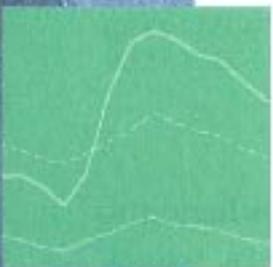


September 4, 2012



**Economic forecast  
2012–2013**



**European debt  
crisis curbing  
growth**

**Additional information**

Chief of Forecasting  
Eero Lehto  
Tel. +358-09-2535 7350

Information officer  
Heikki Taimio  
tel. +358-9-2535 7349



**Economic forecast 2012–2013**

**European debt crisis curbing growth**

*The economic outlook has deteriorated from that of last spring also for Finland. This is reflected in the slowdown of economic growth. The main cause of the weakening of the economic situation is the European debt crisis and the consequent turbulence in the financial markets. The European debt crisis has increased restraint in households and businesses regarding consumption and investment not only in Europe but also elsewhere. Tightened fiscal policy in the crisis countries of Europe has also had more extensive effects and has spurred a recession at least in the crisis countries. Additionally, the world economy could be influenced negatively by the political problems of the U.S. and the inadequate measures of Asian countries to regain economic growth momentum.*

*There has been progress in addressing the difficult and severe euro crisis in the end of the summer. At present it seems the European debt crisis is subsiding in such a way that the prerequisites for economic growth will strengthen in Europe and also, more extensively, in the international economy. In any case the European economy, suffering from weak domestic demand, will rely on outside countries where the economic situation is clearly better.*

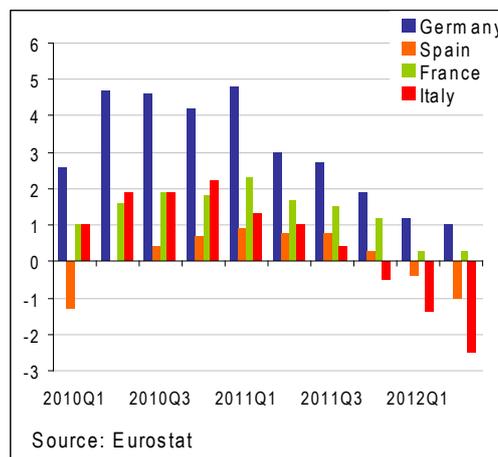
*On the other hand, the possibility of an outright financial crisis and severe recession cannot be ruled out. If the governments of the euro countries and the ECB are unable to make decisions that will relatively quickly support the funding opportunities of the banks and governments of crisis countries, the recession in the euro area will only become deeper in addition to making the economy of the area even more vulnerable. In this case, conditions for making political decisions to boost the economy would become weaker. The uncontrollable breakdown of the monetary union lies at the end of this road, which would lead to a temporary investment recession, also driving Central and Northern Europe into a deep recession.*

*It nevertheless seems that the monetary union will remain intact and the financial market is calming down. This means the outlook for the international economy will begin to brighten at the end of this year at the earliest or the end of next year at the latest. Recovery measures by the governments of developing countries are also influencing this development. In this baseline scenario Finnish GDP would increase by 1.4 per cent this year and 2 per cent next year. As private consumption slows down, the acceleration of economic growth will be driven by the recovery of exports.*

The European debt crisis has cast a shadow on the economic development of the entire EU during the last couple of years. The central governments and banks of the Mediterranean countries and Ireland fell into a crisis as a result of the financial crisis of 2008-2009. The vulnerability of these countries can be partly explained by heavy accumulation of central government debt, rather substantial public sector deficits and/or an excessive real estate boom even before the fall of 2008. The financial crisis has been visible most notably in the rise of the interest rates on the government loans of the crisis countries. The crisis countries have since sought to calm the financial markets by tightening their fiscal policies.

The present relatively tight fiscal policy as well as the turmoil in the financial markets underlying the European debt crisis is stagnating the real economy growth of the euro area as a whole. As the tightness of fiscal policy undermines economic growth particularly in the crisis-affected countries, the general uncertainty brought about by the euro crisis affects the wider world economy as it dampens

**Year-on-year quarterly change in GDP of major euro countries**



capital investment and household consumption. Greece's problems exacerbated the situation about a year ago, and in the summer of 2012 the Spanish government and the banks' funding problems generated cause for concern. The ECB's promise to support (albeit conditionally) the crisis countries through government bond purchases has since reassured the market so that, for example, the long-term yields of Spanish and Italian government bonds have fallen by one percentage point and even more from the highest rates prevailing in July.

The reasonably strong financial positions of Central and Northern European public sectors as well as the U.S. recovery from the collapse of the mortgage market in 2008 have, on the other hand, created conditions for gradual economic growth in these areas, provided that the significant uncertainty in the financial markets eases.

The Labour Institute for Economic Research estimates that it is still far more likely that the euro area can pull out of the slight decline of 2012 and achieve slow growth next year. In this scenario, the ECB's interventions as well as its increasing readiness to support the crisis countries will calm the financial markets and reduce the crisis countries' long-term interest rates well below their peaks seen this year. The realization of this trend will bolster the continuation of moderate economic growth outside Europe. U.S. growth is already accelerating.

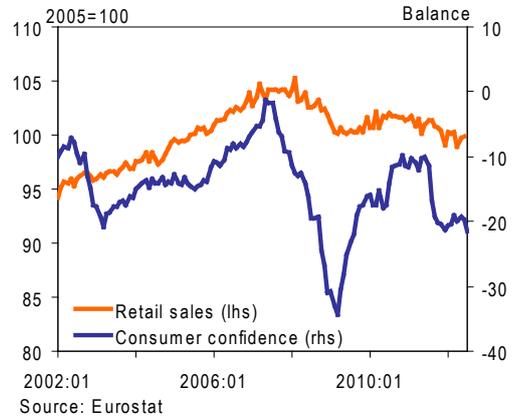
The euro area's GDP growth rate on a quarter-on-quarter basis was zero in the first quarter and -0.2 in the second quarter. It appears that real GDP will still fall in the third quarter. During the fourth quarter the already partly realized calming down of the financial markets will begin to set in so that the euro area's real GDP will stop contracting.

Regional development within the EU and the euro area has been uneven. In the Mediterranean crisis countries, GDP has declined since the end of last year. French GDP has remained stable over the period, and German real GDP has grown with the exception of last year's fourth quarter. The unemployment rate has climbed mainly in the crisis countries.

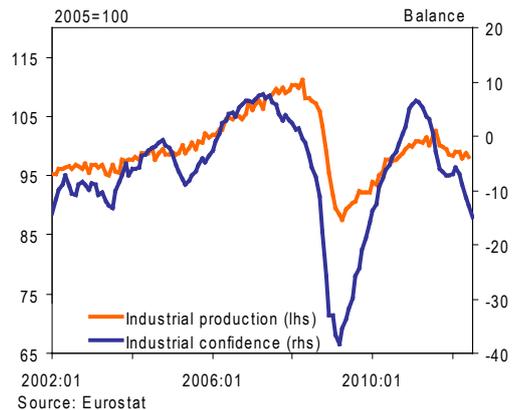
This year the euro area's real GDP will contract by 0.3 per cent. Next year the euro area's GDP will already grow by 1.1 per cent. The growth rates of the whole EU area are 0.2 percentage points higher than these. German GDP will grow by one per cent this year and 1.8 per cent next year. Italian GDP, which is declining this year by two per cent, will already achieve a moderate upswing next year. In Spain, Portugal and Greece, on the other hand, real GDP will decline further next year. The euro area's unemployment rate this year will be more than 11 per cent this year, at which level it will be next year, too. Outside the euro area the UK's GDP will return to growth next year.

Finland's neighbouring areas will continue to grow faster than the rest of Europe. In the Baltic countries GDP will grow this year at a rate of at least 3 per cent. Next year growth will accelerate by about one percentage point. In Sweden, economic growth has remained surprisingly resilient. The strong krona has supported private consumption and its negative impact on exports has at least so far been limited. Sweden's GDP will indeed grow by 1.8 per cent this year and 2.5 per cent next year.

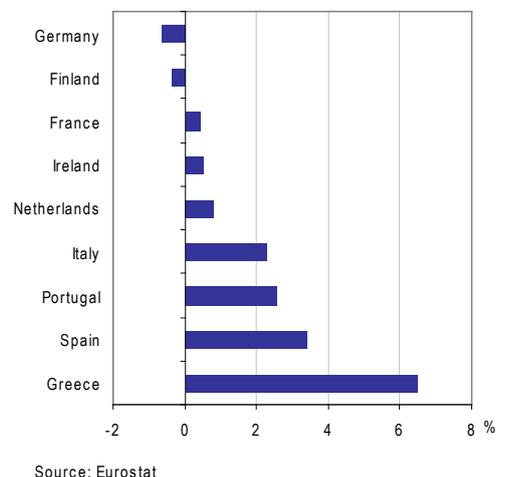
**Consumer confidence and retail sales in euro area 2002:01–2012:07**



**Industrial confidence and industrial production in euro area 2002:01–2012:07**



**Change in unemployment rate in euro countries during last 6 months compared to previous year, %-points**



## European growth driven by foreign trade

Declining domestic demand is the main reason for the contraction of output in EU countries this year. Foreign trade bolsters the region's growth both this year and next year. The dissipation of unrest brought about by the European debt crisis will create conditions for strengthening domestic demand next year, particularly in Central and Northern Europe, where both the financial positions of households and enterprises are such that this is possible.

Of the Southern European countries, Italy has the potential for a strengthening of domestic demand. However, in the Mediterranean countries the decline or halt of total output growth is spurred mainly by foreign trade. Export market growth, a weak euro, as well as a certain degree of "internal devaluation" create conditions for an increase in exports. The net impact of the weakness of the euro having a positive impact on the euro area's GDP naturally affects the entire euro area's economic growth.

## Fiscal policy of European crisis countries is tight

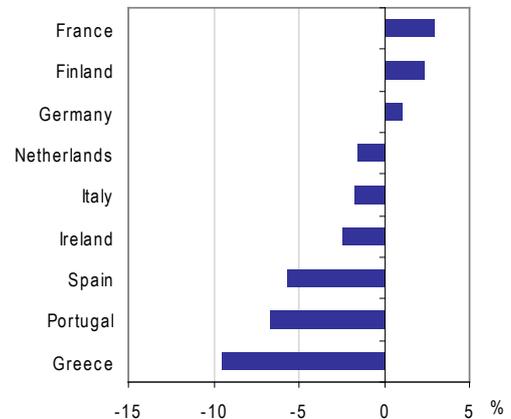
Tight fiscal policies will limit growth in both years. The fact that fiscal policy is clearly tighter in the euro area crisis countries than in other countries in the euro area partly explains the intra-regional differences in growth. Public consumption in the euro area in Greece, Spain and Portugal will be reduced this year and next by several per cent. Italy will tighten public consumption, too, but much less than the aforementioned countries. In contrast, in Germany and France, for instance, fiscal policy is and will be rather neutral next year, with public consumption rising at the rate of the rest of the economy. In both Germany and France, which have avoided any drastic tightening of fiscal policy, the general government's financial position has improved faster than expected. German public finances ran a surplus of 0.6 per cent in the first half of this year in relation to GDP.

The euro area on average is not more indebted or in deficit than, for example, the U.S., U.K. or Japan. Regionally, Spain with its large deficit in conjunction with a nearly 25 per cent unemployment rate largely explains its difficult position in the financial markets. The International Monetary Fund (IMF) has estimated that Spain's structural deficit is also remarkably high. Italy's problem, in turn, is its high public debt. Italy's relatively small fiscal deficit suggests, however, that its high interest rate premium could easily be reined in. The situation in Greece is difficult in spite of the major public finance savings it has implemented. But Greece is in fact relying fully on the support of the European crisis mechanism.

So far, the European crisis countries' public finances have continued to deteriorate. In relation to GDP the deficit is expected to be 2 per cent this year. Spain and Italy have been forced to compromise on the objectives of their public finance cuts. Spain already brought its 2012 deficit target to 6.3 per cent of GDP and 3 per cent in 2013. Italy too has raised the estimate for its public finance deficit. On the other hand, the clear decline of structural deficits and the expected continuing of this trend show, however, that the tighter fiscal policy is balancing public finances in the crisis countries.

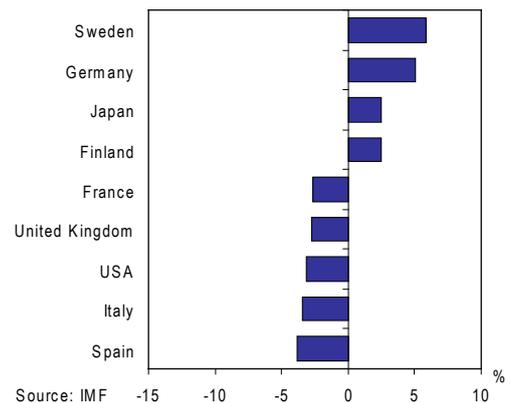
So far, Greece and Spain have done the most to consolidate public finances. This is reflected by the fact that the EU Commission projected Spanish government consumption will contract by 6.9 per cent this year and 3.5 per cent next year. For Greece, the corresponding

## Change in retail trade volume in euro countries during 2011, %



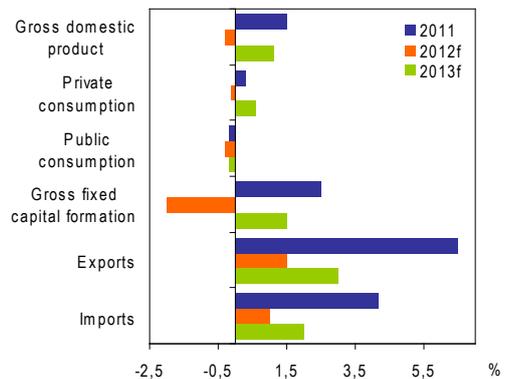
Source: Eurostat

## Current account relative to GDP in 2011



Source: IMF

## Eurozone economic growth 2011-2013



Source: Eurostat, Labour Institute for Economic Research

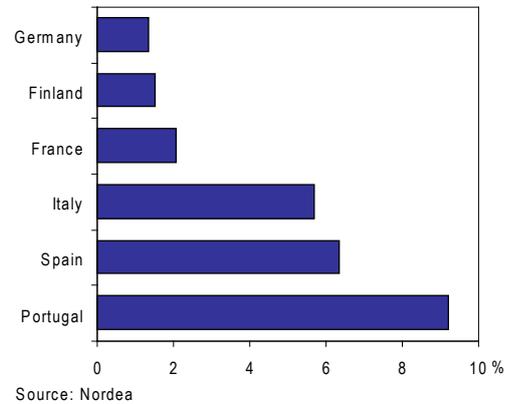
figures were in 11 and 9.5 per cent in this spring's forecast. Portugal has also implemented considerable belt-tightening measures. In Italy, however, the decline is under one per cent. EU average public consumption is declining less than half a percent.

Nominal wages have exhibited a clear downturn in Ireland and Greece. In contrast, Italian and Spanish wage developments have been closer to the EU average.

**Table 1. Public sector structural deficit according to estimates of IMF, as percentage to GNP**

	2009	2010	2011	2012	2013
Euro area	-4,5	-4,6	-3,3	-2,0	-1,4
Germany	-1,3	-3,4	-1,2	-0,6	-0,4
France	-5,1	-5,1	-3,8	-3,1	-2,6
Italy	-3,0	-3,1	-2,7	-0,5	0,7
Spain	-9,7	-7,6	-7,3	-5,0	-3,9
Ireland	-10,6	-9,8	-7,7	-6,0	-5,6
Portugal	-8,8	-9,1	-2,9	-2,1	-0,9
Greece	-18,5	-12,5	-9	-4,5	0,2

**10-year government bond yields on August 27, 2012**

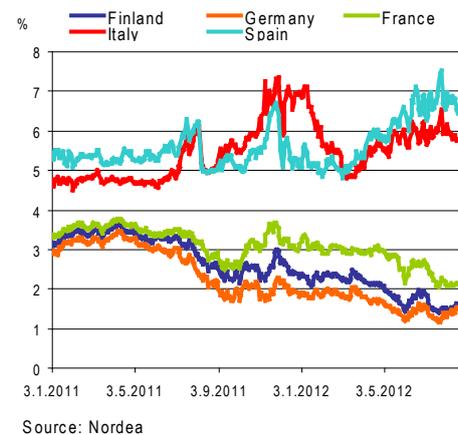


**Is there a solution to the euro crisis?**

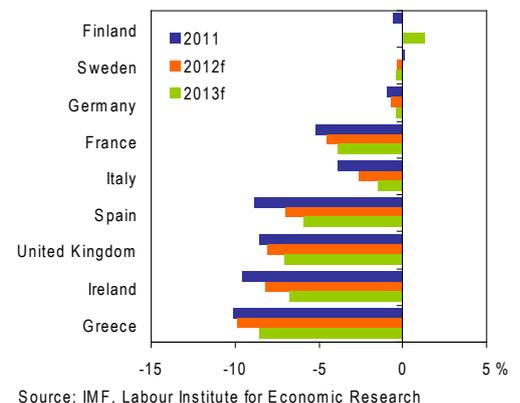
The European Central Bank (ECB) is emerging as a major player in solving the governments' and banks' funding crisis. The ECB has tentatively agreed, through bond purchases, to reduce the interest rate of a crisis country which is asking for support (initially) from the temporary crisis fund and accepts the conditions required for eligibility. This conditionality, the absence of a clear and uncompromising rule for the ECB's purchases, as well as the indicated restriction of these purchases to short-term maturities makes them less effective in lowering the interest rates of the crisis countries. On the other hand, we have seen that the ECB Council's initial decision and its president's prior announcement about the ECB playing an active role have already soothed markets and lowered the long-term rates of Spanish and Italian government bonds. It can be expected that the ECB will seek to reduce the crisis countries' risk premiums, which it sees as being disproportionately high, and that it will be somewhat successful.

During the last couple of years, the euro countries have developed an extraordinary anti-crisis mechanism, which has already required large investments from all countries in the region. In all, the EU's crisis management system's lending capacity will increase to 800 billion euros. The core of this system is made up of the temporary and permanent crisis fund, with a combined lending reserve of 700 billion euros. The European crisis management system has already given support amounting to about 300 billion euros. In addition to Europe's own programmes, the IMF has committed to supporting the euro crisis by 150 billion euros. The crisis fund is a buffer that despite the criticism so far has been the main instrument in combating the euro crisis. Next year, when the operation of a permanent fund is finalized, the potential to direct funding in terms and conditions of own equity to European banks will improve, which also adds to the efficiency and tools of the support.

**Government bond yields 3.1.2011-17.8.2012**



**Public deficit relative to GDP 2011-2013**





Finland's proposal regarding bonds backed by collateral in the form of public assets could be one more way in which the crisis countries could facilitate better access to finance. This instrument would hardly be of so great importance that it could replace the efforts of the ECB and the European crisis management system.

While assessing conflicting developments, it should be noted that the crisis countries' need for support will become disproportionately large if, despite everything, the euro area's real economy continues to decline. Prolongation of the recession and settling only for the crisis countries making structural reforms and fiscal savings will eventually lead to a dead-end. The aim should be actions that have an impact already in the short term. Monetary policy plays a key role in this.

The leaders of the largest euro countries agreed on a 130 billion euro stimulus package at the end of last June to support the region's economic growth. In practice, this decision will not, however, boost investment as much as intended. For example, with respect to the EU's Structural Funds, the question is just the reutilization of unused funds. The attempt to increase the financing granted by the European Investment Bank is problematic given the reluctance of businesses to start new projects under conditions of insufficient demand. In principle, the additional stimulus could only be achieved by the European countries with higher credit ratings if they were to increase their governments' own infrastructure projects.

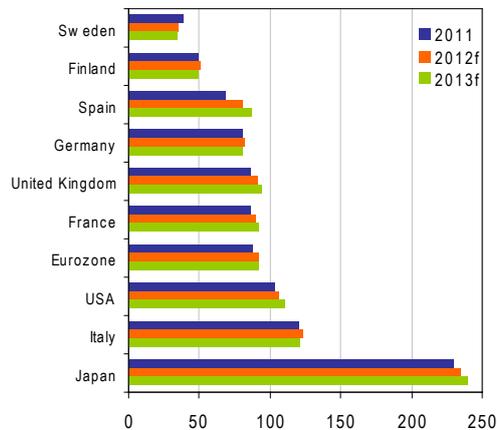
### Tight policy stance in U.S. poses a threat but investments are picking up

GDP grew by 1.8 per cent in the U.S. last year. The upturn was driven by private consumption, which grew by 2.5 per cent, and by the more than 5 per cent increase in private investment. Housing investment fell further. Fiscal policy curbed economic growth given that the volume of public consumption dropped by more than 3 per cent

The U.S. economy is projected to grow 2.0 per cent this year and 2.5 per cent next year. Growth will be supported primarily by private investment and a strong growth in demand for consumer durables. While household debt servicing expenditure relative to income has returned to the level prevailing a couple of decades ago, the conditions for the recovery of the housing market are also beginning to be in place. Housing prices, building permits, construction starts and construction have staged a clear upswing. There has been no substantial improvement, however, in the employment situation.

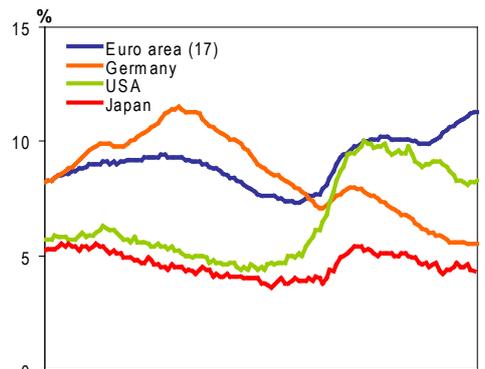
The biggest risk concerning U.S. economic growth is related to fiscal policy. The threat entails about 600 billion dollars (4 per cent of GDP, a so-called fiscal cliff) worth of tightening measures from the beginning of 2013 onwards unless the president and Congress reach agreement before the end of the year on taxation and spending. This impasse might arise because without new decisions, automatic spending cuts agreed upon earlier will go into effect, with unemployment benefit extensions expiring at the same time, as well as some of the cuts in taxation and employer contributions. This forecast assumes, however, that - whatever the outcome of the November elections - a partial solution will be found, making the impact of the tightening measures in 2013 relatively small.

### Public debt relative to GDP 2011-2013



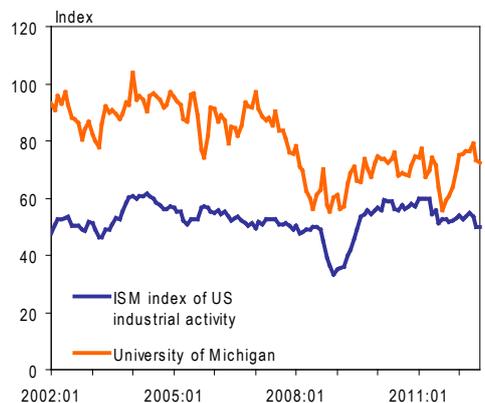
Source: European Commission, Labour Institute for Economic Research

### Unemployment rate in assorted countries 2002:01-2012:07



Source: Eurostat

### US economic indicators 2002:01-2012:07



Source: ISM, University of Michigan



### China's new growth strategy in trouble

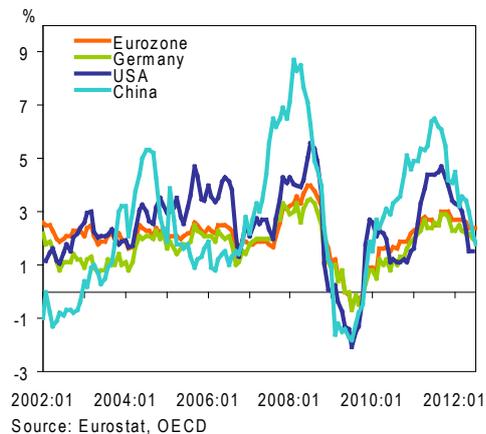
China's economic growth continued to slow down during the first half of this year, remaining at 7.8 per cent, only slightly above the official growth target of 7.5 per cent. The most recent figures suggest an even more clear-cut downshift than the GDP figures from the beginning of the year. Exports have incurred problems, but growth of investment nevertheless continued to be strong. Services and construction prospects look good, and the retail slowdown has not been very substantial either, even though consumer confidence has weakened considerably during the summer.

China's economic policy is expected to react strongly to the slow-down. Surely it will mainly focus on measures promoting investment. It will be difficult to find strong domestic remedies for the drop in exports. China's stimulus will be partly based on monetary policy, i.e. interest rate reductions and easing of bank reserve requirements. During the current quarter, China's growth is likely to slow down somewhat, but the rest of the stimulus measures will produce a 7.7 per cent growth in the current year. Next year, the situation is expected to improve so that the country will achieve 8.5 per cent growth..

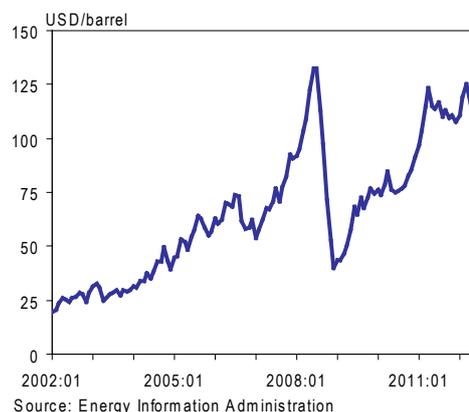
### Japan's reconstruction is under way but exports are flat

The reconstruction after the March 2011 earthquake, tsunami and nuclear accident has begun to show more and more clearly in the Japanese economy: private and public investment and imports have reached a much more rapid rate of growth than before. Real GDP also grew by 2.8 per cent in the first quarter, but growth has since slowed down considerably as a result of difficulties in exports. The Japanese Parliament's recent decision to double the value-added tax rate to 10 per cent by October 2015 will accelerate inflation and move private consumption forward to some extent in the coming years. Supplementary budgets and special monetary policy measures (bond purchases) will maintain domestic demand, but how its exports to China and Europe recover in the near future is of great significance to the country's growth. Japan's GDP is expected to grow this year by 2.0 per cent and 2.3 per cent next year.

### Inflation in assorted countries 2002:01–2012:07



### World market price of crude oil (Brent) 2002:01–2012:07



**Table 2. International economy**

	Share of the world GDP	GDP growth(%)		
		2011	2012e	2013e
United States	19,1	1,7	2,0	2,5
Eur-17	14,2	1,5	-0,3	1,1
Germany	3,9	3,0	1,0	1,8
France	2,8	1,7	0,2	1,3
Italy	2,3	0,4	-2,0	0,4
EU27	20,1	1,5	-0,1	1,3
Sweden	0,5	3,9	1,8	2,5
United Kingdom	2,9	0,8	-0,3	1,0
China	14,3	9,1	7,7	8,5
India	5,7	6,9	5,5	7,0
Japan	5,6	-0,7	2,0	2,3
Russia	3,0	4,3	3,8	4,0
Brazil	2,9	2,7	2,5	4,0

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

Shares of world GDP are based on IMF figures adjusted for purchasing power. The world's GDP in 2011 was 78,897 billion dollars or 56,679 billion euros, of which Finland's share was 0.248%.

## Russia's growth continues to be steady

Russia became a WTO member this summer, which means gradually livelier foreign trade as well as foreign investment. The country's economic growth in the first half of this year was 4.5 per cent as we predicted in the spring but it is slowing down. Industrial production slowed down somewhat, but investments picked up and the retail trade continued to grow by over 7 per cent. The unemployment rate fell to 5.4 per cent, i.e. almost one percentage point lower than a year ago, which together with easing of monetary policy and increasing wages will support domestic demand. Inflation and the price of oil do not seem to constitute threats to the Russian economy, which will continue to grow in the near future at a rate of about four per cent.

## India and Brazil need stimulus

Indian economic growth has also slowed down. In the second quarter of this year, however, GDP growth picked up a little rising 5.5 per cent year-on-year. The devaluation of the Indian rupee will support exports so that economic growth will accelerate this year from 5.5 per cent to 7.0 per cent next year. Brazilian growth was only 0.8 per cent in the first quarter of this year. Brazil suffers at least temporarily from a slowdown in the world trade of raw materials. The country's central bank has cut interest rates significantly and let the currency depreciate by more than 20 per cent from last year's level. The effects of improved competitiveness will become evident in Brazil's exports in the near future. The 53 billion euro stimulus package approved recently to build roads and railways in the coming years will also help.

## Price of food rising, interest rates falling

The fears that emerged early in the year regarding the effects of the sanctions implemented against Iran in the oil market were prevented by further increases in OPEC countries' supply. Oil prices have already risen, however, from the low level of the early summer. In the future, the price of oil is not expected to see major changes so both this year and next year the average oil price will be close to last year's average price, i.e. 111 dollars per barrel.

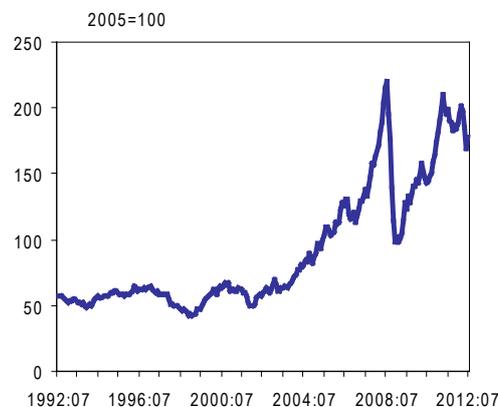
Drought and consequent meagre harvests in a number of the high production areas supplying the world with food and feed grains have increased food prices on world markets. This is generating a boost to inflation, reinforced by the fact that the United States is in part using its dwindling harvest for bio fuel and not food. Food commodity prices will continue to rise for some time and level off next year if no more disturbances appear. Non-oil commodity prices are expected to increase only slightly.

The 12-month average increase of euro area consumer prices in July was 2.7 percent, the same as that for last year as a whole. Core inflation has long remained slightly below two per cent, but tax hikes and the rise in energy prices in recent months have still sustained the 2.4 per cent rate of increase of the harmonized consumer price index. However, the rise of producer prices and labour costs is slowing down so that inflation in the euro area will be 2.5 per cent for this year as a whole. Market expectations regarding inflation next year have settled at just under two per cent.

The European Central Bank (ECB) is expected to cut its repo rate from the current 0.75 per cent by 0.25 percentage points already in

## Raw materials world market price index

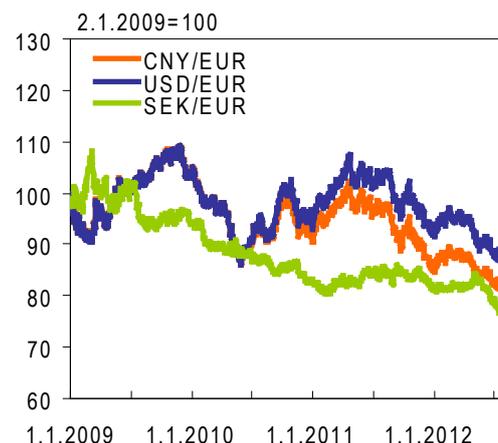
1992:07-2012:07



Source: International Monetary Fund

## Exchange rates

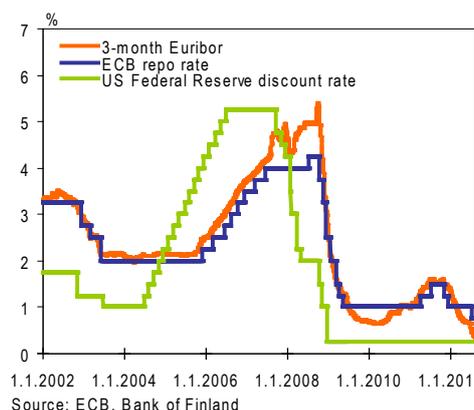
2.1.2009-31.08.2012



Source: ECB

## Short-term interest rates

2.1.2002-17.8.2012



Source: ECB, Bank of Finland

its September meeting, and again before the end of the year. This also requires a decision as to whether to lower the interest rate on bank deposits at the ECB to below zero, which might have a bigger impact on their lending than repo rate cuts as such. For recovery purposes, the ECB could also openly commit - like the Federal Reserve - to keeping its key interest rates low for a long time, but it is likely to stick to keeping its leeway to safeguard its slightly less than two per cent inflation target. Interest rate cut expectations have, however, pushed the 3-month Euribor slightly below 0.3 percent, a level from which it is not expected to change substantially even during next year.

There has been a pronounced decline in the interest rates of many countries' long-term government bonds. For example, the interest rates of Finnish and German 10-year bonds have fallen close to 1.5 per cent as a result of the so-called safe haven effect. U.S. interest rates are under pressure because of the uncertainty associated with the country's fiscal policy. The euro area crisis countries' interest rates have remained high, but they have also fluctuated a lot, primarily because the expectations relating to the measures of the ECB and the emergency fund have changed. Providing the ECB undertakes the expected large-scale bond purchases, the crisis countries' interest rates will decline for at least a while, but at the same time the safe haven effect of other countries' interest rates will weaken. The forecast assumes, however, that the rise of the interest rates of Finland and Germany, for example, will remain very low on an annual basis.

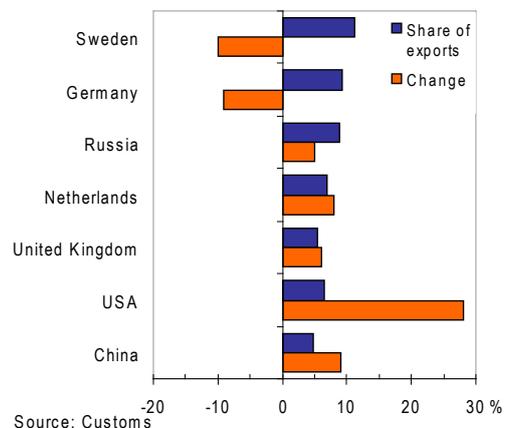
In this year's second quarter, the euro/dollar exchange rate fell more than 7 per cent, after which it has remained almost unchanged. The exchange rate is essentially affected by the foreign exchange markets estimate of economic growth and the development of different crisis factors in the euro area and the United States. The rate is assumed to remain at the current level in the forecast. It is also significant for Finland that the Swedish krona has strengthened about ten per cent during the summer - it has nevertheless merely returned to the level prevailing at the beginning of March.

## Foreign trade

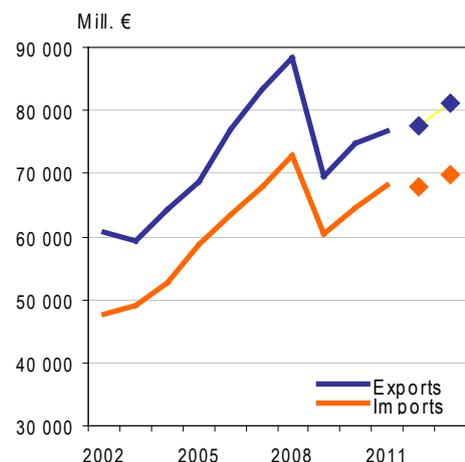
Last year relatively strong domestic demand bolstered imports of goods and services, which grew by 5.7 per cent in volume altogether. Import prices rose at the same time by an average of 6.3 per cent. The fact that exports grew by only 2.6 per cent and that export prices rose by only 4.3 per cent meant that goods and services incurred a deficit of 1.3 billion euros. It should be mentioned that in the final annual statistics published last July the growth figures for both import and export growth were much higher than in the preliminary annual figures released in March. For example, the change of service exports, which was initially reported at -8.6 per cent, was ultimately adjusted to 2.3 per cent.

In the first half of this year the value of goods imports has declined two per cent and the value of exports of goods by half a per cent from last year, which has been enough to offset the trade balance deficit. Because the terms of trade have also weakened as import prices rise faster than export prices, the volume of imports of goods has already fallen far more than the volume of exports. Towards the end of the year import prices are expected to rise in the wake of raw material prices in the world market, which is why there will be a significant deficit in the trade balance once more.

## Finnish merchandise exports in January-May 2012

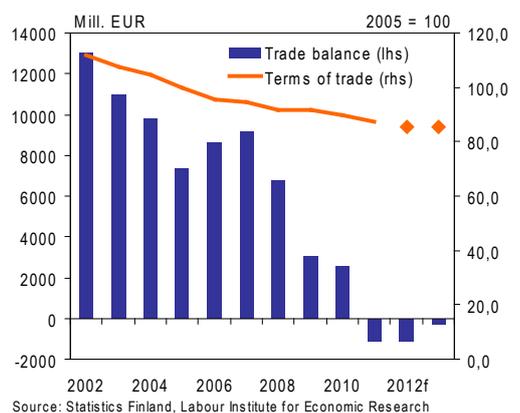


## Imports and exports of goods and services 2002-2013



Source: Statistics Finland, Labour Institute for Economic Research

## Terms of trade and trade balance 2002-2013

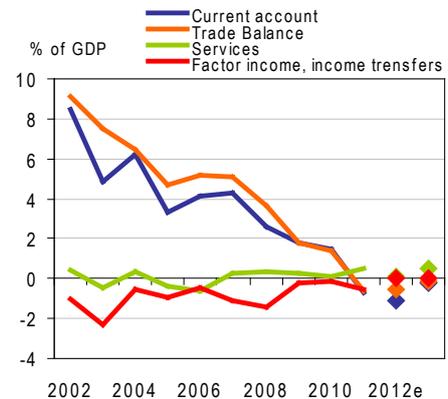




The entire volume of exports will increase by just over one per cent this year. Correspondingly, the volume of imports will decline by 0.6 per cent. Apparently, this year's modest imports are partly explained by the fact that this year's demand has been satisfied by last year's generous amount of imports. The slight recovery of Finland's export markets will raise the growth of the volume of exports to a scant five per cent next year. Export of services will increase by 7 per cent, reflecting the deepening trend of Finnish exports being service-driven. After a long time the electronics industry's exports will support service export growth. Due to the slow growth rate of domestic demand the amount of imports will increase only about three per cent next year.

The trade balance will run a deficit of about one billion euros this year. The rather fast growth of goods exports will reduce the trade deficit next year to just over 200 million euros. The services account will be already almost a billion euros in surplus next year. The factor income and income transfers account will run a deficit of more than one billion euros both this year and next year. The current account deficit will rise to two billion euros this year, but next year it will remain under 400 million euros.

**Current account surplus relative to GDP by components 2002-2013**

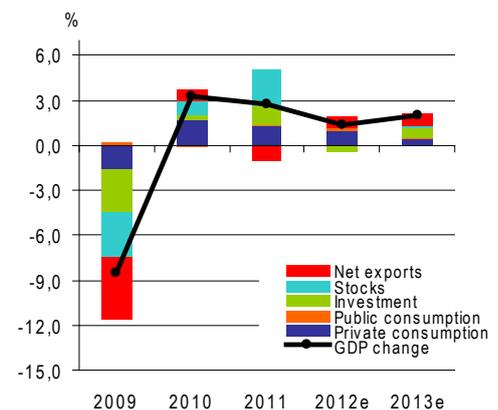


Source: Bank of Finland, Labour Institute for Economic Research

**Basic services growing more slowly than rest of economy**

The growth of almost all industries will slow this year. Value added in industry will increase by a scant one per cent this year, and nearly 3 per cent next year. This year the chemical industry is growing the fastest. The forest industry's output, however, will decline by nearly

**Production growth subcategories**



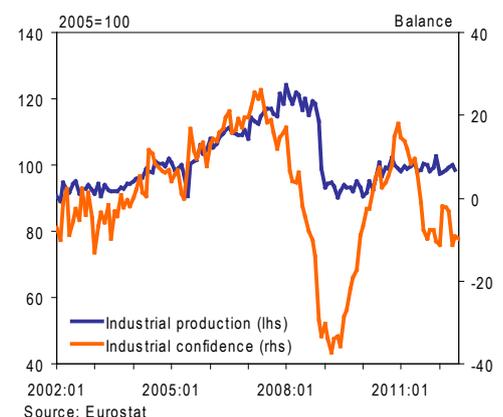
Source: Statistics Finland, Labour Institute for Economic Research

**Table 3. Key forecasts**

	2011	2012e	2013e
Unemployment rate (%)	7,8	7,6	7,6
Unemployed (1 000)	209	205	205
Employed (1 000)	2474	2484	2493
Employment rate (%)	68,6	69,1	69,5
Inflation, consumer price index(%)	3,4	3,0	2,8
Index of wage and salary earnings (%)	2,8	3,4	2,6
Real disposable income of households (%)	0,0	1,0	0,5
Current account surplus (Bill. €)	-2,2	-2,1	-0,4
Trade surplus (Bill. €)	-1,2	-1,1	-0,2
Central government surplus Bill. €	-5,6	-4,5	-2,0
% /GNP	-3,0	-2,3	-1,0
General government surplus Bill. €	-1,2	0,0	2,6
% /GNP	-0,6	0,0	1,3
EDP debt			
% /GNP	49,1	50,0	49,0
Tax rate %	43,4	43,8	44,2
Short term interest rates (3 month euribor)	1,4	0,6	0,3
Long-term interest rates (10-year government bonds)	3,0	1,8	1,6

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

**Industrial confidence and industrial production in Finland 2002:01-2012:07**



Source: Eurostat

five per cent, but it will start to increase significantly next year thanks for instance to Russia's WTO membership. Similarly, the electronics industry, whose output is declining this year, will increase to some extent next year. Other industries - mainly the chemical industry and the food industry - on the other hand, will grow this year and next at a rate of 3-4 per cent. The metal industry will grow this year and next at a rate of 1-2 per cent.

Various business services (including real estate) are the fastest growing within the service sector as well as hotel and restaurant services, which are being given a boost by Russian tourism. These services will also grow next year by about three per cent. Growth in the wholesale and retail trade has slowed down the most over this year, and the slowdown in private consumption growth will keep its growth at about one per cent next year, too. Construction activity will decrease this year, but it will already begin to grow next year. The recovery of heavy industry next year will support growth in transports. Public finance savings will keep the growth of basic services at about one per cent both this year and next.

### Housing investments falling

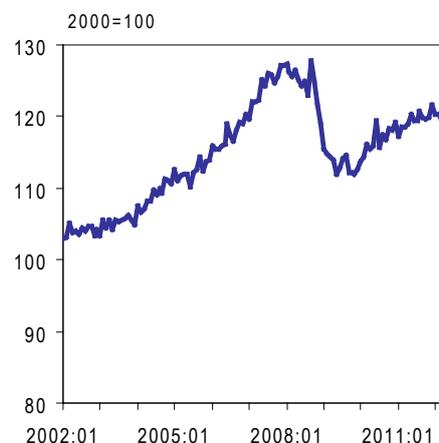
Total investment increased by approximately 6.8 per cent last year. Growth during this year's first quarter in comparison to the corresponding quarter of last year was 2.2 per cent. Weakening economic growth expectations will affect this year's investments as a whole, but in 2013 they will experience a slight pick up.

The rise in housing construction came to a halt in the last quarter of last year, falling in the first quarter of this year by 2.4 per cent. Residential building permits have decreased sharply this year compared to last year. We predict that residential construction will decline by 4 per cent in volume this year. Next year it will achieve 3.2 per cent growth again. Nonresidential building construction was still increasing slightly in this year's first quarter in comparison to last year. However, for the year as a whole, the decline will be about one per cent. Next year nonresidential building construction will experience growth of 4.3 per cent. Civil engineering construction fell strongly last year. The decline was already much weaker in the first quarter of this year. All in all, civil engineering construction will decline slightly this year, but it will grow by 2.5 per cent next year.

Investment in machinery, equipment and transport equipment grew strongly last year, but growth had already slowed down in the first quarter compared to the rest of the year. Machinery and equipment investment varies strongly along with cyclical trends, and the uncertain economic outlook will weaken the growth of this investment this year. We predict that the volume will contract by 2.5 per cent this year. Next year, improving prospects will boost real growth to 1.8 per cent.

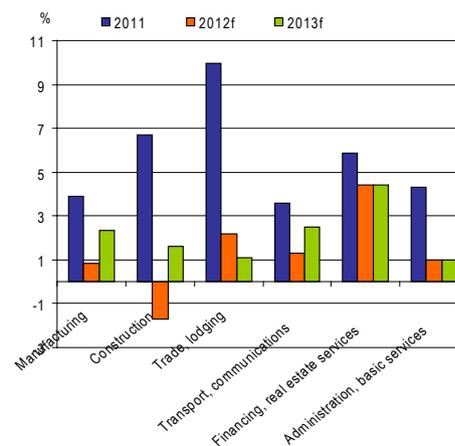
Overall, the level of private investment is projected to decline 2.4 per cent this year and to grow by 4 per cent next year. Public investment will decline by 1.6 per cent this year and 2.8 per cent next year, mainly due to the municipalities' tight fiscal situation.

### Trend indicator of output 1996:01-2012:12



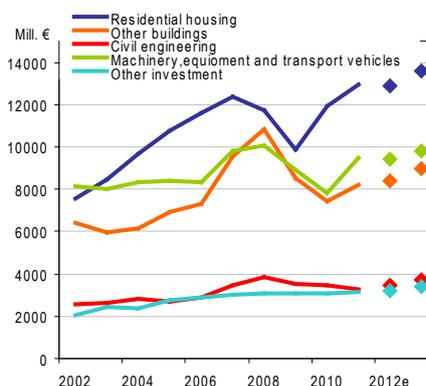
Source: Statistics Finland

### Change in production volume by sector 2011-2013



Source: Statistics Finland, Labour Institute for Economic Research

### Investments 1990-2013



Source: Statistics Finland



## Employment increasing steadily but slowly

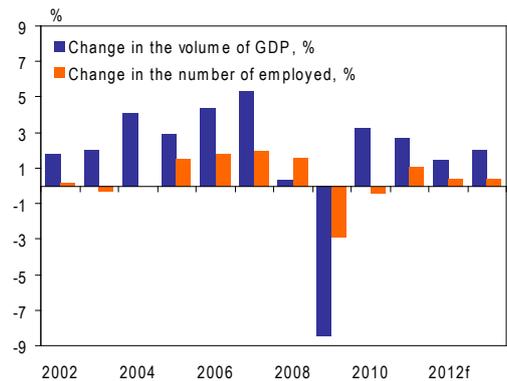
The number of employed persons grew by an average of 1.1 per cent during last year. This year employment according to the employment survey has increased in every month with the exception of January and June, but the number of unemployed job-seekers registered in unemployment offices has now grown for a number of months in a row in comparison one year ago. Towards the end of the year employment will no longer increase and it may even decrease. We predict employment will increase at an average pace of 0.4 per cent both this year and next.

Typically during a recession the population's labour force participation rate declines, because people left without jobs exit the labour force as active job seeking ends. As the employment situation improves, the labour force participation rate generally rises again. Moreover, the aging of the population contributes to a reduction in labour participation, because the labour force participation rate is lower in growing older age groups, although the labour force participation rate of the oldest age group has increased steadily. Last year the labour force participation rate remained unchanged. During the first half of this year, men's labour force participation rate declined slightly on average while the rate for women increased on a year-on-year basis. As a whole no significant changes will occur in the labour force participation rate this year and next.

As a combined effect of labour force participation and population growth, the labour force will increase 0.3 per cent in both years. The unemployment rate will decrease to 7.6 per cent this year and remain the same next year from the combined effects of changes in the amount of employment and the labour force.

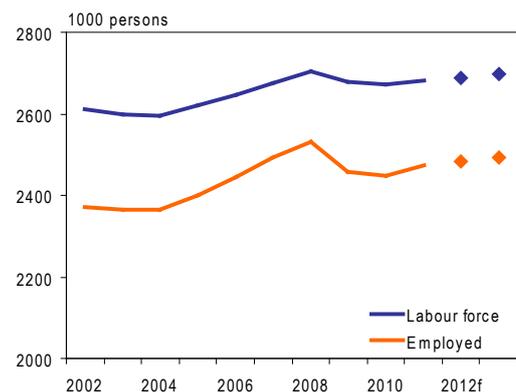
Adapting to the amount of work in the economy takes place not only through changes in employment but also through the number of hours worked. Working hours are easier to adjust than employment and typically working hours decline more than jobs to begin with in a recession. As output returns to growth working hours also begin to rise before the employment figures. As growth continues, this development is eventually reversed, i.e. employment increases more than the number of hours worked. In 2011

## GDP and employment 2002-2013



Source: Statistics Finland, Labour Institute for Economic Research

## Supply of labour and employment 2002-2013



Source: Statistics Finland, Labour Institute for Economic Research

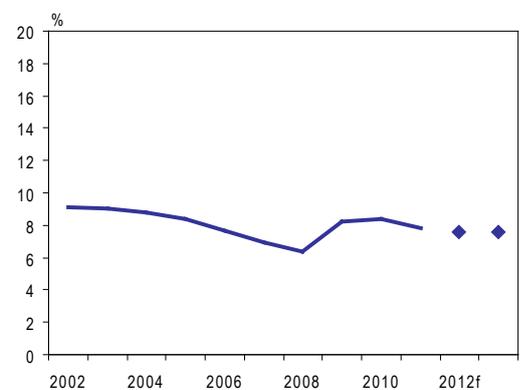
**Table 4. Demand and supply**

	2011	2011	2012f	2013f
	Bill. €	Change in volume (%)		
Gross Domestic Product	189,4	2,7	1,4	2,0
Imports	78,3	5,7	-0,6	2,9
Total supply	267,7	3,6	0,9	2,3
Exports	77,1	2,6	1,2	4,8
Consumption	151,2	1,8	1,4	0,7
private	105,2	2,5	1,7	0,8
public	46,0	0,4	0,7	0,5
Investment	37,1	6,8	-2,3	3,1
private	32,4	7,7	-2,4	4,0
public	4,6	0,6	-1,6	-2,8
Change in stocks (incl. statistical discrepancy) <sup>1</sup>	2,4	2,5	0,0	0,1
Total demand	267,7	3,6	0,9	2,3

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

Source: Statistics Finland, Labour Institute for Economic Research

## Unemployment rate 2002-2013



Source: Statistics Finland, Labour Institute for Economic Research

the hours worked already increased a little less than employment, by 0.9 per cent. Strong employment growth will not take place within the forecast period and this year and next hours worked will increase at nearly the same rate as employment, i.e. by 0.3 per cent and 0.4 per cent, respectively.

Economic expansion and contraction take place partly also via growth of productivity. GDP growth of 1.4 per cent and the 0.3 per cent increase in hours worked this year represents a 1.1 per cent increase in productivity per hour worked. In 2013 productivity growth will correspondingly be 1.6 per cent of hours worked.

### Tax hikes slow decline in inflation

Finnish consumer prices are expected to rise toward the end of this year at more or less the same pace as in the beginning of this year, so the rate of inflation this year will be 3.0 per cent. The impact of tax hikes at the beginning of this year will be felt throughout the year and in the beginning of April the car tax was changed and motor vehicle taxes raised. Without the tax increases, the rise in consumer prices would have been nearly one percentage point lower. In the latter part of this year inflation will be dampened, above all, by the fall in interest rates, but this trend will be offset somewhat by increases in food and transportation prices.

Next year the one percentage point increase in value added tax will boost consumer prices by a total of at least 0.6 percentage points. In addition, part of the effect of the hikes in the motor vehicle tax and transfer tax and the increase in VAT on magazines and newspapers will be shifted to next year. The combined impact of the tax increases on consumer prices in 2013 will be about one percentage point. On the other hand, the rise in food prices, in particular, is not expected to continue to be as strong as before. Inflation for next year as a whole will remain at 2.8 per cent, i.e. slightly lower than for this year.

### Comprehensive agreement will keep earnings growth modest

A steep rise in consumer prices spawned negative growth in real wages last year. Real wages fell by 0.7 per cent as nominal wages rose by 2.8 per cent and consumer prices by 3.4 per cent. The last time real earnings growth was negative was during Finland's Great Depression in 1993. Average wages which include the effect of overtime work, however, rose slightly faster than the change in the earnings index, i.e. 3.1 per cent. Also the amount of bonuses paid increased from the previous year.

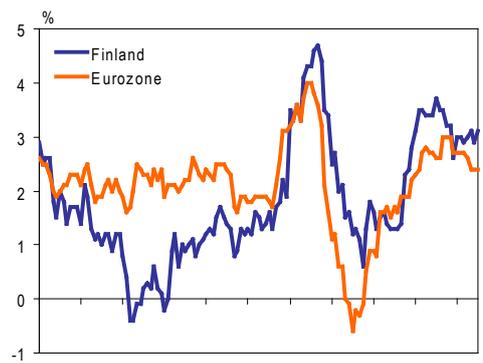
The comprehensive labour market agreement signed in November 2011 stipulates to a great extent the development of earnings this year and next. The comprehensive agreement covers 91 per cent of employees in the private sector and 100 per cent in the public sector. In most cases the agreement is in force for 25 months, so the contracts are still valid next year. During the first year the contractual increases (salary and wage increases and the cost of the changes in working conditions) are 2.4 per cent. In the second year the contractual increases are lower, i.e. 1.9 per cent. The sector-specific agreements differ from each other e.g. with respect to the weighting of general increases and locally agreed items.

### Change in labour productivity and hours worked 2002-2013



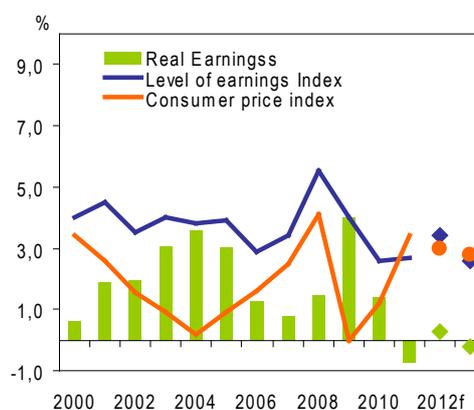
Source: Statistics Finland, Labour Institute for Economic Research

### Harmonized index of consumer prices 2002:01-2012:07



Source: Eurostat

### Changes in level of earnings and consumer price index and real earnings, 2000-2013



Source: Statistics Finland, Labour Institute for Economic Research



During the first half of this year earnings rose by 3.8 per cent compared to last year. This increase includes contractual increases and wage drift as well as a one-off payment of 150 euros paid at the beginning of the contract period. Towards the end of this year wage growth will slightly decelerate and earnings for the year as a whole will rise by 3.4 per cent. Next year, earnings will grow more slowly, i.e. 2.6 per cent. The contractual increases are thus lower than for the current year and there are no one-off payments. Mild growth in wage drift will be insufficient to compensate for the impact of these factors.

The development of real income is almost stagnant over the forecast period. This year real earnings will rise by only 0.4 per cent, and next year real earnings will fall by almost the same margin as the inflation rate remains at about three per cent.

### Household purchasing power experiencing sluggish growth

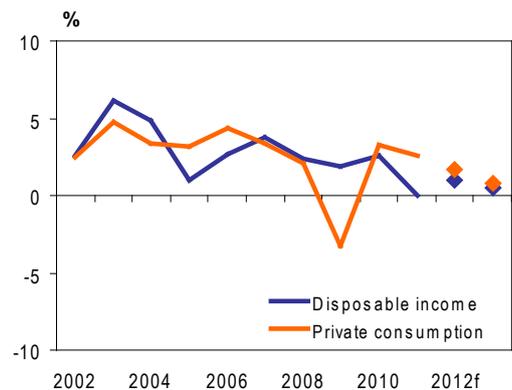
Real disposable household income did not rise at all last year. At the same time, the prolonged and fairly steady growth in income came to a halt, even though the wage bill was boosted by an increase in the number of hours worked and a rise in the level of earnings. The upswing in household incomes exceeded the rate of increase in prices, as wage and salary income increased by 4.4 per cent, social security benefits by 3.7 per cent, and property and entrepreneurial income by a total of 4.1 per cent. Direct taxes paid by households were nevertheless 7 per cent higher than those paid the previous year.

This year purchasing power will increase slightly, even though the rate of growth in the wage bill will slow to 3.7 per cent. A slightly swifter rise in earnings than previously is offset by slower growth in labour input compared to last year. Social benefits are, in contrast, expected to grow more swiftly than last year and faster than the wage bill, i.e. nearly 5 per cent. This is due to inflation adjustments prompted by last year's high inflation, increases in basic benefits and structural growth in pension income. Property and entrepreneurial income increases will also boost wage and salary income somewhat more rapidly during both forecast years.

This year direct taxes will increase more or less in line with household income, but the pace of growth in employees' social insurance contributions will be even faster, i.e. about 6.5 per cent. Employees' wage and salary income taxation will remain almost unchanged on average, because tax hikes and cuts in deductions will be offset by inflation adjustments. The development of social insurance contributions will in turn be affected by, among other things, higher employment pension contributions. Household disposable income will increase in nominal terms this year by 4.2 per cent while real purchasing power will climb by one per cent.

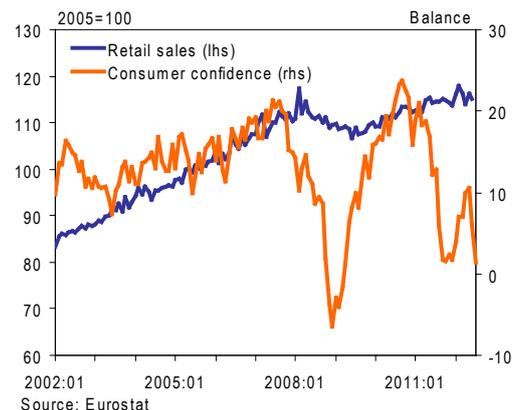
Next year purchasing power is expected to increase more slowly than this year. This is attributable to both the slowdown in earnings growth and the tightening of taxation. The wage bill will grow by 3.2 per cent while social benefits will increase slightly more slowly than in the current year, i.e. about 4.5 per cent. There will be no inflation adjustments to the state income tax scales, and the tax rates for persons earning more than 100,000 euros will be raised in line with the so-called solidarity tax. Municipal tax rates will also be raised marginally and the employee pension contributions will continue to rise. Overall, the tax burden will rise even though earned income deductions and basic deductions will be increased. Household disposable income will increase next year in nominal terms by 3.5 per cent and in real terms by 0.5 per cent.

### Change in households' real disposable income and private consumption 2000-2013



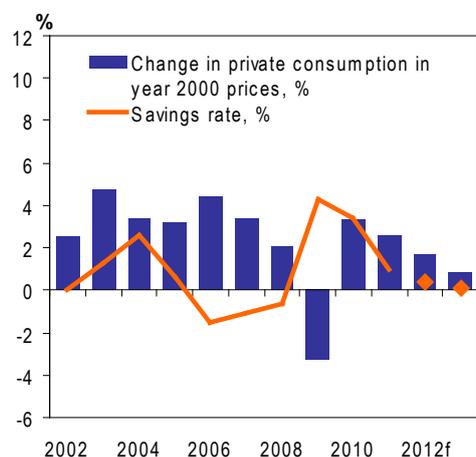
Source: Statistics Finland, Labour Institute for Economic Research

### Consumer confidence and retail trade sales in Finland 2001:01-2012:0t7



Source: Eurostat

### Private consumption and savings rate 2002-2013



Source: Statistics Finland, Labour Institute for Economic Research

## Private consumption growth subsiding due to anaemic growth in purchasing power

Private consumption increased by 2.5 per cent last year even though the real purchasing power of households stagnated. The savings rate indeed fell from the previous year's 3.4 per cent to 1 per cent. The relatively steady growth in income during previous years spurred consumer demand and in particular durable goods purchases increased significantly (8.2 %). The amount of outstanding household loans grew by slightly over 6 billion euros, and the debt ratio (outstanding loans / disposable income) rose to 115.6 per cent.

According to preliminary figures, private consumption continued to exhibit strong momentum in the first half of the year, although consumer confidence indicators fell sharply late last year. In the first quarter, the volume of private consumption grew by as much as 5.8 per cent compared to a year ago. The strong growth was still bolstered by durable consumer goods purchases, fuelled intermittently by brisk car sales in anticipation of tax changes that went into force in April. Consumption of nondurable goods and services grew more slowly, at a rate of 3-4 per cent.

Consumption growth will slow down significantly during the year, while households' real purchasing power will increase by only about one per cent. After rising swiftly in the beginning of this year, consumer confidence has started to fall again, and the retail trade confidence indicator has deteriorated significantly. Private consumption is expected to grow by 1.7 per cent this year. The saving rate will continue to fall, declining to 0.4 per cent from last year's one per cent.

Next year the growth of household purchasing power will slow down to half a per cent and this will reflect upon private consumer spending. Private consumption growth will subside to 0.8 per cent, which is clearly less than in previous years. Differences in the growth of the subcategories of consumer goods demand are likely to be small. The savings rate will continue to decline and it will be only slightly positive (0.1%) next year.

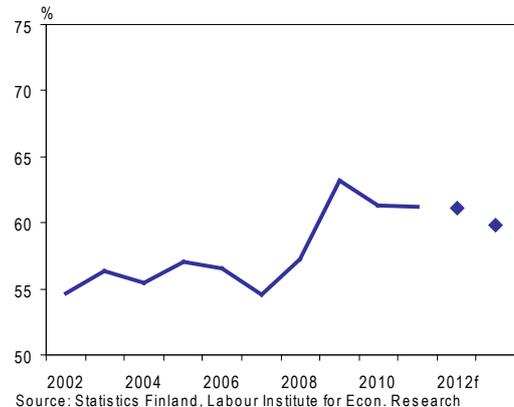
## State tax revenues continue to grow

Indirect taxation was raised considerably this year. Excise taxes were raised on tobacco, alcohol, sweets, ice cream, soft drinks, fuel and lotteries. A hike in motor vehicle taxes took effect in early April. Tax changes are forecast to generate a rise in indirect tax revenues by a total of 6.5 per cent this year.

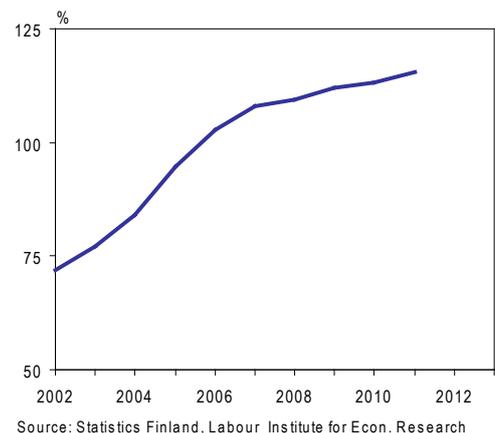
At the beginning of next year, all VAT rates will be increased by one percentage point, which will generate additional tax revenues of approximately EUR 830 million per year. Revenues from taxes on production and imports will thus increase significantly next year, despite the fact that the growth in the tax base will be slowing at the same time. Total indirect tax revenues are projected to grow at a rate of 8.0 per cent next year.

This year the state income tax scales were adjusted for inflation and the rise in the level of earnings. The earned income deduction was also increased, which will reduce state tax revenues by approximately EUR 115 million annually. The income tax revenues received by the central government will nevertheless increase this year owing to favourable wage developments. Income tax revenues will be boosted by the two percentage point increase in the capital income tax rate and the adoption of a higher capital income tax rate on income in excess

## Functional distribution of income in business activities 2002–2013



## Household debt ratio 2002–2011



## Wage earners' income tax rate 1990–2013



of EUR 50,000 as well as a hike in dividend taxes on unlisted companies. The interest deduction on housing loans was decreased by 15 percentage points and the deduction for domestic help was lowered, which will increase state tax revenues by some EUR 140 million. Corporate tax revenues received by the central government are subject to divergent factors: the central government's share of corporate tax revenues will increase at the expense of the municipalities, while the corporate tax rate will drop by 1.5 percentage points. All in all, the direct taxes received by the central government are projected to grow by 3.6 per cent this year.

Next year the growth in the wage bill will slow down a little bit. State direct tax revenues will be bolstered substantially by leaving the income tax scales unchanged, i.e. by not making adjustments for inflation or the rise in the level of earnings. The income taxation of persons earning more than 100,000 euros per year will be increased, inheritance tax on estates worth more than one million euros will be raised and taxation of high pensions will be increased in line with wage taxation. These solidarity taxes will generate revenues of approximately 100 million euros annually. The transfer tax will rise from 1.6 per cent to 2 per cent and the tax base will be widened, which will boost tax revenues received by the central government by about 80 million euros. On the other hand, state tax revenues will be reduced by an increase in the deductibility of R&D expenditures and industry's eligibility to deduct depreciation expenses. New tax incentives for investors in capital income taxation will have a similar impact. All in all, the direct tax revenues received by the central government are projected to grow by 5.6 per cent next year.

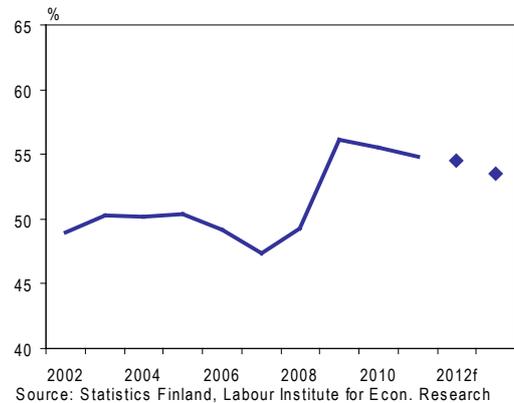
Revenue sharing whereby the central government diverts revenues to the municipalities will increase this year by 3.6 per cent. Cuts agreed upon in the government's budget negotiations will dampen the growth in revenue sharing, so that next year it is forecast to rise by 1.2 per cent. All in all, a reasonably slow-growing expenditure side in tandem with substantial increases in tax revenues will bolster the central government's financial position this year and especially next year. Consequently, the central government's EDP deficit will decline from last year's 5.6 billion euros to 4.5 billion euros this year and to 2.0 billion euros next year.

## No improvement in municipal situation

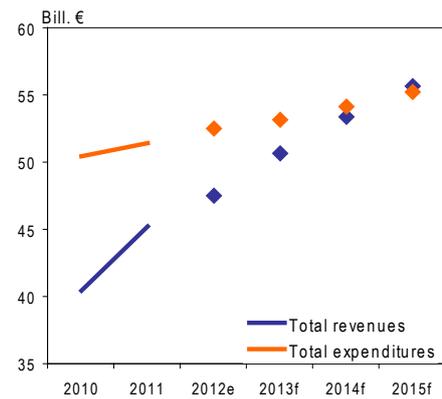
The savings in central government revenue sharing agreed upon in the budget negotiations increase the pressure on municipal finances, even though central government transfers to municipalities increased last year by more than 4 per cent. Last year municipal governments incurred deficits of about 850 million euros. Widening of the tax base and hikes in tax rates are insufficient to improve the financial position of municipalities in the forecast period. The situation of municipalities is also weakened by the lowering of their share of corporate tax revenues. The expenditure side is still under pressure especially with regard to health care, which will sustain its growth in consumption. Municipalities are trying to improve their balance sheets by raising property tax rates. All in all, the direct tax revenues received by municipalities are projected to grow by 3.2 per cent this year and 4.0 per cent next year. At the same time the deficit in municipal finances will rise above one billion euros by 2013.

The contributions received by employment pension and social security funds will develop favourably this year and next: social security

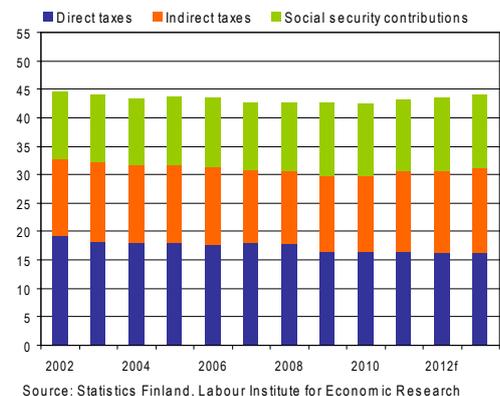
## Public expenditures as percentage of GDP 2002–2013



## Central government revenues and expenditures 2010–2015



## Tax rate by components 2002–2013



payments are projected to grow by about 5 per cent rate in both years. This is partially attributable to the 0.2 percentage point increases in both employee and employer contributions decided upon in the so-called comprehensive income policy agreement. On the other hand, high inflation adjustments will boost employment pension expenditure during both years of the forecast. Basic unemployment insurance benefits and labour market support were increased this year, which will in turn increase the expenditures of social security funds. The freezing of child benefits next year will in contrast bring minor additional savings. Overall, the surplus of employment pension and social security funds will remain almost unchanged relative to GDP over the forecast period.

### General government running a surplus next year

The ratio of taxes to GDP will climb this year as indirect taxation will be increased and social security contributions will rise. The same trend will continue next year as earned income taxes will be raised in addition to further hikes in indirect taxation and social security contributions. The ratio of public expenditure to GDP will be falling again, even though many of the cuts specified in the government's spending limits are by nature back-weighted to take place toward the end of its term in office.

General government finances will improve this year, and the harmonized EDP deficit is forecast to be 0 per cent relative to GDP. Next year the public sector will begin to run a surplus, which is projected to be 1.3 per cent of GDP.

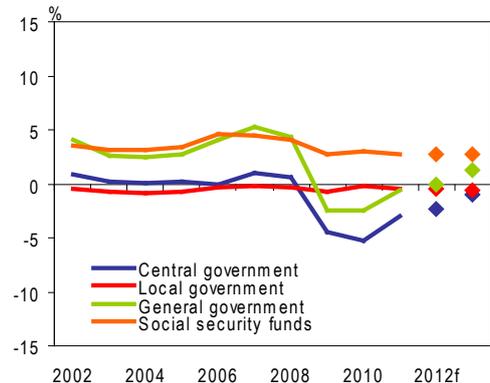
### Fiscal policy

Finnish fiscal policy will be tightened already this year, but next year even more so. The ratio of public expenditure to GDP will decline slightly from 54.5 per cent this year to 53.5 per cent next year. Similarly, the ratio of total tax revenues to GDP will increase this year by 0.4 percentage points from last year, rising next year by the same margin. Next year this tax ratio will be 44.2 percent.

Given that economic growth is relatively sluggish and that unemployment will remain relatively high at 7.6 per cent both this year and next year, the fiscal policy stance can be regarded as relatively tight. During the slump prevailing this year and next, employment could have been fostered by public infrastructure projects, but because of the lags in getting them started, this is already too late. Instead, a more flexible approach would be to spur employment with a variety of cyclical-based aid to support construction by the private and municipal sectors. Construction has slowed down considerably, which has had a significantly negative impact on the labour market.

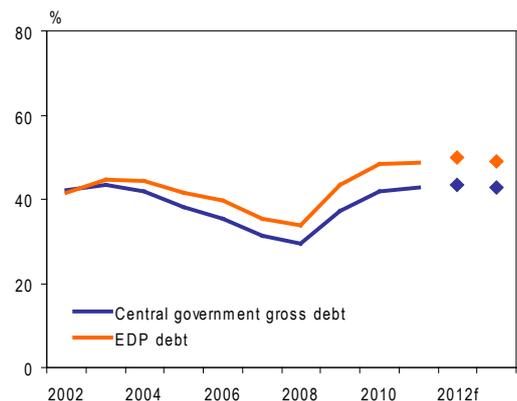
The main problem with fiscal policy is not the current stance per se, but rather the procyclical nature of the triggering mechanisms. If the economy weakens, fiscal policy is tightened. In the current situation where the potential for an outright crisis is clearly evident, we would rather need the possibility of a situation-specific reaction by economic policy. The relatively good financial position of Finland's public sector and confidence in the Finland as a sovereign borrower provide an opportunity for a countercyclical policy.

### General government financial surplus as percentage of GDP 2002–2013



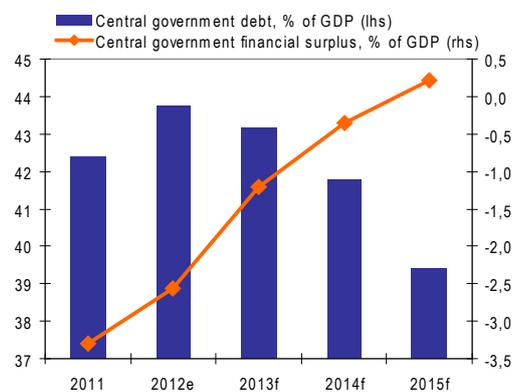
Source: Statistics Finland, Labour Institute for Econ. Research

### Central government gross debt and general government EDP debt as percentage of GDP 2002–2013



Source: Statistics Finland, Ministry of Finance, Labour Institute for Economic Research

### Central government gross debt and net lending 2011–2015



Source: Statistics Finland, Labour Institute for Economic Research

## Where are you heading, competitiveness?

In the short term, the development of Finland's competitiveness will hinge primarily upon trends in labour costs, labour productivity and exchange rates<sup>1</sup>. Unit labour costs depict the cost of labour to produce one unit of output. Unit labour costs decrease if the increase in labour productivity is faster than the rise in nominal wages (or overall compensation of employees including payroll taxes).

Typically, cost comparisons of manufacturing industries producing export goods are particularly relevant from the standpoint of a country's foreign trade. Unit labour costs for the economy as a whole are less informative from the standpoint of the external balance. The adjacent graphs are presented in euros depicting the development of manufacturing unit labour costs in Finland, Sweden and Germany, as well as the current euro area average since 2000.<sup>2</sup> The index does not reflect possible differences in the level of unit labour costs between the different countries; it instead reflects the level of expenses in relation to the year 2000, and its changes from one year to the next reflect changes in relative unit labour costs.

Unit labour costs in manufacturing declined in Finland after the year 2000 until they rose very sharply during the recession. Labour productivity fluctuates strongly during cyclical swings, and this is also reflected in unit labour costs, which is evidenced by trends in the countries under comparison. On the other hand, in 2010 the fall in unit labour costs was more pronounced than in the comparison countries. Unit labour costs in Finnish manufacturing, however, had still fallen in 2011 relative to the 2000 level more than in Germany or the euro area average. As a non-euro country, Sweden has improved its competitiveness more after 2000 although exchange rate changes explain to a large extent the divergent trend with respect to Finland.

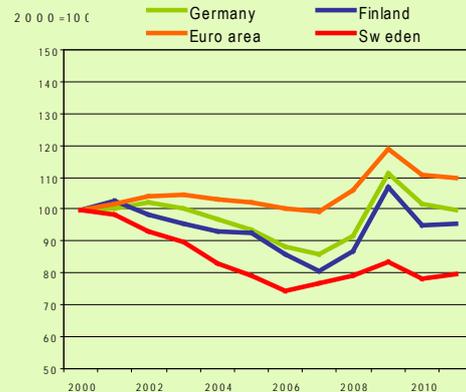
In 2011 the unit labour costs in Finnish manufacturing increased slightly, while they continued to fall slightly in Germany and the euro area. Sweden's unit labour costs measured in euro nevertheless rose slightly more than in Finland.

According to our forecast, unit labour costs for the total economy will rise by about 2.3 per cent in 2012, as average earnings rise by 3.4 per cent and labour productivity by 1.1 per cent. In 2013, average earnings will rise by 2.8 per cent and labour productivity will climb by 1.6 per cent, so unit labour costs will rise by about 1.2 per

<sup>1</sup> In long-term analysis we often also speak of so-called real competitiveness, which is affected by factors such as company innovation, workforce skills and the overall operative environment.

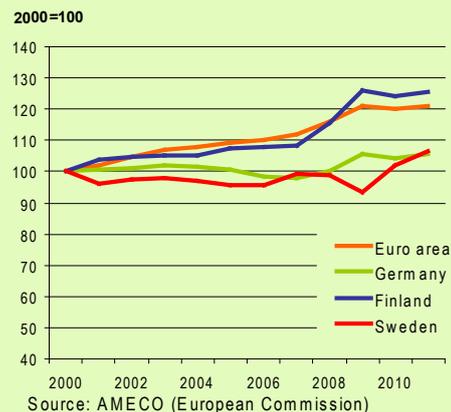
<sup>2</sup> The average is calculated by weighting each country's unit labour costs with the gross value added by the manufacturing sector. The average does not include Ireland and Malta, and some missing values are estimated for France and Portugal using other data.

### Nominal unit labour costs (manufacturing) 2000–2011



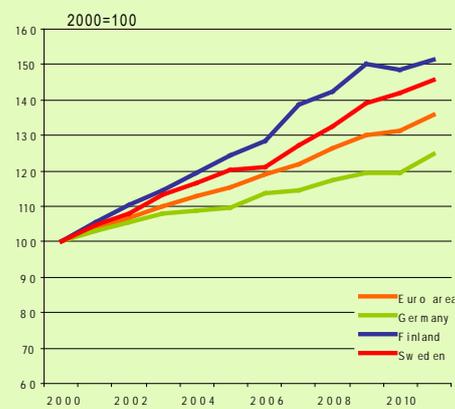
Source: AMECO (European Commission)

### Nominal unit labour costs (total economy) 2000–2011



Source: AMECO (European Commission)

### Labour cost index, manufacturing 2000–2011



Source: Eurostat

cent. This is slightly higher than the European Commission's forecast for the overall euro area<sup>3</sup>. Unit labour costs of the total economy have nevertheless developed quite differently in the 2000s than those for manufacturing, and from the standpoint of export competitiveness they may be a misleading indicator.

An adjacent graph also shows Eurostat's labour cost index for the manufacturing sector. Compared to the level prevailing in the year 2000, Finnish labour costs have climbed relatively quickly, but thanks to a rise in productivity the trend for unit labour costs has been more favourable.

Trade with regions outside the euro area is also affected by the exchange rate and unit labour costs in competitor countries outside the euro area. An adjacent graph presents Finland's real effective exchange rate, which depicts relative unit labour costs in manufacturing in Finland and its rivals measured in the same currency. The graph shows how changes in the exchange rate affect our competitiveness. During the past year the euro has weakened against the U.S. dollar by 12.7 per cent and against the Swedish krona by 9 per cent, which has lowered the real effective exchange rate, i.e. improved our competitiveness.

### Finland's real effective exchange rate compared to 36 industrial countries 2000-2011



Source: European Commission

<sup>3</sup> The European Commission's forecast is 1.7% for 2012 and 0.9% for 2013. Source: Tukusetto (2012).



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

The example family calculations of the Labour Institute for Economic Research (PT) assess the impact of wages, income transfers, taxation, expenditure on housing loans, and rent on the purchasing power of six different example families. The calculations are based on the government's proposals for changes in income taxation, commodity taxation and social security. The calculations regarding taxes and income transfers have been made using the so-called Jutta model. They are being presented here now for already the fifth time in conjunction with PT's autumn forecast.

The example families are the same as last year, and they have been selected to describe Finnish households in as versatile a manner as possible. A person with the 2011 median income has been selected according to gender and job title or education background as the representative wage receiver. Half of the persons in the median wage earners group earn more than him or her and half less. The median gross income has been revised upwards to take into account holiday pay and bonuses.

The 2011 data for the median income of the example family has been obtained from Statistics Finland's private sector monthly salary statistics. Gross incomes in 2012 and 2013 are based on PT's forecast for wage developments. Earnings are expected to rise in 2012 by 3.4 per cent and in 2013 by 2.6 per cent.

Pensioners' gross income is projected on the basis of already realized changes of the pension index in 2012. Earnings-related pensions are expected to grow by 3.2 per cent in 2013. The earnings-related pension index is based on the change in the consumer price index and the change in the earnings index. In 2013 the National Pensions index is expected to rise by 3.0 per cent. The change in the National Pensions index is based on the change in the cost of living index.

Earned income taxation will increase because earned income taxation will not be adjusted for inflation and the rise in the level of earnings in 2013 to 2014. In addition, a new Finnish Broadcasting Company (YLE) tax will be introduced amounting to 0.68 per cent of gross income or a maximum of 140 euros.

It is assumed that all families have paid the TV license prior to 2013 and it is included in taxes. This allows us to gauge the impact of next year's YLE tax on families' income in a sensible way.

The situation of families with children will deteriorate since child benefits will not be adjusted for inflation in 2013. The maximum deduction for housing loan interest is being reduced to 80 per cent. The unemployed and recipients of the National Pension will benefit from an extraordinary inflation adjustment of 0.7 percentage points for 2013. The calculations also take into account the tax proposals in line with the government's 2013 budget negotiations. The parameters derived from the budget

negotiations include information about earned income deductions, basic deductions in municipal taxes as well as employee contributions. In addition, the calculations incorporate assumptions based on our forecast about changes in municipal tax rates and mortgage rates. All figures used in the underlying assumptions are presented in more detail in the appendix of this document

Family-specific inflation forecasts have been made using the same consumption baskets as in the previous year. Inflation forecasts for products appearing in the commodity baskets have been derived from PT's forecast. Inflation for each commodity group takes into account, among other things, hikes in VAT. Family-specific inflation has been derived using inflation forecasts for different commodity groups and family-specific consumption baskets. Real income has been obtained by eliminating the impact of inflation on net income.

### Family descriptions

#### White collar couple with high income

The family is a childless couple belonging to AKAVA (Confederation of Unions for Professional and Managerial Staff). The man has an MBA and the woman has studied law. Monthly wages in 2012 are 6777 euros and 5403 euros. The family lives in owner-occupied housing with no debt.

#### White collar family, 2 children

The parents of the white collar family are an engineer and a nurse, both of whom belong to STTK (Finnish Confederation of Professionals). The monthly wages in 2012 are 3637 euros and 3126 euros. The family has two children. The family lives in owner-occupied housing with a mortgage of 150,000 euros.

#### Blue collar family, 2 children

The parents of the blue collar family are a truck driver and a store sales person, both of whom are members of SAK (Central Organization of Finnish Trade Unions). Monthly wages in 2012 are 2408 euros and 2206 euros. The family has two children and lives in a rented flat (80 square metres).

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

The family consists of a single parent mother and one child. The mother works as a cleaner for a monthly wage of 2060 euros. The family lives in a rented flat (60 square metres).

#### Single unemployed

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

#### Retired couple

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



## Families' nominal income development

The model family calculations indicate that the nominal income of all the families will increase in 2012 and 2013. One of the factors contributing to the deceleration of the growth in families' net income in 2013 is the hike in both the central and municipal governments' earned income taxation. In addition, the slowdown in the growth of the net income of the white collar family with two children is attributable to the reduction in the tax deductions for interest on housing loans. The family loses net income of about 50 euros per year due to the cuts in tax deductions for interest on mortgages. The YLE tax increases the total taxation of families with two wage-earners and decreases it for the single-parent family, the retired couple and the single unemployed. The underlying assumption is that families have previously paid for a TV license.

## Family-specific inflation

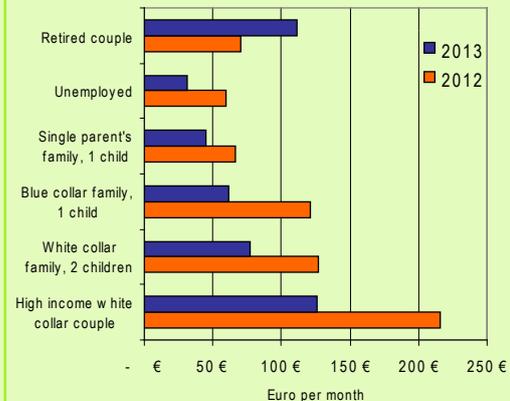
There are no major differences in the family-specific inflation figures between families as well as between the two forecast years. The inflation rates of all families in 2012 will range between 2.8 and 3.0 per cent. In 2013 they will remain between 2.6 and 3.0 per cent. Rising food prices will have a marked impact on all families in both 2012 and 2013. The cost of using private motor vehicles will increase in both years. The declining cost of telecommunications services and moderate trends in the price level for cultural and leisure services will in turn dampen inflation in both years.

## Family-specific real income changes

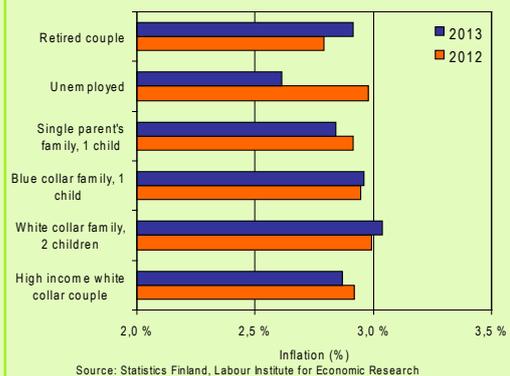
Family-specific changes in real income in euros are obtained by adjusting nominal incomes for inflation and comparing the income of one year with the next. The figure shows that real income will rise in all families except for the white collar family in 2012. The real income in all working families will decline in 2013.

The changes in the income in 2012 of the single parent, blue collar family, white collar family, and the high income white collar couple are less than one per cent. In 2013, the income of the blue collar family, the white collar family and the high income white collar couple will fall by over one per cent. Changes in the incomes of both the unemployed person and the retired couple are positive in both years and relatively higher than in those of other families. The real income of the unemployed person will rise by four and three per cent in 2012 and 2013, respectively. Since the inflation rates for different families are close to each other, the parameters affecting net incomes are the most important factors explaining the development of real income.

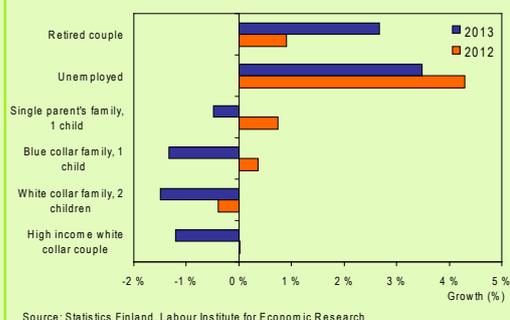
## Family-specific changes in nominal net income 2012 and 2013



## Family-specific inflation rates in 2011 and 2012



## Family-specific real income changes in euro in 2011 and 2012



**Appendix table 1. High income white collar couple's income development**

Year	2010	2011	2012	2013
Gross income (€/month)	11343	11779	12180	12496
Income transfers received (€/month)	0	0	0	0
Taxes incl. TV permit (€/month)	4241	4427	4612	4803
Net income (€/month)	7101	7352	7568	7694
Share of taxes out of gross income (%)	37,4	37,6	37,9	38,4

Source: Statistics Finland, Labour Institute for Economic Research

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

Year	2010	2011	2012	2013
Gross income (€/month)	6311	6541	6763	6939
Income transfers received (€/month)	211	211	219	219
Taxes incl. TV permit (€/month)	1790	1856	1960	2058
Net income (€/month)	4732	4895	5023	5100
Share of taxes out of gross income (%)	28,4	28,4	29,0	29,7

Source: Statistics Finland, Labour Institute for Economic Research

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

Year	2010	2011	2012	2013
Gross income (€/month)	4355	4463	4614	4734
Income transfers received (€/month)	211	211	219	219
Taxes incl. TV permit (€/month)	992	1017	1056	1114
Net income (€/month)	3574	3657	3778	3839
Share of taxes out of gross income (%)	22,8	22,8	22,9	23,5

Source: Statistics Finland, Labour Institute for Economic Research

**Appendix table 4. Small income single parent family's (1 child) income development**

Year	2010	2011	2012	2013
Gross income (€/month)	1890	1993	2060	2114
Income transfers received (€/month)	286	290	301	305
Taxes incl. TV permit (€/month)	425	456	468	481
Net income (€/month)	1750	1826	1893	1938
Share of taxes out of gross income (%)	22,5	22,9	22,7	22,8

Source: Statistics Finland, Labour Institute for Economic Research

**Appendix table 5. Single unemployed person's income development**

Year	2010	2011	2012	2013
Gross income (€/month)	551	553	674	669
Income transfers received (€/month)	352	361	317	335
Taxes incl. TV permit (€/month)	110	111	129	119
Net income (€/month)	793	804	862	915
Share of taxes out of gross income (%)	20,0	20,0	19,2	17,1

Source: Statistics Finland, Labour Institute for Economic Research

**Appendix table 6. Retired couple's income development**

Year	2010	2011	2012	2013
Gross income (€/month)	2327	2533	2625	2713
Income transfers received (€/month)	0	0	0	0
Taxes incl. TV permit (€/month)	595	617	639	616
Net income (€/month)	1732	1916	1986	2097
Share of taxes out of gross income (%)	25,6	24,4	24,4	22,7

Source: Statistics Finland, Labour Institute for Economic Research


**Appendix table 7. Example family calculation assumptions**

Year	2012	2013
<b>Income transfers and taxation according to government program</b>		
Unemployment compensation and labour market aid (€/month)	674,24	699,21
Housing aid deductible threshold (€/month)	676	700
Welfare income basic component (€/month)	461,05	474,90
Maximum deduction in municipal taxation (€/year)	2850	2880
Maximum amount of earned income deduction (€/year)	945	970
Housing loan interest deduction	85 %	80 %
Increase in central government income tax scales	n. 3,1 %	0 %
<b>Government budget proposals</b>		
Hospital payments, wage earners and entrepreneurs	1,22 %	1,30 %
Daily disability compensation, wage earners	0,82 %	0,73 %
Unemployment insurance	0,60 %	0,60 %
Employment pension insurance, under age 53	5,15 %	5,35 %
Employment pension insurance, over age 53	6,50 %	6,80 %
<b>Forecasts of Labour Institute for Economic Research</b>		
Earnings level index change	3,4 %	2,6 %
Rent index change	4,2 %	3,5 %
Municipal tax rate change	0,08	0,1
Employment pension index change	3,6 %	3,2 %
Average interest rate on new housing loan	2,2 %	2,2%
National pension index change	3,8 %	3,0 %

**In addition**

Calculations take into consideration changes in energy, transport and excise taxes.

Source: Ministry of Social Affairs and Health, Statistics Finland, Labour Institute for Economic Research