons (Chart 14). The deceleration in economic growth has thus begun to be reflected on the labour market. According to the forecast, the number of employed will decline in 2013 and 2014 by around ½%, and jobs will be lost, particularly in construction and manufacturing. Since the recession, most new jobs have been in public and publicly funded services, but here, too, employment has not increased during the autumn.

According to Statistics Finland's labour force survey, the unemployment rate stopped rising in October, but the Ministry of Employment and the Economy's statistics show continued clear growth in the number of unemployed job-seekers. The increase in unemployment is due particularly to an abrupt reduction in unemployed people finding new jobs (Chart 15).⁷ According

⁷ The relationship between the unemployment rate and economic growth is examined in Box 3, p. 30–32.

Chart 14.

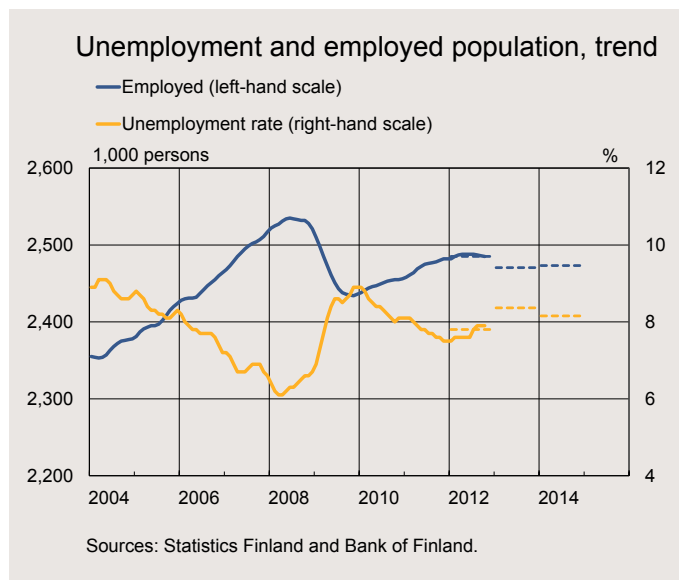
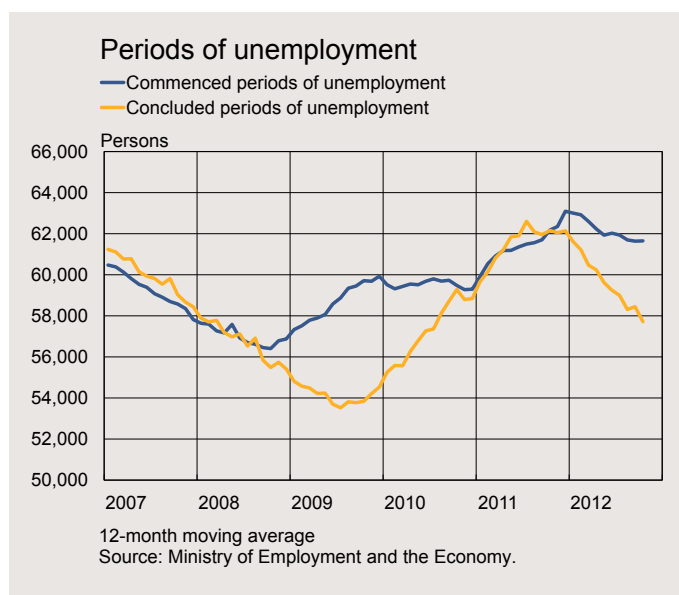


Chart 15.



to the forecast, the unemployment rate will peak at 8.4% in 2013. Unemployment growth will be slowed in the immediate years ahead by a contraction in labour supply as large numbers of people retire from the labour market. The working-age population (15–64-year-olds) already began to decline in

Box 3.

The link between economic growth and the unemployment rate has changed

Large fluctuations in GDP growth and unemployment rate

In the 1980s, the Finnish economy grew rapidly, at an average 3½% per annum (Chart 1). At the same time, the unemployment rate remained around 4½–5½%, until the acceleration of economic growth in 1988–1989 to over 5% brought unemployment down to around 3%. In the recession of the 1990s, output collapsed and there was a strong increase in unemployment.

After the recession, the rise of the electronics industry pushed up GDP growth in 1994–2000 to an average 4½% per annum, and at the same time there was a

rapid drop in the rate of unemployment. Once the IT bubble had burst, the Finnish economy grew at only 2% per annum in 2001–2003. The slower rate of growth halted the drop in unemployment, but did not cause it to rise again.

In the middle of the first post-millennium decade, GDP growth accelerated again to over 4%, but this was not reflected in as strong a drop in unemployment as had been the case in the second half of the 1990s. On the other hand, the strong contraction in GDP in 2009 did not produce a significant rise in the unemployment rate. It would seem that the linkage between

GDP growth and the unemployment rate has changed in recent decades.

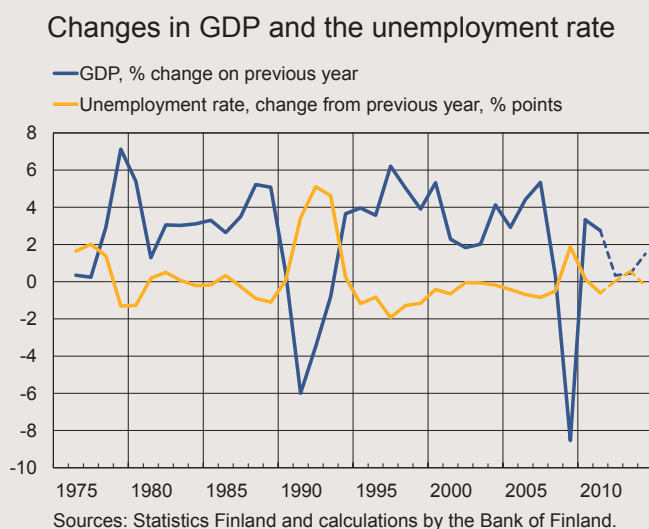
According to the Bank of Finland forecast presented in this publication, Finland's real GDP will grow on average 0.8% per annum in 2012–2014. This slower pace of GDP growth will cause a rise in the unemployment rate of just under ½ a percentage point relative to 2011.

Okun's Law in Finland

The negative correlation between GDP growth and the unemployment rate is known as Okun's Law.¹ On the basis of studies conducted at the Bank of Finland, the relationship between GDP and the unemployment rate has changed in recent decades. Since the recession of the 1990s, the unemployment rate has not reacted as sensitively to changes in output as in previous decades.²

If we compare estimates of the correlation between GDP growth and changes in the unem-

Chart 1.



¹ In the 1960s, the American economist Arthur Okun was the first to notice the statistical correlation between GDP growth and changes in the unemployment rate. According to his calculations, a one percentage point slowdown in economic growth increased the unemployment rate in the United States by 0.3 of a percentage point.

² See Gardberg, M (2010) *Okun lag i Finland – ett samband som förändrats med tiden*, BoF Online 9/2010, and Gardberg, M & Kinnunen, H, 'Unemployment rate reacted less than expected to drop in output', *Bank of Finland Bulletin: Economic Outlook* 2/2010, p. 33–34.

ployment rate from two different periods, we can see that the impact of changes in GDP growth on the unemployment rate was stronger in 1976–1993 than in the post-recession period 1994–2011 (Chart 2).

The sensitivity of the unemployment rate to changes in GDP has declined for a number of reasons. One key factor is the ageing of the working-age population. As the labour force share of older age cohorts grows, labour force participation varies more clearly than before according to labour demand. The result is smaller fluctuations in unemployment.

In addition, changes to key labour market institutions – such as job security, the size of unemployment benefits, the flexibility of wages in relation to labour demand and the number of part-time jobs – influence the correlation between GDP growth and unemployment. In principle, these factors can exert influence in opposite directions. For example, a weakening of job security will increase the sensitivity of unemployment to changes in GDP, whereas improved incentives to accept offers of employment will moderate fluctuations in unemployment.

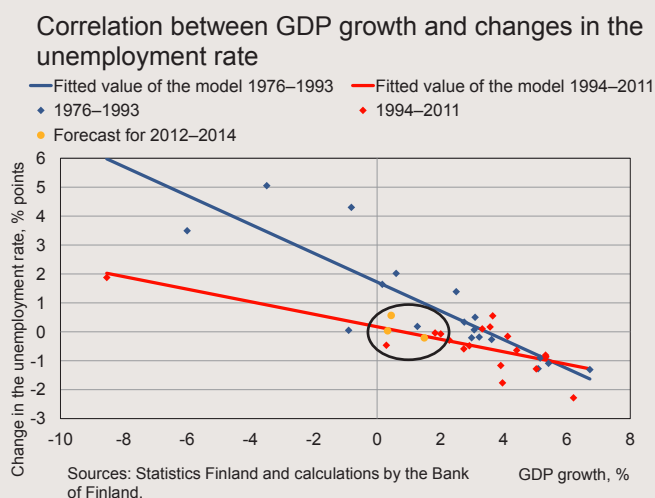
Okun's Law can be presented as the simple equation $\Delta u = \alpha - \beta \Delta y$. Here, Δu is the change in the unemployment rate, α is the constant term, and the Okun coefficient β depicts how the pace

of GDP growth (Δy) affects the unemployment rate.

Over the period 1976–1993, the Okun coefficient β was 0.50, meaning an acceleration of economic growth by one percentage point slowed growth in the unemployment rate by 0.5 of a percentage point. In 1994–2011, the equivalent coefficient was just 0.22. This represents a substantial reduction in the sensitivity of the unemployment rate to changes in GDP. The constant term of the equation (α), ie the pace of annual growth in unemployment given zero economic growth, was 1.7 in 1976–1993. In 1994–2011, the value of the constant term had fallen to 0.17. (The fitted values of the model calculated from these parameter estimates are presented in Chart 2.)

The estimation results can also be used to calculate the pace of GDP growth sufficient to keep the unemployment rate unchanged. Setting the change in the unemployment rate at zero gives us GDP growth of α/β . (In Chart 2, this is the point at which the estimated fitted values of the model cut the horizontal axis.) In 1976–1993, growth of 3.5% was sufficient to stabilise unemployment, whereas in 1994–2011 the required pace of growth was just 0.8%. During the recession related to the financial crisis, unemployment increased remarkably little relative to the strong contraction in output. If the later estimation period is shortened so as to end in 2008, both the estimated parameters become larger in such a way that the level of growth sufficient to

Chart 2.



hold unemployment steady is 1.3%.³

The pace of economic growth needed to maintain unemployment unchanged has thus slowed considerably in recent decades. A change of this nature can be observed simply by reviewing the pace of GDP growth alongside changes in the unemployment rate (Chart 1). In the 1980s, unemployment remained relatively stable while growth was in excess of 3%, while slower growth of around 2% for several years since the turn of the millennium did not cause an increase in unemployment.

Changes in the age structure of the population and in institutional and structural features of the economy underlie the changing relationship between GDP growth and unemployment

The link between economic growth and unemployment has, in fact, changed in two distinct ways. In the first place, the sensitivity of the unemployment rate to the pace of GDP growth has declined (ie the Okun coefficient has become smaller). The ageing of the population and changes in economic institutions are the key variables behind this change.

³ In the estimate covering 1994–2008, the Okun coefficient is 0.27 and the constant term is 0.33. In the estimate covering 1994–2011, excluding 2009, the Okun coefficient is 0.27 and the constant term is 0.36.

The other change is the reduction in the pace of GDP growth needed to keep unemployment unchanged. This is explained by a marked decline in the pace of growth in labour productivity and the ending of the growth trend in the size of the working-age population. In 1976–1993, labour productivity grew by an average 2.8% per annum, whereas in 1994–2011 the equivalent figure was 2.1% per annum. Since 2000, productivity growth has continued at slightly over 1½% per annum. The increasing predominance of services in the production structure of the economy and the slower pace of growth in industrial productivity growth explain the fading pace of total factor productivity growth.

Growth in the working-age population (15–64-year-olds) has also slowed somewhat. Prior to the recession of the early 1990s, the working-age population was growing by an average of 0.4% per annum, but after the turn of the millennium the pace of growth faded to 0.2%. In 2011, the size of the working-age population actually declined, and in 2012–2016 it will decline by 0.4% per annum.

With productivity no longer growing at the pace it once did and no further growth in the working-age population, a slower pace of growth is sufficient to maintain unemployment unchanged. Thus, even slow growth will not significantly

increase unemployment, although it will still mean weak development in the general government funding base and material well-being in the economy.

For the forecast period, the relationship between GDP and unemployment forecasts is very similar to that suggested by Okun's Law based on the data from 1994–2011. In Chart 2, the points plotted for 2012–2014 are very close to the fitted values of the model.

2011, and in the forecast period this trend will continue at an average of just under 0.5% per annum. Although the unemployment rate will not significantly rise, the spread and prolongation of long-term unemployment could lead to the permanent exclusion from the labour market of younger people in particular, thereby undermining the potential output of the entire economy.

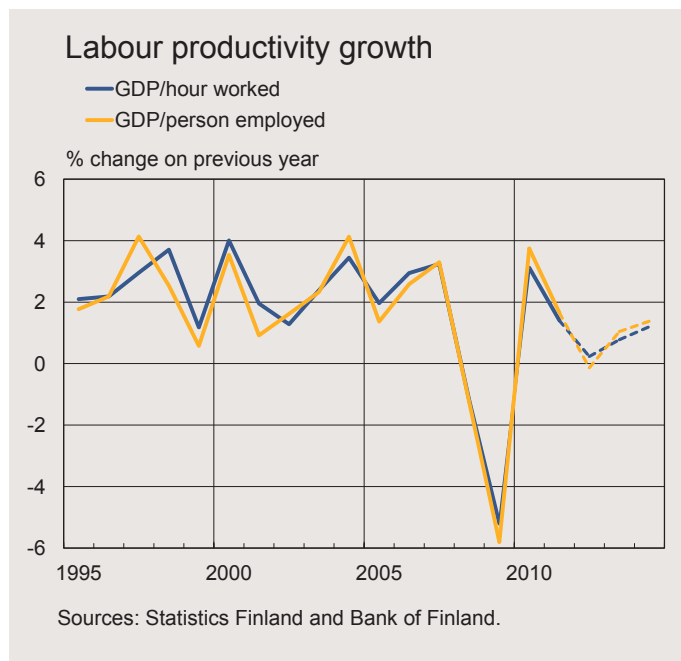
Productivity growth follows the business cycle

With employment in the years following the financial crisis reacting only weakly to fluctuations in output, productivity development in the Finnish economy has been strongly cyclical (Chart 16). In 2012, productivity growth has hovered around zero, with a substantial slowdown in economic growth and no change in employment. In 2013 and 2014, the pace of growth in productivity will return towards its estimated long-term average value of 1.5% as economic growth gradually gathers pace.

Public finances

Accelerating economic growth and tighter fiscal policy meant the general government financial balance still improved substantially in 2011. The general government deficit contracted to 0.9% of GDP, ie about 2 percentage points down. The expansion of tax bases, together with tax increases, strengthened the position of central government in particular. By contrast, local government finances moved slightly deeper into deficit, with local

Chart 16.



government revenue growth moderating and expenditure growth accelerating from the previous year. As in previous years, the social security funds continued to post a strong surplus. The general government primary balance moved slightly into surplus, and the accumulation of general government debt continued, albeit at a considerably slower pace. At the end of 2011, general government debt was 49% of GDP (Table 3).

The Government Programme and consolidation measures approved in connection with the decision on central government spending limits will reduce the central government deficit ratio significantly in the next few years.⁸ In addition, increases in employment contributions approved by the labour market organisations will curb the

⁸ The condition and sustainability of Finland's public finances are assessed in Box 4, p. 36–40.

Table 3.

General government fiscal balance and debt, % GDP					
% of GDP	2010	2011	2012 ^f	2013 ^f	2014 ^f
General government net lending	-2.8	-0.9	-1.3	-1.0	-0.8
Central government	-5.6	-3.3	-3.2	-2.5	-2.2
Local government	-0.2	-0.4	-0.8	-0.8	-0.9
Social security funds	3.0	2.8	2.7	2.3	2.4
General government debt	48.6	49.0	53.6	55.9	57.4
Central and local government	51.1	52.2	56.6	58.8	60.3
Central government	42.0	42.1	46.0	47.8	48.7
Total tax ratio	42.4	43.3	43.7	44.7	45.0
GDP, percentage change	3.3	2.7	0.3	0.4	1.5

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

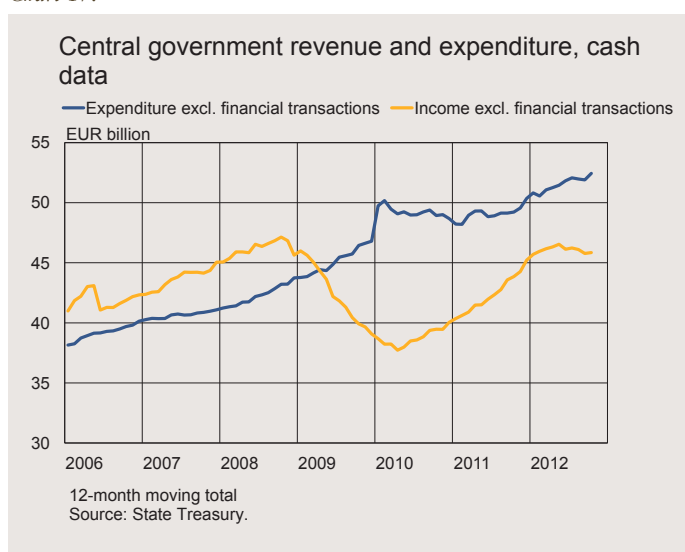
contraction in the surplus on the earnings-related pension funds. However, due to the weak expansion of tax bases, tax revenue growth will remain muted. Hence, the public finances will post a considerable deficit in the next few years. Weak economic growth will erode the conditions for fiscal consolidation, and it is therefore

likely that the general government financial balance will remain substantially below the targeted levels.

In 2012, the general government financial balance will deteriorate to -1.3%. The local government deficit will deepen, and the central government deficit will not improve from 2011. In addition, the surplus on the earnings-related pension funds will contract.

The central government deficit will remain almost unchanged in 2012, ie substantially above 3% of GDP. Tax increases will boost government revenues, but less than in 2011. However, the weak economic growth is reflected in tax base dynamics. Corporate tax accruals, in particular, have declined strongly, and growth in tax revenues on earnings and capital income has moderated markedly in the course of 2012. Government expenditure growth has, in turn, picked up, partly due to cyclical factors. Therefore, the difference between central government revenue and expenditure has begun to grow again (Chart 17).

Chart 17.



The local government balance will be weakened particularly by the sharp contraction in corporate taxes in 2012 and cuts in central government transfers. The surplus on the pension funds will also contract in 2012, despite increases in the size of pension contributions. Sizeable index increments will boost pension expenditure, and the number of pension recipients will increase, while aggregate wages will grow at a sluggish pace. The rate of return on the pension funds is low by historical standards.

In 2013, the financial position of central government will improve somewhat. There will be a substantial tightening of fiscal policy, as adjustments to income tax scales to compensate for inflation and higher real earnings will not be implemented. Fiscal tightening will also be fuelled by VAT rate increases. The higher taxation will boost central government expenditure by about 0.5% of GDP. Central government expenditure growth will moderate in the forecast period, particularly due to reductions in transfers to local government and savings in different administrative sectors of central government. In addition, the low level of interest rates will contribute to growth in debt servicing costs continuing to be moderate in 2013–2014. However, according to the forecast, the central government deficit will remain high, amounting to 2.5% in 2013. With a further slight tightening of fiscal policy in 2014, the general government deficit will decline to 2.2%.

The financial position of local government will deteriorate, as central

government expenditure savings and slower expansion of the tax base will cut local government revenues. Local government revenue growth will slow in 2013, particularly due to cuts in central government transfers and a 5 percentage point reduction in the increased share of corporate tax receipts going to local government. In the latter part of the forecast period, the local government deficit ratio will remain roughly at the same level as in 2012. Local government tax revenues will increase, but, due to the cuts in central government transfers, growth in total local government revenue will remain subdued. In 2013, local government expenditure growth will be curbed by lower negotiated wage increases. Otherwise, no other major changes are expected in the local government expenditure base, and spending growth will remain brisk, at around 4% on average.

The surplus on the social security funds will contract gradually in response to higher pension expenditure, reflecting the growing number of pension recipients, index increases and declining pension fund returns due to the low level of interest rates. Pension expenditure will grow by almost 6% on average per annum in the forecast period. Increases in pension contributions will not be enough to sufficiently compensate for the higher pension expenditure and the lower return on pension fund assets.

The growth in public debt will not be reversed in the forecast period, but the pace of growth will slow towards the end of the period. At the end of

Box 4.

Finland's public finances

The outlook for Finland's public finances has deteriorated in the course of 2012. In early summer, it still appeared that the expenditure cuts and tax increases approved in connection with the decision on central government spending limits would suffice to halt the rise in government debt. The central government debt-to-GDP ratio was estimated to come to a halt around 2015 both in the background assessments presented in connection with the spending limits decision and the Bank of Finland's June 2012 forecast.

Due to the renewed weakening of the economic situation after the summer, the central and local government fiscal deficits have begun to grow. The estimates on central government tax revenues have been revised downwards in the supplementary budgets prepared

in the autumn, and monthly cash data suggests that central government funding needs have increased further in the latter part of the year. The growth prospects for the next few years are weaker than previously assessed, and the long-term growth prospects are also bleak. Hence, all in all, the risk of excessive general government debt has increased.

Public finances in the medium term

According to the Bank of Finland's new forecast, the central and local government debt ratios will rise throughout the entire forecast period extending to 2014. After the forecast period, the deficits will deepen further, as public expenditure will begin to grow due to population ageing. In 2019, the combined central and local government deficit will

stand at about 3% of GDP (Table 1). Together, central and local government debt will already exceed the threshold of 60% in 2014. Growth in pension expenditure will accelerate relative to growth in aggregate wages, and the surplus on the earnings-related pension funds will contract by about 1 percentage point relative to 2012. In 2019, the general government financial balance will show a deficit of 1.3%, and the debt-to-GDP ratio will be over 60%.

The economic developments underlying the assessment of the medium-term public finances is based on a calculation of employment resources and assumptions concerning productivity trends and progress in ongoing structural changes. Private sector demand, which is currently partly based on

Table 1.

Public finances in the medium term

% of GDP	2010	2011	2012 ^f	2013 ^f	2014 ^f	2015 ^f	2016 ^f	2017 ^f	2018 ^f	2019 ^f
<i>Net lending by public sector (ESA95)</i>	-2.8	-0.9	-1.3	-1.0	-0.8	-0.6	-0.7	-0.9	-1.2	-1.3
<i>Central government</i>	-5.6	-3.3	-3.2	-2.5	-2.2	-2.0	-2.0	-2.0	-2.1	-2.2
<i>Local government</i>	-0.2	-0.4	-0.8	-0.8	-0.9	-1.0	-1.1	-1.0	-0.9	-0.8
<i>Social security funds</i>	3.0	2.8	2.7	2.3	2.4	2.5	2.3	2.1	1.9	1.7
<i>Primary public sector balance</i>	-1.4	0.5	0.1	0.3	0.6	0.9	0.7	0.4	0.2	0.0
<i>General government debt</i>	48.6	49.0	53.6	55.9	57.4	58.3	59.1	59.9	60.8	61.5
<i>Central government debt</i>	42.0	42.1	46.0	47.8	48.7	48.9	49.0	49.2	49.5	49.8
<i>Central and local government debt</i>	51.1	52.2	56.6	58.8	60.3	61.1	61.8	62.5	63.3	63.9
<i>Total tax ratio, % of GDP</i>	42.4	43.3	43.7	44.7	45.0	44.9	44.9	44.7	44.7	44.6

^f = forecast

Sources: Statistics Finland and Bank of Finland calculations.

increasing indebtedness, will return in the calculation to a sustainable path by 2019.

Households will increase their savings and reduce their financial deficit so that the current account deficit will melt away almost entirely. In the calculation, this will curtail domestic demand and, thus, output growth.

In 2015–2019, economic growth will remain at 1.6%, which means that average growth will accelerate only slightly from that in 2014. Economic growth will stem solely from the rise in private-sector labour productivity. Employment growth will

remain muted in the latter part of the decade, and the unemployment rate will fall to around 7% (Table 2).

According to the medium-term growth path for public finances, the government target of reversing the rise in the central government debt ratio in the current parliamentary term will not be met without additional measures. It can be technically calculated that, in 2014–2015, the deficit would need to be reduced by a total of EUR 1 billion to bring the increase in the central government debt ratio to a halt.

At the same time, however, the local government debt ratio is rising further.

In addition, without new fiscal consolidation measures, the structural deficit will exceed the reference value determined in the fiscal compact agreed by 25 EU countries. According to the fiscal compact, the general government structural deficit may, as a rule, be 0.5% of GDP in the medium term, at most. An even more noticeable deviation will be recorded for the medium-term objective set in Finland's Stability Programme, which is that Finland's general government

Table 2.

Medium-term economic developments

	2010	2011	2012 ^f	2013 ^f	2014 ^f	2015 ^f	2016 ^f	2017 ^f	2018 ^f	2019 ^f
<i>Economic growth</i>	3.3	2.7	0.3	0.4	1.5	1.7	1.6	1.6	1.6	1.6
<i>Productivity, % change</i>	3.7	1.7	-0.1	1.0	1.4	1.5	1.5	1.4	1.4	1.4
<i>Labour input, % change</i>	-0.4	1.0	0.5	-0.6	0.1	0.2	0.1	0.2	0.2	0.2
<i>Unemployment rate, %</i>	8.4	7.8	7.8	8.4	8.2	7.8	7.6	7.3	7.0	6.8
<i>Household savings ratio, % of GDP</i>	3.3	1.1	1.0	0.2	0.2	0.5	1.1	1.4	1.8	2.1
<i>Current account, % of GDP</i>	1.5	-1.6	-1.3	-1.3	-1.3	-1.1	-0.9	-0.8	-0.6	-0.5

f = forecast

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

Table 3.

General government structural balance

% of trend GDP	2010	2011	2012 ^f	2013 ^f	2014 ^f	2015 ^f	2016 ^f	2017 ^f	2018 ^f	2019 ^f
<i>Structural revenue</i>	52.2	53.9	54.1	55.2	55.6	55.7	55.7	55.6	55.6	55.6
<i>Structural expenditure</i>	54.0	54.4	55.2	55.6	56.0	56.1	56.4	56.6	56.8	57.0
<i>Cyclically adjusted balance</i>	-1.8	-0.5	-1.1	-0.4	-0.4	-0.4	-0.7	-1.0	-1.2	-1.4
<i>Cyclically adjusted primary balance</i>	-0.8	0.6	0.3	0.9	1.0	1.0	0.7	0.4	0.2	0.0
<i>General government excl. earnings-related pension funds (ESA95)</i>										
<i>Cyclically adjusted balance</i>	-5.1	-3.6	-3.8	-2.8	-2.7	-2.7	-2.9	-2.9	-2.9	-2.8
<i>Cyclically adjusted primary balance</i>	-3.7	-2.1	-2.4	-1.5	-1.3	-1.2	-1.4	-1.5	-1.5	-1.4

f = forecast

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

should post a structural surplus of 0.5% of GDP at least, in the medium term. Measured by the structural balance,¹ Finland's public finances will deteriorate from almost a balanced position in 2013 to a deficit of 1.4% of GDP by the end of the 2010s (Table 3).

Reaching the Stability

Programme's medium-term target in the present decade will require much more extensive consolidation measures than simply halting the rise in the central government debt-to-GDP ratio. By contrast, it

¹ The structural balance is estimated according to a common method agreed by the Eurosystem. For more information on the method, see Bouthevillain, C – Cour Thimann, P – Van den Dool, G – Hernández de Cos, P – Langenus, G – Mohr, M – Momigliano, S – Tujula, M (2001) *Cyclically adjusted budget balances: an alternative approach*. Working Paper Series No. 77. September. European Central Bank.

would be possible in 2014 to reach the structural deficit of 0.5% determined in the fiscal compact if the rise in the debt ratio could be halted by the middle of the decade. However, the general government finances would deteriorate again towards the end of the decade.

Net borrowing by central and local government

Despite the public sector's foreseeable growing funding needs, Finland's government borrowing has been strongly placed on the financial markets. Compared with other EU countries, the borrowing requirement has remained low. The general fall in interest rates and successful management of debt have helped to keep growth in interest expenditure in check,

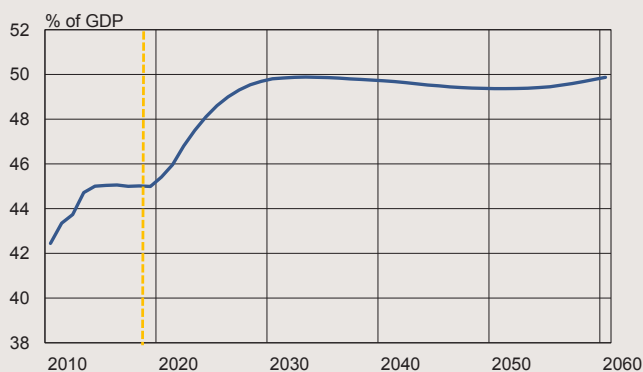
even though central government debt has grown at a rapid pace. The Finnish government has retained its AAA credit rating, and the spread between the Finnish and German government bond yields has remained small. These two factors have curtailed growth in central government's debt servicing expenses and eased government access to funding.

Central government's gross borrowing requirement is estimated at about EUR 24 billion in 2012, corresponding to about 12% of GDP. Over 96% of central government debt consists of long-term debt. The average maturity of government debt has ranged between 5 and 6 years for a long time. Recently it has been extended to over 6 years.

Local government debt has also increased alarmingly since the year 2000, by almost EUR 1 billion per annum. Local government funding needs will grow even further in the next few years, as central government expenditure savings will cut income transfers and population ageing will increase local government expenditure further. So far, local government has been able to acquire funding at a reasonable price. This is partly because the majority of local government funding needs are covered via loans by Municipality Finance Plc.

Chart.

Fiscal consolidation requirement measured in terms of the tax ratio



Sustainability projections for the public finances

The deteriorating fiscal balance, rising debt ratio and weaker-than-forecast economic growth will increase the need for long-term fiscal consolidation more than previously estimated. The sustainability gap is currently estimated to stand at about 4% of GDP.² The weakening of the macroeconomic environment has largely worn off the positive effect on the public finances of the measures approved in connection with the decision on spending limits in summer 2012. The sustainability gap is currently about ½ of a percentage point higher than was assumed in the wake of that decision, even though the population projection published in autumn reduces the sustainability gap by ½ of a percentage point.

The requirement for consolidate in the public finances will fall primarily on central and local government. Earnings-related pension contributions must also be raised for an extended period, but later, in the 2040s, they could actually be reduced. Postponing the consolidation of central and local government finances until the next decade would signify a very rapid rise in the tax rate or expenditure cuts immediately in

² For more detailed information on the sustainability assessment, see the article on fiscal sustainability projections for Finland by Kinnunen, Mäki-Fränti & Viertola (p.75–86, below).

the early part of the 2020s (Chart). In practice, it is clear that fiscal consolidation measures must be continued in both the current and the subsequent parliamentary term.

The deteriorating funding base and the fiscal adjustment system

Finland's general government financial balance is still strong in international comparison. The system of agreeing on central government spending limits has functioned well, supporting the pursuit of responsible fiscal policy in conditions of rapid economic growth. Expenditure has remained well within the spending limits, and multiannual limits extending beyond the parliamentary term of the time have brought long-term continuity to budgetary politics.

It is largely thanks to the spending limits system that the unexpected and, in retrospect, very temporary revenue windfalls in the early years of the new millennium did not flow to the expenditure side of the Budget. Based on budgetary data, we can calculate that, in 2001–2007, tax revenue grew by a total of EUR 6.6 billion relative to the Budget estimates, while supplementary budgets suggest that expenditure is estimated to have decreased by EUR 0.2 billion. If the spending limits had not curtailed increases in appropriations, central government finances would probably have been much less balanced than was the case when

the financial crisis hit the Finnish economy with full force in 2008.

The spending limits system also functioned well in the deepest phase of the economic crisis, since the automatic stabilisers could function without changes to the system. However, now that the medium-term economic outlook has deteriorated and there is a substantial risk that tax receipts will remain even weaker than forecast, spending limits may not be enough to curb expenditure growth. For example, the spring 2012 decision on spending limits was based on a forecast according to which economic growth would be about ½ of a percentage point higher per annum than projected in the present Bank of Finland forecast. Moreover, as the long-term fiscal consolidation needs are more substantial than estimated in the spring, it is evident that the current spending limits do not support the objectives set for structural balance.

The majority of public expenditure consists of local government expenditure. The central government spending limits primarily adjust local government expenditure only via central government income transfers related to basic services. Developments in other local government expenditure are also affected by other central government subsidies granted with the purpose of encouraging local government to improve

operational efficiency. However, simply by adjusting subsidies central government cannot steer developments in local government expenditure very effectively. From the perspective of managing expenditure, it is important that central government refrain from adding new service obligations to local government.

Economic policy choices in a weak economic environment

The weakening of the economic environment has increased the challenges facing Finland's public finances. The objective of cutting off the rise in the central government debt-to-GDP ratio will not be met without new decisions, nor will the deficit target written into the Government Programme be reached.

Fiscal consolidation in a situation of weak demand does not come without its problems. There is a risk that expenditure cuts and tax increases can also erode economic growth potential for a prolonged period. A protraction and escalation of unemployment into structural unemployment would be detrimental to long-term labour force developments.

The uncertain economic situation strongly underlines the importance of a rules-based approach for the credibility of the fiscal policy. From the perspective of credibility, it would be harmful to slip from

the set objectives, and hence it is important to stick to the agreed debt objectives. Also justifiable is having a principle, agreed in the Government Programme, as to how corrective measures are allocated to the revenue and expenditure sides of the Budget. This reduces the political uncertainty associated with fiscal policy decisions and thereby contributes to strengthening the credibility of the fiscal stance.

In selecting revenue measures, it is important to pay attention to the structural effects of these measures. From the perspective of labour supply, it would probably be more detrimental to target measures at labour tax increases than to use other tax measures. Similarly, higher non-wage labour costs would also increase companies' labour costs in a situation where competitiveness relative to competitor countries has already suffered due to faster labour cost growth. Losses to growth arising from higher indirect taxes are usually smaller than the slowdown in economic growth due to higher labour taxes and payments.

On the expenditure side, achievement of the debt target requires that the spending limits be reduced from what was agreed in spring 2012. In addition, the deepening of the sustainability gap should be increasingly taken into account in the spending limits. Therefore, the level of spending limits for the adminis-

trative branches of central government should gradually be better aligned with sustainable expenditure levels.

Stabilising the public finances is the largest national challenge facing the Finnish economy. Achieving a sufficiently large general government surplus will require fiscal policy measures for the rest of the present decade, as the required consolidation measures will be substantial in view of the slow rate of economic growth. Achieving general government sustainability will also require structural measures, of which measures to increase the labour force are central. The economy needs higher labour inputs at each stage of working life. This would also smooth division of the costs of safeguarding the welfare state across the different age groups. Sufficient and binding decisions on structural measures would support confidence in fiscal stability and secure Finland's position as one of the strongest economies in the euro area.

2014, consolidated general government debt will amount to a full 57% of GDP. Fuelled by rising local government indebtedness, the combined central and local government debt will grow at a rapid pace, amounting to slightly over 60% of GDP at the end of 2014. Central government debt will also grow briskly, albeit at a slowing pace towards the end of the forecast period (Chart 18).

Higher taxation will push up the tax ratio, particularly in 2013. The tax ratio will continue to rise slightly in 2014, to 45% of GDP, equalling the level recorded in the first half of the 2000s (Chart 19).

External balance

In 2011, Finland's current account deficit turned out to be larger than previously estimated. According to revised data, the combined figures for foreign trade in services and the income account pushed the current account deficit up to EUR 3 billion, or 1.6% of GDP. In 2012, the current account deficit will be 1.3%, and it will remain at similar levels in 2013–2014 as well. In other words, Finland as an economy will continue to accumulate foreign debt (Chart 20).

The deficit on the trade account will be around 0.5% of GDP for the entire forecast period. In 2013 and 2014, export and import volumes will grow at the same pace. Imports will grow mainly because of imported inputs for the export industry, while the sluggishness of domestic demand will

Chart 18.

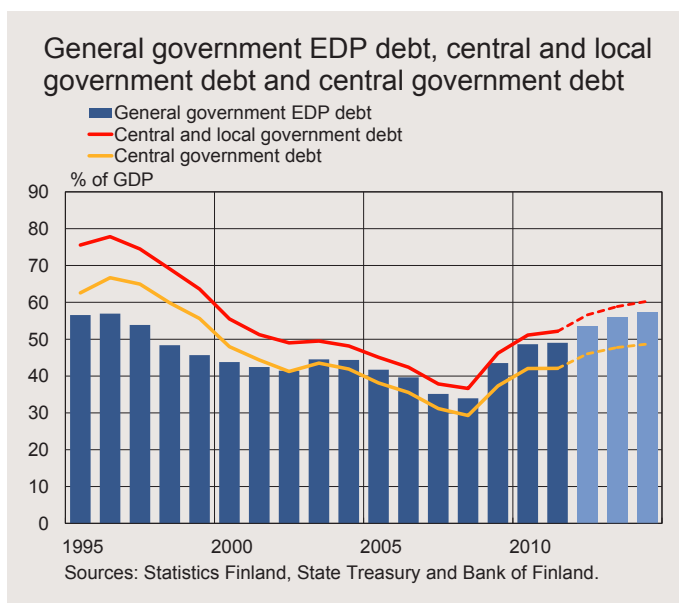
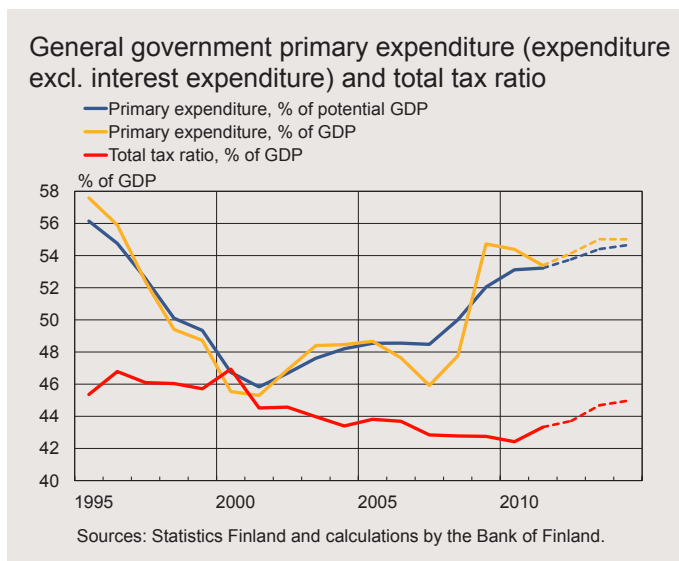


Chart 19.



dampen imports as a whole. As the terms of trade will deteriorate only slightly, the trade balance will remain unchanged over the entire forecast period.

Relative to GDP, the current account deficit was about 1% larger than the trade balance deficit in 2011.

Chart 20.



The difference is explained by the deficits of about 0.9 of a percentage point in current transfers and 0.2 of a percentage point in the income account. In 2012–2014, the income account will remain close to balance. Economic growth is slowing at about the same pace in Finland and abroad, so income flows in and out will follow similar patterns.

The terms of trade – the ratio of export prices to import prices – will improve temporarily in 2012, since during the early part of the year, import price developments have been particularly sluggish. In the forecast period, export prices will develop almost in line with other countries' export prices, and the weakening in the terms of trade will slow compared with previous years.

Since the 1990s, the trend of Finland's export prices has been dominated by the decline in manufacture of electrical and electronic products. Recently, the export share of

this industry has decreased steeply, which is why Finnish export prices in the future will develop more like export prices in other industrial countries. In the forecast period, the rise in export prices will be only slightly slower than import prices.

The current account deficit in 2011 is first and foremost a consequence of reduced financial savings in the household sector (Chart 21). Households have reduced their financial savings particularly by increased housing investment. In the forecast period, growth in the value of housing investment will continue, and with taxation being simultaneously tightened, household savings will contract, contributing to the current account deficit.

The corporate sector financial balance will remain in surplus, but the surplus will contract during the forecast period. The savings of non-financial corporations will decrease, but the low investment ratio will keep corporate net lending in positive territory. Meanwhile, the public sector financial balance will improve only slightly in the forecast period.

Wage and price trends

Wage growth slows

The trend in negotiated wages is in line with the framework agreement concluded between the social partners towards the end of 2011. The cost implications of pay rises and other changes in the terms and conditions of employment contracts will be 2.4% in

2012 and 1.9% in 2013. Furthermore, negotiated wages in 2012 are increased by a one-off payment of EUR 150 in the spring, which boosted them by slightly less than ½ of a percentage point. Correspondingly, the one-off payment in 2012 will slow growth in negotiated wages in 2013. In 2014, negotiated wages will rise slightly faster than productivity growth, at an annual rate of about 1.5%.

In 2012, aggregate wages will rise by 3.4 %, but due to high inflation, real incomes will grow only slightly. Nominal income growth will be about 2.5% in 2013, since the weak cyclical situation will reduce the bonuses paid on top of regular wages, and the one-off payment made in 2012 will have a technical negative impact on income growth. Once the cyclical situation improves in 2014, bonuses will rise and incomes will rise by about 2.5%. At the same time, decelerating inflation will boost wage-earners' real income.

Compensation per employee will grow by 4.1% in 2012, since the positive cyclical situation on the domestic market during the early part of the year increased the demand for labour input (Chart 22). The rapid expansion in the compensation of employees and the weak trend in productivity will increase unit labour costs heavily in 2012. In 2013, the weak cyclical conditions will slow wages growth to around 2.7%, while the cost pressures resulting from wage increases will diminish as labour productivity improves. In 2014, wages growth will pick up to a good 3%. At the same time, unit labour costs will

Chart 21.

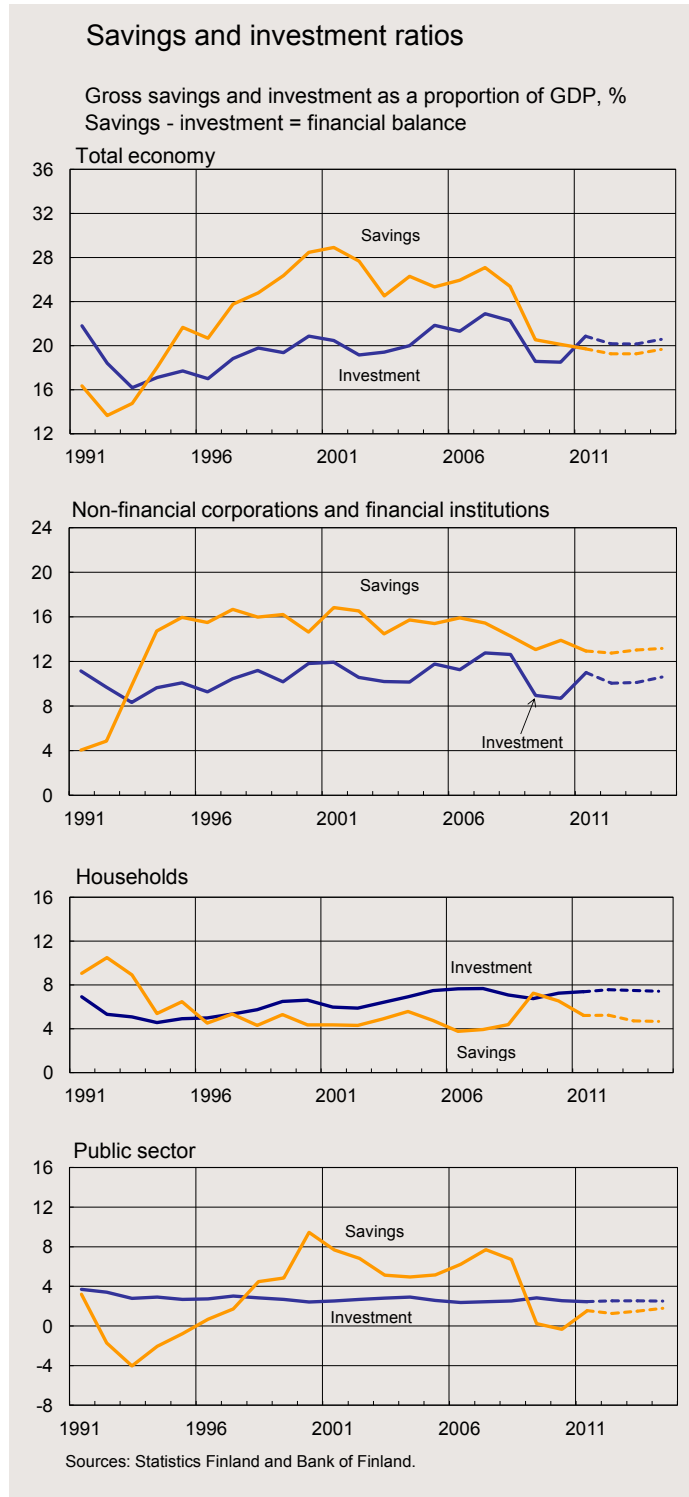


Chart 22.

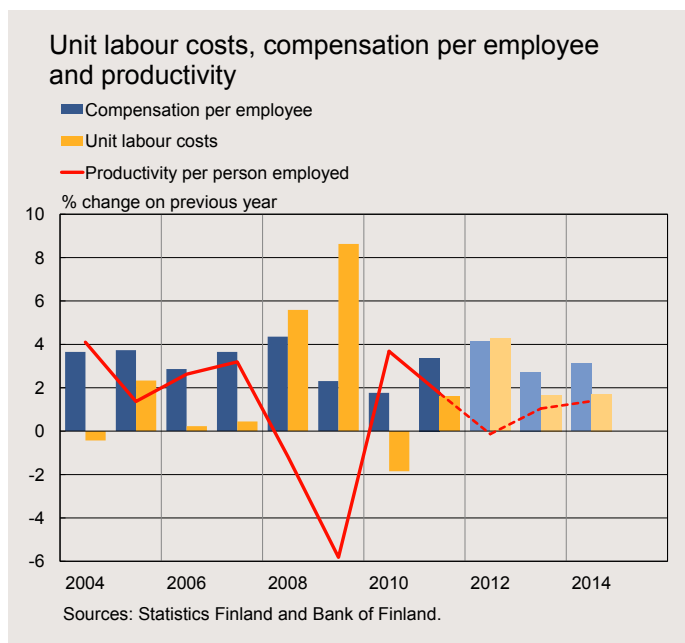
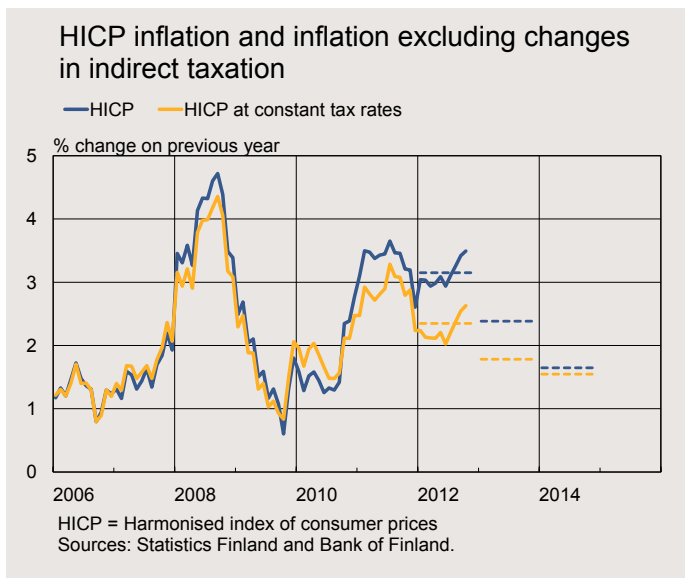


Chart 23.



grow less than 2% on the back of improving productivity.

Inflation gradually slowing

Indirect tax rises have kept inflation as measured by the harmonised index of

consumer prices (HICP inflation) at a high level in 2012 (Chart 23). According to the forecast, inflation will be 3.1%, ie almost the same as in 2011. Rises in excise duties and value-added taxes have boosted inflation by 0.5 of a percentage point in 2011, and by almost 0.9 of a percentage point in 2012. The rise in all value-added tax rates in January 2013 will have an estimated impact of a good 0.6 of a percentage point on inflation. However, in 2013 inflation will slow to 2.4%, and in 2014 to 1.6%.

The differential between inflation measured by the harmonised index and the national consumer price index (CPI inflation) has widened in recent months, mainly due to decreased interest rates on housing loans and consumer credit. CPI inflation will therefore be 2.9% in 2012 and in 2013 will remain somewhat lower than HICP inflation, at around 2.3%. In 2014, CPI inflation will be 1.8%.

Service prices will increase in 2012 by approximately 3.1%. The increase has been boosted by wage rises and also by the impact of energy prices and tax changes on costs in transport and restaurant services. Wages growth will slow in 2013, and energy prices will remain at the 2012 level. The same factors will also contribute to a slowdown in the pace of rise in rents. All in all, service prices will not rise by more than 2.8% in 2013.

The rapid growth in food prices will level off in 2013. The prices of processed food (incl. alcohol and tobacco) increased 6.2% in 2012. Price increases have been boosted

particularly by rises in excise duties. The prices of food commodities have also increased, but, based on market expectations, the upward trend will not continue in 2013. The prices of processed food increased an estimated 3.8% in 2013. The increase in the prices of unprocessed food in 2012 has reflected unfavourable weather conditions and higher energy prices. The consumer prices of meat products will increase by almost 8% in 2012, since a rapid increase in costs has eroded the profitability of meat production and reduced the domestic supply of meat.

The prices of industrial goods (excl. energy) will increase by about 0.8% in 2012. In 2013, prices will rise faster, at an estimated annual pace of 1.4%, due to the rise in VAT rates. The import prices of consumer goods have risen exceptionally rapidly in 2012, which adds upward pressure to the prices of industrial goods.

The price of energy will rise only marginally in 2013. The forecast is based on market expectations on crude oil prices, according to which the price of oil will decline in 2013–2014. The weak economic situation has reduced demand for electricity, and there is therefore presently less upward pressure on electricity prices.

Risks to the inflation forecast are broadly balanced. Business and consumer confidence in Finland's economy has deteriorated, and there are no signs of demand-driven inflation. Wage growth will slow over the forecast years, and consumption will grow only marginally. Developments in

international commodity prices are subject to great uncertainty. Increases in the prices of food commodities may cause further cost pressures at the producer level domestically as well as internationally. Increases in the price of energy and other production inputs and growth in pay costs may have a higher-than-expected delayed impact on domestic consumer prices during 2013.

Risk assessment

Risks to the international economy highlight the fragility of the economic situation

The forecast is based on the assumption that national and EU-level measures will be sufficient to stabilise the economies of the crisis countries in Europe and reassure the markets over their debt sustainability. However, correcting indebtedness and restoring confidence will take time, which will mean continued uncertainty.

In a fragile situation, developments may for different reasons take a more unfavourable turn. Savings measures that are necessary by themselves will test crisis countries' ability to adjust their economies, and it will be politically difficult to carry through the essential structural reforms. Failure of a single crisis country's adjustment programme could trigger a renewed spiral of distrust, which could have extensive contagion effects. Even more dangerous would be the paralysis of European decision-making, which would undermine the credibility of

safety frameworks created for the crisis countries.

A renewed weakening of market confidence would lead to capital flight, which would erode the collateral assets of banks in the crisis countries and reduce the flow of credit. The economic plight of the crisis countries would deepen, and economic growth in the euro area as a whole would decelerate. Crisis countries' return to the markets would be delayed, and the ability of other countries to raise funds on the markets could also be weakened. The outcome would be a difficult situation, where the need for European support finance would increase at the same time as countries that provide such finance encountered worsening problems in their own public finances. Such a situation would be politically unstable and erode the credibility of the European crisis management strategy.

Another risk to the international economy stems from the fiscal policy choices of the United States. The forecast for the United States is based on the assumption that a political consensus will be reached on a partial continuation of the temporary stimulus measures otherwise scheduled to end at the beginning of 2013 and accounting for about 4% of US GDP. However, a failure to continue the stimulus would mean to a stronger-than-forecast tightening of US fiscal policy. This would dampen economic growth, not only in the United States but also in Europe and Asia.

In both risk scenarios, the main implications for Finland would come through foreign trade. If the pull of

exports were to fade still further, this would have large-scale implications for domestic income formation and the public finances. The implications via the financial sector if the European debt crisis were to come to a head could also be significant. As market finance plays a considerable role in the funding of the Finnish banking sector, serious disruptions in the functioning of the European financial markets could damage the ability of Finnish banks to provide funding to businesses and households.

Confidence in the Finnish economy may falter

In addition to the uncertain international situation, the Finnish economy is impaired by several domestically driven problems that will take time to correct.⁹ The erosion of Finland's traditionally strong industrial sectors will probably remain permanent and, according to the forecast, household and general government debt accumulation will continue, losses in price competitiveness will not be recouped and the current account deficit will not be rectified.

Despite these problems, the Finnish economy has enjoyed strong confidence on the international financial markets, which has been reflected in low funding costs for the government and banks. The forecast assumes this situation will remain unchanged.

The confidence enjoyed by the Finnish economy is based on the market expectation that Finland will be able to

⁹ The alternative scenario to the forecast (Box 5, below p. 48–51) illustrates the impact on economic performance of a higher degree of competition on labour and product markets.

implement the corrective measures needed to restore the economy to a sustainable trajectory. If we are unable to undertake the required actions and there is no improvement in the competitiveness of Finnish production, market confidence in Finland's ability to resolve the problems in the economy may be shaken. This would not only lead to a rise in the financing costs for government but also increase the costs of bank funding and, by extension, tighten access to credit for the private sector as a whole.

Such developments would force a deeper-than-forecast cut in domestic demand, which would be aggravated by falling asset values. The imbalances in the public finances would worsen, unemployment would rise more rapidly than forecast and structural unemployment could also remain higher than anticipated for an extended period. In order to preserve international confidence, it is important to address the structural problems in the Finnish economy in a timely manner, before they begin to destabilise the economy. Although remedial measures may slow growth in the short term, the economic costs of faltering international confidence would be much higher. Improved price competitiveness is central to industrial jobs. The current job losses in industry are both structural in nature and dependent on the business cycle. Competitiveness will largely determine whether the job losses will be permanent.

Household consumption could be lower than forecast

Regardless of the general and international risks to the Finnish economy, household demand could remain lower than projected as a consequence of weakening earnings expectations. The forecast foresees no improvement in the household savings ratio of close to zero during the forecast period. In practice, this means that consumption will continue on an unsustainable path in the years ahead. Household indebtedness will increase, and the savings ratio will not return to a sustainable level capable of halting this trend until after the forecast period.

This assumption includes a clear factor of uncertainty. International economic activity is expected to remain subdued for a very long time and, owing to problems specific to Finland, the outlook for Finnish household earnings is still particularly weak. It is, therefore, possible that households will already begin to correct their financial positions in the forecast period. Increasing household savings would have extensive implications for economic performance. Consumption would decline, and economic growth could come to a total halt in 2013 and 2014.¹⁰

¹⁰ For more information on the effects of stronger household finances, see Box 5, Bank of Finland Bulletin 3/2012: Economic outlook, p. 43–45.

Box 5.

Alternative scenario: increased competition in labour and product markets

Competitiveness in an economy means the realisation of strong competition in labour and product markets. Companies' limited pricing power, freedom of entry to the market and flexible adjustment of wages to changes in labour market equilibrium are key features of competitive markets. The presence of competition enhances market performance: production inputs are effectively allocated and economic agents are able to respond rapidly to changes in the outlook for supply and demand during business cycles. Competitive markets increase the competitiveness of the economy as a whole, on which a country's success in global competition is ultimately based.

Competition in the Finnish product markets is assessed to be low, as the markets are concentrated and competitive pressures weak.¹ In many sectors, companies are large in terms of the size of the domestic market, meaning there is a concentration of pricing power in these companies. Consequently, Finnish companies are able, through their own actions, to influence their operating environment and market conditions. Globalisation and the development of the

¹ See eg *International Monetary Fund, Finland – 2012 Article IV Consultation, Concluding Statement (11 June 2012) or OECD (7 April 2010) Economic Survey of Finland 2010: Overcoming the crisis and beyond.*

European internal market have naturally increased competition in Finland, as elsewhere, but many sectors have remained closed due, for example, to Finland's distant location or restrictions related to market entry. For example, Finland's retail sector is the most concentrated in the euro area, which may be a reason why Finnish households pay a higher price for their consumption than the euro area average.²

Unit labour costs in Finland have risen faster than in many competitor countries. In Finnish manufacturing, in particular, nominal labour costs relative to value added have increased considerably more rapidly than across the euro area as a whole. Labour costs in industry and those elsewhere in the economy, transmitted via intermediate inputs, account for equally large shares of total manufacturing costs, meaning that wage decisions in other sectors have a weight in manufacturing costs equal to that of wage decisions in manufacturing.³ At least part of the intermediate inputs, such as transport services, can be acquired only from the closed

² For more information on structural features and the effect of competition on prices in the euro area, see Box 6, *Bank of Finland Bulletin 5/2011: Economic outlook*, p. 47–49.

³ See *Kustannuskilpailukyvyn mittausten menetelmien uudistaminen* ('Revision of methods for measuring cost competitiveness'; in Finnish only), *Prime Minister's Office Publications*, 3/2012.

sector, which meets with only limited domestic competition.

In practice, a higher degree of competition means more limited pricing power for economic agents in the labour and product markets. Labour market reforms, for example, are able to reduce both employers' and employees' monopoly power in wage negotiations and thus support wage adjustment and labour market equilibrium. Deregulation and facilitating entry into a sector, in turn, are examples of measures that increase competition in the product markets.

According to the forecast, the competitive situation will remain unchanged in Finland in 2012–2014. For example, wages will rise considerably faster than productivity improves, and consumer price inflation will be brisk despite subdued private demand. Finland's external competitiveness will not improve either, considering that average unit labour costs will rise faster in Finland than in countries such as Germany or Sweden⁴ and the current account will remain in deficit.

Using the Bank of Finland's Aino model, this alternative scenario illustrates the impact on economic performance of a higher degree of competition in

⁴ *European Commission forecast (November 2012).*

labour and product markets.⁵ The alternative scenario ascribes an improvement in competitive conditions to structural reforms.⁶ Labour market reforms promote favourable conditions for wage flexibility at workplace level. The scenario foresees a 5.5% reduction in employees' wage mark-up in 2013–2019, which means that average wage growth will slow by approximately 0.5 of a percentage point a year. Competition in the product markets will increase to such an extent that companies' price margin will narrow by 2.5% in 2013–2019, which will curb price increases in private sector production by 0.3 of a percentage point, on average, a year.

As a consequence of the combined effect of both labour and product market reforms, average wage increases slow by 0.4 of a percentage point in the first reform year, and by 0.7 of a percentage point in subsequent years. The subdued pace of increase in wages constrains growth in corporate production costs. In addition, these reforms cause the prices of intermediate

⁵ *Labour and product market reforms are examined in Kilponen & Ripatti (2006) Labour and product market competition in a small open economy – Simulation results using a DGE model of the Finnish economy. Bank of Finland Discussion Papers 5/2006. The results presented in the Discussion Paper are in qualitative terms similar to the effects suggested here.*

⁶ *In order to allow the general equilibrium model to illustrate structural reforms whose impact will not fade as in an impulse response analysis, the persistence of the shocks was set at one.*

goods to rise, on average, at an annual pace that is 0.7 of a percentage point slower than envisaged in the baseline forecast.

A higher degree of competition reduces efficiency losses caused by imperfect competition in both the closed and the open sector, thus adding to output. The alternative scenario assumes unchanged nominal interest rates, but real interest rates rise higher than the baseline suggests, owing to declining inflation.

Higher output requires additions to the capital base, meaning that economic resources are allocated to investment. Investment grows faster than consumption, particularly at the beginning of the reforms, when the difference between the relative prices of consumption and investment is at its widest. At the early stage of the reforms, private consumption is subdued by three factors. Firstly, the rise in the real interest rate slows private consumption growth. Secondly, growth in nominal and real average wages decelerates. Finally, household consumption opportunities are impaired by lower corporate profits. This 'wealth effect' is relatively prolonged, but abates at the end of the review period. After six years from the beginning of the reforms, private investment volume is over 10% higher than in the baseline forecast, but private consumption is only 0.3% higher.

Domestic output growth increases labour demand, and the number of employed throughout the review period is higher than in the baseline forecast. Lower inflation supports purchasing power, while compensating for sluggish increases in nominal average wages.

Reforms to increase competition on the domestic market lead to an improvement in Finland's external competitiveness. Unit labour costs grow more slowly than in the baseline forecast and the real exchange rate depreciates. Exports grow faster than foreseen in the baseline, throughout the review period. As the reforms curb the pace of increase in the prices of domestically produced goods, companies increase the use of domestically sourced intermediate goods, causing import growth to recede. Moreover, a strong deceleration in consumption growth reins in import growth. However, more moderate increases in export prices weaken the terms of trade, meaning that the higher exports barely impact on the external balance.

Under the alternative scenario, labour and product market reforms that enhance competitive conditions increase output throughout the review period faster than in the baseline developments. After six years, GDP is 3.5% higher than the baseline figure. Some of the reform benefits arise from higher exports. Even so, the domestic

market gains the most: employment is up, investment too, and even private consumption resumes growth following the strong investment boom.

The alternative scenario shows that measures to increase competition and ensure the presence of a competitive operating environment are effective means of augmenting private sector investment and output. The increase in employment also improves the sustainability of the public finances.

Table.

Alternative scenario: increased competition in labour and product markets

	2012	2013	2014	2019 deviation, %
<i>GDP, % change</i>				
Baseline forecast	0.3	0.4	1.5	
Alternative scenario		0.5	1.7	
Difference		0.0	0.2	3.5
<i>Private consumption, % change</i>				
Baseline forecast	0.7	-0.1	1.2	
Alternative scenario		-0.7	0.7	
Difference		-0.7	-0.5	0.3
<i>Private investment, % change</i>				
Baseline forecast	-0.9	0.4	3.5	
Alternative scenario		1.3	4.7	
Difference		0.9	1.3	10.3
<i>Exports, % change</i>				
Baseline forecast	-1.9	1.3	4.3	
Alternative scenario		2.0	5.0	
Difference		0.7	0.7	4.5
<i>Current account, % of GDP</i>				
Baseline forecast	-1.3	-1.3	-1.3	
Alternative scenario		-1.2	-1.1	
Difference		0.1	0.2	0.1
<i>Price of private sector output, % change</i>				
Baseline forecast	2.7	2.1	2.2	
Alternative scenario		1.3	1.4	
Difference		-0.9	-0.8	-5.0
<i>Private consumption deflator, % change</i>				
Baseline forecast	3.2	2.1	1.6	
Alternative scenario		1.4	0.9	
Difference		-0.7	-0.7	-4.3
<i>Terms of trade, % change</i>				
Baseline forecast	0.8	-0.4	-0.1	
Alternative scenario		-0.9	-0.5	
Difference		-0.5	-0.4	-2.7
<i>Average wages, % change</i>				
Baseline forecast	4.1	2.4	2.9	
Alternative scenario		2.0	2.2	
Difference		-0.4	-0.7	-4.4
<i>Employed (1,000 persons)</i>				
Baseline forecast	2 485	2 470	2 473	
Alternative scenario		2 491	2 508	
Difference		20	34	4.9
<i>Unit labour costs, % change</i>				
Baseline forecast	4.3	1.7	1.7	
Alternative scenario		2.2	1.2	
Difference		0.6	-0.5	-3.1

Differences calculated on the basis of unrounded figures.

Sources: Statistics Finland and Bank of Finland calculations.

Changes from the previous forecast

The picture of the performance of the Finnish economy in the years 2012–2014 provided by the present Bank of Finland forecast is gloomier than that presented in the forecast released in June 2012. The level of GDP growth forecast for 2012 is 1.2 percentage points, and for 2013, 0.8 of a percentage point lower than in the June forecast. In the summer, the estimate was that GDP would reach the pre-recession level during the forecast period, but more subdued growth since then has caused the estimated time to be postponed until after the forecast period.

The changes to the forecast are due to a deterioration in both the global economy and Finland's domestic market. The continuation of the sovereign debt crisis has subdued growth expectations in Europe. Slower growth in export demand has led to reduced output and willingness to invest on the part of exporting companies. Restructuring has

continued in the key export industries of electronics and the forest industries, and output has declined. Meanwhile, uncertainty coupled with slower growth in disposable income have eroded Finnish households' confidence and willingness to consume. Hence the operating environment for companies producing for the domestic market has also deteriorated.

The changes in the economic operating environment of both Finland's export markets and the domestic economy will lead to slower economic growth in 2012 and 2013 than was forecast in the summer. In the present forecast, growth in Finland's export markets is estimated to be 1.3 percentage points weaker in 2012, and 2.9 percentage points weaker in 2013 than foreseen in the summer forecast. Whereas in the summer exports were forecast to grow by over 2% in 2012, actual developments were already

weaker than forecast in the first half of the year, and, according to the present forecast, exports for 2012 as a whole will be almost 2% down on the previous year. In 2013, export growth is forecast to be almost 4 percentage points lower than forecast in June.

Private consumption growth will be on average one percentage point lower in 2012 and 2013 than forecast in the summer. Declining real incomes and the deteriorating employment situation will reduce households' willingness to consume. In early 2013, introduction of the new public service broadcasting tax will technically contract the value of private consumption by around 0.5%.

Prolongation of the European debt crisis has led the markets to lower their expectations over the level of interest rates in the euro area, particularly for 2013. Relative to the June forecast, market expecta-

Table.

Current and June 2012 forecast

	2011	2012	2013	2014
<i>GDP, % change</i>	2.7	0.3	0.4	1.5
<i>June 2012</i>	2.9	1.5	1.2	1.6
<i>Inflation (HICP), %</i>	3.3	3.1	2.4	1.6
<i>June 2012</i>	3.3	2.9	2.2	1.6
<i>Finland's export markets, % change</i>	6.8	2.7	2.9	6.0
<i>June 2012</i>	7.1	4.0	5.8	6.2
<i>Current account, % of GDP</i>	-1.6	-1.3	-1.3	-1.3
<i>June 2012</i>	-0.7	-0.7	-0.9	-0.9
<i>General government net lending, % of GDP</i>	-0.9	-1.3	-1.0	-0.8
<i>June 2012</i>	-0.9	-0.8	-0.2	0.1

tions are for the 3-month Euribor to be an average 0.5 of a percentage point lower in 2013, at 0.2%. Notwithstanding the exceptionally low level of interest rates, private investment is forecast to grow in 2012–2013 an average 2.6 percentage points slower than forecast in June. Investment in housing construction will contract an average 0.7% per annum in 2012–2014, whereas in the summer it was expected to grow. Private investment will be reduced by the prevailing uncertainty and the weak outlook for demand. The lower investment curve will also reduce imports, which will grow considerably slower than estimated in the June forecast. The current account deficit is forecast to be deeper throughout the forecast period relative to the June forecast.

The general government financial balance will decline substantially relative to the June forecast. The deficit is forecast to increase 0.5 of a percentage point in 2012, to 1.3% of GDP. Revenues from corporation tax and indirect taxes, in particular, will be lower than in the June forecast. The weak economic outlook for the next few years will keep the general government balance in deficit. In 2013–2014, the deficit will be on average 0.7 percentage points larger than foreseen in the previous forecast. At the end of the forecast period, general government debt relative to GDP will be around 57%, or more than 3 percentage points larger than estimated in the summer.

Financial stability

4 December 2012

Despite partially positive developments on the financial markets, the outlook for the European banking sector remains uncertain. The deterioration of the macro-economic outlook will increase credit risk. Customers' situation is eased by the low level of interest rates and loan forbearance, but, at the same time, these may promote excessive indebtedness. In addition, it is difficult to get an accurate picture of the extent of loan forbearance, which increases uncertainty among market participants.

The Finnish financial system has remained stable, despite the difficult operating environment. The banking sector remains sound and profitable. However, the low level of interest rates and slow pace of economic growth are increasing the structural interest rate risk and credit risk. Stress tests confirm that the banking sector's capital buffers are resilient to an abrupt deterioration in profitability. The low level of interest rates creates challenges for life and pension insurers' investment activities and the profitability of insurance business.

International operating environment – financial markets

The President of the ECB, Mario Draghi emphasised in July 2012 that the euro is irreversible. The Governing Council of the ECB has since decided to establish the Outright Monetary Transactions (OMT) programme, through which the ECB is prepared to purchase an undefined amount of short-term sovereign bonds of those crisis countries that still have access to market funding. The condition for the OMTs is that the

The terms of bank-mediated corporate finance are tightening. The interest rates on Finnish non-financial corporations' bank loans are currently lower than the average interest rates on corporate credit in the euro area.

It is important to make banking union operationally viable as quickly as possible. A common supervisory mechanism and a common crisis resolution system for banks are the key elements of the reform. Banking union will stabilise the financial markets and reduce the probability of banking crises, but it will not on its own provide a solution to the current crisis. That will require determined action by governments and, over the longer term, structural reforms to the banking system.

A reliable infrastructure is a fundamental component of financial market stability. Supervision of payment and settlement systems is to be harmonised by updating the principles of oversight. In respect of these systems, the regulations governing receivership and bankruptcy should also be harmonised.

countries agree to the conditions defined by the European Stability Mechanism (ESM). The financial markets reacted positively to these announcements, market sentiment improved and risk premia declined.

Despite the improvement on the markets, the European economy remains extremely vulnerable. The euro area is still divided into two groups of countries: those that have maintained their high credit ratings and those whose credit rating has weakened by several

Governments must not postpone essential reforms, lulled by the recent easing of financial market uncertainty.

grades. This divide is, however, narrowing slightly, as the outlook for the real economy is also weakening in those countries with a high credit rating.

The austerity measures taken by excessively indebted European countries allied to the measures taken by the ECB eased financial market tensions during the autumn. The interest rates on the sovereign bonds of the excessively indebted crisis countries have dropped to a tolerable level, and these countries, with the exception of Greece, have been able to finance their general government deficit (Chart 1). As investors withdraw from the crisis countries, government borrowing focuses increasingly on the domestic banks, and, in turn, the banks can use the sovereign bonds as collateral for central bank refinancing. This has reinforced the interdependence of banks and governments in the distressed countries. In a number of countries, the European economic crisis has hampered

access to finance for even healthy banks and companies, as foreign investors or banks have withdrawn from the smaller countries with poor liquidity.

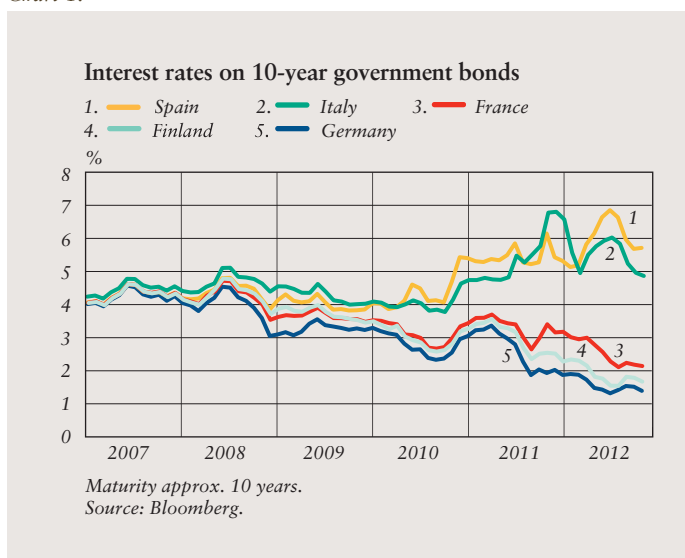
The essential measures already implemented have, however, decreased the room for any additional stimulus measures. There is also a threat of widespread crisis fatigue, resulting from the fact that the measures implemented are not seen to have improved the situation. Governments must not postpone essential reforms, lulled by the recent easing of financial market uncertainty.

Outlook for European banking sector remains uncertain

The outlook for the European banking sector is uncertain. The fateful interdependence between governments and banks has not yet been cut. The financial markets have become fragmented, and cross-border interbank deposits have decreased in the majority of euro area countries. There are also major cross-country divergences in banking sector funding costs. Many banks are still dependent on central bank refinancing.

The deterioration in the macroeconomic situation has further weakened banks' prospects. The sluggish pace of economic growth is increasing the level of nonperforming assets, which may later cause credit losses. Particularly exposed are banks that operate in indebted countries with high unemployment and that have made only small loan loss provisions on nonperforming assets. The situation is aggravated by the banks' high dependence on market funding. Uncertainties over the contents

Chart 1.



and impact of future regulation are also increasing bank risk.

The low level of interest rates has decreased borrowers' loan-servicing costs, thereby easing their position. The banks face the danger that in an environment of low interest rates, the level of nonperforming assets does not correspond to customers' actual debt-servicing capacity. Consequently, loan losses would increase with a rise in interest rates. Debtors face the risk of excessive debt, attracted by the low level of interest rates. A low risk-free interest rate also increases investors' incentives to seek a higher return through higher investment risks. If this is protracted, it could lead to a situation in which asset prices no longer correspond to economic fundamentals.

In addition to the strengthening of the interdependence between governments and banks, another concern from the perspective of financial stability is the reinforced interdependence between the banking and insurance sectors. Insurance companies are major investors in debt securities issued by banks, and, in the worst case, banks' problems may also pose a threat to insurance companies with healthy core operations. In large European financial conglomerates there is evidence of a tighter interdependence between the banks and insurance companies, due, for example, to an increase in liquidity swaps. In liquidity swaps, liquid eligible debt securities in the insurance company's portfolio are swapped with less liquid debt securities in the bank's portfolio. This supports the bank's access to funding, but, at the

same time, it may hamper the efficient reallocation of the insurance company's portfolio, for example in a crisis situation. The problem with liquidity swaps, like with other new financial products, is their opacity. Due to the lack of adequate information, it is difficult for consumers or investors to get a clear understanding of financial market entities' risks and the channels through which they spread. The opacity of information is heightened in crisis situations and causes unnecessary uncertainty on the financial markets.

Solid banks' access to funding has eased

On the other hand, there are many factors supporting financial stability. The improvement of market sentiment has eased the access to funding for banks with a strong financial position. In addition to the ECB's measures, the uncertainty relating to banks has also been alleviated by the European Banking Authority's (EBA) capital exercise on large European banks, which was successfully implemented in June 2012.

The EBA's capital exercise improved the resilience of the European banking system. Altogether, banks increased their capital by over EUR 200 million between December 2011 and June 2012. The capital strengthening was achieved mainly by measures such as retained earnings, new equity, and liability management.¹ The EBA will in future pay attention not only to capital

The fateful interdependence between governments and banks has not been cut. The weakening of the real economy increases the risks for both.

¹ In liability management measures, the bank redeems its own debt securities below their nominal value. The resulting capital gains increase the bank's equity.

Banks are preparing for regulatory changes by increasing the share of deposits in their funding acquisition.

ratios but also to the amounts of capital held, as banks are required to maintain an absolute amount of CT1 capital corresponding to the level of their CT1 capital at the end of June 2012.

Despite the improvement on the markets, large banks have acquired only a limited amount of funding from the bond market. This is partly explained by the ongoing balance sheet adjustment, which reduces banks' need for refinancing. Many banks have frontloaded the majority of their refinancing for 2012. Moreover, several banks have already acquired from the ECB longer-term refinancing in the form of longer-term refinancing operations (LTRO).² Banks are preparing for regulatory changes by increasing the share of deposits in their funding acquisition. The quantitative liquidity standards of Basel III require banks to acquire longer-term funding and, thereby, a more stable funding structure.

The share of senior unsecured bonds in total issues has grown in autumn 2012, indicating an increase in risk appetite and a restoration of confidence. This has diversified banks' funding structure. It should also be noted that European banks' access to US dollar funding is slowly improving. US money market funds' investments in euro area banks are on a slow upward trend. Some banks in southern Europe have resumed the issuance of US dollar bonds.

² The banks have the option of early repayment of the longer-term refinancing in January and February 2013.

Lack of transparency causes uncertainty

Despite the gradual recovery, the financial markets remain vulnerable. It is, therefore, important to promote confidence in the banking sector by increasing the transparency of banking activities. The factors that caused the lack of transparency during the crisis have changed and their consequences have become pronounced. Uncertainty has been caused by the lack of information on banks' holdings of debt securities that have lost their value. The current uncertainty is increased by an incomplete picture of banks' asset encumbrance and loan forbearances.

In recent years, financial market uncertainty has increased the importance of banks' secured funding. The advantage of secured funding is the more reasonable price, and often also its better availability compared with unsecured funding. Secured central bank refinancing has grown strongly during the crisis. In the short-term interbank market, the share of secured funding has grown and that of unsecured funding has declined. Moreover, in banks' unsecured long-term funding there is evidence of a transition to secured bonds, particularly covered bonds. The growing popularity of secured funding has also increased banks' asset encumbrance. Asset encumbrance is also increased by the growing use of central counterparties on the derivatives markets, as customers are required to post collateral with the central counterparty.

Asset encumbrance weakens the position of holders of unsecured loans in

a possible liquidation and thus increases the creditors' risks. Banks' creditors and markets in general should have access to adequate information on asset encumbrance to enable the correct pricing of this risk. From the information banks are currently disclosing, it is difficult to get an accurate picture of the extent of this phenomenon. To improve transparency, banks should disclose more information on the factors affecting asset encumbrance.

During the crisis, banks have displayed forbearance over their customers' repayment difficulties. Typical forbearances include smaller instalments or postponement of instalments. Loan forbearance is a sensible solution for both the bank and the debtor if the customer's repayment difficulties are of a temporary nature. Forbearance may prevent realisation of the collateral. Collateral sold in a poor market situation does not necessarily cover the entire loan amount, which causes loan losses.

However, forbearance does not help if the customer is permanently insolvent. In such a case, forbearance only postpones the recognition of the inevitable loan losses, and thus gives an incorrect picture of the quality of the credit portfolio. At the level of the economy as a whole, postponing the recognition of loan losses distorts the optimal allocation of resources, because the funds used for keeping going those customers that are incapable of servicing their debt are away from the funding of investment objects that can generate a higher yield.

As the crisis has continued, doubts have arisen as to the underestimation of

overdue loans and the postponement of the recognition of loan losses. The uniformity and transparency of forbearance has been questioned, and the comparison of credit risks across banks and also banking sectors is considered difficult. The transparency and uniformity of forbearances should be improved, so as to avoid increasing market uncertainty.

In addition, there are still doubts as to the comparability of the methods used in capital adequacy calculation. For example, the risk weights applied to housing loans differ considerably depending on the method of capital adequacy calculation. Applying smaller risk weights, and hence a smaller capital requirement and narrower margin, than competitors may distort bank competition. It is therefore important that banks that are using internal models also disclose information that complements the capital adequacy ratios calculated based on risk-weighted assets.

The Finnish banking sector has thus far remained sound and profitable

The 'stability map' for Finland includes several indicators, and it shows that the situation in Finland's financial system has changed in some respects since early 2012 (Chart 2).³ The macroeconomic situation has weakened, but the banking sector stress index, which indicates risk-bearing capacity, and the risk premia, which indicate banks' risk-bearing capacity and access to market-

Banks should improve disclosure on asset encumbrance and forbearance.

³ The indicators used in the stability map (Chart 2) and the methods for calculating them are described in Bank of Finland Bulletin 2/2011: Financial stability, Box 1, p. 5.

Chart 2.

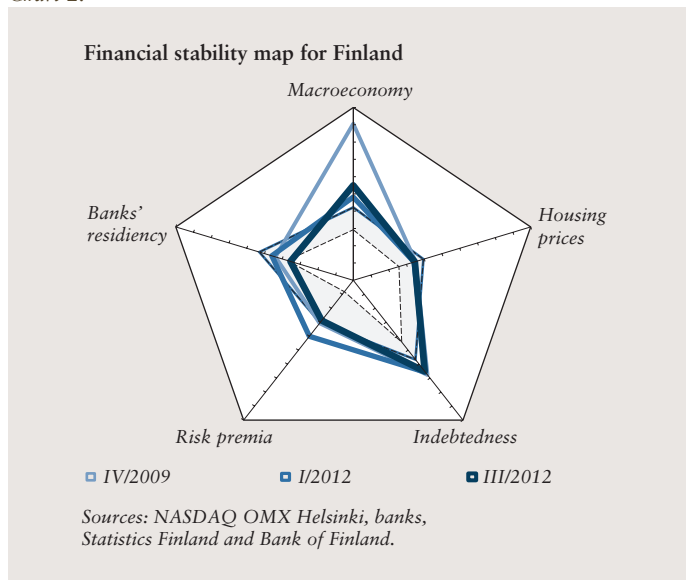
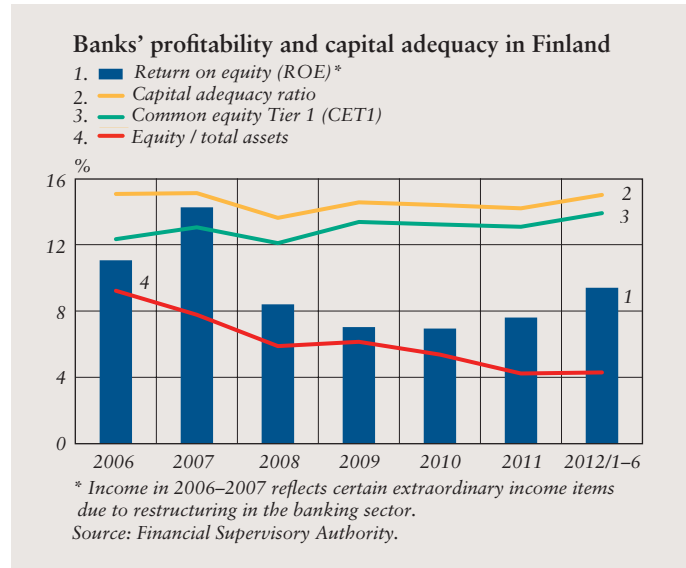


Chart 3.



based funding, show positive developments.

The Finnish banking sector's profitability has improved in 2012 (Chart 3). In January–June, the combined operating profit of the banking sector was EUR 1.5 bn, 18%

higher than a year earlier. The improved profitability was also reflected in the return on equity, which rose to 9.4% in the first half of the year. The return on equity has not been higher than this at an annual level since 2007. Developments in profitability have, however, been mixed, as the majority of the improvement in profits was accounted for by three largest banking groups,⁴ whose aggregate operating profit in January–June was 20% higher than a year earlier. The aggregate operating profit of other domestic banks decreased by 2% in the same period.

The profitability of the large banks was supported by favourable market developments, which pushed income from trading and investment activities, which is typically important for these banks, onto a clear upward trajectory. The income structure of other banks reflects to a larger extent the other traditional cornerstone of banking, net interest income. Net interest income, excl. derivatives trading, has started to decline, due to the narrowing of the margin between lending and deposit rates (Chart 4). This structural interest rate risk will in future be a key risk in the banking sector if interest rates remain low for a protracted period.

The Finnish banking sector's loan losses increased rapidly in 2009. At their highest, loan losses amounted to 0.5% of the stock of loans and guarantees. Loan losses have subsequently decreased and are currently slightly larger than in the pre-crisis years, when they were exceptionally small. Nonperforming

⁴ Nordea Bank Finland, OP-Pohjola Group and Danske Bank.

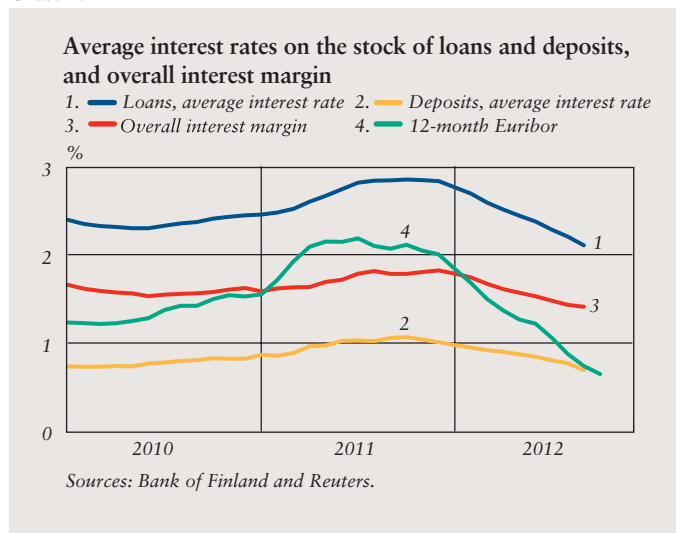
assets also grew notably in 2008–2009. The amount of nonperforming assets has since stabilised, to 0.6% of the stock of loans and guarantees. Both the ratios show that the Finnish banking sector's credit risks have remained small. A strong negative shock to the macro economy would, however, be reflected as a rapid rise in loan losses, particularly those on corporate loans.

The capital adequacy of the Finnish banking sector has remained virtually unchanged for a number of years. Capital adequacy has remained solid, and the capital adequacy ratio has remained close to 15%, compared with the present minimum requirement of 8%. At the end of September 2012 the capital adequacy ratio stood at 15.2%. The quality of equity is reflected in the fact that common equity (Core Tier 1) accounts for a large share of equity. The average capital adequacy ratio calculated on the basis of these figures was 14.0%. This is well above the level of 9% set by the EBA for large European banks in its capital exercise completed in June 2012. Attention has, however, been drawn to the decline in the equity ratio. The protracted decline in the ratio of equity to non-risk weighted assets has now bottomed out, as the increase in the banking sector's total assets has come to a halt.⁵

Finnish banks have obtained funding from the international financial markets at a reasonable price, as the partial restoration of confidence has eased bank funding. Demand for

⁵ The doubling of assets was due to the rapid growth of Nordea Bank Finland's (NBF) assets. This issue is discussed in more detail in Bank of Finland Bulletin 2/2012: Financial stability.

Chart 4.



investment instruments that are considered safe, ie Northern European banks, has also lowered the price of funding. For example, the risk premia on covered bonds over the swap rates has decreased considerably since the start of 2012. Risk premia on senior bonds have come down even more, and the position of senior bonds as a source of market funding has improved.

The stock of bonds issued by Finnish banks has increased rapidly. At the end of September 2012, it totalled EUR 43.6 billion, an increase of one third from a year earlier and double the situation two years ago. The majority of bonds are issued by the three largest banks.

Banks in Finland have focused on improving the efficiency of capital utilisation. The margins charged from the weakest customer groups have been increased to correspond with the capital tied by their loans. This has led to a higher dispersion of margins between customer groups. As banks in general

seek to improve the efficiency of capital usage, the focus of business has shifted to products that tie up only a small amount of capital. Such products include housing loans and credit granted to companies in good health. In housing loans, too, the coverage of the collateral has an impact on the capital requirement if the bank uses the Internal Ratings Based Approach (IRBA) in the calculation of capital adequacy.

Stress test confirms banking sector's resilience in the event of a difficult operating environment

The banking sector's biggest risks in the next few years arise from the challenges in the domestic and international operating environment. The markets expect interest rates to remain at a very low level over the next few years. Market rates are, however, expected to start rising slightly in 2013, although net interest income is expected to decline further, as in Finland changes in market rates are typically reflected in variable rate contracts only after a time lag. On the other hand, net interest income will be supported by banks' efforts to increase loan margins. Maintaining the current level of net income from trading and investment activities may prove difficult in future. Banks will keep to their strict cost discipline, and costs are expected to decline slightly. The slow pace of economic growth is expected to increase loan losses in Finland in 2013. Based on all these indicators, banks' operating profits will decrease significantly in 2013.

The stress test conducted for the International Monetary Fund in spring 2012 confirmed the resilience of the

Finnish banking sector's capital buffers to a strong deterioration in profitability. The stress test's negative risk scenario for 2012–2015 is much more pessimistic than real economic developments in 2012 and the Bank of Finland's forecast for the Finnish economy. Under the projected risk scenario, the real economy is hit by a strong negative growth shock: exports and investment take a dive, which leads to an increase in unemployment, bankruptcies and loan losses. Profitability pressures are heightened by the decline in asset prices and the persistently low level of interest rates. In this longer-term stress scenario, the banking sector's average capital adequacy ratio decreases substantially, but nevertheless remains higher than the minimum requirement. Moreover, the Basel III requirements on the liquidity coverage ratio (LCR) and, to some extent, also the net stable funding ratio (NSFR) would create challenges for banks in the transition period for the new regulation.

Insurance companies' solvency improved

The situation of the Finnish insurance sector has remained stable, despite the challenging operating environment. Insurance sector entities have posted positive results on average, and in the various insurance sectors (excl. individual pension plans), growth in premium income has been higher.

In the first three quarters of 2012, insurance companies' income on investment was on a good level, considering the operating conditions:

for example, pension insurers' return on investment activities has averaged 6% in 2012. The profitability of insurance and the higher return on investments have supported insurance companies' solvency (Table).

In the short-term, the most serious risk to insurance companies relates to market developments. Life and pension insurers' investment income, in particular, is vulnerable to changes in share prices. The situation on the investment market has eased, but the market remains vulnerable. The

protracted low level of interest rates poses challenges for pension and life insurers' activities. For insurance companies, it will be increasingly difficult to achieve the required return on technical provisions. There is a risk that the companies will seek a higher return on investment by increasing the risks in their investment activities. Life insurers can make changes in the range of insurance products offered to customers, but insurance institutions engaged in statutory pension insurance cannot provide new products to the insured.

Table.

Solvency of life, pension and non-life insurers					
	9/2012	9/2011	12/2011	12/2010	12/2009
<i>Life insurers</i>					
Capital and reserves, EUR million	3,032	2,616	2,439	2,663	2,252
Solvency margin, EUR million	5,769	4,345	4,366	5,137	4,237
Solvency capital, EUR million	5,921	4,518	4,511	5,306	4,407
Solvency margin, % of minimum amount	5.46	3.96	4.00	4.58	3.82
Solvency capital, % of technical provisions	24.4	18.3	18.3	20.7	18.0
Risk-based solvency position	3.17	2.46	2.39	3.06	2.83
<i>Employee pension insurers</i>					
Capital and reserves, EUR million	342	332	338	347	334
Solvency margin, EUR million	17,720	14,626	15,106	19,443	14,681
Solvency margin, % of minimum amount	12.33	10.73	10.91	14.41	11.65
Solvency margin, % of technical provisions	24.7	21.5	21.8	28.8	23.3
Risk-based solvency position	2.47	2.23	2.61	2.51	2.75
<i>Non-life insurers</i>					
Capital and reserves, EUR million	2,111	1,710	1,826	1,852	1,737
Solvency margin, EUR million	3,154	2,389	2,449	2,470	2,208
Solvency capital, EUR million	5,116	4,598	4,392	4,667	4,381
Solvency margin, % of minimum amount	4.59	3.68	3.72	3.92	3.61
Solvency capital, % of technical provisions	58.9	56.1	53.7	60.6	58.1
Solvency capital, % of premiums earned over 12 months	149.6	142.2	134.3	149.3	143.9
Risk-based solvency position	2.16	2.03	1.82	2.08	2.09

Source: Financial Supervisory Authority.

Cyclical indicators point to a rapid deterioration in the outlook for businesses.

Tighter terms and conditions on corporate loans

The weakening of the business outlook is starting to affect companies in a number of ways. Thus far, corporate sector turnover has remained on a slight upward trend, and business has remained profitable, despite the weakening of the economy; average corporate indebtedness has not risen alarmingly. The number of bankruptcy petitions filed has not changed significantly either.⁶

Business outlook indicators⁷ nevertheless point to a rapid deterioration in the outlook for businesses. Industrial output has stagnated, and output levels are well below pre-recession levels. The outlook for construction output is also deteriorating.

Uncertainty in the international economy and on global financial markets is reflected in Finland's open economy as a weakening of export demand. The pull of exports has partly been undermined by the erosion of competitiveness.⁸ In Finland, there are risks to the corporate sector's operating environment, due to the weakening of export demand, and prospects in general have deteriorated. In Finland, companies are investing cautiously, and this is also reflected in the subdued demand for companies' long-term foreign debt financing.

The annual pace of growth in bank lending to non-financial corporations

was in October just under 6%, but, in recent months, the stock of lending to non-financial corporations has started to decline slightly. Demand for large corporate loans (of over EUR 1 million) has faded. The volume of corporate lending by pension providers has also decreased.

Finnish non-financial corporations' bond issues have increased rapidly in 2012, and in the largest companies long-term market funding has partially replaced long-term bank funding. Acquisition of short-term funding from the commercial paper market has remained stable.

The financial markets' sensitivity to crises and tightening regulation are, however, starting to be reflected in corporate finance. Considering the level of uncertainty, Finnish non-financial corporations' access to funding has remained relatively good, due, for example, to the stability of the national banking sector. Growth in the credit stock of Finnish non-financial corporations has significantly exceeded that of the euro area corporate sector as a whole. Finnish non-financial corporations' funding situation has also been supported by the interest rates on bank loans, which have been lower than those in other euro area countries (Chart 5). However, in larger corporate loans (over EUR 1 million), the interest rate spread between Finnish and euro area non-financial corporations as a whole is small.

The majority of corporate loans are variable-rate, and the margins on corporate loans granted by banks have been small considering the circum-

⁶ Statistics Finland (2012) Official Statistics of Finland: Bankruptcies.

⁷ Confederation of Finnish Industries (November 2012), Business outlook indicator.

⁸ Lauri Kajanoja (2012) Suomen vaihtotaseen heikkeneminen 2012 ('The weakening of Finland's current account in 2012'; in Finnish only). BoF Online 12/2012.

stances. The low level of interest rates has, however, weakened the development of banks' net interest income, which has pushed up the margins on new corporate credit. The other terms and conditions on corporate loans, such as collateral requirements, are also tightening, and there are signs of problems in access to finance. The results of the ECB survey on the financing of small and medium-sized enterprises (SMEs) show a further deterioration in euro area companies' financing conditions. However, SMEs considered sluggish demand as an even bigger concern than access to finance.

The results for Finland show that the availability of bank credit for SMEs has deteriorated considerably within the past six months.⁹ In Finland, the diversification of corporate finance, from bank financing to financing on the market, is hampered by the fact that the domestic market for debt securities is not yet sufficiently developed.¹⁰

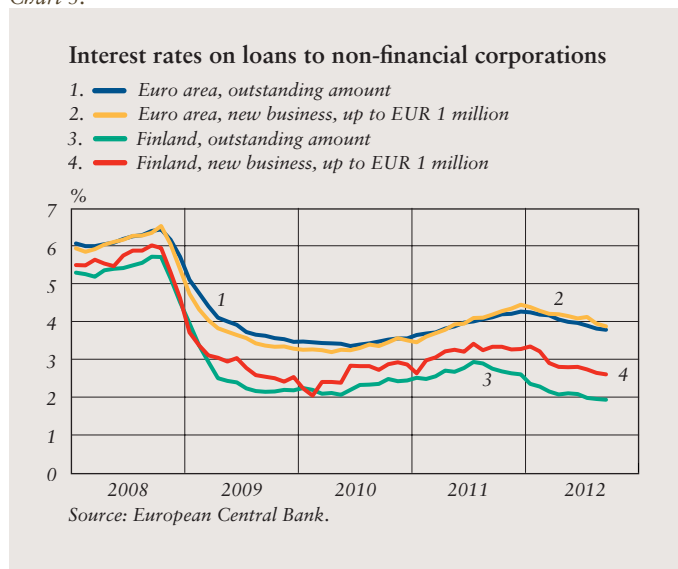
Finnish households' financial situation was discussed extensively in the Bank of Finland Bulletin published in spring 2012,¹¹ which focused on financial stability, and there have been no major changes in households' financial situation since then. The trend in household incomes has remained fairly positive, but growth in disposable income will slow as taxes are tightened and the outlook for employment weakens.

⁹ ECB (November 2012), Survey on the access to finance of small and medium-sized enterprises in the euro area. April to September 2012.

¹⁰ See the article 'Financial stability' in Bank of Finland Bulletin 5/2011: Economic outlook, p. 61–74.

¹¹ Bank of Finland Bulletin 2/2012: Financial stability.

Chart 5.



Household indebtedness has been growing rapidly for a prolonged period. Household debt relative to disposable income has in the past ten years nearly doubled, to 118% of disposable income.¹² Growth in the stock of household loans has dampened, but, for example, the stock of housing loans has grown at an annual rate of nearly 6%.¹³ Measures are to be introduced for the housing market with the aim of dampening housing prices and growth in housing loans. Reduction of the tax-deductibility of interest on housing loans, an increase in the rate of asset transfer tax and the broadening of the tax base should dampen growth in household indebtedness and also improve households' crisis awareness. In addition, it has been proposed that the authorities be granted the right to

¹² Statistics Finland, Official Statistics of Finland: Financial accounts, II/2012.

¹³ Bank of Finland, Financial Markets – Statistical Review (12/2012).

impose macroprudential tools, such as a maximum loan-to-value (LTV) ratio.¹⁴

There are clear signs of a weakening in households' financial situation, and, for example, the number of payment defaults is rising rapidly. The majority of these defaults are, however, related to high-interest-rate and short-term consumer credit granted by small-loan companies that are not covered by financial supervision, and there has been virtually no increase in banks' loan losses on household loans.

Public sector debt growing

The slowing pace of economic growth has weakened Finland's general government financial balance, and the fiscal deficit has grown. The central government fiscal deficit, in particular, has increased, and central government debt was at the end of October over EUR 82 billion, 45% of GDP.

¹⁴ Macroprudential Regulation and Supervision of the Financial Market. Ministry of Finance 32/2012.

Local government finances have been slightly in deficit, but as the economy slows the local government balance is deteriorating. In June 2012, the local government loan stock was EUR 10.5 billion, approximately 5% of GDP, and the local government deficit was some 0.4% of GDP.¹⁵ The local government financial balance is expected to deteriorate further, and local government debt will continue to grow.

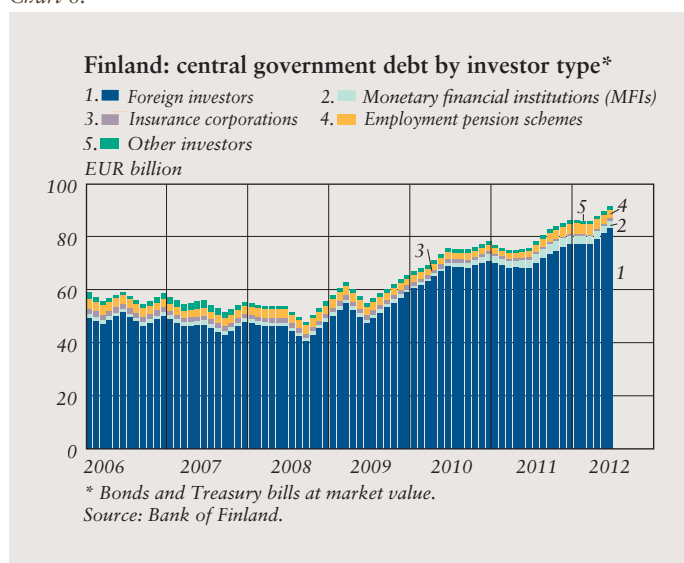
Finland's public sector acquires the bulk of its debt financing from the international financial markets. Due to their good credit rating, the long-term funding costs of Finnish central government and Municipality Finance (a financial institution providing finance to local government) have been small and demand for their debt securities has been strong. Of the stock of public sector debt, nearly 90% is held by foreign investors (Chart 6). The risk relating to this is if foreign investors were to start withdrawing from Finland, which would hamper the financing of the general government deficit. Private sector foreign debt financing would also run into difficulties.

Banking union – a new framework to safeguard financial stability

In June 2012, the European Council decided that one of the measures to combat the economic crisis is to deepen Economic and Monetary Union. As part of this objective, the European Commission presented a communication entitled 'Roadmap towards a Banking Union' in September 2012. The

¹⁵ Statistics Finland, Quarterly statistics on the finances of municipalities 2012, II/2012.

Chart 6.



project is aimed at shifting three areas of relevance to the stability of the financial markets from national to EU level: banking supervision, bank crisis management – ie the bank recovery and resolution framework – and deposit insurance schemes. The creation of banking union can be considered as one of the most significant integration initiatives in Europe since the establishment of the EU and the adoption of the single currency.

Why is banking union necessary?

The objectives set for banking union are ambitious. It should be able to weaken the fateful connection between Member States and banks. Sovereign debt problems are reflected in banking business and, similarly, the problems of banks in financial distress may easily become a burden on government. This interconnectedness is so strong that it could undermine the entire foundations of Economic and Monetary Union if serious problems were to emerge in either sector.

Banks have been important providers of finance for government. Consequently, sovereign payment difficulties are reflected directly in bank profitability and may, in a worst-case scenario, even drive a sound bank into liquidation and bankruptcy. On the other hand, it has been almost impossible in practice to let systemically important banks go bankrupt, as national bankruptcy legislation is built for the purpose of unravelling problems in normal business activity and is poorly suited to resolving banking-sector problems.

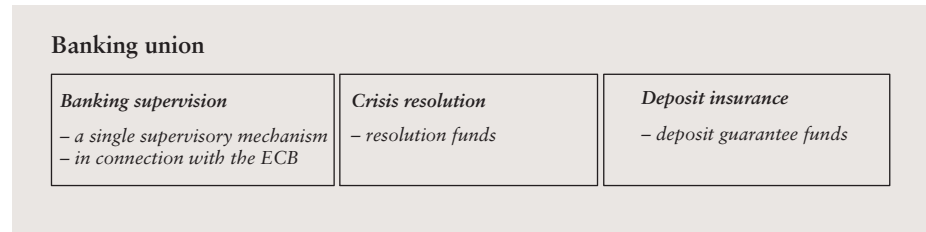
Banking union is also expected to restore confidence in the functioning of the financial system and restrain one country's banking or debt problems from spilling over to other Member States. A lack of confidence is currently one of the biggest obstacles to the normal functioning of the financial markets.

The aim of banking union is to reduce the social costs of banking crises. Allowing a large bank to go bankrupt according to current legislation on liquidation and bankruptcy can easily cause disruptions on the financial markets, and a bank's orderly winding-down is almost impossible. Thus, the use of bank support has often been the quickest way of unravelling problem situations. In recent years, EU countries have provided more than EUR 4,500 billion in various forms of support to the banking sector.¹⁶ However, the use of bank support cannot be deemed a good solution in any situation. The use of bank support also involves a dilemma regarding the accountability of creditors, because, without bankruptcy proceedings, bank creditors cannot be forced to participate in covering the losses incurred; rather, in addition to shareholders, governments and taxpayers will foot the bill. By contrast, in a bankruptcy, bank creditors will lose the bulk of their claims, thereby participating in covering the losses. Rescuing banks from bankruptcy using government funds should not provide creditors with an opportunity to avoid

The aim of banking union is to reduce the costs to society from banking crises.

¹⁶ From October 2008 to October 2011. European Commission communication on banking union, 10 September 2012.

Chart 7.



their responsibility for the losses incurred.

Banking union would enable many such problems related to the supervision and regulation of the financial markets to be addressed that cannot be tackled by national-level systems.

Pillars of banking union

Single Supervisory Mechanism (SSM)

The banking union process has made the greatest strides in the area of preparations for centralising banking supervision. Banking supervision will be built around the European Central Bank (ECB), but in such a way as to keep it separate from the conduct of monetary policy. The original aim of the Commission was to have a single banking supervision mechanism up and running from the beginning of 2013. However, the EU summit in October specified the timetable to the effect that decisions on the legal arrangements will be made by the end of 2012 and the practical preparations during 2013. The aim is to gradually enlarge the sphere of centralised banking supervision, starting from banks dependent on public support and systemically important banks. In practice, the ECB will not itself supervise directly all

banks; practical supervisory tasks will be delegated to national supervisors.

Crisis resolution

In June 2012, the Commission submitted a proposal for a Directive establishing a framework for the recovery and resolution of credit institutions and investment firms (Bank Recovery and Resolution Directive proposal). The Directive would significantly harmonise and revise crisis resolution legislation across Member States. Even so, this Directive will not yet create a new centralised EU-wide crisis resolution mechanism, which is scheduled for inclusion in banking union. The content of the Commission's Directive proposal is, however, such that the Directive could act as a basis for a new centralised resolution mechanism.

The Directive proposal makes the use of crisis resolution tools and powers conditional on the authorities' assessment that a bank is about to fail. A precise criterion for the probability of imminent failure has not yet been defined, but – generally – if a bank is losing an essential part of its equity capital, its liabilities are higher than its assets, it is unable to pay its debts or becomes dependent on public support, the trigger conditions for official action will be satisfied.

The Directive would empower the resolution authorities to implement sizeable structural arrangements in order to resolve problems: these would include sale of business, establishment of a bridge institution, asset separation and launching a bail-in process. The bail-in tool would give the resolution authorities the power to write down the value of claims of unsecured creditors and to convert debt claims to equity. The tool could be used, for example, to recapitalise a bank and in connection with the establishment of a bridge bank. In addition to what is proposed in the draft Directive, resolution would be supported by a requirement that financial institutions should raise a certain proportion of their funding in the form of specific bail-in instruments, which banks would not be allowed to hold, in order to reduce contagion risks.¹⁷

The Directive would also set up a network of national resolution funds. These would be required to participate in resolution funding. The fund could be used as a bail-in tool to sufficiently strengthen a bank's capital adequacy. The resolution fund of a Member State would be obliged to lend money to the national resolution fund of another Member State if the latter had insufficient funds to finance a resolution. If necessary, national deposit insurance schemes would also participate in resolution funding, up to a maximum amount to be defined separately.

The new resolution mechanism is an important reform, enabling

¹⁷ Final Report by the High-level Expert Group on reforming the structure of the EU banking sector (http://ec.europa.eu/internal_market/bank/docs/high-level_expert_group/report_en.pdf).

resolution of future bank problems with the help of legislation specifically enacted for the purpose. The proposed Bank Recovery and Resolution Directive would give the authorities extensive powers to address bank problems. Going forward, large banks could also be wound down without causing significant disruptions to financial stability or costs to taxpayers. The Directive would also enable bail-ins without the need to drive banks into bankruptcy.

Deposit insurance

The primary objective of deposit insurance schemes is to prevent bank runs. The aim of a Union-level deposit insurance scheme is to increase depositor confidence in the functioning of the system in the event of more extensive crises. National deposit insurance schemes¹⁸ have functioned well in countries that have not faced severe debt problems. By contrast, trust in the sustainability of deposit insurance has faltered in countries (such as Greece and Ireland) where confidence in the government's ability to meet its obligations has weakened. A mere doubt about the proper functioning of a deposit insurance scheme may lead to a bank run, which would further exacerbate the problem situation. The operation of a Union-level deposit insurance scheme would not be dependent on a single Member State's solvency and would thus strengthen confidence in the sustainability of deposit insurance as a whole.

¹⁸ Deposit guarantee funds will compensate for the deposits of private persons and companies (with one deposit bank) up to EUR 100,000 per depositor if the bank is unable to repay the deposits.

The credibility of a deposit insurance scheme as a means of preventing bank runs is ultimately based on an implicit or explicit public guarantee to depositors, as the size of a national deposit guarantee fund based on ex-ante funding typically accounts for a few per cent, at a maximum, of the deposit stock of the banks in the country concerned. Assets accumulated to a country's deposit guarantee fund will only be able to safeguard the deposits of a relatively small bank that has defaulted. The chances of deposit guarantee funds being able to finance deposit insurance by borrowing would also be very limited, especially if an extensive systemic crisis were to occur.

A Union-level deposit guarantee fund would be able to operate in the event of extensive crises and preserve depositor confidence even in difficult economic situations.

A Union-level deposit guarantee fund would also be able to operate in the event of extensive crises and preserve depositor confidence even in difficult economic situations. In order to maintain credibility, this type of fund would need a guarantee from the Member States similar to that national funds currently have.¹⁹

Accordingly, EU deposit insurance built on harmonised national deposit guarantee funds could be a simpler and faster way of creating a deposit insurance scheme that would fulfil the needs of banking union. A decentralised system would also reduce pressures to urgently resolve issues related to joint responsibility and sharing of losses.

¹⁹ According to Honkapohja (2012), http://www.suomenpankki.fi/fi/suomen_pankki/ajankohtaista/puheet/Pages/sh_puhe_120924.aspx, the size of a Union-level deposit guarantee fund would probably be insufficient in systemic crises where many banks fail at the same time. The fund would therefore need common fiscal backing.

Single rule book

A single rule book covering all the parties involved can also be considered an important part of banking union and banking-sector restructuring. A single set of rules and their consistent application would guarantee a level playing field and enable practical implementation of European-level regulation. The EU is finalising new capital adequacy and liquidity rules based on the international recommendations of the Basel Committee on Banking Supervision (Basel III). Within the EU, a fully consistent application of rules normally requires maximum harmonisation, in which case there is no room for national practices different from those of the others. However, a single rule book should not be such as to prevent the use of macroprudential instruments that typically arise from national needs.

The parties involved must be able to agree on sharing the losses from banking crises

One of the most difficult issues to agree on relates to the covering and sharing of losses caused by banking crises. Especially when the losses are so high that they are able to collapse the entire system, the questions regarding the division of responsibilities will assume a central role. Those who can clearly be deemed responsible for bearing the losses incurred include bank shareholders and unsecured creditors and, possibly, deposit guarantee and resolution funds. The allocation of losses to governments and taxpayers

should be avoided under all circumstances, as far as possible. In practice, however, full protection of governments (and taxpayers) against losses from banking crises will not be possible, not even under banking union. Thus, Member States need to agree on the rules of the game that would guarantee the functioning of banking union even in the event of an extensive crisis.

Banking union would foresee much broader involvement of creditors, and the resolution process would enable both cost-effective structural arrangements and orderly bank wind-downs. The more effectively banking union functions, the less a joint sharing of costs will be needed.

Structural reforms also needed

Banking union is an important step towards more stable financial markets, but reforms addressing bank structures are also needed. Without structural reforms, banking union could remain a reform whose operational capacity is limited when a crisis hits. Complex bank structures and large risk concentrations make it difficult to carry out measures targeted at problem banks. In addition, taking high risks is poorly compatible with deposit banking, as governments are ultimately responsible for the costs of deposit insurance. In those areas of banking where a significant part of bank funding comes from insured deposits, limits on risk-taking should be considered.

Reforms related to banking structures have been put forward in at least three significant international initiatives:

- The High-level Expert Group chaired by Governor **Erkki Liikanen** on reforming the structure of the EU banking sector proposes that a bank's high-risk activities should be transferred to a separate subsidiary as soon as they exceed a certain threshold.
- The **Volcker Rule** prevents deposit banks in the United States from engaging in speculative proprietary trading.
- The United Kingdom, in turn, is considering the proposal by a committee led by **Sir John Vickers** to transfer retail banking (incl. household and SME deposits) into a separate subsidiary.

All three proposals seek to protect bank deposits from risks related to other banking operations. This requirement is justified, because it is precisely deposit insurance related to bank deposits that is the most significant factor causing costs on government and taxpayers in the event of extensive problem situations.

Legacy problem to be resolved before banking union

Decision-makers should also be able to resolve the 'legacy problem' in connection with the creation of banking union. Transferring via the banking union the losses caused earlier by problem banks to others to pay jointly cannot be considered an acceptable way of resolving banking-sector problems. Earlier losses must be settled using primarily the assets in the bank's home country deposit guarantee and

resolution funds and, if necessary, the country's taxpayer contributions. Application of joint responsibility under banking union can be justified only after old losses have been covered. Banking union as such will not include a mechanism for resolving legacy problems; rather, it must be possible to settle old losses in another manner, at the latest before the setting up of a Union-level resolution authority and deposit insurance scheme.

Is there also a case for 'infrastructure union'?

Healthy banks are not the only key issue. Also crucial to the stability of the financial markets is the reliable operation of the financial market infrastructure. The oversight of payment and settlement systems is being harmonised with the reviewed oversight principles. The liquidation and bankruptcy regulations covering payment and settlement systems should also be harmonised.

Not only the banks, but also financial market infrastructures, ie payment and securities clearing and settlement systems, including central counterparties, are crucial for the financial markets. The globalisation of financial markets has resulted in the concentration of infrastructure services. Typically, financial market infrastructures are systemically important either in the traditional sense that their failure may lead to the failure of their participants (eg central counterparties) or because they play a critical role in the daily operation of the broader economy (eg retail payment systems). Even if the

system operators are financially sound, the systems themselves can be a potential source of contagion if their risk management is not up-to-date. Infrastructures have performed reliably during the financial market crisis, thereby supporting crisis resolution. The objective of the revised oversight principles for payment and settlement systems,²⁰ and particularly the new regulations on securities market infrastructure, is to strengthen the infrastructures. It is, however, worth considering whether infrastructures should have a supervisory mechanism similar to banking union.

Central banks already cooperate in the oversight of infrastructures. In the area of payment systems, euro area banks have a cooperative oversight arrangement that resembles single supervision. In this arrangement, systemically important systems are assessed in cooperation, against jointly harmonised oversight principles. In the oversight of cross-border payment systems, too, central banks have agreed on the division of responsibilities.

Central banks' cooperative oversight arrangements do not, however, cover securities clearing and settlement systems. A barrier to the single oversight of securities systems are differing interpretations of euro area central banks' competence as defined by EU legislation. Instead of single oversight, euro area central banks assess securities settlement systems from a user perspective, because the systems are used for collateral management in

²⁰ See the CPSS-IOSCO principles, <http://www.bis.org/list/cpss/index.htm>.

Regulations on the liquidation and bankruptcy of infrastructures should be agreed at EU level.

monetary policy operations. Central banks also cooperate in the oversight of central securities depositories and central counterparties, under Memoranda of Understanding (MoU). Institutional supervisors also participate in this cooperation.

The key elements of crisis resolution in banking union are creating a liquidation and bankruptcy legislation designed particularly for banks, banks' credible crisis resolution plans and bail-ins. Liquidation and bankruptcy processes for infrastructures are regulated nationally. The Commission has drawn attention to this matter by publishing a consultation on a recovery and resolution framework for financial market institutions other than banks.²¹ Infrastructure entities normally already have crisis resolution plans, and central banks have assessed them against the applicable oversight standards. Infrastructure entities' risk profile differs from that of banks. For example, they do not necessarily grant credit to their participants or guarantee the settlement of transactions, in which case they do not face credit or liquidity risks. Consequently, operational risk remains the most significant risk for these entities. The realisation of operational risks may, however, have serious implications for the financial markets (eg the securities registers of central securities depositories becoming inaccessible). The question of investor involvement (bail-ins) is not relevant for infrastruc-

ture entities, as they do not cover their funding by issuing debt securities in a manner comparable to banks.

Infrastructures are already strongly integrated in the EU, particularly in the field of payment systems and central counterparties. This trend will probably continue in the other areas of infrastructure, too. A single supervisory framework and harmonised legislation would, at their best, support the position of host countries by creating certainty about regulation and supervision in the infrastructure entities' home country and by ensuring that all competent authorities in the host country have access to information and a sufficient degree of influence. Creating this type of supervisory framework is challenging, but centralised supervision also involves open questions, as has been witnessed during the drafting of banking union. The primary objective should therefore be to introduce at EU level harmonised liquidation and bankruptcy legislation that takes account of the special features of infrastructures.

Keywords: banking sector, banking union, crisis management, infrastructures, financial markets, financial system, securities markets, stability, supervision, oversight

²¹ Consultation on a possible recovery and resolution framework for financial market institutions other than banks: http://ec.europa.eu/internal_market/consultations/2012/nonbanks_en.htm. The deadline for comments was 28 December 2012.

Fiscal sustainability projections for Finland

7 December 2012

Finland has substantial problems with fiscal sustainability. The weak economic situation in the next few years, combined with economic growth that will remain subdued also in the long term and rising expenditure pressures denote a considerable need to strengthen the financial balance of both central and local government. Higher immigration would reduce these needs, but could not be a decisive factor. Faster output growth would ease the situation of the earnings-related pension funds. A rise in the price of public services is a particular threat to the sustainability of the public finances.

Expenditure cuts and tax increases approved in connection with the decision on central government spending limits in spring 2012 decreased the risk of Finland's general government becoming over-indebted. As a result of the deepening of the economic crisis in summer 2012 and the weakening of medium-term growth prospects, the outlook for public finances has deteriorated once again. Future developments are also clouded by the fragility of the tax base: in recent years, growth has been fuelled by rising household debt, the savings ratio has declined substantially and the current account has moved into deficit. Therefore, when analysing the long-term sustainability of public finances, we must take into account that growth cannot be based on a rise in private sector debt. The economy must eventually return to a balanced growth path.

The following sustainability projections are based on the assumption that private sector demand will return to a sustainable path by 2019, after which growth will no longer be based on rising

private sector indebtedness.

A further assumption is that, over the same period, no new decisions will be made that would improve fiscal sustainability. Hence, the calculations illustrate the pressures to strengthen public finances Finland would be faced with if, during the current or the next parliamentary term, no structural reforms increasing labour supply, for example, were to be implemented or no changes made in the public revenue or expenditure frameworks.

Medium-term economic developments

The sustainability calculation is based on the Bank of Finland forecast extending to 2014 and an outlined economic growth scenario running up to 2019. In the early part of the period, export demand will grow at a sluggish pace, and hence economic growth will rest primarily on domestic consumption. The savings ratio in the economy will remain low in the next few years, and the current account will post a substantial deficit. Household indebtedness is expected to peak in the middle of the decade, after which the savings ratio will begin to rise and the current account deficit begin to contract. By 2020 the economy as a whole is assumed to have returned to a sustainable path. At that time the current account will be balanced and the economy will continue to grow at a stable pace until the end of the review horizon in 2060.

Medium-term growth prospects have deteriorated due to the recession that followed the financial crisis, but also on account of a structural change in



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output. The share of manufacturing in total output is on a declining trend, while the share of services is correspondingly increasing. Growing demand for age-related services is pushing up the GDP share of public services. Since the productivity of public services has traditionally grown at a slow pace, if at all, productivity growth at the level of the total economy is slowing down.

Assessments of employment resources, investment and sector-specific output trends indicate that economic growth will already ease substantially in the immediate years ahead. In 2015–2019, growth will remain at 1½%, which means that average growth will not accelerate from that in 2014 (Table 2). Growth will stem solely from the rise in private-sector labour productivity (1.9%). Employment growth will remain muted in the next few years, and the unemployment rate will remain at around 7%. Since the labour input of the economy as a whole will not increase, the rise in public-sector labour input will subtract from private-sector labour resources. Growth in labour productivity will rest mainly on growth in total factor productivity.

Assumptions concerning long-term developments

Long-term supply of labour

The forecast for labour supply builds on a calculation undertaken at the Bank of Finland in spring 2011.¹ The scenario extends to 2040 and is based on the

¹ Kinnunen, H & Mäki-Fränti, P (2011) Long-term supply of labour. Bank of Finland Bulletin 3/2011, p. 49–57.

assumption that cohort-based labour force participation rates will increase over time as older cohorts make way for younger ones. Statistics Finland's new population projection published in autumn 2012 gears the forecast towards a slightly more positive direction. In the new population projection, the assumption concerning net immigration has been revised upwards, resulting in a faster growth in working-age population than estimated previously. Mortality has also been revised up relative to previous population projections, leading to a slight reduction in age-related cost growth.

Based on the new population projection, developments in labour supply will be more positive than previously estimated. According to the calculation based on the population projection published in 2009, the number of persons aged 21–64 would be lowest around 2030, ie about 150,000 persons fewer compared with the initial level. However, the rising cohort-based labour force participation rates would compensate for the declining working-age population, so the labour force would only contract by about 80,000 persons. According to the calculation based on the new population projection, population aged 21–64 would only decrease by about 120,000 persons at most, and labour supply would contract accordingly by about 50,000 persons. In fact, labour supply would actually exceed the current level around 2040 (Chart 1).

Expenditure pressures on public finances

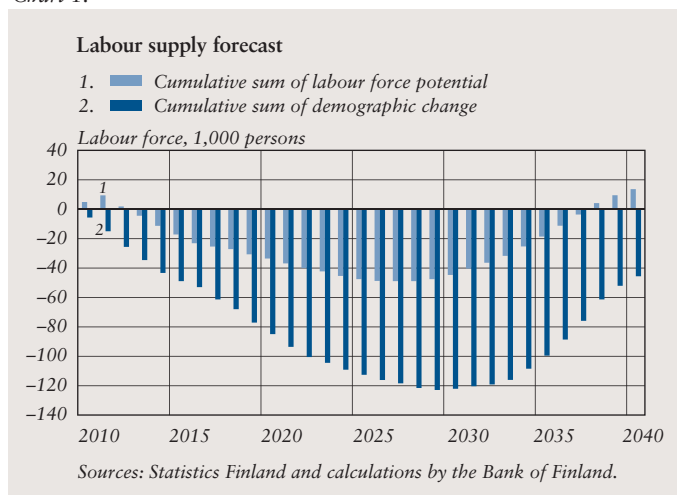
Population ageing will increase public expenditure far into the future. As the share of very old cohorts in the working-age population increases, health care and other long-term care expenditure relative to the funding base will grow, too. Similarly, the GDP share of pension expenditure will increase in step with the growing share of population aged over 60.

Besides demographic developments, expenditure growth will also be affected by other factors that are difficult to predict. At the level of individuals, the need for health care and long-term care services will depend, for example, on changes in the health status of individuals in each age group, the need for informal care and use of purchased services. Technological development in health care brings more efficient treatment but, at the same time, increases the expectation level set for health care and, hence, typically raises costs.²

The calculations presented in this article contain the assumption that the volume per person of individual public service expenditure, such as health care, education and social expenditure, grows in step with productivity, ie GDP per person employed. Hence, the volume of services increases along with rising living standards. It is also assumed that service price growth follows overall price developments.

² For more information on developments in age-related expenditure, see Kinnunen, H – Mäki-Fränki, P – Viertola, H (2013) Julkisen talouden kestävyystarkasteluja ('Fiscal sustainability projections'). BoF Online. Bank of Finland. Forthcoming.

Chart 1.



Based on these assumptions, the GDP share of public service expenditure is only affected by changes in age structure or employment. These assumptions are in line with the practices agreed by the European Commission's Ageing Working Group. The age-related weights for health care, long-term care and education are also selected in accordance with the recommendations of the working group.³

Thus, growth in age-related expenditure is determined by the breakdown of costs by cohorts, the population projection and the assumptions on productivity and price developments. As in sustainability calculations in general, income transfers other than pensions, old age-related income transfers and unemployment benefits are expected to grow at the same pace as GDP. Hence, GDP growth originating from higher employment

³ On the working group's methodology, see European Commission (2012) The 2012 Ageing Report: Economic and budgetary projections for the EU27 Member States (2010–2060). Directorate-General for Economic and Financial Affairs. Economic Policy Committee. Ageing Working Group.

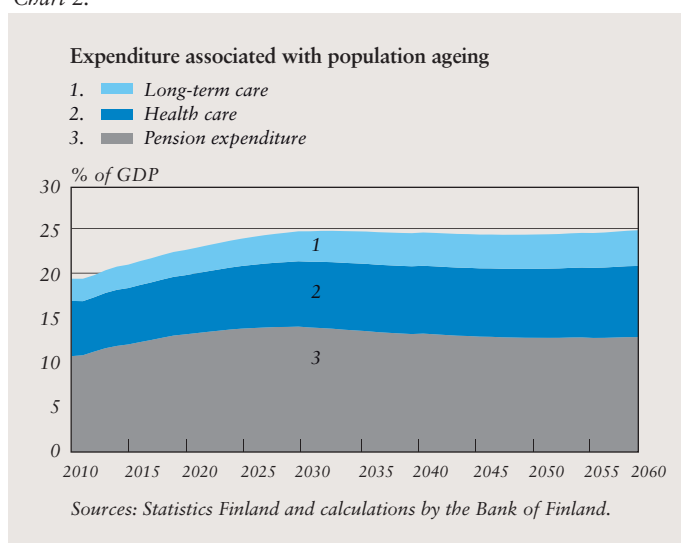
will not reduce the GDP share of income transfers. The rationale behind this assumption is not very good, but the intention is that this analysis would not diverge from generally agreed practices.

Estimating future developments in pension expenditure is more straightforward than estimating other age-related cost items. Trends in pension expenditure are linked to pension entitlements, which are, at the macro level, affected by earnings developments and the replacement rate. In the following projections, growth in pension expenditure was estimated on the basis of calculations undertaken by the Finnish Centre for Pensions on long-term developments in the number of pension recipients and the average replacement rate.⁴

All in all, depending on the benchmark period, age-related expenditure will grow in the calcu-

⁴ See Risku, I – Elo, K. – Klaavo, T – Lahti, S – Sihvonen, H – Vaittinen, R (2012) Statutory pensions in Finland: long-term projections 2011. Finnish Centre for Pensions. Reports 02/2012.

Chart 2.



lations by 2½–5 percentage points relative to GDP (Chart 2 and Table 1). If the benchmark is 2010, for which the most recent statistical data is available, pension expenditure, in particular, will rise substantially. The retirement of baby-boomers will increase pension expenditure in the latter part of the 2010s, so that the GDP share of pension expenditure will be even higher in 2019 than in 2060. Nevertheless, pension expenditure will grow substantially until the turn of the 2030s (Table 1).

Assumptions concerning economic developments

Scenarios regarding age-related expenditure developments are the key factor affecting the long-term dynamics of the public finances. Of the assumptions concerning the macro economy, employment developments are the most essential. In the baseline scenario, the path for employment growth is based on the projected path of the labour force participation rate presented above and the unemployment assumption. In the sustainability scenario, the unemployment rate is expected to fall to 6½% in 2020 and to remain permanently at this level (Table 2). Despite the slight rise in the participation rate, labour input grows virtually at a zero rate. Therefore, real GDP growth rests solely on productivity growth. In the medium-term scenario, output growth is assumed to stabilise at the end of the 2010s and to remain thereafter at about 1½%. The inflation rate is 2%, and in the baseline scenario the real interest rate and the real income on pension funds are assumed to be 3½%.

Table 1.

Primary public expenditure and age-related expenditure in the long term										
	2010	2011	2012	2013	2014	2019	2030	2040	2050	2060
Primary public expenditure, % of GDP	54.4	53.4	54.2	55.1	55.0	55.4	57.8	57.5	57.2	57.8
<i>Of which: age-related expenditure</i>										
Health care	6.2	6.0	6.1	6.2	6.3	6.6	7.3	7.6	7.7	8.0
Long-term care	2.5	2.4	2.5	2.5	2.6	2.7	3.3	3.7	3.8	4.0
Pension expenditure	12.5	12.6	13.0	13.4	13.7	14.5	15.5	14.6	14.1	14.3
Education	6.6	6.3	6.3	6.4	6.4	6.3	6.5	6.3	6.3	6.4

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

Table 2.

Assumptions concerning economic developments										
	2010	2011	2012	2013	2014	Average				
						2015–2019	2020s	2030s	2040s	2050s
Economic growth	3.3	2.7	0.3	0.4	1.5	1.6	1.4	1.6	1.5	1.4
Productivity, % change	3.7	1.8	–0.2	1.0	1.4	1.5	1.4	1.4	1.4	1.4
Labour input, % change	–0.4	1.0	0.5	–0.6	0.1	0.1	0.0	0.2	0.1	0.0
<i>Employment rate</i>										
Participation rate	66.1	66.1	66.2	66.0	65.8	64.6	65.0	65.8	66.1	65.4
Unemployment rate	8.4	7.8	7.8	8.4	8.2	6.8	6.5	6.5	6.5	6.5
Inflation (price of GDP)	0.4	3.1	2.8	2.1	1.9	2.3	2.0	2.0	2.0	2.0
Interest rate of debt	2.6	2.6	2.5	2.5	2.4	2.4	5.0	5.5	5.5	5.5

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

The public sector balance sheet was broken down into two parts: earnings-related pension funds and other public sector. The latter comprises central government, local government and social security funds other than the earnings-related pension funds. This breakdown, together with the age-related nature of costs, determines the necessary classification of expenditure and revenue. Therefore, pensions were broken down to earnings-related pensions and other pensions. Of the former, pensions paid by general government are analysed

separately. Besides earnings-related pension contributions, pension expenditure and the return on fund assets, the balance sheet of earnings-related pension funds includes transfers to and from central government.⁵

The fact that earnings-related pension funds have their own balance sheet made it possible to set a growth path for the balance sheet consistent

⁵ Transfers to central government reflect the share transferable from the State Pension Fund for budgetary purposes. The proportion of these transfers in employment expenditure is assumed to remain constant. Transfers from general government reflect, in turn, the central government share in pension contributions mainly to agricultural entrepreneurs.

with the targets set for the pension system. The target was a level of pension funds that remains constant relative to the wage bill, allowing pension contributions to adjust. In sustainability projections, where the total tax ratio is kept unchanged, the change in pension contributions was neutralised in other tax items.

Public sector income was broken down relatively exhaustively in detailed tax categories. Tax base developments were also fairly detailed. For example, employment expenditure and unemployment contributions affected the level of income tax accruals.

Sustainability projections

Debt trajectories

The calculations show that Finland's public finances are not on a sound footing. Both central and local government debt are rising drastically. The primary balance of central and local government will remain negative, with public expenditure rising briskly in an environment of slow economic growth and high real interest rates. On the other hand, towards the end of the review horizon, the surplus on the earnings-related pension funds will begin to increase, as pension expenditure growth moderates due to the contracting number of baby-boomers among pension recipients. If pension contributions remained unchanged, the GDP share of the pension funds would rise to 80% by 2060.

A more accurate picture is gained of the pressures on public sector debt when the general government net debt

is analysed by keeping the pension funds relative to GDP at the level of the base year (2019). This curbs growth in pension contributions towards the end of the review period. With an unchanged total tax ratio, general government debt will begin to grow at a rapid pace. Central and local government debt will already exceed the level of GDP at the beginning of the 2030s (Table 3).

Fiscal consolidation needs

Keeping indebtedness under control requires fiscal consolidation, the scale of which is measured by the sustainability gap and the required increase in the tax ratio. These are alternative perspectives in analysing the need for fiscal consolidation. The sustainability gap indicates the scale of a one-off adjustment required for public finances to return to a sustainable footing. It measures how much, initially, taxation should be permanently increased or public expenditure reduced for indebtedness to remain contained, taking into account expenditure arising from population ageing and public debt in the initial situation. The required tax ratio increase, in turn, denotes the path of the tax ratio, changing over time, with which public debt can be maintained at a desired level.

Measured by the sustainability indicator, the overall fiscal adjustment need will be about 4% of GDP (Table 4). Central and local government are burdened by negative primary balances, forthcoming expenditure increases and the initial high level of debt. As the adjustment of earnings-related pension

The sustainability gap indicates the scale of a one-off adjustment required for the public finances to return to a sustainable footing.

Table 3.

Developments of public debt: pension contributions balance earnings-related pension funds										
% of GDP	2010	2011	2012	2013	2014	2019	2030	2040	2050	2060
Central and local government balance	-5.8	-3.7	-4.0	-3.5	-3.1	-2.3	-7.9	-11.5	-14.7	-19.4
Central and local government primary balance	-4.4	-2.2	-2.6	-2.1	-1.6	-0.9	-2.9	-3.5	-3.1	-3.4
Employee pension funds balance	3.0	2.8	2.7	2.4	2.3	1.6	2.1	2.6	1.8	2.1
Central and local government debt	51.2	52.2	56.6	58.9	60.3	63.0	98.7	155.8	62.7	310.5
Pension funds	77.7	72.0	72.6	73.2	73.1	69.6	67.7	68.5	70.7	69.2

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

Table 4.

Sustainability gap indicators and their components, % of GDP				
		Present value of future interest expenditure	Primary balance in 2019	Present value of future primary balances
S2*	4.2	1.1	-0.9	-2.1
S1*	4.1	1.2	-0.9	-2.0

* For the definitions of the sustainability gap indicators, see European Commission (2012) *The Ageing Report. Economic and budgetary projections for the EU27 Member States*.
Source: Calculations by the Bank of Finland.

contributions will bring the balance sheets of the earnings-related pension funds into balance, the pressure for fiscal adjustment will be reflected in the balance sheets of central and local government and other social security funds. For this reason, in the presented sustainability gap calculation, pension expenditure growth is not reflected in the change in the primary balance, and the primary balance in 2019 illustrates the position of central and local government.

The required tax ratio increase indicates how much central and local government would need to increase taxes so that their combined debt ratio would not exceed 60% of GDP. At the

same time, it is assumed that the earnings-related pension funds adjust contributions so that the funds relative to the wage bill remain roughly at the same level as in 2019.

The need to increase taxes will be strongest in the 2020s when growth in employment expenditure also increases employment contributions. Since the general government debt has reached the benchmark of 60% already in the initial situation, the deteriorating primary balance will directly increase central and general government tax rates as well (Chart 3). Measured by the total tax ratio, taxation would tighten by almost 5 percentage points in the first years of the 2020s. Taxes could

The sustainability gap calculations are subject to uncertainty.

later be eased slightly, but weaker growth in labour input at the end of the period will increase the need to raise taxes again.

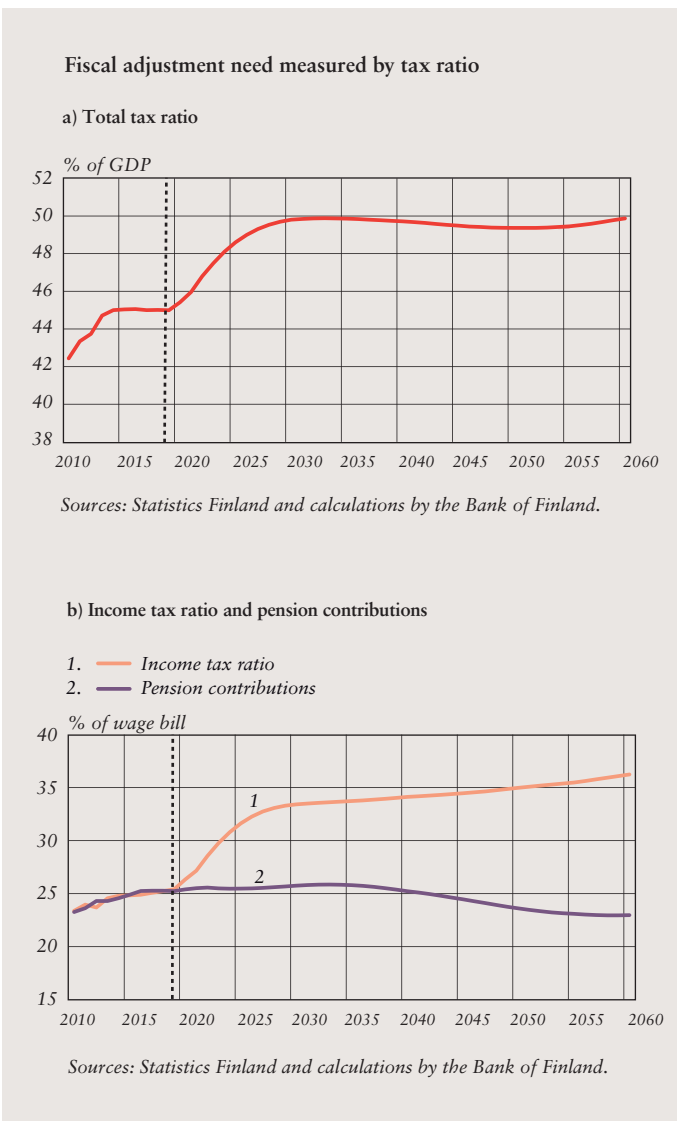
The calculation contains the assumption that tighter central and local government taxation would pertain solely to earnings. Income taxes would have to be raised by about 8% in the next decade. At the same time, earnings-related pension contributions

would have to be increased by just under 1 percentage point, and could even be reduced slightly after the end of the 2030s (Chart 4).⁶

The picture of fiscal adjustment needs provided by the sustainability calculations is conditional on a number of choices. The assumption of the initial level of the central and local government structural deficit is fundamental. In the projections presented in this article, the base year is relatively far ahead (2019), so the uncertainty related to the initial situation is very high. However, a sufficiently long adjustment time is needed, since sustainability calculations require that the economy is close to equilibrium at the starting point. At present, the Finnish economy is undergoing significant structural changes, and the economic crisis has also eroded the balance of the economy in other ways than through the public finances. This pertains, in particular, to household indebtedness, unemployment and the current account deficit.

Developments in public service costs are another essential source of uncertainty. Since producing public services is labour-intensive, the costs of these services tend to increase faster than the general level of prices. Hence, scenarios easily underestimate costs arising from the production or provision of services. Scenarios are also naturally affected by assumptions

Chart 3.



⁶ Growth in the surplus on the pension funds was also observed by Vanne, R & Vaittäinen, R (2012) in their article 'Kestävyysvaje eläkejärjestelmässä ja muussa julkisessa taloudessa' ('Sustainability gap in the pension system and in other public finances'). Talous & Yhteiskunta 2/2012. Labour Institute for Economic Research.

regarding interest rates and the return on pension funds. Furthermore, the productivity assumption, too, is important from the perspective of adjustment needs.

The third central source of uncertainty pertains to labour force dynamics. Population projections have underestimated developments in the size of working-age population throughout the 2000s. This is mainly due to the fact that actual net immigration has increased faster than predicted. Therefore, the immigration assumption has constantly been revised upwards in population projections. For example, the 2001 population projection contained an assumption that immigration would be 5,000 persons per annum, while in the latest 2012 projection it was already assumed to be 17,000 persons per annum.

The following sections illustrate the impact of the various assumptions on adjustment needs.

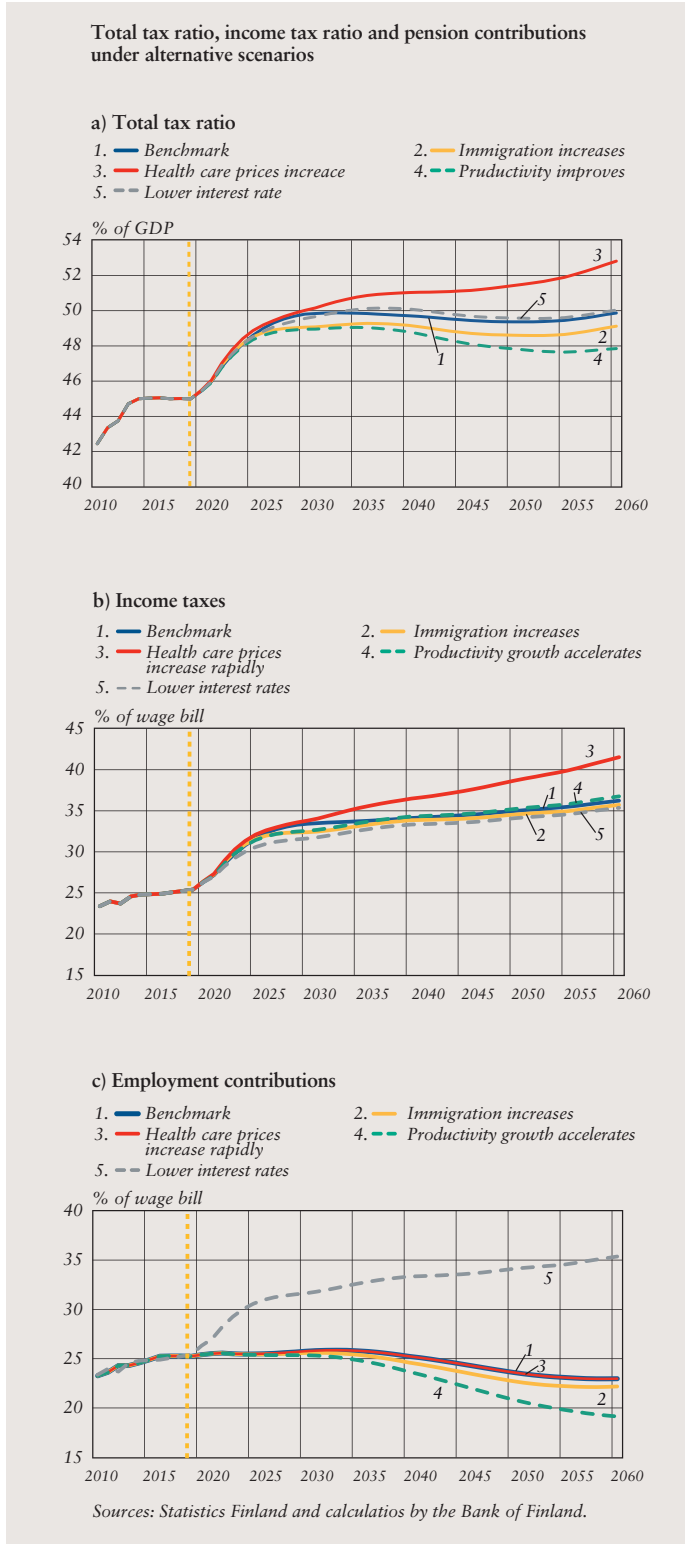
Alternative development paths

Immigration increases

Since actual immigration has systematically been higher than estimated, it can be assumed that this could also hold true in the future, especially when economic developments outside the EU area are very asymmetric and the labour market in Finland is likely to tighten further in response to the growing demand for long-term care services.

In what follows, it is assumed that net immigration would increase by 25,000 persons per annum in

Chart 4.



2021–2060, ie substantially faster than estimated in the latest population projection (17,000 persons).

Furthermore, it is schematically assumed that the distribution of the rise in the number of immigrants by 1-year cohorts would equal the share of immigrants in the population estimated in the current population projection. At the end of the review horizon, immigrants would account for 18% of the total population, compared with 14% in the current population projection.

Immigrants are younger than the population on average,⁷ hence growth in immigration increases the size of the working-age population. At the same time, it also slightly increases the number of children in the initial phase, and later the number of pension recipients and therefore public expenditure. Expenditure growth arising from immigrants was taken into account in the calculation on the basis of age group-specific expenditure breakdowns. Growth in the number of pension recipients stemming from higher immigration was, in turn, assumed to accelerate in proportion to the rise in the share of persons over 64. Hence, the pension replacement rate was assumed to remain unchanged, and the average earnings of immigrants were assumed to equal those of the original population. In addition, it was schematically assumed that the employment and productivity of

immigrants would equal those of the indigenous population.

The assumed growth in immigration has a relatively small impact on fiscal adjustment needs. Nevertheless, the average tax rate would still be about 1 percentage point lower than in the benchmark scenario (Chart 4), and the sustainability gap would be 0.6% smaller. It can be schematically calculated that halving the sustainability gap via immigration would require immigration inflows of about 47,000 persons per annum. This would increase the share of immigrants in the total population to 28% in 2060.

Rise in the prices of public services

Cost developments constitute an essential source of uncertainty for analyses of developments in the prices of public services. The baseline scenario contained an assumption that service prices will rise at the same pace as costs in the economy as a whole. However, statistics from recent years indicate that the price index for basic services has increased considerably faster than the general level of prices. For example, in 2001–2011 the index rose by 22%, while the price of GDP rose by 12%.

The impact of the uncertainty stemming from developments in public service prices is illustrated, to take an example, by assuming that health care prices would be determined purely on the basis of developments in input prices. The average share of labour costs (wages and employer contributions) was estimated at 60%, while the remaining input prices follow consumer price developments. This would substantially

⁷ For more information on age breakdown, see eg Kinnunen, H – Mäki-Fränti, P – Viertola, H (2013) *Julkisen talouden kestävyystarkasteluja* ('Fiscal sustainability projections'). BoF Online. Bank of Finland. Forthcoming.

increase the need for fiscal adjustment. In 2060, the total tax ratio would be over 3 percentage points and the sustainability gap 2 percentage points higher than the benchmark (Chart 4).

Productivity and the interest rate assumption

An improvement in the productivity of the economy has only a slight impact on central and local government balance sheets in the sustainability calculations. This is due to the common assumption used in the projections that higher living standards stemming from faster productivity growth also raise the level of public services. Hence, increased productivity does not reduce the GDP share of central and local government expenditure. Improved productivity does, however, enhance the balance on the earnings-related pension funds. The pension replacement rate declines, as higher earnings levels, which are assumed to follow productivity developments, increase the pension index by a weight of just 20%. The impact of improved productivity is also reflected through the debt discount factor. As increased productivity reduces the difference between real growth and the real interest rate, debt-servicing costs relative to GDP decrease compared with the benchmark.

An alternative scenario estimated the impact of a ½ a percentage point faster productivity increase. The pension replacement rate declines significantly in the longer term. While in the baseline scenario the pension replacement rate was assumed, in line with the assessments of the Finnish

Centre for Pensions, to fall to 48% by 2060, in the alternative scenario the replacement ratio would contract to 41% due to faster productivity growth.

A decline in the replacement rate boosts the surplus on the earnings-related pension funds significantly. This would allow a 4 percentage point reduction in pension contributions (Chart 4). Faster productivity growth would decrease the total tax ratio by 2 percentage points and the sustainability gap by about 1 percentage point.

The interest paid by central and local government on their debt and, on the other hand, the impact of the return on pension fund assets do not have a material impact on the sustainability gap, provided they are not assumed to differ from each other. In fact, a 1 percentage point lower real interest rate would increase the sustainability gap slightly, since the level of pension funds is higher than the level of debt (Chart 4). What could be of material importance is if the rate of return on the pension funds were higher than the interest paid on central government debt. In fact, it can be mechanically calculated that if the return were 1 percentage point higher than the interest, the sustainability gap would contract by 0.7 of a percentage point.⁸

Analysis of projection results

Finland has substantial problems with fiscal sustainability. If fiscal policy

A improvement in productivity has only a slight impact on central and local government balance sheets in the sustainability calculations.

⁸ The expected rate of return on the pension funds can exceed the expected interest rate level on government debt if pension fund assets are invested in instruments that are riskier than government bonds. At present, slightly over half of pension assets have been invested in instruments other than short-and long-term debt securities.

remains unchanged after 2014 and no new structural measures are undertaken, significant consolidation needs would build up in the public finances. If indebtedness were then turned on a downward trend solely by changing the revenue framework, this would mean that the total tax rate would need to be raised in 2021–2025 by an amount corresponding to about 4% of GDP. Tax increases on such a scale would inevitably affect economic growth. These dynamic effects have not been taken into account in the projections presented in this article, meaning the actual need to tighten taxation would be even higher.⁹

Of the factors affecting long-term economic growth, the impact of the assumptions concerning immigration, public service price dynamics and productivity growth were illustrated. From the perspective of the sustainability of the public finances, the most important among these factors are the costs related to the production of public services. Alone, a change in health care prices to correspond to the assumed labour input prices would increase the sustainability gap by over 2 percentage points.

The exogenous increase in labour force via higher-than-expected net immigration would ease the state of the public finances somewhat. However, it would have a significant impact only if growth in immigration inflows were substantial. In addition, the impact is

⁹ For the dynamic effects of tax increases analysed with a general equilibrium model, see Kinnunen, H & Railavo, J (2011) Analysis of the macroeconomic effects of population ageing using a general equilibrium model. Bank of Finland Bulletin 5/2011, p. 85–93.

based on the assumption that the employment and productivity of immigrants is at the same level as those of the indigenous population.

The impact of growth in economic productivity on the pension system yielded an interesting result. A small weight for earnings developments in pension indexation would induce a significant change in the relations between wages and pensions, should productivity growth accelerate. This would build room for reductions in pension contributions, which would considerably reduce the need for fiscal adjustment.

The sustainability projections illustrate the forthcoming expenditure pressures and debt-servicing costs. The sustainability indicator shows what should be done if adjustment were implemented in full and right at the beginning of the review period. The adjustment paths based on the debt ceiling and the funding ratio provide for a time dimension in the projections. The message is clear: if there are no major structural reforms in the current decade, we will very shortly be faced with a situation where taxes must be raised and/or public expenditure cut substantially. The time path of the tax rate also reveals that a new fiscal policy strategy cannot be postponed to the next parliamentary term. This would lead to strong corrections in fiscal policy, which would be particularly detrimental to the course of the economy.

Keywords: sustainability of the public finances, population ageing, indebtedness

Finland's competitiveness and its measurement

10 December 2012

Finland's competitiveness has weakened during the period of Economic and Monetary Union, if competitiveness is understood to mean the presence of conditions ensuring the economy's external balance. The profitability of output in the open sector has declined. Unit labour costs in manufacturing point to a more favourable performance, but differences in price developments across sectors essentially reduce the usefulness of this indicator as a measure of competitiveness.

Finland's current account entering deficit in 2011 has raised the question of the country's competitiveness. During monetary union, average labour costs have grown faster in Finland than in many other countries. A weakening in the international competitiveness of Finnish production could at least in part explain why Finland's trade account and, by extension, current account have fallen into deficit following a period of surpluses lasting nearly 20 years (Chart 1). The significance of external balance and competitiveness is highlighted by the severe economic problems of recent years in those euro area countries whose current account deficits were large prior to the onset of the financial crisis.

Competitiveness means different things in different contexts.¹ Generally, in its broadest sense, it can refer to things that have an impact on the economy's growth prospects and firms' operating environment. This article adopts a narrower perspective, competitiveness being understood to mean the

¹ See eg Boltho (1996).

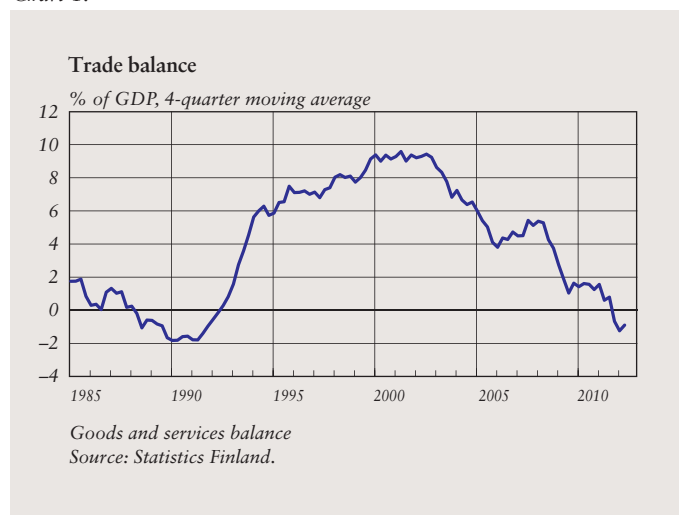
presence of conditions ensuring the economy's external balance. Accordingly, an improvement in competitiveness means the conditions for achieving trade surpluses improve. When competitiveness is defined in this way, there is no reason from the viewpoint of economic prosperity to strive for as high or 'good' a level of competitiveness as possible, but an appropriate level that contributes to stable and balanced economic performance.

This article looks at the development of Finland's competitiveness during monetary union, ie since 1999. The article reviews how conditions for Finland's external balance have evolved in the light of different competitiveness indicators and which indicators are useful in the case of Finland.

Consumer price developments as a competitiveness indicator

In the examination of conditions for the economy's external balance, competi-

Chart 1.



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tiveness is often measured in terms of prices, costs and price ratios.² One example is the average change in consumer prices in Finland compared with other countries.

In measuring a country's competitiveness, its prices and costs are analysed relative to the price and cost developments in other countries. Domestic prices or costs are often compared with the weighted average of trading partners' prices and costs expressed in a common currency, and the weights are the respective shares of the trading partners in the country's foreign trade. One such measure is the real trade-weighted currency index, ie the real effective exchange rate, where consumer prices are used as a deflator (Chart 2).³

² See eg Turner & Van 't dack (1993).

³ The chart portrays two 'plus euro area' competitiveness indicators compiled by the Bank of Finland: real at consumer prices and nominal. For more information on these indicators, see Kajanoja (2000).

Consumer price changes do not point to a current significant deviation of Finland's competitiveness from what it was in 1999. In the past five years, the real currency index based on consumer prices has risen slightly relative to the nominal index. This means that consumer price inflation in Finland has been higher than in its trading partners on average.

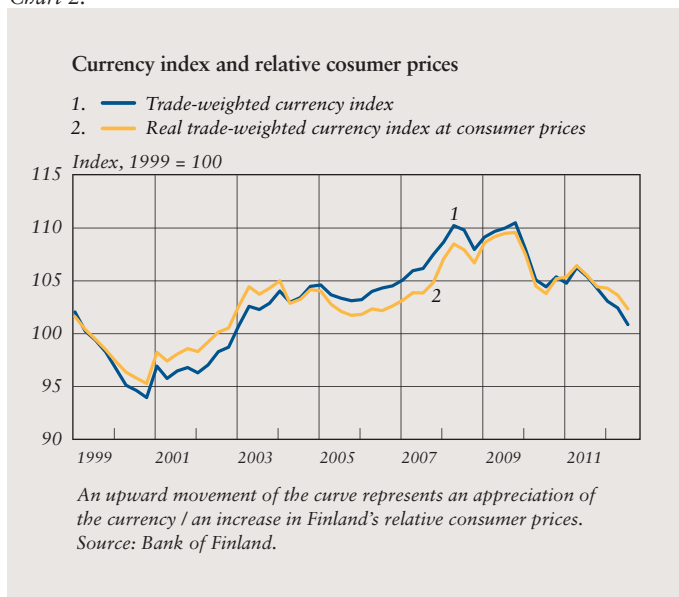
Measurement of competitiveness using consumer prices has the advantage of comprehensive information on these price developments being available from various countries with a short time lag. The weakness of the indicator as a measure of conditions for external balance is that the consumer price index depicts the prices of domestically sold consumer goods, and their movements are only indirectly linked with the costs of the open sector in the economy.

Labour costs and unit labour costs across the whole economy

Labour costs have an impact on competitiveness. Variables related to labour costs are therefore generally used in measuring competitiveness. One possibility is to make a direct comparison of labour cost developments across countries. Accordingly, compensation per employee in Finland is examined relative to corresponding data in Finland's trading partners (Chart 3).⁴ The comparison is again conducted in a common currency and based on country weights in Finland's foreign trade. During monetary union,

⁴ Compensation per employee includes wages, bonuses and employers' social security contributions.

Chart 2.



the level of labour costs in Finland has risen by about 10% relative to the average of the trading partners. The rise has been faster by about the same amount relative to the euro area average.

The level of labour costs rose in Finland more rapidly than in other countries, particularly in 2008 and 2009. This was due to the agreement of two-year collective labour agreements including large negotiated wage increases slightly before the onset of the international recession.

However, labour costs do not directly provide a comprehensive picture of conditions for external balance, as companies' operating environment is in a process of continuous change. For this reason, in gauging competitiveness, labour costs are frequently explored relative to the evolution of labour productivity. Developments in unit labour costs describe how much total employee compensation changes relative to the volume of output. Output volume growth may increase corporate income and hence companies' capacity to pay wages.

Compared with its trading partners, average unit labour costs in Finland have grown by slightly over 10% since 1999 (Chart 3). During the same period, they have increased relative to the euro area average by about 8%. In 2008 and 2009, relative unit labour costs expanded by even more than relative labour costs, because of a substantial decline in labour productivity in Finland. This was related to lower industrial production, due both to the impact of the interna-

tional recession on Finnish exports and to problems specific to the electronics industry. Labour productivity declined, as the number of employed did not fall in the same proportion as the volume of output.

Problems related to measuring manufacturing competitiveness

The above measures of competitiveness are based on combined developments in all the sectors of the economy. A more straightforward description of conditions for external balance is provided by the performance of the economy's open sector, which means export output and output competing with imports. In this connection, manufacturing performance is frequently surveyed. In Finland, manufacturing accounts for approximately 80% of total goods and services exports.

Manufacturing unit labour costs relative to those of other countries are regularly used as a measure of competi-

Chart 3.



Relative unit labour costs in manufacturing provide a competitiveness indicator that is exceptionally difficult to interpret in the case of Finland.

tiveness. It is easy to interpret this indicator when there are no major differences in the industrial structures of the countries among which comparisons are made. As an extreme example, we could examine a situation where trade between all countries were limited to a single product of uniform quality that would have only one price on the international markets. In this case, of course, a country whose unit labour costs are low would be well positioned in international competition, especially when it is further assumed that the prices of intermediate goods needed for output would be the same in all the countries involved. Unit labour costs would then directly illustrate the profitability of output.

In reality, there are considerable differences in industrial structures across countries. Unit labour costs as an indicator of competitiveness are of little use when price developments vary strongly between sectors and the share

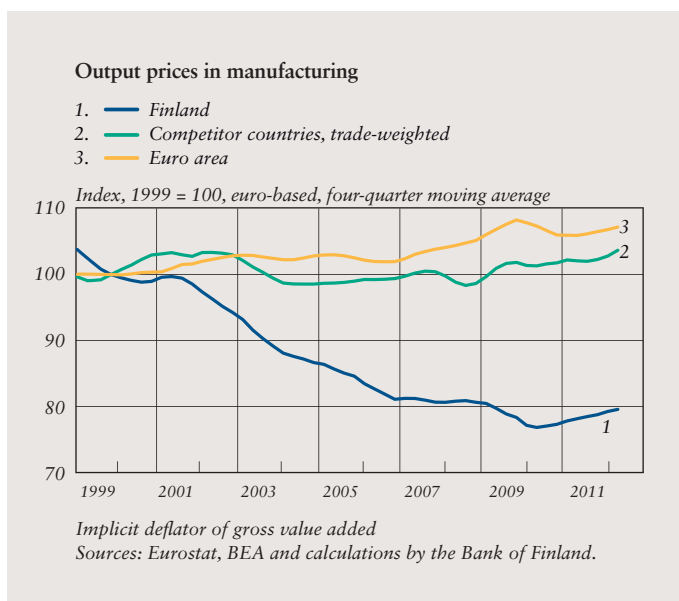
of sectors with divergent price performance is particularly large in the home country. As a consequence, cross-border differences in the evolution of output volume differ sharply from those in the evolution of output value. In that case, relative unit labour costs do not provide a reliable picture of the development of output profitability in the open sector. Output volume growth will not necessarily increase a company's capacity to pay wages if the price obtained for the products falls.

Unit labour cost developments in Finnish manufacturing compared with those of Finland's trading partners provide an indicator that is exceptionally difficult to interpret. It fails to describe in a useful manner how competitiveness has unfolded. This is because two sectors whose price movements have diverged considerably from those of the other sectors have accounted for a particularly large share of Finnish industry. These sectors are electronics and the paper industry. The products of these sectors have displayed exceptionally weak price performance during monetary union.

Nominal value added in Finnish manufacturing has, in fact, declined rapidly relative to real value added. This means that price developments in manufacturing value added have been exceptionally weak in Finland: during monetary union, the decline in prices has been about ¼ relative to the performance of the trading partners and the euro area average (Chart 4).

The most important single reason for divergent price trends in

Chart 4.



manufacturing has been related to the prices of electronics products. Sales price indices for the electronics industry decline because they take changes in product quality into account. The indices are constructed in such a way that quality improvements reduce the prices shown in the statistics. If, for example, the unit price of a product remains unchanged but product quality improves, the price shown in the statistics will be lower. At the same time, quality improvements in products mean that the statistically compiled volume of output increases compared with the value of output. In compiling the statistics, volume changes are computed in such a way that changes in the price index constructed by the statistical authorities are deducted from changes in the output value based on information received from companies.

The effects of the method applied to the compilation of price indices become evident in the examination of electronics output in Finland (Chart 5). It increased in value terms by about 40% from 1999 to 2008. During the same period, the output price index declined to one third of its previous level. This means the volume of output more than quadrupled.

Development of electronics output volume has, therefore, not meant a corresponding change in electronics companies' income flows. Volume growth has mainly been an indication of improvements in product quality, which, in turn, has benefited mostly foreign buyers of these products. Such output

volume growth related to a fall in the price index lowers unit labour costs, but does not improve competitiveness.⁵

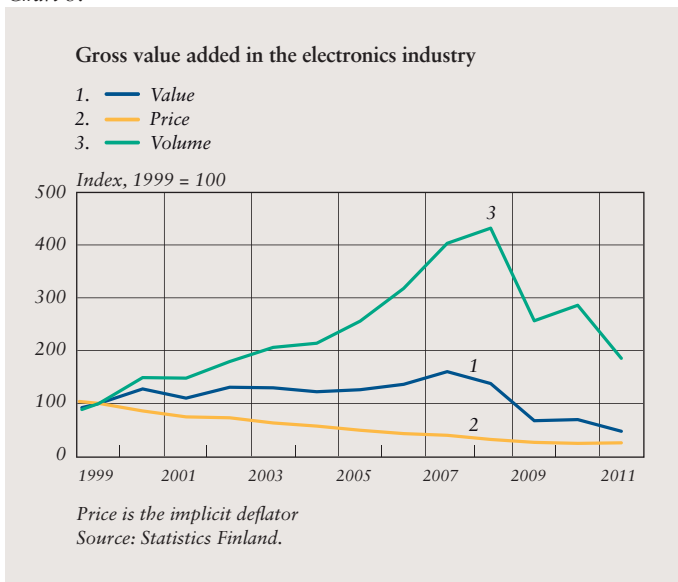
The interpretative problem related to manufacturing unit labour costs also concerns the above-discussed unit labour cost developments in the economy as a whole. The problem is, however, of minor importance in respect of the whole economy relative to a comparison based on manufacturing. This is because the sectors with strongly divergent price trends account for a smaller share of Finland's whole economy than of its manufacturing.⁶

The compilation of statistics is not entirely uniform internationally, and statistical authorities in various countries may treat changes in product quality differently in their price indices. This increasingly deepens the interpretative problem related to unit labour costs when price developments diverge between sectors. Even if the unit prices and qualities of products as well as output values developed in a similar

⁵ In drawing conclusions from the development of other economic statistics, too, it is worthwhile taking the exceptional price developments in Finnish manufacturing into account. In addition to unit labour costs, this price performance has been clearly reflected in the terms of trade and GDP volume, among other factors. Finland's terms of trade have deteriorated unusually strongly in international comparison. This has meant that GDP volume growth has not made a full contribution to income growth in Finland. Real annual average national income grew by well over 0.5 of a percentage point less than GDP volume in 1999–2011. The corresponding difference in euro area countries was, on average, less than 0.2 of a percentage point, due to more favourable terms of trade dynamics.

⁶ Divergent trends in relative prices can be taken into account in an analysis of the whole economy by using a change in output volume adjusted for terms of trade effects, rather than a change in output volume, to generate unit labour costs. This comparison suggests that, compared with the euro area average, unit labour costs in the Finnish economy as a whole have increased during monetary union by some 5 percentage points more than the 8% based on an ordinary unit labour costs comparison.

Chart 5.



fashion in two countries, differences in compiling price indices could lead to different statistical changes in output volume.

Output value tells more

In order to avoid interpretative problems related to unit labour costs, changes in labour costs can be explored relative to changes in output value, instead of changes in output volume, for the purpose of measuring competitiveness.⁷ This enables us to obtain an indicator for the profitability of output in the open sector whose interpretation is not hampered by differences in price developments across sectors. In addition to labour productivity, the indicator also shows the effects of changes in sales and intermediate goods prices on the operating conditions for the open sector.

⁷ For more information on the qualities of such a competitiveness indicator relative to other indicators, see eg Turner – Van ‘t dack (1993), Lipschitz – McDonald (1992) and Pekkarinen – Peura (1984).

Chart 6 portrays the evolution of manufacturing labour costs relative to output volume and value.⁸ Both variables are compared with corresponding developments in Finland’s trading partners. Labour costs relative to output volume, ie unit labour costs, have declined by about 10% during monetary union vis-à-vis the average of the trading partners. However, this has mainly been related to strong growth in output volume and, by extension, to exceptionally weak performance in the prices of products manufactured by Finnish industry. Output value has not evolved equally favourably. Labour costs relative to output value have grown by about 20% during monetary union, compared with Finland’s trading partners. The picture that this provides of competitiveness is thus considerably gloomier than that painted by unit labour costs.

Analysing Finnish manufacturing developments relative to the euro area average generates an outcome broadly similar to that provided by a comparison, based on Finland’s foreign trade weights, with the most important trading partners. During monetary union, unit labour costs in manufacturing have contracted by about 10% relative to the euro area average, while labour costs relative to nominal value added have increased by approximately 20%.

Changes in profitability in manufacturing may be affected by sectoral composition. Profitability could be eroded both by developments in each manufacturing sub-sector and by an

⁸ Output here means gross value added.

increased share of sub-sectors with lower profitability. Changes in sectoral composition have not played an important role in Finland during monetary union. A separate comparison with trading partners in respect of 13 manufacturing sub-sectors reveals that only 1 percentage point of the 19% decline in profitability between 1999 and 2010 is explained by structural changes.

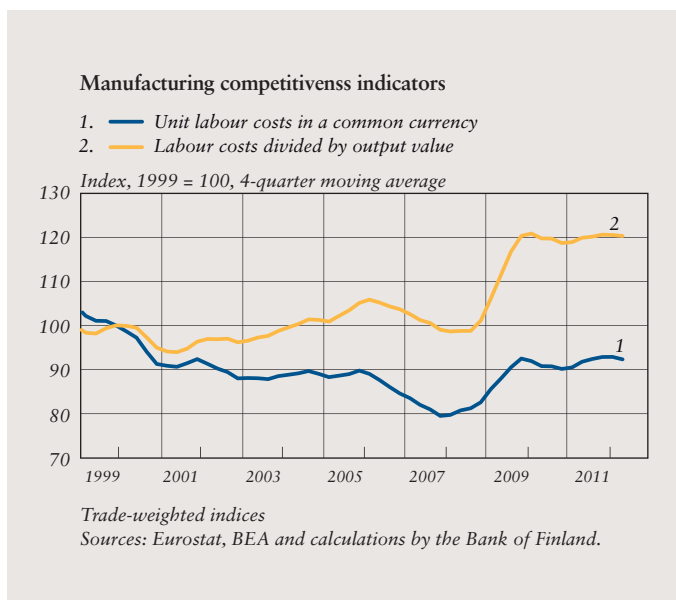
Why has manufacturing profitability declined?

Weaker profitability for manufacturing output in Finland relative to Finland's trading partners is explained by both a faster pace of increase in wages and more subdued developments in output value than in other countries. Output value increased rapidly until the beginning of 2008, but has declined substantially since then. There are many reasons for this unsatisfactory performance. One reason is the impact of muted international economic trends on Finland's export industry in recent years. Problems specific to electronics and the paper industry also fester in the background. Moreover, output value developments and, by extension, profitability have been impaired by growth in costs for intermediate goods used in manufacturing.⁹

Prices of intermediate goods used in manufacturing have risen in recent years, and behind this increase lie in part domestic cost developments. In recent years, the rise in the level of labour costs

⁹ For a more detailed discussion on cost developments in intermediate inputs used in manufacturing, see Mankinen et al (2012).

Chart 6.



in Finland has been more rapid outside than within manufacturing. Compared with its trading partners, the level of labour costs in Finland has risen particularly rapidly precisely in many of those sectors that produce the bulk of domestic intermediate inputs for Finnish manufacturing.¹⁰

The exceptional price performance of Finnish manufacturing has been due, mainly, to the large share of electronics and the paper industry in the manufacturing sector, as noted above (Chart 4). The backgrounds for weak price developments in these two sectors differ. Divergent price trends in electronics are explained by the sector's rapid technological advances, accompanied by the method of compilation of price indices (Chart 5). As regards the paper

¹⁰ These sectors are transport and storage, agriculture and forestry, trade, professional, scientific and technical activities, information and communication, energy supply, and administrative and support services.

industry, weak price developments are, in turn, largely the result of subdued demand for those product categories in which the Finnish paper industry specialises.

Considerations regarding the measurement of Finland's competitiveness

If the contraction observed in recent years in the output of the electronics and paper industries remains protracted, Finnish manufacturing price developments will barely diverge as significantly as earlier from those in Finland's trading partners in the immediate years ahead. This means that taking unit labour costs in manufacturing as an indicator for Finland's competitiveness will become more meaningful. It should be noted, however, that, in measuring competitiveness, the evolution of indicators is usually monitored over the preceding 10–20 years. Therefore, the use of unit labour costs in manufacturing as an indicator for Finland's competitiveness will still be misleading for many years.

Examination of changes in Finland's competitiveness relative both to its trading partners from a broad-based perspective and to the euro area average is useful. Broad-based measurement of competitiveness relative to Finland's trading partners provides comprehensive information on conditions allowing the achievement of external balance. These include fluctuations in the external value of the euro. On the other hand, changes in competitiveness relative to the euro area average mean a development that

movements in the external value of the euro cannot overturn. A substantial weakening of competitiveness inside monetary union would require, if it were to be corrected, such economic adjustment mechanisms that may entail a significant rise in unemployment, among other factors. Recent economic problems in certain euro area countries provide evidence of the difficulty of such adjustment.

Competitiveness indicators and external balance across countries

International comparisons suggest that Finland is not the only country where the use of relative unit labour costs in manufacturing as a competitiveness indicator is misleading. This can be inferred from an analysis of the trade balance and two different competitiveness indicators in 18 countries (Charts 7 and 8).¹¹ Charts 7 and 8 show the evolution of the variables between 1999 and 2011, and each observation depicts developments in one country.

Contrary to what might be expected, a stronger increase in unit labour costs in manufacturing than in other countries has not typically led to deterioration in a country's external balance. The correlation coefficient between the variables in the observations in Chart 7 is 0.00.

By contrast, a change in manufacturing labour costs relative to output value exhibits a strong correlation with the development of the trade balance

¹¹ The charts plot developments in the following countries: the Netherlands, Spain, Ireland, the United Kingdom, Italy, Austria, Greece, France, Sweden, Germany, Slovakia, Slovenia, Finland, Denmark, the Czech Republic, Hungary, Estonia and the United States.

The deterioration in manufacturing profitability has several causes.

(Chart 8). External balances have deteriorated in many of those countries where manufacturing labour costs have increased compared with output value. The correlation coefficient in this case is -0.81 .

Country-specific observations between Charts 7 and 8 differ only in respect of manufacturing price developments in each country. Price differences between sectors thus appear to render unit labour costs in manufacturing misleading as a competitiveness indicator, not only in Finland but also more generally.

The indicators for the whole economy in Chart 3 appear to have an even weaker link with the performance of the economy's external balance than unit labour costs in manufacturing. The correlation of a change in the external balance with labour cost developments is $+0.52$ and with unit labour cost developments $+0.40$ when the same period of time and almost the same group of countries as in Charts 7 and 8 are under review.

The above comparisons mostly use information on traditional industrial countries. However, some countries that joined the European Union in 2004 are also included. Removal of these countries from the comparison does not materially change the outcomes concerning manufacturing. Nevertheless, they do change to some extent the correlations between the indicators for the whole economy and the external balance. When the examination is limited to traditional industrial countries, the correlation coefficient for unit labour costs in the whole economy is -0.05 .

Chart 7.

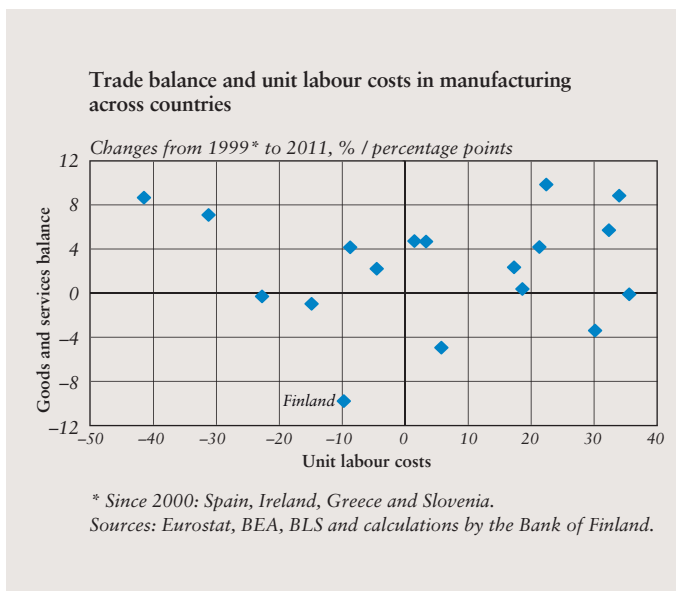
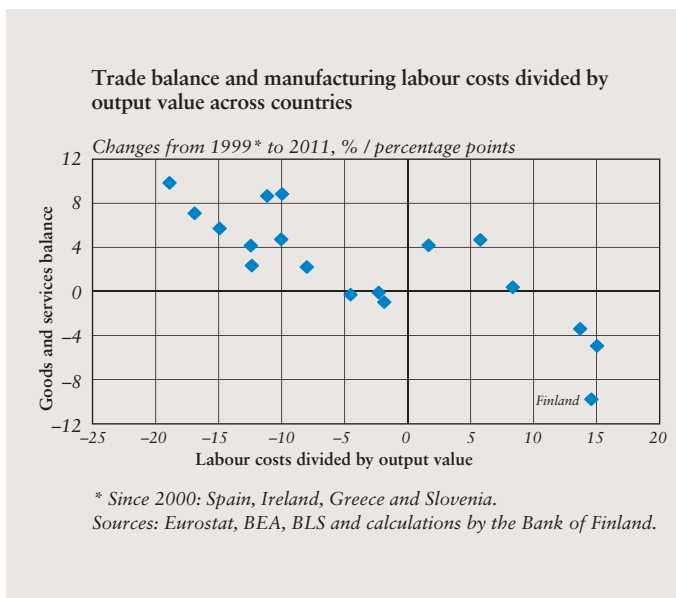


Chart 8.



It should be noted that the correlation coefficients presented here only provide one view of the capacity of different indicators to capture the evolution of international competitiveness. If more variables were included in

the analysis, the conclusions could be different. They could also be different if correlations in respect of simultaneous movements in the variables were not explored, but rather the predictive power of various indicators concerning subsequent developments in the external balance.

In assessing the significance of different indicators, it is also important to note that the viewpoints offered by these indicators for the development of competitiveness differ and that the indicators may be complementary to each other. For example, relative labour costs portray one underlying factor of competitiveness, whereas unit labour costs and the profitability of output include other information on the evolution of the economy's external balance. If, for example, external demand for Finnish industry's products declines in response to changes in consumer preferences, this will be reflected in unit labour costs and profitability unless the number of employed and other cost factors are immediately adapted in the same proportion as demand weakens.

Conclusions

Finland's competitiveness has weakened during monetary union, if competitiveness is understood to mean conditions ensuring the economy's external balance. Competitiveness deteriorated substantially in 2008 and 2009, and has not improved since. This is suggested by key competitiveness indicators.

Development of unit labour costs in manufacturing points to a more

favourable performance, but price differences across sectors essentially reduce the usefulness of this indicator as a measure of competitiveness.

The weakening of Finland's external balance since the turn of the millennium has been a consequence of several different underlying factors.¹² One of these factors is a faster pace of increase in the level of labour costs than the average for Finland's trading partners. In any case, competitiveness is weaker than previously and the profitability of output in the open sector has deteriorated. This suggests that the current conditions for a better external balance and employment growth in the open sector are not good.

Keywords: competitiveness, unit labour costs, current account, terms of trade

¹² Kajanoja (2012).

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Articles and boxes from previous publications

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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

<i>% change on previous year</i>	2010	2011	2012 ^f	2013 ^f	2014 ^f
<i>GDP at market prices</i>	3.3	2.7	0.3	0.4	1.5
<i>Imports of goods and services</i>	6.9	5.7	-1.2	1.0	4.2
<i>Exports of goods and services</i>	7.5	2.6	-1.9	1.3	4.3
<i>Private consumption</i>	3.3	2.5	0.7	-0.1	1.2
<i>Public consumption</i>	-0.3	0.4	-0.3	1.0	0.6
<i>Private fixed investment</i>	3.5	7.7	-0.9	0.4	3.5
<i>Public fixed investment</i>	-7.7	0.6	0.4	0.5	1.3

2. Contributions to growth¹

	2010	2011	2012 ^f	2013 ^f	2014 ^f
<i>GDP, % change</i>	3.3	2.7	0.3	0.4	1.5
<i>Net exports</i>	0.4	-1.1	-0.3	0.1	0.0
<i>Domestic demand excl. inventory change of which</i>	2.1	2.7	0.2	0.3	1.5
– <i>Consumption</i>	1.7	1.4	0.3	-0.1	0.9
– <i>Investment</i>	0.4	1.3	-0.1	0.1	0.6
<i>Inventory change + statistical discrepancy</i>	0.9	1.2	0.4	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

<i>Index, 2000 = 100, and % change on previous year</i>	2010	2011	2012 ^f	2013 ^f	2014 ^f
<i>GDP at market prices</i>	114.0	117.5	120.7	123.3	125.7
<i>Imports of goods and services</i>	108.0	114.8	115.4	117.7	119.9
<i>Exports of goods and services</i>	96.4	100.6	101.9	103.5	105.3
<i>Private consumption</i>	116.8	120.9	124.7	127.4	129.4
<i>Public consumption</i>	142.1	147.1	153.1	157.6	161.7
<i>Private fixed investment</i>	115.1	118.1	123.0	125.5	128.6
<i>Public fixed investment</i>	125.1	129.6	136.1	138.7	141.2
<i>Terms of trade (goods and services)</i>	89.2	87.6	88.3	87.9	87.8
	0.4	3.1	2.8	2.1	1.9
	6.1	6.3	0.5	1.9	1.9
	4.1	4.3	1.3	1.5	1.8
	2.0	3.4	3.2	2.1	1.6
	2.3	3.5	4.1	2.9	2.6
	-2.6	2.6	4.1	2.0	2.5
	-1.0	3.6	5.0	1.9	1.8
	-1.9	-1.9	0.8	-0.4	-0.1

4. Balance of supply and demand, at current prices

<i>EUR million and % change on previous year</i>					
	2010	2011	2012 ^f	2013 ^f	2014 ^f
<i>GDP at market prices</i>	178,796	189,368	195,226	200,257	207,186
	3.8	5.9	3.1	2.6	3.5
<i>Imports of goods and services</i>	69,736	78,342	77,764	80,087	85,031
	13.3	12.3	-0.7	3.0	6.2
<i>Total supply</i>	248,532	267,710	272,990	280,344	292,217
	6.3	7.7	2.0	2.7	4.2
<i>Exports of goods and services</i>	72,005	77,075	76,648	78,860	83,751
	11.9	7.0	-0.6	2.9	6.2
<i>Consumption</i>	143,445	151,151	156,959	161,118	165,873
	4.3	5.4	3.8	2.6	3.0
<i>Private</i>	99,221	105,172	109,232	111,513	114,702
	5.4	6.0	3.9	2.1	2.9
<i>Public</i>	44,224	45,979	47,727	49,605	51,170
	2.0	4.0	3.8	3.9	3.2
<i>Fixed investment</i>	33,818	37,093	38,399	39,317	41,545
	-0.5	9.7	3.5	2.4	5.7
<i>Private</i>	29,361	32,448	33,497	34,297	36,369
	0.8	10.5	3.2	2.4	6.0
<i>Public</i>	4,457	4,645	4,901	5,020	5,176
	-8.5	4.2	5.5	2.4	3.1
<i>Inventory change + statistical discrepancy</i>	-736	2,391	984	1,050	1,048
<i>% of previous year's total demand</i>	0.6	1.3	-0.5	0.0	0.0
<i>Total demand</i>	248,532	267,710	272,990	280,344	292,217
	6.3	7.7	2.0	2.7	4.2
<i>Total domestic demand</i>	176,527	190,635	196,342	201,484	208,466
	4.1	8.0	3.0	2.6	3.5

5. Balance of supply and demand

<i>% of GDP at current prices</i>					
	2010	2011	2012 ^f	2013 ^f	2014 ^f
<i>GDP at market prices</i>	100.0	100.0	100.0	100.0	100.0
<i>Imports of goods and services</i>	39.0	41.4	39.8	40.0	41.0
<i>Exports of goods and services</i>	40.3	40.7	39.3	39.4	40.4
<i>Consumption</i>	80.2	79.8	80.4	80.5	80.1
<i>Private</i>	55.5	55.5	56.0	55.7	55.4
<i>Public</i>	24.7	24.3	24.4	24.8	24.7
<i>Fixed investment</i>	18.9	19.6	19.7	19.6	20.1
<i>Private</i>	16.4	17.1	17.2	17.1	17.6
<i>Public</i>	2.5	2.5	2.5	2.5	2.5
<i>Inventory change + statistical discrepancy</i>	-0.4	1.3	0.5	0.5	0.5
<i>Total demand</i>	139.0	141.4	139.8	140.0	141.0
<i>Total domestic demand</i>	98.7	100.7	100.6	100.6	100.6

6. Prices

<i>Index, 2000 = 100, and % change on previous year</i>					
	2010	2011	2012 ^f	2013 ^f	2014 ^f
<i>Harmonised index of consumer prices, 2005 = 100</i>	110.5	114.2	117.8	120.6	122.5
	1.7	3.3	3.1	2.4	1.6
<i>Consumer price index, 2005 = 100</i>	109.7	113.4	116.7	119.4	121.5
	1.2	3.4	2.9	2.3	1.8
<i>Private consumption deflator</i>	116.8	120.9	124.7	127.4	129.4
	2.0	3.4	3.2	2.1	1.6
<i>Private investment deflator</i>	115.1	118.1	123.0	125.5	128.6
	-2.6	2.6	4.1	2.0	2.5
<i>Exports of goods and services deflator</i>	96.4	100.6	101.9	103.5	105.3
	4.1	4.3	1.3	1.5	1.8
<i>Imports of goods and services deflator</i>	108.0	114.8	115.4	117.7	119.9
	6.1	6.3	0.5	1.9	1.9
<i>Value added deflators</i>					
<i>Value added, gross at basic prices</i>	115.5	118.7	122.1	124.9	127.8
	0.6	2.8	2.9	2.3	2.3
<i>Private sector</i>	107.8	110.5	113.5	115.9	118.4
	-0.1	2.6	2.7	2.1	2.2
<i>Public sector</i>	158.2	164.0	170.1	175.1	179.9
	3.4	3.7	3.7	2.9	2.7

7. Wages and productivity

<i>% change on previous year</i>					
	2010	2011	2012 ^f	2013 ^f	2014 ^f
<i>Whole economy</i>					
<i>Index of wage and salary earnings</i>	2.6	2.7	3.4	2.5	2.5
<i>Compensation per employee</i>	1.8	3.4	4.1	2.7	3.1
<i>Unit labour costs</i>	-1.9	1.7	4.3	1.7	1.7
<i>Labour productivity per employed person</i>	3.7	1.7	-0.1	1.0	1.4

8. Labour market

<i>1,000 persons and % change on previous year</i>					
	2010	2011	2012 ^f	2013 ^f	2014 ^f
<i>Labour force survey (15–74-year-olds)</i>					
<i>Employed persons</i>	2,447	2,474	2,485	2,470	2,473
	-0.4	1.1	0.5	-0.6	0.1
<i>Unemployed persons</i>	224	209	210	226	220
	1.5	-6.9	0.8	7.3	-2.6
<i>Labour force</i>	2,671	2,682	2,695	2,696	2,693
	-0.2	0.4	0.5	0.0	-0.1
<i>Working-age population (15–64-year-olds)</i>	3,555	3,539	3,525	3,507	3,492
	0.2	-0.4	-0.4	-0.5	-0.4
<i>Labour force participation rate, %</i>	66.1	66.1	66.2	66.0	65.8
<i>Unemployment rate, %</i>	8.4	7.8	7.8	8.4	8.2
<i>Employment rate (15–64-year-olds), %</i>	67.8	68.6	69.0	68.9	69.2

9. General government revenue, expenditure, balance and debt

% of GDP					
	2010	2011	2012 ^f	2013 ^f	2014 ^f
General government revenue	53.0	53.9	54.2	55.3	55.6
General government expenditure	55.8	54.8	55.5	56.4	56.4
General government primary expenditure	54.4	53.4	54.1	55.0	55.0
General government interest expenditure	1.4	1.4	1.4	1.3	1.4
General government net lending	-2.8	-0.9	-1.3	-1.0	-0.8
Central government	-5.6	-3.3	-3.2	-2.5	-2.2
Local government	-0.2	-0.4	-0.8	-0.8	-0.9
Social security funds	3.0	2.8	2.7	2.3	2.4
General government primary balance	-1.4	0.5	0.1	0.3	0.6
General government debt	48.6	49.0	53.6	55.9	57.4
Central government debt	42.0	42.1	46.0	47.8	48.7
Tax ratio	42.4	43.3	43.7	44.7	45.0

10. Balance of payments

EUR million					
	2010	2011	2012 ^f	2013 ^f	2014 ^f
Exports of goods and services	72,005	77,075	76,648	78,860	83,751
Imports of goods and services	69,736	78,342	77,764	80,087	85,031
Goods and services account (SNA)	2,269	-1,267	-1,116	-1,227	-1,280
% of GDP	1.3	-0.7	-0.6	-0.6	-0.6
Investment income and other items, net (+ statistical discrepancy)	2,104	-142	295	412	421
Current transfers, net	-1660	-1643	-1699	-1732	-1775
Current account, net	2,713	-3,052	-2,520	-2,546	-2,635
Net lending, % of GDP					
Private sector	4.3	-0.7	0.0	-0.2	-0.5
Public sector	-2.8	-0.9	-1.3	-1.0	-0.8
Current account, % of GDP	1.5	-1.6	-1.3	-1.3	-1.3

11. Interest rates

%					
	2010	2011	2012 ^f	2013 ^f	2014 ^f
3-month Euribor ¹	0.8	1.4	0.6	0.2	0.3
Average interest rate on new loans	2.9	3.2	2.3	2.1	2.4
Average rate of interest on deposits	0.7	1.0	0.8	0.5	0.5
Bank lending rate, average	2.3	2.6	2.3	1.6	1.7
Yield on Finnish 10-year government bonds ¹	3.0	3.0	1.9	1.7	2.2

¹ Technical assumption derived from market expectations.

12. International environment

<i>The Eurosystem staff projections</i>					
	2010	2011	2012 ^f	2013 ^f	2014 ^f
GDP, % change on previous year					
Whole world	5.1	3.7	3.1	3.3	4.0
USA	2.4	1.8	2.2	1.9	2.6
Euro area ¹	1.9	1.5	-0.6 – -0.4	-0.9 – 0.3	0.2 – 2.2
Japan	4.6	-0.7	1.6	0.4	1.3
Imports, % change on previous year					
Whole world	12.8	6.3	3.0	4.1	7.0
USA	12.5	4.8	2.9	2.8	6.5
Euro area ¹	9.6	4.3	-1.1 – 0.3	-1.7 – 3.7	1.7 – 7.7
Japan	11.2	6.3	5.9	2.4	4.5
Index, 2000=100, and % change on previous year					
<i>Import volume in Finnish export markets</i>					
	165.5	176.8	181.6	186.8	198.0
	13.2	6.8	2.7	2.9	6.0
<i>Export prices (excl. oil) of Finland's trading partners, national currencies</i>					
	113.5	116.4	118.3	120.3	122.2
	2.3	2.5	1.7	1.7	1.6
<i>Export prices (excl. oil) of Finland's trading partners, in euro</i>					
	97.3	101.6	107.3	109.8	111.5
	8.0	4.4	5.6	2.3	1.6
<i>Industrial raw materials (excl. energy), HWWA index, in US dollars</i>					
	212.7	243.4	203.5	194.3	202.4
	38.7	14.4	-16.4	-4.5	4.2
<i>Oil price, USD per barrel²</i>					
	79.6	110.9	111.8	105.1	100.5
	28.7	39.3	0.8	-6.0	-4.3
<i>Finland's nominal competitiveness indicator^{2,3}</i>					
	103.6	103.0	99.2	98.6	98.6
	-3.8	-0.5	-3.7	-0.6	0.0
<i>US dollar value of one euro²</i>					
	1.33	1.39	1.28	1.28	1.28
	-5.0	5.0	-8.0	-0.5	0.0

¹ The Eurosystem staff projections for macroeconomic developments in the euro area. The uncertainty related to the estimates is illustrated by presenting them as ranges. The ranges are based on differences between estimates made in previous years and actual developments. The breadth of the ranges is the mean of the absolute values of these differences, multiplied by two.

² Technical assumption derived from market expectations.

³ Narrow plus euro area, 1999 Q1 = 100.

Organisation of the Bank of Finland

1 January 2013

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