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Contents

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The cover portrays the work of T.J. Häkkinen 'Ilves' (1948).

Preface

The pace of wage rises has increased in Finland. Union-level negotiations conducted last year and in the early months of this year produced much larger increases than in previous years. The increases are such that average wages in Finland look set to rise significantly faster than the euro area average. This is at the same time as a forecast slowdown in labour productivity growth. Moreover, growth in real national income will be subdued in the years ahead, as now, by the weakening trend in the terms of trade, ie rising import prices relative to export prices. The pay deals already agreed will weaken the international cost-competitiveness of Finnish production and increase upward pressures on consumer prices in Finland.

It is possible that the international economy is now embarking on a serious downturn because of the ongoing difficulties on the financial markets. If this is indeed the case, it will also mean a considerable deterioration in the economic outlook for Finland. The simultaneous weakening of cost-competitiveness caused by the large pay increases will in this case further exacerbate the situation in Finland.

The Finnish labour market has become tighter. Besides the large pay rises, this is also indicated by the fact that a growing number of companies are complaining of difficulties in boosting output due to a shortage of skilled labour. The labour market tightness has occurred in a situation where there is still an unemployment rate of over 6%. This indicates problems in the functioning of the market. These are partly a question of a mismatch of labour supply and demand. There is a lot of unemployment despite the existence of a large number of unfilled vacancies. It is often impossible to find suitably skilled employees to fill the available jobs in the localities where they are needed.

From the perspective of labour market efficiency, it is encouraging that the collective agreements of recent years have provided more scope for agreeing wages at the level of the individual company or workplace. The proportion of wage increases actually agreed locally has, however, increased only very little, compared with eg Sweden or Denmark. If the trend in wage bargaining moves more towards local agreements, this will make it easier to reduce the problems of mismatch between labour supply and demand. It will also boost companies' and the whole economy's ability to adapt to changes in the external environment. In a globalising world, such changes will be more frequent and harder to anticipate. Increased local agreement would boost both employment and opportunities to improve labour productivity. The increased need for more local agreements does not change the fact that the coordination of pay rises at national level remains an important guarantor of strong employment and price stability.

A key challenge for the government is to implement measures to encourage both the provision and the take-up of employment. The coexistence of labour market tightness and an unemployment rate of over 6% indicates the scale of this challenge. In this respect, there is strong justification for cuts in labour taxation. Naturally, these must be implemented without endangering the stability of public finances.

The pay rises under the new collective agreements are on average larger in the public than the private sector. Large pay rises in the public sector do not directly affect the competitiveness of exports – in contrast to large pay rises in industry. They do, however, increase central and local government expenditure and thereby weaken the general government balance,

the maintenance of which is essential in preparing for the retirement of the baby-boom generation. Large wage increases could thus cause pressure to tighten labour taxation, and this would be a backward step in resolving the problems on the labour market.

Improving labour productivity in public services has become even more important in light of the large public sector pay rises. The key issues are how to exploit new technology, how to organise work and how to encourage employees to be innovative in this area. Labour productivity growth in public services would reduce the threat to the general government balance and the related pressure to increase taxation, which, if implemented, would undermine employment. Besides weakening the general government balance, the ageing of the population also reduces the scope for economic growth. The working-age population is beginning to contract, and demand for public services – particularly health and care services – is increasing. If labour productivity in public services is poor, the increase in demand will mean slower labour productivity growth in the economy as a whole.

28 March 2008

Bank of Finland forecasts

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

The forecast report focuses on the Finnish economy, while also presenting the Monetary Policy and Research Department's assessment of future trends in the international economy, on which the Finnish forecast is based. The forecast assumes that interest and exchange rates will develop in line with market expectations.

The forecast for the Finnish economy and the related risk assessment are prepared using a macroeconomic model developed at the Bank of Finland plus a large body of other data and assessments on the direction of the economy.[1]

The Bank of Finland publishes its macroeconomic forecast twice a year, in spring and autumn, in a special issue of the Bank of Finland Bulletin. It also participates twice a year in preparation of the Eurosystem forecast for the euro area as a whole.[2] The European Central Bank also publishes summations of the Eurosystem forecasts in the June and December editions of the ECB Monthly Bulletin.

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[1] The model is presented in 'Aino: the Bank of Finland's new dynamic general equilibrium model of the Finnish economy', an article by Juha Kilponen, Antti Ripatti and Jouko Vilmunen published in the Bank of Finland Bulletin 3/2004, and in 'Labour and product market competition in a small open economy – Simulation results using a DGE model of the Finnish economy', another article by Kilponen and Ripatti published as Bank of Finland Discussion Paper 5/2006.

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

Forecast at a glance

In 2007, the Finnish economy grew a full 4.4% from the previous year and there was further very rapid improvement in the employment rate. According to survey data, a shortage of skilled labour restricted output in an increasing number of companies, while as a consequence of the new round of collective agreements wage growth accelerated considerably towards the end of the year.

The Bank of Finland forecasts a deceleration in the pace of economic growth in Finland. The estimate for GDP growth is 2.7% in 2008, 2.3% in 2009 and 2.2% in 2010. Export growth will be subdued by the weakening trend in the global economy, due largely to the problems on the international financial markets. Growth will also suffer from a weakening in international cost-competitiveness due to the rapid pace of wage rises in Finland, interest rates that are higher than the average for recent years, and the ongoing problems in the forest industries. The economic downturn is expected to be over by 2010, but growth prospects will then be subdued by the beginning of a decline in the size of the working-age population.

Inflation was 1.6% in 2007, as measured by the change from the previous year in the harmonised index of consumer prices (HICP). There has been a marked acceleration in the pace of inflation in the early months of 2008, due in large measure to increases in the world market prices of crude oil and food raw materials. Consumer prices were also pushed up by increases in indirect taxes on energy products and alcoholic beverages.

The harmonised index of consumer prices is forecast to rise 3.1% in 2008, 2.5% in 2009 and 2.0% in 2010. The national consumer price index (CPI), which is more commonly used as a measure of inflation in Finland, is forecast to rise 3.1% in 2008, 1.9% in 2009 and 1.7% in 2010. In the immediate years ahead, inflation will be driven by acceleration in the pace of wage rises. On the other hand, it will be gradually moderated by an expected slowing of growth in the world market prices of crude oil and food raw materials. In 2010, inflation will also be moderated by wages growth slowing down again and the reduction of value-added tax on food planned for the end of 2009.

Executive summary

The Finnish economy continued to grow at a rapid pace until the first half of 2007.[1] During the second half of the year, however, there was a deceleration in the pace of growth, and the forecast for the immediate years ahead is for slower growth than in recent years. The slowdown is, however, not expected to be as strong as during the downswing at the start of the decade (Table 1 and Chart 1). Growth will be restrained by the forecast subdued export demand, somewhat tighter financial conditions and the weakening of domestic cost-competitiveness as the pace of wage rises picks up. Growth will also be further constricted by problems of labour market mismatch and shortages of building land.

The outlook for the world economy has deteriorated since last summer. The problems on the financial markets that began in the US housing loans market have worsened, and uncertainty has grown in the markets for many financial assets. The problems experienced by financial institutions have also been reflected in growing risk premia in the interbank markets, where interest rates on unsecured loans rose significantly at the end of 2007 relative to those on secured loans. This has kept the interest rates on unsecured loans – eg Euribor rates – at a higher level than they were in the first half of 2007.

Finnish exports have grown rapidly in recent years during a period of strong growth in the world economy. In the second half of 2007, however, export growth was more subdued, and the weakening international economic climate means the forecast for the immediate years ahead is for slower growth in exports. As well as the United States, economic growth is also forecast to be slower in several other countries. In many emerging economies the forecast is for a continuation of fairly strong growth.

The outlook for the international economy is surrounded by considerable uncertainty, as the full scale and consequences of the problems on the financial markets are not yet entirely clear. If the problems were to worsen and there is a sharp weakening in world growth, Finnish growth, too, will be weaker than forecast. The difficulties could lead to a substantial erosion in the pace of growth in demand for Finnish exports, higher financing costs for banks and other companies operating in Finland, and a decline in the prices of shares and other assets in Finland.

The improved employment situation in Finland has fostered growth in household incomes and sustained households' confidence in the future. Private consumption has continued to grow rapidly. Consumer spending has recently been higher than households' disposable income, which means the savings ratio has turned negative. The pace of growth in consumer spending is forecast to gradually decline over the next few years.

Household liabilities have grown larger than their annual disposable income. Together with higher interest rates, this will mean increased interest expenditure. Relative to their

[1] This publication is based on the statistical data available on 7 March 2008.

Table 1.

Forecast summary

Supply and demand

	2007	2006	2007	2008f	2009f	2010f
	At current prices EUR billion	Volume, % change on previous year				
Gross domestic product	178.8	4.9	4.4	2.7	2.3	2.2
Imports	71.8	7.8	4.1	3.6	5.7	5.6
Exports	80.1	11.8	4.8	3.0	4.7	4.7
Private consumption	90.5	4.1	3.7	3.1	2.8	2.6
Public consumption	37.9	0.6	0.8	1.3	1.5	2.1
Private fixed investment	31.9	6.5	8.1	5.7	3.1	2.3
Public investment	4.4	-6.4	3.4	5.1	2.4	3.2

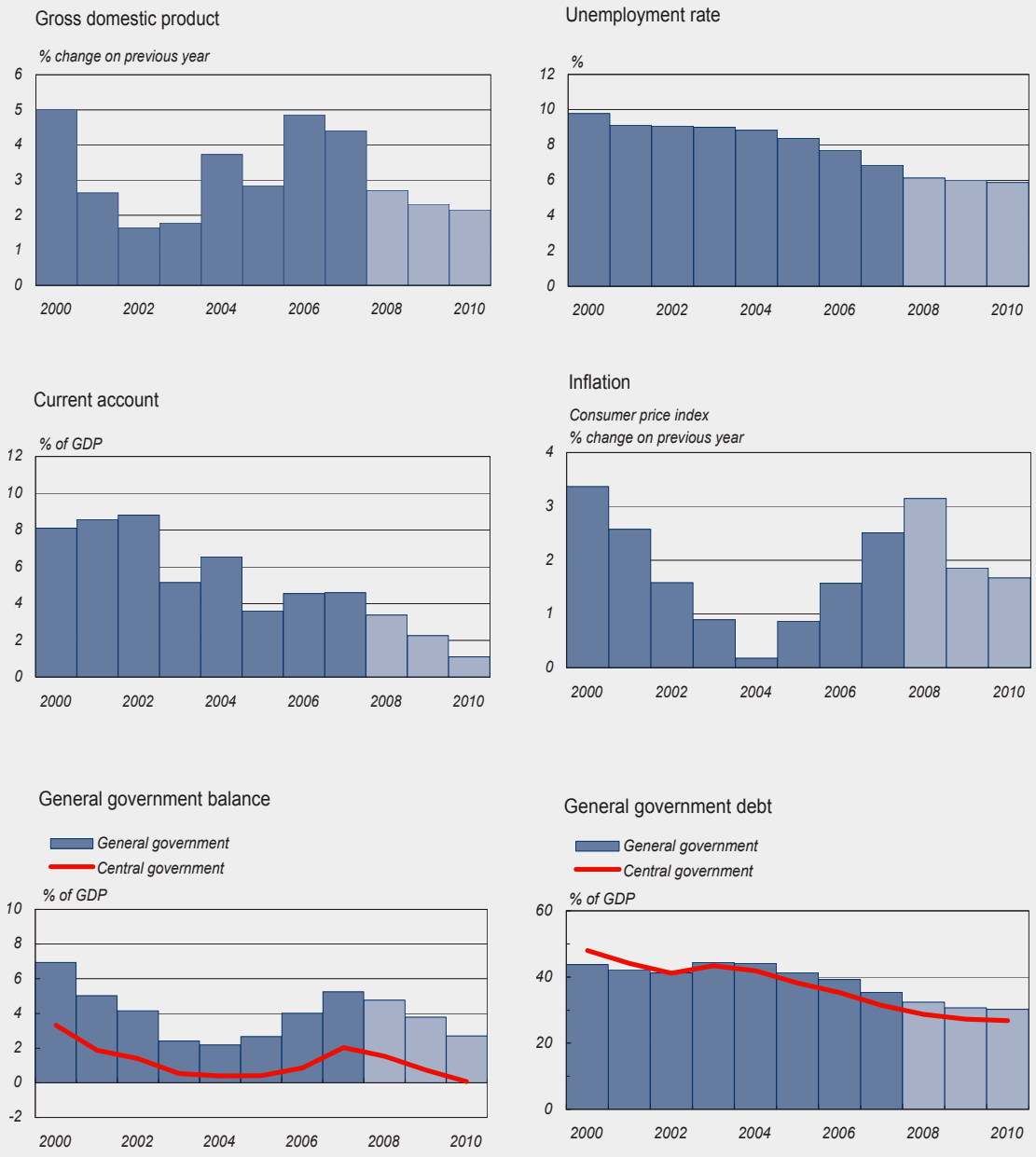
Key economic indicators

	2006	2007	2008f	2009f	2010f
% change on previous year					
Harmonised index of consumer prices	1.3	1.6	3.1	2.5	2.0
Consumer price index	1.6	2.5	3.1	1.9	1.7
Wage and salary earnings	3.0	3.3	5.3	4.4	3.5
Labour compensation per employee	2.9	3.1	5.0	4.1	3.4
Productivity per person employed	3.1	2.3	0.8	1.8	2.1
Unit labour costs	-0.2	0.8	4.3	2.2	1.3
Number of employed	1.7	2.1	1.9	0.5	0.1
Employment rate, 15–64 year-olds, %	68.9	69.9	71.1	71.4	71.6
Unemployment rate, %	7.7	6.9	6.1	6.0	5.9
Export prices of goods and services	2.7	1.3	-0.1	-0.3	-0.7
Terms of trade (goods and services)	-3.1	-1.3	-2.6	-1.8	-1.8
% of GDP, National Accounts					
Tax ratio	43.4	43.0	42.8	42.4	41.8
General government net lending	4.0	5.2	4.8	3.8	2.7
General government debt	39.2	35.4	32.3	30.7	30.2
Balance on goods and services	5.0	4.7	3.3	2.2	1.0
Current account balance	4.6	4.6	3.4	2.3	1.1

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

Chart1.

Key economic indicators



Sources: Statistics Finland and Bank of Finland.

disposable income, however, households' interest expenditure will remain well below the levels of the early 1990s.

Housing investment grew rapidly for several years before declining slightly during the course of 2007. Indicator data suggests housing investment will remain weak in the first half of 2008. The forecast for the next few years is for growth in housing investment to be more or less at a standstill, with interest rates and construction costs higher than the average for recent years and a continuing shortage of building land and skilled labour.

There was a considerable acceleration in 2007 in the pace of corporate investment growth. Particularly striking was the increase in companies' construction investment, while growth in investment in equipment and machinery was also fairly good. Investment growth has been helped by strong earnings development, the positive demand outlook and the favourable financial climate that prevailed until the middle of last year. Indicator data suggests corporate construction investment will continue to grow strongly through the first half of 2008. Thereafter, the pace of growth is forecast to ease gradually. Investment in equipment and machinery is forecast to keep growing in 2008, but at a slower pace. Growth in corporate construction investment and investment in equipment and machinery will be dampened by the weakening demand outlook and the poorer financial climate.

On the employment front, the recent rapid improvement has continued. In 2007, the number of employed grew by almost 50,000 on the previous year, an increase of approximately 2%. Employment growth has gained from supply factors such as more comprehensive labour market participation by older people of working age. Employment rates in different age cohorts among the over-60s have already risen well above their levels prior to the recession of the early 1990s. However, despite the growth in supply, strong demand for labour has led to a tightening of the labour market. Surveys indicate that increasing numbers of companies are finding increases in output are being restricted by a shortage of skilled labour. This is happening in a situation where the unemployment rate is still over 6%, which means that problems of labour market mismatch are seriously constricting growth in employment and GDP. In other words, employers have a need for employees with particular training and experience in parts of the country where such employees are not available.

Employment growth is forecast to decelerate gradually during the course of 2008. Thus, employment trends are forecast to follow the path of economic growth trends in the normal pattern of a slight delay. The fairly rapid growth in labour productivity that has been a feature of recent years will show a cyclical deceleration in 2008. The forecast for 2009 is for labour productivity growth to accelerate again to around the average for the decade as a whole.

In 2010, the growth potential of the Finnish economy will begin to decline as the size of the working-age population itself begins to decline.

While in 2009 the number of 15–64-year-olds will still grow 0.2% on the previous year, according to Statistics Finland's population forecast, in 2010 it will decline by 0.3 %. For this reason, economic growth and growth in the number of employed is forecast to be lower in 2010 than we have become accustomed to, despite the assessment that the weak phase of the economic cycle will already be over.

Labour costs in Finland rose more or less in line with the euro area average in 2006 and 2007. The tightening labour market led to an acceleration in the pace of wage rises in Finland towards the end of 2007. Wage rises agreed at union level over the past twelve months have been much higher than those of recent years. Wages are in fact forecast to rise much faster in 2008 and 2009 than in recent years, while the pace of rise in unit labour costs will also pick up considerably. The consequent weakening in Finland's international cost-competitiveness will undermine growth and hamper the improving employment situation. Wage growth is forecast to slow somewhat in 2010 as a consequence of a prior weakening in labour demand.

The world market price for crude oil has continued to rise rapidly. The US dollar prices of other industrial raw materials have also risen, although in euro terms they are now on average close to the levels of a year ago. The appreciation in the external value of the euro has moderated the impact of higher commodity prices on Finnish import prices, which have seen a deceleration in their pace of increase over the past twelve months. The prices of food raw materials have, however, risen considerably, even in euro terms. The rapid rise in food prices began last year. The main reasons for this have been increased production of biofuels in fields previously used for growing food, changing eating habits in emerging economies and poor harvests in some areas due to exceptional weather conditions. In the immediate years ahead, raw material prices are expected to remain close to their current levels.

Inflation in Finland remained relatively sluggish until the end of 2007, as measured by the harmonised index of consumer prices (HICP). At the end of the year, inflation was pushed up particularly by the rise in consumer prices for fuel caused by the rise in the price of crude oil. Early 2008 has seen a further considerable acceleration in the pace of inflation. This is due in part to further rises in the price of crude oil, although the increasing cost of food raw materials that occurred during the course of 2007 also fed into consumer prices at the turn of the year. The rises were particularly steep in cereal and dairy products and in the price of meat. Consumer prices were also pushed up at the turn of the year by tax rises included in the prices of fuel, electricity and alcoholic beverages.

HICP inflation is forecast to be a full 3% in 2008. The inflation forecast for 2009 and 2010 is that the pace will gradually ease. In the immediate years ahead, inflation will be sustained by a faster rise in labour costs. In contrast, one factor that according to our assessment will serve to restrict

inflation will be that the recent rising trend in world market prices for commodities will on average more or less come to a halt. Inflation will also be slowed by more sluggish economic growth and the stronger external value of the euro. The increases in indirect taxation introduced at the beginning of 2008 will no longer be reflected in annual inflation figures after the end of 2008, and the reduction in value-added tax on food planned for the end of 2009 will reduce food prices at that time.

Inflation measured according to the national consumer price index (CPI) was faster in 2007 than HICP inflation. This was because of the increase in interest rates and housing prices. In the immediate years ahead, CPI inflation is forecast to slow more quickly than HICP inflation. This is because of a forecast easing in the pace of housing price rises and an assumed gradual reduction in interest rates from their present level. The assumption regarding the future trend in interest rates is based on market expectations on 7 March 2008.

More substantial wage increases and the recent acceleration in inflation raise the spectre of a cost spiral in the Finnish economy. If future wage demands and companies' pricing decisions are based on expectations of a continued rapid rise in costs and prices, the level of costs in the domestic economy could gradually rise so high that restoration of the cost-competitiveness of Finnish production will require a long and painful process of adjustment. The situation will become particularly difficult if costs rise faster than in other countries and there is a simultaneous significant deterioration in the international economy.

Finland's general government surplus continued to grow in 2007 on the back of rapid economic growth. The surplus is forecast to remain almost as large relative to GDP in 2008. Thereafter it will begin to decline, as economic growth slows, rising public sector pay pushes up labour costs and tax cuts reduce the inflow of revenue. The contraction of the working-age population from 2010 onwards will begin to permanently compromise the general government balance.

Financial markets

The financial market turbulence that began on the US housing market has since summer 2007 also spread to the markets for other financial instruments, and in some measure to other countries as well. Finance has become both harder to obtain and more expensive for many borrowers. Interest rates on corporate bonds have risen relative to government bonds, and share prices have fallen.

The European Central Bank has held its policy rate at 4% since June 2007. Market expectations have since then moved towards a reduction in the rate, but the 12-month Euribor, for example, has come down hardly at all. This is due to the fact that the present higher risk premia are also reflected in the Euribor rates, which are used on the unsecured interbank market.

The changed economic outlook has led to a decline in the dollar and appreciation of the euro against other currencies in recent months. According to the forecast assumptions based on market expectations, short-term rates in the euro area and the external value of the euro will remain close to their present levels for the next few years.

In Finland, the interest rate rise has led to a slight slowing in the pace of rise in housing prices. This trend is forecast to continue over the next few years. Growth in the stock of housing loans has also eased slightly, but household indebtedness has continued to deepen.

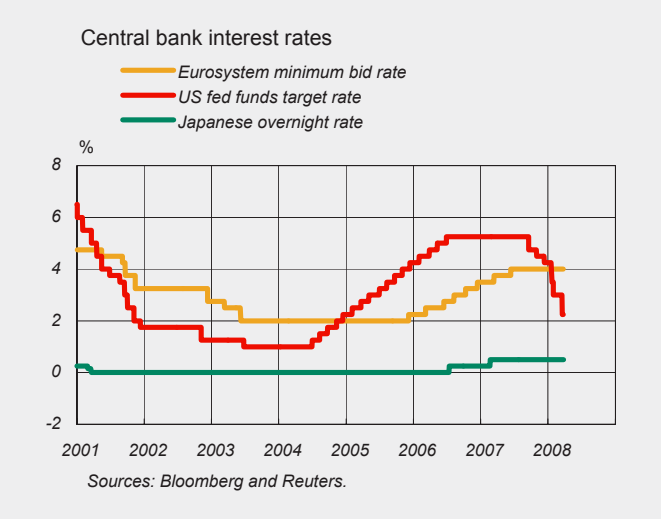
Since the summer of 2007, the international financial markets have been marked by uncertainty, increasingly expensive financing costs on the markets for many financial instruments, a weakening of the growth outlook and a relaxation of monetary policy in the United States. The problems began with loan losses incurred by financial institutions, particularly housing mortgage lenders in the United States. The problems have also weakened growth prospects outside the United States.

Interest rates

The Governing Council of the European Central Bank raised its key policy rate to 4% in June 2007 and has subsequently held it at this level (Chart 2).

In recent months, the view of the Governing Council has been that the risks to price stability have been on the up side. Particular concern has been caused by the possible knock-on effects on wages and prices from the acceleration in the pace of inflation that has already taken place.

Chart 2.

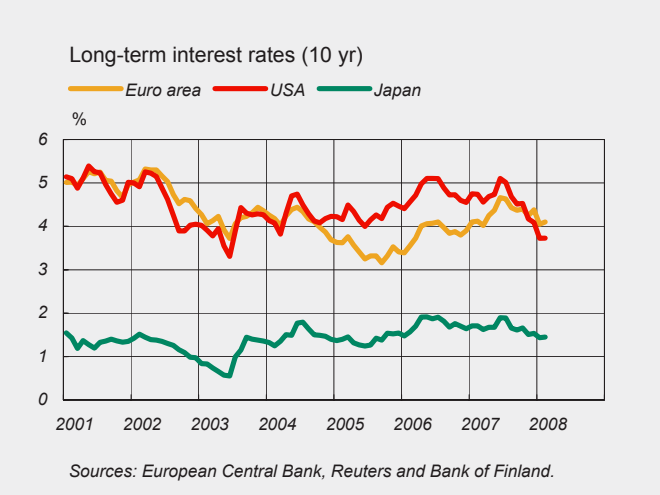


The expectation on the financial markets, however, is that the Governing Council is more likely to lower its policy rate during the course of 2008 than to raise it. The monetary policy decisions of the ECB Governing Council and the background to these decisions are explained in more detail in Box 1.

The US Federal Reserve's key policy rate was 5.25% as recently as September 2007. Since then it has been lowered in a rapid series of cuts. In January 2008 alone the Fed lowered its key rate twice, by a total of 1.25 percentage points, and in March by a further 0.75 percentage points, to 2.25%. The rate cuts have been the Fed's response to the rapid weakening of the outlook for the US economy.

The Bank of England cut its key rate 0.25 percentage points to 5.5% in December. The Bank of Japan, in contrast, has held its key rate steady at 0.5% since February 2007. The expectation on the financial markets is that the Japanese central bank will raise its key rate further, but at a rather leisurely pace.

Chart 3.



Fears that the turbulence and uncertainty on the financial markets will be reflected in the real economies of the United States and many other countries have weakened the growth prospects for the international economy and depressed interest rates on long government bonds in many countries since mid-2007 (Chart 3). In addition, increased concern on the part of investors to avoid risk has led to a lowering in interest rates on government bonds relative to corporate bonds, particularly, if not solely, in the United States. Despite the lower rates on government bonds, interest rates on corporate bonds have typically risen in both the United States and the euro area. At the same time, the use of derivatives to protect against risk has become more expensive. Moreover, banks have tightened their lending conditions in both the euro area and the United States, according to bank lending survey data from the ECB and the Federal Reserve.

The generally unsettled conditions on the international financial markets led during the second half of 2007 to a strong upward movement in the risk premia paid by banks on unsecured loans. In the euro area this was reflected in a rise in Euribor rates, which happened without the ECB raising its policy rate. Since December 2007, Euribor rates have for the most part come down a little, primarily due to a change in expectations over the future course of monetary policy. Risk premia on the interbank market have continued to fluctuate strongly.

Exchange rates

The exchange rates for the major currencies have changed somewhat since mid-2007 in response to the transformation of the economic outlook and interest rate differences between currencies. The euro has appreciated against the US dollar and the British pound. Relative to the Japanese yen and the Swedish crown the value of the euro in February 2008 was approximately the same as six months earlier.

In terms of the real trade-weighted exchange rate index, the external value of the euro was approximately 5% stronger in February 2008 than six months earlier (Chart 4). At the same time the US dollar weakened in real terms by a slightly larger amount. From the perspective of the Finnish economy the fluctuations in exchange rates have had a limited impact. This is indicated by the fact that Finland's trade-weighted exchange rate index[1] in February 2008 was only around 2% stronger than six months earlier.

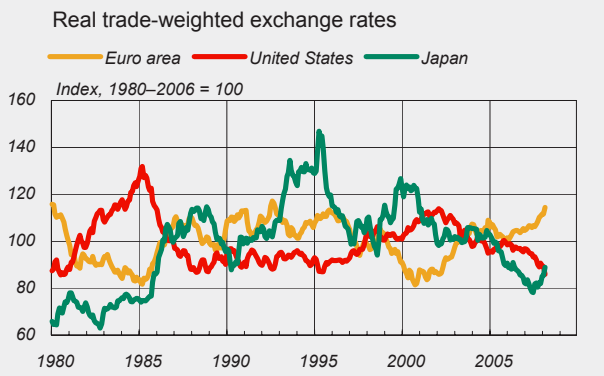
Stock markets

In the second half of 2007 international stock markets were still responding fairly calmly to the impact of the increased uncertainty on the financial markets, but pessimism grew in the early months of 2008, when share prices fell considerably in all the major economic regions (Chart 5).

The decline in the past six months has particularly affected the shares of financial institutions. All in all, the decline in share prices is largely due to the threat of a general weakening in the overall performance of the economy. The average earnings development of listed companies has remained fairly strong in the euro area and Japan, but in the United States there was a decline in earnings during the course of 2007.

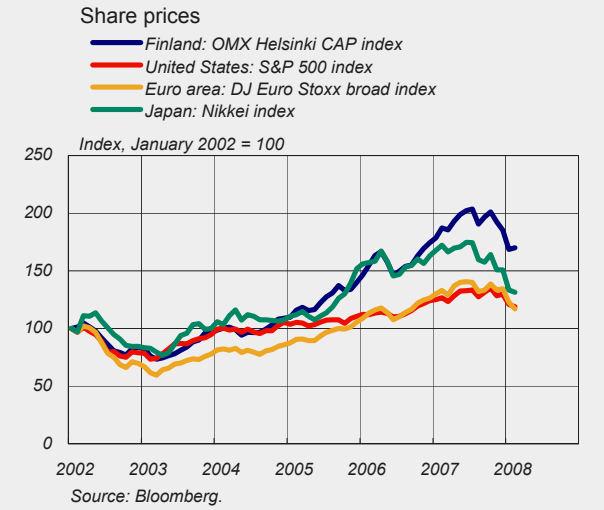
Since January, share prices have on the whole been fairly stable, although

Chart 4.



Based on consumer prices. The curve rises as a currency appreciates in real terms. The most recent figures are based on nominal exchange rates.
Source: IMF.

Chart 5.



Source: Bloomberg.

[1] This exchange rate index is Finland's narrow trade-weighted indicator of competitiveness supplemented with euro area countries.

daily fluctuations have continued to be substantial and trading has been brisk. Implicit volatilities calculated on the basis of option prices indicate that market uncertainty over the future trend in share prices has increased since the middle of 2007 in the euro area, the United States and Japan.

Share prices on the Helsinki Stock Exchange have largely followed the general trend internationally. In February 2008 they were broadly at the same level on average as a year earlier. The international problems in the banking sector are not reflected in the same sort of losses in the share prices of banks operating in Finland. In contrast, share price trends in the forest and metal industries (excl. electronics) in recent months have been rather weak – despite the relatively strong order books and profitability in the metal industry. The earnings development of companies listed on the Helsinki Stock Exchange has on average remained strong.

Chart 6.

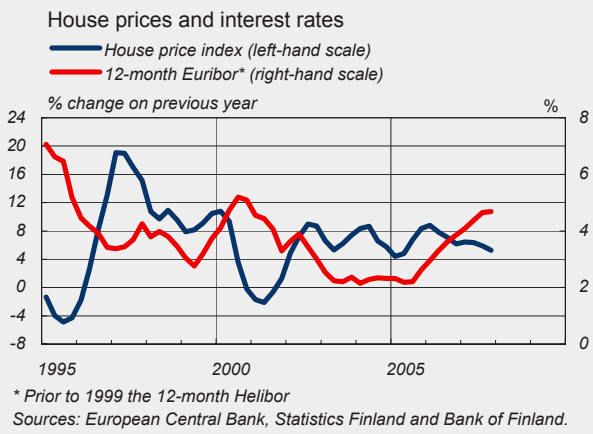
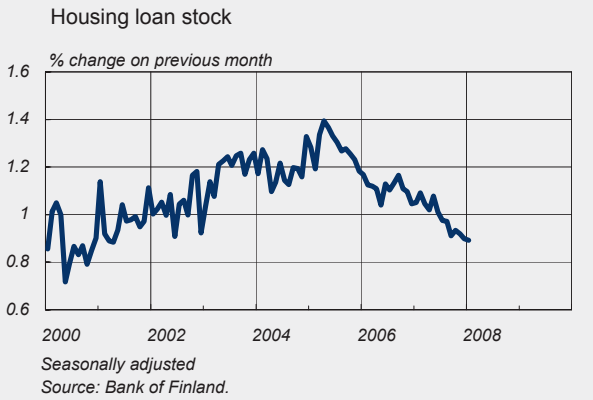


Chart 7.



Housing prices

Interest rate rises subdued the rise in housing prices to some extent in 2007. The annual pace of increase in housing prices eased back to 5.5% at the end of the year, against 6.4% at the end of 2006 (Chart 6). At the same time, annual growth in the housing loan stock slowed from 14% to 12½%.

No dramatic change can be observed in house purchases. Employment and households' income development are forecast to remain fairly solid, and the predominant expectation on the financial markets is that interest rates will not change greatly in the immediate years ahead. According to Statistics Finland's consumer survey, there has been no dramatic change in households' plans regarding house purchases in recent months. The pace of growth in the housing loan stock has eased slightly (Chart 7). House prices are forecast to continue to rise over the next few years, but the annual pace of increase is estimated to slow to around 2–3%.

Financial position of households and the corporate sector

Monetary financial institutions

Financial institutions operating in Finland continued to lend at a brisk pace in 2007. The stock of loans granted to Finnish residents grew around 12% over the course of the year. The pace of growth was almost the same in corporate and household loans, and was slightly up on the previous year, despite higher interest rates. In December 2007 the rate of interest on all new loans averaged 6.7%, compared with 5.8% a year earlier. At the same time the average interest on the loan stock rose from 4.5% to 5.3%.

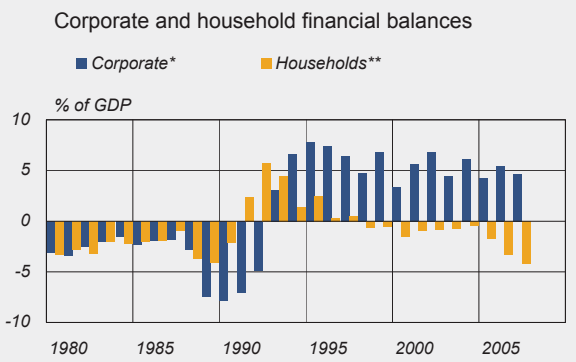
Deposits in monetary financial institutions by members of the public grew slightly faster than loans in 2007. Average interest rates on deposits grew by a comparable amount to interest on loans, from 1.8% to 2.6% between December 2006 and December 2007.

Corporate finance

Companies operating in Finland have continued to report strong earnings development. The corporate sector has in recent years increased its share of national income. Although average corporate earnings growth will in the future be weakened, partly due to the problems in the forest industry, the position of the corporate sector will on the whole remain good.

Corporate balance sheets have continued to be solid on average. Although growth in the value of companies' fixed investment accelerated to 16% last year, the corporate sector continued to enjoy a strong funding surplus. In other words, after the financing of fixed investment a considerable sum remained to fuel net investment in financial assets (Chart 8). Companies' bank debt admittedly grew 12% during the course of the year, and bond financing by almost the same amount, although the volume of foreign debt declined. Financial assets were invested in a broad range of different instruments.

Chart 8.

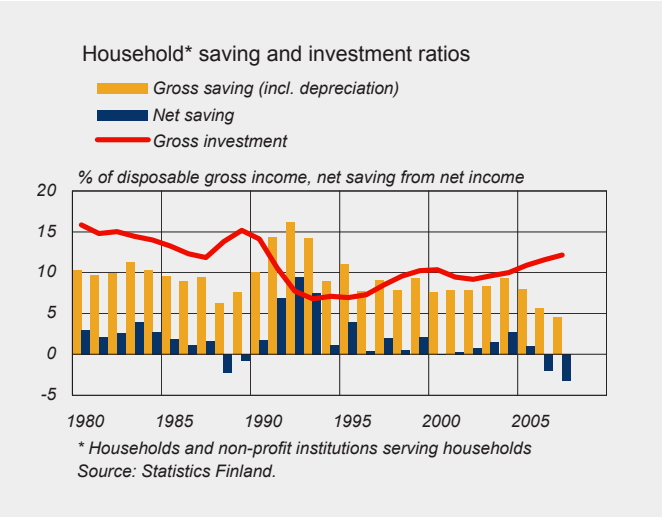


* Non-financial corporations, housing corporations and financial and insurance corporations
** Households and non-profit institutions serving households
Source: Statistics Finland.

Household finance

Improved employment and the distinct rise in the level of earnings that began towards the end of last year have considerably boosted household incomes. However, over 2007 as a whole the increase in disposable household income was still only 4%, which means there was a contraction in households' share of national income, while the corporate and public sectors increased their shares. Households' consumption

Chart 9.



expenditure rose by just under 5%. The household savings ratio thus continued and deepened the negative trajectory that began in 2006 (Chart 9).

In addition, households' financial deficit, ie their net increase in debt, was exceptionally large (Chart 8). According to data from September 2007, the volume of debt exceeded the annual volume of disposable income. As a result of the substantial level of borrowing, however, households' deposits also grew around 12% during the course of 2007. Until August 2007, households continued to invest briskly in unit trusts, but thereafter this activity declined in response to the turbulence on the international financial markets. At the same time, growth in deposits began to accelerate.

Increased indebtedness means households' interest expenditure will grow in the immediate years ahead, as interest rates will on average be higher than they have been in recent years. Relative to disposable income, however, household interest expenditure will remain considerably less than in the early 1990s.

Box 1.

Forecast assumptions

World trade and Finland's export markets

The world economy and world trade are forecast to grow more slowly in the next few years than the average in recent years. Even so, they should maintain a fairly favourable momentum compared with their long-term averages. The weakest phase is predicted to be in 2008. There will be a deceleration in growth, particularly in the industrial economies, with expansion in Finland's export markets also slackening off (Table 2). Nevertheless, the export markets are forecast to grow (about 1–2 percentage points) faster than world trade, due mainly to a strong increase in Russian imports. The assessments of international economic growth and expansion in Finland's export markets underpinning the domestic forecast are the Bank of Finland's own assessments and are discussed in greater detail in the chapter 'Demand'.

Commodity prices

Rapid growth in emerging economies is expected to keep the prices of crude oil and other industrial raw materials high in the next few years. The forecast assumption is for the price of Brent crude to follow the trend in futures price quotations as at 7 March 2008 and to be at USD 98 (EUR 65) per barrel at the end of the forecast period. Investment growth in the world's emerging economies is expected to maintain the high level of industrial raw material (excl. energy) prices. These are, however, estimated to decline slightly in 2009 and 2010 as their elevated price levels stimulate a gradual increase in supply. A more detailed analysis of projected developments in raw material prices is presented in the chapter 'Costs and prices'.

Foreign trade prices

The euro-denominated export prices of countries of key importance for Finnish exports should remain, on average, slightly lower in 2008 than in 2007, due largely to the recent appreciation in the external value of the euro. In 2009 and 2010, the export prices of Finland's competitor countries are predicted to rise at an annual pace of around 2%. Inflationary pressures are expected to persist due to elevated raw material prices and a lower dampening impact from China and certain other emerging economies on the rate of increase in international prices of industrial products. The forecasts for price trends in the exports of Finland's competitors are the Bank of Finland's own estimates.

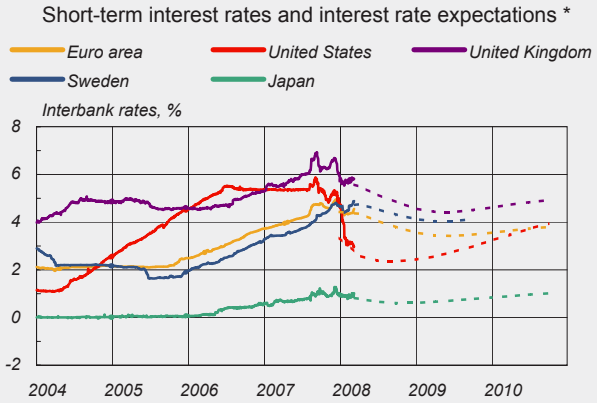
Table 2.

Forecast assumptions

	2006	2007	2008f	2009f	2010f
Finland's export markets[1], % change	10.3	8.5	7.8	7.8	7.6
Oil price, USD/barrel	65.4	72.7	99.2	99.1	98.3
Euro export prices of Finland's trading partners, % change	2.9	1.2	-1.9	1.9	1.9
3-month Euribor, %	3.1	4.3	4.2	3.5	3.7
Yield on Finnish 10-year government bonds, %	3.8	4.3	3.5	3.4	3.4
Finland's nominal competitiveness indicator[2]	101.9	104.0	108.0	108.2	108.3
US dollar value of one euro	1.26	1.37	1.51	1.51	1.50

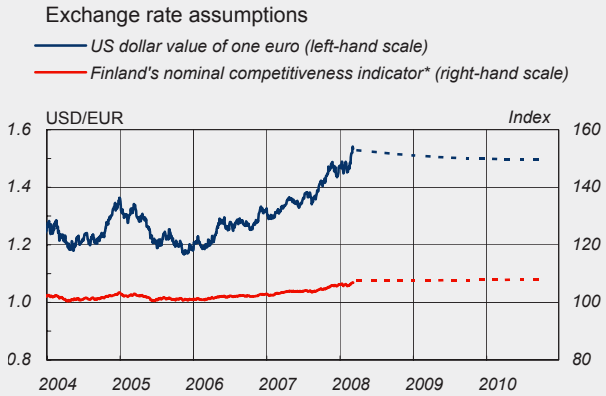
[1] Growth in Finland's export markets equals growth in imports by countries to which Finland exports, on average, weighted by their respective shares of Finnish exports.
[2] Narrow plus euro area, 1999 Q1 = 100
f = forecast
Sources: Statistics Finland, Bloomberg and Bank of Finland.

Chart 10.



* 3-month market rates and interest rate expectations based on interest rate futures
Sources: Bloomberg and Bank of Finland.

Chart 11.



* Narrow plus euro area, January–March 1999 = 100
Sources: European Central Bank and Bank of Finland.

Interest rates and exchange rates

According to the forecast assumption based on interest rate futures quotations, the 3-month Euribor should in the next few years be slightly below the level observed in the second half of 2007 (Chart 10). Under the assumption based on currency forward quotations, the external value of the euro should in turn remain close to its early-March 2008 level (Chart 11). The interest and exchange rate assumptions in the forecast are derived from market expectations on 7 March 2008. The underlying assumption concerning interest rates and exchange rates is purely technical and does not anticipate the interest rate policy of the ECB Governing Council nor include an estimate of equilibrium interest rates. Recent developments in interest rates and exchange rates are discussed more closely above, at the beginning of this chapter.

Box 2.

Recent monetary policy in the euro area

The monetary policy of the Governing Council of the European Central Bank (ECB) is aimed at keeping the rate of inflation in the euro area below, but close to, 2% over the medium term as measured by the harmonised index of consumer prices (HICP).[1] The Governing Council monitors and analyses the economic outlook for the euro area and accordingly sets key interest rates at levels conducive to promoting price stability over the medium term.

The Governing Council raised its key policy rate by ¼ percentage point in March and June 2007. Since these adjustments the policy rate has stood at 4%. Since June, the Governing Council has kept the policy rate unchanged (Chart 2).

In the early part of 2007, the decisions of the Governing Council were guided by the favourable growth prospects for the euro area, sustained strong money and credit growth and signs of upside risks to price stability over the medium term. In the course of spring and summer 2007, the Eurosystem and the ECB made an upward revision to their forecasts of real GDP growth in 2007.[2] Inflation forecasts for 2007 and 2008 were also revised upwards. It was further estimated that medium-term growth prospects had remained favourable.

In their reasoning underlying the interest rate decisions in the first half of 2007, the Governing Council underlined that the risks to the outlook for price stability were mostly related to factors within the euro area and, in particular, to potentially stronger-than-expected wage developments in a context of growing rates of capacity utilisation and improvements in the labour market situation. Even after the interest rate adjustment in June, the Governing Council emphasised that the monetary policy stance of the ECB remained on the accommodative side.

The chain of events originating in the US housing market resulted in serious disruptions to global money markets. In autumn 2007 and winter 2008, the Eurosystem and the ECB revised downwards their forecasts for economic growth in 2008. Notwithstanding this, they estimated that the fundamentals of the euro area economy had remained sound and that growth would continue broadly in line with potential output growth over the medium term. However, the potential impact of the reappraisal of risk in financial markets on the real economy of the euro area was said to be surrounded by unusually high uncertainty. According to the Governing Council, the reappraisal of risk has increased the uncertainty surrounding the economic outlook, while the risks to economic growth are increasingly on the downside. The Governing Council held the stronger-than-expected increase in the prices of commodities, protectionist pressures and a disorderly reversal of global financial imbalances to be the downward risks to growth.

Annual HICP inflation in the euro area picked up notably in November 2007 and has ever since remained clearly above the levels consistent with price stability. A major contributory factor has been the increase in the world market prices of crude oil and food. Partly for these reasons, the Eurosystem and the ECB also revised upwards their inflation forecasts for 2008 during the course of autumn and winter 2007–2008. In its forecast of March 2008, the ECB expects inflation to be considerably above 2% on average in 2008 and to slow down somewhat in 2009.

Since summer 2007, in the communications following its meetings, the Governing Council has stated that the risks to the outlook for price developments remain on the upside in a

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[1] *The Governing Council of the ECB comprises the six members of the ECB's Executive Board and the central bank governors of the euro area member states, including the governor of the Bank of Finland.*

[2] *The Eurosystem comprises the European Central Bank and the euro area national central banks, including the Bank of Finland.*

context of strong money and credit growth. According to the Governing Council, inflationary pressures stem from the ongoing increase in the prices of crude oil and food, stronger-than-expected wage development, an increase in the pricing power of companies in segments with low competition, and higher-than-expected increases in administrative prices and indirect taxes.

In its communications, the Governing Council has emphasised that it is all the more important to anchor inflation expectations in line with price stability at times of financial market volatility and increased uncertainty. It has underlined its commitment to act in such a way as to avoid the spill-over of second-round effects from a higher rate of inflation on wage and price-setting behaviour. With the ongoing reappraisal of risks in financial markets, the Governing Council has indicated that it will closely monitor financial market developments and their effect on the real economy of the euro area.

Supply

The rapid pace of economic growth in Finland continued in 2007, if somewhat more slowly in the second half of the year. According to the forecast, growth is now slowing down. The downturn is forecast to be over by 2010, although the growth potential in the economy will decline at that time as the working-age population begins to contract. Labour productivity has continued to grow relatively quickly, but the forecast for 2008 is for a cyclical slowdown in the pace of productivity growth.

Rapid growth has meant an increase in the resource utilisation rate of the economy. The employment situation has continued to improve, survey data indicates that capacity utilisation rates in industry are running at a high level, and different estimates suggest last year's GDP was higher than the potential output for the economy.

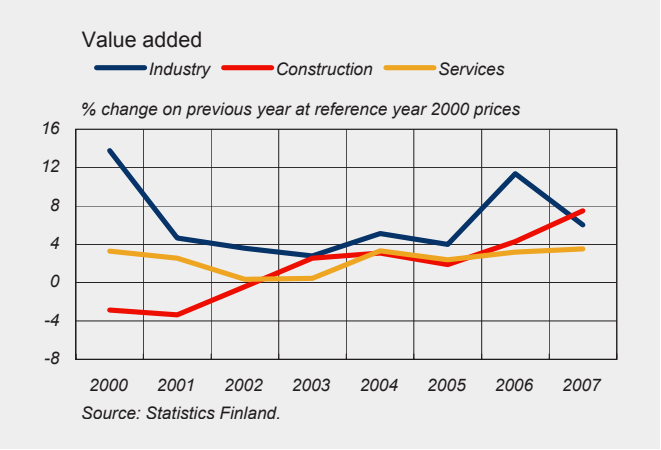
The number of employed has continued to grow rapidly, while the unemployment rate has continued to decline rapidly. An increasing number of companies have indicated in surveys that output growth is being restricted by a shortage of skilled labour. Indeed, the labour market in general can be considered to have tightened, and the pace of wage rises has accelerated. A gradual slowdown is forecast in the pace of growth in the number of employed. A reduction in the number of employed is, however, not forecast – not even in 2010, when the working-age population will begin to contract.

Output

Finland's GDP grew 4.4% in 2007. As in 2006, this was well above average for the present decade (3.2%). According to advance data from Statistics Finland, real value added was up 6.0% in industry and 3.5% in services. Growth in the cyclically sensitive construction sector was faster than in any previous year since the turn of the millennium, with real value added up 7.5% (Chart 12). The capacity utilisation rate in manufacturing industry was higher than in recent years. These figures indicate that 2007 was marked by brisk economic activity. Various assessments of the output gap also suggest the Finnish economy was performing at a high level (see Box 3.)

The developments in 2007 nevertheless contain signs of a turn in the cycle, with the pace of GDP growth slowing over the course of the year. At the level of main economic sectors, the pace of growth eased back in industry, construction and services, and the utilisation rate for industrial output capacity fell slightly towards the end of the year. In addition, survey data from the Confederation of Finnish Industries suggests the cyclical outlook for Finnish

Chart 12.



companies has deteriorated somewhat in recent months in all three sectors.

According to the Bank of Finland's forecast, GDP growth will slow further in the immediate years ahead. GDP is expected to grow 2.7% in 2008, 2.3% in 2009 and 2.2% in 2010. The slower growth expected for 2008 and 2009 is thought to be due to weakening cyclical conditions: for example, growth in Finland's export markets is forecast to be somewhat slower. In addition, a shortage of skilled labour and lack of production capacity will restrict growth in some fields, eg the technology industry. In 2010, the final year of the forecast period, the size of the working-age population will begin to decline, which will weaken the potential for growth across the entire economy.

The rise in the price of imports relative to exports in recent years has considerably moderated growth in Finland's gross national income relative to volume growth in GDP. In 2007, GNI grew around one percentage point slower than volume growth in GDP. In the immediate years ahead, too, GNI growth is forecast to be much more sluggish than growth in GDP.[1]

[1] The impact of the terms of trade on real incomes in Finland was discussed in Bank of Finland Bulletin 1/2007, p. 25–26.

Employment and labour

The employment situation continued to improve rapidly in 2007 for the third year in a row, with growth in demand for labour and increased supply due to greater participation in the labour market at both ends of the age scale. The number of employed grew over the year as a whole by an average of 50,000 persons. At around 2%, this represents even higher employment growth than in 2006. The employment rate among 15–64-year-olds rose to 69.9% (Table 3). The average unemployment rate for the year as a whole was down to 6.9%, with the number of unemployed averaging more than 20,000 less than the previous year. The number of long-term unemployed fell by as much as 13,000. As in previous years, a considerable proportion of employment growth in 2007 came from outside the registered labour force. The labour force increase over the year as a whole averaged 30,000. The proportion of part-time employment remained more or less unchanged at around 14%.

The biggest growth in employment in 2007 – as in previous years – was in service sectors, while employment also continued to grow strongly in construction. Industrial employment, in contrast,

Table 3.

Working-age population, labour force share and employment rate 2005–2010

	2005	*2006*	*2007*	*2008f*	*2009f*	*2010f*
Working-age population, 15–64-year-olds, 1,000 persons	*3,496*	*3,507*	*3,517*	*3,525*	*3,531*	*3,522*
Labour force share, 15–74-year-olds, %	*66.4*	*66.8*	*67.2*	*67.7*	*67.7*	*67.4*
56–74-year-olds, %	*33.1*	*35.1*	*35.9*			
Employment rate, 15–64-year-olds, %	*68.0*	*68.9*	*69.9*	*71.1*	*71.4*	*71.6*
56–74-year-olds, %	*30.9*	*32.9*	*33.8*			

Sources: Statistics Finland and Bank of Finland.

was more or less unchanged following the growth of the previous year.

A considerable proportion of companies in the construction sector reported labour shortages in 2007, although the proportion declined somewhat towards the end of the year. This was, however, accompanied by a marked increase in the proportion of industrial companies suffering shortages. It is possible that the relatively weak employment development in industry in 2007 was at least partly due to employers being unable to find suitable employees.

The good employment situation in 2007 encouraged an increased number of young women to enter the labour market: employment among 15–24-year-old women grew by as much as 8.3%. In combination with the impact of already implemented pension reforms, the employment situation also encouraged a much higher level of labour market participation among older men. The employment rate among the over-60s continued to rise.

Currently available indicator data suggests the number of employed will continue to grow through the first half of 2008. There are still a large number of unfilled job vacancies, amounting to approximately 1.5% of the labour force, but the pace of growth in new vacancies has slowed in recent months (Chart 13). Continued growth in the number of employed is also suggested by data, including survey data, on companies' recruitment intentions, although the pace of growth indicated will be slightly slower in the first half of the year.

The forecast slowdown in economic growth will be reflected in the employment figures with a time lag. Employment growth is forecast to become more subdued during the course of 2008, but average growth in the number of employed over the year as a whole will still be substantial, at 1.9%, almost as much as in 2007. In the early phase of the forecast period, employment growth will be predominantly in the private sector and in services (Chart 14).

Chart 13.

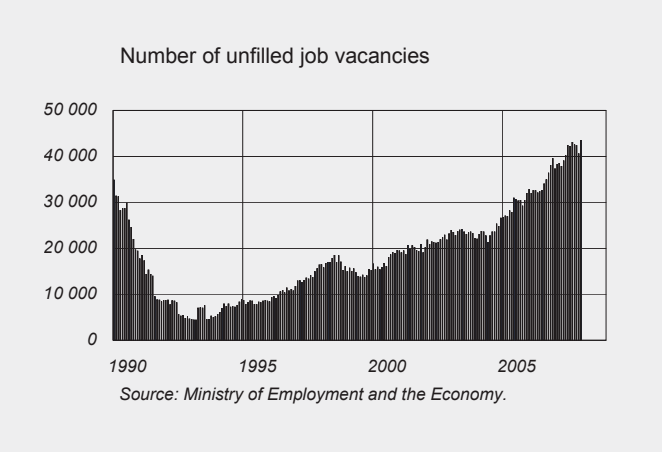
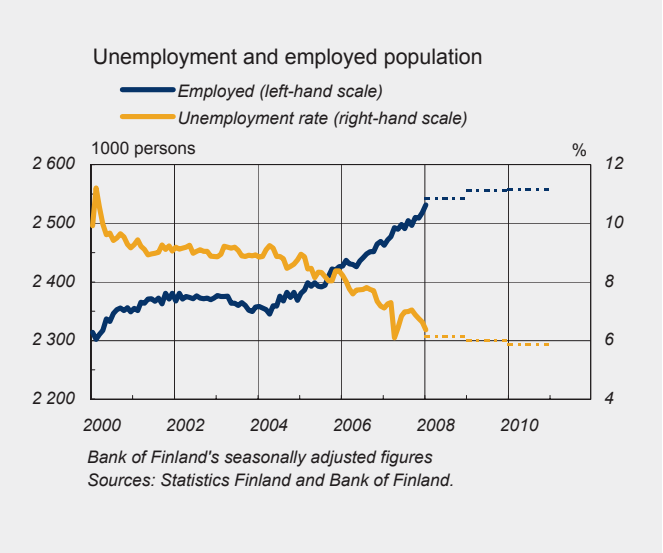


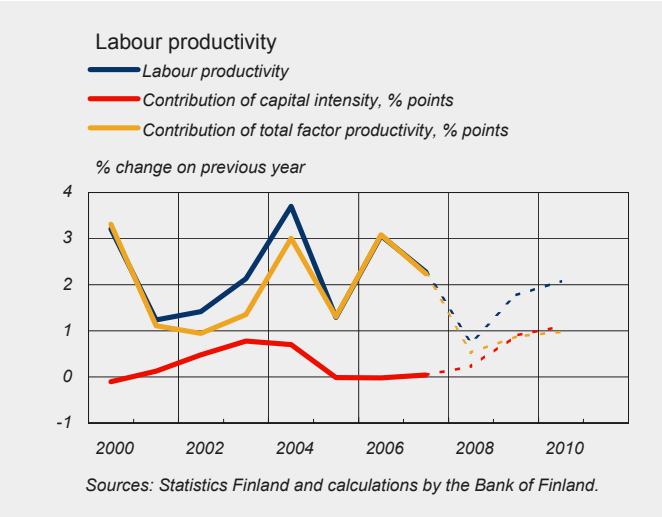
Chart 14.



Employment growth will slow down in 2009–2010. The number of employed is forecast to increase by only 0.5% in 2009 and 0.1% in 2010. The weaker employment trend in 2009 is due to the present deterioration in cyclical conditions, but in 2010 the economic cycle will no longer be exerting a negative influence on employment. Instead, the changing demographic structure will at that time begin to undermine the potential growth in labour supply. In 2009, the working-age population (15–64-year-olds) will still grow 0.2%, but in 2010 it will already begin to decline by 0.3%, according to Statistics Finland's population forecast.

It is estimated that the employment rate among the working-age population (15–64-year-olds) will rise to above 71% before the end of the current year. In 2009 and 2010 it will rise further, but only very slowly. There will still be a fairly rapid decline in the unemployment rate this year, to an annual average of 6.1%, and it will thereafter continue to fall slowly, reaching 5.9% in 2010.

Chart 15.



Productivity and capital

Labour productivity grew by 2.1% in 2007, when productivity is measured according to the volume of GDP produced per person employed. Labour productivity growth was thus around average for the present decade (Chart 15). The employment trend is forecast to continue to be fairly strong in 2008, while GDP growth will be much slower than in 2007. Labour productivity growth is estimated at less than 1%, with the employment trend responding as normal at a slight delay to the slower growth in GDP. The slowdown in productivity growth is, however, assumed to be temporary and cyclical in nature, and the phase of sluggish productivity development is expected to be somewhat shorter than during the trough in the early years of the decade. A return to labour productivity growth of around 2% per annum is forecast for 2009 and 2010.

In growth accounting, changes in labour productivity are customarily divided into two components: one due to increases in capital intensity, and one due to changes in total factor productivity. Capital intensity essentially describes how much physical capital there is in the economy per person employed. Total factor productivity cannot be observed directly, but is calculated as a residual.[2] Thus defined, total factor productivity depicts a

[2] In other words, the change in total factor productivity is the portion of the change in labour productivity that remains unexplained when the impact of capital intensity has been taken into account.

number of hard-to-quantify factors that affect the volume of output, such as technical development, quality of labour, organisation of production and the ability of the market to allocate resources efficiently. In addition, the measurement of total factor productivity can be influenced by a range of cyclical factors, such as capacity utilisation rate and work intensity.

Labour productivity growth since the beginning of the present decade has been due primarily to an improvement in total factor productivity (Chart 15). The slightly negative contribution of capital intensity in 2005 and 2006 is due to the strong employment trend in these years. Although the investment ratio was at the same level as in the early years of the decade, productive capital declined slightly relative to the number of employed. The estimate for the immediate years ahead is for the impact of capital intensity to turn positive, due to slower growth in employment. In contrast, the investment ratio is expected to remain close to its present level throughout the forecast period.

Box 3.

Output gap estimates

The concepts of potential output and output gap are often used in monetary policy analysis. They relate to a simplified way of perceiving the link between total output and price stability. Potential output is the highest possible level of output that can be achieved at a given time without stimulating an acceleration in inflation. Output gap is the difference between actual and potential output. In periods when there is a markedly positive output gap the economy is often overheated and the inflation rate is likely to accelerate. In contrast, a negative output gap often points to resource underutilisation in the economy: the unemployment rate is high, and companies have higher-than-average unused production capacity. In these circumstances, the inflation rate is likely to decelerate.

This box presents estimates of the output gap in Finland between 1996 and 2007.[1] The estimates have been calculated using the Hodrick-Prescott filter, the production function approach and the Bank of Finland's Aino model.

When the Hodrick-Prescott filter (or 'HP filter') is used to estimate potential output and the output gap, the only information on the state of the economy that is needed is the time path of GDP. Potential output estimated with the HP filter presents an essentially two-sided moving average of the time series of GDP.[2] The output gap calculated with the filter is often considered to reflect cyclical conditions (cyclical upswing in the context of a positive output gap, and recession when the output gap is negative), and the output gap illustrated in Chart 16 mirrors rather well the general conception of cyclical developments in recent years.

It is, however, not self-evident that output gap estimates based solely on GDP time series are particularly useful for the purposes of inflation analysis and monetary policy. The output gap estimated using the HP filter was continuously positive between 1997 and 2002 (Chart 16). However, during that period, the inflation rate accelerated only in 2000 (yellow curve in Chart 16). Thus, the historical inflation data would suggest the peak in the output gap around the turn of the millennium is too flat.[3]

In the production function approach, in addition to GDP time series, information on production inputs (capital and labour) is also used in estimating the output gap (Chart 17). The resulting output gap estimate is broadly similar to the outcome using the HP filter (Chart 16). Here, however, the output gap can be divided into two components: the labour market contribution and the trend deviation in total factor productivity.

The labour market contribution reflects the level of tightness in labour market conditions. In the context of a positive labour market component, the actual unemployment rate is typically below the so-called natural unemployment rate that mirrors structural unemployment. In these conditions, companies often face difficulties when trying to recruit qualified employees. This creates upside wage pressures in the labour market, which in turn is likely to push up inflation.[4]

The trend deviation in total factor productivity, meanwhile, indicates how much total factor productivity (which reflects eg technological developments and the organisation of production) deviates from its trend level.[5] For example, productivity growth in Finland accelerated in the late 1990s as the production structure

[1] *Data for 2007 is based on the Bank of Finland's forecast published in autumn 2007 (Bank of Finland Bulletin 3/2007).*

[2] *In other words, when estimating the potential output level in, for instance, 2000, GDP data from the late 1990s and the early years of the 2000s will most strongly influence the result.*

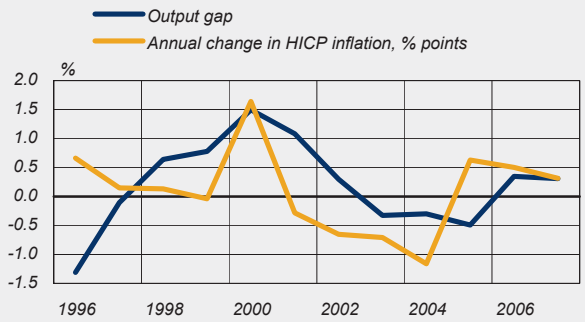
[3] *Broadly similar conclusions can be drawn on the basis of an inflation indicator that excludes the prices of energy and unprocessed food, as well as an indicator of underlying inflation, unaffected by changes in indirect taxes and administered prices. The basic message also remains the same if we look at wage inflation (ie the rate of increase in nominal wages).*

[4] *The calculations underlying Chart 17 have been carried out using the European Commission's NAWRU indicator (non-accelerating wage inflation rate of unemployment) for Finland.*

[5] *A more detailed definition of overall productivity is included elsewhere in this report under the heading 'Productivity and capital'.*

Chart 16.

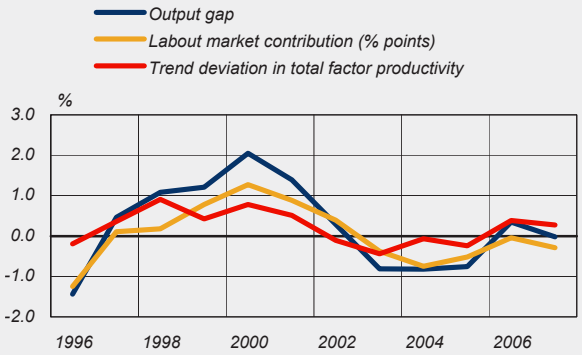
Output gap estimated with the HP filter, and annual change in inflation



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

Chart 17.

Output gap estimated using the production function approach: contributions by two components



Sources: Statistics Finland, European Commission and calculations by the Bank of Finland.

underwent changes and new establishments emerged for producing and exploiting the new information and communication technologies. Between 1997 and 2001 this was reflected in a positive trend deviation in total factor productivity (Chart 17).

The key significance of the trend deviation in total factor productivity in the late 1990s and the early years of the 2000s suggests that output gaps estimated using the HP filter and the production function approach are not necessarily entirely suitable indicators for analysing price stability. It does not seem to be self-evident that improving total factor productivity would, as such, result in inflationary pressures in the economy. It might be more natural to think that increased efficiency results in decreasing production costs and hence a lower inflation rate.

In recent years, central banks have started to make increasing use of dynamic stochastic general equilibrium (DSGE) models in the analysis of inflation, cyclical changes and monetary policy. The Aino model is a DSGE model developed at the Bank of Finland, and it has been calibrated to reflect the Finnish economy.[6]

DSGE models rest on modern macro theory, according to which potential output represents the production path that would materialise if prices and wages were fully flexible. Actual output differs from this definition of potential output, since in modern economies (like the Finnish economy) prices and wages adjust only slowly to changes in the economic environment: in collective bargaining, the development of negotiated wages can be set for years ahead, while companies also do not constantly change the pricing of their products.[7]

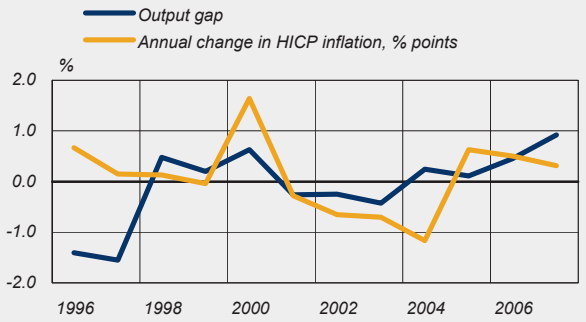
The absolute value of the output gap calculated with the Aino model (Chart 18) has generally been smaller than output gap estimates obtained using the HP filter or the

[6] *A more detailed presentation of the Aino model can be found in 'Aino: the Bank of Finland's new dynamic general equilibrium model of the Finnish economy', an article by Juha Kilponen, Antti Ripatti and Jouko Vilmunen published in the Bank of Finland Bulletin 3/2004, and in 'Labour and product market competition in a small open economy – Simulation results using a DGE model of the Finnish economy', another article by Kilponen and Ripatti published as Bank of Finland Discussion Paper 5/2006.*

[7] *For more detailed information see 'Microanalysis of price-change frequencies', an article by Jouko Vilmunen in the Bank of Finland Bulletin 1/2005.*

Chart 18.

Output gap calculated using the Aino model, and annual change in inflation



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

production function approach. There is a rather natural reason for this difference. In the estimates obtained using the HP filter and the production function approach, the structural change and acceleration in technological advances that began in the late 1990s are reflected in a rather large positive output gap. Likewise, the recession in the global economy and the growth slowdown in Finland's export markets in the early years of the new millennium result in a negative output gap. The Aino model suggests, instead, that the structural change in the economy and the growth slowdown in the export markets cause volatility in the time paths of both GDP and potential output. Hence, according to Aino, the positive output gap around the turn of the millennium was not due to the increase in productivity dynamics as such; it was rather a result of the functioning of the labour market. Between 1998 and 2000, actual output exceeded potential output, since the wage increases decided in the general incomes policy settlements in the late 1990s were moderate in relation to the subsequent actual trend in productivity. The ratio of labour costs to productivity being lower than earlier, companies were able to expand their production. The unravelling of upward wage pressures during the trade union round in 2000 also triggered a negative output gap.

Output gap estimates based on the Aino model seem to be, at least in certain respects, more in line with recent years' inflation developments than more traditional output gap estimates (Chart 18). The peak of the output gap derived from the Aino model is narrower around the turn of the millennium and broadly coincides with the inflation peak in 2000. The inflation rate also accelerated between 2005 and 2007, and the output gap calculated with the Aino model was positive during this period. The output gap estimated using the HP filter did not become positive until 2006, while that calculated using the production function approach was positive only during 2006, being negative in 2005 and hovering around zero in 2007. Historical inflation data would suggest that the least accurate output gap estimates obtained using the Aino model were those for 2004. However, the deceleration in the inflation rate at that time was due to a large extent to the reduction of excise duties on alcohol.

The current state of the economy can be examined with the help of fresh estimates of the output gap. Based on these, the utilisation rate of resources in the Finnish economy would on the whole appear to be fairly high in 2007. Estimates of the output gap produced using both the Aino model and the HP filter are positive for 2007. However, the estimate using the production function is close to zero. As we can see from figure 17, this is due to a negative labour market contribution. This, in turn, is based on the European Commission's estimate of how low Finland's unemployment rate can fall without stimulating an acceleration in the pace of wage rises. This is perhaps optimistic in the light of recent data. For 2007, the estimate was 6.4%.

Box 4.

Employment and hours worked in the Nordic countries

The employment situation in Finland has improved in recent years. However, the employment rate – the number of employed divided by the working-age population – still remains well below that of the other Nordic countries. On the other hand, Finland has much higher figures than the other Nordic countries for the number of hours worked per person employed (Chart 19). Finland also performs reasonably well in a comparison of the number of hours worked annually in the Nordic countries across the economy as a whole relative to the size of the working-age population (Chart 20).

A partial explanation for the hours worked per person employed being higher in Finland can be found in the differences in the extent of part-time working in the different countries. In Finland, a much smaller proportion of employed people work part-time than in the other Nordic countries. In 2006, part-time workers accounted for under 14% of the employed workforce in Finland, while the figures for Sweden, Denmark and Norway averaged almost 25%. In all the Nordic countries, most part-time workers are women, which means the differences in the figures are essentially differences in the labour-market position of women. In Sweden and Norway, where the employment rate for women is much higher than in Finland, part-time work accounts for more than twice as much of female employment (over 40%) than in Finland (under 20%). The proportion of part-time work has actually risen slightly in recent years in Finland, Sweden and Denmark due to higher employment in female-dominated service sectors in response to the strong performance of the economy.

Statistics on the number of employed and employment rates do not distinguish between full-time and part-time employment. It is possible to construct an alternative measure of the

Chart 19.

Chart 20.

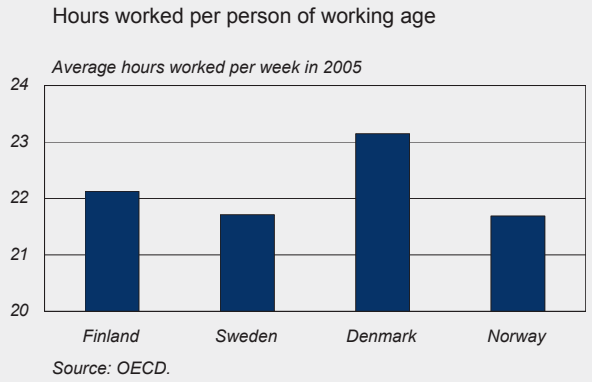
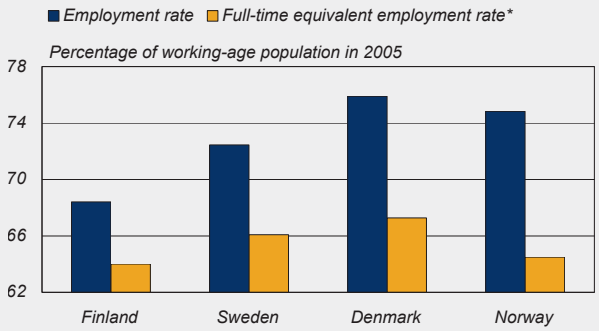


Chart 21.

Employment rate and 'full-time equivalent employment rate'



* Takes account of the impact part-time work has on total hours worked
Source: Eurostat.

employment rate that takes account of the proportion of part-time work by giving part-time jobs a lower weighting in the statistics than full-time jobs. Calculated thus, the 'full-time equivalent employment rate' in Finland is closer to the level of the other Nordic countries than the employment rate as normally measured (Chart 21). This alternative measure takes account of two factors: the fact that part-time work as a proportion of total employment varies between countries, and the fact that the average annual hours worked by part-time workers also varies between countries.

As well as the extent of part-time working, differences in the hours worked per person employed are also affected by other factors, such as the average numbers of days off sick per employee. According to the available data, there are less sick days per employee in Finland than in the other Nordic countries on average, which helps explain the relatively high Finnish figures for hours worked per employee. No internationally harmonised statistics on the number of days off sick are currently available. Data compiled by CESifo and the OECD nevertheless suggest an average of under 10 sick days per person employed in Finland and Denmark, against 15–20 days in Sweden and Norway.

Demand

Finnish exports continued to grow strongly in the first half of 2007, but slowed thereafter. In the second half of the year the problems on the international financial markets began to come to a head. Towards the end of the year there was a slowdown in US growth, and in recent months the growth outlook has deteriorated both in the United States and in many other countries. The forecast for the immediate years ahead is for world economic growth and growth in Finnish exports to be somewhat slower than in recent years.

In 2007, household consumption continued to grow rapidly. The improving employment situation sustained growth in household incomes and confidence in the future. There was, however, slower growth in housing investment, with a rise in both interest rates and construction costs, and a continued shortage of building land. Households' consumption expenditure grew to a level well in excess of their disposable income, and consumption growth is forecast to slow somewhat over the next few years. Growth in housing investment is forecast to remain slow.

Corporate construction investment and investment in machinery and equipment grew considerably in 2007 against a background of continued strong earnings. The forecast for 2008 is for a slowing of corporate investment growth in response to a weakening demand outlook and higher financing costs.

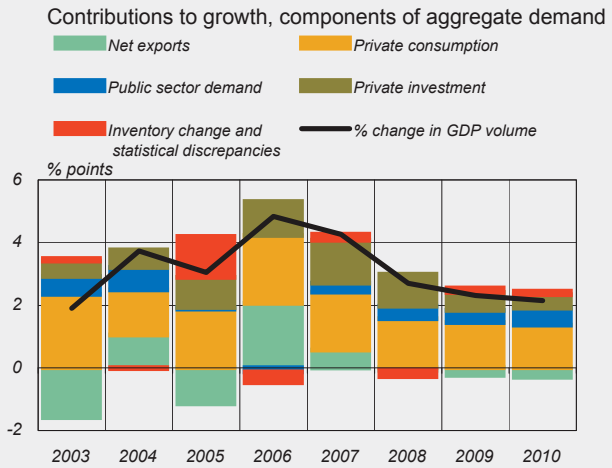
In 2007, there was a large general government surplus, but this is forecast to decline gradually over the next few years in the face of rising personnel costs, tax cuts and slower economic growth. The decline in the size of the working-age population from 2010 onwards will mark the beginning of a long-term decline in the general government balance.

Domestic demand made an important contribution to growth in the second half of 2007, while the contribution of net exports declined. Although the Finnish economy grew more slowly in the second half of the year, growth in domestic demand remained reasonably brisk. The structure of growth will change during the forecast period. Private consumption will grow only a little more slowly, whereas there will be a much more marked slowing in the pace of growth in private investment. In 2008, the pace of both export and import growth will continue to decline, but will recover somewhat in 2009–2010. During the forecast years, imports will grow slightly faster than exports, and the growth impact of net exports will be slightly negative. This is a consequence of both domestic supply-side restrictions and the moderating pace of growth in export demand. Public sector demand will grow moderately during the forecast years. All in all, more subdued demand and supply-side restrictions will mean a phased decline in the pace of GDP growth of around 2% during the forecast period (Chart 22).

Private consumption

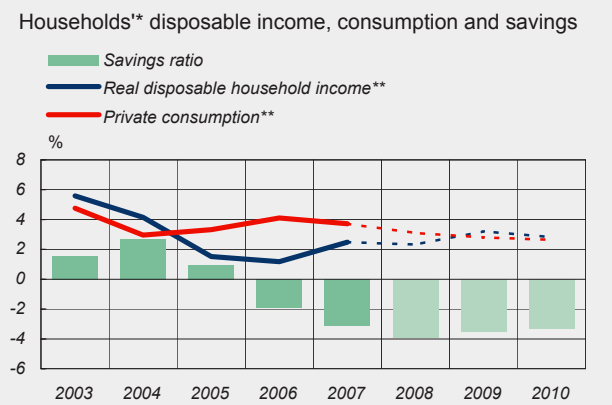
Private consumption continued to grow strongly in 2007, with volume growth 3.7% up on the previous year. Consumption growth gained from much faster growth in disposable income than in 2006 (Chart 23). The growth in real disposable income was based mainly on good employment development, while also being boosted by the wage increases and one-off payments included in new collective agreements concluded towards the end of the year. Real income growth

Chart 22.



The chart is merely indicative. The GDP growth contribution of each demand item has been calculated on the basis of its volume growth and its value share in the previous year.
The figures for 2008–2010 are forecasts.
Sources: Statistics Finland and Bank of Finland.

Chart 23.



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

was, however, moderated somewhat by the acceleration of inflation during the course of the year. Shareholders' dividend income was up slightly on the previous year as a result of good earnings development, while pension income increased slightly more than the previous year (Chart 24).

Although consumer confidence in the Finnish economy weakened towards the end of the year, from the point of view of the outlook for consumption it is significant that consumers continue, at least for the time being, to have confidence in their own finances and employment (Chart 25). This confidence has continued through the early months of 2008, although the outlook for the Finnish economy has further deteriorated.

Household debt has continued to grow in recent years, and the ratio of debt to annual disposable income increased in 2007 to well over 100%. Together with the rise in interest rates from the previous year, the increased level of debt means that debt-servicing expenses are also higher. Relative to disposable income, however, they are forecast to remain well below the level of the early 1990s.

The consumption figures towards the end of 2007 were affected to some degree by the response of car sales to changes in the car tax, which was reformed at the beginning of November and came into effect at the turn of the year. Many consumers postponed purchases, particularly of new cars, until 2008. The volume of private consumption in 2008 is forecast to be more than 3% up on the previous year. Besides the brisk car trade in the early months of the year, consumption growth will also gain from the continued positive state of employment – despite the slower pace of economic growth.

Private consumption growth will, however, ease back slightly to 2.8% in 2009, and around 2.6% in 2010. Consumption will be bolstered by strong growth in households' real disposable income. The continued healthy increase in real disposable income will not, however,

lead to faster consumption growth, as the savings ratio is strongly negative.

It is estimated that disposable income will grow this year nominally by as much as 5.6%, a marked increase on the pace of growth last year. The most important contributing factors will be faster wages growth and the continued improvement in the employment situation. Positive incomes development will continue in 2009 and 2010 as a consequence of a steady increase in income transfers and tax cuts, although there will be a gradual deceleration in the pace of growth in aggregate wages as wage rises become more moderate and employment growth eases off. All in all, growth in real disposable income will be reasonably strong during the forecast period, as the pick-up in the pace of inflation in 2008 will, according to the forecast, be largely temporary.

The household savings ratio was around 3% negative in 2007. The savings ratio (the difference between disposable income and consumption expenditure, divided by disposable income) will be slightly lower still this year. This can be interpreted as reflecting the strength of consumer confidence, partly as a consequence of the positive employment trend. The savings ratio is forecast to remain negative, but to rise somewhat towards the end of the forecast period.

General government

The general government balance has improved markedly in recent years as a result of the sustained growth in the economy. The surplus grew to a record EUR 9.5 billion in 2007, or 5.2% of GDP. The balance was particularly strengthened by growth in the central government surplus to 2% of GDP. In addition, recent years have seen the build-up of a surplus in the social security funds, in particular, although the local government sector has been running a slight deficit (Chart 26). At the same time, general government gross debt has declined. At the end of 2007, general government debt stood at 35.4% of GDP.

Chart 24.

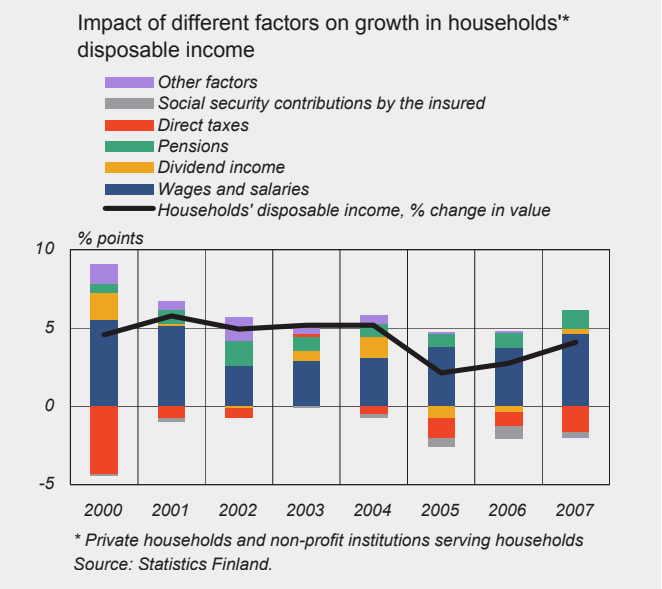


Chart 25.

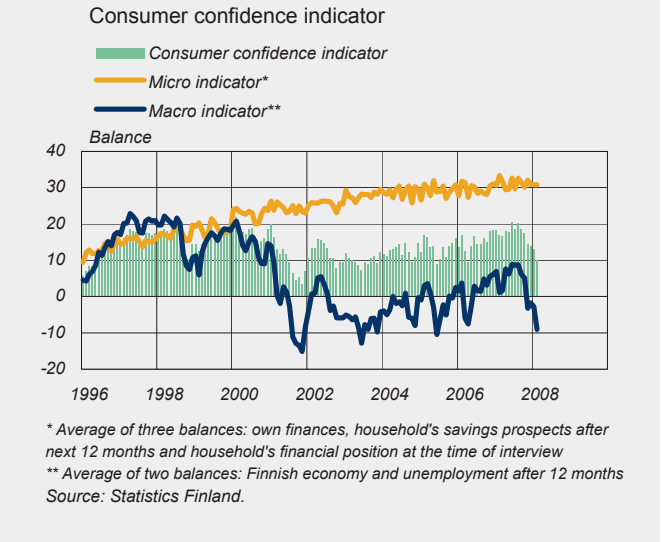
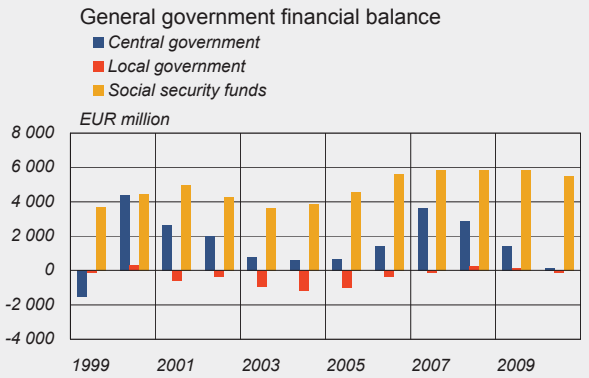


Chart 26.



The figures for 2008–2010 are forecasts.
Sources: Statistics Finland and Bank of Finland.

Last year's exceptionally rapid economic growth boosted general government asset income and tax receipts at the same time as unemployment expenditure was reduced. Public sector employee compensation also grew only moderately, if we look at the average figures over 2007 as a whole. The number of employed grew slowly and average wages rose only slightly, as the pay rises included in the new round of collective agreements came into effect towards the end of the year.

Growth in general government expenditure has also been restricted in recent years by the fact that approximately three quarters of on-budget items are subject to agreed annual ceilings under the system of spending limits for central government expenditure, and these limits have been observed in practice. There is no equivalent system at local government level, and expenditure growth here has been much faster than in central government.

Growth in the tax bases – particularly corporate profits, but also aggregate wages and private consumption – has boosted central and local government tax receipts considerably in recent years. The strong growth in tax bases has meant the tax ratio has remained fairly stable, despite discretionary cuts in tax rates. In 2007, the tax ratio was approximately 43% of GDP, more or less equal to the previous year.

The general government balance is, however, forecast to deteriorate over the next few years as economic growth slows and the increase in the number of employed also becomes more subdued. Slower growth in the tax bases together with the planned tax cuts included in the government programme will dampen the pace of growth in tax receipts in the years ahead. At the same time, public sector labour costs will be rising at a faster pace. The pay rises agreed last autumn will increase general government consumption expenditure. When to this is added the serious increase in age-related expenditure around the turn of the decade as the population ages, the pace of growth in public sector spending on pension and care will rapidly accelerate after 2010.

The Finnish population is ageing faster than any other country in the EU. According to the forecast, the favourable trend of recent years in the general government balance – particularly central and local government – will deteriorate permanently from 2010 as the working-age population begins to contract and the number of pensioners grow. At that point revenue growth will slow down and expenditure growth speed up.

Despite the clear slowdown in economic growth, the afterglow from the period of strong growth will still sustain the general government surplus in 2008,

partly because of the continuing downward trend in unemployment expenditure. The general government surplus will actually decline only slightly, to 4.8% of GDP, primarily because of a decline in the central government balance.

Slower growth in the tax bases, the tax cuts planned for 2008 – 2010 under the government programme and increased expenditure, taken together, will almost completely erode the central government surplus by the end of the forecast period. At the same time, local government finances will overall be more or less in balance. Rising labour costs will place an increased strain on local government finances. On the other hand, growth in tax receipts, and particularly in central government transfers, will boost local government income during the forecast period. The growth in tax receipts will be furthered by an increase in the average local government tax rate in 2008. The general government surplus will decline to 2.7% of GDP by 2010, and will by this time be totally dependent on the surplus in the social security funds. The ageing of the population will, however, weaken the balance of the social security funds, too, towards the end of the forecast period, and increasingly after the turn of the decade.

Gross general government debt is estimated to contract to 30% of GDP by the end of the forecast period, as central government will able to use some of its surplus to reduce central government debt. In 2010, however, the decline in the debt ratio will be due entirely to GDP growth, as the euro value of central government debt will begin to grow.

Discretionary tax cuts will continue in the immediate years ahead. The tax cuts included in the government programme will mean a reduction in the total tax rate to 42% of GDP by 2010. The overall tax burden on the economy will be reduced by a cut in value-added tax on food at the end of 2009 and the income tax cuts contained in the government programme, which the forecast assumes will be implemented in 2009 and 2010. The forecast also assumes that the government will adjust income tax scales annually to prevent higher taxation of wage-earners' income as a consequence of higher inflation and rising real earnings.

Table 4.

General government revenue, expenditure, financial balance and debt, % of GDP

	2004	2005	2006	2007	2008[f]	2009[f]	2010[f]
General government revenue	52.4	53.1	52.9	52.7	52.4	51.8	51.4
General government expenditure	50.2	50.4	48.9	47.5	47.6	48.1	48.7
General government primary expenditure	48.4	48.7	47.3	45.9	46.1	46.7	47.4
General government interest expenditure	1.8	1.7	1.5	1.5	1.5	1.4	1.3
General government net lending	**2.2**	**2.7**	**4.0**	**5.2**	**4.8**	**3.8**	**2.7**
Central government	0.4	0.4	0.9	2.0	1.5	0.7	0.1
Local government	-0.8	-0.6	-0.2	-0.1	0.1	0.1	-0.1
Social security funds	2.5	2.9	3.4	3.3	3.1	3.0	2.7
General government primary balance	3.9	4.4	5.5	6.8	6.2	5.2	4.0
General government debt	**44.1**	**41.3**	**39.2**	**35.4**	**32.3**	**30.7**	**30.2**
Central government debt	41.9	38.2	35.3	31.4	28.7	27.2	26.8
Tax ratio	43.4	43.8	43.4	43.0	42.8	42.4	41.8

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

Total general government expenditure is estimated to rise in current price terms by about 5% annually in 2009 and 2010. Expenditure will also grow relative to GDP in the forecast period. Consumption expenditure will be inflated particularly by rising public sector labour costs. Towards the end of the forecast period, population ageing will also begin increasingly to push up expenditure. Expenditure growth is estimated to be faster in local than central government, and the pressure on local government to take on more staff will also grow in line with increasing demand for social and healthcare services. General government investment expenditure growth will be fuelled particularly by transport infrastructure projects to be carried out in 2008 and 2009. Investment expenditure will also grow relative to GDP.

Chart 27.

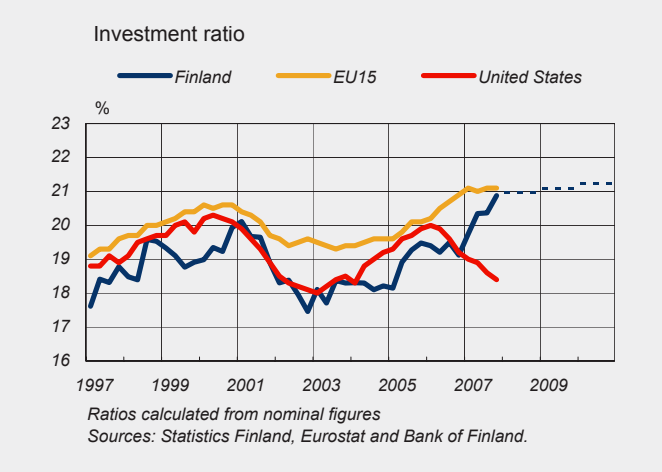
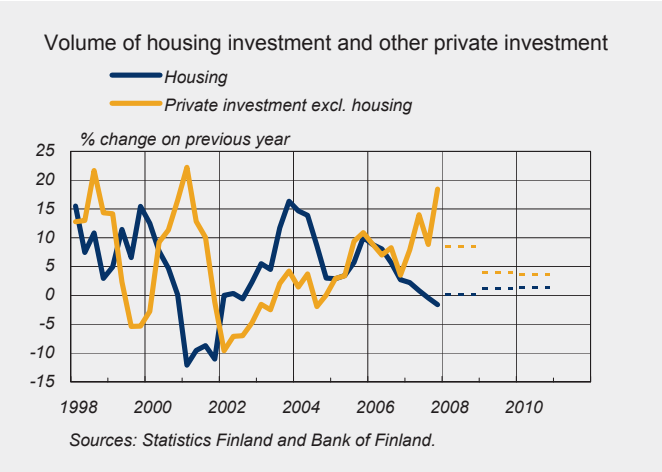


Chart 28.



Investment

The volume of private investment grew almost 8% in 2007. Investment growth thus continued at a rapid pace for the third year in a row, with the pace of growth actually much faster in 2007 than in the previous two years. The investment ratio for the economy as a whole rose to slightly above 20%. It was last more or less this high in 2001 (Chart 27).

In contrast to other investment, investment growth in housing construction came to a standstill in 2007 (Chart 28). Housing demand has been hit by the higher costs of finance. Despite the continued rise in housing prices, there has been no real increase in the volume of housing construction, which is restricted by higher construction costs and a shortage of building land.

Although growth in housing construction came to a standstill in 2007, other areas of construction experienced a strong expansion. According to advance data from Statistics Finland, the volume of new construction (excl. housing) grew approximately 25% in 2007. There was brisk growth in industrial and warehouse construction, but growth was particularly rapid in commercial (65%) and office construction (55%). The exceptionally strong growth in commercial and office construction is due to demand for new, modern premises, while older and

possibly inconveniently situated premises are increasingly underused.

Investment in equipment and machinery also grew strongly in 2007, by approximately 6%. Together with construction (excl. housing), this boosted non-residential investment by as much as 12% in 2007 (Chart 28).

The pace of price rises in private investment accelerated in 2007, primarily due to the strong increase in construction costs. The pace of increase in housing construction investment prices rose to 7%, against a continued 3% rise in the price of other investments.

Of business surveys, the Confederation of Finnish Industries' investment survey anticipates a further increase of around 6% in the total value of domestic investment by industrial enterprises in 2008; this is a slightly lower increase than in 2007, when the figure was 11%. In addition, energy sector investment will grow strongly in 2008, with the combined investment growth by industry and the energy sector totalling almost 18%. Besides construction of the new nuclear power plant at Olkiluoto, investment growth in the energy sector will also be driven by infrastructure investment in electricity, gas and water. The main focus of domestic investment by manufacturing industry, according to the survey, will be to replace old production capacity.

Private investment growth will ease considerably during the forecast period, from around 8% in 2007 to approximately 2% in 2010. Viewed sectorally, there are two distinct trends: non-residential investment will grow strongly in 2008, but will thereafter become much slower, while the slower phase in housing construction in 2008 will be followed by a slight recovery.

Indicator data suggests housing construction will remain sluggish over the next few months and the volume of housing construction investment in 2008 is forecast to remain at the level of 2007. The assumed small drop in interest rates and more subdued rise in housing construction costs will give a small stimulus to housing construction in 2009–2010. In addition, slower growth in other construction will gradually provide an opportunity for housing construction, as it will enable the construction sector, which is suffering a shortage of skilled labour, to transfer workers into housing. Continued high house prices and shortages of building land will, however, constrain the forecast annual growth in investment in housing construction.

In contrast, other construction is set to continue to perform strongly in 2008, although the exceptionally rapid pace of growth will slow considerably towards the end of the forecast period as the slower phase of the economic cycle takes hold. High rates of under-utilisation also suggest a slowdown in office and other commercial construction in the medium term.

Investment in machinery and equipment planned in advance (linked to eg construction of the nuclear power plant at Olkiluoto, and aircraft purchases) will support machinery and equipment investment growth at least in 2008, whereafter the forecast slowdown in economic growth will also subdue investment in this area.

World economy and external demand

The world economy continued to grow fairly strongly in the second half of 2007

despite the disturbances on the financial markets. The pace of growth is slowing as a result of the prolonged financial market unrest and weaker confidence, but, even so, the forecast is for a reasonable level of growth throughout the forecast period. As a counterbalance to slower growth in the major economic regions, particularly the United States, growth is continuing at a brisk pace in non-Japan Asia , the OPEC countries and Russia, for example. World growth for the present year is forecast to be slightly under 4%. The slowest phase of growth is estimated to be fairly short-lived, and the world economy is forecast to return to over 4% growth in 2010 (Table 5).[1] Despite the recent problems on the financial markets, the world economy is not forecast to go into recession, although the considerable uncertainty surrounding the duration and extent of the problems means the risks to the growth forecast are weighted on the down side.

The pace of growth in the EU15 eased back in the final quarter of 2007.[2] Growth for the year as a whole reached 2.7%, but the forecast for 2008 is below 1.8% (Chart 29). The more subdued growth outlook for the world economy, increased uncertainty and weaker confidence will inhibit the pace of growth. Growth will also be restricted by the tighter financial climate for many would-be borrowers. The slowest phase of growth will, according to the forecast, be in 2008, with a partial recovery forecast for 2009. Private consumption growth in the EU15 is estimated to accelerate during the forecast period in response to strong labour market development, the forecast acceleration in wages growth and the eventual decline in interest rates included in the forecast assumptions. Export performance in the EU15 will remain relatively good in light of the expected favourable growth in export markets, particularly in the new EU member states and Asia. The pace of

Chart 29.

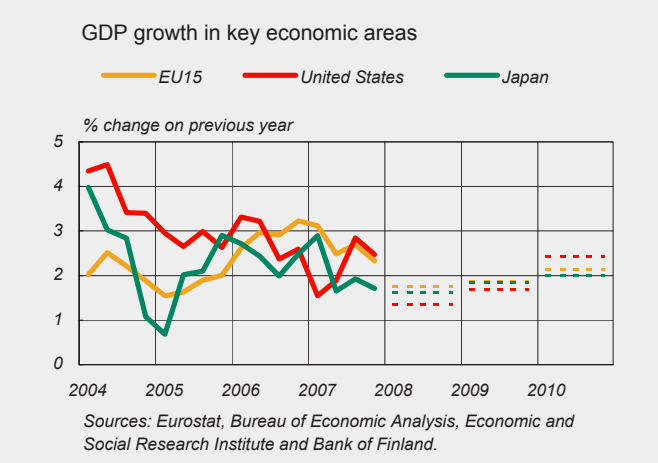


Table 5.

GDP and trade growth rates

% change on previous year

GDP	*2007*	*2008f*	*2009f*	*2010f*
United States	*2.2*	*1.3*	*1.7*	*2.4*
EU15	*2.7*	*1.7*	*1.9*	*2.1*
Japan	*2.0*	*1.6*	*1.8*	*2.0*
World	*4.8*	*3.9*	*4.0*	*4.3*
World trade	*6.6*	*5.8*	*6.7*	*7.0*
Finland's export markets	*8.5*	*7.8*	*7.8*	*7.6*

Growth in Finland's export markets equals growth in imports by countries to which Finland exports, on average, weighted by their respective shares of Finnish exports.
f = forecast
Source: Bank of Finland.

[1] In January 2008, the International Monetary Fund (IMF) adjusted its country weightings for shares of world GDP based on purchasing power parity (PPP). The main reason for the adjustments was new price data on the emerging economies. As a result of the adjustment, many countries' share of global GDP (eg China and India) as measured by PPP weightings is now much smaller than before. The present forecast uses the new IMF weightings.

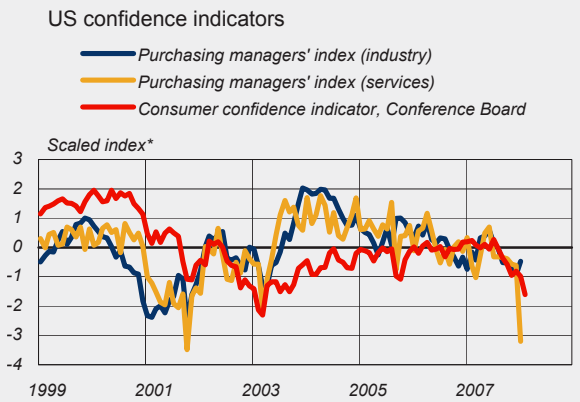
[2] The EU15 includes the 'old' member states of the European Union, ie the original euro area countries plus Greece, the United Kingdom, Sweden and Denmark.

investment growth is, in contrast, forecast to ease in 2008 in response to the increased level of risks in the economy and the tighter financial climate.

Economic growth in the United States slowed in the final quarter of last year, but the previous strong development means growth for the year as a whole was still 2.2%. US GDP growth is forecast to be only 1.3% in 2008 (Chart 30). Both the housing and labour markets and private consumption have for the most part continued to perform weakly in recent months. Housing investment continues to contract, and the weak trend in investment activity overall will hamper growth in 2008. The biggest source of support for growth will come from the export sector, which will benefit from improved price competitiveness. Private consumption will grow much more slowly in the face of the continued adjustment in the housing market and slowing growth in both employment and earnings. Towards the end of 2008 and in 2009, GDP growth is forecast to pick up slightly, mainly due to stronger growth in private consumption. The economic slowdown is forecast to be over by 2010.

The Japanese economy grew more slowly in the second half of 2007 due to the introduction of tighter regulations on housing construction and the resulting collapse in the construction of new houses. This is expected to still weigh the economy down during the first half of 2008. Even so, GDP growth reached 2.0% in 2007 as result of strong export growth and corporate investment. Exports to Europe and Asia have compensated for more sluggish exports

Chart 30.



** The index illustrates distance from the average as standard deviations. Averages and standard deviations are based on observations made during the timespan of the chart.*
Sources: Bloomberg and ISM.

to the United States. A considerable proportion of output in Asian countries is exported outside the region, and the slower growth in the United States and Europe is therefore expected to be reflected in future Japanese exports. Household consumption demand in Japan has still not shown any clear sign of recovery, with growth in household incomes remaining sluggish. In 2008, Japan's GDP growth is estimated to slow to 1.6%. The slower growth is, however, expected to be temporary, with eg housing construction beginning to gradually return to normal, and import demand in neighbouring countries remaining for the most part brisk.

In non-Japan Asia, growth remains brisk, although slower growth in the main economic regions will somewhat weaken the export outlook for countries in the region. The internal dynamics and strong domestic growth within the region will, however, sustain growth. This is part of the reason the forecast envisages continued strong growth in world trade during the forecast period.

The Chinese economy continued to grow very rapidly in 2007. Accelerating inflation and increased wage pressures, however, suggest the actual pace of growth was faster than potential growth. Although the pace of growth is expected to gradually slow in the future, it will remain fast throughout the forecast period.

The Russian economy also grew strongly in 2007, and the figure for 2008 is forecast to be almost 8%. Growth is expected to slow to 6% by the end of the forecast period. The continuation of rapid growth is supported by the assumed continuation of oil prices around their present level throughout the forecast period. The forecast envisages an acceleration in both consumption and investment growth. Investment needs, appreciation of the rouble and rising wages will sustain rapid import volume growth, which in recent years has run at approximately three times the rate of export volume growth.

Export markets and export prices

World trade growth slowed in 2007 to under 7%, from almost 10% in 2006. Towards the end of 2007, the bipolar split in the world economy began to deepen as the combined impact of the financial market disturbances that originated in the United States and domestic problems this side of the Atlantic began to be reflected in UK, and to a small degree euro area, imports. In the emerging economies, in contrast, import demand has remained brisk, with Chinese investment growth in particular showing no signs of slowing down. Indicator data suggests trade in the emerging economies has continued to be brisk in the early months of 2008. This is partly because the continued high price of oil is bolstering demand in oil-producing countries.

Growth in Finland's export markets eased somewhat in 2007, but nevertheless remained fairly strong.[3] The key factor was Russia, the euro value of whose imports grew last year by a whopping 24%. Last year's exports from Finland were in general weighted towards countries rapidly increasing their imports, such as Sweden and the new EU member states. Finland's export markets grew last year approximately 2 percentage points faster than world trade, the main reason being the very strong growth in Russian imports.

In the forecast period, Finland's export markets will continue to grow relatively rapidly, if somewhat more slowly than before. Mainly because of the rapid growth in import demand in Russia, Finland's export markets will still grow much faster than world trade.

Chart 31.

[3] Growth in Finland's export markets means average import growth in Finland's trading partners weighted according to their share of Finnish exports.

This will be particularly true in 2008, when the difference is as much as 2 percentage points (Chart 31). Swedish imports, which are important to Finland, will also grow faster than those of the other industrial economies.

The rise in the price of oil and the continued high prices for metals have bolstered the prices of exports by Finland's chemical and metals industries. The annual pace of rise in export prices for engineering products accelerated to approximately 3% towards the end of last year on the back of higher raw material costs and strong demand. The decline in export prices for electronics products slowed in 2007, but is expected to pick up again.

Forest industry export prices in 2007 developed differently in different parts of the sector. After a strong start to the year, the slowdown in construction in Europe pushed the export prices for sawn goods onto a downward trend towards the end of the year. In contrast, growing Chinese demand for paper pulled up the price for pulp almost throughout the year. However, the price trend in paper itself has been subdued, and the prices for some qualities of paper have actually fallen despite the rising price of pulp (Chart 32).

Over all, Finland's export prices remained more or less at the level of the previous year in 2007 when measured against the export deflator for goods and services. On the other hand, the export price index weighted according to export shares in 2000 was up an average 2.4% on the previous year. Export prices for Finnish goods have been rising much more slowly for several years than those for other countries with similar levels of income, despite an export structure weighted towards raw materials and semi-manufactures (Chart 33). This has been partly due to the rapidly falling prices of mobile phones, which has been compensated for by strong growth in productivity. In addition, export prices in the paper industry have more or less stood still in recent years.

For structural reasons, the depreciation of the dollar has possibly affected

Chart 32.

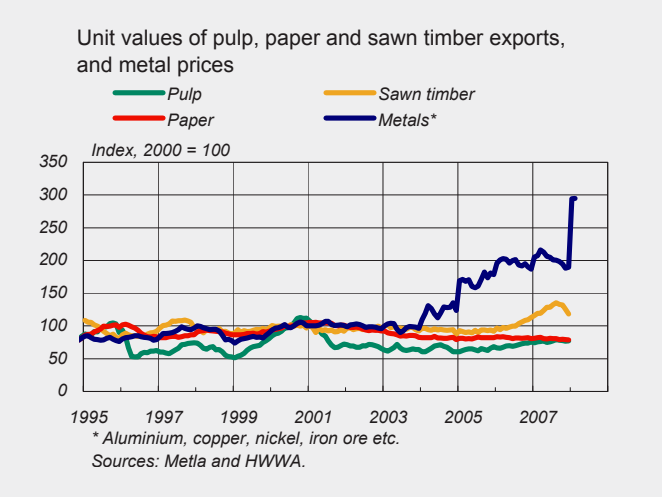
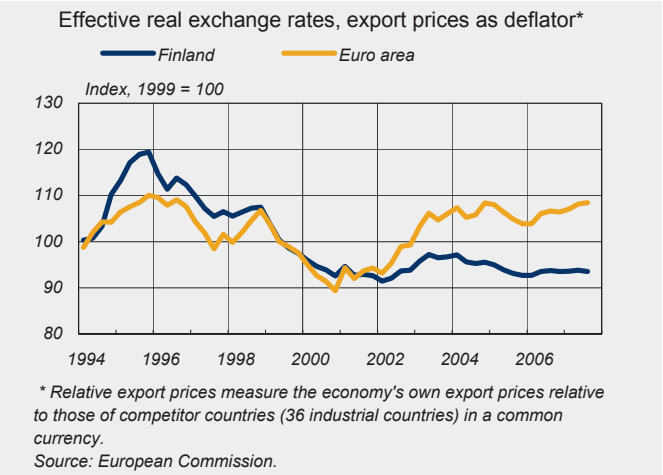


Chart 33.



Finland's export prices more than those of other euro area countries. In the forecast period this trend will initially continue as the stronger euro depresses export prices, particularly this year. The decline in industrial raw material prices assumed in the forecast will also be reflected in export prices for goods and services, which are estimated to decline somewhat over the next few years.

Viewed sectorally, the forecast estimates that export prices in the electronics industry will continue to decline throughout the forecast period. The decline in metal prices during the forecast period will restrict export price rises in some product groups. The export prices of technology companies producing capital goods will, however, continue to rise as higher raw material and labour costs eventually feed through into final goods prices. The forecast assumes that roundwood imports from Russia will continue. The immediate years ahead will see over-supply on the market for forest industry products due to the weak dollar and sluggish demand, and this will exert a downward pressure on export prices.

Foreign trade

There was a marked slowing of growth in Finland's foreign trade in 2007. The fairly strong early-year trend in both exports and imports slackened towards the end of the year. Despite the slower growth, the total volume of goods and services exports increased 4.8% in 2007, while growth in the total volume of imports was just 4.1%. Import growth was slowed by the sluggishness of service imports, whereas goods import growth was a reasonable 5.0%.[4] Import prices once again rose faster in 2007 than export prices.

The fairly strong development of the world economy boosted the exports of Finnish capital goods manufacturers in 2007, with, for example, exports of machinery and equipment up by a fifth. The value of metal manufactures exports grew 10%, although towards the end of the year there was a substantial drop in volumes, and prices declined by a few per cent. The drop in value of telecommunications equipment exports caused a general fall in the value of exports for the electronics sector as a whole of a few per cent, although in the rest of the sector there was a substantial increase in export values. The value of paper industry exports remained unchanged as the sector struggled with structural problems (Chart 34).

In 2007, exports to Russia continued to grow, whereas exports to Germany and Sweden stood still (Chart 35). Russian imports, too, continued to grow very rapidly in 2007. As Finnish industry focuses particularly on the manufacture of capital goods, the export sector is unable to take full advantage of Russia's import growth. This is because Russian imports focus largely on consumer goods, of which Finland does not produce very much. On the other hand, there was a notable increase in re-exports of motor vehicles to Russia in 2007, whereas re-exports of mobile phones continued to decline.

The forecast estimates that the pace of growth in both exports and imports will slow in 2008, but pick up again to

[4] Statistics Finland has revised upwards the figures for services imports in the National Accounts by an average of approximately EUR 2 billion annually from 2002 onwards.

around 5% towards the end of the forecast period. Electronics exports are forecast to develop only moderately, with communications equipment increasingly being manufactured abroad. Exports of machinery and equipment are forecast to grow, with the strength of investment demand in emerging economies keeping the export outlook relatively bright. Paper industry exports will suffer from over-capacity and the Russian export duties on roundwood. The baseline scenario assumes that Russia will increase roundwood export duties in April 2008. On the other hand, the impact of additional increases planned for 2009 have not been taken into account in the forecast, as the talks on these between Russia and the EU are still ongoing. The roundwood export duties are discussed in more detail below, in the chapter 'Risk assessment'.[5]

Finnish exports will grow much more slowly during the forecast period than the average for recent years. In addition to slightly slower growth in the export markets, this is also in some measure due to a partial mismatch between the products Finland produces for export and demand in the export markets. On top of this, some export sectors in Finland have a shortage of both labour and capacity that is restricting more rapid export growth (Chart 36).

Current account

The current account surplus began to grow slightly in 2007. Advance data

[5] The export duties and their possible impact have been discussed in Bank of Finland Bulletin 3/2007, p. 73–77.

Chart 34.

Chart 35.

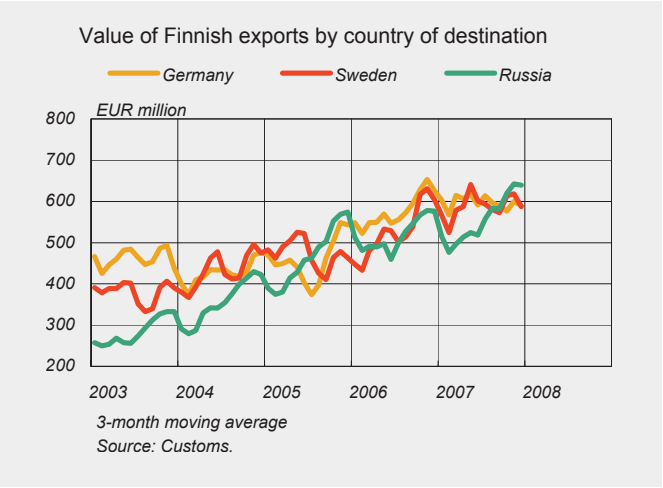


Chart 36.

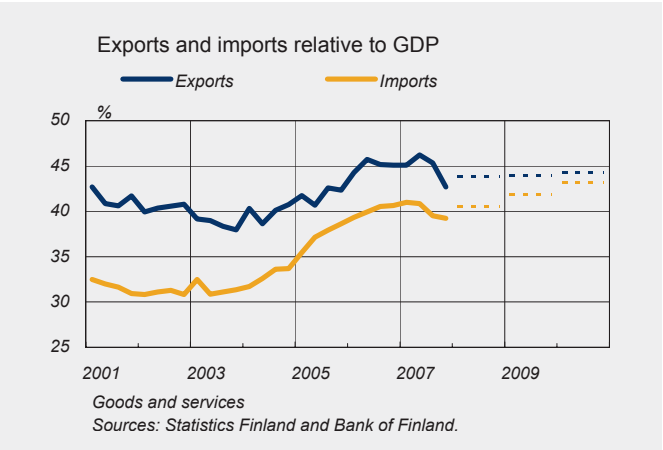


Chart 37.

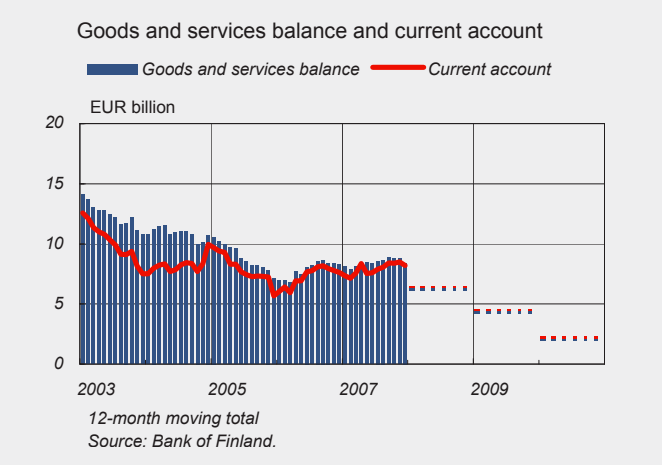
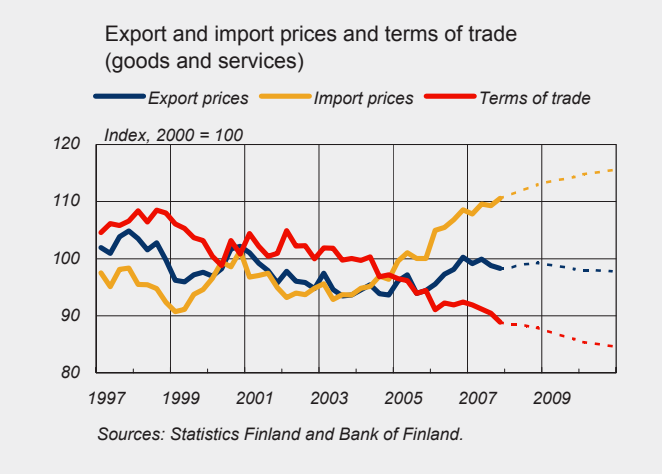


Chart 38.



suggests a surplus of around EUR 8 billion, or approximately 4.6% of GDP. The biggest contributor to the surplus was the greater value of goods exports relative to goods imports. The goods account showed a surplus of around EUR 8.9 billion. The increase in the current account surplus is in turn explained by the improvement in the services account and growth in the surplus on the income account.

The deficit on the services account declined in 2007 to EUR 0.5 billion, down almost a half from the level of the previous year. Income from services has been boosted by the item'Other business services', which includes things such as head-office services for multinational companies and merchanting services. In February 2008, a revision was made to the figures for service imports in the balance of payment statistics that reduced the balance of payments surplus for the years 2002–2007 by an average of approximately EUR 2 billion per annum.[6]

The surplus on the income account grew further from the level of 2006. The growth is explained by the yield on portfolio investment: outward payments of interest and dividends in 2007 were smaller than in previous years, while inward payments continued to grow as in previous years. At the same time, the net yield on direct investment has remained positive.

The current account surplus is forecast to start declining in 2008 (Chart 37). In volume terms, exports of goods and services will grow almost as fast as imports, but deterioration in the terms of trade will reduce the trade surplus. The forecast estimates that the terms of trade will continue to deteriorate in 2009–2010 (Chart 38). The income and current transfers accounts are expected to remain at the level of the previous year. The current account surplus will as a result contract to approximately 1% of GDP in 2010.

[6] This revision is a result of and congruent with Statistics Finland's revision to National Accounts services import statistics referred to in footnote 4 above.

Costs and prices

Labour costs in Finland rose at close to the average rate for the euro area in 2006 and 2007 but are projected to pick up sharply in 2008 and 2009. Agreements made during the last year include larger wage increases than before. As labour productivity growth slows, unit labour costs will accelerate substantially.

World prices of food raw materials and crude oil rose notably in 2007, and metals prices remained at a high level. But euro appreciation tempered the rise in raw material prices measured in euro. Relative to recent years, raw materials are estimated to remain expensive in the immediate years ahead.

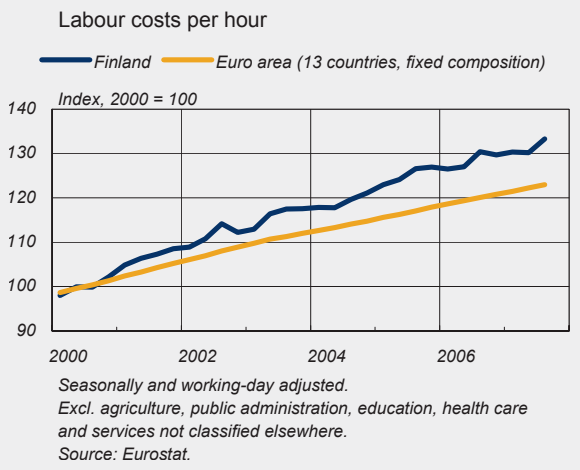
Consumer price inflation increased during 2007, and again substantially in January 2008. The recent rise is partly due to a rise in the price of crude oil. The inflation pick-up at the turn of the year was also affected by the pass-through of rising prices of food raw materials into consumer prices of cereal and dairy products in particular. Consumer prices in January 2008 were also affected by increases in indirect taxes on energy products and alcoholic beverages. Inflation is projected to increase in 2008 and to decline thereafter. Upward pressure on prices will come from accelerating labour costs, while a tempering effect will come from an easing of economic growth, the strong euro and a reduction in value-added taxes on food at the end of 2009.

Labour costs

Since the start of the present decade, labour costs have been rising faster in Finland than in the euro area as a whole, because of faster-rising wages. This trend is apparent in the hourly labour costs of the private sector (Chart 39). But thanks to a moderating climb in the level of wages, the rise in Finnish labour costs slowed to a rate close to the average for the euro area in 2006–2007. This year we are seeing a weakening of Finland's international cost-competitiveness as labour costs rise considerably faster than in the euro area as a whole.

Wage drift did not increase during the period covered by the 2005–2007 centralised wage settlement, even though economic growth picked up and fears of impending labour problems increased. Towards the end of 2007, even as the economy was already slowing down, wages accelerated sharply as new collective agreements at union level affecting many sectors of the economy entered into force. In the final quarter, the wage and salary index rose by slightly more than 5% per

Chart 39.



Seasonally and working-day adjusted.
Excl. agriculture, public administration, education, health care and services not classified elsewhere.
Source: Eurostat.

annum compared with just 3.3% for the year as a whole. The effect of negotiated increases on the fourth-quarter rise was about four percentage points (Chart 40).

A similar picture of wage developments is rendered by the broader 'labour compensation per employee', which includes also overtime pay and bonuses. This measure, after increasing by about 3% in 2006 and 2007, accelerated towards the end of the year.

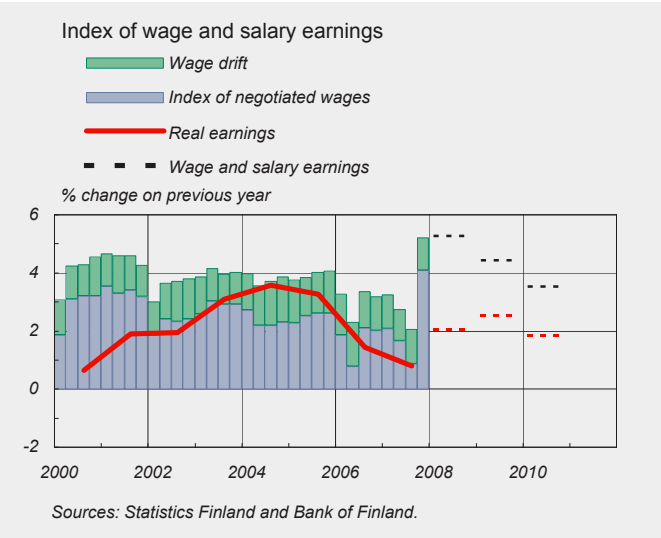
The recently negotiated increases will have a bigger impact on wages in 2008. The outlook for 2009 also includes a robust rise in the level of wages, because many of the latest round of agreements cover periods of more than two years. The average negotiated increases are about 4½% for 2008 and 3½% for 2009. One-off increases in many sectors at the end of 2007 add to the front-loaded effect of the negotiated increases.

The forecast projects robust wage growth over the forecast period despite some moderation during that time. This prognosis is affected not only by the front-loaded nature of negotiated increases, but even more by the dynamics of the business cycle: the projected slowing of economic growth would restrain the increase in the demand for labour and reduce the pressure on wages, despite the opposing forces of an ageing workforce and shifting into retirement. The share of overtime pay in total wages would decline, the increase in bonuses would moderate, and the gap between the indices of wages and salaries versus negotiated wages would narrow somewhat.

Another factor that will slightly moderate wage drift in the coming years is the increasing resort to local agreements. Wage agreements in more and more sectors are being negotiated at the level of the individual workplace or company. This is especially the case in sectors comprised of companies that compete in international markets. A more detailed discussion of the increasing importance of local agreements and bonuses is presented in Box 5.

Wage earners' average level of earnings should rise by about 2% per annum in real terms over the course of the forecast period, ie roughly at the average rate posted since the beginning of the present decade. The purchasing-power effects of large nominal increases set for 2008 will be moderated by accelerating consumer prices (due in part to the wage increases). Whether inflation moderates in the near future depends largely on whether the rise in domestic labour costs slows down.

Chart 40.



The cyclical dynamics will moderate the growth of labour productivity in 2008 from that posted in recent years, as employment reacts with a time lag to a slowing of production growth. It is, however, assumed that the expanding scope of local labour agreements will boost productivity growth towards the end of the forecast period. The slower productivity growth and faster rise in wages portend rapidly rising unit labour costs, which raise concerns about the international competitiveness of Finnish products in 2008–2009 (Chart 41). Any slowing of the rise in unit labour costs in 2010 will require that both productivity and wages return (as predicted) close to their earlier trend lines.

Raw material prices

In 2007, the world-market prices of raw materials were higher than in recent years partly due to the higher demand caused by a rapidly growing world economy (Charts 42 and 43). During the past six months, prices of crude oil and food raw materials have continued to rise. Prices of metals have also remained at a high level. The recent rise in US dollar prices of raw materials has been partly due to the weakening dollar. Indeed, in euro terms, the price increases have been considerably more modest.

Conditions in the oil markets remained fairly taut in the latter half of 2007 because of strong demand, with many OPEC countries bumping against capacity constraints. For this reason, even minor supply disruptions caused fairly substantial movements in crude

Chart 41.

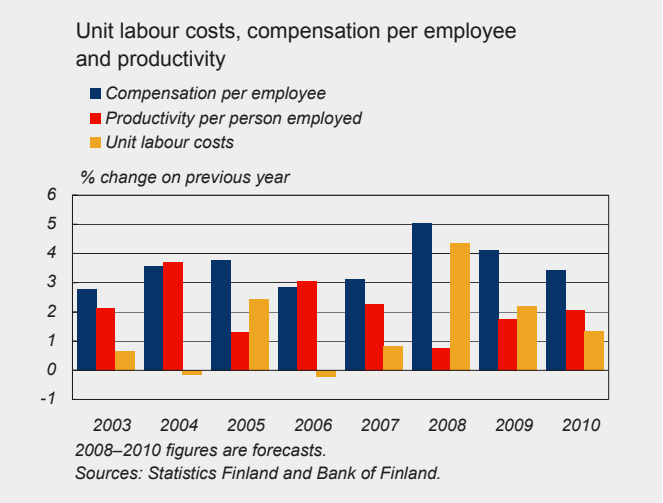


Chart 42.

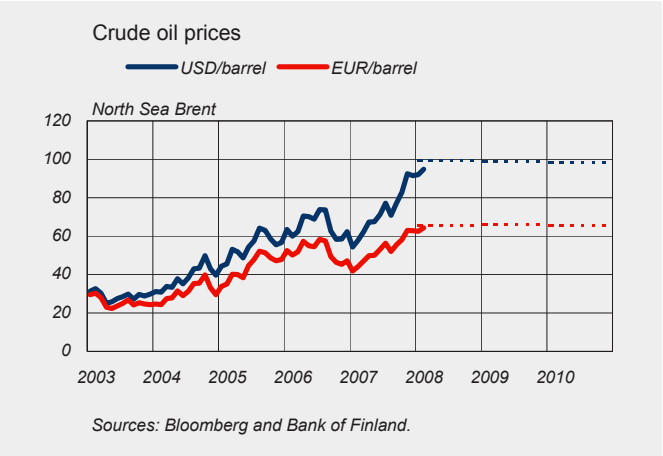
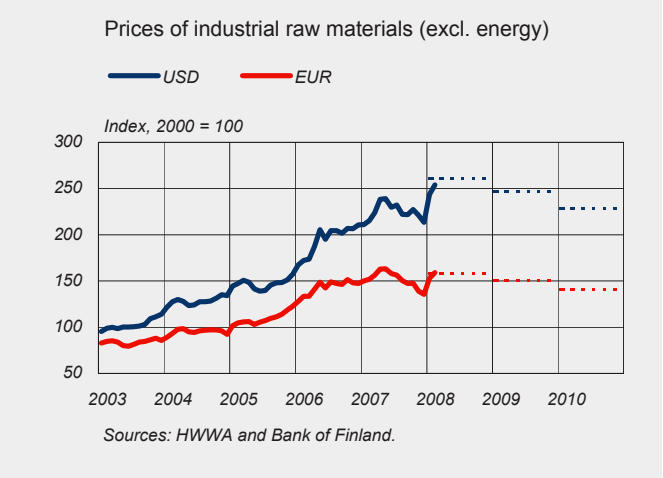


Chart 43.



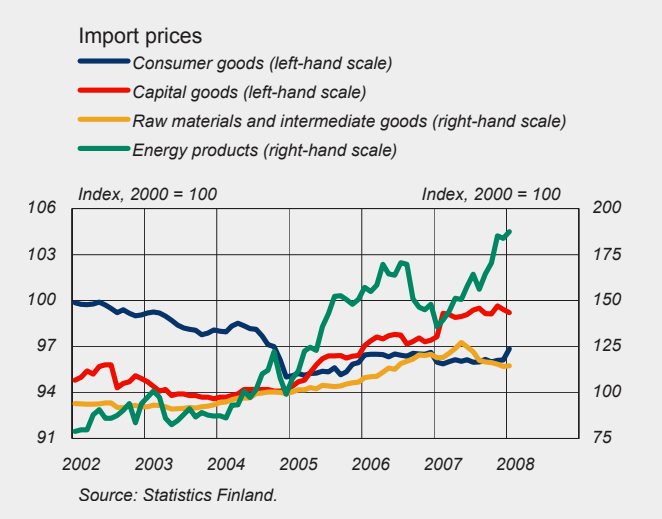
oil prices, and oil prices continued on an upward path.

It is assumed that the price of crude oil will remain at the current level in the coming months and then decline only slightly over the next few years. A price of USD 98 (EUR 66) per barrel is projected for the end of the forecast period. The forecast also anticipates that prices of non-oil industrial raw materials will remain high due to rapid growth in the emerging economies. However, prices of metals in particular should decline due to an increase in supply.

The dollar prices of food raw materials began to rise at the beginning of the present decade and have risen particularly rapidly since 2005. This has been partly due to a shortage of crop land.[1] The conversion of cultivated land to the production of bio-energy has reduced the supply of cereals and boosted their prices on world markets (Chart 47). Prices of vegetable oils and sugar products have also risen rapidly. The price rises in world markets have also been spurred by exceptional weather in some countries. The price increases in cereals and energy have in turn pushed up the prices of dairy products. The rise in world prices of food raw materials has also been supported by the strong growth in the world economy. A longer-term factor pushing up food prices has been the changing consumption patterns in the emerging economies. Assessments by international organisations (OECD and FAO) indicate considerable short-term uncertainty surrounding the prices of food raw materials and considerable variation in prices across different product groups.

[1] The factors behind price developments in food raw materials are discussed in more detail in Risto Herrala's article 'Maataloushyödykkeiden maailmanmarkkinat ja euroalueen inflaatio' ('The world market for agricultural commodities and inflation in the euro area', in Finnish only). Euro & talous 1/2008.

Chart 44.



Import prices

Despite the rise in world markets prices of raw materials, there was a pronounced slowing of the rise in Finnish import prices in 2007 compared with the previous year. This was partly due to the rise in the external value of the euro.

Measured by the index of import prices, import prices rose on average by 2.4% in 2007 – considerably less than in the previous two years. Of the index components, prices of consumer goods fell slightly, while price rises for capital goods decelerated to just under 2% per annum (Chart 44). Energy prices in 2007 were unchanged on average from the previous year thanks to the low level that prevailed in the early part of

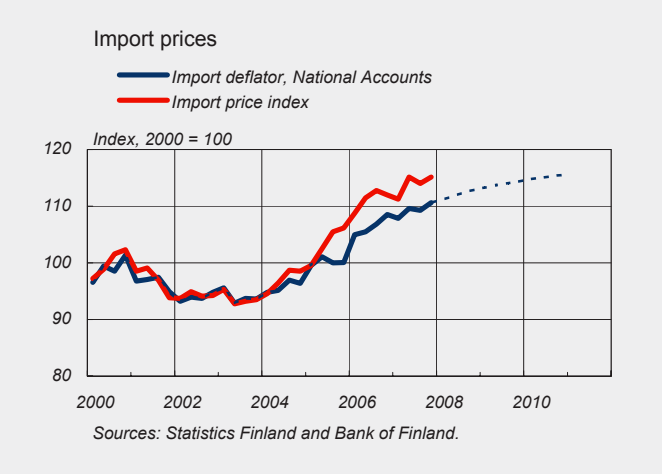
the year. In contrast, prices of intermediate goods (incl. raw materials) increased by just over 4.5%. The jump in energy prices in the latter part of the year lifted the index of import prices by nearly 3% in the fourth quarter of 2007 compared with the same period the previous year.

Globalisation, the increase in imports from emerging economies and heightened international competition continued (as in 2006) to dampen the rise in prices of imported consumer goods in 2007. Meanwhile, strong worldwide demand kept import prices of capital goods on a steady ascent. Prices of energy imports tracked the wide fluctuations in crude oil prices. After the spring, prices of imported intermediate goods (incl. raw materials) turned down as the surge in world prices of metals was reversed. However, metals prices have climbed again in the early stages of 2008.

The import deflator for the national accounts, like the index of import prices, rose by less in 2007 than in the previous year (Chart 45). According to the deflator, which covers both goods and services, prices in both categories rose by just over 2.5% in 2007.

The forecast for 2008 sees a slightly smaller rise in import prices than in 2007. Energy import prices are projected to remain fairly high over the forecast period, on the assumption that oil prices will remain at historically high levels. However, subdued price developments are assumed for other intermediate goods (incl. raw materials). The annual rise in import

Chart 45.

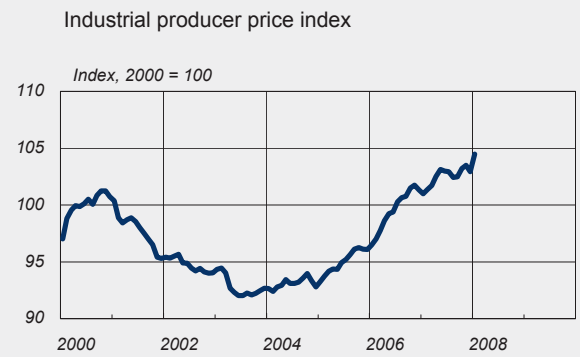


prices in 2008 will also be restrained by the euro appreciation that we have seen in recent months. As regards consumer goods, the globalisation constraint on import prices is expected to gradually subside in the course of the forecast period. Import prices of capital goods are expected to trend moderately upward over the same period as world economic growth eases. The forecast for import prices (in the national accounts) looks to an increase of nearly 2.5% in 2008, followed by increases of just under 1.5% per annum in 2009–2010.

Domestic producer prices

Prices of industrial producer goods have risen briskly in recent years. The rise continued at a fairly rapid pace – 3% on average – last year. Prices rose at a particularly fast pace in the early part of 2007, although the price rise in raw materials (excl. energy and foods) eased slightly towards the end of the year, in line with developments in world markets. The fairly rapid rise in producer prices has continued into 2008. Movements in industrial producer prices

Chart 46.

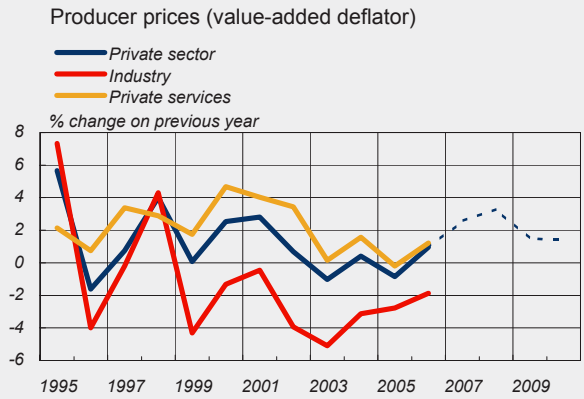


Source: Statistics Finland.

Chart 47.

The cereal varieties included in the indices differ slightly.
Sources: HWWA and Statistics Finland.

Chart 48.



Sources: Statistics Finland and Bank of Finland.

to a large extent follow developments on the international markets and in export prices because a large share of Finnish industrial products are exported and oil and other raw materials are used abundantly in the production of capital goods and intermediate goods (Chart 46). Developments in labour costs and productivity also influence the costs of industrial production.

Since 2005, prices of food raw materials have increased sharply on world markets (Chart 47). This is also apparent in the rise in producer prices in Finnish agriculture. Up until July 2007, the rise in Finnish agricultural producer prices was moderate relative to developments around the world, but since then those prices have risen sharply. Although the share of cereal prices in food production costs is fairly small, the recent surge in producer prices substantially pushed up consumer prices of foods in January 2008, when wholesale prices were revised. Processing costs weigh heavily in food production costs, which are thus notably impacted also by movements in labour costs and energy prices.

Production costs in the private sector are projected to rise slightly more in 2008 than in 2007, as measured by the national accounts value-added deflator for private sector output. The rate of increase will pick up as labour productivity growth slows and labour costs accelerate at the same time as prices of raw materials remain at a fairly high level (Chart 48). After 2008, price trends should moderate as the rise in unit labour costs moderates and prices of raw materials begin a gradual descent.

Consumer prices

Measured by the harmonised index of consumer prices (HICP), Finnish inflation was 1.6% in 2007 – half a percentage point less than that for the euro area as a whole (Chart 49). Towards the end of 2007, the surge in energy prices boosted the annual inflation rate to nearly 2%. In January 2008, the inflation rate jumped to 3.5%, mainly due to precipitous rises in food and energy prices (Chart 50). In February, HICP inflation was 3.3% per annum.

In recent months, the inflation rate has been rising in response to worldwide price rises in food raw materials and crude oil. At the start of 2008, consumer prices were also inflated by increases in indirect taxes on energy and alcohol (Table 6). Upward pressure on consumer prices has been alleviated somewhat by the recent euro appreciation, and further constraint has been exerted by increasing imports from emerging economies, heightened competition among retailers and the moderate increases in unit labour costs that continued until 2007.

The rise in service prices increased to 3% in 2007, mainly because of higher prices in the telecommunications sector. In January–February 2008, the impact of service price inflation on overall inflation remained substantial, with prices of hotel and café services being pushed up by the increases in alcohol taxes and food prices at the start of the year.

Energy prices, which rose by just 2% in 2007, began to rise sharply after October. In January–February 2008, prices of energy products were nearly 20% higher than in the same period a year earlier, as the world price of crude oil continued to climb. Increases in excise duties and energy taxes respectively pushed up fuel and electricity prices.

Chart 49.

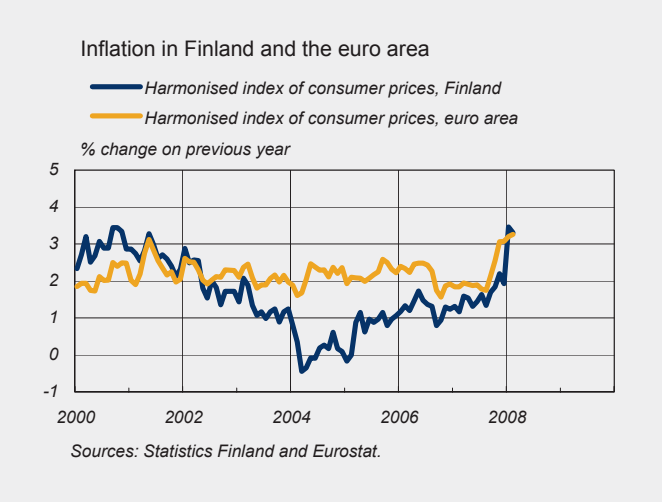


Chart 50.

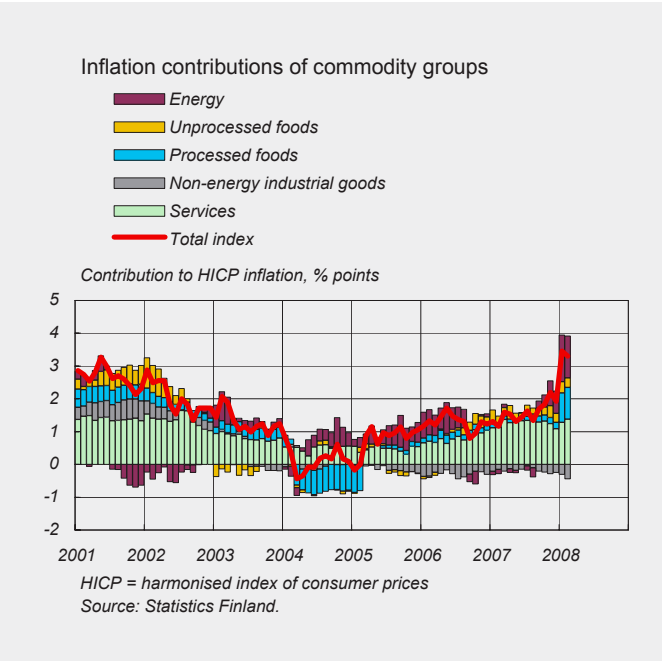


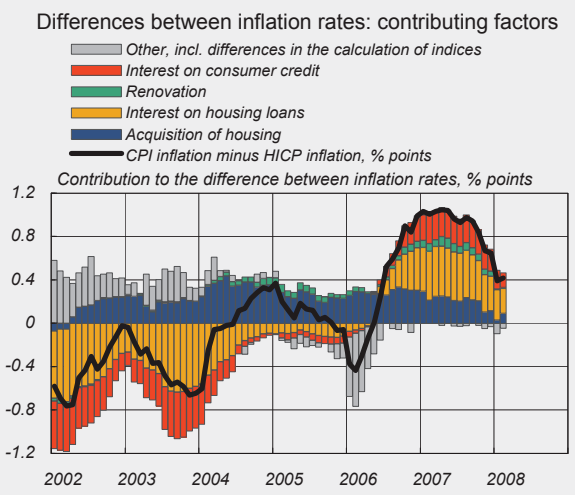
Table 6.

Recent inflation

	Average change, % 2007	*12-month change.% Feb 2008*	*Contribution to inflation 2007*	*Contribution to inflation Feb 2008*
Harmonised index of consumer prices. total index	*1.6*	*3.3*	*1.6*	*3.3*
Non-energy industrial goods	*-0.6*	*-1.6*	*-0.2*	*-0.5*
Motor vehicles	*-2.7*	*-8.1*	*-0.1*	*-0.4*
Energy	*1.8*	*16.6*	*0.1*	*1.3*
Fuels	*0.7*	*17.6*	*0.0*	*0.9*
Electricity	*5.3*	*8.5*	*0.1*	*0.2*
Processed foods	*1.0*	*6.5*	*0.1*	*1.0*
Cereal products	*1.1*	*7.7*	*0.0*	*0.2*
Dairy products	*-0.2*	*10.5*	*0.0*	*0.3*
Alcoholic beverages	*1.3*	*7.0*	*0.1*	*0.3*
Unprocessed foods	*4.0*	*4.1*	*0.3*	*0.3*
Meat products	*2.0*	*6.2*	*0.1*	*0.2*
Services	*3.1*	*3.3*	*1.3*	*1.3*
Telecommunications	*7.6*	*5.4*	*0.3*	*0.2*
Hotel and café services	*2.3*	*4.2*	*0.1*	*0.3*

Source: Statistics Finland.

Chart 51.



Contributions calculated using weights in the consumer price index, 2005 = 100
CPI = national consumer price index
HICP = harmonised index of consumer prices
Sources: Statistics Finland and calculations by the Bank of Finland.

The decline in prices of non-energy industrial goods, which began in 2003, continued in 2007 at an annual rate of 0.6%. Prices of ICT and entertainment electronics continued their sharp descent of recent years. Moreover, the cut in car tax in January 2008 notably lowered the prices of new cars at the start of the year; used car prices had dropped a couple of months earlier. Overall, the decline in prices of non-energy industrial goods exerted a modest restraint on inflation in January–February.

Consumer prices of foods rose moderately in Finland in 2007 despite the sharp rise in prices of food raw materials on world markets. Prices of processed foods (incl. milk and bread) rose by just 1% on average in 2007. In contrast, prices of unprocessed foods, especially vegetables, increased sharply (4%). Consumer prices of foods rose sharply only at the turn of the year, as taxes on alcohol increased and wholesale prices of foods were raised substantially. In the food category, alcohol, dairy and cereal products posted the largest price increases, but meat prices also rose considerably.

The jump in food prices in Finland at the start of 2008 was in contrast to elsewhere in the euro area, where food prices have typically accelerated gradually since mid-2007. The price jump in Finland was caused by a new agreement between retailers and the food industry that took account of the rising costs of production.

Measured by the Finnish CPI, consumer price inflation was 2.6% in 2007 (Chart 51). This was considerably more than HICP inflation, due to the fact that CPI inflation was boosted by the continuing rise in housing prices and higher interest rates on housing and consumer credit, none of which are included in the HICP.

High inflation in 2008 – some easing thereafter

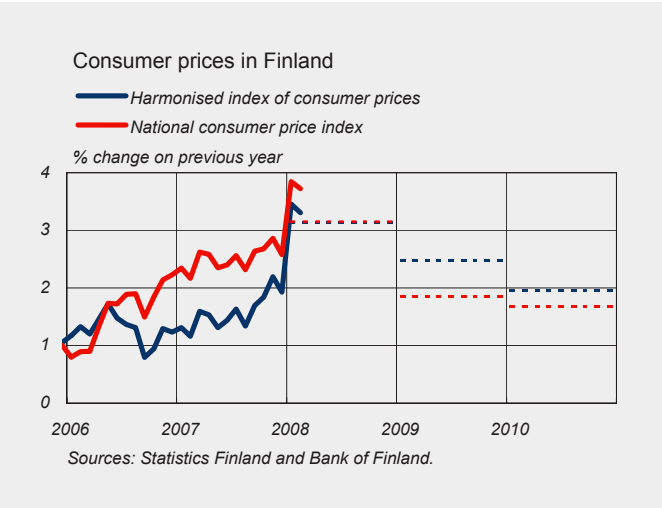
Inflation is expected to increase substantially in 2008 compared with 2007, to 3.1% as measured by the HICP (Chart 52). The relatively high inflation, compared to recent history, can be ascribed to high prices of oil and food raw materials as well as to accelerating labour costs. The sharp rise in prices in the current year is also partly due to the tax changes that came into effect at the start of the year, the resulting effects of which will be apparent in inflation throughout the current year.

HICP inflation is projected to slow to 2.5% in 2009, when the rise in import prices will ease and inflation will no longer be affected by the recent increases in energy and alcohol taxes. Moreover, at the start of 2009, the hike to the annual inflation figure in January 2008 from the sharp rise in food prices will disappear. The forecast estimates that growing demand for bio-energy and changing consumption patterns in the emerging economies will keep food prices at historically high levels over the next few years. The reduction in value-added tax on food should restrain the rise in consumer prices in late 2009 and 2010, enabling HICP inflation to fall to 2.0% per annum.

Decelerating wage increases will help constrain inflation pressures in 2010. Slower economic growth and moderating price developments around the world also point to lower inflation during the forecast period. Another inflation restraint is the euro's historically high external value, which should in the coming years continue to prevent full passage of international inflation pressures into the domestic economy.

Finnish CPI inflation is projected to increase to 3.1% in 2008. It is expected to subside gradually in the course of the year, to lower rates than HICP inflation, given the forecast

Chart 52.



assumption that the level of interest rates will decline and the rise in housing prices will ease during the forecast period. Annual CPI inflation is expected to slow to 1.9% in 2009 and 1.7% in 2010.

Box 5.

Bonus schemes and local bargaining gaining in importance

Wage flexibility, in the sense of decisions on wages and other conditions of employment moving closer to individual companies and their employees, has been increasing in Finland in recent years, mainly through two mechanisms. On one hand, an increasing number of employees are covered by bonus schemes, while, on the other hand, a higher proportion of total pay increases are accounted for by locally agreed pay rises in both centralised and industry-specific settlements. These trends are mutually supportive, taking Finnish wage bargaining practices closer to the practices of competitor countries.

The changes in the corporate operating environment in the wake of globalisation are the major reason for the increase in bonus schemes and local bargaining. Economic shocks are increasingly company or even product-specific. Companies must be able to flexibly adjust to these shocks, which increases the need for bargaining over conditions of employment partly at local level. Local bargaining over wages and working hours, together with tying wages and salaries to the economic performance of the company, can foster labour market efficiency and company productivity. The growing need for local bargaining does not, however, remove the need for coordination of pay increases at the level of the economy as a whole as an important safeguard of employment and price stability.

Sectoral variations in the use of bonus schemes

Company-specific pay schemes, such as bonuses, which are included in the item of wages and salaries in the national accounts system, gained more ground in the 1990s, and especially at the turn of the millennium. The proportion taken up by bonuses tied to company or individual performance has grown in recent years to around 5% of total labour costs in the secondary sector. The proportion of bonuses is highest in the technology industry, in particular electronics. By contrast, the proportion is lower in private sector services, with the exception of the financial and retail sectors, while bonuses are rarely paid in the public sector.[1]

Seen from the perspective of the employees covered by bonus schemes, bonuses are accorded higher importance, accounting for 6% on average of their total earnings in recent years. Bonus schemes are much more widespread among white-colour than blue-collar workers, with the bonuses payable to white-colour workers also accounting for a higher proportion of total earnings.[2]

Local bargaining gaining ground

During the past ten years or so, wage negotiations have evolved towards greater sectoral and local flexibility. In the centralised incomes policy settlements, the company or industry-specific raises have also been significant over the past few years, in principle accounting for around 20–30% of overall wage increases. However, if no other settlement has been reached at local level, these raises have been given across the board, in similar manner to general pay increases. This was largely the case in the incomes policy settlement for 2005–2007.

In 2007, industry-specific wage negotiations were conducted, as the comprehensive incomes policy settlement for 2005–2007 expired at the end of September 2007. The industry-specific round of negotiations is now nearly completed – with the exception mainly of industries not covered by the comprehensive settlement for 2005–2007 and where the present settlement is due to expire in spring 2008.

In relation to past experience, the most recent wage

[1] *For comprehensive statistics, see the Labour Cost Survey (covering data up to 2004) and Structure of Earnings Statistics (covering data up to 2005) of Statistics Finland.*

[2] *Pay Statistics Survey, 2006. Confederation of Finnish Industries. Helsinki 2007.*

settlements in a number of industries increasingly include locally negotiated raises in addition to the overall pay increase. Agreement on these is made in line with industry-specific practices, with employees generally represented by their shop stewards. In the present wage agreements, which span just over two years on average, locally negotiated raises typically account for a higher proportion of the overall increase than before.

According to the new wage settlements, local bargaining is gaining ground particularly in the technology and chemicals industries and the financial and insurance sector. In the technology industry, the rate of the workplace-specific increase depends on whether it is differentiated in some way or awarded across the board in the same way as the general pay increase; tailored rises entail higher increases, on average. In this way, the negotiating parties seek to encourage local bargaining to enhance productivity. Of the pay hikes agreed under the wage settlement for autumn 2009, the local wage element accounts for as much as 50% for upper-level employees in the technology industry, and 40% for other employees in the industry. In the financial and insurance sector, local raises will be allocated to white-collar workers according to individual pay negotiations, starting from autumn 2008. The proportion of the overall increase to be determined in the individual negotiations will increase to 50% in the course of the wage settlement period.

There are also efforts to increase local bargaining in the public sector. In central government, local raises have been allocated towards development of pay and bonus schemes. Similarly, in local government, locally agreed increases are of fairly minor significance, but an equality payment is being added to the basic wages of certain female-dominated sectors. The link between the amount of the local sectoral allowance payable in the latter part of the wage settlement period and developments in numbers of employees in the sector negotiated by the Union of Health and Social Care Professionals, Tehy, represents a new approach to developing public sector pay schemes in a more productivity-enhancing direction.

Overall, in the case of senior employees, the new wage settlements in several sectors allow for agreements where local bargaining accounts for half of the overall increase as early as the second year. Local bargaining over conditions of employment is also becoming more widespread, especially in industries competing in global markets. By contrast, in domestic market industries and private and public services, less progress is foreseen in local bargaining in the current wage settlement period.

Box 6.

Households' inflation expectations

In its monthly consumer survey, Statistics Finland publishes data on consumers' assessments of recent actual inflation and future inflation. The survey covers assessments of consumer price inflation over the previous 12 months and expectations regarding increases in consumer prices over the next 12 months.

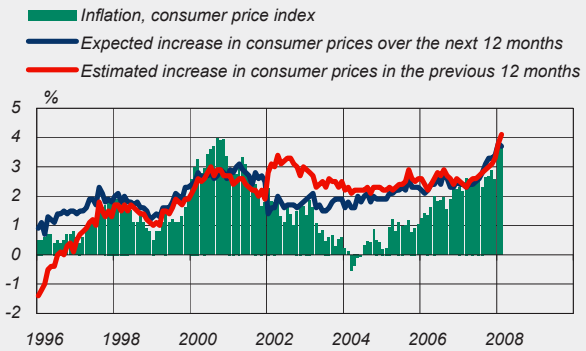
Typically, consumers appear to overestimate inflationary developments, as in 2000–2006 their assessments of future inflation averaged 2.2%, compared with average actual inflation of 1.4% in 2001–2007 (Chart 53). On the other hand, consumers' inflation assessments are slower to change than actual inflation and seem to respond with a time lag to an acceleration or deceleration in inflation. The euro cash changeover at the beginning of 2002 apparently distorted consumers' perceptions of price changes, as at that time there was a clear discrepancy between consumers' inflation perceptions and actual inflation. Since June 2007, assessments of past and future inflation have been broadly similar, with a strong upward movement in each indicator. In recent months, inflation expectations have been at record high levels compared with their long-term trends, and in January–February 2008 inflation did actually accelerate discernibly in respect of housing costs, foodstuffs and energy products.

In 2001–2007, women typically expected inflation to pick up more than men, and the middle age groups (ages 35–44 and 45–54) appear to foresee faster price increases in the future than other age groups (Table 7). Rather than reflecting regional differences, inflation expectations appear to vary somewhat according to consumers' socio-economic status: students and pensioners expect future price increases to remain more moderate than other consumer groups.

The differences between the inflation estimates of the different population groups are fairly minor. The different expectations over future trends presumably reflect a number of factors, such as different consumption habits, purchasing behaviour and the average size of a single purchase. The outcome for actual inflation and consumers' purchasing intentions (eg plans for housing purchase) may also cause price awareness and inflation perceptions to change. The recent strong boost in inflation expectations may have been partly affected by the clear elevation of liquid fuel prices, larger wage increases and a lively public debate on food prices.

Chart 53.

Actual inflation, consumers' inflation expectations and consumers' estimates of past inflation



Source: Statistics Finland.

Table 7.

Actual inflation and inflation expectations by population group, %

Population group	*2001–2003*	*2004–2006*	*2007*	*2001–2007*	*Weighted proportion*	*Proportion in the survey*
Inflation (consumer price index)	***1.7***	***0.8***	***2.5***	***1.4***		
Total	*2.4*	*1.9*	*2.4*	*2.2*	*100*	*100*
Gender						
Men	*2.4*	*1.8*	*2.3*	*2.1*	*50*	*50*
Women	*2.4*	*2.1*	*2.5*	*2.3*	*50*	*50*
Age						
15–24 years	*1.7*	*1.5*	*2.1*	*1.7*	*17*	*16*
25–34 years	*2.3*	*1.9*	*2.4*	*2.1*	*16*	*15*
35–44 years	*2.6*	*2.2*	*2.5*	*2.4*	*18*	*17*
45–54 years	*2.7*	*2.2*	*2.6*	*2.4*	*19*	*19*
55–64 years	*2.5*	*2.0*	*2.5*	*2.3*	*19*	*18*
65–74 years	*2.2*	*1.7*	*2.3*	*2.0*	*12*	*15*
Education						
Basic education	*2.2*	*1.8*	*2.3*	*2.0*	*29*	*30*
Upper secondary education	*2.5*	*2.0*	*2.4*	*2.3*	*40*	*39*
Tertiary education	*2.5*	*2.0*	*2.5*	*2.3*	*31*	*30*
Regions						
Greater Helsinki	*2.3*	*1.9*	*2.3*	*2.1*	*20*	*20*
Rest of southern Finland	*2.4*	*2.0*	*2.5*	*2.2*	*22*	*21*
Western Finland	*2.4*	*2.0*	*2.4*	*2.2*	*36*	*38*
Eastern Finland	*2.3*	*2.0*	*2.3*	*2.2*	*11*	*10*
Northern Finland	*2.2*	*1.9*	*2.4*	*2.1*	*12*	*11*
Socio-economic status						
Farmers	*2.7*	*2.1*	*2.2*	*2.4*	*1*	*1*
Other self-employed	*2.7*	*2.0*	*2.7*	*2.4*	*6*	*6*
Upper-level white-collar workers	*2.4*	*1.9*	*2.3*	*2.2*	*16*	*16*
Lower-level white-collar workers	*2.6*	*2.2*	*2.5*	*2.4*	*18*	*17*
Blue-collar workers	*2.4*	*2.1*	*2.4*	*2.3*	*19*	*18*
Unemployed	*2.3*	*1.9*	*2.5*	*2.2*	*4*	*4*
Students	*1.8*	*1.5*	*2.1*	*1.7*	*12*	*12*
Pensioners	*2.4*	*1.9*	*2.4*	*2.1*	*20*	*22*
Homemakers, etc.	*2.4*	*1.9*	*2.5*	*2.2*	*4*	*4*
Type of household						
Single	*2.3*	*1.8*	*2.3*	*2.1*	*18*	*18*
Families with children	*2.4*	*2.0*	*2.4*	*2.2*	*38*	*36*
Other (adult) households	*2.4*	*1.9*	*2.4*	*2.2*	*44*	*46*
Households' gross income brackets						
Lowest income	*2.3*	*1.8*	*2.4*	*2.1*	*12*	*13*
Second lowest income	*2.4*	*2.0*	*2.5*	*2.3*	*24*	*25*
Second highest income	*2.5*	*2.0*	*2.4*	*2.3*	*32*	*32*
Highest income	*2.4*	*1.9*	*2.4*	*2.2*	*24*	*24*
Income unknown	*1.7*	*1.6*	*2.1*	*1.7*	*7*	*7*

Source: Statistics Finland, consumer survey.

Risk assessment

The forecast envisages a weakening of the international economy in the immediate years ahead, primarily as a consequence of the recent problems on the financial markets. The economy could, however, perform much more poorly than forecast, as we still do not know how serious the financial market problems will turn out to be and how far they could spread.

A greater-than-forecast weakening in the international economy would also be felt in Finland. Export demand would probably be lower than forecast. Moreover, a deepening of the problems on the international financial markets could mean higher financing costs for banks and other companies operating in Finland and depress the price of shares and other assets.

The Finnish economy is also facing the potential threat of a home-grown cost spiral. The pace of wage rises and of inflation have both accelerated. If future wage demands and companies' pricing decisions are based on expectations of a continued rapid rise in costs and prices, this could lead to a greater-than-forecast weakening in the cost-competitiveness of domestic output. This would lead to a long and painful process of readjustment. If the international economy were at the same time to weaken more than forecast, the situation could become extremely difficult.

The forecast envisages a gradual slowing in the pace of inflation in 2009 and 2010. Actual inflation could, however, differ from the forecast both because of the possible cost spiral and also if price rises in food raw materials and the impact of this on Finnish consumer prices were to turn out to be greater than forecast. In addition, changes in the price of crude oil could lead to a rate of inflation well above or well below that envisaged in the forecast.

International economy

The risks to the growth forecast for the international economy are on the down side. The most significant factors of uncertainty in the forecast are the financial market disturbances that began in the United States and their possible impact on both the US economy and the world economy.

The financial market difficulties in the United States are primarily a problem for the US economy itself, but the size of the US economy and the close links between international financial markets mean they also pose a risk for the world economy as a whole. The extent, depth and duration of investment losses as well as their impact on the availability of credit, and hence on the real economy, are still unclear. The forecast estimates that the US economy will not go into recession.[1] The risk is that it might.

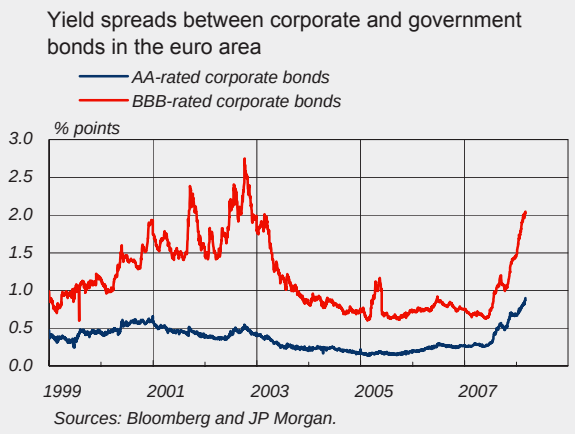
Safe haven investments and a more accommodating monetary policy have already brought the interest rates on US government debt below the annual pace of consumer price inflation. In contrast, survey data indicates a tightening of the terms of private credit and higher risk premia. Both lenders and borrowers have become more cautious. Besides

[1] The forecast for the US economy in 2008 is for a period of slower growth that will be over by 2010. The section 'World economy and external demand' discusses the forecast for the US economy in more detail.

housing loans, household debt is also running at record levels in terms of outstanding credit card debt. It still remains to be seen how successful the strong cut in the monetary policy rate and fiscal policy relaxation will be in stimulating economic recovery in the present situation.

It is a fairly widespread view that the US economy's impact on the rest of the world is weaker than it used to be, as the internal dynamics of Asian economies, oil-producing countries and other raw material producers have become stronger and their weight in the world economy has grown. Even so, a worsening of the problems in the United States would be strongly reflected on both Europe and Asia. The situation in Europe is made more difficult by the close links between European and US financial markets. One example of this is the fact that in the euro area, too, interest rates on corporate bonds relative to those on government bonds (in other words the risk premia) have recently risen (Chart 54).

Chart 54.



The Chinese economy has continued to grow at around 10% per annum on the back of a very high investment ratio and export growth. Inflation in China has accelerated considerably over the past year, despite largely administrative measures by the government in an attempt to prevent the economy from overheating. The avoidance of overheating and unwise investments is, in fact, a major challenge for the Chinese economy. Partially similar threats can also be seen in many raw material exporting economies around the world. If they are now on the brink of overheating, this will make it even harder for them to adjust in the event of weaker-than-forecast economic performance in the industrial economies. In the case of China, one question that arises is whether the economy could switch fluently to growth based on domestic consumption if exports to the West were to stagnate . The forecast envisages the slowdown in growth will be much less marked in the emerging economies than in the industrial countries. If this turns out not to be the case, the situation in the world economy and the international environment for the Finnish economy will be very different from the picture presented in the forecast.

Domestic economy

The risks to international growth mean that the risks to the Finnish growth forecast are, at least in 2008 and 2009, on the down side. International risks feed into the Finnish economy via export demand and financing conditions. Although the world economy is forecast to grow more slowly than previously estimated both this year and in 2009,

there is, as indicated above, a clear risk of even slower growth than this. The alternative scenario presented later in this chapter examines the potential consequences for Finland of a weakening of the international economy on a scale much greater than forecast.

The forecast assumes that Russia will increase export duties on roundwood in April 2008. Russia has also been planning a further major increase in the duties in early 2009. As the talks between Russia and the European Union over this additional increase are still ongoing, the potential increase has not been taken into account in the forecast. An increase on the scale planned would have a considerable impact on the Finnish forest industry's roundwood procurement, and it would also have serious unfavourable second-round effects on the Finnish economy in the immediate years ahead.[2]

The Finnish economy is also facing risks of domestic origin. For a number of reasons, some of which may be viewed as temporary, consumer price inflation has been accelerating in recent months. At the same time, households' inflation expectations have risen to their highest level since 1995. Although inflation has clearly gathered pace, there remains scope for it to slow again in 2009 and 2010.

Favourable development is threatened by the risk of a domestic cost spiral. Faster growth in wage and salary earnings this year combined with higher inflation expectations could lead to an upward spiral in wages and other costs in the domestic economy. The forecast estimates that the pace of growth in wage and salary earnings will be much faster than before in 2008 and 2009, slowing thereafter in 2010. For 2008 and 2009 the trend in negotiated wages is already fairly clear, as it is based on the union-level collective agreements negotiated during the past year. Thus, in the area of wages, realisation of the risk of an upward cost spiral would primarily mean higher-than-forecast wage drift in 2008 and 2009 plus larger-than-forecast negotiated wage rises in 2010. If it were to occur, such a cost spiral would considerably weaken the prospects for higher employment and economic growth.

The brisk pace of economic growth in 2007 strengthened Finland's public finances – in some respects more than could have been expected purely on the basis of the improved performance of the economy. In this sort of situation there is a risk that revenue of a cyclical or otherwise extraordinary nature could be used for purposes other than financing one-off projects or reducing debt. If this were to happen, the general government structural balance would be weakened in a situation in which the surpluses even without this do not appear sufficient to cover the public sector's long-term financial requirements.

Controlling growth in public expenditure by improving public sector efficiency and productivity in the production of public services is one of

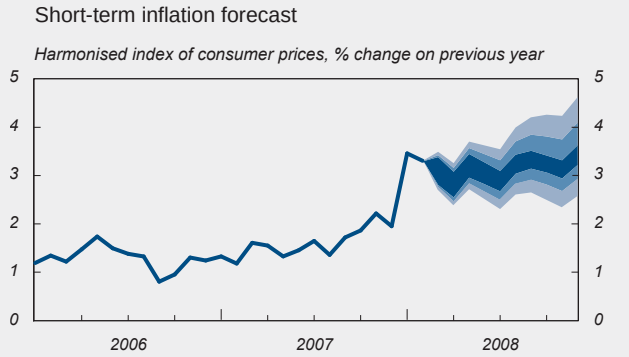
[2] The potential impact of increases in Russian export duties on the Finnish forest industry's use of roundwood, forest industry output and the second-round effects of changes in output on the output of other sectors was assessed in the alternative scenario presented in Bank of Finland Bulletin 3/2007.

the favoured means for ensuring the long-term financial base of general government. The forecast assumes that public services productivity will increase sufficiently to prevent excessive expansion of public sector employment in the immediate years ahead. Improving productivity in this area is, however, an extremely demanding objective. Indicators suggest that productivity in healthcare services run by local government municipalities and joint municipal boards has deteriorated considerably during the present decade. If the efforts to increase efficiency and improve productivity do not progress in the manner assumed, public expenditure will grow faster than forecast.

Although the forecast estimates the number of employed will grow throughout the forecast period despite the decelerating pace of economic growth, there is a perceivable risk of better-than-forecast development on the domestic labour market. The economic forecasts of recent years have often underestimated future employment growth. It is possible that further cuts in income tax and other factors, such as a rise in the average age of retirement, will improve the employment situation relative to the forecast in the immediate years ahead.

One of the positive factors of uncertainty in the forecast relates to the performance of the economy in 2010. Annual growth is forecast to slow at that time to 2.2%, although the cyclical dip in growth is estimated to occur in 2008 and 2009. The reason for the weak growth figure is the fact that the working-age population will begin to decline in size in 2010, and this will considerably reduce potential growth both in employment and in the economy as a whole. The forecast envisages continued growth in the number of employed in 2010 despite the contraction in the working-age population. It is, however, possible that the demand generated by the growing number of pensioners will succeed in providing employment for a higher-than-forecast proportion of the declining working-age population. In this case, the economy could grow faster than forecast, as domestic output would be able to meet a larger-than-forecast proportion of the increased demand and a smaller-than-forecast proportion would lead to import growth.

Chart 55.



The fan chart illustrates the degree of uncertainty in the short-tem inflation forecast. Inflation is estimated to be within the darkest area with 50% probability. 75% probability is depicted by the darkest area plus the two medium-dark areas either side of it, and 90% probability by the entire coloured area. Sources: Statistics Finland and Bank of Finland.

Short-term inflation risks

The short-term risks to the inflation forecast are slightly on the up side. The uncertainty surrounding the forecast for HICP inflation in 2008 is illustrated in Chart 55. In addition to the level of risk

indicated in the chart, the forecast for the national consumer price index (CPI) is also subject to risks regarding the future trends in housing prices and housing loan interest rates, as these are included in the national CPI, but not in the HICP.

Because the short-term inflation risks are slightly on the up side, the short-term forecast fan (Chart 55) is slightly asymmetrical: faster-than-forecast inflation is considered a little more probable than slower-than-forecast inflation. The risk of faster-than-forecast inflation relates to both the trend in service prices and the impact of world market prices of foodstuffs on price levels in the domestic market. If this year's growth in labour costs is reflected more quickly than expected in service prices, inflation will be stronger than forecast. On the other hand, if the feed-through of world market prices of foodstuffs into the price of food in Finland with all the associated second-round effects has been underestimated, due for example to overestimating the inflation-dampening impact of retail competition, the rise in food prices could be greater than expected.

The breadth of the fan in Chart 55 illustrates the slightly larger-than-normal uncertainty surrounding the inflation forecast for 2008. The development of oil and other commodity prices over the next few months is attended by more risks than normal. Both changes in demand and supply disturbances (eg exceptional weather conditions or political uncertainty) could, if they were to materialise, cause fluctuations in the world market prices for commodities in both directions. At the same time, changes in the external value of the euro could either soften or amplify the impact of commodity price fluctuations on domestic prices.

Alternative scenario: the impact on Finland of a stronger-than-forecast deterioration in the international economy

The trend in the international economy and world trade assumed in the forecast for the Finnish economy is relatively favourable throughout the forecast period. Growth in total world output slows only slightly from the exceptionally positive trend of recent years, while growth in Finland's export markets eases only a little in the baseline scenario.

There are, however, considerable risks of a weaker-than-forecast trend in the world economy. The financial market disturbances that began with the US housing loan crisis and their negative impact on the real economy could spread further and last longer than is assumed in the baseline scenario.

This alternative scenario uses the Bank of Finland's Aino model to assess the macroeconomic impact on Finland of a considerably stronger-than-forecast deterioration in the international economy. Growth in Finland's export markets is assumed to slow during the forecast period by an average of 3 percentage points per annum and the weakest phase to occur in 2009.

In addition to slower growth in external demand, increased uncertainty on the international financial markets is assumed to cause an approximately 0.25

percentage point increase in risk premia. This scenario assumes the slowdown to be worldwide and that central banks in the Western industrial economies will respond to the more subdued economic activity and weaker inflationary pressures by lowering their key interest rates by around 1.5 percentage points relative to the baseline scenario.[3] Due to the global nature of the slowdown, it is not assumed to have any impact on exchange rates.

The slower growth in the export markets is assumed to feed through in full to Finland's export performance (Table 8).

When assessing the impact on the domestic economy from the world economic slowdown, the scenario also takes account of the long-term (typically extending through 2009) wage settlements agreed last autumn and in the early part of this year. These are reflected in the scenario in the trend of nominal wages, which in 2008–2009 is fairly brisk relative to the weak macro-economic trend the scenario presents. The adjustment of the pace of increase in nominal wages to the weaker-than-forecast performance of the economy occurs in this scenario mainly in the final year of the forecast period. This means the scenario assumes that the (downward) adjustment of wages to the weaker economic trend in 2008 and 2009 is weaker than on average in a similar situation.

In the alternative scenario, the performance of the international economy deteriorates relative to the baseline scenario from mid-2008 onwards. In the average values for the year as a whole this is reflected in a slightly more than 1 percentage point decline in export market growth relative to the baseline. The largest deceleration in the pace of growth is in 2009, when growth in the export markets weakens by around 5 percentage points relative to the baseline. The weakness of external demand is reflected in Finland's export growth, which declines in 2009 to around zero.

The sluggish exports and higher risk premia also impact on domestic demand via lowered income and output expectations on the part of households and businesses. Both household consumption expenditure and corporate investment develop considerably more slowly than in the baseline scenario. The weak exports and subdued domestic demand also considerably dampen import growth. In this scenario, slower export growth has a much larger impact

[3] The assumption regarding changes in interest rates is technical in nature and does not reflect the Bank of Finland's position on probable or desirable interest rate changes.

Table 8.

Alternative scenario
Deviations from forecast

	2008	*2009*	*2010*
Annual deviation, % points			
Export markets	*-1.3*	*-5.1*	*-2.5*
GDP	*-0.9*	*-1.6*	*0.7*
Imports	*-1.5*	*-5.4*	*-3.2*
Exports	*-1.3*	*-5.3*	*-2.4*
Private consumption	*-1.1*	*-0.6*	*0.3*
Private sector investment	*-1.8*	*-2.2*	*0.8*
Price of private consumption	*-0.2*	*-1.7*	*-1.7*
Average wages	*-0.2*	*-1.4*	*-2.7*
Real average wages	*0.0*	*0.3*	*-1.0*
Number of employed	*-0.8*	*-1.8*	*0.5*
Deviation, level			
Employed, 1,000 persons	*-21.2*	*-67.2*	*-56.1*
Unemployment rate, % points	*0.4*	*1.3*	*1.1*

Source: Bank of Finland calculations.

on the economy than the assumed increase in risk premia.

Relative to the baseline, GDP growth is already slower by around 1 percentage point in 2008, and by a full 1.5 percentage points in 2009. Given baseline GDP growth in 2009 of 2.3%, the alternative scenario gives a figure of under 1%. The weakness of export demand and increase in risk premia both serve to subdue demand for goods and thus also reduce inflation with a short delay. Inflation in 2009 and 2010 is accordingly much slower than in the baseline scenario.

Weaker export demand causes major pressures for adjustment in the development of average wages (compensation per employee) in the forecast period. The scenario assumes that the pace of increase in average wages slows in 2009 by just under 1.5 percentage points relative to the baseline. On top of contractual pay increases, the baseline forecast envisages wage drift on a scale of under 1 percentage point in 2009. In the alternative scenario, the pace of increase in average wages slows in 2009 below the pace of contractual pay increases; in other words, wage drift is actually slightly negative. This last occurred at the beginning of the present decade during the slump that followed the bursting of the technology bubble. In the final year of the forecast period, 2010, the adjustment of average wages is much stronger than in the preceding two years, and the pace of wage rises actually slows by almost 3 percentage points relative to the baseline.

According to the baseline forecast, nominal wages in 2008–2009 will develop much more briskly than in previous years. In the alternative scenario, too, the collective pay agreements already concluded have an impact on the assumed development in wages. Despite the assumption of negative wage drift in 2009–2010, the rise in average wages is fast relative to the weakening trend of the economy. As a result, real average wages remain more or less unchanged and the employment situation deteriorates dramatically.

In 2008, subdued demand weakens employment growth by almost 1 percentage point relative to the baseline forecast. In the following year, sluggish demand and rising real wages depress employment growth by almost 2 percentage points more and there are 70,000 less people employed than according to the baseline. Baseline employment development is, however, relatively strong, and under the alternative scenario, too, the number of employed is even at the bleakest point in 2009 only around 6,000 less than the average actually achieved in 2007.

The international recession envisaged in the alternative scenario would hit the Finnish economy fairly hard. This is naturally a consequence of the size of Finland's large export sector. In respect of growth and employment the Finnish economy is at the present moment exceptionally vulnerable to economic disturbances, at a time when long-term, expensive pay settlements prevent rapid adjustments in wage formation. In this alternative scenario, the losses in both output and employment are considerable.

Changes from the previous forecast

This box provides an analysis of changes in the Bank's forecast and risk assessment since the forecast published in October 2007, and the reasons for said changes.[1] GDP growth is now predicted to be on average 0.3 percentage points lower and inflation 0.5 percentage points higher in 2008 and 2009 than was forecast last October (Table 9).

Of the key forecast assumptions, those derived from the international economic outlook have changed most. The easing of the robust world economic expansion that was already anticipated last autumn has proved slightly more pronounced and broadly-based than predicted at that time. However, despite lower growth rates in world trade, the prices of oil and other commodities are expected to remain well above the levels previously estimated. Oil is now in the region of USD 100 a barrel, as opposed to oil futures prices in September still suggesting a price level of just over USD 70. In addition, the revision to the inflation forecast for 2008 is not affected only by the higher crude oil price but also by the strong elevation of world market prices for food raw materials. This has pushed up consumer prices for food more than predicted in autumn 2007.

The strengthening of the euro's external value from the previous forecast, particularly with respect to the US dollar, has absorbed a large proportion of the increased upward pressures on import prices. In terms of Finland's trade weights, the euro is effectively a good 3 % stronger than assumed in the previous forecast.

Financial market expectations reflect weaker prospects for key economic areas. The international financial market turmoil has continued, thereby reducing Finnish growth prospects, too, even if the availability of financing is not perceived as having been impaired in Finland. Short-term market rates (3-month Euribor rates) are now broadly at the level assumed in the previous forecast, whereas market interest rate expectations have begun to weaken moderately.

Finnish export growth eased in the latter part of 2007, and exports are projected to develop in the forecast period more sluggishly than was estimated in early autumn. This is partly due to a moderation in global demand, notably for investment goods. Another underlying contributory factor is weaker competitiveness following stronger domestic cost developments, with shortages of suitably skilled labour or other capacity constraints also dampening growth in an increasing number of firms.

Wage increases negotiated by trade unions for 2008–2009 turned out larger than estimated in the previous forecast, which has necessitated a slight revision to the wage forecast. The scope for productivity growth in 2008 will be weaker given the more muted cyclical climate. These factors, taken together, will impact the forecast for 2008 and 2009 so that growth is projected to remain weaker and inflation higher than previously estimated.

The forecast figures have also been affected by new nowcasting information and by statistical

[1] *Bank of Finland Bulletin 3/2007. Economic outlook. Bank of Finland.*

Table 9.

Current and previous forecast

	2007	*2008*	*2009*	*2010*
GDP, % change	*4.4*	*2.7*	*2.3*	*2.2*
previous forecast	*4.4*	*3.1*	*2.5*	
Inflation (HICP), %	*1.6*	*3.1*	*2.5*	*2.0*
previous forecast	*1.7*	*2.6*	*2.0*	

revisions. The picture of recent volume growth in private consumption is now more stable and lays a foundation for a slightly stronger growth scenario. Private investment growth in 2007 was stronger than forecast, partly owing to statistical revisions to data on the first half of 2007, but investment growth is estimated to ease in the next few years, as projected earlier. Of Statistics Finland's revisions, the most important is the revision to foreign trade statistics on services, where service import figures were revised upwards from 2002 onwards. The revision is provisionally estimated to have a limited impact on the cyclical outlook, but it confirms the pattern of a declining trend in the current account surplus, as already suggested by the Bank of Finland's forecasts for some time.[2]

The forecast now extends to 2010. At that time, the working-age population will start shrinking, which will act as a constraint on the economy's growth potential. On the other hand, employment has evolved more favourably than projected in the previous forecast, as has the labour force. Consistent with the previous forecast, the employment rate will continue its gradual rise and the unemployment rate its gradual decline in the forecast years.

The forecast includes nothing really new regarding domestic fiscal policy, as the budget proposal for 2008 was already available for the previous forecast. The income tax cuts in the Government programme for 2009 and 2010 have now become more precise. The general government surplus in 2007 was larger than anticipated, but the estimate of a long-term sustainability gap in public finances already included in the previous forecast continues to be valid.

The risks to GDP growth will lie slightly on the downside, as in the preceding forecast. The risk of the previously predicted worsening in global financial market dislocations has partly materialised. The potential for a further serious deterioration in the situation continues to pose a threat to the realisation of the forecast now presented. The risk of a domestic wage/price spiral, which was already foreseen in the previous forecast, is also partly materialising, and the risk of its reinforcement and protraction casts a shadow on both the growth and the inflation outlook. On top of this, as noted in the previous forecast, the risk of continued higher Russian export duties overshadows the availability of roundwood for the forest industry.

In line with the earlier forecast, the risks of inflation will be skewed to the upside – this time, particularly at the end of the forecast period. At that point, there should be a break in the cost spiral as productivity gains momentum and wage developments become more subdued. The predicted tightness of the labour market – despite lower GDP growth – will, however, maintain the risk of a cost spiral. In the short-term forecast, the balance of risks is more evenly distributed between upside and downside risks: the development of world market prices for oil and raw materials is difficult to foresee, and, in particular, the pass-through to consumer prices of higher world market prices for food raw materials depends on a number of factors, such as the competitive situation.

[2] *Upward revisions to service export statistics were made some time ago (see Bank of Finland Bulletin 3/2006, p. 32–33). Statistics Finland had not yet taken account of the service imports revision for balancing supply and demand in the preliminary annual accounts data as at 29 February 2008.*

Articles and boxes from previous publications

Articles

Maatalushyödykkeiden maailmanmarkkinahinnat ja euroalueen inflaatio [World market prices of agricultural commodities and euro area inflation; in Finnish only]. Risto Herrala. Euro & talous 1/2008.

Wages and macroeconomic developments: simulations using the Aino model. Lauri Kajanoja, Jukka Railavo and Anssi Rantala. Bank of Finland Bulletin 3/2007.

Household wealth in Finland. Risto Herrala. Bank of Finland Bulletin 3/2007.

Revenue neutral shifts in the tax structure: experiments with a dynamic general equilibrium model. Juha Kilponen and Jouko Vilmunen. Bank of Finland Bulletin 1/2007.

A new indicator for the volume of industrial output. Samu Kurri. Bank of Finland Bulletin 1/2007.

Price bubbles – a central bank perspective. Marko Melolinna and Katja Taipalus. Bank of Finland Bulletin 4/2006.

Katsaus Yhdysvaltain rahapolitiikkaan [Review on monetary policy in the United States; in Finnish only]. Antti Suvanto and Mika Pösö. Euro & talous 4/2006.

Why does consumers' perceived inflation differ so much from actual inflation? Samu Kurri. Bank of Finland Bulletin 3/2006.

Spending rules bring stability to fiscal policy in Finland. Helvi Kinnunen. Bank of Finland Bulletin 3/2006.

Household indebtedness. Risto Herrala. Bank of Finland Bulletin 1/2006.

Changing paper markets and prices. Lauri Hetemäki. Bank of Finland Bulletin 1/2006.

ICT's contribution to labour productivity. Pentti Forsman and Jukka Jalava. Bank of Finland Bulletin 1/2006.

Will growth in Russia continue? Pekka Sutela. Bank of Finland Bulletin 4/2005.

General equilibrium effects of population ageing. Juha Kilponen and Helvi Kinnunen. Bank of Finland Bulletin 3/2005.

Consumer price changes. Samu Kurri. Bank of Finland Bulletin 3/2005.

The housing market and household indebtedness in Finland. Risto Herrala. Bank of Finland Bulletin 2/2005.

Weak innovativeness in EU forms a barrier to competitiveness. Helvi Kinnunen. Bank of Finland Bulletin 2/2005.

Increasing competition on the product and labour markets. Juha Kilponen and Antti Ripatti. Bank of Finland Bulletin 1/2005.

Public services productivity, the labour market and public finances in Finland. Helvi Kinnunen. Bank of Finland Bulletin 1/2005.

Taxation and employment – international comparisons. Mikko Spolander and Juha Tarkka. Bank of Finland Bulletin 1/2005.

Microanalysis of price-change frequencies. Jouko Vilmunen. Bank of Finland Bulletin 1/2005.

Risks related to increasing debt and ample liquidity. Tapio Korhonen. Bank of Finland Bulletin 4/2004.

Will rapid growth in China continue? Tuuli Koivu. Bank of Finland Bulletin 4/2004.

Aino: the Bank of Finland's new dynamic general equilibrium model of the Finnish economy. Juha Kilponen, Antti Ripatti and Jouko Vilmunen. Bank of Finland Bulletin 3/2004.

Forecast errors in the Bank of Finland's forecasts. Hanna-Leena Männistö. Bank of Finland Bulletin 3/2004.

The accuracy of preliminary National Accounts data. Olli Savela and Pentti Forsman. Bank of Finland Bulletin 3/2004.

Expenditure pressures on public finances: how much can we afford? Helvi Kinnunen. Bank of Finland Bulletin 3/2004.

The US current account deficit. Mika Kortelainen. Bank of Finland Bulletin 1/2004.

Challenges for Finnish economic policy in an unstable international environment. Matti Vanhala. Bank of Finland Bulletin 4/2003.

The electronic equipment industry and Finland's transformation into a high-tech economy. Pentti Forsman. Bank of Finland Bulletin 3/2000.

Current situation in the Finnish housing market. Mikko Spolander. Bank of Finland Bulletin 1/2000.

Boxes

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Alternative scenarios

- Alternative scenario: Impact of Russian export duties on roundwood. Bank of Finland Bulletin 3/2007, p. 73–77.
- Alternative scenario concerning increased supply of labour among the over-60s. Bank of Finland Bulletin 1/2007, p. 72–73.
- Risk assessment: Slower growth in labour productivity in the world economy outside the euro area. Bank of Finland Bulletin 3/2006, p. 72–74.
- Alternative scenario: Improvement in public sector productivity. Bank of Finland Bulletin 1/2006, p. 75–77.
- Risk assessment: deterioration in the terms of trade. Bank of Finland Bulletin 3/2005, p. 78–80.

Forecast tables

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

% change on previous year

	2006	2007	2008f	2009f	2010f
GDP at market prices	4.9	4.4	2.7	2.3	2.2
Imports of goods and services	7.8	4.1	3.6	5.7	5.6
Exports of goods and services	11.8	4.8	3.0	4.7	4.7
Private consumption	4.1	3.7	3.1	2.8	2.6
Public consumption	0.6	0.8	1.3	1.5	2.1
Private fixed investment	6.5	8.1	5.7	3.1	2.3
Public fixed investment	-6.4	3.4	5.1	2.4	3.2

2. Contributions to growth*

	2006	2007	2008f	2009f	2010f
GDP, % change	4.9	4.4	2.7	2.3	2.2
Net exports	2.1	0.6	-0.1	-0.2	-0.3
Domestic demand excl. inventory change	3.1	3.5	3.0	2.4	2.3
of which Consumption	2.2	2.1	1.8	1.8	1.8
Investment	0.9	1.5	1.2	0.6	0.5
Inventory change + statistical discrepancy	-0.3	0.2	-0.2	0.1	0.1

** Bank of Finland calculations. Annual growth rates using the previous year's GDP shares at current prices as weights.*

3. Balance of supply and demand, price deflators

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

	2006	2007	2008f	2009f	2010f
GDP at market prices	106.3	109.0	111.7	113.6	114.9
	1.3	2.5	2.5	1.7	1.1
Imports of goods and services	106.8	109.6	112.3	114.1	115.4
	6.0	2.6	2.5	1.6	1.1
Exports of goods and services	97.9	99.2	99.0	98.8	98.1
	2.7	1.3	-0.1	-0.3	-0.7
Private consumption	107.7	109.4	112.9	115.6	117.7
	1.6	1.6	3.2	2.4	1.8
Public consumption	123.1	127.2	133.1	138.1	141.6
	3.6	3.4	4.6	3.8	2.5
Private fixed investment	105.5	110.4	113.5	115.2	117.1
	3.1	4.7	2.8	1.5	1.6
Public fixed investment	112.4	118.3	122.8	124.7	126.8
	4.4	5.3	3.7	1.6	1.6
Terms of trade (goods and services)	91.7	90.5	88.2	86.6	85.0
	-3.1	-1.3	-2.6	-1.8	-1.8

4. Balance of supply and demand, at current prices

EUR million and % change on previous year

	2006	2007	2008f	2009f	2010f
GDP at market prices	167,041	178,759	188,096	195,687	202,187
	6.2	7.0	5.2	4.0	3.3
Imports of goods and services	67,195	71,764	76,200	81,788	87,377
	14.3	6.8	6.2	7.3	6.8
Total supply	234,236	250,523	264,296	277,475	289,564
	8.4	7.0	5.5	5.0	4.4
Exports of goods and services	75,489	80,108	82,436	86,052	89,451
	14.8	6.1	2.9	4.4	4.0
Consumption	122,277	128,389	136,395	143,651	150,170
	5.3	5.0	6.2	5.3	4.5
Private	85,864	90,454	96,218	101,316	105,845
	5.7	5.3	6.4	5.3	4.5
Public	36,413	37,935	40,176	42,336	44,325
	4.2	4.2	5.9	5.4	4.7
Fixed investment	32,212	36,292	39,439	41,259	42,949
	8.2	12.7	8.7	4.6	4.1
Private	28,181	31,903	34,654	36,279	37,724
	9.9	13.2	8.6	4.7	4.0
Public	4,031	4,389	4,785	4,979	5,225
	-2.3	8.9	9.0	4.1	4.9
Inventory change + statistical discrepancy	4,258	5,734	6,026	6,513	6,995
% of previous year's total demand	-0.1	0.6	0.1	0.2	0.2
Total demand	234,236	250,523	264,296	277,475	289,564
	8.4	7.0	5.5	5.0	4.4
Total domestic demand	158,747	170,415	181,860	191,423	200,113
	5.5	7.4	6.7	5.3	4.5

5. Balance of supply and demand

% of GDP at current prices

	2006	2007	2008f	2009f	2010f
GDP at market prices	100.0	100.0	100.0	100.0	100.0
Imports of goods and services	40.2	40.1	40.5	41.8	43.2
Exports of goods and services	45.2	44.8	43.8	44.0	44.2
Consumption	73.2	71.8	72.5	73.4	74.3
Private	51.4	50.6	51.2	51.8	52.3
Public	21.8	21.2	21.4	21.6	21.9
Fixed investment	19.3	20.3	21.0	21.1	21.2
Private	16.9	17.8	18.4	18.5	18.7
Public	2.4	2.5	2.5	2.5	2.6
Inventory change + statistical discrepancy	2.5	3.2	3.2	3.3	3.5
Total demand	140.2	140.1	140.5	141.8	143.2
Total domestic demand	95.0	95.3	96.7	97.8	99.0

6. Prices

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

	2006	2007	2008f	2009f	2010f
Consumer price index, 2005=100	101.6	104.1	107.4	109.4	111.2
	1.6	2.5	3.1	1.9	1.7
Harmonised index of consumer prices, 2005=100	101.3	102.9	106.1	108.7	110.9
	1.3	1.6	3.1	2.5	2.0
Private consumption deflator	107.7	109.4	112.9	115.6	117.7
	1.6	1.6	3.2	2.4	1.8
Private investment deflator	105.5	110.4	113.5	115.2	117.1
	3.1	4.7	2.8	1.5	1.6
Exports of goods and services deflator	97.9	99.2	99.0	98.8	98.1
	2.7	1.3	-0.1	-0.3	-0.7
Imports of goods and services deflator	106.8	109.6	112.3	114.1	115.4
	6.0	2.6	2.5	1.6	1.1
Value-added deflators					
Value-added, gross at basic prices	107.1	110.2	113.9	116.2	117.6
	1.1	2.9	3.4	2.0	1.2
Private sector	102.6	105.3	108.7	110.4	111.9
	1.0	2.6	3.3	1.5	1.4
Public sector	130.2	134.2	139.2	145.3	149.5
	3.6	3.1	3.7	4.4	2.9

7. Wages and productivity

% change on previous year

	2006	2007	2008f	2009f	2010f
Whole economy					
Index of wage and salary earnings	3.0	3.3	5.3	4.4	3.5
Compensation per employee	2.9	3.1	5.0	4.1	3.4
Unit labour costs	-0.2	0.8	4.3	2.2	1.3
Labour productivity per employed person	3.1	2.3	0.8	1.8	2.1

8. Labour market

1000 persons and % change on previous year

	2006	2007	2008f	2009f	2010f
Labour force survey (15–74-year-olds)					
Employed persons	2,443	2,494	2,542	2,555	2,557
	1.7	2.1	1.9	0.5	0.1
Unemployed persons	204	184	166	164	160
	-7.0	-10.1	-9.5	-1.5	-2.4
Labour force	2,647	2,677	2,708	2,719	2,716
	1.0	1.1	1.1	0.4	-0.1
Working-age population (15–64-year-olds)	3,507	3,517	3,525	3,531	3,522
	0.3	0.3	0.2	0.2	-0.3
Labour force participation rate, %	66.8	67.2	67.7	67.7	67.4
Unemployment rate, %	7.7	6.9	6.1	6.0	5.9
Employment rate (15–64-year-olds), %	68.9	69.9	71.1	71.4	71.6

9. General government revenue, expenditure, balance and debt

% of GDP

	2006	2007	2008f	2009f	2010f
General government revenue	52.9	52.7	52.4	51.8	51.4
General government expenditure	48.9	47.5	47.6	48.1	48.7
General government primary expenditure	47.3	45.9	46.1	46.7	47.4
General government interest expenditure	1.5	1.5	1.5	1.4	1.3
General government net lending	4.0	5.2	4.8	3.8	2.7
Central government	0.9	2.0	1.5	0.7	0.1
Local government	-0.2	-0.1	0.1	0.1	-0.1
Social security funds	3.4	3.3	3.1	3.0	2.7
General government primary balance	5.5	6.8	6.2	5.2	4.0
General government debt	39.2	35.4	32.3	30.7	30.2
Central government debt	35.3	31.4	28.7	27.2	26.8
Tax ratio	43.4	43.0	42.8	42.4	41.8

10. Balance of payments

EUR million

	2006	2007	2008f	2009f	2010f
Exports of goods and services (SNA)	75,489	80,108	82,436	86,052	89,451
Imports of goods and services (SNA)	67,195	71,764	76,200	81,788	87,377
Goods and services account (SNA)	8,294	8,344	6,236	4,264	2,074
% of GDP	5.0	4.7	3.3	2.2	1.0
Investment income and other items, net (+ statistical discrepancy)	644	1,189	1,264	1,334	1,398
Current transfers, net	-1,331	-1,331	-1,141	-1,190	-1,225
Current account, net	7,607	8,202	6,359	4,408	2,247
Net lending, % of GDP					
Private sector	0.5	-0.7	-1.4	-1.5	-1.6
Public sector	4.0	5.2	4.8	3.8	2.7
Current account, % of GDP	4.6	4.6	3.4	2.3	1.1

11. Interest rates

%

	2006	2007	2008f	2009f	2010f
3-month Euribor	3.1	4.3	4.2	3.5	3.7
Average interest rate on new loans	4.8	5.9	5.8	5.3	5.6
Average rate of interest on deposits	1.4	2.2	2.7	2.4	2.2
Bank lending rate, average	3.9	4.9	5.0	4.4	4.5
Yield on Finnish 10-year government bonds	3.8	4.3	3.5	3.4	3.4

12. International environment

Bank of Finland forecast

	2006	2007	2008[f]	2009[f]	2010[f]
GDP, % change on previous year					
Whole world	5.0	4.8	3.9	4.0	4.3
USA	2.9	2.2	1.3	1.7	2.4
EU15	2.9	2.7	1.7	1.9	2.1
Japan	2.4	2.0	1.6	1.8	2.0
Imports, % change on previous year					
Whole world	9.0	6.6	5.8	6.7	7.0
USA	5.9	1.9	0.5	2.6	4.0
EU15	8.3	4.2	3.9	5.2	5.5
Japan	4.2	1.7	2.8	4.3	4.7
Index, 2000 = 100, and % change on previous year					
Import volume in Finnish export markets	146.2	158.7	171.0	184.4	198.4
	10.3	8.5	7.8	7.8	7.6
Export prices (excl. oil) of Finland's trading	106.8	110.1	112.2	114.5	116.8
partners, national currencies	3.3	3.1	1.9	2.0	2.1
Export prices (excl. oil) of Finland's trading	95.7	96.8	95.0	96.8	98.7
partners, in euro	2.9	1.2	-1.9	1.9	1.9
Industrial raw materials (excl. energy), HWWA	194.7	224.5	260.3	246.5	228.3
index, in US dollars	32.6	15.3	15.9	-5.3	-7.4
Oil price, USD per barrel	65.4	72.7	99.2	99.1	98.3
	20.1	11.2	36.4	-0.1	-0.8
Finland's nominal competitiveness indicator[1]	101.9	104.0	108.0	108.2	108.3
	0.3	2.1	3.9	0.1	0.2
US dollar value of one euro	1.26	1.37	1.51	1.51	1.50
	0.9	9.1	10.5	-0.6	-0.5

[1] Narrow plus euro area, 1999Q1 = 100

Organisation of the Bank of Finland

7 March 2008

PARLIAMENTARY SUPERVISORY COUNCIL

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