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Economic outlook 1 • 2009
(Special issue, published twice a year)

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The cover picture depicts the national motif on the Italian 1 euro coin: Leonardo da Vinci's Vitruvian Man.

Preface

World economic growth contracted in unprecedented fashion during the final quarter of 2008. The world economy is now in a deep recession with no prospect of a rapid recovery. Disruption of financial intermediation and increased uncertainty linked to the deleveraging process are undermining consumption and investment throughout the world. GDP is contracting in the developed economies, but the pace of growth is also slowing in emerging and developing economies.

At the same time, world trade is contracting strongly. This will have a particularly severe impact on small countries like Finland that depend on exports.

Authorities all over the world have embarked upon policy measures to break the negative spiral. Many of the channels through which policy exerts an influence are slow to take effect, which makes it hard to make a precise assessment of their effectiveness at the present stage.

However, several important measures with fast effects have also been put in place. Tools have been created to contain the financial market crisis by strengthening the banks' capital reserves and supporting their efforts to raise new finance. At the same time a commitment has been made to prevent the collapse of systemically important financial institutions.

These measures have stabilised the global banking system, but the capacity of financial markets has not been fully restored. The need to correct their balance sheets has forced financial institutions to reduce their lending, tighten their terms and conditions of credit, and sell in unfavourable terms some of their investments. Thus, the crisis on the financial markets has spread extensively into the real economy.

The Bank of Finland forecast does not expect the world economy to recover until the first half of 2010. By that time the massive monetary and fiscal policy support measures will have begun to have an effect and the financial market crisis will gradually begin to ease.

The European Central Bank has taken steps to ensure liquidity in the banking system. Since last October it has lowered its policy rates by a total of 2¾ percentage points. The Eurosystem's fixed rate for main refinancing operations now stands at 1.5%, while the rate for the deposit facility stands at 0.5%. Since last October the ECB has also carried out the main and longer-term refinancing operations through a fixed-rate tender procedure with full allotment at the interest rate of the main refinancing operations. The ECB has indicated that it will continue this non-standard policy practice for as long as needed, and in any case beyond the end of 2009. As a result of these measures, there has been a substantial reduction in money market interest rates such as the Eonia and the Euribor. Euribor rates are used extensively in Finland as reference rates.

It is worth emphasising that the European Central Bank has not yet used up all its room for manoeuvre in its interest-rate policy. This conserns all key policy rates.

If the recession becomes further prolonged and the downside risks to price stability increase, it will be necessary to broaden the arsenal of non-standard measures and extend the duration of the measures. It is important to keep all options open.

Once the recession is over, the world economy will look different than before the crisis. The pace of growth in the United States will be slower for an extended period as domestic demand readjusts to a sustainable level. Many European countries, too, will have to adapt to a lower level of growth than they have been used to in recent years. Many of the countries in eastern and central Europe will find that it will take longer than previously thought to achieve the average standard of living among EU member states. Capital flows into the emerging economies will decline at least temporarily.

The present crisis will have a considerable impact on the operating environment of the financial markets. The scope of market regulation will be extended, balance sheet transparency improved, and incentive structures that increased the instability of the system updated. Within Europe there will be significant steps towards harmonising financial supervision at both national and EU level. More generally, the GDP share of financial services will be lower than before the crisis.

General governments will become considerably more indebted as a consequence of both the expansionary fiscal measures and the fall in tax revenues.

Expansionary measures taken simultaneously by all countries are essential to stimulate faster economic growth. At the same time it is important to make a credible commitment to medium and long-term balancing measures to restore the stability of public finances. This will preserve public confidence in the sustainability of general government finances, which is essential for economic recovery and long-term growth.

It is also important that government support measures do not distort competition or lead to a delay in essential structural adjustments. Protectionist measures must be prevented.

Small open economies like Finland have benefited considerably from growth in international trade and the deepening international division of labour. If international trade were to decline, the international capital markets fragment and protectionism increase, Finland's productivity growth would slow down for a prolonged period.

The growth outlook for the Finnish economy has deteriorated sharply in a very short period of time. While the Bank of Finland forecast in September 2008 envisaged cumulative growth in real GDP of a full 5% in the years 2008–2010, the current estimate is for a decline by the same amount. More than half of this change in the forecast can be attributed to the recent adverse developments. These include a sudden fall in GDP towards the end of 2008 and the extremely weak performance of the economy in the first quarter of 2009. These changes imply a much weaker point of departure for the coming years than envisaged in the September forecast.

Above all the gloomier economic situation is due to the crisis in the world economy, the scale of which could not be foreseen when the previous forecast was made.

The greatest change is in the outlook for exports. The new forecast envisages a substantial drop in the volume of exports. As regards domestic components of demand, the pace of investment growth, in particular, will slow down. Private consumption will also be much more sluggish than before, and there will be a rise in the household saving ratio.

Employment will decline more than previously forecast, with a total of 180,000 jobs being lost over the period 2009–2011. Inflation will be at just half the level envisaged in the previous forecast. The current account surplus will be eroded. General government finances will sink into a sizeable deficit. At the same time, central and local government will move deeper into debt, and the size of the pension funds will decline.

Even if the recession turns out to be short-lived, as envisaged in the forecast, its depth will have a negative long-term impact on the economy. The room for manoeuvre in public finances has been substantially reduced. Finland's experience demonstrates that it will also take a long time for the labour market to recover.

An expansionary fiscal policy and the related increase in government debt are justifiable under the present circumstances. However, Finland continues to face major public expenditure pressures from population ageing in the years ahead. Measures to stabilise the public finances over the medium and long term will enhance the credibility of expansionary measures and make it easier to fund them.

23 March 2009

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

Finland's volume GDP grew 0.9% in 2008. GDP growth was still relatively brisk in the first half of the year, but contracted in the final quarter. Over the year as a whole, growth decelerated in almost all sectors of the economy. Value added in manufacturing declined in the first quarter, while in the latter part of the year there was also a downturn in growth in the trade sector as well as in transportation, storage and telecommunications. In construction, the turning point came slightly earlier than in other sectors of the economy, with output in the industry beginning to contract around the middle of the year.

The Bank of Finland estimates that GDP will decline 5.0% in 2009, and a further 1.1% in 2010. The Finnish economy will return to a positive growth curve in 2011. The international economy will recover as the financial market crisis gradually eases and the massive monetary and fiscal policy support measures begin to take full effect. Finnish exports will, however, grow more slowly than the export markets throughout the forecast period. Private consumption will decline in 2009, but will thereafter begin to grow cautiously. The household savings ratio will grow substantially in 2009 and remain high in 2010–2011. Investments will decline in 2009–2010 and grow just a little in 2011. Willingness to invest will be undermined by problems with export demand, caution in the household sector and difficulties in acquiring finance. The decline in output will be gradually reflected on the labour market. Employment will weaken throughout the forecast period: the number of employed and the labour force as a whole will both decline, and the unemployment rate will rise. The problems in goods exports will erode the current account surplus during the forecast period. General government finances will develop a substantial deficit, and central and local government will undoubtedly move deeper into debt.

Inflation slowed towards the end of 2008 due to the substantial fall in energy prices. The harmonised index of consumer prices (HICP) is forecast to rise by 1.2% in 2009, 1.1% in 2010 and 1.3% in 2011. Inflation according to the consumer price index (CPI) will be slightly lower in 2009, at 0.5%. The pace of CPI inflation will be moderated by both low energy prices and the economic recession.

Executive summary

The global financial market crisis has turned out to be longer and more severe than previously expected.[1] It has now spread to the real economy, with several economic regions entering recession at the same time. Falling asset values and growing credit losses have rekindled a lack of confidence in the financial and banking sector.

Central banks have responded rapidly to the problems on the financial markets, cutting their policy rates and beginning extensive use of non-standard measures to support the financial system. Governments have also given considerable support to the financial sector, leading to increased government borrowing and higher borrowing expenses. There has been a substantial increase in risk premia, particularly in countries with weak public finances.

Corporate credit markets have remained tight for both bank and market finance. The position of low-risk companies has eased somewhat, but the credit market position of higher-risk companies is still very difficult. In Finland, growth in the stock of corporate and household loans has slowed considerably in recent months in response to the banks' tighter lending policy and fading demand for credit. House prices have come down in many countries, including Finland, where there has also been a substantial slackening in house sales.

The 2008 deceleration in growth was widespread across the Finnish economy. The contribution to growth from net exports disappeared entirely, while the contribution from components of domestic demand was considerably reduced. The pace of growth in private consumption was cut by half, while investment growth came to almost a complete standstill. Private investment will continue to contract in 2009–2010. Housing output will be substantially reduced, and export sector investment is set to contract further. The problems in the export sector will continue in 2009, and exports will not provide any notable support for growth before the end of the forecast period. Recovery from recession in 2011 will be based on a gradual strengthening of domestic demand. After 2009, the international recession will have no further impact on services or domestic demand in Finland. Fiscal policy will be supportive of growth, thus clearly contributing to recovery from the recession.

Finland's volume GDP grew 0.9% in 2008. Growth was still relatively brisk in the first half of the year, but in the final quarter GDP contracted. The Bank of Finland estimates that Finnish GDP will decline by 5% in 2009. There will also be a further slight contraction in output in 2010. World growth is expected to begin to recover in the first half of 2010 as the financial market crisis gradually eases and the massive monetary and fiscal policy support measures begin to take effect. The recovery in the international economy will mean the Finnish economy, too, will return to positive growth in 2011.

The decline in GDP has had a phased impact on the labour market. The long-sustained growth in the number of employed came to a halt in the second half of 2008, and unemployment

[1] The present publication is based on the figures available on 13 March 2009.

increased slightly in the last few months of the year. The employment trend was, however, still positive on average for 2008 as a whole. The employment situation will deteriorate throughout the forecast period: the number of employed and the labour force as a whole will both decline, and in 2011 the unemployment rate will be around 10%.

Finnish exports will grow considerably more slowly than the export markets throughout the forecast period. Following the recent rapid phase of investment, the structure of demand in the export markets is less suited to Finland's export supply. The demand outlook for the export sectors will remain weak.

The problems facing goods exporters will erode the current account surplus during the forecast period. By 2011 it will in practice have disappeared altogether, with the recovery in consumption and investment causing a pick-up in imports amid continued lacklustre growth in exports. This change in the external balance is significant, as Finland has had a structural current account surplus, with savings exceeding investments, ever since the recession of the early 1990s. Examination of the current account on the basis of the financial balances of the various sectors indicates that during the forecast period the structure of the economy will change in the same direction as in the recession years of the early 1990s, the general government financial deficit being counterbalanced by household finances once more going into surplus.

In addition to the demand problems for exporters, companies' willingness to invest is also suffering from the problems in accessing finance. The weak cyclical environment provides no encouragement to launch new investment projects, despite the reduction in interest rates lowering the cost of finance. As well as the problems in accessing finance, housing construction is also suffering from the cautious attitude of households.

Private consumption will decline in 2009. As is typical in a cyclical downturn, economic agents are responding to the increased uncertainty by saving a larger proportion of their income. The savings ratio already became positive towards the end of 2008, and will rise substantially during 2009 as consumer confidence and the employment outlook both deteriorate. In 2010 consumption will begin to grow slightly, with the pace of growth clearly picking up in 2011. The savings ratio will, however, remain high, being almost 4% in 2011. Even so, this is only half what it was during the recession years of the early 1990s.

The outlook for general government finances in the immediate years ahead has rapidly deteriorated as a result of the generally depressed state of the economy. Central government finances will also be significantly hit by the expansionary course of economic policy. By the end of the forecast period, the central government deficit is forecast to equal almost 5% of GDP. The general government debt ratio will rise by approximately 18 percentage points to 51% in 2011.

The cyclical deterioration in labour productivity that began in 2008 will continue in 2009, but in 2010 productivity will once again begin to improve. Substantial negotiated pay increases

Table 1.

Forecast summary

Supply and demand

	2008	2007	2008	2009[f]	2010[f]	2011[f]
	At current prices EUR billion	Volume, % change on previous year				
Gross domestic product	186.2	4.2	0.9	-5.0	-1.1	1.5
Imports	75.0	6.5	-1.3	-17.5	-6.1	2.3
Exports	82.2	8.1	-1.1	-19.6	-5.0	0.4
Private consumption	95.7	3.3	2.0	-1.4	0.3	1.7
Public consumption	41.2	0.8	1.7	2.5	2.1	2.5
Private fixed investment	33.7	9.0	1.3	-15.1	-13.8	2.9
Public investment	4.7	6.8	-1.3	3.8	3.8	4.9

Key economic indicators

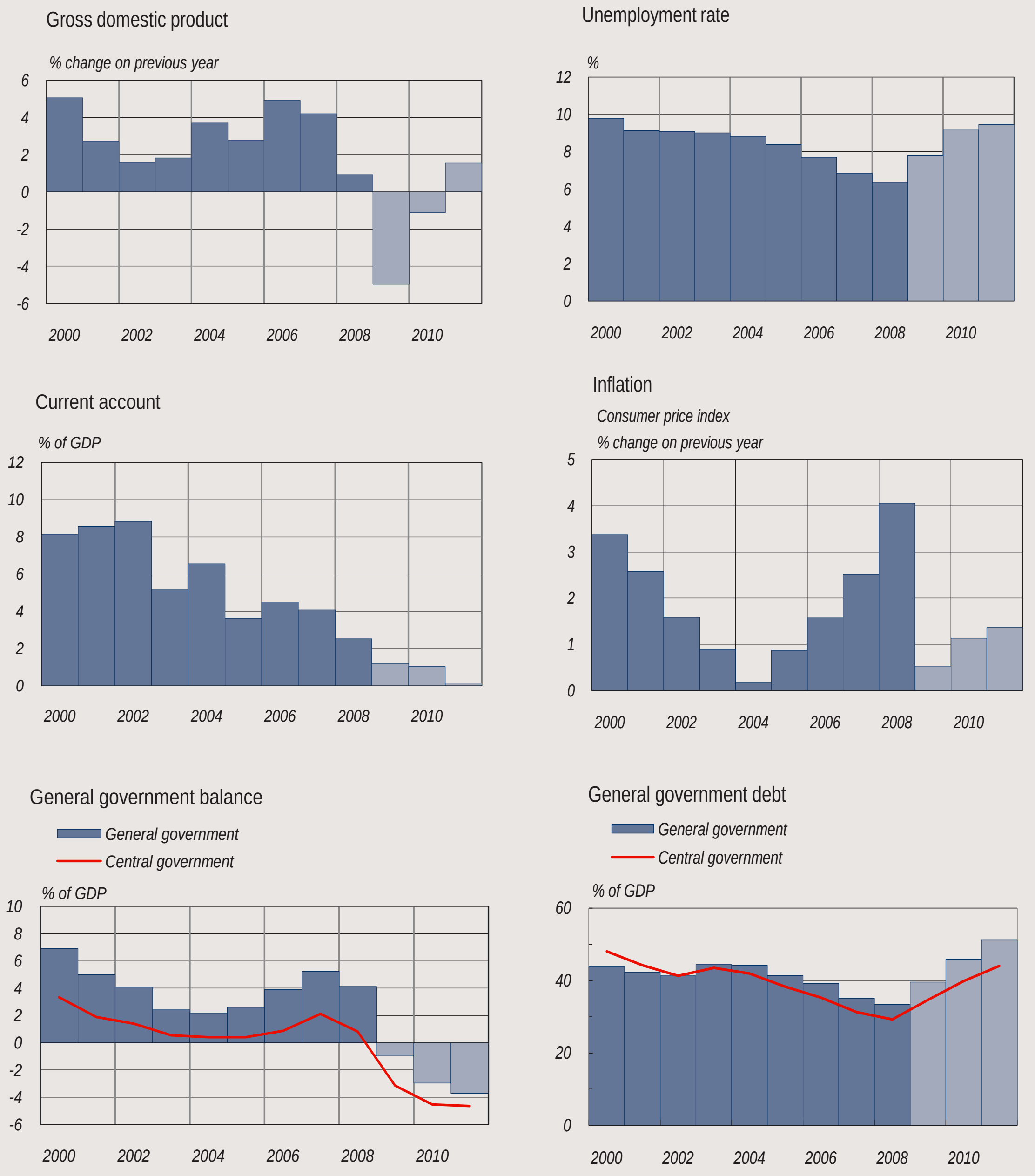
	2007	2008	2009[f]	2010[f]	2011[f]
% change on previous year					
Harmonised index of consumer prices	1.6	3.9	1.2	1.1	1.3
Consumer price index	2.5	4.1	0.5	1.1	1.4
Wage and salary earnings	3.3	5.2	4.7	3.7	2.8
Labour compensation per employee	3.4	5.5	4.0	2.7	2.4
Productivity per person employed	2.2	-0.6	-1.7	2.5	2.0
Unit labour costs	1.2	6.3	6.2	-0.1	0.4
Number of employed	2.0	1.6	-3.3	-3.5	-0.5
Employment rate, 15–64-year-olds, %	69.9	70.6	68.9	66.7	66.7
Unemployment rate, %	6.9	6.4	7.8	9.2	9.5
Export prices of goods and services	0.7	1.2	-3.6	-1.3	0.6
Terms of trade (goods and services)	-1.4	-2.7	-1.3	-1.5	-0.8
% of GDP, National Accounts					
Tax ratio	42.9	42.6	41.5	41.8	42.0
General government net lending	5.2	4.1	-1.0	-3.0	-3.7
General government debt	35.1	33.4	39.6	45.8	51.1
Balance on goods and services	5.0	3.9	1.8	1.6	0.8
Current account balance	4.1	2.5	1.2	1.0	0.2

f = forecast

Sources: Statistics Finland and Bank of Finland.

Chart 1.

Key economic indicators



Sources: Statistics Finland and Bank of Finland.

will sustain the brisk pace of increase in labour costs in 2009. There will be a simultaneous decline in productivity, as employment responds with a delay to the downturn in the economy. In 2010 and 2011 labour costs will grow more slowly than in the current year and productivity will improve. Continued weak inflation will support a rise in real wages during the forecast years.

The prices of oil and other commodities rose considerably through 2008 until around the middle of the year. Thereafter, the rapid deterioration in the world economy caused a sharp decline in commodity prices. The low commodity prices mean import prices are forecast to continue to decline substantially in 2009, after which they will begin a gradual rise.

In 2008, inflation accelerated until September on the back of the dramatic rise in energy prices. Thereafter the pace of rise in consumer prices faded considerably as a result of the substantial decline in energy prices. Inflation is forecast to slow to an average of slightly over 1% in 2009 and to remain relatively low in 2010 and 2011 as well. Both low energy prices and the economic recession are expected to substantially moderate consumer price inflation during the forecast years.

World growth is forecast to recover as the financial market crisis gradually eases and the massive monetary and fiscal policy support measures begin to have an effect. One of the main risks of a weaker-than-forecast trend is, however, if normalisation of the international financial markets were to be slower than expected. This would also cause a stronger-than-forecast weakening of growth in emerging economies. There is also a heightened risk of openly protectionist measures. The spread of protectionism would hamper recovery in world trade and hence the world economy as whole.

The massive disruption to international trade also brings an extraordinary degree of uncertainty to the outlook for the Finnish economy in the immediate years ahead. Domestic risks relate to exporters' ability to operate in a changing market, caution in the household sector and the operating of the labour market. Exports are in danger of a stronger-than-forecast decline, particularly among producers of capital goods. The forecast assumption that employers will more able and willing to provide work than in previous recessions could, moreover, turn out to be overly optimistic. This risk will grow as the recession lengthens.

The risk of a faster-than-forecast decline in aggregate demand also includes the possibility of a weaker-than-expected trend in prices. Despite the relatively rapid rise in wages, the risks to the price forecast are clearly on the downside. The trend in wages could also turn out to be weaker than forecast in the final two years of the forecast period.

It is, of course, possible the trend could be more positive than forecast, if economic policy measures are able to cut the negative spiral generated by the crisis in confidence and thereby stimulate renewed growth in world trade. If this were to happen, annual GDP growth could accelerate in 2011 to a good 3%. Even if this were to happen, however, the economy would still not have returned to the situation prior to the-recession by the end of the forecast period.

Financial markets

The global crisis on the financial markets has turned out to be more prolonged and stronger than expected. The crisis has now spread to the real economy, with several economic regions drifting simultaneously into recession. The recession in the real economy has rekindled a lack of confidence in the financial and banking sector following a drop in asset values, bankruptcies and growing credit losses. Central banks have responded very quickly to the problems on the financial markets both by cutting their policy rates and by using non-standard support measures.

Developments on the bond market are being dictated by the data on the deteriorating state of economies around the world. Massive government intervention in support of the financial sector is reflected in increased public borrowing. The growing level of public debt has created enormous pressure on the bond markets for bond issues, and this could affect the expected returns on government bonds. For some governments the costs of borrowing have already been growing substantially as a consequence of higher risk premia.

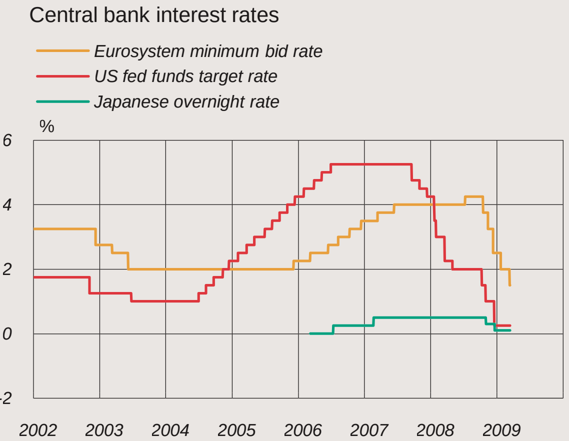
For businesses, the credit markets have remained tight in respect of both bank finance and market finance. The position of companies with a strong credit rating has eased somewhat, but the position of high-risk companies remains very tight.

House prices have begun to decline in many countries, including Finland, where house sales have also been much more sluggish. The international trend on the loan markets has been varied, reflecting the variation in supply and demand factors between different countries. In Finland, the pace of growth in the stock of corporate and household loans has slowed in recent months as a consequence of banks' stricter lending policies and waning demand.

Interest rates

The problems on the financial markets and the rapid deterioration in the growth outlook caused central banks to respond extremely quickly by cutting their policy rates. Between September 2008 and the beginning of March 2009 the European Central Bank lowered its key policy rate from 4.25% to 1.5%. Over the same period the US Federal Reserve lowered its policy rate from 2% to 0.00–0.25%. The Bank of England, meanwhile, has lowered its policy rate from 5% in September to 0.5% at the beginning of March, the lowest rate ever in the long history of the bank. The Bank of Japan has also lowered its rate (Chart 2).

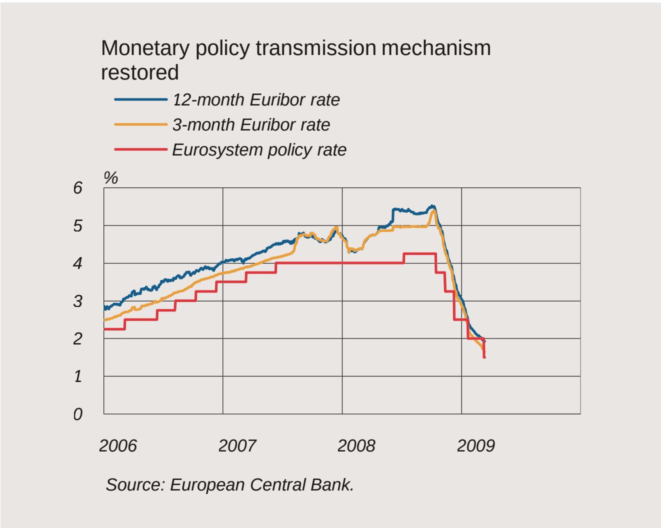
Chart 2.



Sources: Bloomberg and Reuters.

In addition to cutting their policy rates, many central banks have also sought to support the markets by means of a number of non-standard measures, and the markets have certainly benefited as a result. In the euro area, the cutting of the central bank policy rate and reform of the tender procedure have clearly enhanced the effectiveness of monetary policy, as witnessed by the drop in the Euribor rate (Chart 3).

Chart 3.



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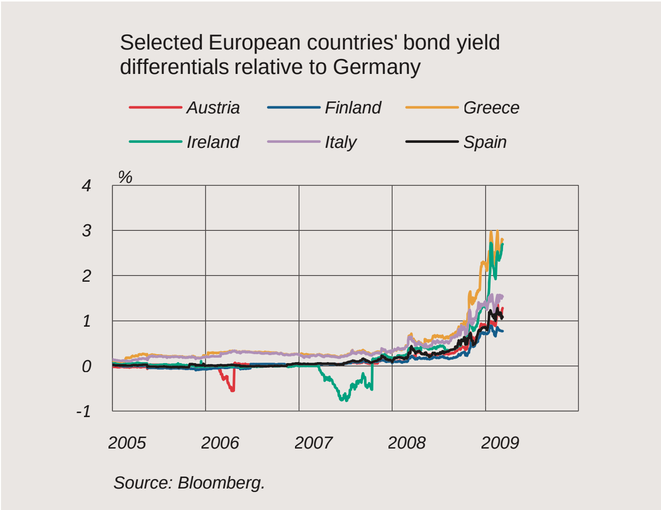


Developments on the bond market are currently being dictated by the deteriorating data on the economy. Weaker-than-expected figures in recent months have postponed expectations of interest-rate rises by the central banks. The yields on long government bonds declined in both the euro area and the United States in the second half of 2008, but in recent months long-term yields in the United States have begun to rise again. There is no sign of a similar rise in the euro area.

The decline in share prices has boosted demand for government bonds, which are considered to be the least risky investment; demand has been particularly brisk for short-term government papers. Money-market rates of under a year in duration and the rates on two-year government bonds have actually continued to decline in the euro area in the early months of the year. In the United States, short-term rates have risen slightly since the start of the year.

In 2009, governments have a pressing need to issue bonds. This is because of the massive support measures, which will have to be funded through additional borrowing. For some issuing countries, the costs of borrowing are rising strongly, as weaker credit ratings and higher levels of indebtedness have meant a sharp rise in the risk premia they have to pay (Chart 4).

In the case of countries in eastern Europe, the rising expenses involved in issuing government bonds have even caused some countries to withdraw from the bond markets altogether. On the credit derivatives markets, too, the risk-hedging costs for these countries have risen dramatically since late autumn 2008. The position of emerging economies will be made even more awkward by a growth in the need for loan refinancing in 2009.

The credit markets have been very tight, in respect of both bank finance and market finance. As well as reduced supply, there have also been clear signs of a reduced demand for finance. According to the results of a lending survey of banks in the euro area, the tight lending policy is being sustained by expectations of a further deterioration in both the overall economic situation and the outlook for different sectors as well as higher costs of finance for the banks themselves.

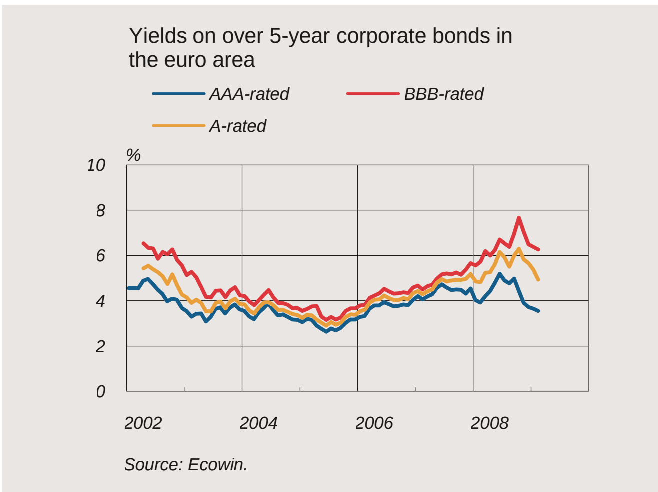
The financial market crisis has also led to higher costs for companies seeking debt finance from the markets, due to higher risk premia. In the past half year there has been a discernible emergence of two distinct groups in terms of companies' position when seeking market finance. For the most creditworthy, access to finance has become easier, while for those companies considered to pose a higher risk the situation has remained extremely tight and their financing costs have grown as risk premia have continued to rise (Chart 5). It is now more expensive to hedge against companies' credit risks, the risk premia on corporate loans have risen and the narrowing of interest differentials between secured and unsecured money has come to an end.

Exchange rates

Since summer 2008 there have been strong movements on the currency markets. The increased aversion to risk in response to the global recession has been reflected particularly in the appreciation of the yen and the dollar (Chart 6).

The value of the dollar has been rising recently in terms of the real exchange rate index. The nominal rate of exchange between the euro and the dollar has fluctuated strongly since summer 2008 after the prolonged rise of the euro against the dollar finally came to an end. One of the reasons for the rise of the dollar is thought to be its

Chart 5.



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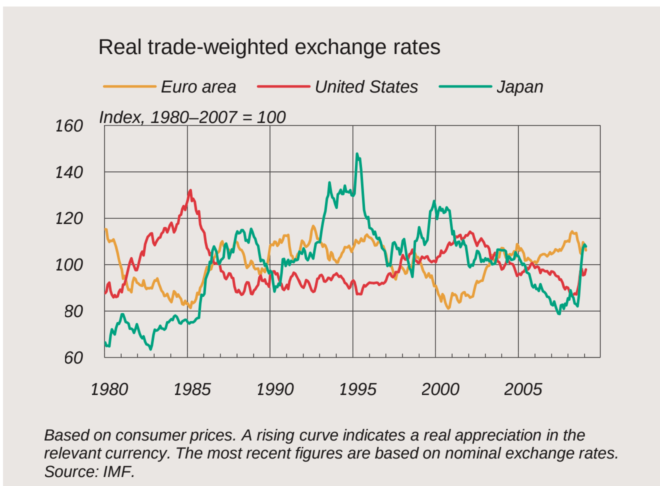


position as a safe haven investment. This factor has become more important in recent months with the increasing amount of negative economic data. In long-term perspective, however, the development of the dollar and its position as an anchor currency are shrouded in uncertainty, partly because of the size of the government debt in the United States.

Of the leading currencies, the yen has been appreciating strongly until very recently as measured by the trade-weighted real exchange rate index. Japanese growth has, however, begun to contract. The news on the country's industrial output and exports, in particular, has been very weak. The external value of the yen is, however, supported by its position as an anchor currency.

The value of the euro is still subject to uncertainty, as the euro area economy, too, is drifting rapidly into recession, and there is a fear the problems in the European financial sector could get worse as credit losses grow. One specific risk facing the euro comes from European banks' large risk exposures in the economies of eastern Europe, where loan losses are expected to grow strongly. This is thought to be partly due to the proportion of foreign currency-denominated loans in eastern Europe.

The nominal exchange rate of the Russian rouble depreciated very rapidly in autumn 2008, falling much more than the currencies of other commodity producers. The Bank of Russia has taken steps to slow the slide of the currency, which explains the very rapid decline in its foreign reserves. It has set an upper limit for depreciation at 41 roubles to a basket composed of the dollar and the euro. Just recently the value of the rouble appears to be settling very close to the upper limit.

In China, the central bank last summer halted the nominal appreciation of the yuan against the dollar, and since then their bilateral exchange rate has remained relatively stable. Against the euro, however, the yuan has appreciated. Its real effective exchange rate has been appreciating for a prolonged period. The rise was particularly strong towards the end of 2008.

The British pound has suffered from the problems of the financial sector. Moreover, the economic outlook for the United Kingdom is extremely bleak. The problems of the financial sector have had mainly an indirect effect on exchange rates, as support measures to save the struggling financial sector have meant an increase in government borrowing. In Sweden, the problems in the financial sector have also been reflected in the value of the krona. The projected future trend of the economy has deteriorated rapidly, and the outlook for Sweden's export-driven economy is expected to remain gloomy for the near future. The krona has depreciated very rapidly in recent months. The pace of the decline has been fuelled by Swedish banks' large risk exposures in the rapidly weakening Baltic States.

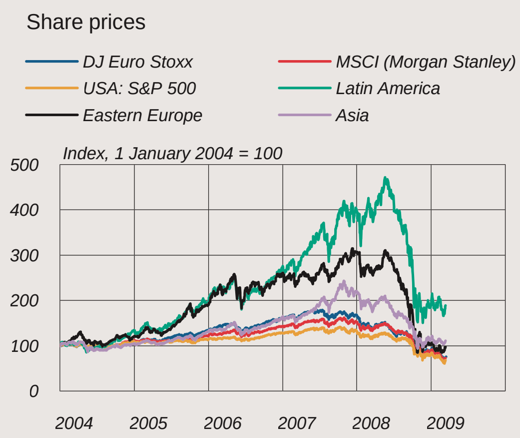
Stock markets

Share prices everywhere fell extremely steeply in autumn 2008. The situation appeared to become a little calmer in the early months of 2009, until the bad news on the world economy and the corporate earnings outlook plus reawakened fears for the stability of the banks and the financial system sent share prices into a new plunge. The negative adjustment in the price of banking shares has been stronger than the movements in other sectors. The car industry is an example of another sector that has been experiencing serious difficulties in a number of countries.

The main share indices in the industrial economies are at their lowest level for over ten years. The MSCI World index, which depicts the development of shares in 23 industrial countries, has already fallen by over 20% in the early months of 2009 (Chart 7). Indices in emerging economies have also come down. In China, however, share prices have rallied slightly in the early months of the year.

The world economic recession and the serious disturbance to the financial markets have caused negative shocks to corporate earnings and dividends. Companies have found their earnings considerably depressed as the recession gathers strength. In the final quarter of 2008, the earnings of companies quoted on the United States' S&P 500 index were 58% down on the final quarter of 2007, while those of the largest European corporations were as much as 84% down. The weak outlook forecast for economic growth is also depressing corporate earnings expectations for 2009. Companies have reinforced their liquidity positions in order to protect themselves from the impact of the current poor state of the financial markets. In many cases, the steps to ensure liquidity have meant a cut in forecast dividend flows. Analysts expect this to continue.

Chart 7.



Sources: Bloomberg and Morgan Stanley Capital International.

In Europe, the shares that lost most value in 2008 were those of companies in the financial sector, technology and manufacturing. In the early months of 2009, the shares to fall most in Europe have been those of companies in the financial and basic materials sectors. In the United States, the shares that lost most ground in 2008 were those of companies in the financial, basic materials and technology sectors. In the early months of 2009, the most negative development has been seen in financial sector and manufacturing companies.

In Finland, the OMX Helsinki 25 had by the beginning of March 2009 lost over 40% of its value in the previous half year. The worst performance has been in the information technology, basic materials and financial sectors.

Chart 8.

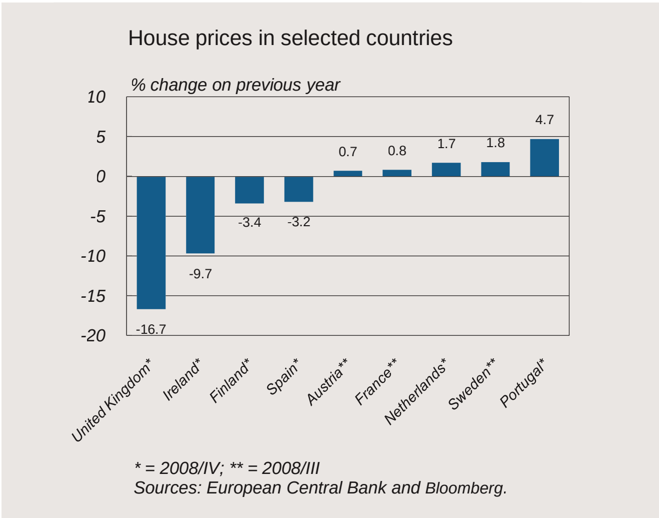
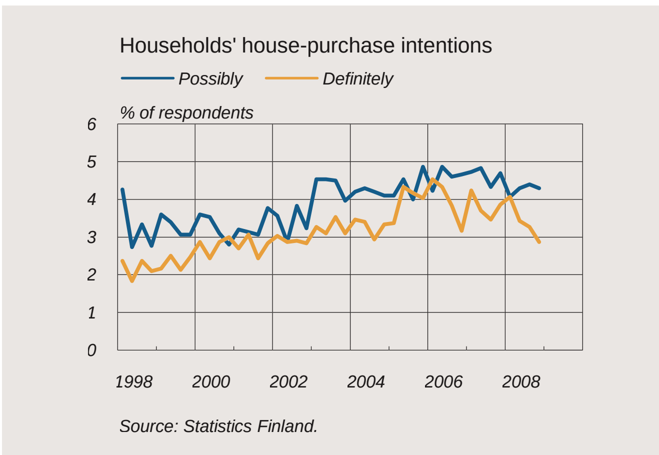


Chart 9.



Housing market

The pace of rise in house prices has slowed and prices in many countries have begun to fall (Chart 8). The decline began in the United States as long ago as 2006, and housing units there have now lost about a fifth of the value they held at the peak of the market. The pace of decline in house prices accelerated to 12% year-on-year in the United States in the last quarter of 2008.

In the EU, the housing market slump began first in Ireland and the United Kingdom, where the pace of decline has also been most rapid. In Finland, house prices began to decline in the last quarter of 2008.

House prices in Finland in the last quarter of 2008 were 3.3% down on the same period a year earlier. Relative to the previous quarter the price of housing units in old blocks of flats was down 3.8% for the country as a whole. The decline in prices was broadly based. It affected both new and old houses, the most important types of dwelling and numerous different areas.

As well as the fall in prices, the stagnation of the Finnish housing market is also reflected in a declining number of sales and longer selling periods. In the last quarter of 2008 there were approximately 40% less houses sold than in the same period a year earlier. The average selling periods for new houses increased several fold during the autumn. With the existing housing stock hard to sell, there was a dramatic fall in housing starts.

The sluggishness of the housing market is in the main due to waning demand. During 2008, the number of households considering a move remained fairly large, according to Statistics Finland's consumer survey (Chart 9). In contrast, the number certain they would move house began to decline fairly steeply. There were a number of reasons to hesitate. The international financial crisis hit household confidence hard. The collapse of share prices meanwhile cut the value of savings intended for the purchase of a new property. On the supply side, the banks have tightened their lending policy, as reflected in larger interest margins on housing loans.

The near-term development of the housing market is shrouded in a great deal of uncertainty. The increasingly bleak economic trend is further feeding households' hesitation over entering the market. On the other hand, the recent reduction in interest rates on housing loans and the current exceptionally low interest means lower borrowing costs and a greater incentive to buy.

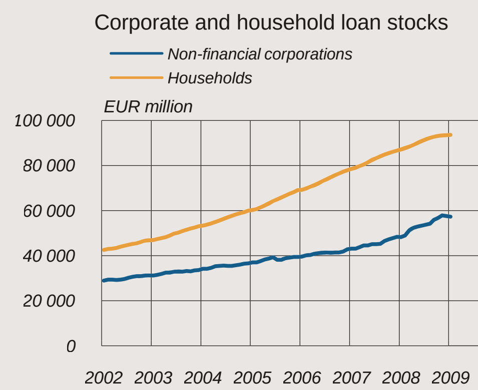
Financial position of households and the corporate sector

Loan markets developed in different ways in different parts of the world towards the end of 2008. In the United States, commercial banks' lending to the public began to contract in November, while the growing fears of a credit slump were met with a variety of measures to support the financial system. In the euro area, lending by financial institutions continued to grow, but much more slowly towards the end of the year. Many countries experienced brisker bank lending as the corporate bond markets contracted sharply and companies were forced to turn increasingly to the banks for finance. In China, the banks under public control vigorously expanded their lending to stimulate the economy.

The slowdown in lending in the United States and the euro area derives from both the stricter lending policy of the banks and declining demand for credit. The available survey data indicates that a large proportion of banks have tightened the terms and conditions for both corporate and household credit. At the same time, demand for loans is being depressed particularly by waning corporate investment and households' increasingly hesitant attitude towards buying a house. Interest rates are now substantially lower than before as a consequence of monetary policy relaxation in both the United States and the euro area, but this has not yet been enough to bring about a recovery in credit demand.

In Finland, there was a rapid slowdown in financial institutions' lending to the public last autumn, and the stock of loans began to contract in December. At the end of 2008, the corporate loan stock stood at approximately EUR 58 billion, or 31% of GDP, and the household loan stock was approximately EUR 93 billion, or 50% of GDP. The more relaxed monetary policy and lower Euribor rates meant

Chart 10.



Source: Bank of Finland.

the average rate of interest on new loans to the public came down from 5.6% to 4.2% in the second half of 2008. This downward trend has continued in the early months of 2009.

Corporate borrowing was growing exceptionally strongly as recently as the beginning of 2008, with a growth rate of over 20% (Chart 10). This was due to a mixture of investment, a need for additional working capital and corporate restructuring. The loan market subsequently deteriorated during the course of the year. According to a financial survey of industrial and service companies carried out in September 2008, companies were finding it harder than before to procure external finance. Late autumn brought a further tightening of lending policy by the banks. This was accompanied by a decline in corporate demand for credit due to the deteriorating international economic outlook and the sharp slowdown in corporate investments caused by the slump in housing construction.

There was a rapid deceleration in the pace of growth in the household loan stock towards the end of 2008, in respect of both housing loans and consumer and other credit. The slower growth in the stock of housing loans reflects the decline in house sales and house prices, while the reduction in consumer and other credit indicates households are hesitant to make large and expensive consumer goods purchases amid the present economic uncertainty.

The prolonged period of economic growth means both companies and households have been highly solvent until very recently. However, in autumn 2008, companies began to experience increasing problems in meeting their payment commitments. Since last summer there have also been signs of households experiencing increasing difficulties with payments.

With the loan market in the doldrums, the balance sheets of financial institutions operating in Finland have begun to contract in the early months of 2009. Balance sheet growth was still sustained in 2008 by the strong growth in financial institutions' other assets and liabilities arising from derivatives trading. On the asset side of the balance sheet, there was a decline in both direct lending to corporate customers and the volume of tradable corporate bonds. On the liabilities side, there was a contraction in deposits and fund units. The dramatic fall in the value of fund units is undermining the liquidity of both Finnish companies and households.

Despite the force of the economic downturn, the capital adequacy, liquidity and lending capacity of banks operating in Finland have not been seriously damaged. The financial future of businesses and households in Finland depends to a considerable degree on how deep and prolonged the international economic crisis turns out to be. The low level of interest rates bolsters the solvency of households and businesses in a challenging economic environment.

Box 1.

Forecast assumptions

World trade and Finland's export markets

World GDP is estimated to contract by almost 1½% in 2009, with growth to recover very slowly in 2010–2011. Owing to the serious financial market crisis, the confidence of economic agents is exceptionally weak, consumption and investment falling and world trade declining strongly. The outlook for growth is gloomy across the board in both developed and emerging economies, even though some countries, such as China, are still experiencing fairly comfortable growth.

World trade is forecast to fall in the current year for the first time since 1982. It will pick up again towards the end of the forecast period, but in 2011 world trade growth will still be running well below the pace observed in previous years. Finland's export markets will also contract strongly in the near term because of a broad-based reduction in imports in countries and sectors important for Finnish exports. The markets for the Finnish export industry, largely focused on exporting capital goods, will shrink in the wake of global investment demand. Not even Russia, one of the key countries for Finnish exports in recent years, can be counted on to drive exports. Finland's export markets will start to rebound in line with world trade only in 2010, but still in 2011 growth in the export markets will remain much more subdued than in recent years. 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

The rapid change in the state of the world economy last autumn was reflected in many commodity prices, which started to decline strongly. The price fall was broadly based across different commodity markets, such as crude oil, base metals and foodstuffs. In recent months, however, the price decline has slowed and commodity prices have mostly remained stable. The forecast assumption is for the price of Brent crude to follow the trend in futures price quotations as at 2 March 2009 and to be at USD 60.2 (EUR 47.1) per barrel by the end of the forecast period. The prices of industrial raw materials (excl. energy and food) are assumed to remain at relatively low levels in the next few years, compared with price trends over the last few years (Table 2). A more detailed analysis of develop-

Table 2.
Forecast assumptions

	2007	2008	2009^f	20010^f	2011^f
Finland's export markets[1], % change	8.5	5.0	-7.1	0.5	4.2
Oil price, USD/barrel	72.7	97.6	48.2	55.5	60.2
Euro export prices of Finland's trading partners, % change	0.3	-0.3	-4.8	-0.7	0.6
3-month Euribor, %	4.3	4.6	1.7	1.9	2.6
Yield on Finnish 10-year government bonds, %	4.3	4.3	4.1	4.4	4.7
Finland's nominal competitiveness indicator[2]	104.0	107.0	110.5	110.7	110.9
US dollar value of one euro	1.37	1.47	1.27	1.27	1.28

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

ments in commodity prices is presented in the chapter 'Costs and prices'.

Foreign trade prices

The export prices of countries of key importance for Finnish exports, ie Finland's competitor countries, are anticipated to fall slightly in the first half of 2009 due to lower costs and weaker demand. For 2009 as a whole, they are expected to decline by more than 3½%, largely on account of lower raw material and energy prices. As early as 2010, however, export prices should start to increase gradually in response to higher raw material and energy prices. The forecasts for price trends in the exports of Finland's competitors are the Bank of Finland's own estimates.

Interest rates and exchange rates

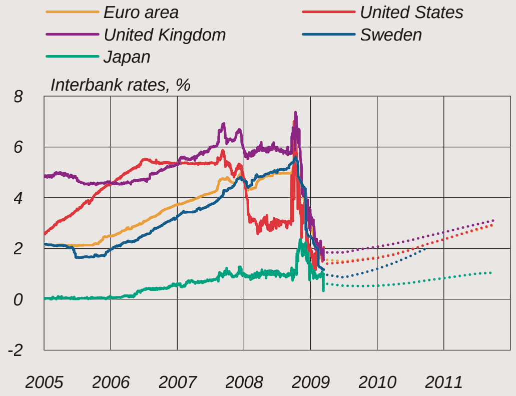
According to a forecast assumption based on interest rate futures quotations, the 3-month Euribor should this year decrease slightly below its current level (Chart 11).

Under an assumption based on currency forward quotations, the external value of the euro should in turn undergo a slight depreciation (Chart 12).

The interest and exchange rate assumptions in the forecast are derived from market expectations on 6 March 2009. 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.

Chart 11.

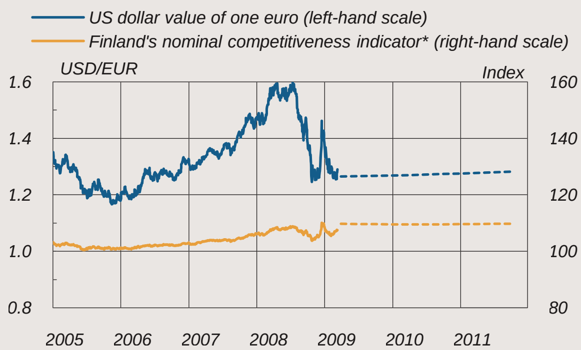
Short-term interest rates and interest rate expectations*



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

Chart 12.

Exchange rate assumptions



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

Box 2.
Helvi Kinnunen

Recent monetary policy in the euro area

Through its monetary policy, the Governing Council of the European Central Bank aims to keep the inflation rate in the euro area, as measured by the harmonised index of consumer prices (HICP), below, but close to, 2% over the medium term. The Governing Council monitors and analyses the economic outlook for the euro area and sets its key interest rates at a level that best supports price stability over the medium term.

The macroeconomic environment in which the Governing Council has to decide monetary policy for the euro area has recently undergone unprecedentedly rapid change.

Until July 2008, the characteristic features were accelerating inflation and an increasingly gloomy and uncertain outlook for the future direction of the economy. In early autumn, the world economic situation weakened dramatically as the turbulence on the financial markets came to a head and quickly deteriorated into a full-blown crisis. Financial institutions in many countries were forced to strengthen their balance sheets, tighten their terms of lending and realise their investments. There was also a general decline in supply and demand indicators.

In the euro area, too, the economic situation deteriorated rapidly. The decelerating pace of growth in the world economy led to a marked drop in the price of oil and many other commodities. This reduced the risk that the earlier rise in commodity prices would feed through to corporate and household inflation expectations, to wages and on into consumer prices. There were in fact increasing signs that the earlier inflationary pressures were dispersing. Since October, the Governing Council of the ECB has lowered its key policy rate on five occasions, by a total of 2.75 percentage points, to the present level of 1.5% (Chart 2).

In October, the Governing Council lowered the policy rate by 0.50 percentage points to 3.75%. Contrary to the standard practice, the decision was taken at an extraordinary meeting of the Governing Council. The decision to relax monetary policy was taken in coordination with the central banks of the United Kingdom, Canada, Sweden, Switzerland and the United States, which also announced a cut in their key policy rates. In addition, the Bank of Japan also indicated its support for monetary policy relaxation. At the same time, the Governing Council decided to change the tender procedure for the ECB's refinancing operations and narrow the standing facilities corridor formed by the rates on the marginal lending facility and the deposit facility and bring them closer to the rate on the main refinancing operations. It was also decided to carry out the Eurosystem's main refinancing operations as fixed-rate tender procedures at a tender rate to be set by the Governing Council. As well as adopting a fixed rate, the tender procedure was also changed from the previously applied procedure in that the ECB indicated that in future it would approve banks' tenders in full.

In justifying their interest-rate decisions, the central banks noted that inflationary pressures had begun to ease with the downward turn in the price of energy and other commodities while intensification of the financial crisis had increased the likelihood of slower growth and hence further reduced the risks to price stability from accelerating inflation.

The Eurosystem staff macroeconomic projections for the euro area published by the ECB in December 2008 revised estimates of growth and inflation in 2008 and 2009 substantially downwards from the estimates presented in September. Having assessed that the risks to price stability from faster-than-forecast inflation had dispersed and that the pace of inflation would remain in line with price stability over a policy-relevant horizon, the Governing Council lowered the ECB's key policy rate by 0.50 percentage points in November and a further 0.75 percentage points in December. In December, the Governing Council also decided to restore the standing facilities corridor to 2 percentage points.

The Governing Council lowered the policy rate a further 0.50 percentage points at both its January and March meetings. The Governing Council expects demand to contract in 2009, both globally and domestically, but thereafter to gradually recover. The Eurosystem staff macroeconomic projections for the euro area published in March 2009 forecast an average annual decline in real GDP of between 2.2% and 3.2% in 2009, with rates of growth between -0.7% and +0.7% in 2010. Annual HICP inflation is expected to be between 0.1% and 0.7% in 2009.

The pace of inflation is forecast to ease further in the immediate months ahead, becoming temporarily negative in the middle of 2009. This is primarily due to the trend in energy prices in the reference period a year earlier. However, in the second half of 2009 the annual pace of inflation is expected pick up again, also due to the effect of the reference period. It is therefore probable that HICP inflation will fluctuate considerably in 2009. However, this sort of short-term fluctuation has no significance for monetary policy.

Box 3.

Katja Taipalus

Impact of the financial market crisis on the real economy

There is a clear link between macroeconomic growth and the financial markets' degree of sophistication. A smoothly functioning financial system allocates capital resources effectively from sectors with surplus funds to sectors with a shortage of funds, and from low-productivity sectors to innovations and fast-growing sectors. This effective allocation of capital adds to the growth potential of the economy over the long term.

From the perspective of economic activity, the linkages that exist between the financial markets and the real economy are of crucial importance. When the financial markets function smoothly, there is no shortage of capital or finance for investment projects.[1] Investors are willing to take on risks, the liquidity position of the financial markets improves, and financial intermediation and its channels increase in response to positive economic developments. The financial markets are by nature 'procyclical', ie they reinforce the economic cycle.

In contrast, when there is a dislocation in financial intermediation, the resultant bottlenecks can be the key to assessing the performance of the real economy. When economic growth slows, the risk-bearing ability of economic agents weakens. The financial markets return to simple, established structures and procedures, which reduces the channels of financial intermediation. The availability of market funding, in particular, will be impaired, as increased risk aversion among investors curbs liquidity supply and raises the price of finance against a backdrop of higher risk premia. The impact of the financial markets on the real economy is again procyclical, but this time it exacerbates a negative spiral.

Various financial innovations are key to the development and greater efficiency of the financial markets. At their best, innovations can facilitate risk diversification, thereby improving financial intermediation. However, innovations need to be sustainable and their risks correctly assessed. Failing this, global financial markets may, at worst, cause many different financial intermediary sectors to become gridlocked simultaneously. This can have concurrent, sizeable implications for the real economy in a number of countries, as we have observed recently.

The blame for the mispricing of securities risks has been attributed to securitisation. Securitisation mainly refers to various financing techniques whereby illiquid assets are transformed into marketable securities. These structured products are collateralised by assets and their cash flows. Assets used as collateral can be mortgages, credit card debt or other securitised instruments, among others.

The greatest benefit from securitisation is that it enables risk diversification and the transformation of illiquid assets into liquid instruments. Securitisation has facilitated access to finance and increased banks' ability to free up their capital resources for new lending. It is precisely through greater supply of finance that securitisation has proved useful to the development of the real economy.

Securitisation has, however, led to a number of problems, such as extremely rapid product development and market expansion, which have prevented the proper functioning of pricing for real underlying risks. This mechanism made it possible to remove risks from balance sheets and hedge against them, whereby the hedging in some cases turned out to be inadequate. Given its role in boosting finance, securitisation has tied the financial markets more closely together with the real economy. In the absence of securitisation, it would, for example, have been very difficult to transform housing wealth into cash for consumption. However,

[1] *The characteristics of a sophisticated financial system include a stable and effective banking system, adequate competition, developed market funding channels and access to international financial markets.*

securitisation also diminishes banks' dependence on monetary policy, via their own funding.

The rapid, strong accumulation of liquidity in the financial system has not been exclusively positive. In the context of abundant liquidity supply, risks were underestimated, asset price (such as house prices) inflation accelerated and the indebtedness of economic agents increased. With the diminished role of risk, investment efficiency was also possibly damaged.

As a result, the abundant liquidity in the markets may have contributed to the rapid increase in debt ratios. The need to reduce the debt burden on highly-indebted households and also, to some extent, on non-financial corporations, has emerged as a key feature of the financial crisis. An even greater problem is the health of the financial sector itself. Leverage on the basis of bank balance sheets has been considerable, albeit there is wide diversity between different countries.

Adjustment to lower debt levels is a painful process for the banking sector, as impairment of investment assets has already contributed to erosion in their resilience to shocks. Currently, the economic downturn means loan losses are also starting to grow. The problem for the banks is the scarcity of capital, which will constrain bank lending and investment. Deleveraging may only occur through acquisition of new capital, sale of assets or reduction in the lending stock. Assuming profitable financial results, equity may also be increased by refraining from dividend distribution. Sales of invested assets in weakening markets bring losses, and it is difficult to raise new capital in an environment of declining economic activity and investor risk aversion. For this reason, banks may come under heavy pressure to curb their lending. As corporate market funding waned amid the deepening financial crisis, the banks initially catered for their clients and increased their lending. Recently, however, banks' willingness to extend more credit has faded, and higher loan losses will increasingly impair their ability to grant credit. A rebound in the credit market, from the viewpoint of both bank and market funding, and the resumption of activity are likely to be important to the economy's pace of recovery.

Compared with previous recessions, governments and central banks have been exceptionally active in their measures to support the financial sector. However, when debt ratios are high, the stimulating effect of low interest rates may be slower than usual. The support measures are massive, but the financial markets appear to have had great difficulty in interpreting their real significance and effectiveness.

As financial intermediation is of key importance for economic growth, the functioning of the financial markets has an incontestable impact on the real economy. The pre-crisis operational framework of the financial markets, where market funding played an increasingly important role in financial intermediation, highlighted the relevance of risks and investors' risk-bearing capacity. In such a framework, risk perception directly determines the level of finance provided. As risk perception in the economy is closely linked with the prevailing economic situation, the problem of market funding is always its procyclicality, in both positive and negative cycles.

Both individual banks and individual non-financial corporations must ensure the adequacy of their capital levels in order to get over bad times. Recently, when the whole financial system has been facing a serious crisis threatening its stability, government has taken on an enhanced role in safeguarding the functioning of the system and securing bank lending. The lessons drawn from the crisis will have a significant impact on the operations of financial institutions and their operating environment going forward as supervision is developed further in the areas of financial stability and prudential supervision of credit institutions in order to avoid the recurrence of crises.

Supply

Finland's GDP volume grew 0.9% in 2008. First-half growth was still relatively brisk, but in the last quarter there was a decline in GDP. The Bank of Finland estimates that GDP will decline 5.0% in 2009. In 2010, too, there will be slight further decline in output. The international economy is expected to recover in 2011, and the Finnish economy will also return to positive growth at this time.

The prolonged period of growth in the number of employed came to an end in the second half of 2008 and there was a slight rise in unemployment in the final months of the year. The employment situation is expected to deteriorate throughout the forecast period, with the unemployment rate rising to around 10% in 2011.

The cyclical decline in labour productivity that began in 2008 will continue in 2009, but in 2010 productivity will begin to grow again.

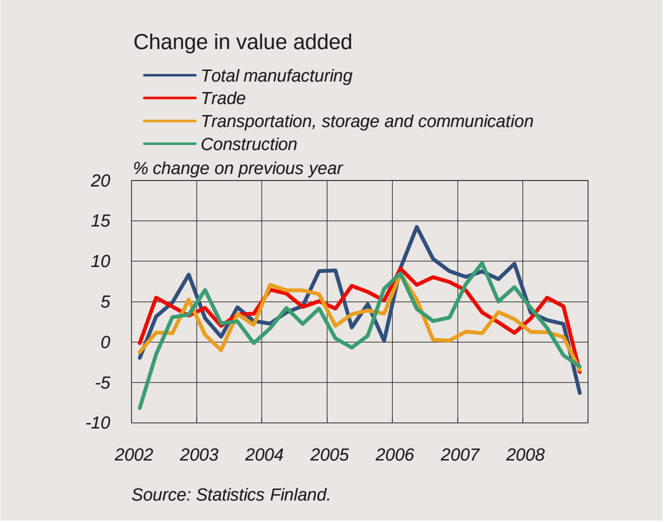
Output

Finland's GDP volume grew 0.9% in 2008. The slowing pace of GDP growth that began before the end of 2007 continued in 2008. In the last quarter of 2008 there was an absolute decline in GDP.

Growth slowed over the course of the year in almost all sectors of the economy. According to advance data from Statistics Finland, the rate of growth in manufacturing value added was over 3% in the first half of 2008, but in the last quarter the sector reported a decline in value added (Chart 13). The trade sector and the transportation, storage and communication sector both also saw growth turn negative towards the end of the year. In construction, the downturn came a little earlier than in other sectors of the economy, with output in the sector beginning to contract around the middle of the year.

Indicator data clearly suggests that output has continued to decline in the early months of 2009. The volume of new manufacturing orders has collapsed in recent months, while manufacturing order books have also declined. In the construction sector, hardly any new residential construction projects were launched in the second half of 2008. New construction is expected to die down in autumn 2009, when a large proportion of current projects are completed. According to a survey by the Confederation of Finnish Industries (EK), confidence among manufacturing and construction companies is as low as it was during the recession of

Chart 13.

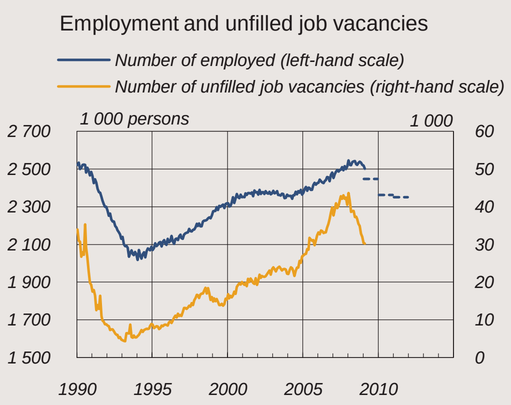


the early 1990s. There has also been a sharp decline in confidence among companies in the service sector.

According to the Bank of Finland forecast, Finnish GDP will decline 5.0% in 2009 and a further 1.1% in 2010. The biggest decline is expected in manufacturing, which will suffer from fading demand in export markets. A decline in construction output is also forecast, with infrastructure and renovation projects funded or supported by the public sector being insufficient to compensate for the contraction in residential construction. The Finnish economy is forecast to return to growth in 2011, when the world economy begins to recover. However, growth in 2011 is expected to be only 1.5%, well below the average for recent years.

The financial market crisis will probably also have longer-term consequences for Finnish growth, as there is a connection between macroeconomic growth and the workings of the financial markets. Large Finnish companies, in particular, have acquired finance on the international capital markets, and financial market fragmentation would have an impact on the operating environment of these companies at least. There is also the danger that the crisis could feed protectionism and lead to a decline in world trade. This, too, would undermine the long-term growth prospects of a small open economy like Finland's. The crisis will also impact on the long-term potential output of the economy via the labour force and the stock of physical capital (Box 4).

Chart 14.



Bank of Finland's seasonally adjusted figures
Sources: Statistics Finland, Ministry of Employment and the Economy and Bank of Finland.

Employment and labour force

The decline in output has been gradually reflected on the labour market. Growth in the number of employed came to a halt in the second half of 2008 and there was a slight rise in unemployment in the final months of the year. In addition, the employment rate declined in the last quarter, although for 2008 as a whole the employment trend was on average still positive. There were 40,000 more people in work than in 2007, and 11,000 less unemployed. The unemployment rate fell 0.5 percentage points to 6.4%.

The end of the prolonged positive labour market trend has shown up above all in the substantial increase in lay-offs and redundancy talks.[1] The figures on the numbers laid off vary from Statistics Finland's 14,000 in the

[1] Lay-offs are not shown in Statistics Finland's employment and unemployment statistics, as people laid off for less than 3 months are entered in the statistics as employed.

last quarter of 2008 to the Ministry of Employment and the Economy's over 26,000 in January 2009. The Employment and Economic Development Centres' estimate of 46,000 laid off includes advance lay-off warnings and thus gives an even bleaker picture of the situation on the labour market.

Another indicator of the employment impact from the decline in output is the number of vacant jobs. This has been declining fairly steeply since the final months of 2008. In the last quarter of 2008 there were around 20% less vacant jobs in Finland than a year earlier (Chart 14). The Confederation of Finnish Industries (EK)'s business outlook indicator indicates a further rapid deterioration in employment in the immediate months ahead.

The harsh economic environment has also been reflected to some extent in labour supply, where the participation rate has begun to fall. At the same time, there was a decline towards the end of the year in the proportion of atypical – part-time or fixed-term – jobs. Employment among the young has also weakened.

The employment situation has begun to deteriorate particularly strongly in manufacturing, and EK's surveys indicate there was also a significant decline in employment in construction in the last quarter of 2008. The parts of the survey dealing with personnel expectations also point to a substantial drop in construction and manufacturing personnel over the next few months. In contrast, the downturn in employment in services is much less marked.

The deteriorating economic situation will substantially reduce the number of employed over the course of the forecast period. There will also be a marked decline in the size of the labour force as a whole. In addition to the economic cycle, labour supply will also be cut by demographic factors. The forecast period coincides with the arrival at retirement age of the first cohorts of the baby-boom generation, of which a considerable proportion are expected to leave the labour force. For this reason, open unemployment will not grow as much as it would have done for purely cyclical reasons. The departure of the baby-boomers from the labour market allied with employers' recent experiences of labour shortages also mean less people will lose their jobs than would otherwise have been the case.

Employment will also be supported by the structure of output: service-sector employment is not expected to suffer as much as in the recession years of the 1990s. For example, local government is not expected to cut staff.

By 2011 there are forecast to be on average 180,000 fewer people in work than in 2008. The employment rate will fall below 67% towards the end of the forecast period. During the forecast period the labour force will contract by a total of 107,000, ie less than the contraction in employment. The unemployment rate will rise to 7.8% this year and 9.2% in 2010. There will be a further rise to 9.5% in 2011, although GDP will by then already have begun to grow again.

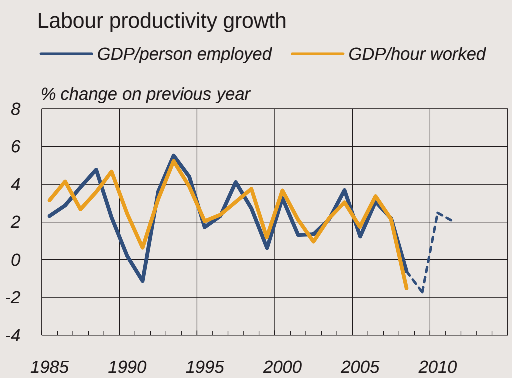
Productivity and capital

Labour productivity declined by 0.6% in 2008, as measured by the volume of GDP per person employed. The Bank of Finland estimates that labour productivity will decline further in 2009, but will begin to grow again in 2010 and 2011.

It is very rare for labour productivity to decline across the economy as a whole. The last time this happened in Finland was in 1991 (Chart 15).

Negative labour productivity growth does not mean that Finland has recently adopted inferior or less-efficient production methods. Productivity development in 2008 and the Bank of Finland's estimate for 2009 are more an expression of the present cyclical situation in the economy. In the early stages of a recession employment typically does not decline until some time after the slowdown in output growth. Correspondingly, as the economy recovers there is generally a delay before employment picks up. Thus, changes in the intensity of work and the capacity utilisation rate are expressed over the short and medium term as fluctuations in labour productivity. The number of hours worked per person employed also depends on the business cycle. Particularly during a recession, GDP volume per person employed typically fluctuates more than GDP volume per hour worked. This was the case in, for example, the recession years of the 1990s (Chart 15).

Chart 15.



Sources: Statistics Finland and Bank of Finland.

A recession can, however, also have more permanent impacts on productivity development. The production structure of an economy changes as 'creative destruction' forces the closure of old production plants and the creation of new ones as the economy recovers.

The long-term impacts of the 1990s recession can be analysed with the help of growth accounting. In growth accounting, changes in labour productivity are customarily divided into those due to capital deepening and those due to changes in total factor productivity. Capital deepening describes the amount of fixed capital in an economy per employee, while total factor productivity growth describes both technological and organisational innovations. In the 1980s, capital deepening still played a key role as a source of labour productivity growth in Finland. In contrast, after the recession of the 1990s labour productivity growth has been based primarily on total factor productivity growth. This is partly explained by the proportional decline in the economy of capitalintensive industries like the forest industries and the simultaneous proportional growth in the role of the electrical engineering and electronics industry, with its lower stock of physical capital.

Since the recession fifteen years ago, labour productivity has grown much more quickly in Finland than in western Europe on average. However, it is by no means automatic that a similar favourable trend will continue after the current crisis. Finnish exporters are already in the forefront of technological development, which was not the case in the early 1990s. Moreover, small open economies like Finland have benefited considerably from growth in international trade and the deepening international division of labour. If international trade were to recede, the international capital markets fragment and protectionism increase, Finland's long-term productivity growth would presumably be considerably slower than in recent years.

Box 4.

Charlotta Grönqvist, Markus Haavio and Helvi Kinnunen

Effects of recession on potential output

This box discusses the potential effects of the current recession on labour, the stock of capital and the medium and long-term potential output of the Finnish economy. In this context, medium term refers to the years 2012–2015, while long term refers to the years beyond 2015.

The Bank of Finland projects the rate of unemployment to climb close to 10% in the course of the forecast period. The difficult labour market situation will also have longer-term consequences for labour input. Firstly, an employee's skills may deteriorate during a long spell of unemployment. Secondly, young people face difficulties in getting their careers started in times of recession, while some older employees exit the labour market for good.

The Bank of Finland projects that the labour force participation rate for the cohorts reaching working age in 2009–2011 (born in 1983–1992) will decline permanently by 3 percentage points as a result of the recession, implying a loss of 19,000 persons from the labour force. In a downturn, the prevalence of long-term unemployment will also grow among persons of prime working age, and the present calculations assume a permanent loss of 10,000 persons from the labour force. In assessing the effects of the downturn on potential output in the medium term, ie over the years 2012–2015, a further assumption is that 20,000 older employees will become unemployed or seek retirement during the recession and will not re-enter the labour market. Overall, these assumptions imply a contraction of the labour force by 1.9% in the medium term and 1.1% in the long term.

The present projections are based on data on the medium and long-term effects of the Finnish 1990s recession on the size of the labour force by cohort. The crisis witnessed 15 years back left a permanent mark on the Finnish labour market: some members of the age cohorts that reached working age during the recession have remained outside the labour force permanently.[1] Those born in the early 1970s are much more likely to be outside the labour market than those born a few years earlier who benefited from the boom of the late 1980s to get their working careers off to a good start. Furthermore, the labour force participation rate for those born in the early 1970s has not increased much since the turn of the millennium despite the decline in the overall unemployment rate and the cohorts' attainment of prime working age. The rough estimate of long-term unemployment is also based on the experience from the last recession: long-term unemployment tripled over the years 1992–1995. At that time, more than half of the long-term unemployed were over the age of 55, and hence at considerable risk of, in effect, moving outside the labour force altogether.[2] The calculations assume that older long-term unemployed will take the unemployment pathway to retirement during the downturn, as they did during the 1990s recession. However, projections of future developments take account of the Bank of Finland forecast, which indicates that the rate of unemployment will remain much lower in the current recession than in the 1990s, when it climbed to 17% at its peak.

A recession also affects the amount of productive capital in the economy. The Bank of Finland projects that investments will decline over the forecast period and the investment ratio for 2009–2011 will be well below the average for the present

[1] *See Grönqvist, C and Kinnunen, H (2009) Taantuman vaikutus työvoiman tarjontaan: 1990-luvun kokemuksia ('Effects of the recession on labour supply: experiences from the 1990s'). BoF Online 1/2009. Bank of Finland (in Finnish only).*

[2] *According to Kyyrä and Ollikainen, approximately half of those unemployed who are eligible for extension of earnings-related unemployment benefit before retiring on old-age or unemployment pension have exited the labour force. See Kyyrä, T and Ollikainen, V (2008) To search or not to search? The effects of UI benefit extension for the older unemployed. Journal of Public Economics 92/2008, p. 2048–2070.*

decade. In 2012, the capital stock will be 5% smaller than it would have been without the experience of a financial market crisis and global recession. The alternative scenario that we use in these calculations is based on the assumption that the Finnish economy would be on a balanced growth path without the financial market crisis, with capital growth consistent with the sum of labour growth and growth in labour-saving technology. In a balanced growth path, capital input and GDP are increasing at the same pace, with the capital-to-GDP ratio remaining stable over time.[3]

In Finland, the capital stock has amounted to roughly three times annual GDP in the 2000s. After the recession, investments will start to recover and the amount of capital will gradually adjust to a level consistent with the balanced growth path.[4] At the same time, the effect of the recession on the capital stock will wane (Table 3).

Table 3.

Effects of recession on potential output

	2012–2015	*2016–2020*	*2021–2025*
Labour input	*-1.9*	*-1.1*	*-1.1*
Capital input	*-4.9*	*-2.5*	*-1.8*
Potential output	*-3.3*	*-1.7*	*-1.4*

Source: Bank of Finland calculations.

Calculations of the effects of the recession on potential output are based on the weights of labour and capital income shares (0.55 and 0.45). The underlying idea is that the income shares of the production factors reflect their significance for the output process. Based on these calculations, the recession will cut Finnish potential output in the medium term by 0.55*1.9 + 0.45*4.9 = 3.3%. This means that Finland's potential output will in the medium term (2012–2015) be 3.3% lower than it would have been without the experience of a financial market crisis and global recession.

The implicit assumption of the present calculations was that the Finnish economic environment would be essentially restored after the downturn. It is, however, highly likely that the environmental setting of the Finnish economy will also undergo permanent change. Consequently, the recession may have much deeper effects on the potential output and growth prospects of the Finnish economy than outlined above.

3 Matti Pohjola concludes that Finnish economic development in the early 2000s largely satisfied the criteria for balanced growth explained here. See Pohjola, M (2007) Työn tuottavuuden kehitys ja siihen vaikuttavat tekijät ('Developments in labour productivity and underlying factors'). The Finnish Economic Journal 103(2), p. 144–160 (in Finnish only).

4 For the projections, Tobin's q model of investments involving adjustment costs was employed.

Box 5.
Charlotta Grönqvist

Effects of population ageing on labour productivity

There is a general fear that population ageing will reduce not only the amount of labour available but also labour productivity.[1] Indeed, previous research suggests that labour productivity growth declines in step with the ageing of the labour force.[2] This is an interesting observation considering that the effect of the baby-boomers is already reflected in the demographic structure of the Finnish labour force. In actual fact, the ageing of the working-age population has already come to a halt. This article provides an econometric analysis of the effects of labour force ageing already witnessed and any potential future effects on labour productivity in Finland.[3]

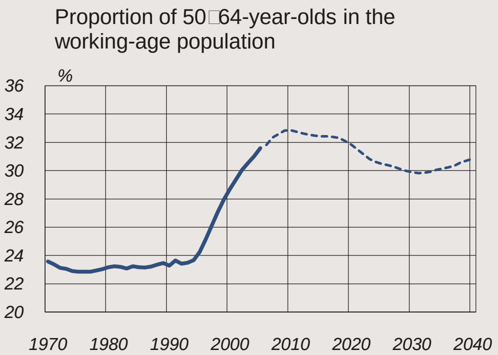
The baby-boomers have a major significance for the demographic structure of the working-age population. The proportion accounted for by older employees (aged 50–64) in the working-age population (15–64 years) has increased from one fourth to one third since 1995 (Chart 16). However, a rejuvenation of the Finnish labour force is already foreseen: over the next two decades the proportion of employees aged 50–64 will decline to 30%.

As in most empirical studies on labour productivity, the theoretical framework for this study is the production function, according to which productivity is a function of labour quality and capital. The data are from the EU KLEMS database, which includes sectoral level[4] production inputs over the years 1970–2005.[5]

Labour quality is measured by the proportion of working hours contributed by men and women aged 50–64 and by the sectoral pay level relative to the average pay level.[6] For measurement of capital, the capital of the ICT sector is treated separately from other capital, as ICT investments are regarded as important generators of growth.[7] The estimations also take account of the cyclical sensitivity of labour productivity, which is measured by the unemployment rate.

The findings based on Finnish observation data indicate that labour productivity growth starts to slow as the contribution of older employees to hours worked increases. This observation is consistent with previous research findings. Hence, the ageing of the labour force has had a negative effect on productivity during recent decades. Over the years 1970–1990, labour productivity growth declined by 0.5 percentage points on average

Chart 16.



[1] *Huovari, J, Kiander, J and Volk, R (2006) Väestörakenteen muutos, tuottavuus ja kasvu ('Demographic change, productivity and growth'). Reports of the Pellervo economic research institute PTT, No. 198 (in Finnish only).*

[2] *Tang, J and MacLeod, C (2007) Labor force ageing and productivity performance in Canada. Canadian Journal of Economics, p. 582–602; Feyrer, J (2007) Demographics and productivity. The Review of Economics and Statistics, 89(1), p. 100–109.*

[3] *Grönqvist, C (2009). The effect of labour force ageing on productivity in Finland. BoF Online 2009 (forthcoming).*

[4] *TOL 1 level.*

[5] *The model is estimated using the GMM method.*

[6] *The key variables (the proportion of men and women aged 50–64) are endogenous and are therefore instrumented, with the proportion of men and women over 49 in the total population and the educational level of the sector used as instruments.*

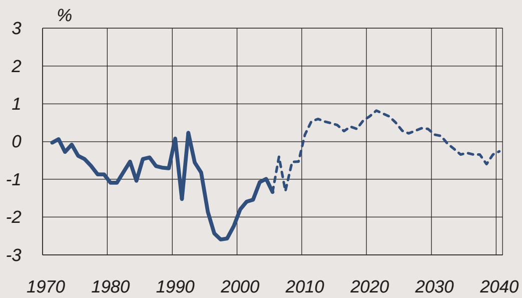
[7] *Stiroh, K (2002) Information Technology and the U.S. Productivity Revival: What Do the Industry Data Say? American Economic Review, vol. 92, no. 5, p. 1559–1576.*

annually in response to population ageing (Chart 17). In 1991–2005, when the population was ageing very quickly, the annual effect of demographic change on labour productivity was –1.5 percentage points, on average.

Labour productivity increased at an average rate of 3.4% per annum over the years 1970–1990, while the annual growth rate for 1991–2005 was 2.9% on average. Hence, potential labour productivity declined by 14% over the years 1970–1990 in response to population ageing, while more than one third of potential productivity growth was lost over the years 1991–2007 because of the ageing of the population.

Chart 17.

Effects of demographic change on labour productivity



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

In the future, a decline in labour productivity due to population ageing will no longer be a problem in Finland. The explanation for this is that while the population as a whole is on average ageing, the labour force is becoming younger. Thus, contrary to general belief, the demographic structure of the labour force will, in the future, have a positive (+0.1 percentage points) rather than a negative effect on labour productivity in Finland (Chart 17).

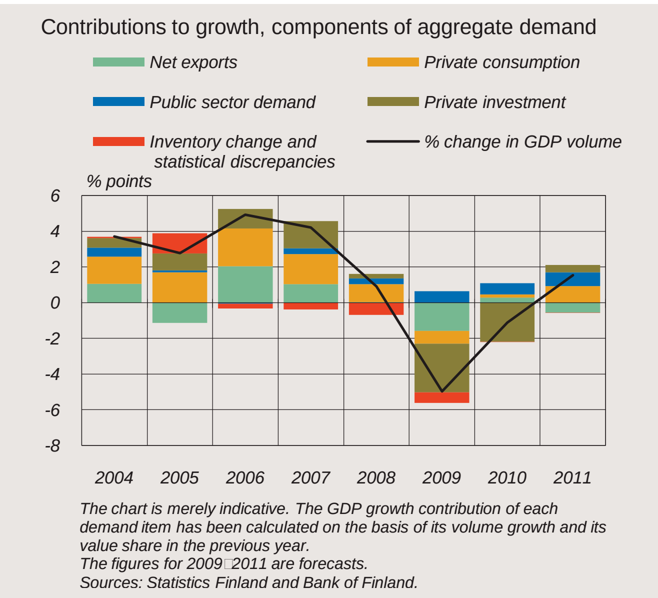
Demand

Finnish exports will grow more slowly than the export markets throughout the forecast period. The composition of demand in the export markets will not support Finnish output to the same extent as before. World growth is expected to start recovering in the first half of 2010 as the financial market crisis gradually eases and the substantial monetary and fiscal policy stimulus measures start to take hold. Growth will not return to the pace typically observed in the past few years even at the end of the forecast period in 2011. The need of many households and businesses to reduce their debt burden will at that time still be subduing demand and investment.

Apart from weak demand for export industry products, companies' willingness to invest will be further depressed by difficulties in accessing finance, despite the fact that lower interest rates are reducing corporate financing costs. Housing construction will decline, as the number of new unsold housing units has increased and the weak cyclical situation discourages the launch of new building projects. Private consumption will wane in 2009. The savings ratio will rise substantially as consumer confidence and the employment outlook deteriorate. Consumption will start to grow slightly in 2010, with the pace of growth picking up in 2011. The savings ratio will remain high throughout the forecast period. The near-term outlook for public finances has become rapidly more dismal as a consequence of the impairment of general economic trends. Central government finances will also be substantially affected by an expansionary fiscal policy and are forecast to post a deficit of almost 5% of GDP by the end of the forecast period. The prolonged current account surplus will be absorbed entirely during the forecast period.

contribution of net exports to growth was eliminated entirely, and there was also a considerable decline in the contribution of domestic demand

Chart 18.



The deceleration of economic growth in 2008 was broadly based. The positive components (Chart 18).

In 2009–2010, economic growth will be dampened most strongly by the contraction of investment. The contraction of investment is due partly to reduced domestic housing construction investment and partly to a decline in investment by the export industry.

The contribution of net exports will turn clearly negative in 2009, and exports will not recover to make a discernibly positive contribution to growth during the forecast period. Recovery from the downturn will in fact be based on the resumption of domestic demand, after a slight dip, and its renewed contribution to growth. The international downturn will not affect service sectors and domestic demand more extensively than in 2009, with the contraction and deceleration in growth being related to international problems affecting exports and the export industry. The public sector will make a positive contribution to growth in 2009–2011, and this will play an important role in recovery from the recession.

Consumption

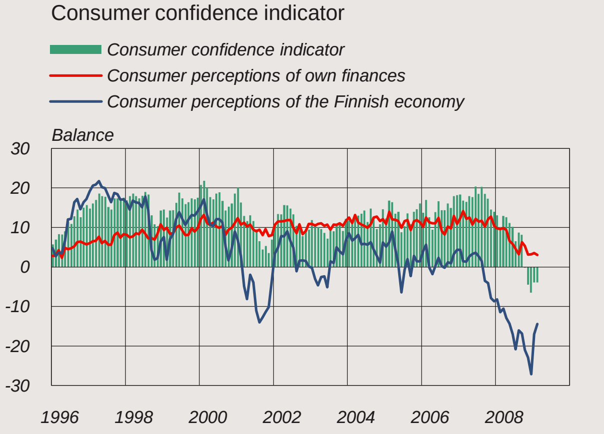
Private consumption growth will remain well below the level of the past few years. According to preliminary national accounts data for 2008, private consumption expanded by 2.0% in 2008. In the first half of the year, consumption was underpinned by the purchase of consumer durables. Car sales, in particular, were brisk because of changes in taxation. Another boost to consumption growth came from substantial pay increases. In the latter part of 2008, private consumption began to decline. Lower consumption was reflected in all categories of consumer durables. Consumption of services also decelerated.

According to Statistics Finland's consumer survey, consumer confidence in the economy continued to be weak in February 2009 (Chart 19). Consumer expectations of Finland's economic activity have weakened in parallel with the slackening of industrial output. However, households' confidence in their own finances has remained more optimistic than confidence in the Finnish economy. The key to consumer behaviour is how the labour market situation will evolve. Consumers' high distrust in the future will constrain consumption particularly in 2009. Even so, confidence is not expected to weaken further towards the end of the forecast period, which will contribute to consumption growth in 2010–2011.

In 2009, private consumption will decline for the first time since the recession of the 1990s. Data on both car sales and the volume of trade in the first months of the year point to lower consumption. Weak consumer demand is primarily due to a sharp rise in the savings ratio. In fact, growth in disposable real income will still remain relatively robust in 2009 as wages and salaries increase appreciably, income taxation eases, inflation slows and the fastest phase of weakening in employment is not yet at hand. Consumption will start to grow slightly in 2010, with the pace of growth picking up in 2011. Disposable real income will grow fairly slowly at this time, as average pay developments will be moderate, employment deteriorating and no tax cuts scheduled for these years.

As is typical in a cyclical downturn, households will respond to higher uncertainty by saving a larger proportion of their income. The savings ratio will rise fastest in 2009, but it will also go up

Chart 19.

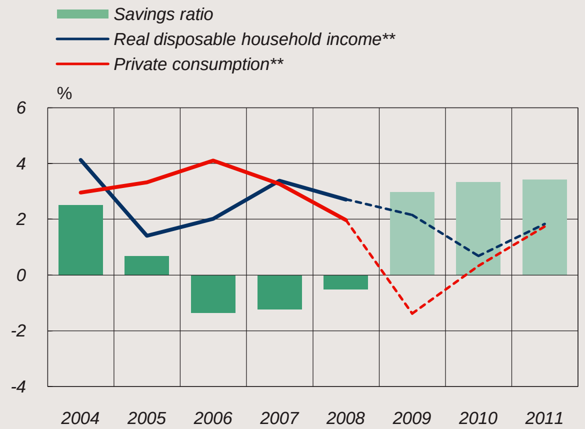


Source: Statistics Finland.

moderately thereafter (Chart 20). In 2011, it will already be approaching 4%. Accordingly, there will be a substantial improvement in household finances in the forecast period. The change is significant compared with the last few years. The savings ratio has been negative since 2006, when it fell strongly in a situation where real income growth remained modest with regard to the overall cyclical situation. Despite the rapid elevation of the savings ratio, it will still remain at half of what it was at the time of the 1990s recession.

Chart 20.

Households'* disposable income, consumption and savings



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

General government

The general government balance has been exceptionally robust in Finland for a number of years, and surplus continued to be generated in 2008. However, the economic downturn led to a marked retrenchment in the central government surplus. Towards the end of the year, growth in tax revenues and asset income slowed appreciably. On the government expenditure side, current transfers grew particularly strongly, while purchases and investments also increased strongly. Local government finances remained close to balance, thanks particularly to favourable developments in the early part of the year and government transfers. The surplus in the social security funds, in turn, continued to expand in 2008, buoyed by asset income growth and higher current transfers from central government. The general government debt to GDP ratio contracted by a clear margin, as the surpluses enabled a reduction in central government debt.

Table 4.

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

	2005	2006	2007	2008	2009f	2010f	2011f
General government revenue	52.9	52.6	52.5	52.5	51.3	52.1	52.8
General government expenditure	50.3	48.7	47.3	48.4	52.3	55.1	56.5
General government primary expenditure	48.6	47.2	45.8	46.9	50.8	53.4	54.6
General government interest expenditure	1.7	1.5	1.5	1.5	1.5	1.7	1.9
General government net lending	**2.6**	**3.9**	**5.2**	**4.1**	**-1.0**	**-3.0**	**-3.7**
Central government	0.4	0.9	2.1	0.8	-3.1	-4.5	-4.7
Local government	-0.7	-0.3	-0.1	-0.1	-0.7	-1.0	-1.4
Social security funds	2.9	3.4	3.3	3.4	2.8	2.6	2.3
General government primary balance	4.3	5.4	6.7	5.6	0.5	-1.3	-1.8
General government debt	**41.4**	**39.2**	**35.1**	**33.4**	**39.6**	**45.8**	**51.1**
Central government debt	38.2	35.3	31.2	29.2	34.6	39.8	44.0
Tax ratio	43.9	43.4	42.9	42.6	41.5	41.8	42.0

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

General government finances to deteriorate rapidly

The near-term outlook for public finances has turned rapidly bleaker amid the worsening of general economic trends. As general government revenue decreases and expenditure remains at broadly the same levels as in earlier years, the financial balance is forecast to weaken to -3.7% of GDP by 2011 (Table 4).

The central government financial position will deteriorate dramatically as early as 2009, when the tax bases will contract. A marked decline is expected particularly in corporate tax receipts, but also in revenues from other direct and indirect taxes.

Central government finances will also be seriously eroded by the expansionary fiscal policy. Tax cuts under the Government programme, accounting for about 1% of GDP, will be mainly implemented in 2009, while higher unemployment and several road and transport-related projects will add substantially to central government expenditure. Another increase in expenditure will arise from the increase in current transfers to the Social Insurance Institution following the abolition of employers' national pension insurance contributions.

Central government finances are predicted to show a good 3% deficit relative to GDP in 2009. With tax revenue continuing to fall and unemployment expenditure sustaining an upward trend in the period ahead, the central government deficit will reach around 5% of GDP in 2011.

Local government finances will also deteriorate markedly in the next few years. Local government tax revenues will be substantially undermined by weakening employment and lower corporate earnings. Given rapid expenditure increases, the local government deficit will grow to about 1½% of GDP in the near term. Local government expenditure pressures will also be fuelled by higher demand for basic services as a result of population ageing. By contrast, expenditure pressures will be alleviated in the future by the removal of employers' national pension insurance contributions.

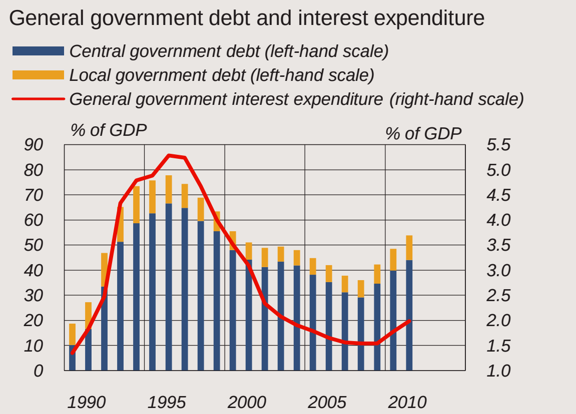
The financial balance of social security funds is estimated to weaken in the forecast period, but to remain in a sizeable surplus. Population ageing will gradually start to increase pension expenditure in the forecast period. Pension funds' lower investment income will also erode the financial balance of the social security funds.

General government debt to increase substantially

The general government debt ratio will increase by almost 20 percentage points from 2008, to a good 50% of GDP by 2011. The debt ratio rose last in the mid-1990s. General government interest expenditure has declined since the mid-1990s, but will begin to grow again in the forecast period (Chart 21).

Central government needs to take on significant amounts of new debt to finance its deficit. Loans extended to Iceland and Latvia and support measures targeted at non-financial corporations will also add to the debt burden. Local government indebtedness will also accelerate in the next few years as tax revenue declines and expenditure growth continues at a brisk

Chart 21.



Sources: Statistics Finland and Bank of Finland.

pace. Going forward, substantial renovation and investment needs will further increase the debt pressures on local government. The total tax ratio will decrease markedly in 2009 because of tax cuts but will start to rise again towards the end of the forecast period.

The uncertainty surrounding the forecast for general government finances is primarily related to employment developments. An essential impairment in employment would have a particularly strong negative impact on central and local government tax revenue from earned income, which would be reflected in an increase in the central and local government deficits. A risk can also be seen in relation to structural reforms – eg the central government productivity programme and local government and service restructuring reforms. If these were to fail to curb expenditure growth as hoped for, this would further increase public expenditure relative to output. When population ageing begins to seriously push up age-related expenditure, productivity growth will play a crucial role in safeguarding the sustainability of public finances.

Even if the economy returns to potential output after the forecast period, there will still have been a long-term deterioration in general government, and particularly central government, finances. From the perspective of economic agents, of key importance will be the measures adopted to stabilise public finances. Based on the experience of recent decades, budgetary practices will play a decisive role. Credible and binding budgetary frameworks have proved an effective tool in controlling public expenditure in Finland. Expenditure has remained within the agreed framework, even though the ceilings set for expenditure have been very strict. In order to safeguard public finances and basic welfare services, it is essential that public expenditure growth remains moderate in the years to come.

Investment

The volume of private investment grew only a good 1% in 2008, ie considerably more slowly than in previous years, amid a rapidly worsening outlook for export and home market industries (Chart 22). Even so, the investment ratio for the economy as a whole remained high, at over 20% of GDP.

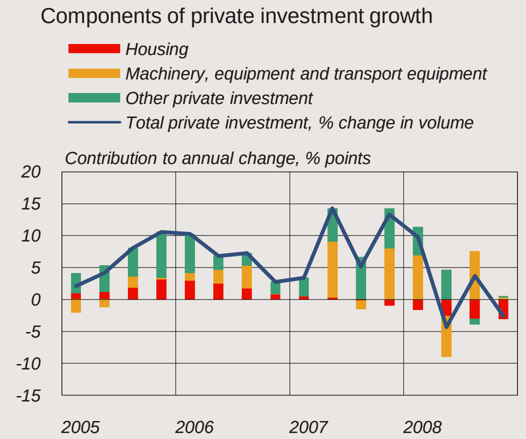
Growth in construction investment came to a standstill in 2008. Housing construction investment was down more than 9% on the previous year. Households' weakening economic prospects and ongoing high financing costs reduced willingness to purchase housing. Difficulties in accessing finance and particularly a substantial increase in the number of unsold housing units led to a very low number of new housing starts.

Non-residential construction still grew by 8% in 2008, mainly on account of the completion of a number of unfinished projects. Growth primarily stemmed from commercial and office construction and from industrial and warehouse construction. Non-residential construction started to shrink in autumn 2008, following a strong reduction in start-ups. Underlying the low level of start-ups were increased caution among foreign investors and a considerable expansion in the supply of premises relative to rental demand.

The pace of growth in the volume of corporate machinery and equipment investment slowed to less than 4% in 2008. The weaker economic outlook was also reflected in machinery and equipment investment, and growth was mainly due to longer-term investment projects. Overall, investment in productive capacity (excl. housing construction) expanded by a good 6% from the previous year.

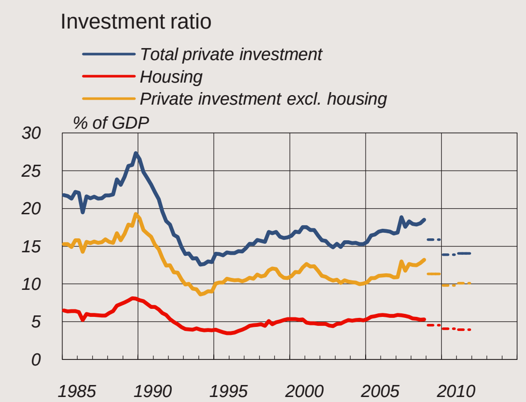
The investment outlook for 2009 is gloomy. According to the investment survey conducted by the Confederation of Finnish Industries (EK) at the end of last year, the value of domestic industrial fixed investment is anticipated to decline by about 4% this year. Investment is expected to decrease in a number of key sectors. Investment in the energy sector is projected to increase, which is related to the nuclear power plant project that is currently underway and other electricity, gas and water supply investments. However, as economic prospects have deteriorated since the completion of the survey, there may be a considerably stronger reduction in industrial fixed investment than planned by firms.

Chart 22.



Source: Statistics Finland.

Chart 23.



Investment ratios have been calculated on the basis of nominal figures.
Sources: Statistics Finland and Bank of Finland.

Private investment will develop exceptionally modestly in the forecast period, compared with the last few years. It is estimated to decline by more than 15% in 2009, and the downward trend will continue at roughly the same pace in 2010. Investment is predicted to have already resumed moderate growth by the end of the forecast period. The overall drop in investment will be striking, however, as the 2011 investment ratio is projected to be lower than in any year since 2000 (Chart 23).

Construction investment will be on a downward trajectory both this year and in 2010. Housing construction will decline, as the number of new unsold housing units has increased and the weak cyclical situation discourages start-ups of new building projects. On the other hand, the public sector intends to step up production of rental apartments and to encourage renovation, which – if it materialises – would mitigate the building slump. Office construction will slacken markedly in the forecast period, as the rates of underutilisation for office premises have in many places already risen to high levels. Construction of industrial and warehouse premises will also be cut back in 2009–2010. As new construction output starts to fade, this will free up labour and other resources for renovation work. Stimulus measures targeted at renovations will have a positive impact on construction. Construction investment will also be boosted by the work required on, for example, the new nuclear power plant at Olkiluoto and the western extension of the Helsinki metro, as well as a number of other infrastructure projects launched by the public sector.

The bleak economic outlook is generally curtailing corporate willingness to invest. Access to funding has become more difficult, even though the lower level of interest rates reduces firms' financing costs.

World economy and external demand

2008 will go down in history as a year of exceptional economic developments. In the early part of the year, economic growth was still continuing at a very brisk pace in several places across the world economy and strong demand for commodities pushed their world market prices up to new records. Meanwhile, consumer price inflation was generally picking up, as the elevated commodity prices and higher capacity utilisation rates added pressure on costs.

The global financial market crisis that began in August 2007 deepened in the course of a few months, developing into an outright crisis, the ramifications of which began to be reflected rapidly and extensively outside the financial sector as well. Output growth in the main economic regions gave way to a strong contraction in growth towards the end of the year, while economic growth also slowed sharply in most emerging economies.

According to the Bank of Finland's new forecast, the world economy is now undergoing a severe recession, from which there is no quick exit on the horizon. The disruption caused by the financial market crisis in financial intermediation, the weakening climate of confidence and the pressures for correcting imbalances in public finances will depress consumption and investment on a broad scale.

Gross domestic product will shrink, especially in developed countries, but also in many emerging economies. Simultaneously, there will be a strong decline in world trade. The contraction of GDP will continue in a number of countries until the end of 2009, partly into 2010. Even in those countries where output looks set to grow this year, growth will remain appreciably more subdued than in recent years.

World growth is expected to start recovering in the early part of 2010 as the financial market crisis gradually eases and the massive monetary and fiscal policy stimulus measures begin to take hold. The general slowdown in inflation will also provide a boost to the resumption of growth.

Even so, growth will recover very sluggishly, and there will be no return to the pace of growth typically witnessed in recent years, not even towards the end of the forecast period in 2011. The need of many households and businesses to reduce their debt burden will at this time act as a continued drag on demand at the same time as earlier commodity price increases and changing funding structures, following the financial market crisis, will have weakened potential growth in a number of countries for an extended period of time.

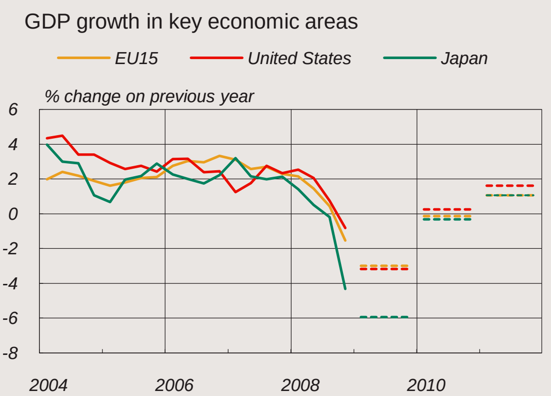
World economic prospects are much bleaker in the new forecast compared with the previous forecast. This is reflected particularly clearly in world trade, which experienced a dramatic deterioration at the end of 2008. The forecast also foresees a decline in the volume of world GDP in 2009.

The economic outlook is especially weak for a number of developed economic regions, where the economy is expected to still shrink year-on-year in 2010. By contrast, Asia is predicted to witness continued comfortable growth in many places, as domestic demand offsets the growth impact of weaker exports.

In 2011, world growth is forecast to be around 2.8%. Although economic activity will then be more favourable than in the two preceding years, growth will still remain much slower than the almost 5% pace observed in recent years (Table 5).

Real GDP in the EU15 is forecast to decline by 3.0% in 2009. Year-on-year contraction will still continue in 2010, largely because of the negative carry-over effect. Only in 2011 will annual growth be about 1% (Chart 24). The

Chart 24.



Sources: Eurostat, Bureau of Economic Analysis, Economic and Social Research Institute and Bank of Finland.

Table 5.

Rates of growth in GDP and world trade

% change on previous year

GDP	2008	2009f	2010f	2011f
United States	1.1	-3.2	0.2	1.6
EU15	0.7	-3.0	-0.1	1.1
Japan	-0.7	-5.9	-0.3	1.1
World	3.1	-1.4	1.3	2.8
World trade	3.2	-6.8	0.6	4.2
Finland's export markets	5.0	-7.1	0.5	4.2

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.

weak economic activity is partly the result of difficulties in world trade, partly of factors internal to the euro area. Euro area investment will also fall as a consequence of problems in accessing finance and the high costs involved, as well as caution exercised by non-financial corporations and households. Although households' disposable real income will progress relatively well in a number of countries in the near term, driven by tax cuts, low inflation and reasonable pay developments, the forecast envisages subdued private consumption over a longer period of time because of fears of unemployment and the tighter credit climate.

US GDP for 2009 as a whole is predicted to be 3.2% lower than last year. Private consumption is weighed down by declining employment, a considerable reduction in wealth and tighter credit terms. The shedding of jobs and reduced working time will curtail consumers' disposable income, while the risk of unemployment will depress consumer sentiment. The low level of investment – particularly construction investment – will persist throughout 2009. Net exports, in contrast, are set to grow because of falling imports.

The decline in US GDP is expected to come to a halt towards the end of 2009. Growth will initially be buttressed by public demand and, to some extent, by exports, and in the second quarter of 2010 also by a gradual recovery in investment. Private consumption will set off sluggishly and is expected to resume growth only in the latter half of 2010. GDP will grow only slightly in 2010, with growth just a good 1½% in 2011. The sluggishness of forecast growth reflects not only the ongoing legacy from the excesses on the housing market and the levels of indebtedness of the past few years, but also the assessment that, compared with earlier estimates, the pace of US potential growth has slowed in the wake of the financial crisis and the preceding commodity price shocks.

The Japanese economy contracted drastically against the backdrop of a sharp fall in exports and industrial production in the last quarter of 2008. The prospects of the export sector, which is key to the Japanese economy, are poor, as the economies of most major market areas are undergoing a downturn and global recovery is predicted to start relatively slowly. The already subdued domestic consumer demand is expected to moderate further still on account of weak earnings and labour market developments. Held back by declining exports and investment demand, Japanese GDP is forecast to resume slow growth only during 2010.

Downbeat export prospects and low investment demand will cause growth in Asian countries outside Japan and China to be considerably more sluggish during the forecast period than in recent years. The growth forecast for the Russian economy has also been revised markedly downwards because of the weaker external environment.

Export markets and export prices

World trade and Finland's export markets continued to expand until summer 2008. In the early part of the year, the world economy suffered from capacity shortages, which was reflected in freight charges as well as in delivery delays.

Moreover, the abrupt hike in the prices of food and oil was an indication of international overheating on the energy market. These phenomena were reflected in Finland's export markets and export prices.

The deepening of the financial market crisis began to weigh on investments and international trade after the summer. Finland's export markets collapsed amid the deepening crisis at the end of last year as businesses vigorously scaled down their inventories and cancelled investments in productive capacity. According to preliminary data, the export markets contracted by about 2% in the last quarter of 2008 compared with the previous quarter. Growth in the export markets for 2008 as a whole was only 5%, as opposed to 8.5% in 2007. World trade as a whole slackened even more sharply, with the pace of growth halving to 3.2% in 2008 (Chart 25).

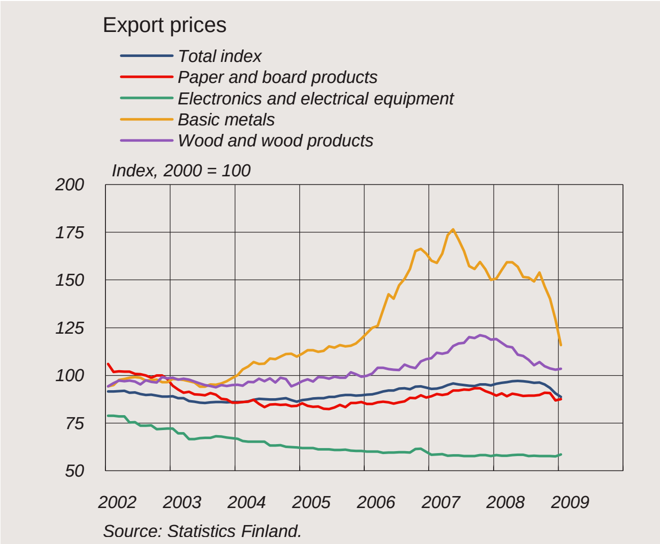
Of Finland's largest trading partners, US imports contracted by as much as 2.8% in 2008 year-on-year, while UK imports for the year as a whole were also down slightly. By contrast, Russian imports continued to grow by almost 20% from 2007, although the pace of growth already began to subside towards the end of the year.

Export prices showed a highly erratic pattern in the course of 2008. The volatility of crude oil prices was reflected in the prices of a number of important product categories. The export prices of machinery and equipment as well as consumer durables continued to rise until the end of the year. The collapse in basic metal prices in the last quarter was reflected in a sharp fall in the export prices of Finnish metal manufactures. These prices dropped particularly strongly in January.

The market situation of the forest industry has been slightly different from that of other sectors. Wood industry export prices peaked at the end of 2007, after which they fell throughout 2008. Wood industry prices actually began to stabilise in autumn 2008 at the same time as metal prices collapsed. In the paper industry, export prices of pulp, paper and paperboard have been stable since 2005 (Chart 26).

Chart 25.

Chart 26.



In the early part of the current year, world trade and the export markets will continue to shrink at a relatively fast pace. Towards the end of the year, however, the market situation will start to calm down gradually. Considering 2009 as a whole, Finland's export markets will contract by as much as 7.1%, ie more than world trade. In the export markets, demand is particularly weighed down by the collapse in Russian imports in the current year. By contrast, the forecast assumption is for the imports of Sweden, euro area countries and the United Kingdom to decline slightly more slowly than world trade.

Finland's export markets will start to recover as early as the beginning of 2010. Growth for the year will be just 0.5%, but this is estimated to accelerate to as much as 4.2% on average in 2011. Nevertheless, compared with previous years, growth will be modest, and consequently Finland's export markets will, at the end of 2011, only be at the level of early 2008.

The forecast estimates that most sectors will see a levelling off in the downtrend in export prices during the course of the current year. The export prices of metal manufacturers and the chemical industry dropped dramatically at the beginning of the year, but these price falls are also expected to bottom out in the period ahead and then turn upwards, in accordance with the assumption concerning oil and other commodity prices. Electronics export prices are estimated to continue their downward movement at their previous pace. The forest industry has already witnessed a considerable decline in export prices, causing a reduction in supply. As the demand outlook in the main markets for the forest industry continues to be muted, a significant rise in prices cannot be expected until towards the end of the forecast horizon.

This year, export prices will come down by 3.5% on average, followed by another 1.1% next year. Even so, rising raw material prices will start to push up Finland's export prices towards the end of the forecast period in 2011.

Foreign trade

The deceleration of growth in foreign trade continued in 2008. In the early part of the year, both exports and imports of goods and services continued to grow, but trade was severely disrupted by the financial market crisis towards the end of the year (Box 9). Fourth quarter exports were 13% down on the previous quarter, while the corresponding change in Finland's export markets is estimated at -1.9%. For 2008 as a whole, exports of goods and services declined by 1.1% year-on-year, because of the weak latter half of the year. However, imports of goods and services increased by 4% in 2008, owing to brisk demand for capital goods and consumer durables.

The value of goods exports decreased in 2008 in a number of key markets, such as the United Kingdom, Germany and Sweden. Taken as a whole, exports to EU countries in 2008 remained at the level of the previous year. Goods exports to Russia expanded for the year as a whole, but contracted sharply at the end of the year.

The bulk of Finland's goods exports are directed towards neighbouring countries and the world's largest economies (Table 6). The allocation of Finland's goods exports has remained unchanged in the present decade. Only exports to Russia have increased, with a significant proportion being composed of re-exports.

Export prospects

The bleak situation in goods exports appears set to continue in the early months of the current year. The most recent indicators, such as purchasing managers' indices in various countries, do not point to a quick rebound in demand. The business outlook indicator of the Confederation of Finnish Industries (EK) for February 2009 holds no promise of a turnaround in the near term.

The technology industry, too, estimates a contraction in its exports from last year. The dramatically lower level of metal prices puts a drag on basic metal exports. In the forest industry, in turn, the volume of exports should not come down much further, as suggested by the EK business outlook indicator. On the other hand, structural changes have already lowered the level of forest industry exports with respect to other sectors. By contrast, the chemical industry will see its export outlook weaken further still. Export prospects are thus divergent by sector, as the exports of paper and wood industries are impaired not only by the financial crisis affecting all sectors but also by the already ongoing structural change.

The future exports of all sectors will be obstructed by economic stimulus packages with protectionist features implemented in many countries. These may delay and even prevent the submission of export orders to the Finnish engineering industry in the early part of the year.

Manufacturers also receive export revenues increasingly from services, which are not reflected in the trade figures provided above. The electronics industry, for example, receives income from research and development work done in Finland via exports of services. The sector accounts for more than half

Table 6.

Structure of goods exports by country
% of total goods exports

	1990	2000	2004	2008
Nordic countries	21	15	16	15
Germany and Poland*	13	14	12	13
Russia	13	4	9	12
Italy, France and Spain	12	12	9	10
United States	6	7	6	6
Asia**	3	6	7	6
United Kingdom	11	9	7	5
Baltic states		4	4	3
Total	77	72	71	71

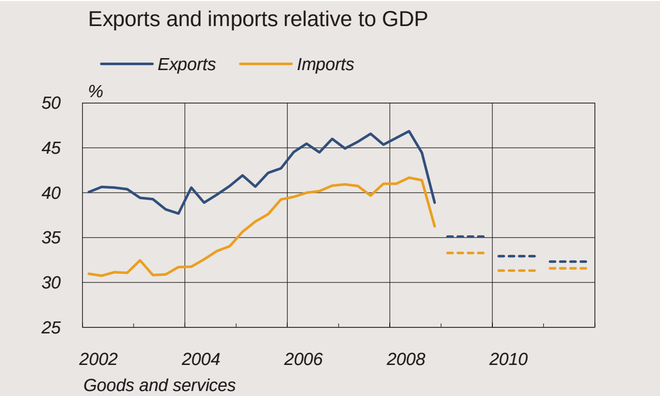
* Germany and Poland are reviewed together because a large part of their foreign trade is with each other.
** China, Hong Kong, South Korea and Japan.
Source: National Board of Customs.

of corporate R&D expenditure. The traditional metal industry and chemical firms also devote resources to research and development, which generate service income. Income received from services exports is not expected to suffer as much as goods exports from fluctuations in demand.

According to the Bank of Finland forecast, exports of goods and services will decline by 19.6% in 2009, ie considerably more than the decline in Finland's export markets. The export markets will start to recover slowly from the beginning of 2010, but Finnish exports will decrease by another 5% on average next year. In 2011, exports will already pick up, but growth for the year as a whole will be only around ½%.

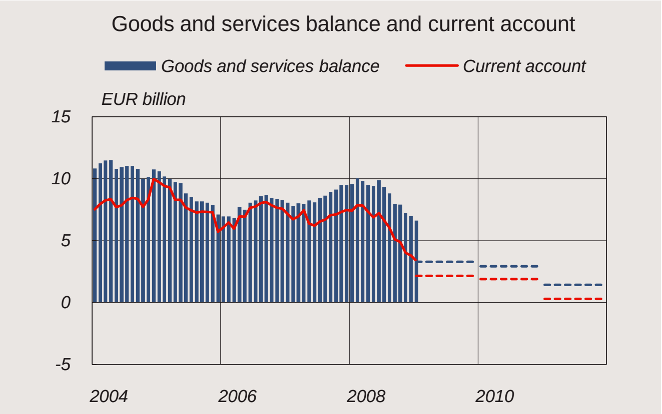
Thus, Finnish exports will grow substantially more slowly than the export markets throughout the forecast period 2008–2011. The demand outlook for the main product categories of the export industry is subdued, even on the downside. The global investment downswing will affect Finnish exports with particular vigour. On top of this, many other factors, such as those related to disruptions in free trade and finance, will continue to impede Finnish firms' export efforts next year. Exports and imports relative to GDP are forecast to suffer a significant decline in 2009 and 2010 (Chart 27).

Chart 27.



Goods and services
Sources: Statistics Finland and Bank of Finland.

Chart 28.



12-month moving total
Source: Bank of Finland.

Current account

The current account surplus fell strongly in 2008 (Chart 28). At the beginning of the year, the goods and services balance was impaired by the weakening terms of trade following the elevation of energy prices. In the latter half of the year, the global economic crisis was already acting as a major constraint on goods exports. Other current account items also undermined the overall account. Outward flows on the income account grew particularly strongly.

Problems in goods exports will erode the current account surplus in the forecast period. In 2009, there will be an unprecedented slide in exports. With a relatively small decline in imports, there will be a marked deterioration in the current account. At the end of the forecast period, the current account surplus will in practice have been absorbed entirely as imports gain momentum amid rebounding consumption and investment and export growth continues to be sluggish.

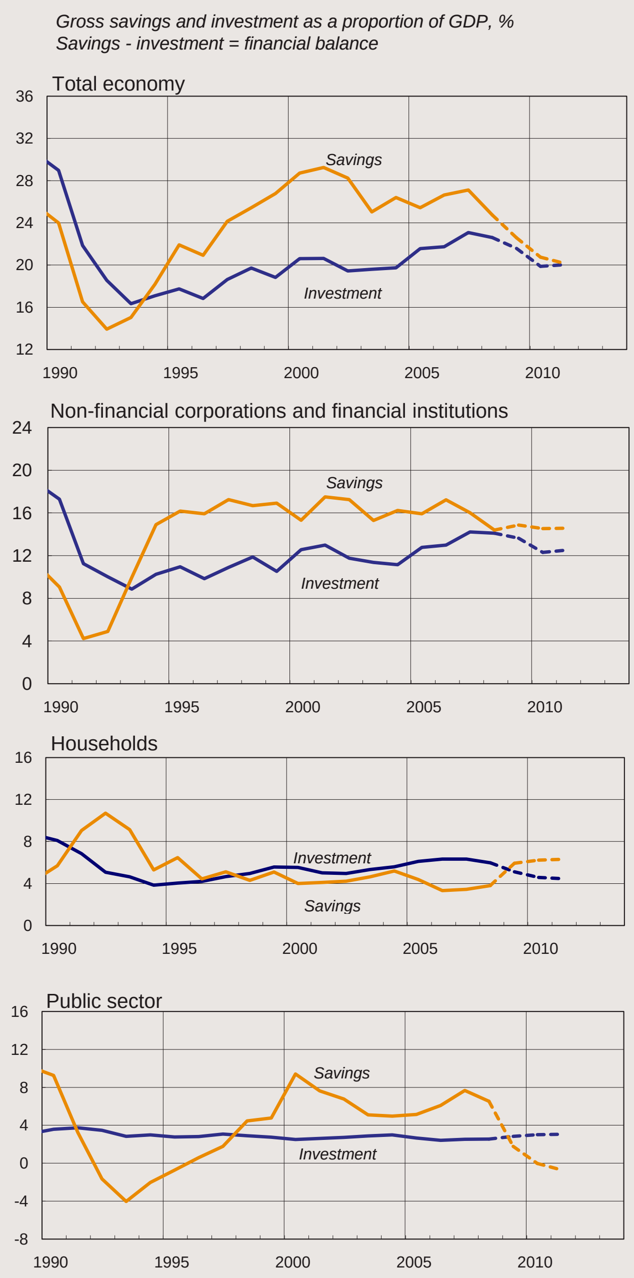
The change in the external balance will be significant, as the current account has been in structural surplus – ie savings have outpaced investments – since the recession of the 1990s. Viewed by sector, financial balances have remained relatively stable. The surplus posted by non-financial corporations and financial institutions has been exceptionally large, even by international standards, remaining broadly stable since the recession. The public sector has also shown a financial surplus throughout the present decade. Households, in turn, have been in deficit. Their savings have been low and even negative in recent years.

An analysis of the current account on the basis of different sectors' savings and investment ratios suggests that the structure of the economy will change during the forecast period (Chart 29). The corporate sector financial surplus will decline. The public sector financial deficit will also expand strongly in the forecast period. The general government savings ratio will plunge, as current transfers increase and growth in tax revenues slackens faster than GDP while public consumption growth remains brisk. Public finances will also be impaired to some extent by a rapid increase in government investment.

Weakening public-sector savings will be counterbalanced by an improvement in the financial position of households. Households will become net lenders in the forecast period, as savings rise and housing investment decreases.

Chart 29.

Savings and investment ratios



Sources: Statistics Finland and Bank of Finland.

When growth again starts to gain strength after the forecast period, the savings ratio will fall. But the adjustment of public finances will take a long time.

Box 6.

Juha Kilponen

Consumption behaviour in a time of financial market turbulence

Modern dynamic macro theory typically assumes that the financial markets operate efficiently. Efficient financial markets permit flexible use of debt, and economic agents' consumption behaves in line with the permanent income hypothesis. From the perspective of consumption dynamics this means that present consumption depends only on the expected discounted value of total lifetime incomes. This means that only unexpected policy changes or such unexpected changes in income or wealth as would alter income permanently will significantly affect current consumption.

However, several international empirical studies of consumption behaviour have repeatedly rejected the assumption that consumption is independent of changes in disposable income. The empirical results suggest that consumption is much more sensitive to fluctuations in disposable income than the theory would suggest.

One key reason identified for the dissonance between the theory and the empirical results is that the theory does not allow for the possibility that financial markets are imperfect, for instance in such a way that some households are financially constrained. Another key reason is the non-separability of consumption and leisure in household decision-making.

In the absence of financial imperfections, consumers can take out loans against expected future wage income, which in practice facilitates consumption smoothing over the long term. As consumers favour a smooth consumption profile, short-term fluctuations in disposable income make only a slight impact on current consumption. In a situation of a temporary decline in income, taking on debt is a part of optimal consumption behaviour. Consumption decisions are, in addition, independent of the consumer's labour market status and amount of leisure time.

These key theoretical assumptions can, however, be adjusted so as to achieve a consumption dynamics that better matches empirical observations. Kilponen (2009)[1] derives and estimates a Euler consumption equation that allows the simultaneous presence of financial constraints and a non-separable consumption-leisure choice. In the model, financial imperfections are motivated by the presence of collateral constraints. The capacity of these financially constrained households to take on debt (and hence smooth their consumption over the long term) depends on changes in the value of the assets (such as housing) used as collateral on their loans. This means that current consumption begins to depend partially on changes in asset values (eg house prices).

The non-separability of labour supply and consumption decisions is motivated by selecting the utility function so that it is in harmony with long-term labour supply facts – in other words, so that the labour share remains unchanged over the long term. As a result of the non-separability, a higher level of consumption makes work more attractive, and vice versa.

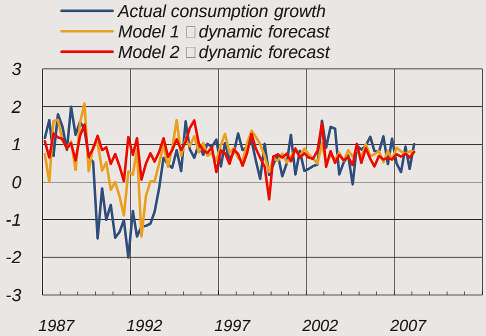
The resulting Euler equation is estimated with the data from Finland for the period 1987Q1–2008Q2. This time frame is particularly informative, since the sample includes a period of a dramatic drop and recovery in private consumption in the aftermath of the house price bubble and economic recession in the early 1990s. The sample also includes a period of more tranquil times without major financial distress (mid-1990s to early 2008).

Estimation results show that both non-separability of consumption and leisure and collateral effects are necessary for capturing the dramatic drop and recovery of consumption growth in Finland in the early 1990s. This result can be

[1] *Kilponen, J (2009), Euler consumption equation with non-separable preferences over consumption and leisure and collateral constraints. Bank of Finland discussion paper 9/2009.*

Chart 30.

Consumption growth and financial constraints



Source: Bank of Finland calculations.

examined visually in Chart 30, which compares consumption growth forecasts generated with two different models. Model 1 includes financial constraints, while model 2 does not. The difference in forecasting capacity between the models is striking. The model with financial constraints is able to explain much more of the slowdown in private consumption growth in the early 1990s than the model without financial constraints. The forecasting capacity of the models also differs statistically.

In the second period (1995QI–2008QII), financial constraints are much less significant. This is reflected in the estimation results in two ways. In the first place, in the estimated model for 1995QI–2008QII, the share of consumption attributable to financially constrained households is smaller than in the model estimated for the whole period. Moreover, it turns out that, for the second period, it is possible to dispense entirely with the assumption of financial constraints without significantly weakening the forecasting capacity of the model. This being the case, the assumption of non-separability of consumption and leisure is sufficient to make the consumption Euler equation agree well with the consumption growth data.

The study allows us to draw the conclusion that in times of financial crisis financial constraints are extremely important to consumption dynamics. Major fluctuations in collateral values are reflected in consumption, as they affect consumers' ability to take on debt and hence maintain a certain level of consumption.

The link between financial market variables and the real economy is made even stronger by the mutually reinforcing impact of decisions on consumption and labour supply: a decline in collateral values reduces consumption possibilities, but at the same time also makes work less attractive. Reduced labour supply then leads to a further drop in consumption demand. If decisions on consumption and labour supply are kept separate, the introduction of financial constraints will by itself improve the forecasting capacity of the consumption equation, but not as much as when using a model that combines financial constraints with non-separable decisions on consumption and labour supply.

In the present situation, in which financial intermediation has been disrupted and uncertainty increased alongside tightening labour markets, there would seem to be very good reasons to take account of both financial constraints and the non-separability of decisions on consumption and labour supply when attempting to project consumption dynamics in the near future.

Box 7.
Hannu Viertola

Fiscal stimulus measures in EU countries

Several EU countries have recently launched or will soon launch substantial fiscal stimulus packages. A common framework for the stimulus programmes has been established in the European Economic Recovery Plan adopted by the European Council in December 2008.

According to the recovery plan, stimulus measures should be temporary, targeted and timely. The establishment and coordination of a common framework is important for ensuring the sustainability of public finances and for avoiding distortion of competition, among other things.

Taken together, the stimulus measures will amount to at least 1.5% of GDP for the EU as a whole (EUR 200 billion). Member states will contribute 1.2%, while the rest, 0.3%, will be financed out of EU funds.

Fiscal measures

According to the European Commission, the EU countries had, by mid-January 2009, announced discretionary fiscal stimulus measures for 2009 in the rough amount of 1% of GDP for the EU. The agreed stimulus measures for the euro area also represent 1% of GDP. At least so far, the stimulus measures announced for 2010 remain below this level, at a little over 0.5%.

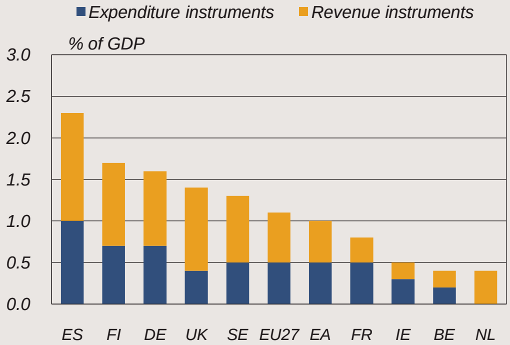
The fiscal stimulus measures announced by EU countries are more or less equally divided between the revenue side and the expenditure side of the budget, ie tax cuts and spending increases (Chart 31). Most member states seek to boost the economy by giving direct support to households, primarily in the form of lower taxes and social security contributions. Measures boosting the purchasing power of households account for nearly half of the initiatives announced.

Roughly half of the EU countries also target cuts in taxes and social security contributions at the corporate sector. Of the stimulus measures, all in all 0.2% of GDP has been allocated to safeguard the continuity of businesses. This does not include the measures introduced to support banks and other financial institutions (capitalisation, funding guarantees etc).

Nearly half of the EU countries have also channelled funds into public investments, above all improvements in infrastructure. Overall, one third of planned stimulus funds has been diverted to public investments. For example, Germany and France plan to increase their investments in infrastructural improvement substantially. By contrast, only a few member states have increased spending on or directed support measures directly at improvements in labour market efficiency. Accordingly, this kind of support accounts for merely around 0.1% of GDP.

Chart 31.

Size of fiscal stimulation in key EU countries, 2009



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

Growing need for stimulus measures

Many EU countries plan to introduce new fiscal stimulus initiatives in addition to those decided earlier. In early January, Germany, for example, announced new support measures to complement the initiatives announced in autumn 2008. The new package for 2009 and 2010 will amount to roughly 2% of GDP. A substantial part of the German support package will be spent to boost public investment. The present estimate is that stimulus measures will account for 1.8% of GDP, on average, over the years 2009–2010 in Germany. At the beginning of the year, France also announced new stimulus initiatives for 2009–2010, amounting to 1.3% of GDP.

Fiscal measures are only part of the aggregate

In addition to the discretionary measures announced, the operation of automatic fiscal stabilisers also stimulate economic growth. For example, unemployment-related expenditure, eg unemployment benefits, grows as the economy contracts and the employment situation deteriorates. The European Commission projects that automatic stabilisers will increase fiscal deficits by around 2% of GDP on average in the EU countries in 2009.

However, fiscal stimulus measures are only part of a larger support package introduced by the governments of various countries to counter the recession. Stimulus measures not reflected in net lending include loans to businesses and funding guarantees. However, these measures account so far for a mere 0.5% of GDP. By contrast, public support to financial institutions to boost capital adequacy and liquidity represents as much as 6% of GDP for the EU. Larger still is the scale of government guarantees to financial institutions to ensure the availability of funding, which accounts for around 20% of GDP for the EU countries.

Overall, the massive stimulus measures will have a considerable impact on the fiscal position and amount of debt held by the EU. The strong reduction in general government revenue in response to a decline in total output, will, together with the stimulus measures, cause a rapid deterioration in the fiscal position of the EU countries.

The fiscal deficit-to-GDP ratio of 3% will be clearly exceeded by many member states already in 2009. The fiscal deficit of the EU is projected to increase to 5% of GDP by 2010. In many EU countries, large deficits are reflected in higher risk premia on public debt and hence still rising financing costs for general government in these countries.

Box 8.

Juha Kilponen

The effectiveness of fiscal policy

The severity of the financial crisis and the sharp decline in the real economy have taken everybody by surprise. Many commentators have argued that strong intervention from fiscal policy is necessary. However, economists have widely diverging views on the effectiveness of fiscal policy as a tool for stimulating aggregate demand.

The arguments on the ineffectiveness of fiscal policy are based on the idea that economic agents are forward looking and can therefore see beyond the public sector budget constraint. Increasing the level of general government debt represents an implicit commitment to increase taxation in the future in order to bring government debt back to a sustainable level.

If households believe taxation will become higher in the future, the optimal response is to save and use the return on their savings later to pay the higher taxes. In this case, fiscal policy will have no impact whatsoever other than the distortions caused by higher taxation in the future that weaken the future potential output of the economy. For a fiscal policy stimulus to work, households have to perceive at least part of general government debt as wealth, or else 'forget' the government could raise taxes in the future.

However, the ongoing economic crisis contains elements that could make a fiscal policy stimulus more effective than it would be under 'normal' conditions. With households' reduced readiness to take on risk, private sector savings are directed to low risk assets. For households, government debt represents such an asset. Government bonds are favoured relative to private sector assets, which have a different risk-return characteristic. This is clearly reflected in a fall in the price of corporate bonds relative to government bonds. This being the case, the crowding out could be less than it would be under normal conditions. Moreover, the employment and output losses resulting from the disturbance to demand could be reduced if fiscal policy measures were to reduce the distortions caused by higher taxation. This box examines the effectiveness of fiscal policy in the light of model calculations using Aino[1], a dynamic general equilibrium model of the Finnish economy developed at the Bank of Finland. From the point of view of the impact of fiscal policy, the key issue in the model is that households take the future into account and see beyond the general government budget constraint. At the same time, the model also contains Keynesian properties. These are generated from various nominal and real rigidities. In addition, households' planning horizon is limited, which means households perceive part of the general government debt as wealth.

The purpose of the calculations is to compare the effectiveness of different fiscal policy measures from a macroeconomic perspective. The analysis considers the macroeconomic impacts of a consumption tax, an income tax, a temporary reduction in social security contributions by employers and an increase in public expenditure.[2] The increased public expenditure is assumed to take the form of public procurement, ie direct purchases from the private sector. Households and businesses are aware of the fiscal policy measures one year in advance and central government debt returns to its initial level very slowly. The fiscal policy stimulus is temporary, and long-term sustainability objectives are maintained in the long-run.

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[1] *For more on Aino see Kilponen, J – Ripatti, A – Vilmunen, J (2004) 'Aino: the Bank of Finland's new dynamic general equilibrium model of the Finnish economy', Bank of Finland Bulletin 3/2004, and Kilponen, J – Ripatti, A (2006) 'Labour and product market competition in a small open economy – Simulation results using a DGE model of the Finnish economy', Bank of Finland Discussion Paper 5/2006.*

[2] *The long-term impacts of taxation policy are also discussed in Kilponen, J – Vilmunen, J (2007) 'Revenue neutral shifts in the tax structure: experiments with a dynamic general equilibrium model', Bank of Finland Bulletin 1/2007.*

The key element in the long-term adjustment is that the initial level of public debt is achieved in the calculation by cutting income transfers, not by increasing taxes. This is to minimise the possibility that the future impacts of higher taxation would undermine the effectiveness of the fiscal policy stimulus.

Alternative measures are made commensurate so that central government debt increases by EUR 3 billion in each case. The stimulus package is assumed to be in place for three years.

The key outcomes are presented in Chart 32. As is clear from the time paths of the variables, the stimulus measures are assumed to come into effect after one year. In terms of overall impact, each alternative would thus imply a EUR 3 billion increase in central government debt. In addition to the direct budgetary effect, this sum also includes the impacts of tax cuts or higher public expenditure on the behaviour of economic agents.

By comparing the various stimulus alternatives we can see that the adjustment of tax ratios is generally more effective than increases in public expenditure (Chart 32). Increased public expenditure crowds out private consumption. Moreover, some of the public expenditure increase flows abroad as a result of a growth in imports. This is reflected in the negative trade balance (Chart 32, column 4, row 5).

In contrast, with measures based on adjustment of tax ratios (Chart 1, columns 1–3), we can see that in all cases domestic demand (private investment and consumption) would grow more. The initial mildly positive response of domestic demand even before the coming into effect of formal tax cuts indicates anticipatory behaviour by households and businesses. Businesses anticipate the increase in demand by adjusting their investments, while households adjust their consumption to the expected changes in future income. These effects are, however, fairly marginal, due to the temporary nature of the fiscal policy adjustment.

The strength of the stimulus from tax cuts in these calculations is rooted in the effects of taxation on relative prices. The model calculations suggest the adjustment of taxation would be most effective when it is targeted at employers' social security contributions. This would have the most positive impact on domestic demand and employment. Reducing employers' social security contribution reduces the marginal cost of labour and, as a result, is the most effective way to boost demand for labour. This, in turn, is reflected in income growth and a temporary increase in consumption. Due to the strong equilibrium effect, the tax wedge[3] could be reduced by twice as much in euro terms as would be the case if the fiscal stimulus were targeted on eg consumption or income taxation. Because the calculation also assumes that central government finances will be kept in surplus in the immediate post-stimulus years by cuts in income transfers – instead of tax increases – the dynamic impacts of taxation are heightened further.

While a reduction in employers' social security contributions would be the most effective way to boost private sector output and employment, a reduction in consumption tax would provide the biggest stimulus to private consumption. The impacts on employment and domestic demand of a cut in income tax would fall between the two aforementioned alternatives.

We should note that the calculations take no account of the special nature of the present economic situation, such as the problems with financial intermediation and the changes in the risk appetite of households and businesses. However, as suggested above, the ongoing

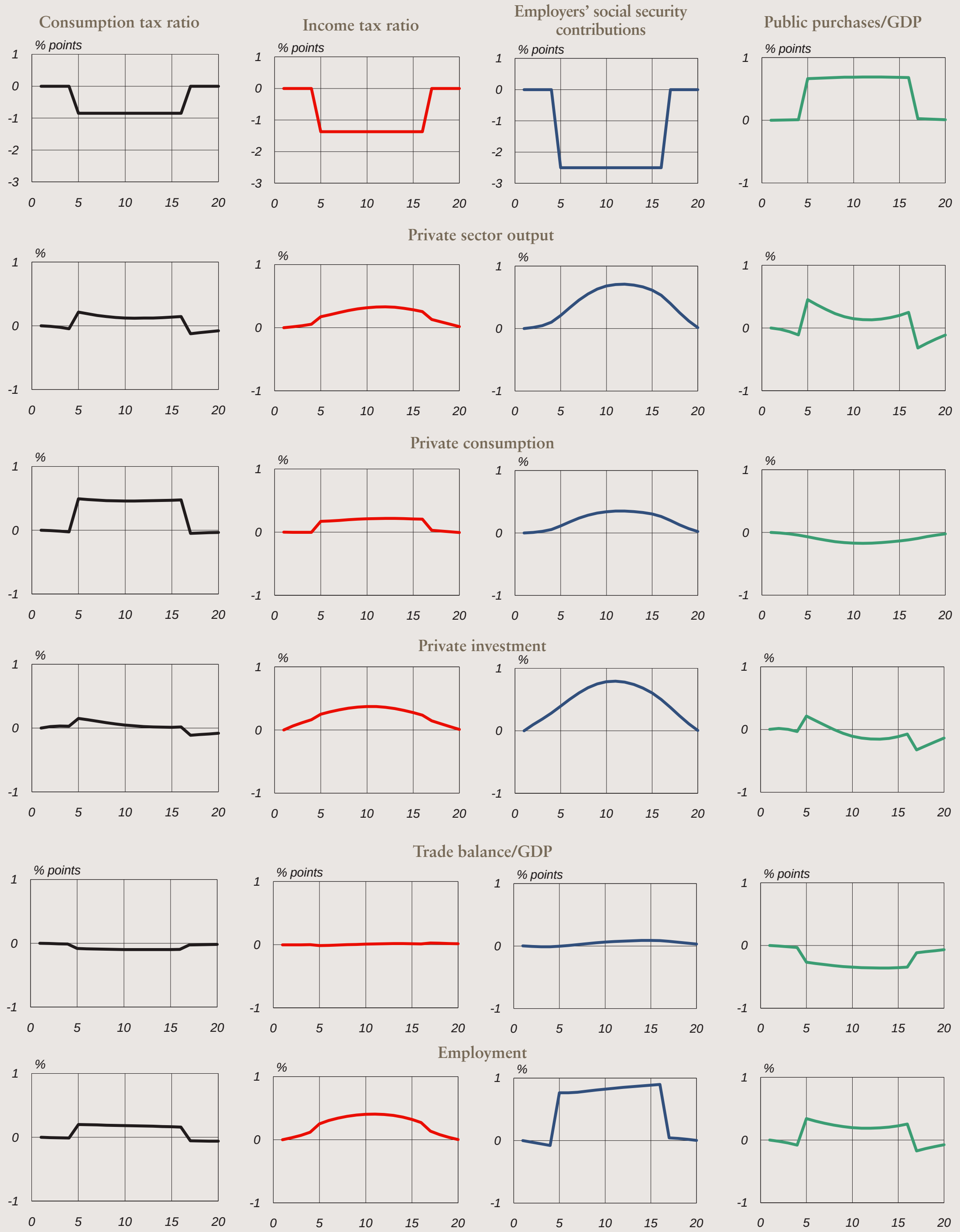
[3] *The tax wedge is the difference between the post-tax consumption wage paid to households and companies' effective labour costs. Percentage point changes in tax ratios correspond almost directly to the narrowing of the tax wedge, as the calculation holds other tax ratios unchanged.*

crisis could actually make fiscal policy more effective than it would be under normal conditions.

The results presented in this box depend on the underlying assumptions of the model, and a certain caution is therefore advisable. In any case, the key result is that the effectiveness of fiscal policy varies considerably between different fiscal policy measures. With regard to taxation policy, much of the difference can be attributed to the equilibrium effects of taxation on labour supply and demand. From the perspective of both short-term and long-term impacts, it is important that these different potential outcomes are taken into account in planning appropriate fiscal stimulus packages.

Chart 32.

A comparison of macroeconomic adjustment under different fiscal policy alternatives



The columns in the chart correspond to the aforementioned fiscal policy alternatives. The first row presents the time curve of taxes and public purchases as a percentage point deviation from the long-term balance. Rows 2–5 present the impacts of each fiscal policy measure on selected macroeconomic variables as percentage or percentage point deviations from their long-term balance. The horizontal axis in the chart indicates quarterly periods.
Source: Bank of Finland calculations.

Box 9.

Pentti Forsman and Charlotta Grönqvist

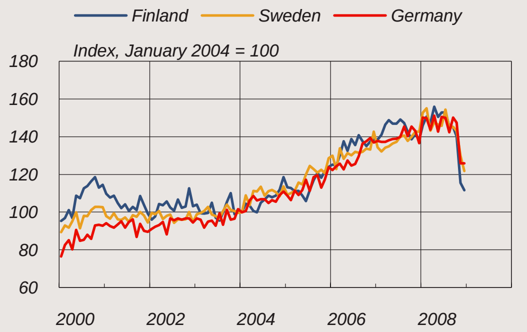
World trade shock and goods exports by sector

The development of Finnish goods exports in the past few years has largely reflected Finnish companies' ability to make use of the opportunities offered by the rapid growth in export markets. Globalisation has favoured other open economies in the EU, too, such as Germany and Sweden. In these countries, the evolution of the value of exports since 2004 has been strikingly similar to that of Finland (Chart 33). Earlier, in the first years of the present decade, German exports grew faster, mainly because of developments in the Finnish and Swedish electronics industries.

Underlying the positive trends has been the broadly based worldwide growth in export demand. The simultaneous collapse in the goods exports of Finland, Sweden and Germany at the end of 2008 provides an indication of the effect on the world economy of

Chart 33.

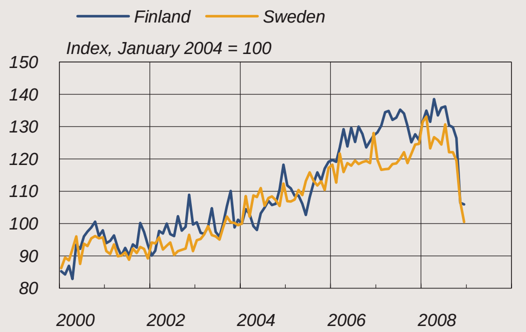
Value of Finnish, Swedish and German goods exports



Figures seasonally adjusted by the Bank of Finland.
Sources: National Board of Customs, Eurostat and Bank of Finland.

Chart 34.

Volume of Finnish and Swedish goods exports



Figures seasonally adjusted by the Bank of Finland.
Sources: National Board of Customs, Statistics Finland, Eurostat and Bank of Finland.

Table 7.
Composition of Finnish and Swedish goods exports
% of total goods exports

	2000		2004		2008	
	Finland	*Sweden*	*Finland*	*Sweden*	*Finland*	*Sweden*
Electrical and optical equipment	31	25	25	18	23	16
Machinery and equipment	10	13	12	14	14	15
Pulp, paper and paper products	22	11	19	10	14	8
Basic metals and metal products	9	9	13	11	13	12
Transport equipment	6	16	6	17	8	14
Chemicals and chemical products	5	9	7	11	7	11
Coke and refined petroleum products	3	3	4	4	7	7
Wood and wood products	5	4	5	3	4	3
Total	92	90	90	88	91	86

Sources: National Board of Customs and Eurostat.

the abrupt global shock that was triggered by the financial crisis. Rather than disrupting only a few sectors in capital goods production, the shock has affected almost all cross-border trade. In the last quarter of 2008, no other demand component shrank as much as exports. The contraction of exports in Finland, Sweden and Germany suggests that well-functioning financial markets are a key determinant of cross-border trade flows. This is further highlighted by the fact that, despite depreciation of the Swedish krona by more than 10% against the euro during the financial crisis, Swedish goods exports last year did not grow in volume terms more than Finland's. In fact, the volume of Swedish exports declined more than Finnish exports in the last quarter of 2008, which may be a consequence of the stalling trade in transport equipment (Chart 34 and Table 7). The trend in goods export volumes suggests that, against the backdrop of an exceptional weakening in export demand, not even good price competitiveness appears to be able to support exports, at least not in the short term.

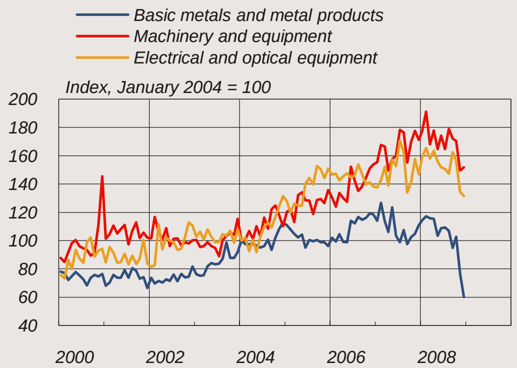
Finnish goods exports by sector

In recent years, of the three main technology sectors, electronics and electrical equipment and the machinery and metal industries have particularly benefited both from the investment spree boosted by low interest rates and from the expansion in international trade. The machinery and metal industries almost doubled the volume of their goods exports in 2004–2007. The volume of electronics and electrical goods exports also expanded rapidly, even though – given lower export prices – the change in value terms was not as significant as in machinery and metal products. The value of metal product exports has increased in recent years mainly because of higher raw material prices, and growth in volume terms has been more subdued (Chart 35).

Even so, some major sectors have been excluded from the goods exports growth fuelled by

Chart 35.

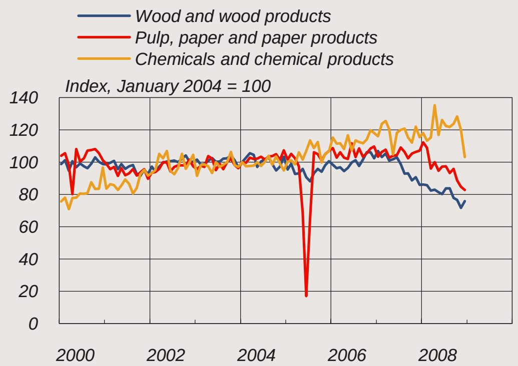
Volume of Finnish goods exports by sector



Figures seasonally adjusted by the Bank of Finland.
Sources: National Board of Customs, Statistics Finland and Bank of Finland.

Chart 36.

Volume of Finnish goods exports by sector



Figures seasonally adjusted by the Bank of Finland.
Sources: National Board of Customs, Statistics Finland and Bank of Finland.

the global investment boom. Paper (pulp, paper and paper products) exports from Finland have contracted since 2005, as paper use has been superseded by advances in information technology (Chart 36). Private consumption growth in Europe remained relatively modest, which was another reason for the sluggish demand for paper. A third factor constraining European paper exports is increased imports of paper and paperboard from Asia. Of the main export industries, the wood and wood products industry also experienced only a very short-lived boom.

In 2008, despite brisk export growth in many sectors in the early part of the year, the value of Finnish goods exports fell below the 2007 level. When the prolonged financial crisis came to a head in autumn 2008, the effect on the real economy and declining exports was surprisingly rapid. However, the brunt of the crisis was felt in sectors that had benefited most from the investment boom and globalisation in recent years.

The implications of the financial market crisis have been exceptionally severe for goods exports from Finland and other countries. The problems in accessing finance have particularly hampered cross-border trade. This is also reflected in an increase in trade credits in the Finnish balance of payments statistics. Contrary to previous cyclical downturns, the shock has this time hit all sectors simultaneously. The near-term outlook for Finnish exports remains precarious.

Box 10.

Jouko Rautava

Finland's important trading partners Russia and China weighed down by the crisis

In the present decade, given the economic strength of the emerging economies, there was already serious discussion on the ability of large emerging economies to act as drivers of world growth, independent of other countries. The current crisis is however revealing that not even China – let alone Russia – can assume such a role. For Finnish exports, the situation in Russia has rapidly deteriorated, and economic growth in China, too, has slowed significantly.

Russian development tied to oil

The global financial crisis hit Russia with full force in the latter part of 2008, when the price of crude oil dropped and Russian companies' foreign funding dried up. The Georgian war in August brought political risks to the fore, which exacerbated Russia's situation. In the first half of 2008, the economy was still expanding at a pace of 8%, but annual growth fell to close to zero in the fourth quarter. The outlook has since become bleaker still, and GDP is predicted to contract by about 2% in the current year. Although the Russian economy is expected to start growing in 2010–2011, the recovery will be sluggish because of modest world economic growth and subdued developments in raw material prices.

In 2009, the volume of Russian energy and raw material exports will decline slightly from last year. By contrast, imports will decrease considerably, as the devaluation of the rouble and weakening employment and earnings developments sap consumers' purchasing power. The gloomy prospects will also be reflected in investment and imports of capital goods. Exports and imports will rebound only slowly. The Urals crude oil price is assumed to remain at USD 40–55 per barrel in the forecast period and, as a consequence, export revenue will be much smaller than in recent years and large trade surpluses may be a thing of the past. On the other hand, a noticeable retrenchment in imports means that a current account deficit is not likely to emerge as a problem.

The Russian government has lent support to domestic companies and banks via monetary, exchange rate and fiscal policy measures. Large foreign exchange reserves accumulated in the good years have facilitated external debt restructuring for Russian banks and other companies. Repayment of government external debt and the possibility of accessing the government's oil funds have, in turn, brought the necessary flexibility to budgetary policy. The government has already introduced tax relief and a number of other financial arrangements in support of the banking and productive sectors. In order to protect domestic output, the government has also resorted to protectionist measures.

As the crisis drags on, the economic policy situation will become more difficult, as the budget deficit anticipated for this year, 8% of GDP, corresponds to almost half the current assets of the oil funds (USD 220 billion). Meanwhile, inflation, stubbornly galloping at a pace of more than 10%, will add pressure for devaluation of the rouble in a situation where a significant portion of foreign reserves has already been depleted to defend the currency. Inflation also makes it harder to cut interest rates, thereby weakening the role of monetary policy in stimulating the economy. On top of this, the elevation of prices erodes households' purchasing power, which, together with muted earnings and employment developments, increases dissatisfaction among the population. Even so, the materialisation of various risks – both on the upside and the downside – is essentially tied to the evolution of world market prices for energy.

Chinese growth to fade substantially

Annual growth in the Chinese economy eased off rapidly to less than 7% in the fourth quarter of 2008, down from the 13%

Table 8.

Annual change in Russian and Chinese real GDP and import volumes, 2008–2011, %

		2008	2009^f	2010^f	2011^f
Russia	GDP	5.6	-2.0	1.0	3.0
	Imports	17.7	-13.0	2.0	7.0
China	GDP	9.0	5.0	6.0	7.0
	Imports	7.0*	-10.0	5.0	10.0

*Estimate

f=forecast

Sources: Rosstat, National Bureau of Statistics of China and Bank of Finland.

observed in 2007. The dismal outlook for the world economy will also overshadow Chinese economic activity in the next few years, and the current year is expected to see GDP growth fall to about 5%. China still has the potential to generate stronger growth, but weak export performance will cause growth to recover only slowly in 2010–2011.

Export and import volumes will remain much lower in 2009 than last year. However, imports, driven by domestic demand, will rebound faster than exports, and the contribution of net exports to Chinese growth will be negative in the forecast period, which is exceptional for China. Volume and price developments in foreign trade suggest that the Chinese trade surplus, a source of commercial policy disputes, will shrink in the forecast period.

Weak export performance will hold investment growth in check, and increasing unemployment in the export sector will scale down private consumption. Nevertheless, domestic demand growth should sustain its relatively strong momentum, underpinned by monetary and fiscal policy support measures. Monetary policy has been loosened vigorously, as evidenced by a pick-up in the already strong credit growth. The nominal appreciation of the yuan against the US dollar has also been halted. Consumer price inflation turned negative in February 2009, which will create more scope for an expansionary monetary policy. A key factor upholding domestic demand is the government's economic stimulus package of almost USD 600 billion (13% of GDP), which is mainly targeted at infrastructure and housing investment and at boosting consumer demand. The Chinese central government gross debt accounts for less than a fifth of GDP, thereby allowing an increase in the fiscal policy stimulus, if necessary.

In the absence of genuine demand, sizeable stimulus measures and strong credit growth may lead to false investment, loan losses and stronger price pressures. The current economic stimulus package will also strengthen Chinese investment-led growth further still, although shifting the focus of input to social security, health care and education might better cater for managing higher unemployment and ensuring the country's long-term growth.

Costs and prices

Substantial negotiated pay rises will sustain a brisk rise in labour costs in 2009. This will be accompanied by declining productivity, as there is always a delay before employment declines in response to economic recession. In 2010 and 2011, labour costs will grow more slowly than in 2009, and productivity will improve. Continued low inflation will support rising real wages during the forecast period.

Oil and other commodities became considerably more expensive until the middle of 2008. Thereafter, the rapid deterioration in the global economy triggered a steep decline in commodity prices. These are expected to remain at historically low levels throughout the forecast period. The price of oil is expected to rise very slowly, with other commodities estimated to begin a subdued rise only in 2011. With commodity prices so low, import prices are forecast to still fall substantially in 2009, whereafter they will begin to climb gently.

In 2008, inflation accelerated until September, driven by the steep climb in energy prices. Since then, the pace of rise in consumer price inflation has eased considerably as a consequence of the dramatic fall in energy prices. Inflation is forecast to come down to an average of just over 1% in 2009 and to remain relatively low in 2010 and 2011 as well. The combined effect of low energy prices and economic recession are expected to markedly subdue the pace of consumer price inflation throughout the forecast period.

Labour costs

Aggregate wage and salary earnings rose at an exceptionally rapid pace in 2008, at an average of 5.2%. This was almost entirely a consequence of collective bargaining agreements between employer and employee organisations. In many industries the largest increases came in late 2007 and early 2008. Around 1 percentage point of the rise was attributable to factors other than negotiated pay rises, as has been the case on average throughout the present decade (Chart 37).

Compared with the rise in aggregate earnings, real wages rose only marginally, at 1.1%, in 2008. The accelerating pace of inflation eroded most of the rise in aggregate earnings. The rise in real wages was therefore very moderate when compared with the trend in the early years of the decade as well. The rapid increase in wage and salary earnings and slower growth in productivity in 2008 substantially weakened Finland's price competitive-

Chart 37.

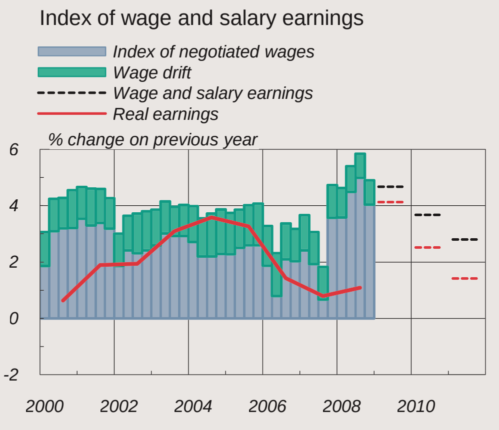
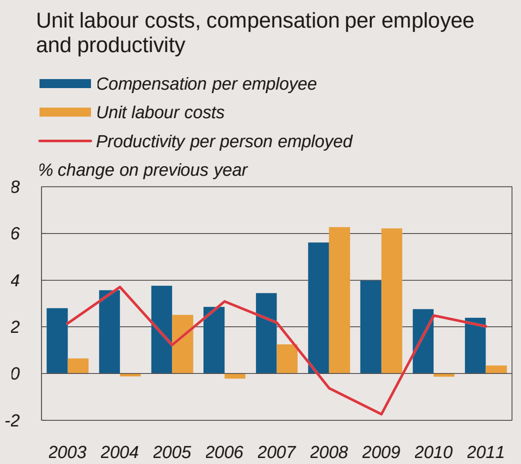


Chart 38.



2009–2011 figures are forecasts.
Sources: Statistics Finland and Bank of Finland.

ness. Unit labour costs rose by a record 6.3% in 2008 (Chart 38).

Earnings development in 2009 will be determined primarily on the basis of negotiated wages. Most collective agreements of the last round are still in force. The average negotiated increases at that time were around 3½%. The recession is not expected to narrow the gap between negotiated wages and aggregate earnings, which is estimated to remain at around 1 percentage point throughout the forecast period. Altogether, aggregate earnings are expected to rise almost 5% in 2009, slowing thereafter to just under 3% in 2011.

The trend in average wages more clearly reflects the recession's impact on wage development than does the index of wage and salary earnings, as overtime and other cyclical factors are not shown in the index, which measures compensation for a standard labour input. The average wage per employee will still rise 4% in 2009, but the pace of rise will ease to 2.7% in 2010 and 2.4% in 2011. Average wages this year and in 2010 will be affected by the reduction in employers' social security contributions.

Unit labour costs will continue to rise strongly in 2009, when labour productivity will decline, partly for cyclical reasons. As is typical at the start of a recession, employment will begin to decline only some time after output growth has already slowed. The decline in productivity is also partly due to the expectation that companies will to some degree seek to avoid shedding labour. Productivity growth will return to average in 2010. Unit labour costs will begin to rise in 2011.

Commodity prices

When the financial market crisis came to a head in autumn 2008, the shortage of capacity that was still plaguing the world economy in the spring gave way suddenly to over-capacity. The sudden cyclical downturn was also reflected in many commodity prices, which began to fall sharply. The fall in prices was reflected extensively on the markets for different commodities, such as crude oil, base metals (eg aluminium, copper and nickel) and foodstuffs. In recent months, however, the downward trajectory has faded, and the majority of commodity prices have remained stable. The prices of sawn goods, pulp and other forest-based commodities also declined after the middle of 2008, but according to data from FOEX, which monitors developments in the sector, the fall in pulp prices has flattened out in the early months of 2009.

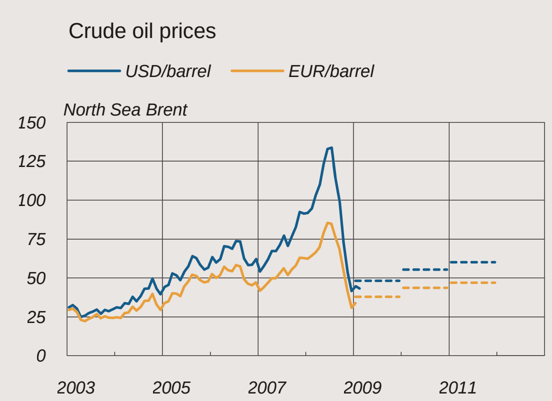
In summer 2008, the futures markets for many commodities were anticipating a continuation of recent years' rising trend. However, there was a rapid change in the autumn, and the price of crude oil, among others, began to fall as consumption contracted. Meanwhile, the worldwide decline in investment led to a fall in the prices of many commodities (eg base metals) used as raw materials in the manufacture of capital goods. Commodities producers have since responded to the weaker demand by cutting output, which has subdued the drop in prices. Growth in commodities inventories has also helped to calm the market.

In summer 2008, the dollar price for a barrel of crude oil briefly touched an all-time record high, both nominally and in real terms. During the course of the autumn, however, the price fell again exceptionally quickly as the deterioration in the world economy depressed demand for oil back to the level of 2005 (Chart 39).

The price of crude oil is not expected to return to the heights of 2008 in the immediate years ahead. This is suggested both by futures prices, which reflect financial market expectations, and OPEC's recent statements on the benchmark oil price. Sluggish demand is the main reason the price of oil has remained relatively low in comparison with recent years. The International Energy Agency (IEA) estimated in its recent report that the slight contraction in demand for crude oil that began in 2008 will deepen in 2009. Global oil consumption last contracted for two consecutive years in the early 1980s.

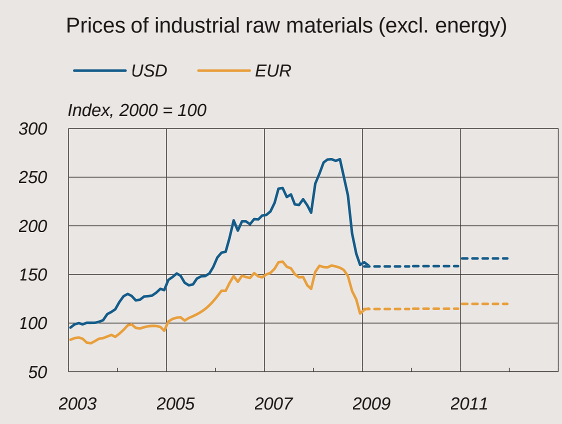
The price of crude oil is expected to rise gradually from its present level during the course of the forecast period. Although the world economy is forecast to contract in 2009, cuts in supply will put a brake on declining prices. OPEC countries have responded to the falling price of oil by cutting production by around 15% between mid-2008 and February 2009, while other oil producers are not significantly increasing their output. Weaker profitability caused by the difficult financial situation and cheaper oil have probably

Chart 39.



Sources: Bloomberg and Bank of Finland.

Chart 40.



Sources: HWWA Institute and Bank of Finland.

caused the postponement of many investments in extra oil production capacity. The prices of industrial raw materials (excl. energy and foodstuffs) are expected to remain very low compared with the levels of recent years (Chart 40). Prices will only begin to rise a little in 2011 as world growth gradually revives. On the other hand, the continued reasonable growth in emerging economies allied to reduced supply, eg as a result of mine closures, will moderate any further downward pressure on prices.

Chart 41.

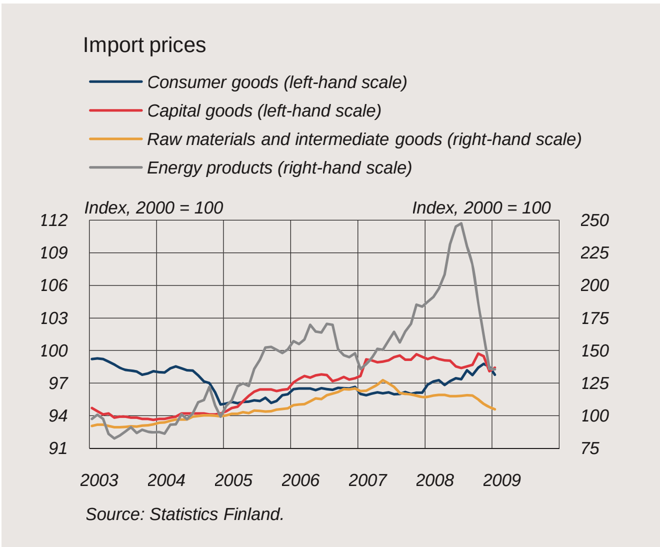
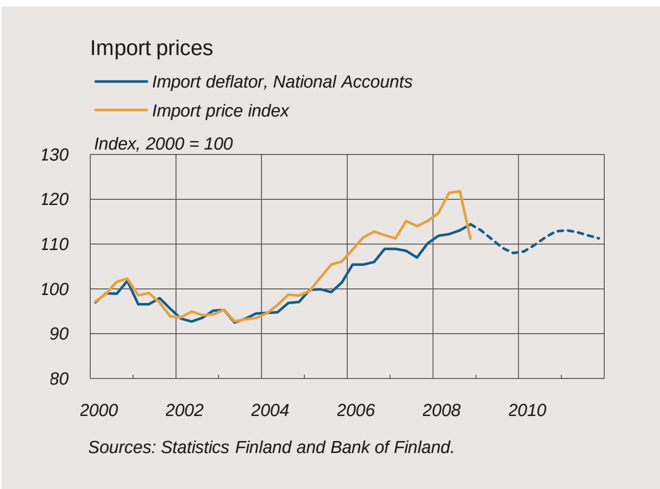


Chart 42.



Import prices and domestic producer prices

The average rise in import prices accelerated to 3.5% in 2008, according to the import price index. In the first half of the year import prices were still rising strongly, but the subsequent sharp decline in the price of energy products precipitated a downturn in October. In December 2008, import prices were almost 7.4% lower than a year earlier, and they continued to decline at a brisk pace after the turn of the year.

Import prices of consumer goods rose steadily throughout 2008, at just under 2% on average (Chart 41). Both capital goods prices and raw material and intermediate goods prices remained fairly steady until the latter part of the year, when they began to decline. Import prices of capital goods in 2008 were on average at the same level as the previous year, while raw materials and intermediate goods prices declined almost 5%.

In contrast, import prices of energy products averaged almost 30% above 2007 prices. After a giddy rise in the first half of the year, they began a steep decline in August due to the drop in crude oil prices. In the early months of 2009, the downward trend in energy prices came to an end, but both consumer goods and raw materials and intermediate goods prices continued to decline. The reversal of the rising trend in import prices in recent months reflects the rapid decline in international demand.

In contrast to import prices, the national accounts import deflator continued to rise throughout 2008 (Chart 42). This is because, in addition to goods, the import deflator also includes services, the prices of which rose much more than goods prices in 2008, at an average of almost 6.5%. The average rise in goods import prices was just under 3.5%.

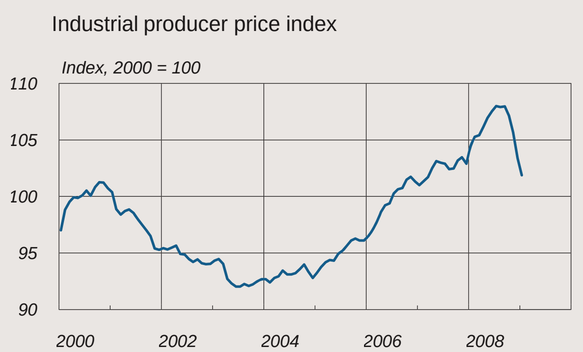
The global recession is forecast to keep the trend in import prices very moderate throughout the forecast period. Energy import prices are expected to follow oil prices and rise only slowly, while the prices of raw materials and intermediate goods will not begin to rise until 2011. Sluggish demand will mean import prices for consumer and capital goods will also rise only slightly. Import prices as measured in the national accounts are forecast to decline a good 2% this year, while in 2010 and 2011 they are expected to rise by an average of just under 1% annually.

The fairly brisk rise of recent years in industrial producer prices continued to be moderately strong in 2008, averaging a good 3.5% (Chart 43). After August, however, there began a sharp fall due to the downward trend in world market prices for commodities. The marked decline in producer prices continued after the turn of the year. As well as the trend in international prices, fluctuations in labour costs and productivity, too, are influencing the trend in industrial producer prices.

The sharp increase in world market prices for food commodities continued until the middle of 2008, but since then prices have been clearly declining (Chart 44). In Finland, the rising trend in agricultural producer prices gathered momentum after July 2007. In 2008, prices began to fall in August. The rapid decline in food commodities prices and a sharp downturn in energy and fertiliser costs led to a fall in agricultural producer prices towards the end of the year.

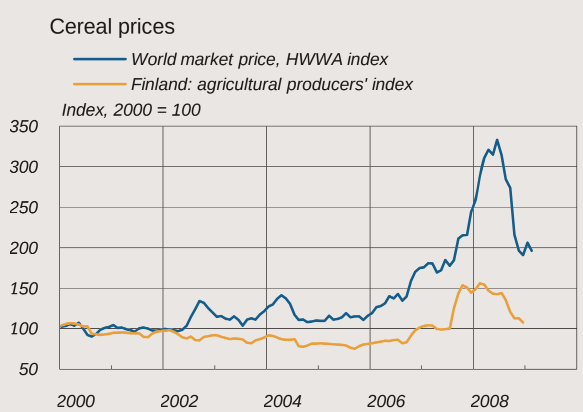
Private sector production prices are expected to rise much more slowly this year than in 2008, as measured by

Chart 43.



Source: Statistics Finland.

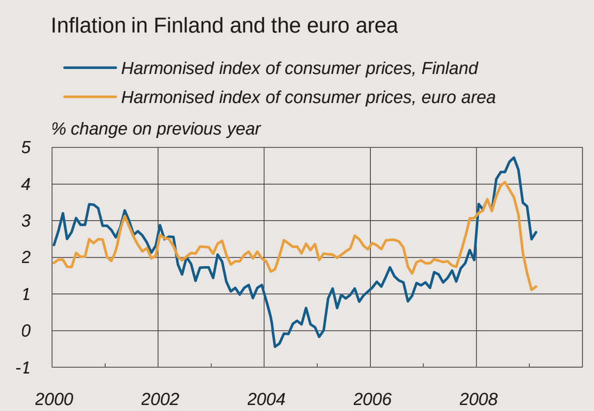
Chart 44.



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

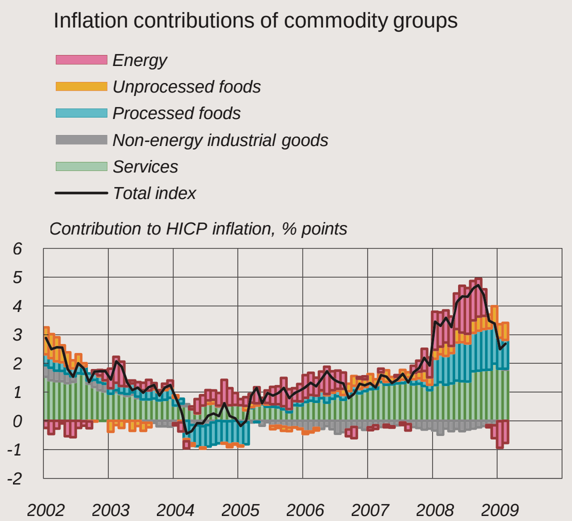
the deflator for value added in private sector production in the national accounts. The pace of rise will slow despite declining productivity and higher labour costs, as raw material prices will remain low. The pace will not pick up until 2011, when raw material prices will begin to climb gently.

Chart 45.



Sources: Statistics Finland and Eurostat.

Chart 46.



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

Consumer prices

In 2008, inflation in Finland as measured by the harmonised index of consumer prices (HICP inflation) was 3.9%, 0.6 percentage points higher than the average for the euro area (Chart 45). Finnish inflation gathered pace until September, but towards the end of the year there was a marked easing off, primarily due to the fall in energy prices. In the first months of 2009 there has been a further substantial drop in inflation: in February it stood at 2.7%.

In January–February 2009, the upward trend in service prices and the continued rise in food prices pushed inflation upwards (Chart 46). In contrast, the inflation-dampening influence of non-energy industrial goods faded almost entirely. However, the steep downward trend in fuel prices, which follow the fluctuations in the world market price of crude oil, substantially subdued the overall pace of consumer price rises.

Prices for cafeteria and restaurant services continued to rise throughout 2008. In addition, the marked rise in rents during the course of the year and the substantial increases in fees within social protection and healthcare services in August pushed the rate of rise in service prices to an average of 3.7% on the previous year. Cheaper telecommunications prices somewhat moderated the rise, which nevertheless continued at a brisk pace in the early months of 2009.

Energy prices rose by an average 13.5% in 2008. Prices rose sharply until July, whereafter they began to fall steeply in the wake of crude oil prices.

The rising trend in electricity prices accelerated substantially last year. The increases in energy taxes at the beginning of the year pushed up the prices of both fuels and electricity. In 2009, the decline in energy prices that began in the latter part of 2008 has continued: in January–February, prices were over 10% lower than a year earlier.

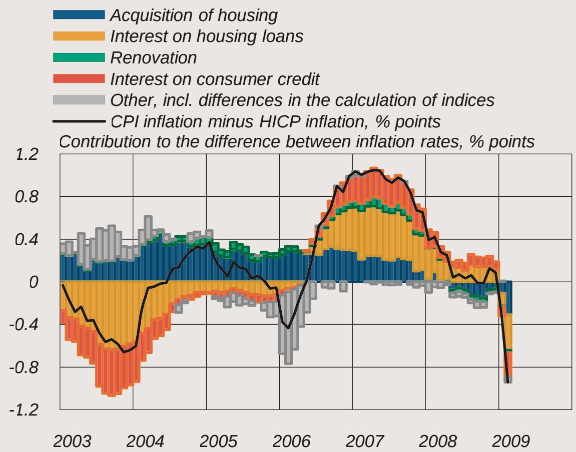
The sustained downward trend in non-energy industrial goods prices that began several years ago accelerated to -0.9% in 2008. This was partly due to the substantial decline in ICT and entertainment electronics prices. Moreover, the cut in motor vehicle tax that came into effect in January 2008 meant a substantial reduction in car prices. After the turn of the year non-energy industrial goods prices were more or less at the same level as a year earlier.

The upward trend in food prices became considerably faster at the beginning of 2008, when the rise in production costs was reflected in the new contract prices agreed between retailers and the food industry. Excise duties on alcoholic beverages were also raised in January 2008. The price of processed food rose by an average of almost 8.5% in 2008, while unprocessed food prices rose a good 6%. The rise in food prices last year was broadly based: dairy products rose 17%, and bread and cereal products a good 8.5%. Meat prices rose much more than the previous year, by almost 7.5%. In the early months of 2009, food was continuing to rise at an annual rate of around 7%.

HICP inflation in Finland averaged 4.1% in 2008 (Chart 47). In similar fashion to the harmonised index, national CPI inflation has also slowed considerably from the heights of last September, when it stood at 4.7%. Interest rates on housing loans and consumer credit pushed up the national index early in the year, while the downturn in house prices moderated the index, a trend reinforced by the rapid reduction in interest rates towards the end of the year. By February 2009, CPI inflation had already slowed to 1.7%.

Chart 47.

Differences between inflation rates: contributing factors

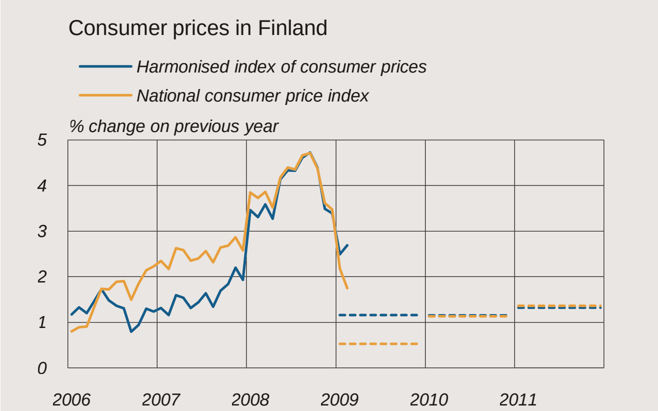


Contributions calculated using weights in the consumer price index, 2005 = 100
CPI = national consumer price index
HICP = harmonised index of consumer prices
Sources: Statistics Finland and calculations by the Bank of Finland.

Inflation will slow substantially in 2009 and remain sluggish for the next few years

HICP inflation is expected to slow to an average of 1.2% in 2009. This is primarily due to considerably cheaper energy prices and the dampening effect of the current economic situation on

Chart 48.



Sources: Statistics Finland and Bank of Finland.

consumer price rises (Chart 48). However, rising labour costs will have an accelerating impact on inflation throughout the whole of this year.

The harmonised index of consumer prices is forecast to rise by an average of 1.1% in 2010 and a further 1.3% in 2011. Although economic growth will gradually recover and import prices will begin to rise gently after the end of the present year, unused capacity, a slower rise in labour costs and continued historically low energy and other commodity prices will keep the rise in consumer prices moderate.

Although the taxation of alcohol and tobacco products was tightened in January 2009, food inflation is expected to be slower in 2009 than 2008. Both cheaper world market prices for food commodities and lower energy and fertiliser costs will moderate the pace of food price rises, as will the cut in value-added tax on food planned for October 2009. The trend in non-energy industrial goods prices will remain fairly subdued in the forecast period. Service prices will also rise more moderately than in recent years.

Inflation as calculated according to national consumer price index is expected to ease to an average pace of 0.5% in 2009. Lower interest rates and falling house prices in 2009 will affect CPI inflation in such a way that it will gradually fall below HICP inflation. In 2010, it will accelerate to 1.1%, and in 2011 to 1.4%.

Box 11.
Jarkko Kivistö and Maritta Paloviita

Base effect on inflation in 2009

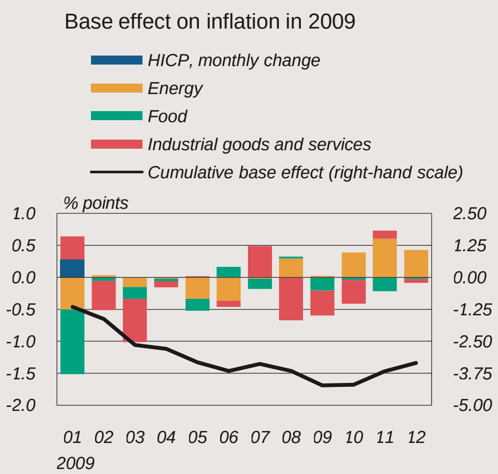
Inflation, as measured by the harmonised index of consumer prices (HICP), is calculated by comparing the change in the index value between two periods of time. Annual inflation is thus affected by the latest observed index value and the one observed a year earlier. If one of the figures is exceptional, the rate of inflation will also be exceptional. Monthly changes in the annual inflation rate can thus be explained by price changes during the reference (base) period and the time of calculation. This box assesses how price developments in 2008 affect the rate of inflation in 2009.

The effect of the reference period (the base effect) on the monthly changes in annual inflation in 2009 is approximately as large as the monthly inflation in the corresponding month of 2008. For example, in January 2009, annual inflation eased to 2.5%, from 3.4% in December. This 0.9 percentage point deceleration can be divided into two parts: the first part (+0.3%) is the change in prices between December 2008 and January 2009. The second part (+1.2%) is the change in prices between December 2007 and January 2008. Thus, the base effect on the rate of change in inflation was in January 2009 -1.2 percentage points.

The base effect subdues annual inflation until September 2009 (Chart 49). The negative base effect is largest in January, but fades gradually and turns positive in October. The exceptional trend in energy and food prices in 2008, in particular, will be reflected in 2009 inflation via the base effect. In January 2009, the base effect dampened inflation by as much as 1.2 percentage points, due to the rapid rise in energy and food prices and the increase in alcohol and energy taxes in January 2008. In contrast, the reduction in car tax that came into effect in January 2008 lowered car prices, which in turn dampened the negative base effect in January 2009. In May and September 2009, price developments will be moderated significantly by the steep increases in the contract prices of foodstuffs that took place in the corresponding months of 2008. The clearly negative base effect in August, in turn, is mainly due to the exceptionally steep increases in social protection and health care charges a year earlier. As a result of the fall in fuel prices in the last months of 2008, the base effect will turn clearly positive after September 2009.

The above relatively simple calculation shows that price developments in 2008 will have a strong negative effect on inflation until late 2009. In

Chart 49.



Sources: Statistics Finland and Bank of Finland.

particular, the base effect of energy and food prices on annual inflation in 2009 will be exceptionally large in Finland. The sharp rise in food prices did not occur in Finland until 2008, in contrast to other euro area countries. The average base effect on annual inflation in 2009 is -0.3 percentage points.

Actual price developments this year will also of course have a material impact on the inflation figures for 2009. Large fluctuations in the sub-categories of the HICP (eg under energy) will have a particularly strong impact on the trend in headline inflation. When analysing the rate of inflation in 2009, it is worth examining both current price developments and the base effect.

Box 12.
Jarkko Kivistö and Maritta Paloviita

Are industrial economies facing the threat of deflation?

The global financial crisis has considerably dampened the rate of increase in consumer prices in industrialised countries. This has sparked discussion on the possibility of deflation, ie a persistent decrease in the general level of prices. In an environment of slow inflation, there are typically periods of falling prices. As such, this is not a sign of deflation or harmful to the functioning of the economy.

Deflation poses problems for the economy because consumers expect the prices of goods and services to fall and therefore postpone purchases, which results in a decline in consumer demand. At the same time, the amount of debt increases in real terms, which causes consumers to cut consumption further. The decline in demand is reflected in lower output, which in turn creates pressures to cut costs by reducing the number of employees or lowering wages and salaries. Both weakening employment and lower wages and salaries shrink consumption and total demand even more, creating a vicious spiral of deflation.

The rate of inflation is expected to decrease substantially in the euro area and other industrial economies (Table 9). Inflation forecasts for 2009 and 2010 published in March 2009 do not, however, suggest extensive deflation. According to a consensus forecast compiled from the forecasts issued by various market analysts, prices are expected to decrease in 2009 only in the United States, Japan and Sweden. In the United States and Sweden, prices are expected to start rising again in 2010. In the euro area, too, inflation is forecast to be very modest in 2009. The most recent forecasts published by the European Commission and

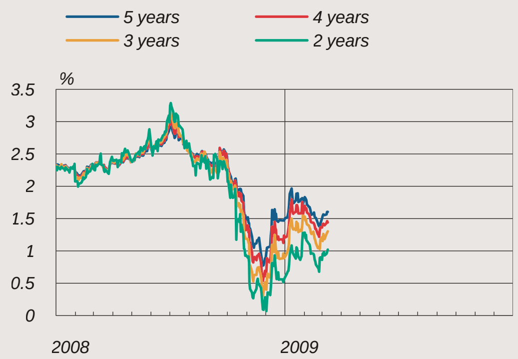
Table 9.
Inflation forecasts for 2009 and 2010
Consumer price index (CPI)
% change on previous year

	2005	2006	2007	2008	2009f	2010f
USA	3.4	3.2	2.9	3.8	-0.9	1.5
United Kingdom*	2.1	2.3	2.3	3.6	1.0	1.8
Japan	-0.3	0.2	0.0	1.4	-1.1	-0.4
Canada	2.2	2.0	2.2	2.4	0.2	1.8
Sweden	0.5	1.4	2.2	3.5	-0.4	1.0
Euro area*	**2.2**	**2.2**	**2.1**	**3.3**	**0.6**	**1.5**
Netherlands	1.7	1.2	1.6	2.5	1.1	1.1
Belgium	2.8	1.8	1.8	4.5	1.1	1.7
Spain	3.4	3.5	2.8	4.1	0.6	1.9
Ireland	2.5	4.0	4.9	4.1	0.3	1.5
Italy	1.8	2.0	1.8	3.3	0.9	1.6
Austria	2.3	1.4	2.1	3.2	0.6	1.3
Greece	3.5	3.2	2.9	4.2	2.0	2.4
Portugal	2.3	3.1	2.4	2.6	0.6	1.6
France	1.7	1.7	1.5	2.8	0.4	1.4
Germany	1.5	1.6	2.3	2.6	0.5	1.2
Finland	0.6	1.6	2.5	4.0	1.5	1.8

** Euro area and United Kingdom: HICP*
f = forecast
Source: Consensus Forecast, March 2009.

Chart 50.

Euro area inflation expectations derived from inflation swaps



Source: Bloomberg.

the OECD this year convey a very similar picture of the inflation outlook for the industrial economies: only in Japan is the general level of prices forecast to decline in 2009 and 2010.

It is worth noting that the subdued level of inflation forecast for 2009 is partly explained by price developments in 2008. The rise in oil prices to record levels, accompanied by the exceptional increase in the prices of other commodities (incl. foodstuffs) accelerated inflation in a number of economic regions in the first half of the year. Similarly, in the second half of 2008, the sharp decline in the prices of oil and other commodities was rapidly passed on to consumer prices. Thus, partly due to the base effect, inflation will slow markedly in the first half of 2009. The situation will, however, return to normal in the second half of the year.

The financial markets' long-term inflation expectations can be evaluated by comparing the yields of inflation-indexed government bonds and standard bonds with the same maturity. Calculated thus, at the beginning of February the indicator of long-term inflation expectations in the euro area showed an average of 2% inflation over the next 20 years. In the United States, the indicator fluctuated fairly strongly: at one point, it was as low as zero, but mainly fluctuated around 1½%.

Market expectations on inflation can also be derived from inflation swap contracts. Inflation swaps are used to hedge against inflation. In early February 2009, short-term (2 years) inflation expectations for the euro area were around 1%, after being close to zero at the end of November 2008 (Chart 50). In the United States, the expectations for inflation 2 years ahead were strongly negative at the end of 2008, subsequently rising to close to zero. Longer-term (over 2 years) swaps indicated clearly positive expectations on inflation. Inflation expectations derived from the yields of various investment instruments should, however, be treated with caution, particularly at times like this when pricing is surrounded with a great deal of uncertainty.

Even though the general rise in prices in the industrial economies is expected to be much weaker than in recent years, reflecting the recession, the probability of deflation is rather small, as indicated by inflation forecasts and market expectations. Partly due to base effects, the statistics may indicate very low, or even negative, inflation figures during 2009. This is, however, expected to be only temporary.

Risk assessment

The world economy is forecast to return to growth as the financial market crisis gradually eases and the massive monetary and fiscal policy support measures begin to take effect. One of the key downside risks to the forecast is, however, that the financial markets could return to normal more slowly than assumed. There is an additional risk that the crisis will undermine growth in the emerging economies more than estimated in the forecast. The probability of openly protectionist measures has also grown. If it were to spread, protectionism would further hamper world trade and hence the recovery of the entire world economy.

The massive disturbance to international trade also brings an exceptional degree of uncertainty to the direction of the Finnish economy in the immediate years ahead. Domestic risks concern exporters' ability to operate in changing markets, caution in the household sector and the functioning of the labour market. Exports are in danger of declining more than forecast, particularly in those industries producing capital goods. In addition, the forecast assumption that, relative to previous recessions, employers will be both more willing and more able to hoard labour, could prove to be overly optimistic, particularly if the recession were to become prolonged.

The risk of a faster-than-forecast decline in aggregate demand also includes the possibility of a more subdued price trend than assumed in the forecast. Despite a relatively rapid rise in wages and salaries, the price risks are clearly weighted more on the down side. Wage development, too, could turn out to be weaker than expected in the later years of the forecast period.

Economic developments could be more positive than forecast if the economic policy measures undertaken were to prevent the crisis in confidence from generating a negative spiral and launch new growth in world trade. If this were to happen, GDP growth could accelerate to a good 3% in 2011. But even if this were to occur, the Finnish economy would not yet have returned to its pre-recession level by the end of the forecast period.

International economy

Central bank rate cuts, a plentiful supply of extra liquidity to support the banks and massive support measures by governments to ensure the capital adequacy of the banks succeeded in preventing the financial market crisis from becoming deeper still towards the end of 2008. Some risk premia on debt instruments have become smaller, and market interest rates – in recent months increasingly also the rates on corporate and household loans – have come down. In almost all countries, governments have taken expansionary fiscal measures to combat the decline in private demand and rapid growth in unemployment. In addition, the decline in world market prices of commodities that has already taken place will bolster economic developments in commodity-importing countries.

Despite the large support measures aimed at the banks and other financial institutions, there is still no clear sign of a recovery in lending, and there is a fear that tighter terms of credit will hamper economic growth more than forecast.

Central banks have increasingly turned to non-standard monetary policy measures, for instance to channel finance directly to specific sectors without mediation by the banks. Indeed, one of the key downside risks to the forecast is that the measures aimed at normalising financial market operations will have a slower-than-expected impact or actually be delayed in implementation.

In recent months it has become clear that the economic and financial market crisis is also seriously undermining growth in emerging economies. Particularly those countries with a large current account deficit could find it difficult to finance their deficits as foreign investors repatriate their capital. This would result in these countries' economic performance being even poorer than expected. The possibility of a further deterioration of the economic difficulties experienced by the new EU member states in central and eastern Europe is a risk that, if realised, could also put financial pressure on the old EU countries.

The forecast assumes that the weakening of growth in, for example, many of the emerging economies of Asia will not be as severe as in the developed industrial economies. There is, however, a risk that the contraction of world trade could, in these countries too, lead to a stronger-than-forecast adjustment in domestic demand. This would hamper their ability to sustain growth in their own economies, which would in turn have a knock-on effect, via their imports, on the rest of the world economy, further undermining the prospects for a recovery in growth.

Although important decisions aimed at stabilising the economy have already been taken at both national and international levels, there is a clear risk of the policies pursued in different countries having openly protectionist features. If these were to spread, such actions would hamper world trade and hence hinder the recovery of the entire global economy, as would the growing tendency to nationalise finance and repatriate capital in an attempt to avoid risk.

Although there are very striking downside risks to the forecast outlook, they are not entirely unbalanced by upside risks. It is also possible to present potential upside risks. The most important of these relates largely to the same factor as the key downside risk, namely the economic policy packages that are currently being put together or have already been decided. It is highly possible that the measures involved will be of a scale and impact greater than assumed in the forecast. Their impact depends not just on their content, but also on how, for example, households respond to the strongly increased levels of general government debt in different countries. The upside risks to growth are more apparent towards the end of the forecast period, whereas the downside risks extend across the entire period.

Domestic economy

The direction of the Finnish economy over the next few years is shrouded in an exceptionally large degree of uncertainty, largely because of the scale of the disturbance to international trade. Domestic risks relate to the ability of exporters to operate in changing markets, caution in the household sector and the functioning of the labour market. Sluggish investment demand puts a question mark over the longer-term prospects for growth. In addition, uncertainty over the policy choices that will be adopted to correct the current imbalances in public finances could have a long-term impact on both savings and investment decisions.

There are downside risks to the export forecast. With exports' market share in many industries being based on a high degree of product specialisation, exports react sensitively to regional changes in demand. Moreover, with competitive advantage in many export sectors being based on strong productivity and internationally efficient production chains, exports are also particularly sensitive to disturbances in global trade flows. The financial market crisis and related disturbances to world trade are particularly visible in industries that produce capital goods. The uncertainty surrounding the outlook for exports is increased by the protectionist measures that threaten to spread if the economic crisis turns out to be more prolonged than forecast.

The situation on the labour market could also turn out to be worse than forecast. The forecast assumption that, compared with previous recessions, labour hoarding would to some extent continue, could prove to be overly optimistic, particularly in the event of a prolonged recession. The key to employment is the performance of the construction industry and the impact thereon of government measures to stimulate the economy. Another factor that makes it hard to predict the labour market is the fact that an exceptionally large proportion of the labour force will have the possibility to leave the labour market in the next few years. This brings uncertainty to the forecast for the number of unemployed and means the forecast does not describe the future labour market trend in the same way as previous forecasts.

The uncertainty regarding the forecast for domestic demand relates above all to household savings. As is normally the case during a recession, households are clearly saving a growing share of the increase in their disposable income. There is, however, a risk that, if the employment situation deteriorates more quickly than forecast, and particularly if there is a strong rise in open unemployment, households will become even more cautious and the saving ratio will rise more than forecast. This would cause a greater-than-forecast slowdown in output growth, particularly in services.

The risk of a faster-than-forecast decline in aggregate demand also contains the possibility of prices developing even slower than forecast. Despite the relatively fast pace of wage rises, the risks to the price forecast are clearly on the down side: in addition to domestic demand factors, international factors also point in this direction.

Weaker-than-forecast income formation and employment would cause faster-than-estimated growth in central government debt. Local government finances would also be strongly hit. Growth in the public debt would also be speeded up by a likely growth in the costs of borrowing. The fastest phase of population ageing is imminent just as the economic recession is eroding the buffers that had been built up to ameliorate the associated costs.

Since the Finnish economy recovered from the recession of the 1990s, the strategic approach in fiscal policy has been to reduce central government debt and increase the size of the pension funds in order to ease the need to tighten taxation as ageing-related expenditure increases. The financial crisis and recession have now already caused a substantial reduction in the value of the pension funds, and central government debt is growing rapidly. This makes it unavoidable to reassess the longer-term fiscal policy strategy.

Uncertainty over the sort of taxation, expenditure and structural policy that will be pursued in future is serving to increase caution on the part of both households and businesses. In Finland, the economic significance of this uncertainty is greater than elsewhere, as the public sector plays a bigger role than in other countries in both service production and pension insurance. There is a risk that uncertainty over taxation, local government services, pension levels or pension age could lead to a larger-than-forecast growth in saving.

The economic recession contains the risk of slower growth in potential output, which would further increase the pressures on fiscal policy. The long-term impacts of the recession on the labour market will contribute to this process. With the additional factor of a substantial reduction in corporate investment, this could mean slower growth in productivity for many years ahead. This places greater importance, but also greater challenges, on measures that can foster productivity growth. It would appear that rapid growth based on a deepening division of labour is partly now a thing of the past, and income levels have therefore fallen to a lower level. Even looking beyond the forecast period, there are at present no foreseeable factors that could help restore the previous growth trend in the immediate future.

The negative spiral could possibly be cut much sooner, in which case the risks assumed in the Bank of Finland forecast will not materialise. Such a development is examined in the alternative scenario presented below.

Alternative scenario: expansionary economic policy proves effective

As a result of the international financial crisis, the world economy will experience a severe recession in 2009. The recession, which has already begun, contains rather a lot of self-fulfilling features. When households and businesses lose faith in the future, consumption and investments decline and international trade contracts. When unemployment grows and production plants have to be closed as the recession deepens, this realises the original fears of households and businesses. This sort of self-reinforcing spiral of expectations, decisions and events is one of the reasons the recession could be prolonged. The Bank of Finland forecast does, indeed, estimate that the Finnish economy will be subdued throughout the current forecast period.

It is, however, possible that this negative spiral could be cut much faster than assumed in the forecast. Central banks and the governments of different countries have responded strongly to the recession by relaxing their monetary and fiscal policies. This alternative scenario[1] assumes that the expansionary economic policy manages to restore household and business confidence in future economic growth and international trade begins to recover. The calculation sets out from the basic premise that these positive effects will begin to be visible at the beginning of 2010.

In dimensioning the basic assumptions in the alternative scenario we have drawn on the Bank of Finland forecast from March 2008. The financial market crisis that began in the US housing market had already begun by spring 2008, but the deepening crisis and general collapse of confidence that came in autumn 2008 still lay ahead. As a result, the Bank of Finland's view of the future was much brighter than it is now. A self-reinforcing negative spiral played no part in the forecast.

The alternative scenario has been dimensioned in such a way that Finland's export markets and actual exports in 2010 grow in line with the March 2008 forecast. The period covered by the March forecast ends in 2010, which means the calculations for 2011 cannot be directly based on the estimates made at that time. In the present calculation, we assume that exports in 2011 will grow at the same pace as in 2010.[2]

The substantial relaxation of economic policy in the alternative scenario and the growth in international trade bolster household and business confidence, while household consumption and corporate investment also begin to recover. In addition, moderate wage rises bolster growth in 2010 and 2011: in the alternative scenario, employees' earnings grow only marginally faster than in the baseline scenario. The underlying idea here is that many industries conclude new wage agreements in autumn 2009, when unemployment is rising according to both the Bank of Finland forecast and this alternative scenario.

Finally, it is worth stressing that the change for the better in 2010 is worldwide. With the recovery of growth in the euro area, there is also a gradual rise in interest rates,[3] which in turn subdues inflation.

The recovery in international trade causes a considerable expansion in both imports and exports in 2010 and 2011 (Table 10). Imports grow around 3 percentage points faster, and exports around 4 percentage points faster than the baseline. The pick-up in international trade and a gradual return of confidence also boost growth in private

[1] The calculations have been carried out using the Bank of Finland model Aino. For more on Aino see Kilponen, J – Ripatti, A – Vilmunen, J (2004) 'Aino: the Bank of Finland's new dynamic general equilibrium model of the Finnish economy', Bank of Finland Bulletin 3/2004, and Kilponen, J – Ripatti, A (2006) 'Labour and product market competition in a small open economy – Simulation results using a DGE model of the Finnish economy', Bank of Finland Discussion Paper 5/2006.

[2] To put it more precisely, the internal growth curve (growth from one quarter to the next) is the same in 2010 and 2011. Annual growth (ie growth from the previous year) is, however, slower in 2010 than in 2011. This is due to the negative growth legacy from 2009.

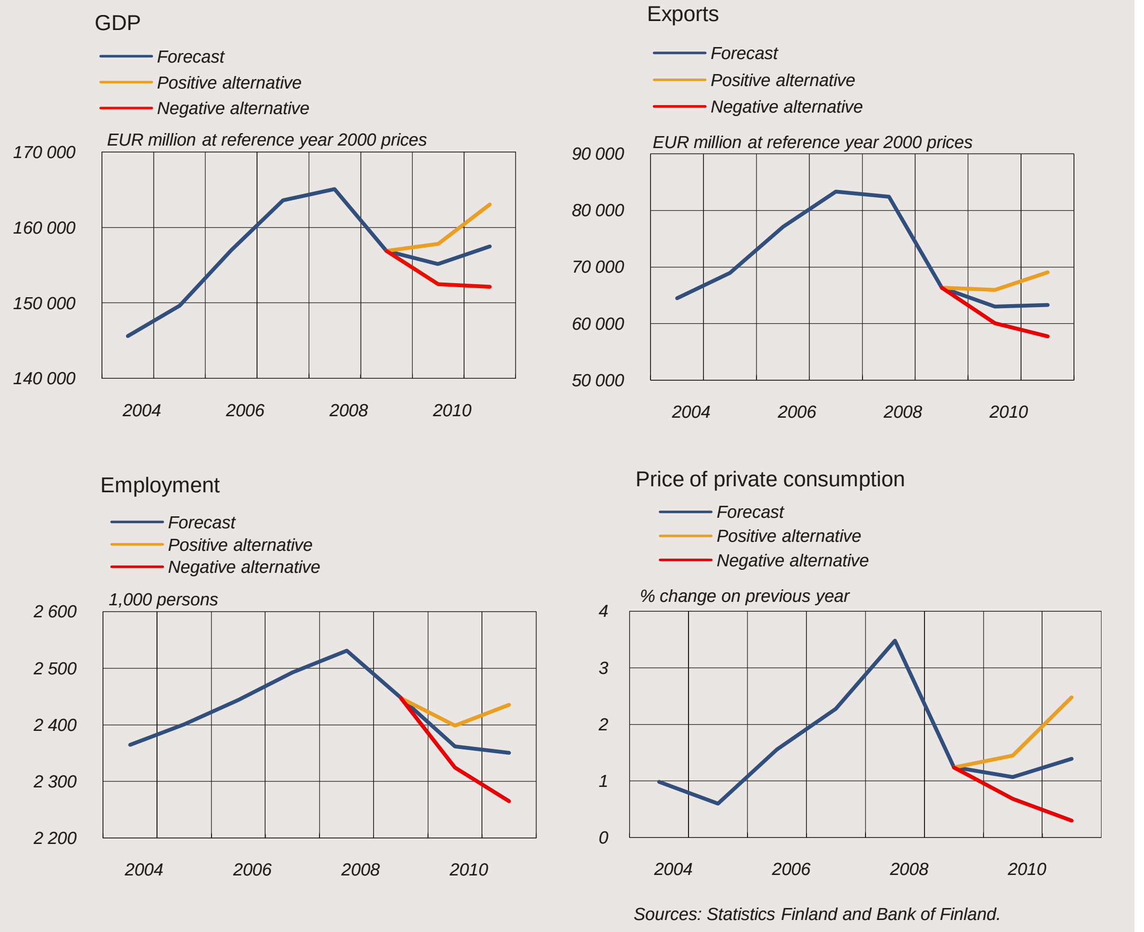
[3] The assumed change in interest rates is technical and does not represent the Bank of Finland's view of probable or desirable interest-rate changes.

Table 10.

Positive alternative scenario *Deviations from forecast*			
	2009	*2010*	*2011*
Annual deviation, % points			
Finland's export markets	*0.0*	*2.4*	*3.2*
GDP	*0.0*	*1.7*	*1.8*
Imports	*0.0*	*2.7*	*3.0*
Exports	*0.0*	*4.4*	*4.3*
Private consumption	*0.0*	*1.0*	*1.4*
Private sector investment	*0.0*	*1.6*	*2.8*
Price of private consumption	*0.0*	*0.4*	*1.1*
Export prices	*0.0*	*0.3*	*1.0*
Index of wage and salary earnings	*0.0*	*0.0*	*0.2*
Deviation, level			
Number of employed, 1,000 persons	*0.0*	*36.7*	*48.4*
Unemployment rate, % points	*0.0*	*-0.5*	*-1.3*

Source: Bank of Finland calculations.

Chart 51.



Sources: Statistics Finland and Bank of Finland.

consumption and investment. The economic recovery pushes GDP growth up to 3.3% in 2011, almost equal to the average in the first half of the present decade.

Growth in the private consumption deflator accelerates in the alternative scenario to over 2% in 2011. For their part, the slow growth in earnings and a slightly faster-than-baseline rise in prices erode real earnings, which are lower than in the baseline scenario. The moderate level of wage rises is, in turn, reflected in a substantial improvement in employment relative to the baseline. As the employment situation improves, the unemployment rate comes down to around 8% in 2011.

The scenario presented above appears at present to be rather optimistic. However, we should note that the losses incurred in 2008–2009 cannot be recovered during the forecast period even under such a favourable scenario (Chart 51). The recession has affected the economy negatively in many different ways. Unemployment has risen, GDP has contracted, production capacity has been lost and the sustainability of the public finances is under strain.

In the alternative scenario presented above, economic policy measures cut the negative spiral created by the crisis in confidence and launch new growth in world trade.

The alternative scenario can, however, be turned on its head: economic policy is unable to cut the negative spiral, world trade contracts further and household and business confidence sinks even lower. In its technical realisation this pessimistic alternative is a mirror image of the positive alternative presented above, and the deviations from the baseline are achieved by moving the plus and minus signs in Table 10 into their opposites. In the pessimistic scenario, GDP continues to contract and the unemployment rate reaches almost 11% in 2011. Inflation slows almost to zero, and the room for manoeuvre in monetary policy contracts further still as interest rates come down to around 1%.

Chart 51 shows how GDP, inflation, employment and exports develop in the Bank of Finland forecast's baseline scenario and the alternative scenarios described above. The chart also shows that, in a situation like the present, future developments are shrouded in an exceptional degree of uncertainty.

Box 13.

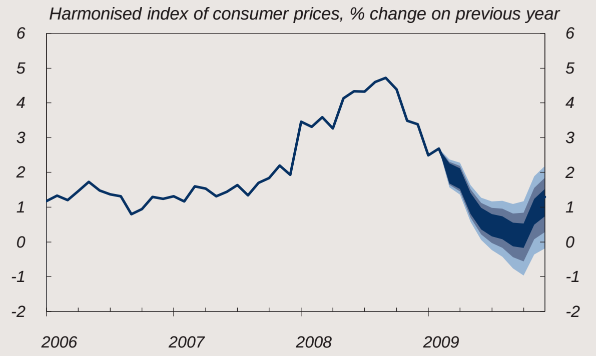
Jarkko Kivistö and Maritta Paloviita

Short-term inflation risks

The short-term risks to the inflation forecast are slightly on the down side. If the economic recession dampens the rise in consumer prices more than expected, inflation in 2009 will be slower than forecast. The uncertainty surrounding the forecast for HICP inflation in 2009 is illustrated in Chart 52. 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 future trends in house prices and housing loan interest rates, as these are included in the national CPI but not in the HICP.

Chart 52.

Short-term inflation forecast



The fan chart illustrates the degree of uncertainty in the short-term 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.

Because the short-term inflation risks are slightly on the down side, the short-term forecast fan is a little asymmetrical: slower-than-forecast inflation is considered a little more probable than faster-than-forecast inflation. The risk of slower-than-forecast inflation relates particularly to the trend in service prices. Higher unemployment, weaker household confidence and lower consumption can slow the increase in service prices more than forecast, in which case inflation would be more subdued than expected in 2009. The weakening of the global economic situation may also have a larger than expected impact on the development of non-energy industrial goods and food prices. There is also a downside risk relating to the short-term development of energy prices: if the economic recession reduces demand for energy more than expected, the development of energy prices will be even more subdued than forecast. All in all, the downside risks to the inflation forecast for 2009 relate to a particularly wide range of consumer prices.

The breadth of the inflation fan (Chart 52) illustrates the larger-than-normal uncertainty surrounding the inflation forecast for 2009. The uncertainty relates particularly to the development of oil and other commodity prices over the next few months. Unexpected changes in demand and supply can cause strong fluctuations in world market prices for commodities. At the same time, changes in the external value of the euro could either dampen or amplify the impact of unexpected changes on domestic prices.

Changes from the September 2008 forecast

The economic outlook has become much bleaker since the Bank of Finland's September 2008 forecast.[1] The changes are due partly to actual developments so far, and partly to the weakening of world trade. Last autumn, economic growth began to slacken rapidly.

Compared with the September 2008 forecast, the change in growth prospects is considerable. While the previous forecast estimated real GDP growth in 2008–2010 at a good 5% overall, growth is now projected to decline by roughly the same amount (Table 11). More than half of this difference is explained by actual developments. The underlying reasons include a deceleration in GDP growth at the end of 2008, the confirmation of lower figures for the early part of 2008 than indicated by preliminary data and weak performance in the first quarter of 2009. These provide a clearly weaker basis for activity in the years ahead than previously expected.

The deterioration in the economic situation is a consequence of the crisis hitting the world economy, the scale of which could not be foreseen in September 2008. World trade growth will remain slower than predicted in the previous forecast, particularly in 2009, but there will also be a substantial divergence in 2010.

Compared with September, the external environment of the forecast has also changed because the financial market crisis has proved more prolonged and severe than previously estimated. Accordingly, the problems in accessing financing are more serious than in the previous forecast. On the other hand, interest rates are well below the levels observed last autumn. Fiscal policy is also clearly more expansionary both internationally and domestically than estimated in the autumn.

The sharp fall in commodity prices constitutes another marked divergence from the previous forecast. The price of oil has almost halved from the September forecast. The prices of other raw materials will also remain discernibly lower than presented in the previous forecast. Likewise, the exchange rate assumption has changed because of the depreciation of the euro against the dollar.

Compared with last autumn, the biggest change relates to the export outlook. The current forecast envisages an appreciable retrenchment in

Table 11.

Current and September 2008 forecast

	2008	2009	2010	2011
GDP, % change	0.9	-5.0	-1.1	1.5
September 2008	2.3	1.3	2.1	
Inflation (HICP), %	3.9	1.2	1.1	1.3
September 2008	4.0	2.6	2.2	
Finland's export markets, % change	5.0	-7.1	0.5	4.2
September 2008	7.3	7.0	7.7	
Current account, % of GDP	2.5	1.2	1.0	0.2
September 2008	3.7	2.6	1.5	
General government net lending, % of GDP	4.1	-1.0	-3.0	-3.7
September 2008	5.1	3.8	3.0	

[1] *In December 2008, the Bank of Finland published a brief revision to its forecast for 2008–2010, reporting on the deepening of the downturn. The benchmark for this box is the September 2008 forecast.*

the volume of exports of goods and services, while only declining volume growth was predicted in the autumn. Of domestic demand components, investment growth in particular will moderate. Private consumption will also evolve markedly more slowly than forecast.

Weaker demand will be reflected in economic equilibrium variables. Employment will deteriorate much earlier than projected. In 2008–2010, a total of about 130,000 jobs will be shed, while the previous forecast anticipated an increase in employment of some 40,000 during the same period. Inflation will be less than half that predicted in the previous forecast. The current account surplus will decrease much faster than estimated earlier, particularly on account of a strong deterioration in the general government balance. Public finances will start to show a substantial deficit, as compared with the September forecast's estimate of only a moderate contraction in the surplus. Meanwhile, the indebtedness of both local and central government will increase and the level of pension fund assets will be lower than forecast in September.

Articles and boxes from previous publications

Articles

Trade with Russia and its importance for Finnish companies. Heli Simola. Bank of Finland Bulletin 2/2008.

Kuluttajien inflaatio-odotukset kasvussa Suomessa [Consumers' inflation expectations on the rise in Finland; in Finnish only]. Timo Hirvonen. Euro & talous 2/2008.

Maataloushyödykkeiden 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.

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

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Forecast tables

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

% change on previous year

	2007	2008	2009[f]	2010[f]	2011[f]
GDP at market prices	4.2	0.9	-5.0	-1.1	1.5
Imports of goods and services	6.5	-1.3	-17.5	-6.1	2.3
Exports of goods and services	8.1	-1.1	-19.6	-5.0	0.4
Private consumption	3.3	2.0	-1.4	0.3	1.7
Public consumption	0.8	1.7	2.5	2.1	2.5
Private fixed investment	9.0	1.3	-15.1	-13.8	2.9
Public fixed investment	6.8	-1.3	3.8	3.8	4.9

2. Contributions to growth*

	2007	2008	2009[f]	2010[f]	2011[f]
GDP, % change	4.2	0.9	-5.0	-1.1	1.5
Net exports	1.1	0.1	-1.6	0.3	-0.6
Domestic demand excl. inventory change	3.5	1.4	-2.8	-1.4	2.1
of which Consumption	1.8	1.2	-0.2	0.7	1.6
Investment	1.7	0.2	-2.6	-2.1	0.5
Inventory change + statistical discrepancy	-0.4	-0.6	-0.6	0.0	0.0

* 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

	2007	2008	2009[f]	2010[f]	2011[f]
GDP at market prices	109.8	112.8	115.8	117.1	118.7
	3.2	2.7	2.7	1.0	1.4
Imports of goods and services	109.0	113.3	110.7	111.0	112.6
	2.1	4.0	-2.3	0.3	1.5
Exports of goods and services	98.5	99.7	96.2	94.9	95.5
	0.7	1.2	-3.6	-1.3	0.6
Private consumption	110.2	114.0	115.4	116.7	118.3
	2.3	3.5	1.2	1.1	1.4
Public consumption	128.4	135.2	140.0	143.5	147.5
	4.3	5.3	3.6	2.5	2.8
Private fixed investment	110.1	114.1	115.3	116.7	118.3
	4.4	3.6	1.1	1.2	1.4
Public fixed investment	118.6	125.7	132.1	134.5	134.7
	5.4	6.0	5.1	1.8	0.2
Terms of trade (goods and services)	90.4	88.0	86.8	85.5	84.8
	-1.4	-2.7	-1.3	-1.5	-0.8

4. Balance of supply and demand, at current prices

EUR million and % change on previous year

	2007	2008	2009f	2010f	2011f
GDP at market prices	179,659	186,164	181,741	181,640	187,033
	7.6	3.6	-2.4	-0.1	3.0
Imports of goods and services	73,056	74,979	60,493	56,884	59,023
	8.7	2.6	-19.3	-6.0	3.8
Total supply	252,715	261,143	242,234	238,524	246,057
	7.9	3.3	-7.2	-1.5	3.2
Exports of goods and services	82,127	82,210	63,775	59,805	60,450
	8.8	0.1	-22.4	-6.2	1.1
Consumption	129,123	136,845	139,232	142,633	148,156
	5.5	6.0	1.7	2.4	3.9
Private	90,685	95,693	95,544	96,879	99,937
	5.6	5.5	-0.2	1.4	3.2
Public	38,438	41,152	43,688	45,754	48,218
	5.1	7.1	6.2	4.7	5.4
Fixed investment	36,566	38,380	34,016	30,638	32,005
	13.6	5.0	-11.4	-9.9	4.5
Private	32,047	33,653	28,862	25,190	26,282
	13.8	5.0	-14.2	-12.7	4.3
Public	4,519	4,727	5,154	5,449	5,724
	12.6	4.6	9.0	5.7	5.0
Inventory change + statistical discrepancy	4,899	3,708	5,211	5,448	5,446
% of previous year's total demand	0.3	-0.5	0.6	0.1	0.0
Total demand	252,715	261,143	242,234	238,524	246,057
	7.9	3.3	-7.2	-1.5	3.2
Total domestic demand	170,588	178,933	178,460	178,719	185,607
	7.5	4.9	-0.3	0.1	3.9

5. Balance of supply and demand

% of GDP at current prices

	2007	2008	2009f	2010f	2011f
GDP at market prices	100.0	100.0	100.0	100.0	100.0
Imports of goods and services	40.7	40.3	33.3	31.3	31.6
Exports of goods and services	45.7	44.2	35.1	32.9	32.3
Consumption	71.9	73.5	76.6	78.5	79.2
Private	50.5	51.4	52.6	53.3	53.4
Public	21.4	22.1	24.0	25.2	25.8
Fixed investment	20.4	20.6	18.7	16.9	17.1
Private	17.8	18.1	15.9	13.9	14.1
Public	2.5	2.5	2.8	3.0	3.1
Inventory change + statistical discrepancy	2.7	2.0	2.9	3.0	2.9
Total demand	140.7	140.3	133.3	131.3	131.6
Total domestic demand	95.0	96.1	98.2	98.4	99.2

6. Prices

Index, 2000 = 100, and % change on previous year	2007	2008	2009f	2010f	2011f
Consumer price index, 2005=100	104.1	108.3	108.9	110.1	111.6
	2.5	4.1	0.5	1.1	1.4
Harmonised index of consumer prices, 2005=100	102.9	106.9	108.1	109.4	110.8
	1.6	3.9	1.2	1.1	1.3
Private consumption deflator	110.2	114.0	115.4	116.7	118.3
	2.3	3.5	1.2	1.1	1.4
Private investment deflator	110.1	114.1	115.3	116.7	118.3
	4.4	3.6	1.1	1.2	1.4
Exports of goods and services deflator	98.5	99.7	96.2	94.9	95.5
	0.7	1.2	-3.6	-1.3	0.6
Imports of goods and services deflator	109.0	113.3	110.7	111.0	112.6
	2.1	4.0	-2.3	0.3	1.5
Value-added deflators					
Value-added, gross at basic prices	111.0	114.4	116.1	117.5	119.3
	3.5	3.1	1.5	1.2	1.5
Private sector	106.0	108.8	109.8	110.6	112.1
	2.9	2.7	0.9	0.7	1.4
Public sector	137.7	146.3	152.4	157.3	162.8
	5.5	6.2	4.1	3.3	3.4

7. Wages and productivity

% change on previous year	2007	2008	2009f	2010f	2011f
Whole economy					
Index of wage and salary earnings	3.3	5.2	4.7	3.7	2.8
Compensation per employee	3.4	5.5	4.0	2.7	2.4
Unit labour costs	1.2	6.3	6.2	-0.1	0.4
Labour productivity per employed person	2.2	-0.6	-1.7	2.5	2.0

8. Labour market

1000 persons and % change on previous year	2007	2008	2009f	2010f	2011f
Labour force survey (15–74-year-olds)	2,492	2,531	2,448	2,362	2,350
Employed persons	2.0	1.6	-3.3	-3.5	-0.5
	183	172	206	238	245
Unemployed persons	-10.0	-6.2	20.0	15.4	2.9
Labour force	2,676	2,703	2,654	2,600	2,596
	1.1	1.0	-1.8	-2.0	-0.2
Working-age population (15–64-year-olds)	3,517	3,536	3,543	3,533	3,513
	0.3	0.5	0.2	-0.3	-0.5
Labour force participation rate, %	67.2	67.5	66.0	64.5	64.2
Unemployment rate, %	6.9	6.4	7.8	9.2	9.5
Employment rate (15–64-year-olds), %	69.9	70.6	68.9	66.7	66.7

9. General government revenue, expenditure, balance and debt

% of GDP

	2007	2008	2009f	2010f	2011f
General government revenue	52.5	52.5	51.3	52.1	52.8
General government expenditure	47.3	48.4	52.3	55.1	56.5
General government primary expenditure	45.8	46.9	50.8	53.4	54.6
General government interest expenditure	1.5	1.5	1.5	1.7	1.9
General government net lending	5.2	4.1	-1.0	-3.0	-3.7
Central government	2.1	0.8	-3.1	-4.5	-4.7
Local government	-0.1	-0.1	-0.7	-1.0	-1.4
Social security funds	3.3	3.4	2.8	2.6	2.3
General government primary balance	6.7	5.6	0.5	-1.3	-1.8
General government debt	35.1	33.4	39.6	45.8	51.1
Central government debt	31.2	29.2	34.6	39.8	44.0
Tax ratio	42.9	42.6	41.5	41.8	42.0

10. Balance of payments

EUR million

	2007	2008	2009f	2010f	2011f
Exports of goods and services (SNA)	82,127	82,210	63,775	59,805	60,450
Imports of goods and services (SNA)	73,056	74,979	60,493	56,884	59,023
Goods and services account (SNA)	9,071	7,231	3,281	2,921	1,427
% of GDP	5.0	3.9	1.8	1.6	0.8
Investment income and other items, net					
(+ statistical discrepancy)	-387	-1,147	37	115	36
Current transfers, net	-1383	-1383	-1167	-1151	-1182
Current account, net	7,302	4,702	2,151	1,885	281
Net lending, % of GDP					
Private sector	-1.2	-1.6	2.2	4.0	3.9
Public sector	5.2	4.1	-1.0	-3.0	-3.7
Current account, % of GDP	4.1	2.5	1.2	1.0	0.2

11. Interest rates

%

	2007	2008	2009f	2010f	2011f
3-month Euribor[1]	4.3	4.6	1.7	1.9	2.6
Average interest rate on new loans	5.9	6.3	3.7	4.1	4.7
Average rate of interest on deposits	2.2	2.9	0.9	0.9	1.2
Bank lending rate, average	4.9	5.4	3.0	2.8	3.7
Yield on Finnish 10-year government bonds[1]	4.3	4.3	4.1	4.4	4.7

[1] *Technical assumption derived from market expectations.*

12. International environment

Bank of Finland forecast

	2007	2008	2009[f]	2010[f]	2011[f]
GDP, % change on previous year					
Whole world	4.9	3.1	-1.4	1.3	2.8
USA	2.0	1.1	-3.2	0.2	1.6
EU15	2.7	0.7	-3.0	-0.1	1.1
Japan	2.4	-0.7	-5.9	-0.3	1.1
Imports, % change on previous year					
Whole world	6.5	3.2	-6.8	0.6	4.2
USA	2.2	-3.4	-7.0	1.0	3.1
EU15	4.5	2.0	-6.0	0.3	3.2
Japan	1.5	1.1	-4.8	-1.1	2.2
Index, 2000 = 100, and % change on previous year					
Import volume in Finnish export markets	158.4	166.1	154.3	155.1	161.6
	8.5	5.0	-7.1	0.5	4.2
Export prices (excl. oil) of Finland's trading	109.7	114.1	112.3	111.6	112.4
partners, national currencies	2.5	4.0	-1.6	-0.6	0.7
Export prices (excl. oil) of Finland's trading	96.2	96.0	91.3	90.6	91.2
partners, in euro	0.3	-0.3	-4.8	-0.7	0.6
Industrial raw materials (excl. energy), HWWA	224.6	236.7	158.2	158.6	166.4
index, in US dollars	15.3	5.4	-33.2	0.3	4.9
Oil price, USD per barrel	72.7	97.6	48.2	55.5	60.2
	11.2	34.3	-50.6	14.9	8.6
Finland's nominal competitiveness indicator[1, 2]	104.0	107.0	110.5	110.7	110.9
	2.1	2.8	3.4	0.2	0.1
US dollar value of one euro[1]	1.37	1.47	1.27	1.27	1.28
	9.1	7.3	-13.2	0.0	0.6

[1] *Technical assumption derived from market expectations.*

[2] *Narrow plus euro area, 1999 Q1 = 100.*

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4 February 2009

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