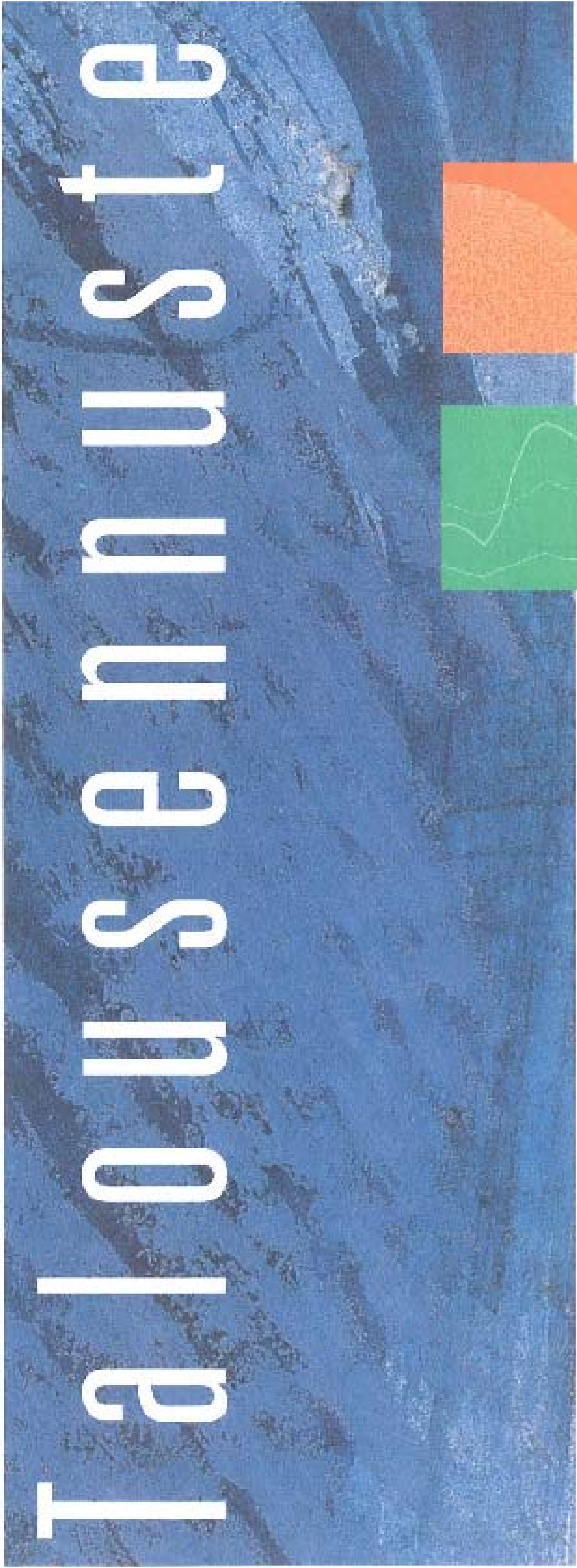


September 1, 2009

Economic Forecast for 2009–2010

Recession easing next year

Additional information
Chief of forecasting
Eero Lehto
tel. +358-9-2535 7350

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

LABOUR INSTITUTE FOR ECONOMIC RESEARCH

Economic Forecast 2009–2010

Recession easing next year – unemployment rate nevertheless rising to 11 per cent on average

The economic crisis spawned by the international financial crisis will hit the countries in the Baltic Sea region, including Finland, whose total production will fall this year by 5.5 per cent. The Finnish recession has been exacerbated by the structural crisis in the forest industry. Despite this, the economic developments are following the international trends rather closely. Industrial production will stage an upturn also in Finland already toward the end of the year. Largely thanks to this, our total production will grow next year by 1.8 per cent. Finland will follow trends in other developed countries as the labour markets will remain weak for a long time. Unemployment will continue to decline in Finland until towards the end of next year, when our unemployment rate will average 11.1 per cent.

Finnish fiscal policy has not been the best possible for counteracting the drop in production. The government got pinned down by tax cuts included in its program that were originally planned for a completely different economic situation. The lowering of taxes and sticking to its stringent spending framework did not allow room for expansionary spending, which has contributed to the steep decline in Finnish domestic demand. Next year the outlook is weakened by the fact that fiscal stimulus is subsiding, for which reason the municipalities are cutting their spending.

Economic risks still large

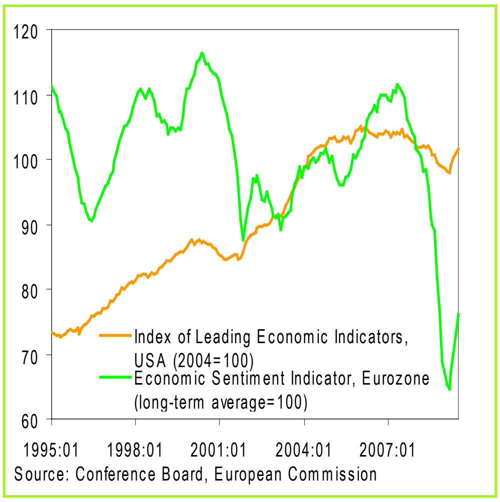
The course of future economic developments and the inherent risks related to this forecast are still appreciably greater than normal. First, the international economy can experience another downturn if the credit losses partly just now being realized by banks and other financial institutions spur another wave of mistrust between different countries' financial markets. An unexpectedly swift rise in raw material prices and divergent trends in exchange rates – possibly even the excessive appreciation of the euro – could nip, for example, Europe's economic growth in the bud.

In Finland's case it has been claimed that the medium-term outlook is gloomy and that Finnish industry is on the brink of a permanent slump. We do not concur with this view. The prevailing economic crisis has not weakened the real competitiveness of the Finnish industry in a way that would spawn permanent problems. The high educational level of the population and relatively ambitious industrial policy in tandem with R&D support will sustain Finnish industry's ability to renew itself dynamically. There is no reason to assume that new activity in other sectors will not offset the downswing in the chemical forest industry.

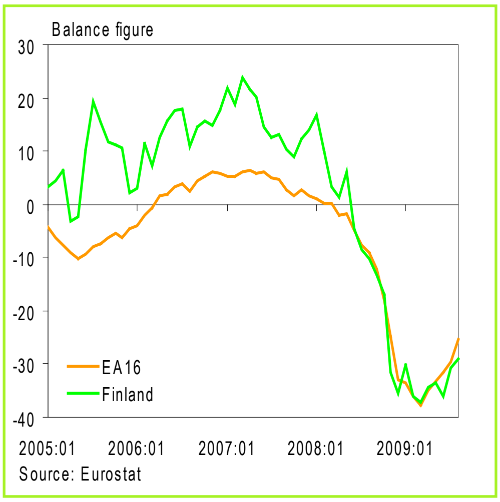
Economic outlook is brightening in certain parts of the world

On the basis of the rise in confidence indicators for European as well as US manufacturers and consumers, we can say that economic prospects have taken a turn for the better. The complete lack of confidence and cloud of gloominess hanging over the world economic outlook at the end of last year have abated.

International leading indicators 1995:01–2009:07



Manufacturing confidence 2005:01–2009:08



The improvement in confidence also foretells a halt in the fall in production and industry is even showing signs of an upswing. The decline in industrial production appears to have stopped on a monthly basis during the summer in the EU region, especially in the larger member countries Germany and France. In the second quarter this has reflected also on the other countries' total production, which grew by 0.3 per cent compared to the previous quarter. Also US industrial production has begun to rise (based on July figures), and the drop in total production is coming to a halt there as well.

The economic growth of the developed countries will nevertheless not be swift for a long time. The rate of growth will be dampened next year by the weakening employment situation and its impact on service production. Whereas the GDP of the eurozone and the entire EU region will fall this year by about 4 per cent, next year it will grow already by 1.5 per cent owing to the pick-up in exports. US economic developments will not differ much from those in Europe. Its GDP will fall this year by 2.8 per cent and grow next year by 1.8 per cent.

To some extent it is surprising that the EU's new member countries – including Bulgaria and Romania – have fallen into a recession like the old member countries. The downturn in these countries (like Russia) is attributable to their relatively vulnerable financial system. On the other hand, the drop in production indicates that the new industrial capacity shifted to these countries from the West has not safeguarded their production. Evidently this recession is not characterized by such a regional redistribution of manufacturing operations that has plagued namely the EU's old member countries.

The unemployment rate of the eurozone this year will average 9.4 per cent, and next year it will rise by almost another percentage point. The outlook for the US labour market is not any brighter than that for Europe. The indebtedness of the US households and the need to shore up their financial positions will constrain private consumption for several years, which will dampen the recovery in the labour markets. This dilemma plagues countries in Europe like England, Ireland, Spain and Denmark, i.e. countries where borrowing has got out of hand. In contrast the German, Italian and French economies do not suffer from this problem. Germany fulfils all the prerequisites for becoming the engine of growth for Europe.

International economy

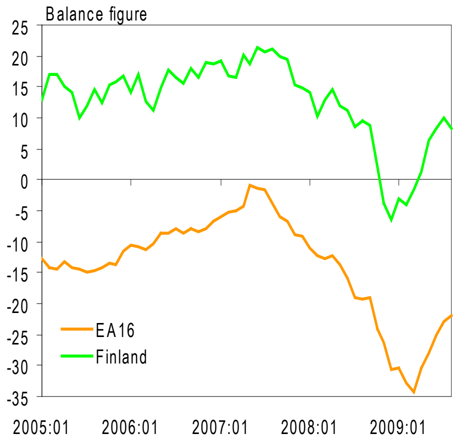
GDP growth (%)	2008	2009f	2010f
United States	1.1	-2.8	1.8
Euro-13	0.7	-4.1	1.5
Germany	1.3	-5.0	2.0
France	0.4	-2.2	1.5
Italy	-1.0	-5.5	1.0
EU27	0.8	-4.0	1.5
Sweden	-0.2	-5.5	1.8
United Kingdom	0.7	-4.0	1.2
Japan	-0.7	-6.0	2.0
Russia	5.6	-6.5	3.5
China	9.0	7.5	8.0

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

China - an exceptional case

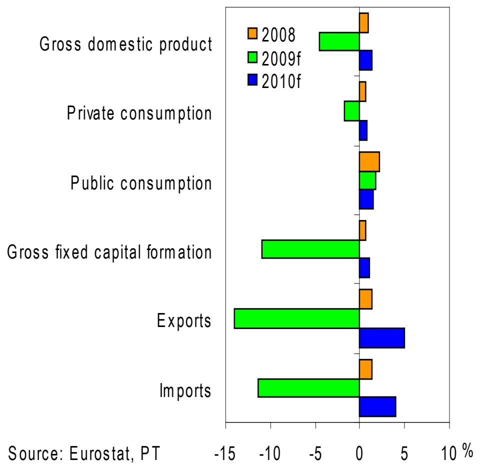
Outside Europe and North America the recent economic development of different countries has been two-fold. The economy of Japan outright collapsed at the end of last year, although its output began to recover already in the second quarter of this year. Japanese unemployment is, however, growing distinctly. The output of other industrialized Asian countries, such as South Korea, has also suffered from the global recession.

Consumer confidence 2005:01–2009:08



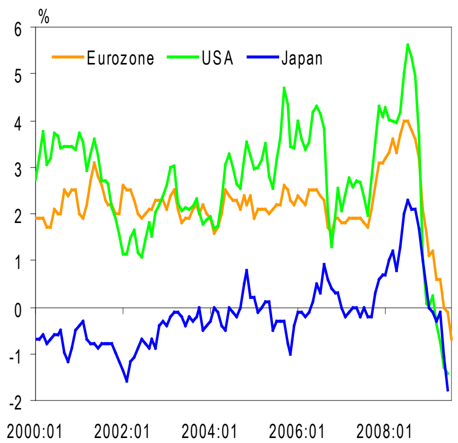
Source: Eurostat

Eurozone economic growth 2008–2010



Source: Eurostat, PT

Inflation in assorted countries 2000:01–2009:07



Source: Eurostat, OECD

China is an exception compared to almost all other countries in that the growth rate of its output has remained swift. China's success is attributable to the fact that its practically state-run financial system is protected from disruptions in the international market. Additionally China has succeeded in using reserves accumulated from foreign trade surpluses in strengthening domestic demand as its export demand has weakened. China's growing imports have benefited producers of raw materials the most, but it has also bolstered the economies of Japan and also other developing countries. Alongside China the developing economy of India might have suffered the least from the financial market crisis and its consequences.

The abrupt reduction of Russia's output in the early year has been surprising in that, like China, it would have had the opportunity to use reserves accumulated from foreign trade to strengthen domestic demand. Apparently Russia's vulnerable system of financial institutions prone to exterior disruptions is one reason for the fast downturn in its real economy. However, as the price of oil rises from last winter's rock bottom level, Russian total production has already staged an upswing during the summer. Next year its GDP will increase already by 3.5 per cent.

Financial crisis easing

On the basis of a survey made by the Eurosystem (ECB and euro region central banks), the worst of the credit crisis, which started in the last quarter of last year and in the first quarter of this year, began to be over in the second quarter of this year. In concrete terms this means that the ability of companies as well as households to obtain loans has improved and the risk premium included in the interest on their loans has decreased. It is also noteworthy that the banks' possibilities to gain financing from the bond markets have improved.

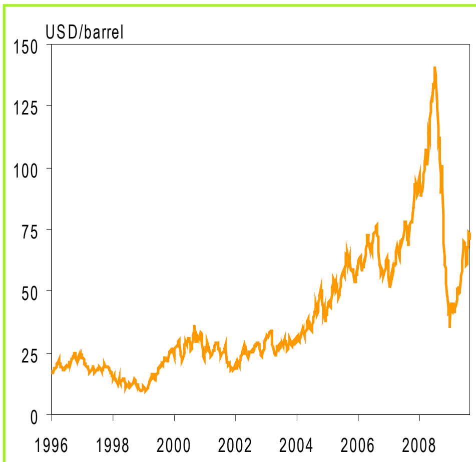
The situation in the financial markets will continue to improve in the third quarter of this year. The situation is nevertheless still tenser than normal. In Europe and especially the US, the possibilities of other than the most creditworthy companies to gain funding from the bond markets are still weak. This problem applies to the US and England, where the significance of the bond market is greater than in continental Europe. The financial crisis is still evidenced by the fact that the short-term funding from the commercial paper markets has not recovered to the level preceding the crisis in the US or Europe.

Monetary policy extremely loose

The Euroean Central Bank has continued to lower its repo rate during the winter and spring and since May 13 it has been one per cent. The US Federal Reserve lowered federal funds target rate to between one and 0.25 per cent already in December last year. Relatively soon after the outbreak of the economic crisis (already last October) the Fed began to bolster the functioning of the money markets by buying companies' short-term commercial paper. In November the Fed began to fund the federal home loan banks directly. At the same time it started a program to ease the availability of loans for households and small and medium-sized enterprises.

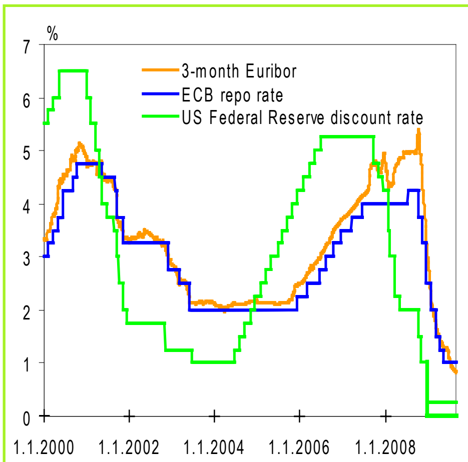
Japan's central bank has in many of its actions followed the lead of the US Federal Reserve. In March the Bank of England resorted to traditional money printing by buying government issued bonds. The ECB has nevertheless refrained from taking steps to stem the collapse of the commercial paper markets, for which reason the burden for reviving these markets has been left up to the feeble efforts of national

World market price of crude oil (Brent) 1996–2009



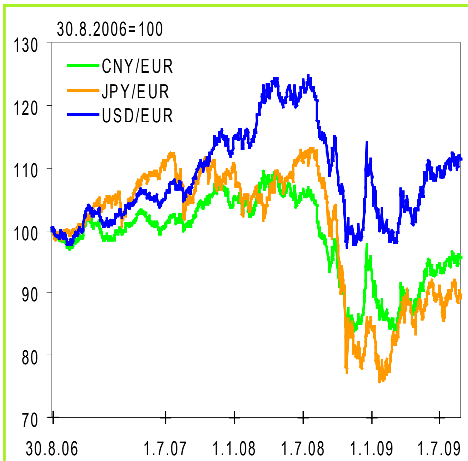
Source: Energy Information Administration

Short-term interest rates 3.1.2000–27.8.2009



Source: ECB, Bank of Finland

Exchange rates 30.8.2006–27.8.2009



Source: ECB

governments. Finally in June 2009 the ECB decided to support longer term markets by beginning to grant banks one-year financing.

It can already be said that the lowering of interest rates by the central banks as well as the easing of financing terms has played a key role in defusing of the credit crisis. The availability of financing has indeed improved and its terms have become more attractive to the borrowers. The significance of financial market factors in the current stage of the recession is receding, but the problem of insufficient demand has not eased.

The central banks have done what they can in order to alleviate the financial crisis. No significant new liquidity increasing interventions are expected. On the other hand, the monetary policy of the developing countries cannot be expected to be tightened for many months since the economies in these countries have fallen into such a deep recession. It is nevertheless apparent that toward the end of next year as the pick-up in economic growth begins to be surer and the signs of an acceleration of inflation become more clear, monetary policy will be tightened. The Labour Institute for Economic Research indeed forecasts that the ECB will raise it repo rate by a total of 1.5 percentage points in the latter half of next year. Three-month Euribor will average 1.5 per cent next year and thus remain on a relatively low level.

Currency exchange rates have fluctuated strongly during the economic crisis. In recent weeks the euro has again begun to appreciate against the dollar. During the last year also the Swedish krona, English pound and Russian rouble have weakened significantly against the euro. In recent weeks the Swedish krona has nevertheless begun to strengthen against the euro so that, for example, the Swedish forest industry's competitive advantage relative to the Finnish forest industry has been trimmed by half.

Demand and supply

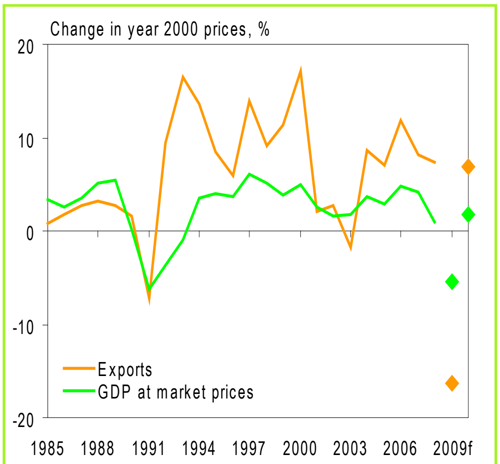
	2008 Bill. €	2008	2009f	2010f
		Percentage change in volume (%)		
Gross Domestic Product	184.7	1.0	-5.5	1.8
Imports	79.6	7.0	-13.8	3.0
Total supply	264.3	2.8	-8.0	2.1
Exports	86.8	7.3	-16.4	6.9
Consumption	136.8	1.9	-1.7	0.1
private	95.6	1.9	-2.8	0.1
public	41.3	2.0	0.7	0.0
Investment	38.1	0.3	-11.0	-1.4
private	33.3	0.4	-13.8	-1.9
public	4.8	-0.3	8.3	1.8
Change in stocks	2.6	-40.1	-10.1	34.2
Total demand	264.3	2.8	-8.0	2.1

Source: Statistics Finland, Labour Institute for Economic Research

Fiscal policy still has leeway for stimulus

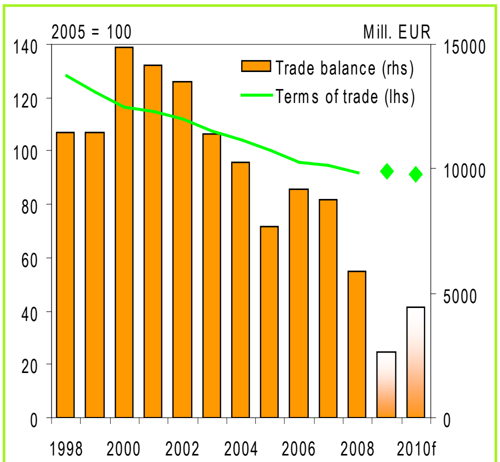
The global scope and severity of the current recession has prompted international economic organizations and the European Commission to encourage cooperation between countries and to coordinate fiscal stimulus. Last year in December the IMF set a goal that countries should stimulate their economies with additional spending and tax cuts so that the fiscal impact of the stimulus would climb to 2 per cent of world GDP. At the same time the European commission set a goal that discretionary stimulus should rise in the EU region to at least 1.5 per cent of GDP. At the EU level the need for coordination of fiscal policy is attributable to

Change in total production and exports 1985–2010



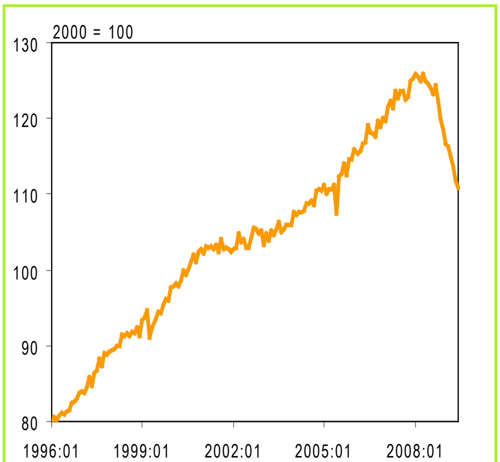
Source: Statistics Finland, PT

Terms of trade and trade balance 1998–2010



Source: Statistics Finland, PT

Trend indicator of output 1996:01–2009:06



Source: Statistics Finland

the fact that much of the benefits from the stimulus are felt in the other countries in the region as their export markets strengthen.

Estimates of the stimulus and the magnitude of its discretionary elements have been imprecise to some extent and can vary from one to the next depending on the types of indicators used. Table 3 presents the scope of stimulatory decisions in the G20 countries and Spain relative to GDP based on calculations where stimulus is defined as new decisions coming on top of the old spending and tax bases. The problem with this approach is that it does not take into account the differences in the tax bases smoothening out growth in expenditures.

Table 3. Stimulus of large countries relative to 2008 GDP

	Spending in 2009		Different years combined	
	Stimulus (%)	Tax cut share (%)	Stimulus (%)	Tax cut share (%)
France	0.7	6.5	0.7	6.5
Germany	1.5	68.0	3.4	68.0
Italy	0.2	0.0	0.3	0.0
Spain	1.1	36.7	4.5	36.7
England	1.4	73.0	1.5	73.0
China	2.1	0.0	4.8	0.0
Japan	1.4	30.0	2.2	30.0
Russia	1.7	100.0	1.7	100.0
USA	1.9	44.0	5.9	34.8

Source: Eswar Prasad and Isaac Sorkin: Assessing the G-20 economic stimulus plans a deeper look, March 2009, Brookings, http://www.brookings.edu/~/media/Files/rc/articles/2009/03_g20_stimulus_prasad/03_g20_stimulus_prasad.pdf

Table 4. Stimulus in EU countries in 2009, relative to GDP (%)

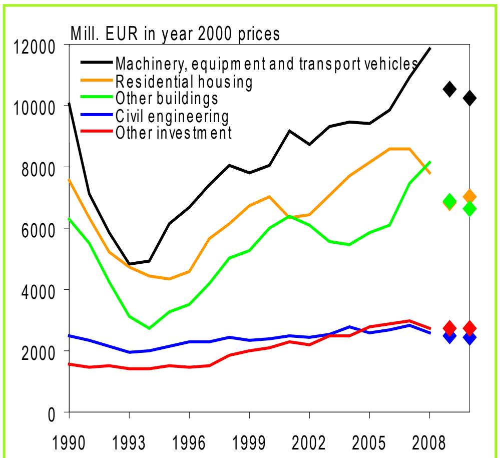
	Spending increases	Tax cuts
Denmark	0.3	0.1
Germany	0.6	0.8
Spain	1.0	1.3
Finland	0.4	1.1
France	0.7	0.3
Italy	0.2	-0.2
Netherlands	0.4	0.5
Eurozone	0.5	0.5
Poland	0.3	0.7
Sweden	0.6	0.8
England	0.4	1.0
EU-27	0.5	0.6

Source: Public finances in EMU – 2009, European Commission Staff Working Document 5/2009.

According to the calculations the stimulus of the G20 countries this year will rise on average to 1.4 per cent of GDP, which falls short of the IMF target. Of all the countries, the US and China have stimulated relatively the most. Of the EU countries, Germany's and England's stimulus is on an average level but France and Italy have been passive. Stimulus by Germany and England has been based largely on tax cuts. Next year Germany, the US and China will continue to stimulate at least on the same magnitude as this year.

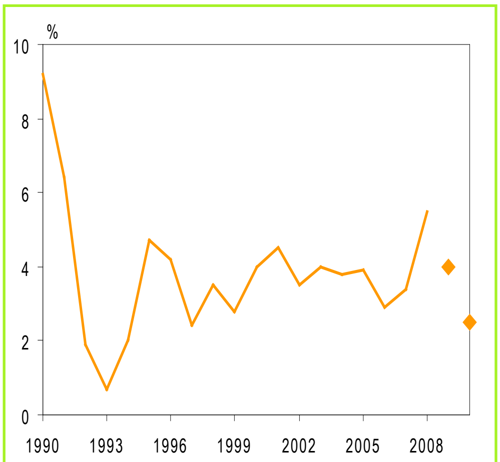
Also the European Commission has appraised the fiscal policy of its member states. The figures presented in table 4 are based on almost the same principles as those in table 3. The figures are preliminary and they are influenced by how the member states have reported to the EU Commission. As regards Finland, the figures do not include expenditures (reported as 0.2 per cent of GDP) that have been used to improve the availability of financing for companies. These kinds of expenditures that

Investments 1990–2010



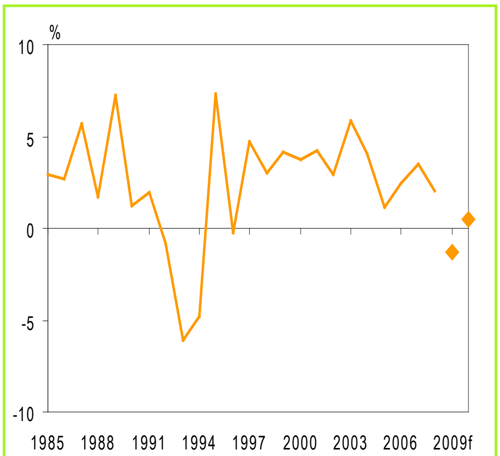
Source: Statistics Finland, PT

Change in level of earnings index 1990–2010



Source: Statistics Finland, PT

Change in household real disposable income 1985–2010



Source: Statistics Finland, PT

are part of the government's financial operations and which also generate income are not included in other counties' stimulatory measures either.

The stimulus by the EU as a whole will rise this year to about one per cent of GDP, thus falling short of the target by 0.5 percentage points. Finland has stimulated more than the average, but the focal point of stimulus has been on tax cuts more clearly than elsewhere in Europe.

In the EU countries public expenditures and tax revenues are subject to strong cyclical fluctuations. The automatic nature of these fluctuations fosters economic activity when it is not eliminated with fiscal policy. Owing largely to these automatic effects, the deficit of the EU countries will deepen this year relative to GDP from last year's 2.3 per cent to 6 per cent. Next year the deficit is forecast to grow to 7.3 per cent. Discretionary decisions account for only 1.1 percentage points of this year's deficit growth. The fact that the governments' are not eliminating this fluctuation by cutting spending or by raising taxes is of pivotal importance in combating the recession.

It is difficult to get a firm grip on the direction of fiscal policy next year for Europe as a whole. It is known that Germany's stimulatory measures will extend into next year. In the case of several other countries it is to be expected that discretionary-based stimulus will be reduced or it will be eliminated completely. It appears that the Commission will not urge its member states to implement new active measures. It can be concluded that fiscal policy will become neutral too soon. In order to stem the rise in unemployment, the stimulus should be continued for at least one more year.

The preconditions of countries to carry out debt-financed stimulus must also be judged on the basis of the terms under which can the central governments can borrow. The economic crisis has highlighted the risks associated with countries' abilities to service their debts, so that interest rate spreads on government bonds have widened.

Table 5. Eurozone 10-year government bond rates, % (August 28, 2009)

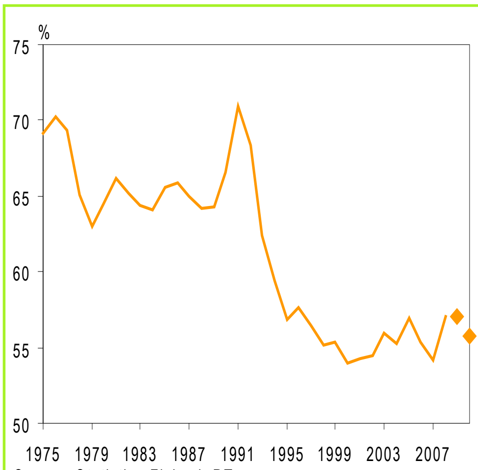
Finland	3.54
France	3.49
Germany	3.23
Italy	4.03
Ireland	4.76
Spain	3.73
Netherlands	3.52

The large size of a country and low debt in the public and private sectors contribute to lower interest rates. The position of central governments in the financial markets is nevertheless very strong during a crisis compared to other borrowers. The availability of financing has not become so unreasonable, even for Italy, that this could be used as an excuse for the passivity of fiscal policy.

Finnish exports recovering next year

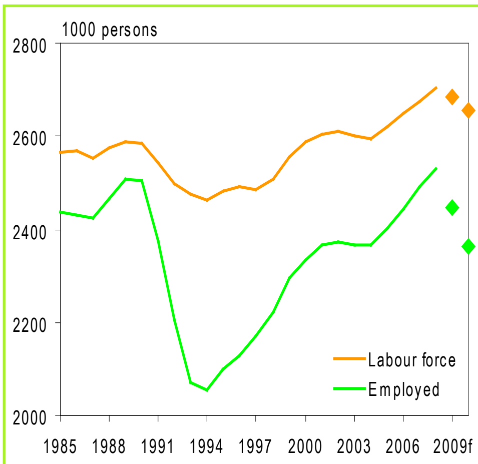
The international financial crisis rather quickly affected Finnish exports, which experienced a sharp downturn already in November of last year. Exports subsequently decreased all the way until May. In the first half of this year the value of the goods exports decreased by 36 per cent. However, this reduction is exacerbated by a large ship delivery taking place at the start of last year, while this year a corresponding delivery will take place in September. In the rest of this year goods exports will nevertheless begin to recover on a monthly level as the demand for industrial products is strengthened by

Functional distribution of income in business activities 1975–2010



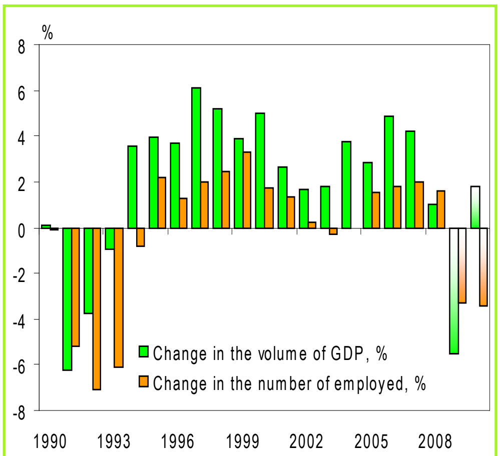
Source: Statistics Finland, PT

Supply of labour and employment 1985–2010



Source: Statistics Finland, PT

GDP and employment 1990–2010



Source: Statistics Finland, PT

the improving economic outlook and goods inventories being replenished. Demand will recover first in products of the process goods industry and the consumer goods industry and not until later in products of the machinery and equipment industry, possibly in the latter part of next year. All in all the amount of goods and service exports will drop by 16 per cent this year, but they will increase by about 7 per cent already next year.

The reduction of export and domestic demand has also led to a substantial decrease in imports. This year the import of goods and services will, however, decline less than exports, about 14 per cent. Next year the volume of imports will increase by 3 per cent.

Export and import prices of goods have also dropped substantially in the first half of this year. These prices will fall this year by an average of 8.5 per cent from last year. The recovering of the international economy and the raw materials market will lift foreign trade prices distinctly already next year. Import prices will rise a couple of percentage points more than export prices. The trade surplus, which will shrink this year by over three billion euros from last year, will nonetheless strengthen next year by a scant 2 billion euros due to the rather fast growth of the volume of exports.

Investments continue to fall next year

Private investments declined by about 11 per cent in the first quarter of this year in comparison to a year ago. Housing construction was in a steep decline and civil engineering construction also started to fall. Uncertainty experienced by businesses was also reflected in machinery and equipment investment, which dropped clearly in the beginning of this year. According to figures on construction permits and new starts, the decrease of construction can be expected to continue also in the rest of the year. Especially retail and office construction will plunge sharply. News about civil engineering construction is also bad. The state-owned road construction company Destia recently announced that it would carry out lay-offs in road and bridge construction work. It appears that effects of the government's stimulatory measures will remain small in civil engineering construction, which as is well known is dependent on public purchases. Only renovation construction remains on a growth path, which prevents the full collapse of construction.

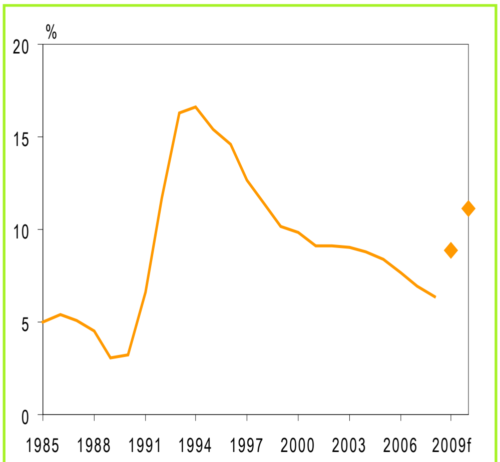
Total private investments are expected to fall by 13.8 per cent this year. The downturn in construction is expected to level off towards the end of next year due to low interest rates and improving cyclical expectations. Housing construction will thus grow slightly next year from the very low level of the ongoing year. Other construction and machinery and equipment investments will also dwindle next year and total private investment will decrease by about 2 per cent from this year's level.

Service sector in trouble

As a result of the collapse of the export market, output has fallen at a record rate in the beginning of this year. Output has fallen across the board. However, the forest industry struggling with structural change and the metal industry dependent of foreign investment demand have suffered the most. Output has been adjusted mostly by having the machines at a standstill. Plants have also been shut down particularly in the forest industry. Construction has also died down. Without the pull of renovation construction, activity would have come to an almost complete halt. In the service sector, which typically reacts to changes in cyclical conditions more slowly, a distinct downturn has also occurred.

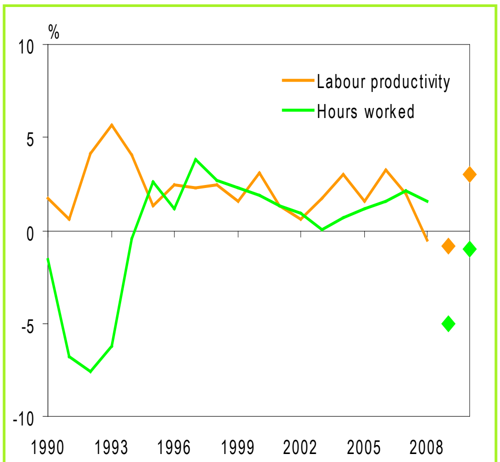
Towards the end of this year a turn for the better is going to take place in industry. The upswing is based first and foremost on the export market imp-

Unemployment rate 1985–2010



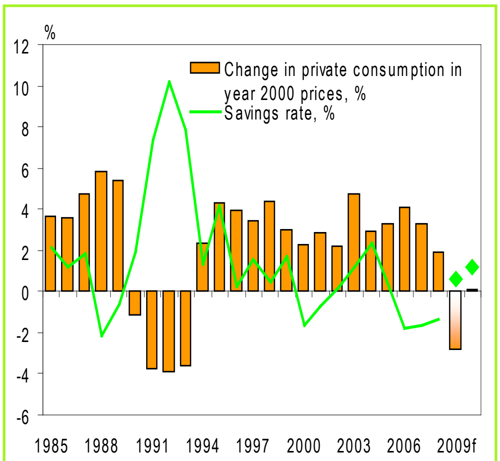
Source: Statistics Finland, PT

Change in labour productivity and hours worked 1990–2010



Source: Statistics Finland, PT

Private consumption and savings rate 1985–2010



Source: Statistics Finland, PT

roving. The recovery is a specific result of the expectations and confidence of businesses and consumers brightening up in large EU countries. Also the already known need to restock depleted inventories with additional production will already be visible in Finnish industry in the end of the year. Here in Finland new orders of the industry have increased somewhat, but not sufficiently. It looks as though the order-books of the machinery and equipment industry will not start to grow distinctly until the latter part of next year.

Key forecasts

	2008	2009f	2010f
Unemployment rate (%)	6.4	8.9	11.1
Unemployed (1 000)	172	238	294
Employed (1 000)	2531	2447	2363
Employment rate (%)	70.6	68.1	65.9
Inflation, consumer price index (%)	4.0	0.2	1.6
Wages, index of wage and salary earnings (%)	5.5	4.0	2.5
Real disposable income of households (%)	2.0	-1.3	0.5
Current account surplus (Bill. €)	4.8	1.6	3.5
Trade surplus (Bill. €)	5.9	2.7	4.5
Central government financial surplus			
Bill. €	1.6	-8.2	-11.2
% / GDP	0.9	-4.6	-6.1
General government financial surplus			
Bill. €	8.1	-5.8	-8.7
% / GDP	4.4	-3.3	-4.8
Emu debt			
% / GDP	34.2	43.1	50.6
Tax rate (%)	43.1	41.2	40.3
Short-term interest rates (3-month Euribor)	4.6	1.3	1.5
Long-term interest rates (10-year gov't bonds)	4.3	3.9	4.6

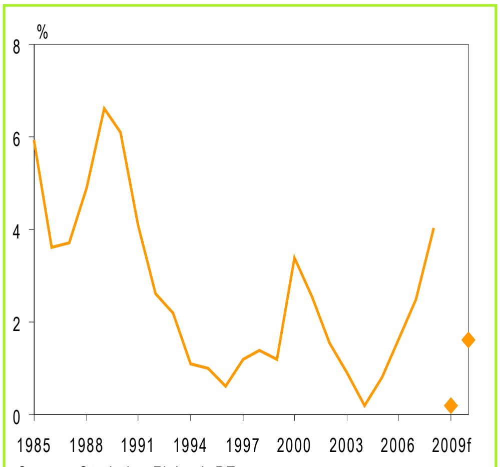
Source: Bank of Finland, Statistics Finland, Labour Institute for Economic Research

The economic growth will still be slow in 2010 in the service sectors reliant on the domestic market and employment developments. On the other hand, in the wholesale and retail trade a large drop was already seen in the beginning of this year, so the low level of comparison will spur higher growth figures than in other service sectors next year. The VAT cut going into effect in October will also bring about its own positive effect to the trade sector. In construction the worst drop will take place this year and so next year housing construction is indeed forecast to recover slightly from this year's very low level. In other construction positive growth figures will not be reached until the year 2011.

Wage growth will slow down and wage bill shrink

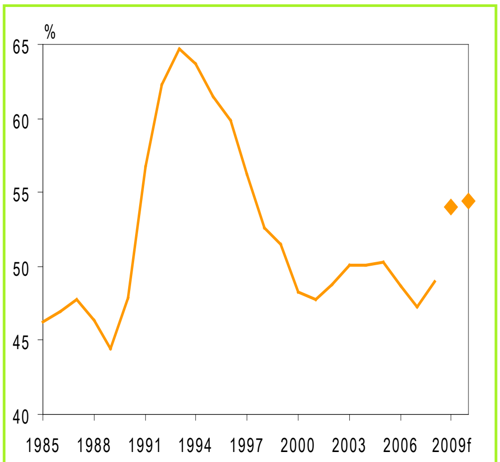
Most of the two-year union-level wage agreement will expire this year. One of the main elements of the wage settlements was the increased prevalence of local agreements and the one-off compensation paid at the beginning of the settlement period. The service sectors and public sectors ended up

Change in consumer prices 1985–2010



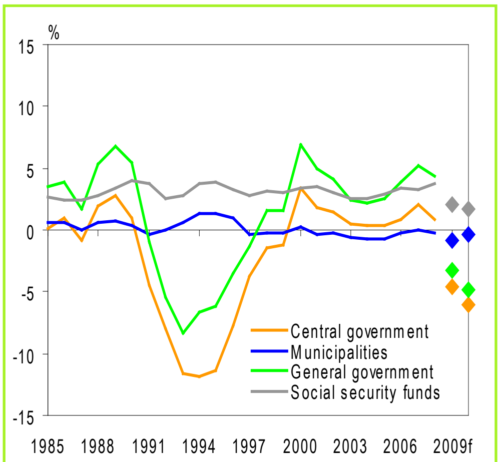
Source: Statistics Finland, PT

Public expenditures as percentage of GDP 1985–2010



Source: Statistics Finland, PT

General government financial surplus as percentage of GDP 1985–2010



Source: Statistics Finland, PT

with somewhat higher percentage increases than in industry. Owing to the carry over of wage increases, the wage earnings index will rise this year by 4 per cent, of which 3.6 percentage points is attributable to the increase in contract wages. We forecast that the level of wage earnings will increase by 2.5 per cent in the year 2010. Most of the rise in the level of earnings stems from agreements already signed. The wage hikes in new agreements will fall well short of those in the previous agreements. The technology industry sectors have just signed new agreements whose direct cost impact is half a percentage point. In the current economic situation the trends in flexible components of compensation such as bonuses will remain moderate.

The downturn in the economy reduces the demand for labour, and the number of hours worked falls faster than employment. Average hourly earnings also grow much more slowly than the level of earnings. In total, the wage bill will decrease this year by 1.7 per cent. During 2010 the weakening of employment will come to a halt and the wage bill will grow by 1.6 per cent. In the current situation companies' operative surplus will drop and the portion of salaries in value added will increase correspondingly. Employee compensation accounts for 57 per cent of the value added of the private sector this year.

This year households' property income will drop strongly. The growing uncertainty sharply increased the popularity of deposits and households' equity investments and dividend income fell. The swift decline in deposits rates will reduce interest income, but in turn the interest expenses on home loans will fall this year. Forestry income will drop to below half of last year's level. The purchasing power of employees will be boosted this year by tax cuts, but the deterioration of employment will have an even greater impact on households' income development. Next year the trends will change, interest rates will rise, employment will level off and households' real income will grow, but only slightly. Household's disposable income will grow this year nominally by 0.2 per cent and next year by 1.8 per cent.

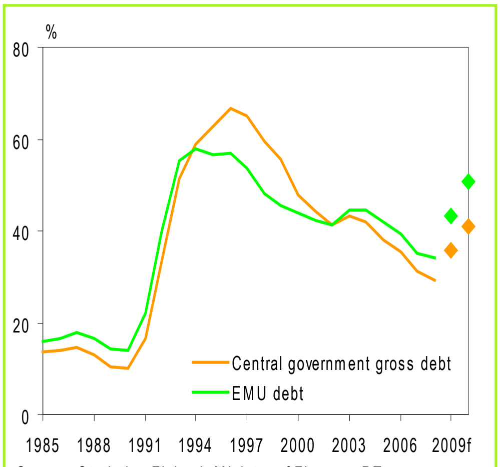
Unemployment continues to rise

The recession started to show up in employment figures in the beginning of this year. During the spring the number of employed persons decreased every month in comparison to figures from a year ago and the descent has become sharper as the year progresses. In July the unemployment rate was 7.7 per cent. At that point the unemployment rate consistent with the trend series and seasonally adjusted was 8.9 per cent. The amount of employed persons had decreased by 3.8 per cent in July in comparison to the previous year.

The downslide in employment will continue for the rest of this year and still into the latter half of the next year, when employment developments will stabilize. Most likely there will be no more great changes in employment during the last months of 2010, but the average change of the year will be clearly negative in any case. This year the amount of employed persons will decrease by an average of 3.3 per cent and 3.4 per cent next year, so a reduction of 84,000 jobs will take place both years. The unemployment rate is 8.9 per cent on average in the year 2009. It will rise towards the end of the year, averaging 11.1 per cent in 2010.

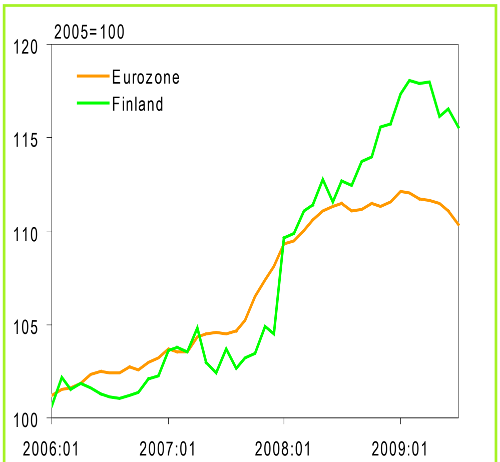
Adjusting to the decrease in labour demand has taken place through employment but also through the reduction of hours worked. Hours worked have decreased in the beginning of the year more than the number of persons employed. This is presumably due to lay-offs and the reduction of over-time. Therefore hours worked are forecast to decrease in 2009 by an average of 5 per cent, i.e. slightly more than employment. However, in the future the adjustment will take place more through employment. In 2010 recovering demand will first increase productivity and then hours worked per employed person. Therefore in 2010 hours worked will dec-

Central government gross debt and general government EMU debt as percentage of GDP 1985–2010



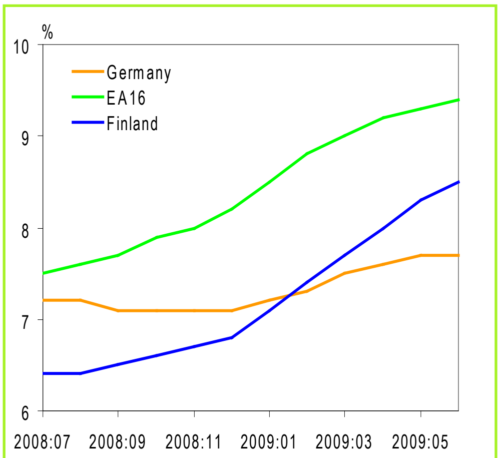
Source: Statistics Finland, Ministry of Finance, PT

Price index of food and beverages (excl. alcohol) 2006:01–2009:07



Source: Eurostat

Unemployment in assorted countries 2008:07–2009:06



Source: Eurostat

rease only by an average of one per cent, although employment will still continue to decrease comparatively sharply.

The development of hours worked has also been reflected in the productivity of the entire economy. Even last year the labour input was not reduced in sync with the decreasing output, which led to the exceptional weakening of labour productivity on the level of the aggregate economy. This year labour productivity will no longer weaken, and next year it will already improve clearly. The phenomenon is familiar from the recession of the 1990s. As the recession progresses the least productive places of employment are eliminated and, on the other hand, the recovery of overall output begins in industry, which is visible in the improvement of productivity.

Typically in a recession the labour force participation rate of the working aged population decreases, as unemployed persons exit the labour force after stopping active job searches. Some move on to retirement and some to studying and household work. The labour force participation rate of the working aged population has already subsided this year as a result of weakening prospects and it has been slightly lower than in the same month of 2008. The annual average of the labour force participation rate of 15-74 year olds will descend from 67.5 per cent to 66.7 per cent in 2009 and still on to 65.7 per cent in 2010.

In recent years the population has increased slightly faster than predicted due to net immigration and the same trend will also continue during the recession. Due to the population structure the number of the 15-64 year olds will, however, turn to a descent in 2010, which in part will decrease the amount of the labour force, although the working aged population (15-74 year olds) will continue to increase.

Consumption by households falls and savings increases

Before the recession private consumption increased for a number of years faster than disposable income and as a result household indebtedness climbed. The average debt in households with housing loans was one and a half times their annual income. Over 200,000 households had a debt of over three times their annual income. The savings rate of households was a negative 1.4 per cent last year. In the fall of 2008 consumption turned to an abrupt descent, which was preceded by the weakening of consumer confidence. In the beginning of the year consumption has deteriorated even more. For example, new car registrations are down 40 per cent compared to a year ago. Households are postponing purchases and even cutting back on everyday expenses. The exceptional nature of the situation is illustrated by the fact that in the first quarter of this year the value of durable consumer goods purchases plunged by 23 per cent. The structural change of consumption will accelerate the weakening of central government finances.

Although consumer confidence has turned to a descent, this has not yet been visible in wholesale and retail sales figures in the first half of the year. We anticipate that consumption will take a turn upwards from its low point already by this year. The estimate is based on improving consumer confidence, decelerating inflation and falling loan interest rates. On an annual level the 15 per cent descent of durable goods purchases will lead to an overall 2.8 per cent reduction of the volume of private consumption in 2009. The slight recovering of the economic situation taking place next year makes the release of the pent-up demand possible with respect to purchases of durable goods. In 2010 private consumption could turn to a slow growth as household savings has become balanced.

Consumer prices falling along with interest rates, harmonized inflation faster than eurozone

Up until the beginning of the year the consumer price inflation was still over 2 per cent. Inflation was sustained by the 10 per cent hike in alcoholic beverage and tobacco taxes in the beginning of this year and the rise in housing loan interest rates as a result of the turmoil in the financial markets in the autumn. Thereafter the inflation rate dropped quickly, and in the summer consumer prices turned to a descent. In the beginning of October the VAT on food will decrease from 17 to 12 per cent. If three fourths of this is passed on to retail prices, commodity prices will decrease by 3,2 per cent and the inflation rate will decrease by 0,4 percentage points. On average, consumer prices will rise by 0,2 per cent in 2009.

The development of domestic inflation is influenced primarily by the cost of living and loan interest rates and they will lower consumer prices by over one per cent. In the second quarter of this year the prices of crude oil and other raw materials will start to rise. The target level of 75 dollars per barrel set by OPEC has been met and is significantly higher than the 35 dollar level prevailing at the turn of the year. Presently a natural price range for the future barrel price is 60-90 dollars. There is a danger that output will not increase sufficiently when oil demand begins to pick up again after the economic crisis has passed. At least in the beginning of 2010 the prices of oil and other raw materials will boost consumer prices compared to this year.

The major weather phenomenon known as El Niño is increasing the risk of dryness and poor crops in East Asia and Australia, which might raise the world market price for wheat at least. Next year interest rates will start to climb from their present low point. Furthermore, consumer prices will rise as a result of the increase in tobacco product taxes in the beginning of the year, the one per cent hike in VAT in July and the raising of taxes on sweets. On average, consumer prices will rise by 1.6 per cent next year. Finland's harmonized consumer price index, which has eliminated the effects of the descent of interest rates and housing prices, will increase by 1.5 per cent this year, thus being distinctly higher than in the eurozone on average. No significant change will be visible next year in the harmonized inflation and we estimate its annual average to be 1.4 per cent.

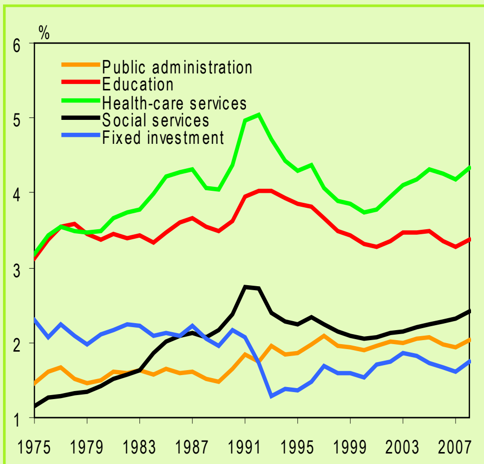
State deficit growing sharply

In 2009 the central government financial surplus will weaken by almost 10 billion euros, resulting in a deficit of 8.2 billion euros. About 1.4 billion of this shortfall is attributab-

Municipal expenditures have not ”got out of hand”

Recently certain politicians have claimed that the municipal spending has got out of hand. This kind of conclusion cannot be made based on the adjacent graph, which presents the main components of municipal spending relative to GDP since the mid-1970s. Municipal expenditures are now approximately on the same level as before the recession 20 years ago. It is natural that the curves rise when the GDP growth used as the ratio’s denominator weakens, as occurred for example in the recession in the early 1990s and in 2008. An interesting structural change appears to have taken place in the early 1990s: the municipalities’ administrative expenditures relative to GDP permanently climbed to a higher level while as the exact opposite occurred in their investment expenditures.

Items of consumption and investment by local government 1975–2008



Source: Statistics Finland

le to the drop in value added tax and car tax revenues. Indirect tax revenues will fall by a total of almost 5 per cent. Hikes in alcohol and tobacco tax will generate about 150 million euros for the state coffers. Inheritance and gift tax revenues will decline by about the same margin.

The fall in earned and capital income tax revenues will increase the state deficit this year by 1.6 billion euros and corporate tax revenues will drop by 2.4 billion euros. Total tax revenues will be 27 per cent lower than last year. The gap between state property income and expenditures will widen by about 900 million euros. Despite the increase in the debt, interest expanses on the state debt are forecast to decline this year by about 20 per cent owing to the decline in interest rates, but property income will fall by about 40 per cent.

Central government income transfers to the municipalities and social security funds will grow by slightly over two billion euros. Regarding the latter, some of the steepest growth is attributable to the compensation earmarked for KELA (the Social Insurance Institute of Finland) for the gradual elimination of employers’ national pension contributions. In the supplementary budget proposal, the growth of state consumption and investment expenditures is slightly higher than forecast in the beginning of the year, but the difference is only a few tens of millions of euros.

In 2010 the state deficit will increase to 11.2 billion, i.e. three billion euros higher than projected for this year, even though growth in consumption and investment expenditures will be cut substantially. The lowering of the VAT on food and restaurants means that total indirect tax revenues will grow by only 100 million euros. Earned and capital income tax revenues will fall by a further 550 million euros, but corporate taxes are expected to generate approximately as much as they will this year. State property taxes will remain at almost the same level as for this year. Next year the largest increases in state expenditures will occur in funds allocated to KELA as compensation for the elimination of employers’ national pension contributions, state revenue sharing distributed to municipalities and unemployment security.

Municipalities save and raise taxes

Despite the severe recession and municipal tax cuts, municipal tax revenues will decline by only a couple of per cent in 2009. Municipal income development will be bolstered, among other things, by steering a greater portion of the corporate tax revenues to the municipalities. An 8 per cent growth in state revenue sharing will also ease the situation of the municipalities. Municipal taxes will rise by only 0.04 percentage points. This year the municipalities are forecast to cut back their consumption expenditure growth to 4.5 per cent from last year’s 7.1 per cent while investment expenditure growth is trimmed to 2 per cent from last year’s 11.5 per cent. Nonetheless, the municipalities will incur a 1.3 billion euro deficit this year, which is almost a billion greater than last year.

Municipal taxes are forecast to be raised next year by about 0.2 percentage points. As corporate tax revenues remain largely unchanged and property taxes rise, total municipal tax revenues will rise by slightly more than three per cent. On the other hand, the increase in state revenue sharing appears to be about half as much this year’s. Municipal austerity measures are expected to be aimed at consumption expenditures, which will climb in nominal terms by two per cent, while investment expenditures are reduced by three per cent. In this manner the municipalities will be able to cut their deficits to about 700 million euros.

In 2009 the property income and proceeds from contributions to the pension insurance institutions and other social insurance funds fell off sharply. At the same time the social benefits and assistance they paid out increased by almost 10 per cent. Their total financial surplus thus decreased by over three billion euros. Next year proceeds from contributions will rise by 3 per cent, while the financial deficit will decline by about 600 billion euros to 3.1 billion euros, i.e. 1.7 per cent of GDP.

This year total public consumption expenditures (central and local government) will grow in real terms by 0.7 per cent. As evidence of the lax fiscal policy stance, the growth of these expenditures will slacken to zero next year. It is even

Table 7. Institute's estimate of impact of government's active measures on taxes and social expenditures in 2010

Fiscal impact, million euros, tax or social expenditures decrease (-), increase (+)		
VAT changes (food, restaurants and general)	-290	
Increase in tax on beverages and candy	+50	
Alcohol and tobacco taxes	+75	
Car tax reform	-75	
Income tax scale adjustment (excl. elimination of impact of wage increase)	-560	
Other tax cuts	-80	
Municipal tax basic and retirement income deductions (for which the central government compensates the municipalities)	-380	
Total taxation changes		**-1260**
Elimination of employers' national pension contributions	-500	
Increase in employers' sickness insurance contribution	+140	
Increase in employers' unemployment insurance contribution	+120	
Increase in employers' TyEL contribution	+50	
Increase in employees' sickness insurance contribution	+270	
Increase in employees' unemployment insurance contribution	+130	
Increase in employees' TyEL contribution	+100	
Increase in entrepreneurs' pension insurance contribution	+15	
Total changes in social expenditures		**+325**
Total		**-935**

possible that they will subside appreciably. An even steeper decline is witnessed in public investment growth, which will decline from 8.3 per cent this year to 1.8 next year.

All in all public expenditure's share of GDP will rise 5 percentage points this year to 54 per cent, owing primarily to the fall in GDP and automatically triggered spending. Next year the corresponding expenditure ratio will remain almost unchanged. Total taxes as a percentage of GDP, on the other hand, will fall this year by a couple of percentage points and next year by a further 0.7 percentage points, ending up at slightly above 40 per cent next year. The general government's financial surplus relative to GDP will fall this year by some 7.7 percentage points to a 3.3 per cent deficit. Next year the public deficit will already be 4.8 per cent, i.e. clearly above the three per cent ceiling allowed by the EU stability and growth pact. Most of the 2.9 billion euro growth in the deficit is attributable to the central government, while the municipalities are assumed to be able to trim their deficit substantially next year. The central government debt will rise to 41 per cent relative to GDP next year while the total public debt will climb to 50 per cent. At its maximum the central government debt rose to 53.4 per cent of GDP, which is still over 10 percentage points away.

Estimate of fiscal policy stance in 2010

Below we present our estimate regarding Finland's fiscal policy stance next year. The calculations have been made for the most part according to the same principles as the Institute's assessment of fiscal policy in 2008 and 2009 published in February.

On the basis of the government's decisions on changes in taxation and social insurance contributions, we already have rather precise information about next year. Taxation will be eased further. The fiscal impact of the decrease in VAT on food alone amounts to -440 million euros in 2010. Hikes in social insurance contributions will be offset by income tax cuts. The adjacent calculations do not include cuts equivalent to 120 million euros that will be carried out so that progression would not tighten earned income taxation as income levels rise somewhat.

In net terms the tax cuts and changes in social insurance contributions reduce the revenues of the central government and social security funds by almost a billion euros, which is about 0.5 per cent of GDP.

Changes in state spending in 2010 and their estimated expansiveness

Central government expenditures rise in the government's first budget proposal from this year's? 49 billion to 50 billion euros, i.e. 2.0 per cent.[1] Expenditures have been boosted by the spending framework's 590 million euro increase as well as the 410 million euro increase outside the framework. The change in expenditures does not include the change in interest expenses nor the compensation to be paid to other tax recipients – mainly the municipalities and KELA (the Social Insurance Institute of Finland) - owing to the fall in tax revenues stemming from changes in the tax regulations. These changes have, on the other hand, been included in the calculation regarding tax cuts.

The rate of change in the price level of state expenditures has slowed down significantly from last year. In its March memo on the government's spending framework,

[1] *Still on the last day of August when this calculation was made, the bottom line for next year's budget was partly an estimate, because the Ministry of Finance has not published a precise figure.*

the Ministry of Finance projects (implicitly) that the price and cost level for the government spending framework will rise this year compared to last year by only 1.74 per cent. Based on this projection, the adjacent calculations assume that the state budget's price level will rise next year by only 1.74 per cent. Budget expenditures will thus increase in real terms by 0.44 per cent. In the adjacent calculation (table 8) the degree of fiscal policy expansiveness is based on the presumption that in a neutral situation state expenditures will grow at the GDP trend rate of 1.5 per cent, so that the so-called primary balance relative to GDP does not change. The trend rate of growth is again assumed to be 1.5 per cent per annum as in the Institute's fiscal policy estimate published in February.

Fiscal policy stance becoming neutral already next year

While fiscal policy is still expansionary on the whole this year, next year it is almost neutral. It should be mentioned that the adjacent estimate about this year's expansiveness has changed from that in February only because the state has made new spending decisions. Even though our estimate is made in a different way than that presented by the EU Commission in June, the estimates for spending stimulus do not differ from one another and the estimates for tax cuts are very close to one another (see tables 5 and 7).

Table 8. Institute's estimate of state's active fiscal policy

Impact relative to 2009 nominal GDP, %, expansionary (+), contractionary (-)	2009	2010
State budget expenditures	0.4	-0.3
Changes in taxes and social spending	0.9	0.5
Total impact	1.3	0.2

Finland's fiscal policy this year is somewhat more expansionary than in the eurozone on average. It nevertheless falls somewhat short of the EU Commission's target. The stimulus is also based almost exclusively on tax cuts. Tax decisions were originally made for structural reasons, but when the recession hit they began to be regarded as counter-cyclical. Because of their fiscal impact they indeed seem to be counter-cyclical, but due to the permanent nature of the decisions they cannot be deemed counter-cyclical, for which the EU Commission mildly criticizes Finland's policy.

On the basis of the fact that Finland's GDP is falling more than that in the eurozone and that our unemployment is rising faster than elsewhere in the eurozone, it cannot be said that our fiscal policy has succeeded very well. It must be admitted, however, that the development in Finland's neighbours has also been weaker than elsewhere in Europe, which has also affected Finland. Next year Finland's economic growth will be characterized by a recovery in exports while the employment situation continues to weaken. In order to stem unemployment and to combat especially long-term unemployment, a halt to fiscal policy-based expansion is undesirable.

In the tax reforms carried out in Finland the decrease in VAT rates on food are substantial. The lowering of VAT from 17 per cent to 12 per cent was decided upon in spring 2007 when it was included in the government's program. It was subsequently decided to implement the tax cut in the beginning of October this year. Not until the end of August this year was it decided to adjust the VAT rate on food to 13 per cent starting in July next year.

It is noteworthy that from the start of 2007 until July of this year the price of food has risen in Finland by 11.6 per cent, i.e. 5.2 percentage points more than in the eurozone on average. During the same period the level of prices excluding food has risen by only 1.2 percentage points more than in the eurozone. Thus Finland's high food inflation cannot be explained by the general rise in costs and prices. Finland's monopolized food chain may have raised prices already prematurely so that they can be lowered appropriately starting in October. Thus it is difficult to say whether the cut in VAT on food will spawn lower food prices. To the extent it lowers food prices, it tends to have a relatively greater impact on low income persons. As an equalizer of incomes, it is nevertheless an inefficient tool.

Finland's current fiscal policy is plagued by the delusion that our dilemma stems primarily from the inefficiency of the financial markets. On the other hand, no one questions the collapse in the export markets, but those responsible for fiscal policy have not considered it possible or sensible to try to offset this sufficiently by boosting domestic demand. Fiscal policy has stimulated domestic demand too little and to the extent expansionary measures have been taken, they have been focused too much on increasing companies' and households' income via tax cuts. During times like this, the efficiency of such measures is undercut by the way that companies have been content with shoring up their profitability while households have increased their saving.

A temporary and sharp increase in public consumption expenditures and investments is still necessary. It is justified on the basis of the anticipated continued deterioration of the employment situation. Support should be directed toward municipalities, housing construction as well as assorted public investment projects. The government's spending framework should not be allowed to tie its hands with respect to stimulus. The public spending stimulus should be raised to about one per cent of GDP.

Effects of economic growth on purchasing power of example families

One year ago the Labour Institute for Economic Research first published calculations in conjunction with its economic forecast in which the effects of wages, income transfers, taxes, housing loans, rents and children's daycare payments on the purchasing power of different example families. The calculations presented here have been updated for the year 2009 and entirely new estimates concern the year 2010.

The example families have been selected to describe Finnish households as diversely as possible. A person with the 2008 median income has been selected according to gender and job title or education background as the representative wage receiver. For example, the income level of a female nurse with the median income is such that half of female nurses earn more than her and half less.

Changes in gross income and net income are based on forecasts. Gross incomes are estimated to grow according to the general wage level development by 4 per cent in 2009 and 2.5 per cent in 2010. The gross incomes of pensioners have been calculated by forecasting national pension indexes and employment pension indexes for the year 2010. National pensions have been forecast to remain unchanged nominally while employment pensions have been forecast to grow by 0.6 per cent in 2010. In 2010 labour market support is expected to remain at the level of 2009.

The nominal net income of families have been calculated by using example forms from the JUTTA-microsimulation model. The model calculates net income by taking into account the tax system. Variables have been fit to presumptions and averages, for example, for union payments, municipal residency and rent level. The forecasts for parameter changes follow the general forecast. Due to the rise of municipal taxes, income taxation is forecasted to tighten by 0.2 percentage points in all income levels in 2010. According to the government's decision, the basic deduction of municipal taxation has been raised from 1480 euros to 2200 euros in 2010.

Family-specific inflation forecasts have been made by calculating family-specific consumption baskets according to the consumption study of Statistics Finland. By using inflation forecasts from different commodity groups, it was possible to calculate family-specific inflation.[2] Nominal incomes have been adjusted to 2008 money, so that real income is produced.

Example families

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 is an economist by education and the woman has a law education. Monthly wages are 5900 euros and 4700 euros. The family lives in a debt-free flat of their own.

White collar family, 2 children

The parents of the white collar family who are members of the STTK (Finnish Confederation of Professionals) are an engineer and a nurse. The monthly wages are 3150 euros and 2600 euros. The family has two children. They have a mortgage of 150,000 euros.

Blue collar family, 2 children

The parents of the blue collar family, who are members of SAK (Central Organization of Finnish Trade Unions), are a truck driver and a store sales person. Monthly wages are 2300 euros and 1850 euros. The family has two children. The family lives in a rented 80 square metre flat.

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 montlhly wage of 1700 euros. The family lives in a rented 60 square metre flat.

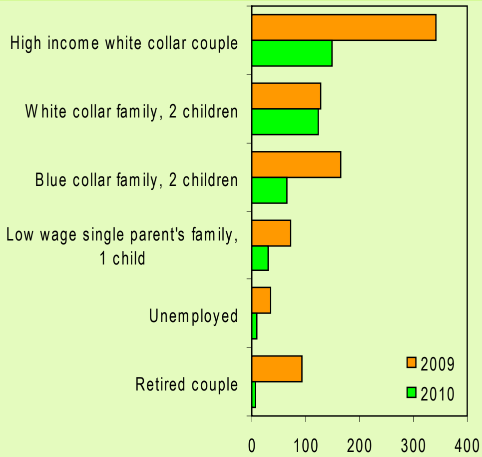
Single unemployed

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

Retired couple

The household consists of two retired persons, one of whom receives an employment pension and the other a national pension. The couple lives in a debt-free flat of their own.

Family-specific changes in nominal net income 2009 and 2010



Source: Statistics Finland, PT

[2] *Owing to the methods used by the consumption study for consumption items, it is difficult to take into account the housing costs of families living in debt-free flats of their own (high-income couple and retired couple), since these families' housing costs are only imputed and they can be regarded as mainly opportunity costs. The opportunity cost approach is approximated in these calculations by using general housing cost indexes instead of using either rental or owner-occupied housing costs.*

Nominal and real change of the net income of the example families

According to the forecast all of the nominal incomes of the example families will increase in 2009 and 2010. With all of the families the growth of nominal incomes is greater in 2009 than in 2010. This is due to the faster growth of wages, compensation and also pensions. For the blue collar family the difference between these two is relatively the smallest, because in 2009 the interest rates on their mortgage are the lowest, due to which interest deductions are also smaller. This in turn lowers the net income of 2009. In the year 2010 interest rates rise again and net incomes increase alongside the higher interest deductions.

There are noticeable differences in inflation rates between the families in 2009. The white collar family, paying interest off its mortgage, differs from others also with respec to this indicator, because lower interest rates push their consumption basket toward the side of deflation. The highest inflation hits the families living in rental housing: the unemployed person, the single parent and the blue collar family due to the rise in rent levels in 2009. In 2010 the inflation differences level out so that the inflation for all types of families is rather close to the annual average.

In terms of real income all families receive a tangible raise in 2009 first and foremost in relation to their own income levels. The swift growth of real incomes is due to the rise of the wage level, easing of taxation and low inflation. The last of these mostly concerns the white collar family, whose consumption basket becomes significantly cheaper this year. The real income of the unemployed person increases the least in the present year above all for the reason that inflation is highest with respect to the unemployed person.

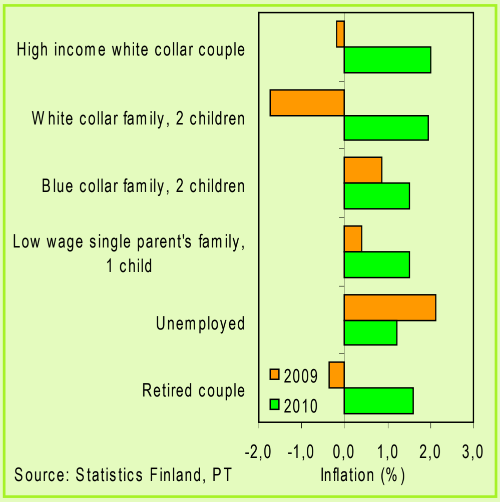
In 2010 the growth of the purchasing power of the families comes to a halt. In the cases of the retired couple and the unemployed person the relative growth of real income turns negative. For the retired couple the reason for this development is that the pension index increases are strongly tied to the consumer price change of the third quarter of the previous year, which will most likely be negative. Inflation will rise in 2010, which will lower real incomes. There is no significant growth of nominal income for the unemployed person either, so positive inflation will push the change of purchasing power into negative figures. In our example family even the basic deduction of the municipal taxation does not increase the real income of the unemployed person, because his welfare benefits would be reduced by a corresponding amount.

Impact of unemployment and lay-offs on family income

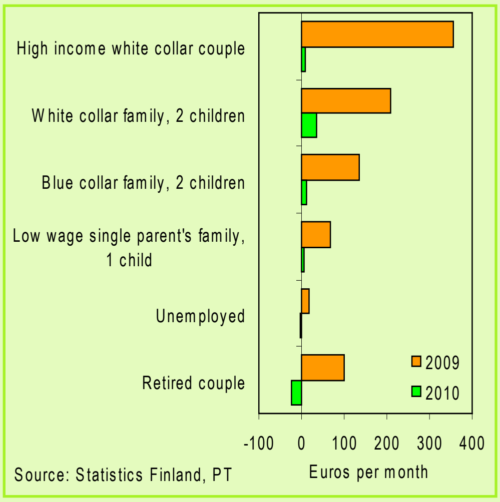
If the one adult of the worker family with better income were to undergo a full year of unemployment, the net income of the family would drop by about 19 per cent. The taxes payed by this family would descend far below received income transfers. If the same person were to undergo a three-month lay-off period, the net income would drop by about 2 per cent. In this case the taxes payed by the family are still higher than the income transfers received by the family.

The estimates concerning unemployment and lay-offs have been made with help of the JUTTA-model and the vero.fi -service.

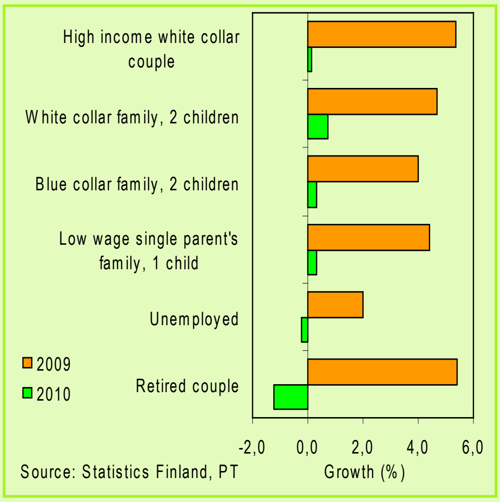
Family-specific inflation rates 2009 and 2010



Family-specific real income changes in euros 2009 and 2010



Family-specific relative changes in real income 2009 and 2010



Appendix table 1. Wage income and taxation 2008 (€/month)

Example families	Gross income	Received income transfers	Taxes	Net income	Taxes share of gross income
High income white collar couple	10600	0	3975	6625	0.38
White collar family (2 children)	5750	211	1482	4478	0.26
Blue collar family (2 children)	4150	211	973	3388	0.23
Low wage single parent's family (1 child)	1700	147	345	1502	0.20
Unemployed	527	400	97	830	0.18
Retired couple	2195	0	352	1843	0.16
Source: Statistics Finland, Labour Institute for Economic Research					

Appendix table 2. Wage income and taxation 2009 (€/month)

Example families	Gross income	Received income transfers	Taxes	Net income	Taxes share of gross income
High income white collar couple	11000	0	4033	6966	0.37
White collar family (2 children)	5967	211	1572	4606	0.26
Blue collar family (2 children)	4307	211	963	3554	0.22
Low wage single parent's family (1 child)	1768	147	340	1574	0.19
Unemployed	551	416	103	865	0.19
Retired couple	2302	0	366	1936	0.16
Source: Statistics Finland, Labour Institute for Economic Research					

Appendix table 3. Wage income and taxation 2010 (€/month)

Example families	Gross income	Received income transfers	Taxes	Net income	Taxes share of gross income
High income white collar couple	11274	0	4160	7114	0.37
White collar family (2 children)	6116	211	1598	4729	0.26
Blue collar family (2 children)	4414	211	1006	3619	0.23
Low wage single parent's family (1 child)	1812	147	355	1603	0.20
Unemployed	551	411	88	873	0.16
Retired couple	2313	0	370	1943	0.16
Source: Statistics Finland, Labour Institute for Economic Research					

Appendix table 4. Impact of unemployment and lay-offs on real net annual incomes

Scenario	Employed	3 months laid off	12 months unemployed
Wage income	51137	44037	22735
Taxes	11438	9123	8532
Received income transfers	2499	6539	20125
Net income	42199	41372	34329
Source: Statistics Finland, Labour Institute for Economic Research			