BANK OF FINLAND BULLETIN 2 • 2008

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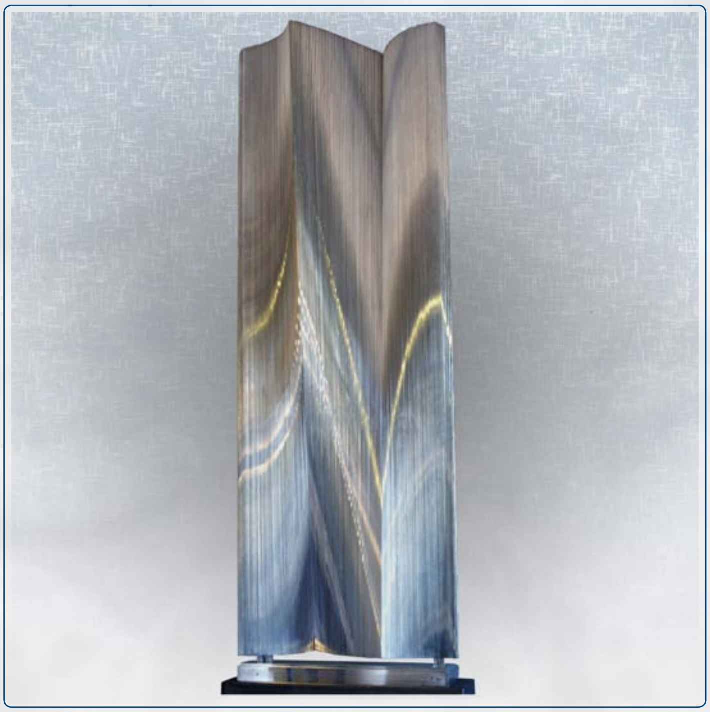

Monetary policy and economic outlook

Trade with Russia and its importance for Finnish companies

China's economic rise has inflation implications for the whole world

Electronic invoicing means more efficient and greener payments

SUOMEN PANKKI
FINLANDS BANK

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The cover portrays the work of
Raimo Utriainen **'Suuri poljento'** (1975).

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Monetary policy and economic outlook

28 November 2008

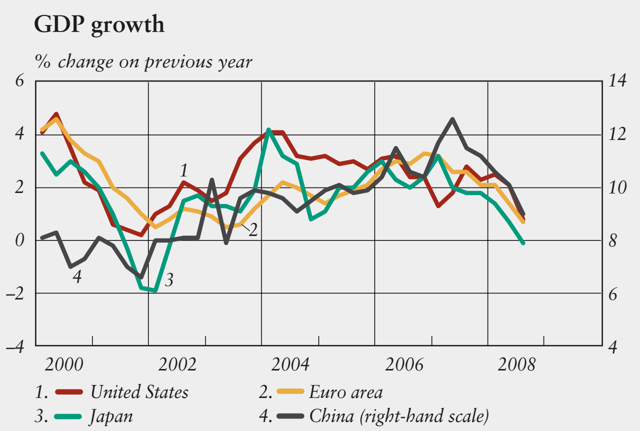
There has been a substantial deceleration in the pace of world growth during the course of the autumn, with the turbulence on the financial markets finally developing into a crisis. At the same time, the short-term growth outlook has dramatically deteriorated in different regions of the world economy, and the outlook in general is currently shrouded in an unusual degree of uncertainty. The condition of the Finnish economy has also begun to deteriorate rapidly. The Bank of Finland has accordingly substantially reduced its growth forecast for the Finnish economy for the immediate years ahead. The slow- down in growth and decline in commodity prices mean inflationary pressures have begun to recede in many countries.

There has been a marked deceleration in the pace of world growth in the second half of 2008. This was visible in third-quarter trends in all the major economic regions and also in many emerging economies (Chart 1). The deceleration in growth is a symptom of the financial market turbulence that began on the US housing loan market in the summer of 2007 finally developing into a worldwide crisis over the past few months. At the same time, its impact has begun to spread ever more broadly from the financial sector into other areas of the economy.

The financial market turbulence deepened substantially during September and October, when a major US investment bank sought protection from its creditors, and many other financial sector corporations were found to have serious problems relating to capital adequacy and liquidity. This rapidly and dramatically undermined confidence in the capacity of the entire global financial system. Many financial institutions have had to make considerable downward adjustments in the value of their assets, reduce their lending and tighten their terms of lending. This has seriously undermined the availability of finance for both businesses and households and has also reduced their willingness to increase investment and consumption. At the same time, both household and business confidence indicators have declined, some at an almost unprecedentedly rapid pace (Chart 2).

The financial market crisis has also spread beyond the major

Chart 1.



Sources: US Bureau of Economic Analysis, Economic and Social Research Institute, Eurostat and Bloomberg.

Chart 2.

Industrial confidence

1. Euro area, Purchasing Managers' Index (left-hand scale)
2. United States, Purchasing Managers' Index (right-hand scale)
3. Japan, Tankan Index, large industrial corporations* (right-hand scale)

* The Tankan Index was restructured in December 2003.

Sources: Reuters, Institute for Supply Management and Bloomberg.

economic regions. In some countries, for example South Korea and Hungary, investors' faith in the ability of banks and businesses to finance their foreign debt was eroded and there was a run on their currencies. In Iceland, the problems with the largest banks plunged the entire national economy into a state of crisis. The impact of the financial market crisis has also been reflected in considerably slower growth in many emerging economies, a dramatic fall in share prices and higher risk premia.

The crisis is also reflected in international organisations' latest economic forecasts. The figures for GDP growth relative to previous forecasts have been considerably reduced. For example, the IMF envisages the world economy growing at only just over 2% in 2009, against around 5% per annum growth in 2006–2007. In the developed world, GDP is expected to contract generally in the immediate future, and even in the emerging economies growth is expected to be much slower than before. According to these forecasts, the recovery in growth will be both later and stickier than previously estimated. These forecasts are currently surrounded by an exceptional degree of uncertainty, as it is still hard to anticipate the full duration and seriousness of the financial market crisis and its impact on growth.

Authorities all over the world have made strenuous efforts to lessen the economic impact of the financial crisis and breathe life back into the financial markets. Many countries have been forced to take major steps to support their financial corporations and substantially increase liquidity in the banking sector. In addition, central banks have lowered their policy rates in all major economic regions and in many emerging economies. The reduced inflationary pressures caused by falling commodity prices and an increase in unutilised production resources has enabled a relaxation in monetary policy. Many countries are also planning fiscal policy measures to stimulate growth.

The slower growth has also been reflected in world trade. There is a clear slowing in the pace of trade growth, and the IMF is forecasting it will be only around 2% next year. The weakening pace of world trade growth is also visible in the extremely steep fall in dry freight prices in recent months (Chart 3). As well as flagging demand, this also reflects difficulties in financing freight due to the crisis on the financial markets.

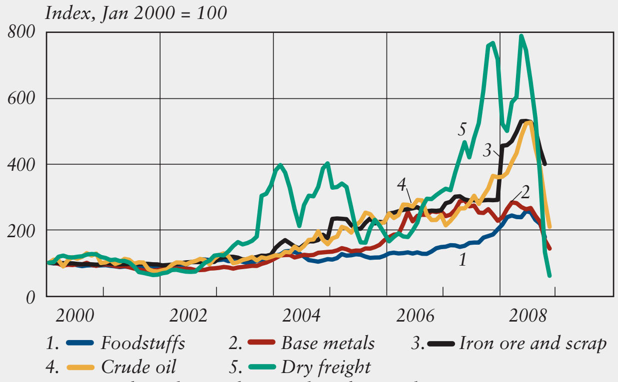
The economic outlook in Finland, too, has rapidly deteriorated. It has become much harder to access finance, and many companies have experienced a drop in the volume of new orders. Investment projects have begun to be cancelled or postponed. Many companies have also dismissed or laid off employees. In response to the considerable deterioration in the economic situation, the Bank of Finland has substantially lowered its growth forecast for the Finnish economy over the next few years (see Box). GDP volume is now estimated to contract 0.5% in 2009. A gradual recovery in growth is expected to begin in 2010, but growth for the year as a whole is not expected to exceed 0.7%.

Falling commodity prices easing inflationary pressures

The rapid deterioration in the world growth outlook has also been reflected in commodity prices, in which there has been a general decline (Chart 3). Demand pressures for many commodities are easing due to more subdued growth in emerging economies. This has been seen particularly strongly in the price of crude oil, the dollar price of which is now just a third of the peak figures of summer 2008. Non-ferrous metal and steel prices have also come down in response to the weakening prospects in many industrial sectors. The drop in oil prices has not been halted even

Chart 3.

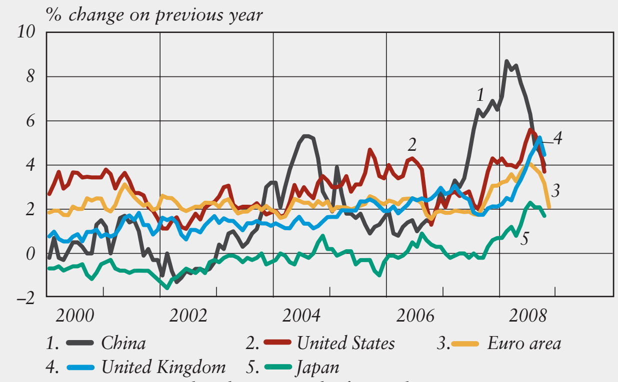
Commodity and freight prices in dollars



Sources: The Baltic Exchange, Bloomberg and HWWA.

Chart 4.

Consumer prices



Sources: Statistical authorities in the featured countries.

by the October decision of OPEC to cut output. There has also been a dramatic drop in crude oil futures prices, which indicates the markets do not expect a rapid rise in oil prices any time soon.

The decline in world market prices of commodities and food is gradually easing inflationary pressures (Chart 4). This has been particularly clear in many emerging economies such as China, where food accounts for a larger share of household consumption than in developed economies. Inflationary pressures are also being subdued by an increase in unutilised production resources as the labour market deteriorates and the utilisation rate of industrial capacity falls.

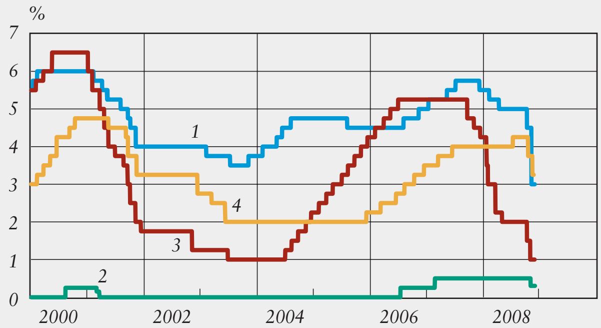
Deepening crisis on the financial markets

The financial market turbulence that began in summer 2007 on the US housing loan market has in recent months developed into a crisis. The situation began to deteriorate rapidly in September 2008, when the US investment bank Lehman Brothers was forced to seek protection from its creditors under the Bankruptcy and Insolvency Act. At the same time, US authorities announced a number of measures to prevent some other financial and insurance sector companies going bankrupt. At the beginning of October, the Congress approved a USD 700 billion support package for the financial sector. During the course of October the crisis spread beyond the United States. Many European governments have since decided on substantial measures to ensure the liquidity and capital adequacy of financial institutions.[1]

Central banks in many countries have also continued to support the financial markets. In order to ensure banking liquidity and stimulate a recovery in lending, central banks have considerably increased their lending to financial institutions and enlarged the number of counterparties eligible for central bank finance. In some countries, they have also guaranteed money market fund liabilities and purchased short-term corporate debt instruments. In addition, the central banks in all the major economic regions have lowered their key interest rates (Chart 5). In the first half of October, the central banks of many of the major economies simultaneously cut interest rates. Over autumn 2008 as a whole, the US Federal Reserve has reduced its key rate by 1 percentage point, and it currently stands at 1%. The Bank of England, meanwhile, has cut its key rate during October and November by a total of 2 percentage points, to 3%.

Chart 5.

Central bank interest rates



1. United Kingdom: repo rate
2. Japan: overnight rate
3. United States: fed funds target rate
4. Eurosystem: main refinancing operations rate*

*Until 15 October 2008, the minimum bid rate

Sources: Bloomberg and Reuters.

[1] The measures taken in different countries and recent developments on the financial markets are examined in more detail in Financial stability 2008, a special issue of the Bank of Finland Bulletin.

The European Central Bank (ECB) has also taken a number of measures in an attempt to defuse the crisis on the financial markets and reduce its impact. It has substantially increased the volume of liquidity in the financial system and at the same time expanded the range of collateral acceptable in its monetary policy operations. The ECB has also increased the range of maturities applicable in its operations, extended the number of counterparties for fine-tuning operations and lent financial institutions in the euro area liquidity in US dollars and Swiss francs based on currency swap agreements with these countries' central banks. In October, the Governing Council of the ECB decided its weekly main refinancing operations would henceforth be carried out through a fixed rate tender procedure with full allotment at the fixed rate. At the same time, the interest rate corridor formed by the standing facilities system's lending and deposit interest rates was reduced from the earlier 2 percentage points to just 1 percentage point. The ECB has also lowered its key rate twice during October and November, by a total of 1 percentage point. It now stands at 3.25%. The Governing Council has justified the interest rate cuts by the improved price stability outlook and the alleviation of upside risks to price stability.

Despite these considerable efforts by authorities around the world, the financial market situation remains difficult. This is indicated by the continued dearth of trading on the short-term interbank money markets and the still large interest-rate differentials between collateralised and uncollateralised credit. The difficulties facing financial institutions are reflected in their lending. According to central bank surveys[2] of financial institutions, the terms of lending to households and businesses continued to tighten during the third quarter of 2008 in both the euro area and the United States.

The financial market crisis has not had a significant impact on interest rates on long-term government bonds in the main economic regions. Overall, these have remained more or less unchanged in recent months, although on a day-by-day basis there have at times been quite substantial fluctuations. In many emerging economies and other countries whose credit rating is weaker than average, however, government bond rates have gone up. Even in the euro area, the interest rate differentials between different countries' government bonds have been growing, reflecting a decline in investors' willingness to take on risk. On the financial markets, the avoidance of risk can be seen in the strong growth in demand for short-term government papers at the expense of corporate debt certificates and banks' short-term debt papers. At the same time, the yield on

[2] For more on the results of these surveys by the ECB and the US Federal Reserve see: www.ecb.int/stats/money/lend/html/index.en.html and www.federalreserve.gov/boarddocs/snloansurvey/200811.

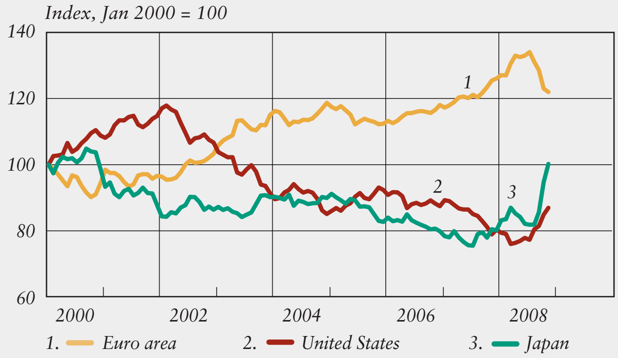
short-term government papers has declined, in some cases to an exceptionally low level.

Recent months have seen considerable movement in exchange rates in the main economic regions. On the nominal trade-weighted index, the euro has depreciated around 10% since June 2008, while the US dollar and the Japanese yen have noticeably hardened (Chart 6). The currencies of some emerging economies, such as Hungary and South Korea, have declined steeply in response to the financial difficulties affecting their economies. On the whole, the exchange rate movements have reflected, not just countries' different rates of interest and changed economic prospects, but also the reduced willingness of investors to take on risk. This has benefited traditionally safe investments such as the US dollar.

Chart 6.

Nominal effective exchange rates

Index, Jan 2000 = 100

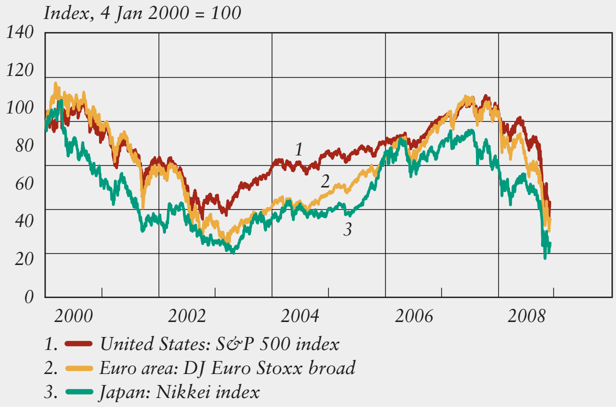


Sources: European Central Bank and Bank of Finland.

Chart 7.

Share prices

Index, 4 Jan 2000 = 100



Source: Bloomberg.

Share prices have fallen recently in all the main economic regions (Chart 7). The downward trend was particularly strong in early October, when fears of a deepening in the financial crisis were reflected at times in quasi-panic on the stock markets. The weakening earnings outlook for business and reduced willingness of investors to take on risk mean continued gloom on the stock markets. At the same time, daily fluctuations are still considerable. Viewed sectorally, the bear market has been broadly based, and even in emerging economies the fall in share prices has at times been dramatic.

The impact of the financial market crisis has also been seen in the movement of measures of investor uncertainty and willingness to take on risk. The risk premia on corporate loans have risen dramatically, and the VIX index, which depicts expected future fluctuations in US share prices, has been running exceptionally high (Chart 8). In addition, the prices for credit risk protection for financial sector companies, in particular, rose dramatically before the support measures introduced by authorities in different countries.

US output down

According to preliminary data, US GDP volume in the third quarter of 2008 was 0.1% down on the previous quarter. Year-on-year, however, the economy grew 0.7%. Private consumption, which still showed reasonable growth in the first half of the year, contracted dramatically in July–September against a backdrop of falling asset values, weakening cyclical conditions and the waning stimulus from tax rebates. The weakening economic outlook and difficulties accessing finance also meant a contraction in corporate investment.

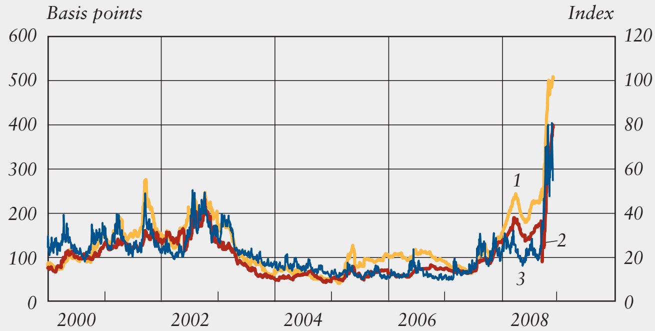
With the financial market crisis coming to a head, the economic outlook for the United States has become gloomier still in recent months, and this has been reflected in a steep drop in confidence over the economy. Both manufacturing and service sector confidence has fallen to its lowest level for decades, and household confidence has also continued to decline strongly in recent months.

The decline in US manufacturing output gathered pace in the autumn, with major automobile producers drifting into difficulties. Domestic consumption demand, meanwhile, is being subdued by the difficult situation on the labour market. There has been a rapid contraction in the number of jobs in both manufacturing and services, and the unemployment rate has risen to 6.5% (Chart 9). House prices have also continued to decline strongly, and the number of unsold properties has remained large.

International organisations have recently considerably lowered their near-term growth forecasts for the United States. Private consumption,

Chart 8.

Stock market volatility and interest rate differentials on corporate loans

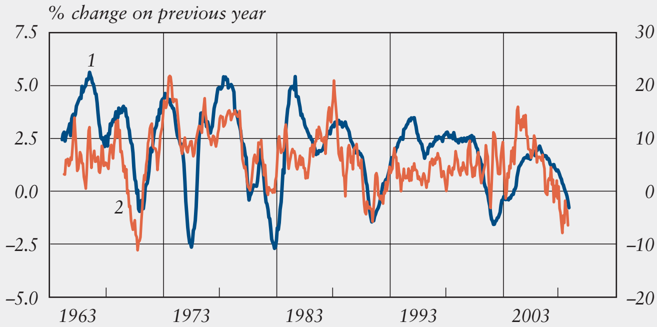


1. Differential* on euro-denominated loans (left-hand scale)
2. Differential* on dollar-denominated loans (left-hand scale)
3. Expected volatility (VIX-index) (right-hand scale)

* Interest rate differential = interest on BBB-rated corporate loans minus interest on AAA-rated corporate loans.
Sources: Bloomberg and Merrill Lynch.

Chart 9.

US labour and housing markets



1. Non-agricultural jobs (left-hand scale)
2. Median price* of new housing units (right-hand scale)

*Seasonally adjusted, 3-month moving average
Source: Bloomberg.

which was still driving growth as recently as the first half of 2008, is now expected to remain weak at the same time as the stimulus from exports declines as the pace of world growth slows. In 2009, US GDP volume is generally expected to decline.

Impact of financial market crisis spreads to Asia

The impact of the financial market crisis has become ever more clearly visible in Japan's real economy and financing conditions. GDP for July–September was 0.1% down both on the previous quarter and year-on-year. Weakening export performance and reduced investment together with poor domestic consumption demand subdued growth in the Japanese economy. The near-term outlook is uninspiring, with slower world growth and the hardening yen hampering exports at the same time as the weakened financial position of the corporate sector and tighter financing conditions are restricting investment. The latest forecasts foresee a decline in Japan's GDP volume in 2009.

The outlook for growth has also deteriorated in non-Japan Asia. The impact of the global financial market crisis has fed through to these countries above all via real economic connections such as trade flows. More recently, the growing general uncertainty on the financial markets and financial institutions' liquidity problems have also begun to affect economic developments. In China, year-on-year growth in the third quarter of 2008 slowed to 9.0%, compared with 10.4% in the first half of the year. Private consumption in China has continued to grow relatively strongly, but industrial output and foreign trade developments have been much more subdued. The Chinese authorities have announced a large programme of expansionary measures designed to strengthen domestic demand in the face of the weakening outlook for exports. The scale of the measures has been indicated as in the region of EUR 450 billion, which is around 14% of China's GDP.

Euro area growth outlook much weaker

Euro area GDP volume in the second and third quarters of 2008 was 0.2% down on the previous quarter. Year-on-year, GDP was up 0.7% in the third quarter, but annual GDP growth, too, has slowed substantially during the course of 2008.

The growth outlook for the euro area economy has become much bleaker in recent months. This has been reflected extensively in different indicators and different countries. None of the euro area's large economies have escaped a substantial weakening in growth. In the third quarter of 2008, GDP volume was down on the previous quarter in Germany, Italy and Spain, and up just slightly in France.

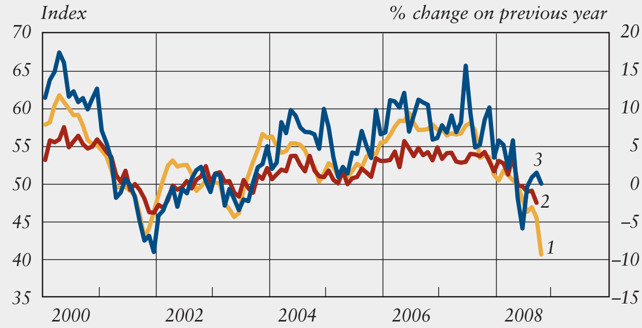
Most indicators of the present condition of business in the euro area and the outlook for the future have declined steeply in recent months. The purchasing managers' indices for both manufacturing and services and the European Commission's industrial confidence indicator have all fallen to their lowest level for approximately 7 years, while the German Ifo business climate index's forward-looking sub-index has also fallen exceptionally low. The rapid deterioration of the growth outlook for the world economy has led to a speedy erosion of companies' order-book expectations (Chart 10). At the same time, industrial output growth has faded and corporate expectations over future output have weakened.

The gloomy manufacturing outlook has been influenced by the halt in value growth for euro area exports. On the basis of statistics extending to August, the value of euro area exports has declined during the present year in many important export markets such as Asia and the United States. We can expect the situation to have deteriorated further during the course of the autumn. The depreciation of the euro in recent months is unlikely to substantially change the situation, as fading growth in the euro area's export markets has traditionally exerted a stronger and more direct influence on euro area exports than the impact of changes in exchange rates.[3]

[3] See 'Modelling the impact of external factors on the euro area's HICP and real economy: a focus on pass-through and the trade balance', ECB Working Paper No. 789, July 2007.

Chart 10.

Euro area industrial output and order book



1. New orders (left-hand scale)
2. Volume of industrial output (right-hand scale)
3. Value of order book (right-hand scale)

Sources: Eurostat and Reuters.

Household consumption in the euro area declined in the first half of 2008, and indicator data suggests the outlook for consumption remains weak. This is despite the fact that falling commodity prices have reduced inflationary pressures and boosted households' purchasing power. Retail trade has remained subdued, and the European Commission's consumer confidence indicator has fallen to its lowest level for 15 years. Although there has been no substantial rise in the unemployment rate, there has been a strong increase in consumers' fears of unemployment. Looking ahead, this could increase households' precautionary savings and reduce consumption of non-essential consumer goods.

The gloomy outlook for euro area growth can also be seen in the forecasts published by international organisations during the course of the autumn. According to the European

Commission, the OECD and the IMF, euro area GDP volume will decline next year or, at best, remain unchanged.

The gloomy economic outlook has also affected general government finances in the euro area. The general government deficit contracted in 2007 to 0.6% of GDP, but the Commission's latest forecast indicates the deficit has begun to grow again and will this year reach 1.3% of GDP. The deficit is forecast to continue growing in the immediate years ahead against a background of declining tax revenues and increasing expenditure, reaching 2% of GDP in 2010. The GDP ratio of general government debt is also forecast to return to an upward trajectory. No euro area country at present falls within the sphere of the Stability and Growth Pact's Excessive Deficit Procedure.

The support measures for financial institutions carried out in several euro area countries have so far had relatively little direct effect on general government finances. This is largely because many of the measures taken are not considered as affecting the budgetary position of central government. In many cases, however, they do mean increased public debt.

Euro area inflation slowing down

Inflation as measured by the harmonised index of consumer prices (HICP) for the euro area eased back in October 2008 to 3.2%, against 4% as recently as July. According to Eurostat's flash estimate, inflation eased further in November, to 2.1 %. The marked deceleration in the pace of inflation during the autumn is due, above all, to the fading pace of growth in energy and food prices. In contrast, there have been no significant changes in recent months in the rates of inflation in non-energy industrial goods and in services.[4]

The substantial drop in world market prices of commodities in recent months and the reduction in demand pressures suggest that euro area inflation will slow further over the next few months. Economic agents' longer-term inflation expectations have also turned downwards in recent months. Survey data indicates that both consumers' and companies' inflation expectations have become more subdued, while longer-term inflation expectations derived from financial market information have also come down.

Finland's growth forecast lowered

The global financial market crisis is also reflected in the outlook for the Finnish economy. It has become harder to access finance, and its price has also risen for many companies. At the same time, the number of new orders has fallen and already agreed orders have been cancelled. Manufacturing and construction companies, in particular, have been forced to cancel or postpone investments. Industrial output growth was negligible in the

[4] The sub-indices for the euro area HICP are not yet available for November.

third quarter of 2008, and in some industries – particularly the forest industry – there was actually a substantial drop in output.

Many companies have also dismissed or laid off employees. The number laid off in September 2008 was approximately 50% higher than in the same month a year earlier. Meanwhile, by mid-November, the number dismissed since the start of the year was already 25% higher than the total for the whole of 2007. Moreover, the duration of periods of unemployment has lengthened and the number of vacant jobs fallen. It is evident the sustained period of growing employment and falling unemployment is now at an end.

The pace of consumer price inflation has recently eased slightly in Finland, primarily due to the fall in fuel prices. Inflation has, however, remained well above average for the euro area. Both national consumer price index (CPI) inflation and HICP inflation in Finland stood at 4.4% in October.

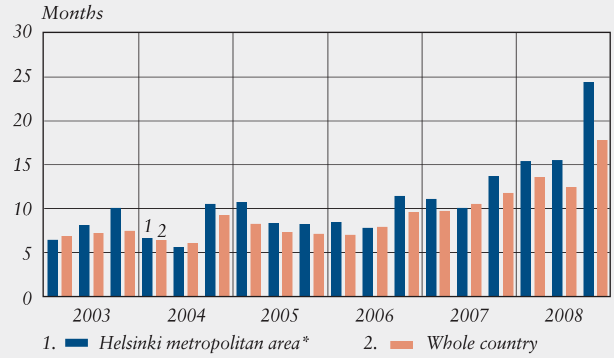
The rapid deterioration in the economic outlook has caused the Bank of Finland to make a substantial downwards revision of its growth forecast for the Finnish economy in comparison with the macroeconomic forecast published in September 2008 (see Box). The forecast for 2009 is now for a 0.5% decline in GDP, while even in 2010 GDP growth will be no more than 0.7%.

The rapid change in the economic situation has also been reflected on the housing market. Rising interest rates and the general weakening of confidence have led to a fall in the number of house sales, lengthened the time needed to make a sale and halted the upward trend in house prices. In July–September 2008, prices for used housing units in apartment blocks across the country as a whole were down by an average of 1.6% from a year earlier.

The subdued state of the housing market has been seen particularly strongly in sales of new housing. The sales period for new housing (number of new housing units divided by monthly sales) across the country as a whole in June–October was 18 months: in the Helsinki metropolitan area it was more than 24 months, and in the rest of the country 15 months (Chart 11). For the country as a whole, the sales period for new housing has normally been around 8–9 months.

Chart 11.

Sales period for new housing in Finland



**Helsinki metropolitan area: Espoo, Helsinki, Kauniainen and Vantaa*
Source: STH-Group Ky.

The number of housing units currently under construction is still well above average, but scarcely any new housing construction projects have been started in recent months. Housing construction was already beginning to contract before the end of 2007, and in the first half of 2008 the volume of housing investment was a couple of percentage points smaller than in the same period a year earlier. With construction of offices and other commercial premises also beginning to peter out, the construction industry has drifted rapidly into difficulties. The labour shortages that were still a problem as recently as the summer are now no longer an issue, and the threat of unemployment for people working in the industry has substantially increased. Business confidence surveys also indicate that the impact of the financial market crisis on Finland has been particularly strong in the construction industry.

Keywords: inflation, monetary policy, economic situation

Box 1.

Finland's economic outlook – forecast update for 2008–2010

The financial market turbulence that began on the US housing loan market has deepened in recent months into a crisis. The deterioration in the world growth outlook has been unprecedentedly rapid. Financial institutions the world over have been forced to strengthen their balance sheets, tighten their lending conditions and realise their investments. Demand and output indicators have declined more or less everywhere. At the same time, business and household confidence has substantially weakened as the housing market adjustment and second-round effects of the financial market crisis have begun to spread into the real economy.

Within a short period of time, international forecasters have revised their growth estimates for the major economies downwards at an unprecedented pace. In most of the developed economies, output is set to decline, while in emerging economies growth will slow substantially over the next few quarters. It is also clear that growth will eventually recover both later and more slowly than previously estimated. Falling commodity prices, waning demand worldwide and an increase in unutilised production resources have resulted in a rapid erosion of global inflationary pressures.

The weakened economic outlook also holds true for Finland. Finnish businesses and households are having to pay a higher price for finance. Other terms and conditions attached to finance have also become tighter. Companies have experienced a decline in new orders, and already agreed orders have been cancelled. The response, particularly in manufacturing and construction, has been that a significant proportion of companies have cancelled or postponed investment projects. Many companies have also dismissed or laid off employees. Several central banks have cut interest rates, and governments have taken steps to support the financial system in numerous ways in order to ensure the provision of credit for businesses and households with as little disturbance as possible. In Finland, too, the government has made preparations to provide extensive support for the banking system and supplemented its budget proposal for 2009 with additional measures to stimulate the economy by, for example, encouraging housing construction and building renovations and boosting exports. These global and domestic measures will eventually reduce the speed at which growth is slowing down, but they cannot prevent a recession.

The Bank of Finland has made a substantial downwards revision of its growth forecast for the Finnish economy in comparison with the macroeconomic forecast published in September 2008 (Table). GDP volume growth in 2008 is estimated at 2.1%, followed by a 0.5% decline in 2009. The economy should begin to recover slowly around the middle of 2010, but growth for the year as a whole will be just 0.7%. The corresponding growth figures in the September forecast were 1.3% for 2009 and 2.1% for 2010.

As economic growth grinds to a halt, this will also lead to a deterioration in the employment situation. The unemployment rate will begin to rise for the first time in 15 years, and there will be a substantial decline in the number of employed. On average, the number of employed is estimated to decline by 46,000 in 2009 and a further 24,000 in 2010. The deteriorating economic situation will be reflected more steeply than normally in the employment figures, as employers will be forced to shed reserve labour they had been holding on to in the face of expected labour shortages. The number of unemployed will, however, grow less than the decline in the number of employed, because labour supply will decrease at both ends of the age spectrum. Labour market participation by those at the upper end of the spectrum will decline particularly strongly. People who already qualify for a retirement pension

Table.

Forecast summary

Supply and demand	2007	2006	2007	2008[f]	2009[f]	2010[f]
	At current prices EUR billion	*Volume, % change on previous year*				
Gross domestic product	179.7	4.9	4.5	2.1	-0.5	0.7
Imports	73.1	7.8	6.6	0.4	-2.1	2.6
Exports	82.2	11.8	8.2	3.9	-3.3	1.0
Private consumption	90.6	4.1	3.2	3.1	0.7	1.9
Public consumption	38.2	0.6	1.3	1.3	1.9	1.6
Private fixed investment	31.9	6.5	8.3	0.4	-6.4	-1.1
Public investment	4.6	-6.4	9.4	-0.4	4.8	4.5

Key economic indicators	2006	2007	2008[f]	2009[f]	2010[f]
% change on previous year					
Harmonised index of consumer prices	1.3	1.6	4.0	2.1	1.6
Consumer price index	1.6	2.5	4.1	1.8	1.7
Wage and salary earnings	3.0	3.4	5.4	3.9	2.7
Labour compensation per employee	2.9	3.5	5.5	3.9	2.7
Productivity per person employed	3.0	2.5	0.8	1.4	1.7
Unit labour costs	-0.2	1.0	4.6	2.5	1.0
Number of employed	1.7	2.1	1.3	-1.8	-1.0
Employment rate, 15–64-year-olds, %	68.9	69.9	70.6	69.2	68.7
Unemployment rate, %	7.7	6.9	6.3	7.2	7.7
Export prices of goods and services	2.7	0.7	1.4	-1.7	-0.9
Terms of trade (goods and services)	-3.1	-1.4	-2.6	-2.9	-3.0
% of GDP, National Accounts					
Tax ratio	43.4	42.8	42.8	42.5	42.7
General government net lending	4.0	5.3	4.5	2.0	0.7
General government debt	39.2	35.1	32.6	33.6	35.4
Balance on goods and services	5.0	5.1	5.4	3.5	1.5
Current account balance	4.5	4.1	3.8	2.5	0.7

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

now comprise a significant proportion of the labour force, as members of the baby-boom generation have in recent years been postponing their retirement. According to the forecast, the number of unemployed will increase by 22,000 in 2009 and a further 14,000 in 2010. The unemployment rate for 2010 is estimated at 7.7%, ie more or less the same as in 2006.

In 2008, labour productivity growth is estimated to be only 0.8%, with the employment trend responding, as normal, with some delay to the deceleration in GDP growth. The slowdown in productivity growth is expected to be temporary and cyclical in nature, and in 2009 and 2010 labour productivity growth is forecast to grow by around 1½% per annum. During the years covered by the forecast, productivity growth will, however, be lower than average for the present decade.

In 2008 and 2009 wage-earners' real earnings will rise faster than labour productivity. This is due, above all, to the fairly high level of negotiated pay increases in the 2007 round of labour market negotiations. Most current pay agreements will run out in spring 2010, at a time when, according to the forecast, Finland will be experiencing a period of slow growth and the unemployment rate will be a full percentage point higher than at present. Pay rises in 2010 are expected to be moderate. Wage drift, in particular, is expected to be less than normal. The rate of increase in real earnings will be approximately 1%, ie slightly less than the increase in labour productivity.

The pace of increase in consumer prices will ease considerably during the forecast period, and inflation will be close to or slightly below 2% under in 2009 and 2010. The forecast for lower inflation in 2009 is due, above all, to an assessment that the downward trend in world market prices of energy and raw materials will continue. Domestic demand and cost pressures will also lessen as growth comes to a halt and the employment situation deteriorates.

With regard to the components of demand, the impact of the global financial market crisis will be seen most strongly in the growth figures for investment and exports. The Bank of Finland's view is that the volume of both investment and exports will decline during the forecast period. The rising costs of finance, shrinking order books and deteriorating earnings outlook will hit investments in machinery and equipment particularly hard. Meanwhile, housing construction will be hit by the fall in demand. Construction of offices and other commercial premises is also expected to slacken. The underutilisation rate for office premises is already rather high, and the volume of empty commercial premises is expected to grow further in the near future as growth slows in wholesaling and retailing.

The volume of exports will turn downwards in 2009 as the main export markets for Finnish goods in western Europe and North America drift into recession. Growth in the Russian market will also taper off as the price of oil declines. Finnish exports react sensitively to demand in the export markets, as a large proportion of the goods exported from Finland are investment goods, for which demand is highly sensitive cyclically. The fading of investment demand and construction in the export markets will also reduce demand for the output of the basic metal industry. Meanwhile, the forest industry, which has long suffered from the unfavourable trend in world market prices for paper, has in recent years cut production capacity, and this trend is expected to continue during the forecast period. The financial market crisis has meant a further decline in demand for forest industry products on the world market. Russia's announcement of a postponement in the introduction of higher export duties on roundwood for about one year does not signify a significant improvement in the outlook for the forest industry.

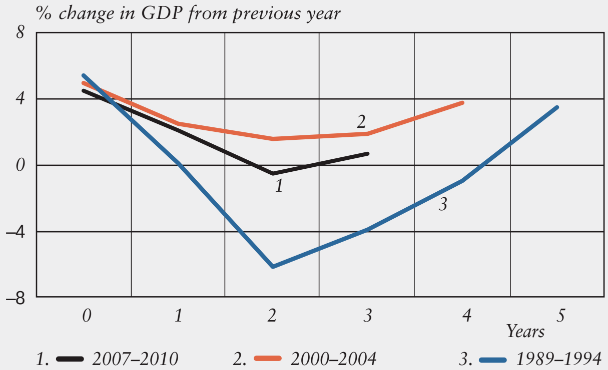
It is estimated that private consumption growth will slow considerably in 2009 and 2010. This contrasts with the September forecast, which foresaw only a slight dip in consumption growth in 2009. Consumers' confidence in their own finances is now significantly weaker, and they also expect the employment situation to deteriorate during the forecast period. Households can therefore be expected to postpone purchases of durable goods, in particular . With the situation on the housing market also deteriorating, the household saving ratio will, contrary to the estimate in the September forecast, rise substantially over the next few years.

The more subdued demand will also be reflected in import volumes. As production for investment and export declines, there will be less need for imported raw materials and foreign intermediate goods. The halt to private consumption growth will also tend to depress imports. Indeed, the forecast estimates that imports will contract in 2009 by around 2%.

General government finances are relatively strong in Finland compared with other countries in the European Union. However, the deteriorating employment situation and

Chart A.

Comparison of economic downswings



Year 0 is the last year before the turn in the cycle.
The data on 2008–2010 are Bank of Finland forecasts.
Sources: Statistics Finland and calculations by the Bank of Finland.

weaker corporate earnings development together with cuts in income tax and VAT will push central government finances into deficit in 2009, and the central government fiscal position will weaken further in 2010. The present surplus for the public sector as a whole will be almost entirely eroded during the forecast period. Despite the weakening economic situation, the general government debt ratio will increase only slightly.

The current account surplus will shrink significantly, being only slightly positive by the end of 2010. The trend is being steered by the goods account, which will have a declining surplus as a result of the weak trend in goods export volumes and deterioration in the terms of trade. The services account is expected to support the current account surplus, whereas the income and current transfer accounts are expected to remain negative, thereby serving to reduce the current account surplus. As a consequence of the rapid deceleration in world trade growth, export prices will fall more steeply than import prices, which means the terms of trade will continue to deteriorate in the forecast period.

Overall, the Bank of Finland's forecast points up the very rapid pace of the slowdown in economic growth in Finland. The downswing also looks to be exceptionally deep in comparison with earlier downswings. It is going to be much more severe than the recession at the start of the present decade, when in practice there was only a slight dip in output (Chart A). The picture painted by the forecast is nevertheless fairly comforting if we compare it with the recession years of the early 1990s.

In the present situation, the Finnish economy benefits from the fact that during the recent years of growth Finland was able to avoid the emergence of significant imbalances in the economy. Despite growing household debt, the economy as a whole has been solidly in surplus, reflecting the health of general government finances and substantial net savings in the corporate sector. Membership of the euro area, meanwhile, offers Finland shelter from sudden interest and exchange rate fluctuations, which can be a problem for small countries during a worldwide crisis.

At the same time, however, there are still factors that heighten the vulnerability of the Finnish economy. The significance of exports for Finland cannot be overstated, and the focus on exports of investment goods represents a risk in the present situation. Moreover, the fairly high pay increases negotiated last year serve to weaken the competitiveness of Finnish producers in a situation where competition in export markets is rapidly intensifying in the face of waning demand.

Trade with Russia and its importance for Finnish companies

28 October 2008

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Finland's trade with Russia has grown rapidly in recent years, and since the turn of the millennium Russia has once again become one of our largest trading partners. Russia is an important export market for Finland, particularly for those companies and industries whose operations are otherwise largely focused on the domestic market. The present significance of exports to Russia is, however, considerably less than during the Soviet era. Imports from Russia are concentrated on just a few companies and industries, although for them Russia represents an important source of raw materials. This article examines recent developments in trade between Finland and Russia, its special features and the significance of this trade for Finnish companies. Some attention is also given to the corporate structure of trade with Russia.

In the past, Finland's trade with Russia has been markedly different from our other foreign trade, initially because of the Soviet Union's planned economy, and later due to the unusual operating environment caused by the transitional phase in the Russian economy. Trade with Russia still has its own distinctive features relative to other foreign trade, despite the considerably more stable and open Russian economy of the present day. These distinctive features are largely reflections of two factors: on one hand the nature of the Russian economy, which is still largely based on output of raw materials, and on the other hand Finland's geographical location between Russia and the markets of western Europe.

The Russian economy is still highly dependent on earnings from the energy sector, although this is not the real engine of growth in the economy. Over the course of the present decade, the Russian economy has grown at an average rate of 7% per annum. Growth has been driven particularly by domestic demand, supported by the strong rise in oil prices. The high level of oil revenues has, however, meant many other production sectors have been somewhat neglected, and domestic output has been unable to meet the growing demand. This has led to a strong increase in Russian imports in recent years, at an average rate of around 20% per annum in real terms. Import growth has been supported by the steady appreciation in the value of the rouble. The concentrated nature of Russian production has meant exports are made up almost entirely of energy products and other commodities, while the country has few other products of interest to international markets.

For Finland, this has meant that imports from Russia also consist mainly of energy products and raw materials for domestic consumption and processing for higher value-added export goods. Russia's rapidly growing imports, meanwhile, have provided Finnish companies with a large export market close to hand, and they have taken advantage of this opportunity.

Its close proximity and weaker competition in many sectors as recently as the early years of the present decade have also made Russia an important market for smaller companies and for companies operating in industries outside of Finland's traditional export sectors. Products that otherwise play a major role in Finnish exports, such as paper and metals, are less important in exports to Russia, which has more output of its own in these sectors. Finland's very favourable location close to Russia has helped the emergence of this export trend that differs from the mainstream of Finnish exports. However, Finland does not produce many of the products that are in great demand in Russia, particularly consumer goods. This demand has been met by importing goods from elsewhere and re-exporting them to Russia, or simply by Finland serving as a route for the passage of transit goods to the Russian market.

Re-exporting clouds the picture of export trends

The value of Finnish exports to Russia has grown by an average of around 20% per annum during the present decade, and Russia's share of Finnish exports has risen to a good 10%. In 2007, the value of exports to Russia totalled EUR 6.7 billion. The largest product group is machinery, equipment and vehicles, which together accounted for over half of all exports to Russia in 2007. Over the course of the decade, cars and mobile phones have become the most important individual export items. Chemical industry products are also important, with their share of exports to Russia fairly constant at around 15%. In contrast, the share of exports to Russia taken by product groups that are important in other export markets, such as paper and metals, is much smaller and has contracted further in recent years. Russia has more output of its own in these product groups. In addition, food products' share of exports to Russia has declined by approximately a half, to around 4%, during the present decade.

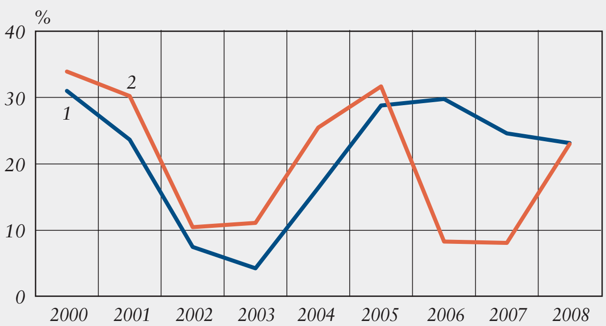
In recent years, however, the pace of growth in Finnish exports to Russia has slowed considerably, despite continued strong growth in Russia's total imports. In 2006 and 2007, the value of exports grew by just 8%, while Russia's total imports continued to grow strongly, by almost 30% in terms of their value in euro (Chart 1). This trend is partly explained by changes in the exports of two important individual products. Mobile phone exports to Russia declined considerably in 2006, followed the following year by a marked deceleration in the pace of growth in car exports, which had been growing very quickly in previous years. It was the strong increase in exports of these two products that had been responsible for a considerable proportion of total export growth to Russia in previous years. The accelerating pace of export growth in the first half of 2008, meanwhile, is largely due to a renewed vigorous increase in car exports.

Some of these mobile phones, and, in practice, all the cars, are re-exports that simply pass through Finland en route to Russia. These products are not manufactured in Finland, being simply brought into Finland from third countries as normal imports and then sent on (re-exported) to Russia. Products for re-export are imported to Finland as end products, and are therefore not further processed in Finland, but they may be re-packed or equipped with Russian-language manuals before export to Russia. Re-exports are estimated to account for 25–30% of Finland's exports to Russia.[1] Other important re-export products, in addition to cars and mobile phones, are home appliances and electronic equipment as well as some chemical products, such as medicines.

It is worth distinguishing re-exporting from transit traffic, despite their undoubted similarities. Re-export goods are brought into Finland, primarily via a Finnish intermediary, and enter the country as normal imports that can be freely sold within Finland. In contrast, the destination, route and timetable for transit traffic is determined in advance at the point of origin, and transit goods can only be stored in designated storage facilities. Moreover, transit traffic is not included in Finland's foreign trade statistics, being recorded in separate statistics compiled by the National Board of Customs. Transit goods comprise largely the same products as re-export goods, particularly cars, but their volume is many times greater than the volume of goods for re-export.

Chart 1.

Euro-denominated annual growth in total Russian imports and Finnish exports to Russia



1. Russian imports
2. Finnish exports to Russia
Sources: National Board of Customs and Bank of Russia.

[1] National Board of Customs (2008), Jälleenvienti Venäjälle vuonna 2006 ('Re-exports to Russia in 2006'); Ollus & Simola (2007), Finnish re-exports to Russia, BOFIT Online 5/2007.

Re-exporting is still rather a new phenomenon, and one related largely to Finnish exports to Russia.

Russia is undoubtedly a significant export market for the trade sector, as almost one third of all exports by companies in the sector go to Russia.

Trade sector companies more prominent than others in exports to Russia

Re-exporting is still rather a new phenomenon, and one related largely to Finnish exports to Russia. Both re-exporting and transit traffic are largely based on the location of the Finnish market between Russia and the rest of the EU. Re-exporting is pursued mainly by large companies in the trade sector. Because Russia has a lot of demand for goods that are not produced in Finland, Finnish trading companies supply the Russian market with goods produced elsewhere. Admittedly, some of the goods exported by Finnish trading companies are also produced in Finland. Re-exporting, in particular, is also partly explained by companies expanding their operations into Russia. It is often easier for these companies to import goods in bulk to Finland and then redistribute to Russia the goods needed in the Russian market.

Re-exporting is also clearly reflected in the corporate structure of exports to Russia. Companies in the trade sector enjoy a one third share of exports to Russia, compared with just a 10% share of total Finnish exports. As the goods are merely delivered via Finland, not produced here, the income and, particularly, employment effects of re-exporting are less than with traditional exports. Admittedly, trade sector companies do benefit from these exports, as they receive income from their role as intermediaries. The other main beneficiaries from re-exporting are providers of storage and haulage services.

Russia is undoubtedly a significant export market for the trade sector, as almost one third of all exports by companies in the sector go to Russia. Even so, the overall significance of exports to companies in this sector is rather small. Meanwhile, companies whose operations are based primarily on re-exporting could find it hard to sustain their competitive advantage in the future. In contrast to transit traffic, in re-exporting, the Finnish-based supplier must be able to retain its intermediary role so as to ensure the goods are not sent straight to the purchaser in Russia. The future of re-exporting could also be affected by a variety of extrinsic factors, with the potential for rapid changes that could be on a significant scale, such as has already happened with mobile phones. Such rapid changes could at the same time obscure the overall trend in Finnish exports to Russia.

Russia as an extension of the domestic market

Most Finnish exports to Russia do, however, involve the traditional exporting of goods produced in Finland. The value of this trade has grown in recent years by a good 10% per annum. Because Finnish exports to Russia have, however, grown more slowly than overall import growth in

Russia itself, Finland's share of the Russian market has declined in recent years by a couple of percentage points. This trend has a number of causes. The Russian market has become more competitive, with China in particular increasing its market share, as it has in world trade overall. Finland is a small economy, and a lack of production capacity is one factor that has restricted growth in exports to Russia. Relative to the size of the economy, Finland nevertheless remains one of the EU's largest exporters to Russia. In some sectors, growth in these exports has also been slowed by Finnish companies replacing their exports with local production in Russia.

Also relevant is that the structure of Russian import demand differs from that of Finland's export supply. The most important exports from Finland to Russia are machinery and equipment, and chemical industry products. Demand for these has been stimulated, particularly in recent years, by the rapid growth of investment in the Russian economy. The greatest single factor in Russian demand is, however, demand for consumer goods, which are not produced in any great quantities in Finland. This difference between the structure of Russian imports and Finnish exports is one of the reasons Finnish exports to Russia have not grown as quickly in recent years as Russian imports overall (Chart 2).

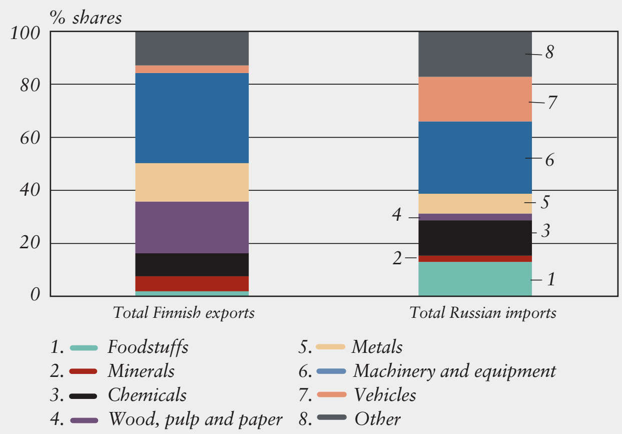
The majority of exports to Russia (excl. re-exports) are from companies that produce machinery, electronic equipment and chemical products. The share of these industries' total exports that go to Russia is well below 10%. Taken as a whole, the least significant sectors in the export trade with Russia are Finland's traditionally important export sectors like the forest and metal industries. All these industries export a lot of goods to other markets, thereby reducing the importance of any single market. Moreover, there is less demand for forest or metal industry products in Russia due to the level of domestic output in these industries.

In contrast, exporting to Russia is most important for those industries whose main focus is on the home market, such as the textile and food

In contrast to the Soviet era, no Finnish industry today is strongly dependent on exports to Russia.

Chart 2.

Structure of total Finnish exports and total Russian imports in 2007



Sources: National Board of Customs and Federal Customs Service of Russia.

Finland's foreign trade is pursued by a relatively small proportion of all Finnish companies, with most of it in the hands of only a few companies.

industries as well as manufacturers of non-metal mineral products (eg building materials). In these sectors, Russia's share of exports has in recent years been in the range of 10–25%. The importance of Russian exports to these industries is partly due to the proximity of the Russian market, as a large proportion of their exports go to nearby trading partners, including eg Sweden. There is also an historical background to the relative prominence of Russia as an export market for these sectors, as many of their products played a relatively prominent role in exports to the Soviet Union. However, no sector of Finnish industry is significantly dependent on the Russian market, as many were during the Soviet era. Exports to Russia account for only a few percentage points of total turnover in all sectors.

Russia is an important export market for SMEs

As foreign trade is carried out by individual companies, an analysis at company level can yield interesting additional information. International studies have shown that foreign trade, and particularly exports, is generally pursued by just a small proportion of companies, with the vast majority focusing exclusively on the home market. Foreign trade has also often been characterised as concentrated, as most of it is in the hands of just a few of the largest companies. Moreover, many companies engage in trade with just one or a few countries and focus their foreign trade on just one or two products.

Many of the above features also apply to Finland's foreign trade. A relatively small proportion of companies engage in foreign trade, most of which is in the hands of only a few companies. The corporate structure of trade with Russia does, however, differ somewhat from the rest of Finland's foreign trade. The analysis of corporate structure presented here draws on the comprehensive and detailed information on Finnish companies trading with Russia contained in the VIRKE databank.[2]

In 2006 around 4,000 Finnish companies exported to Russia. Of these companies, a good 600 were large, and the rest were SMEs.[3] Measured by the value of exports, SMEs still accounted for almost a fifth of total exports to Russia in 2006, while their share of other exports has remained at a good 10% in recent years. The value of SME

[2] VIRKE is a Finnish government project for inter-authority cooperation in combating economic crime. It has provided us with a database for research purposes that contains data gathered by the National Board of Customs and the tax administration on all Finnish companies engaging in trade with Russia. The database covers the years 2002–2006. Statistics on the corporate structure of Finland's foreign trade are also provided in the National Board of Customs publications Tavaroiden ulkomaankauppa yritysten kokoluokittain ('Foreign trade of goods by enterprise size') and Tavaroiden ulkomaankaupan keskittyminen yrityksittäin ('Concentration of foreign trade of goods by enterprise').

[3] The classification of SME is applied to all companies employing less than 250 employees or with a turnover of less than EUR 50 million.

exports to Russia grew by a third in total over the years 2002–2006, while the value of exports by large companies doubled over the same period. SMEs' share of exports to Russia has thus declined in recent years, while the number of SMEs involved in this trade has also dropped.

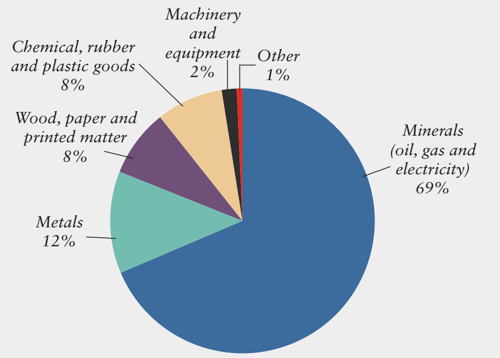
As an export market, Russia is, however, of particular importance to Finnish SMEs, who sent almost 15% of their exports to Russia in 2006. Large companies, meanwhile, sent less than one tenth of their exports to Russia. Large companies generally export to more markets and are also often better equipped to expand operations abroad, which means the significance of an individual export market is not so great.

SMEs, in contrast, often find it easier to focus their exports on nearby markets. The share of SMEs is greatest in the exports to Russia from eastern and southeastern regions of Finland, ie close to the Russian border. Admittedly, Russia is not the easiest of export markets, but, in addition to its proximity to Finland, the rapid growth in demand and relative lack of competition that still exists in many sectors have helped make the Russian market more attractive to SMEs. Only a small proportion of Finnish SMEs are direct exporters, and for the SME sector as a whole the significance of exports to Russia is in this sense rather limited. However, considerably more SMEs are involved in exports through subcontracting, which boosts the importance to the SME sector of exports in general, including exports to Russia.

The Finnish companies that export to Russia are fairly specialised for the Russian market, and this is a feature that has increased further in recent years. In 2006, more than half of all companies exporting to Russia exported only to Russia. Russia's average share of total exports by Finnish companies exporting to Russia grew in the years 2002–2006 from around 60% to over two thirds. Despite the fact that in value terms the greater part of SME exports to Russia come from the Uusimaa area along the south coast, where the greatest concentration of companies is also located, the SMEs that are most strongly specialised in exporting to Russia are located in the southeast

Chart 3.

Structure of Finnish imports from Russia in 2007 (% shares)



Source: National Board of Customs.

of the country, the area of Oulu and Kainuu in the north and along the Russian border in the east.

Exports to Russia accounted for an average 10% of the turnover of companies participating in this trade in 2006,[4] a slightly higher figure than in 2002. For a small proportion of companies, however, exports to Russia are vital, as they account for over half of their total turnover. SMEs are particularly dependent on this business, while for large companies only a few derive even over a quarter of their turnover from exports to Russia.

Imports from Russia are very concentrated

The value of Finland's imports from Russia has grown during the present decade by an average of around 20% per annum, reaching EUR 7.8 billion in 2007. This trend largely reflects the rising prices of oil and other commodities. Traditionally, imports from Russia have consisted of energy products and raw materials. The former (oil, oil products, gas and electricity) at present comprise almost 70% of Finnish imports from Russia (Chart 3). Other important imported goods include metals, roundwood and chemical products, which have each accounted for around 10% of imports from Russia in recent years.

Almost a fifth of imports by large companies and industrial manufacturers come from Russia.

[4] In order to ensure the comparability of turnover and export data the examination has been restricted to companies whose financial statements are based on the calendar year. It therefore covers only just over a half of all potential companies.

In contrast, more refined or processed goods, such as machinery and equipment, are relatively insignificant in imports from Russia, accounting for only one or two per cent of the total.

In 2006, there were approximately 1,400 companies in Finland engaged in importing from Russia, of which a good 300 were large. Measured by value, SMEs' share of imports from Russia has remained steady at around 5%, considerably less than in imports from other countries, where SMEs account for almost a quarter of the total. The concentration of imports from Russia is largely a reflection of the predominance of oil and other commodities, which are imported mainly by just a few large corporations.

Russia is a much more important source of imports for large companies and industrial manufacturers in Finland. Both these categories purchase almost a fifth of their imports from Russia. In some industries, as for example in the manufacture of oil products and in the forest industry, Russia's share of imports is much larger still, due to the unbalanced structure of imports. In contrast, companies in the trade sector derive less than one tenth of their imports from Russia, while only one or two per cent of imports by SMEs come from Russia. Of these SME imports, the largest share is by trade sector companies. For SMEs in manufacturing, the most active importers from Russia are those that operate in the forest and chemical industries. In addition, most food industry imports from Russia are imported by SMEs, although the food industry's share of total imports is admittedly very small.

Of all companies involved in importing from Russia, just under a half import only from Russia. The importance of imports is greatest for a few major commodities importers, but many SMEs in eastern and northern Finland also import almost exclusively from Russia. While Russia's average share of all the imports by companies that import from Russia is a good 60%, the average for SMEs in eastern and northern areas is 90%. Among SMEs and companies in the north and east of the country, the structure of imports from Russia is also considerably more diversified than for the country as a whole; even so, it still comprises mainly relatively unprocessed goods.

Russia's significance as a trading partner is important, but limited

Trade between Finland and Russia is still based largely on comparative advantage and mutually complementary trading structures. Finland primarily imports raw materials from Russia and exports manufactured goods. In contrast to Finland's other foreign trade, there is very little intra-industry trade. The rapid growth of demand in Russia has, however, been particularly marked in consumer goods, which Finland does not produce in any significant quantities. This demand has therefore been met by importing consumer goods from third countries and re-exporting them to Russia.

Although 2008 has seen the restoration of Russia's position as Finland's largest single export market, the large share of re-exporting reduces the significance of this to some extent. The impact of re-exporting on national income, and particularly on employment, is much less than with traditional exports, because the products involved are not made in Finland.

In Finland's largest export industries, the Russian market accounts for well under a tenth of exports. In these industries, both exports and production are often distributed across a number of markets, making them less dependent on any single export market. The rapid increase in import demand in Russia has, however, compensated companies in these industries for the more sluggish state of many other markets in recent years.

Relatively speaking, Russia is most important as an export market for those industries and companies in which exports play only a marginal role. For industries that focus primarily on the domestic market, Russia has served as an extension to this core market, and a large proportion of exports go to Russia as well as to other nearby markets. There is, however, no industry in Finland that is highly dependent on the Russian market, like in the days of the Soviet trade.

For SMEs, too, Russia is fairly important as an export market, and many SMEs export only to Russia. However, only a very small proportion of SMEs engage in any export activity; therefore, for the sector as a whole, the importance is marginal. On the other hand, a considerably larger number of SMEs participate in exports to Russia indirectly, as subcontractors.

Imports from Russia still consist mainly of energy products and other commodities, and import trends have been largely determined by the rising prices for these products. Imports from Russia are concentrated in just a few industries, and Russia's share of imports in these industries is considerable. In terms of corporate structure, too, imports from Russia are dominated by a relatively small number of large industrial corporations, for whom they are very important.

Thus, Finland's trade with Russia still differs somewhat from trade with other countries. For exports, in particular, one factor driving this difference is the location and proximity of the Russian market, which make it a very important export focus for those Finnish companies that have less opportunity in other export markets. The differences in imports from Russia are largely due to the different product structure, with the strong focus on oil and other commodities.

Keywords: foreign trade, companies, Finland, Russia

China's economic rise has inflation implications for the whole world

15 December 2008

China's economy has been growing rapidly for the past three decades. The vigorous pace of growth has increased China's weight in the world economy, and it is now the third largest economy in the world, after the United States and Japan. Its significance in world trade is larger still, as it occupies a unique position as the manufacturing workshop of the world. Developments in China therefore affect prices elsewhere too, including the euro area.

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China influences world price trends in a number of ways. The opening of the Chinese economy has brought hundreds of millions of new workers onto the world labour market with a level of pay so low it has led to a fall in the prices of many consumer goods. A large share of clothes, shoes, toys and electronics are now produced at lower cost than before. On the other hand, rapid economic development and a consequent rise in living standards have also increased consumption in China itself. The recent price peaks for energy and other commodities are partly due to growth in China. Chinese eating habits have also changed, and higher prices for food caused by increased demand have also been reflected in the shops in the euro area.

China also exerts an indirect influence over price formation in other countries. Companies and their products must be able to compete on the open world market, in China every bit as much as elsewhere. Competition for jobs is also worldwide in many sectors. When production can be more freely located close to major markets and in low-cost economies, this gives employers in eg the euro area a stronger position in pay negotiations at the expense of their employees.

This article considers the significance of the different channels through which China influences prices in the euro area. Before that, however, we shall take a brief look at some background factors relating to the Chinese economy, starting with a review of Chinese inflation in recent years and a consideration of what factors could generate price pressures in the future.

China has kept inflation under control

During the period of economic reforms, China has successfully combined extremely rapid growth with low inflation (Chart 1). In the first half of the 1990s, the Chinese economy was overheating, primarily as a result of the rapid pace of growth in lending and investment, and record GDP growth of 14% fuelled annual consumer price inflation that, at its worst, reached over 20%. Later, in the second half of the 1990s, prices in China were inclined more to fall than rise. The background to this deflation was a rapid improvement in productivity. But characteristic Chinese features such as a high investment ratio and consequently tough competition, and possibly even overcapacity, also eroded companies' pricing power.

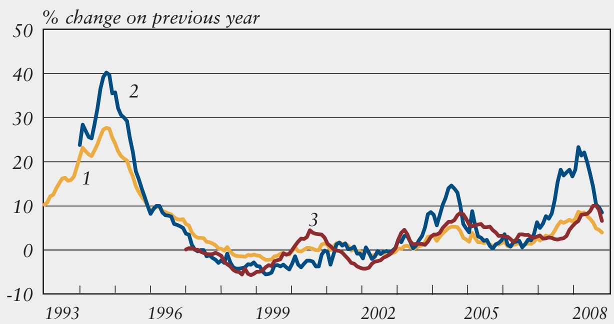
In 2004, production problems with cereals brought a brief acceleration in consumer price inflation in China. The same phenomenon occurred again a couple of years ago, and at the beginning of 2008 inflation touched a momentary peak of almost 9%. This was partly for the same reasons as in the brief inflationary peak of 2004: problems with food production. An outbreak of disease restricted pork output, leading to a rapid rise in the price of meat products. At the same time, the strongly import-dependent cooking oil and soy beans became more expensive worldwide due to poor harvests and a simultaneous increase in demand for foodstuffs as many countries increased their use of biofuels.

Extremely high raw material prices were still pushing up producer prices in China in summer 2008, but a simultaneous slowing of demand growth prevented companies passing their higher production costs on to final product prices. The statistics rather suggest that companies absorbed their higher production costs in the form of a substantial deceleration in the pace of rise in profits.

In order to prevent economic overheating and control inflation, China tightened its monetary policy in autumn 2007. One effect has been to restrict growth in construction and thereby substantially ease price pressures in recent months. Slower economic growth worldwide has reduced demand for goods produced in China and therefore also restricted growth in the Chinese economy. In November, consumer prices were only 2% higher than a year earlier.

Chart 1.

Chinese consumer and producer prices plus the price of food



1. Consumer prices (incl. food)
2. Price of food
3. Producer prices

Source: Chinese statistical authorities.

Growth will eventually lead to higher prices

From the perspective of keeping the value of money stable, the most important element has been the success of China's monetary policy. Daily decision-making and implementation of monetary policy have taken place within a framework created by the pegging of the renminbi to the dollar, tight restrictions on capital flows and the phased reform of the financial sector. Although the central bank has to submit important monetary policy decisions for approval by the government, price stability has remained one of China's key economic policy objectives. An inflationary economic policy was not adopted even in the aftermath of the Asian crisis around a decade ago, when there was a substantial slowdown in the pace of Chinese growth.

In economics it is a generally acknowledged fact that countries with lower levels of income also have lower prices than countries with higher levels of income. This is because productivity in sectors open to foreign trade is much higher in the wealthiest countries than in poor countries. In contrast, the differences in productivity between countries are smaller in sectors that are less exposed to foreign trade, such as services. However, it is often the case that wages in wealthy countries are much higher than in poor countries in these sectors, too, as pay rates in different sectors within a country tend to follow each other fairly closely. As a result, the general price level in a wealthy country ends up being higher than in a poor country.

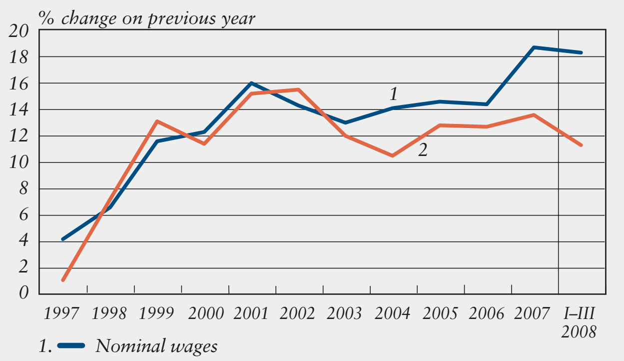
Economic growth is, in fact, often closely related to rising price levels, in the manner outlined above. This has been the case in the new member states of the EU, for example, where prices have risen hand-in-hand with economic growth in approaching the level of the old member states.

In China, too, growth is expected to eventually lead to higher prices. To date, this, known as the Balassa-Samuelsson effect, has not occurred, due particularly to the sheer size of the Chinese labour force. With a substantial proportion of the labour force underemployed, particularly in the countryside, and wages agreed mainly at a very local level, the negotiating power of employees has been extremely weak. As a result, wage development among the uneducated labour force has more or less stood still for years even in those sectors where productivity has been growing rapidly.

Wage development among the educated labour force, which is what official statistics on wages mainly depict, has been very different. The pace of wage rises was already accelerating appreciably at the turn of the millennium, and real wages have subsequently grown at over 10% per annum (Chart 2).

Chart 2.

Average nominal and real wages*



** The figures do not include private sector wages.*

Sources: Chinese statistical authorities plus authors' own calculations.

We can, however, already discern the first signs of upward movement in the wages of uneducated labour as well. The long period of sustained economic growth has already drawn a large proportion of the underemployed rural population into the cities to work, and newspaper stories tell of numerous villages that have lost an entire generation of young adults. On the other hand, rising prices for agricultural products have raised the standard of living in the countryside, too, in recent years. This has removed some of the attraction of low-paid work in the cities, particularly when it is extremely difficult for country people to get an official residence permit for city living. This, in turn, makes it very hard to arrange accommodation, health care or school for their children. Prior to the current downturn, there were increasing stories of the recruitment difficulties facing companies on the Chinese coast that pay very low wages.

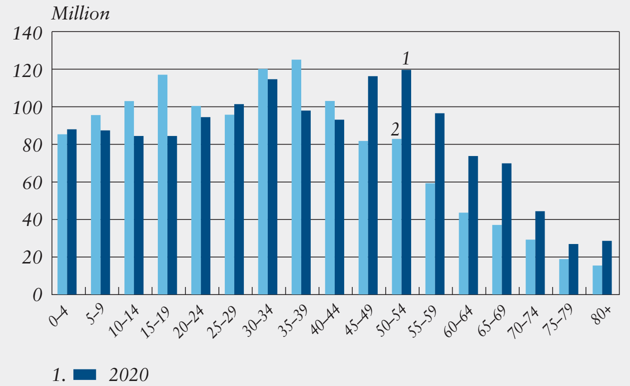
A contraction in the size of the Chinese labour force, which is expected to begin just a few years from now, will in the future increase upward pressures on pay levels. The one-child policy has slowed population growth, and the Chinese population will start to age, with young age cohorts smaller in the future and the number of old people rapidly growing (Chart 3).

Major structural changes in an economy take time. It is generally estimated that increased agricultural efficiency and the consequent migration from the land to the cities will continue to augment the supply of labour in manufacturing and service sectors for several years yet. Growth in demand for services brought about by increased wealth will further fuel migration to the cities. Some assessments envisage massive migration continuing for 20 years still. Moreover, the wages of uneducated workers are so low that even large increases will not significantly alter the level of wages in China relative to wage levels in the developed economies.

Thus, the Chinese authorities' most important objective remains to increase the number of jobs by several million each year, although they are also aiming for a controlled increase in the level of wages. In some areas the authorities have increased the level of minimum wages in recent

Chart 3.

Population by age group in 2005 and 2020



Source: UN population forecast 2006.

years at a very rapid pace. There is, admittedly, much room for improvement in abiding by the minimum wage requirements, particularly in the most slowly developing areas. The higher minimum wages are, nevertheless, helping to push up the general level of wages. Moreover, the new labour contract law that came into effect a year ago will, at least in principle, improve the position of employees and increase the costs on employers.

In addition to rising wages, more active environmental protection will also serve to push up production costs. Until recently, the observation of environmental legislation has been largely dependent on the actions of local authorities, but the central government has in its recent statements clearly indicated the increased importance it attaches to environmental protection.

The Chinese authorities are also able to influence prices directly by dismantling price controls. Although, officially, only a few per cent of consumer prices are regulated, the very recent deregulation of retail fuel prices was highly desirable, if only for the positive impact this will have on energy efficiency.

Productivity development a key issue

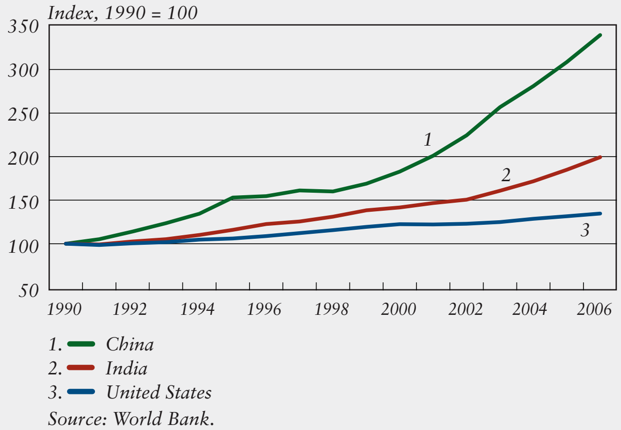
So far, companies operating in China have been able to compensate for rising production costs by improving productivity. When a larger quantity of usable steel is produced from the same amount of iron ore, or twice as many mobile phones are produced in the same number of working hours, the prices of the final products can be kept unchanged despite rising wages or higher raw material costs.

In the years ahead, productivity growth will continue to be an important factor in Chinese price developments. Chinese productivity is still very poor compared with the world's leading economies. Output per worker is, however, growing very quickly (Chart 4). The efficiency of the Chinese economy can easily be improved through labour force training, reorganisation of work and the introduction of new, more efficient technology. Here, China's position in catching up with higher-income countries is rather attractive, as it allows the adoption and adaptation to their own needs of

China's central government has in its recent statements clearly indicated the increased importance it attaches to environmental protection.

Chart 4.

Trends in output per employee in India, China and the United States

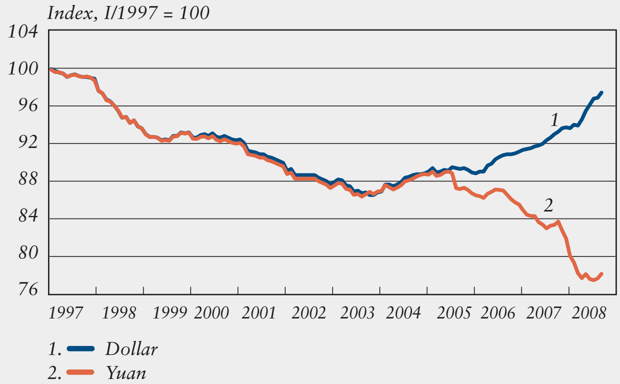


Source: World Bank.

Chart 5.

Trends in Hong Kong's re-export prices

Index, I/1997 = 100



Source: Hong Kong's statistical authorities.

technology developed elsewhere. There is no need to invent entirely new technology in order to boost productivity.

Chinese prices have a direct impact on inflation in other countries

The impact of Chinese price developments on inflation in the euro area is hard to assess due to the lack of detailed statistics. The best way to get a picture of recent price trends is to examine the price data on goods imported from China collected in recent years by the United States.[1] Only a few years ago both yuan and dollar-denominated prices of these goods were declining. Within the past two years, however, the dollar-denominated prices of Chinese goods have begun to rise, and in September 2008 they were 3% higher than a year earlier. This would, however, appear to be a consequence of the Chinese currency's strengthening relative to the dollar, as the yuan-denominated prices of Chinese goods have continued to fall rather than rise.

Statistics from Hong Kong provide a similar picture (Chart 5). It used to be the case that goods that passed through Hong Kong became cheaper year on year, but in recent years this trend has been reversed. However, if, instead of the Hong Kong dollar, which is tightly bound to the US dollar, we examine the prices of Chinese goods in terms of China's domestic currency, the downward trend in prices appears to have continued until 2008. It would now appear to have come to an end, but, as yet, there is no sign of an upward trend.

Several studies have been conducted into the impact of falling Chinese prices on inflation figures in Western countries.[2] They have all come to the same conclusion: developments in China, or globalisation more generally, have had little direct impact on price trends in developed economies. A general assessment is that increased international trade and the entrance into the production chain of low-cost economies such as China have eased the pace of inflation in recent years by at most just a few tenths of one per cent.

[1] The US statistics take account of improvements in product quality.

[2] Côté & de Resende (2008); Feyzioglu & Willard (2008); IMF (April 2006) World Economic Outlook; Kamin, Marazzi & Schindler (2004); Kumar et al. (2003); Morel (2007) and Wheeler (2008).

These results are understandable if we consider how small a share of our consumption is taken up by products made in China. In most euro area countries, consumption of Chinese goods corresponds to under 2% of GDP. Price fluctuations in such a small segment of consumption can make little difference to inflation even in the short term.

A more significant impact on inflation follows from growth in the market share of Chinese goods. When expensive goods are replaced with less expensive ones, the impact on the overall level of prices can be considerable. China's share of imports to the euro area has grown substantially in recent years (Chart 6). The average figure for 2007 was almost 6%, compared with less than 3% at the start of the decade.

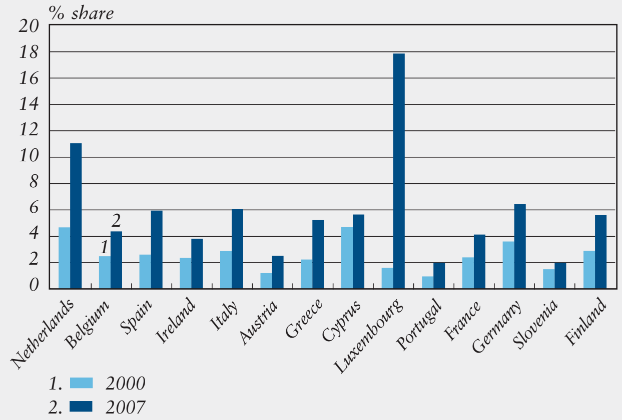
Chinese growth boosts competition

In the case of some products, China's emergence as the driving force of the world economy has actually caused considerable movements in prices. The rapid rise of China and other emerging economies to become major consumers of raw materials is in fact considered to be the main cause of the recent peak in commodity prices.[3] For example, China has become the world's largest consumer of iron ore and steel, and the second largest consumer of crude oil, after the United States (Chart 7).

The rising standard of living has also led to increased consumption of food products in China. The change in diet brought by higher incomes has caused particularly rapid growth in consumption of meat and milk.

Chart 6.

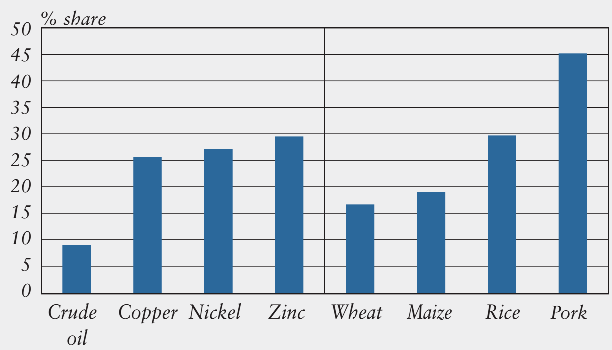
China's share of imports by euro area countries



Source: Eurostat.

Chart 7.

China's share of world consumption of selected commodities and foods



Sources: BP, ICSG, INSG, Antaike and USDA.

[3] IMF (October 2008) World Economic Outlook.

Although China is highly self-sufficient in food production, increased consumption in China combined with a number of other factors to rapidly push up world market prices for food in 2007 and early 2008.

Besides its effect on competition for raw materials and energy, China has also caused increased competition between companies. For European companies, competition with Chinese products is familiar both in the domestic market and in export markets. On the other hand, production specialisation means there are considerable differences between countries in eg the euro area in terms of whether they compete in the same products as China. The overlap with Chinese output is most marked in the southern European countries of Italy, Greece and Portugal, where textiles and shoemaking play a prominent role in the economy. In Finland, electronics occupies a large role similar to in China.[4]

Price stability has remained one of China's most important economic policy objectives.

At the same time, the possibility of investing in a lower-cost country and close to rapidly growing markets is increasing competition for jobs. The competitive impact of the opening of the Chinese economy on wage levels in OECD countries is, however, so far estimated to be small.[5]

Globalisation will not end with China

In contrast to many other emerging economies, China has for the past three decades successfully combined rapid economic growth and low inflation. Even occasional inflation peaks have not led to an inflation-feeding wage and price spiral. The most important element in preserving stability in the value of money in China has been economic policy. China has not taken refuge in inflationary politics, with price stability consistently being one of its most important economic policy objectives.

If China's rapid growth continues, wage and price levels are expected to gradually approach those of its wealthier competitors. Rising wages would then presumably increase the role of consumption in the economy at the expense of the present over-emphasis on investment. This would be a very positive trend.

To date, it is mainly just the educated labour force that has been able to benefit from wage rises. The pay of uneducated workers has remained almost unchanged due to the large reservoir of labour. Declining labour force growth will in future lead to increased competition for uneducated labour as well. However, with wages in this sector of the population averaging only a few per cent of equivalent wages in eg the euro area, a substantial adjustment in the direction of wage levels in developed economies will take years.

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4 Soares Esteves & Reis (2006).

5 Côté & de Resende (2008).

In addition to labour costs, companies' production costs in China will also be pushed up by their increased obligations in the area of environmental protection. Higher costs can, however, be compensated for by improvements in productivity. This is, of course, nothing new, as the transfer of labour from agriculture into more productive sectors of the economy, improvements in the educational level of the work force and the introduction of new technology have thus far, too, been the main engines of Chinese growth.

Although the many years of sustained economic growth have already raised China into the ranks of the largest economies, the impact on consumer price inflation in the euro area has so far been estimated to be rather small. China's large labour force has made production of many consumer goods much cheaper, and as these products have captured market share from more expensively produced goods, inflation has slowed. The impact is estimated to have been a few tenths of one per cent in recent years. China is also causing increased competition within markets. Competition between companies is increasing, but workers in many industries are also being forced into a global competition for jobs, which may erode the scope for pay rises. China is also exerting an upwards pressure on some prices. China, which has been described as the world's biggest commodity guzzler, was the main cause of the peak in commodity prices earlier this year. Growing consumption in China is also increasing competition for energy and food.

In the long term, the pace of inflation is determined by monetary policy, but the short-term impact of China on euro area inflation will grow hand-in-hand with the general increase in China's weight in the world economy. On the other hand, the increasing level of wages or other production costs in China could encourage companies to move production once again to other, lower-cost countries. This would mean the prices of some products could fall even further than they have so far. The first signs of this have already been seen, with companies moving production units away from China's newly wealthy coastal areas, either to inland provinces or neighbouring countries. Meanwhile, China is now moving into production of new high-tech products, which will mean increased competition on the world market, for example in the manufacture of products such as ships, cars and aircraft.

Keywords: China, inflation, monetary policy

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Electronic invoicing means more efficient and greener payments

3 November 2008

Efficient, electronic and standardised payment transmission can boost productivity in the economy. Already since the 1980s, electronic banking services have been bringing the benefits of automation not only to banks, but also to their customers. These benefits could be further enhanced by the widespread use of electronic invoicing.

Technology does not present an obstacle to the widespread implementation of electronic invoicing. There is, however, room for improvement in cooperation between invoicers, invoicees and invoice operators, if this service, which is unanimously recognised as a good thing, is to be effectively utilised. In an ageing society, we need to take advantage of all opportunities to boost output.

At present, the greatest need is for standardisation of the form and functionality of electronic invoices so as to enable both consumers and businesses to use electronic invoicing for more efficient management of their finances. There are currently several different standards in use, which has discouraged small and medium-sized enterprises, in particular, from adopting electronic invoicing.

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Economist
Financial Markets and Statistics

Electronic invoicing offers clear benefits to both consumers and businesses

Electronic invoicing dispenses with the need to manually key in account and reference numbers before payment. When a consumer or business adopts the receipt of strictly formatted, automated invoice data, the manual errors that typically occur in handling paper invoices are reduced and the invoice and payment process becomes faster.

Compared with paper invoicing, the electronic invoice offers either the same or more flexible opportunities

What is an electronic invoice and how does it work?

- In electronic invoicing, the payer receives the same information as is contained in a paper invoice sent through the post, but in digital form using data interchange connections. Digital information can be processed automatically in both the invoicer's invoicing and ledger system and the invoicee's ledger and payment system. Electronic invoicing does away with the need to type in information when paying an invoice.
- Electronic invoices can be sent either directly from the invoicer to the payer in a manner mutually agreed between the two parties, or sent via various operators. Banks and numerous other service providers such as Basware, Itella and TietoEnator provide invoice intermediation services.
- Consumers can have electronic invoices sent directly to their online bank. Banks offer the choice of automatic payment, as currently with a direct debit, or after approval by the customer in his online bank.

for payment. The great advantage of electronic invoicing is that allows the invoice to be integrated with companies' and other organisations' financial management systems. In Finland, it is possible to arrange for electronic invoices to be sent straight to a financial management system or online bank.

Finnish consumers receive up to 300 million invoices annually, and businesses an estimated 180 million. There are currently a number of national projects and campaigns[1] being conducted with the aim of reaching a situation in the next few years in which the majority of paper invoices in Finland will be replaced by electronic ones. If, for example, Finnish consumers were to begin using electronic invoices, this could save as many as 2 million trees a year plus considerable quantities of water and fuel.[2]

If Finnish consumers were to begin using electronic invoices, this could save as many as 2 million trees a year.

When electronic invoicing is accompanied by electronic archiving, the need to save paper invoices and related documents will eventually disappear altogether. The storage of electronic invoices in an electronic archive would help in, for example, checking the period of validity of various types of guarantees and tax-related issues.

Studies of business-to-business invoicing show that it is the invoicee that benefits most from electronic invoicing. At European level, estimates based on the number of payments and companies' costs for processing invoices indicate that a switch to electronic invoicing could bring businesses annual savings in the range of EUR 100–240 billion. The greatest savings could be achieved by full automation of the invoice and payment process.

Seeking a common standard

Business transactions between large corporations have long been based on standardised data interchange, and their financial management is largely automated. Such corporations also have the expertise to further develop their electronic processes. The step to electronic invoicing has been easy to take.

There are, however, too many different standards currently available for electronic invoicing. The sectoral and even in-house invoice data requirements of companies operating on different types of resource base, together with the many different standards, have made it difficult particularly for small and medium-sized enterprises to switch over to electronic invoicing. With the introduction of the single euro payments area (SEPA) meaning the adoption in payments traffic of ISO standards and the XML format[3] familiar from data network applications, this would also appear to be a natural direction for electronic invoicing to develop in.

1 For more detail see www.finvoice.info/.

2 Estimate based on information available from PayItGreen. For more details see www.payitgreen.org/.

3 See eg http://en.wikipedia.org/wiki/XML.

A breakthrough is most strongly expected in electronic business-to-consumer invoicing. Many estimates indicate that consumers in other Nordic countries receive more electronic invoices than in Finland.[4] Change has been slow in Finland because the availability of general information on the different service formats has been poor and it has been impossible to bring the different types of invoice together into a single channel such as online banking. There is little work involved nowadays in catering to the payment needs of ordinary Finnish consumers, as the majority of Finns are used to paying their bills either through their bank's online anking facility or via direct debit. Against this backdrop, the campaign to convince consumers of the benefits of electronic invoicing has had to be planned very carefully.

Banks are working to promote electronic invoicing

In October 2008, an extensive e-invoicing campaign was launched under the leadership of the Federation of Finnish Financial Services. The campaign has led banks to harmonise their operating practices, with the result that consumers now find it easier to receive electronic invoices via a single channel. The service has been developed in order to ensure reliability, and the campaign has made it easy to start using it, with a cartoon character called Bill Virtanen guiding users into the world of electronic invoicing. The technology is presented to consumers in a careful and interesting manner.

Finnish banks have made it easy for their online customers to adopt the use of electronic invoices: instead of a direct debit, customers can choose either an automatically approved electronic invoice or an electronic invoice subject to separate approval before execution of payment. There is, however, still a need for more invoicers willing to issue their invoices electronically.

Everyone should demand their invoices electronically.

When a consumer becomes convinced of the benefits of the electronic invoice, it is vital to immediately supply a comprehensive service, ie an electronic invoice from as many invoicers as possible. According to a recent survey by Itella, the average member of the public in Finland receives 7–8 invoices per month,[5] so if only 1–2 of these are electronic, this is simply not enough. For this reason, and in addition to major invoicers such as electricity and telephone companies, it is particularly important to bring middle-sized invoicers, such as providers of a variety of everyday services, into the e-invoice project targeting consumers.

Some banks give advance warning of electronic invoices. Other banks, invoicers and electronic

[4] Bruno Koch, Billentis, see http://akseli.tekes.fi/opencms/opencms/OhjelmaPortaali/ohjelmat/INTO/fi/Dokumenttiarkisto/Viestinta_ja_aktivointi/Seminaarit/RTEsummit/Bruno_Koch_Billentis.pdf; and Itella Information, see footnote 5.

[5] For more detail see http://www.itella.fi/english/current/2008/20080910_e-invocing.html.

invoicing invoice operator providers will need to decide fairly promptly who will be responsible for providing payment reminders for electronic invoices. To forget is human, and from the perspective of consumers an advance warning, for example directly to their mobile phone, would be a useful service. Payment could then be approved or rejected by pressing an approve or reject button, as is the practice at present in online banking. Would it be possible for someone to develop an identifier for this purpose? Such a service would undoubtedly be widely welcomed.

Besides reminders, other key support services include clearing up mistakes and electronic archiving. Questions and complaints will need to be at least as easy to take care of as it is at present to sort out problems with paper invoices. Archiving practices, meanwhile, are still somewhat heterogeneous and require further development. For example, it is still undecided who will provide archiving, whether the availability and storage periods will meet the requirements of authorities such as the tax authorities, and if archives will be independent of the electronic invoice operator, so they will still be available even if a customer changes bank or invoice operator.

Banks, as payment processors, are advantageously placed in regard to electronic invoicing, which gives them a key role in achieving the breakthrough. In the pioneers of electronic invoicing, such as Norway and Denmark, the breakthrough for consumers has been based on a single channel. Besides the services provided by participants in the banks' campaign, however, consumers are also still being offered a range of different electronic invoicing services, operating models and transmission channels, which can cause confusion. It would, therefore, be good if the various different projects could come closer together.

Transparent pricing is an effective way to influence service usage, and some invoicers have already begun to use their pricing structure to guide their customers. Consumers are hardly likely to want to pay more for the use of payment services than they do at present, but an additional charge for a paper invoice may well be justified if the invoicee requires a paper invoice through the post even when the alternative of electronic invoicing is readily available. On the other hand, it would also be justified to expect companies to pass on to their invoicees some of the savings from the rationalisation of their operations. A small discount on electronic invoices could be both effective and more efficient than punitive pricing in guiding consumers to switch from their current payment habits to the use of electronic invoicing.

Electronic business-to-business invoicing

In many of the countries that have been pioneering the use of electronic invoices, it has been shown that the attitude of invoicees is of central importance to the advance of the new service. When invoicees demand their invoices electronically, invoicers, too, are compelled to enter the age of electronic invoicing. Businesses can achieve extensive benefits by automating their entire invoice reception process. Meanwhile, small companies that have, for example, outsourced their financial management and accounting can already gain considerable benefits if their service provider decides to accept invoices electronically.

Companies' differing requirements regarding the presentation and information content of invoices must be taken into account, but the goal should nevertheless be to harmonise the different types of invoice. Achieving widespread use of electronic invoicing will require teamwork, and if necessary will also require concessions from the different types of company. This can only be achieved through compatability between existing invoice formats or the centralisation of formats. This should be a priority, as businesses must be able to trust the continuity of invoice formats in a changing operating environment.

Common standards can be achieved despite different requirements.

It is also important to closely follow progress in international projects (see Table). As the European Commission has designated electronic invoicing as one of the most

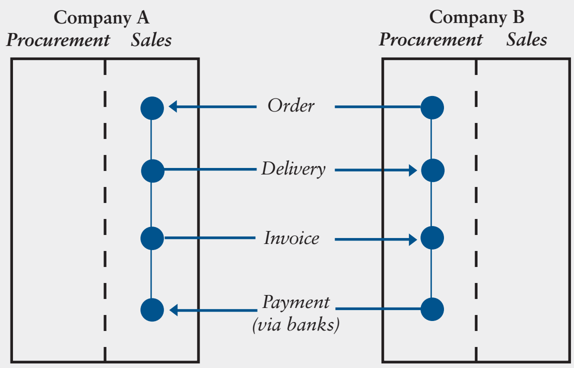
Table.

The most important current projects

Global projects	***United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT)*** – Fosters uniform exchange of data between private and public sectors. Developed, among other things, an international, cross-industry invoice. The new version of the basic invoice currently being developed is intended to bring international standardisation projects closer together.
EU-level projects	***Expert Group on European Electronic Invoicing (EEI)*** – The objective of the EEI is to establish a European Electronic Invoicing Framework (EEIF) to foster the emergence of open and interoperable electronic invoicing services in Europe.
Finnish projects	***A number of concrete projects to foster electronic invoicing*** – Projects figureheaded by the Federation of Finnish Financial Services and the banks; the Finnish Information Society Development Centre, TIEKE and large corporations; and service providers such as Basware, Itella and TietoEnator. A breakthrough in electronic invoicing in Finland requires the bringing together of these separate projects.

Chart.

The trading process as commonly depicted



Sources: EBA and Innopay.

important development projects for boosting European competitiveness, electronic invoicing in Finland will need to be developed in the long term as part of the European project.

The processes of different types of company can be successfully connected to electronic payments if we set the goal of an international generic invoice that is open and inter-operable in both form and structure. This would allow companies to select the invoice content best suited to their own business needs. The invoice process is very closely interlinked with a company's other business processes (see Chart).

In Finland, in response to an initiative by large corporations, the emphasis is currently on improving operating models for sending and receiving invoices.[6] The goal is for the project to make it easier for small and medium-sized enterprises – that can serve as subcontractors to large corporations – to also switch to using electronic invoices.

The aforementioned project is solidly based, as work is progressing in the direction of XML-based invoice formats, such as Finvoice and TEAPSSXML. These can be considered sustainable solutions of similar type to that which the European Commission's expert group on the harmonisation of electronic invoicing is also seeking. European payments are also going over to XML format.

It is essential that projects by non-financial corporations are coordinated with the projects of banks and the public sector. By committing itself to the common invoice format of the business sector, the public sector could be a genuine pioneer in the large-scale adoption of electronic invoicing. This will require central government, both as invoicer and invoicee, to make its possible special needs known in good time, thereby enabling official requirements to be incorporated into the data content of electronic invoices from the outset and allowing the public sector to directly utilise the electronic invoice formats that are in general public use. The local government sector, as a significant invoice processor, should then quickly follow this example.

Thus, the first requirement for achieving a model for an electronic

[6] For more details see http://www.tieke.fi/in_english/_ebusiness/einvoice/.

invoice that is independent of the size of a company and the industry it operates in is an appropriate solution for the issues of data content. In practice, this means agreeing to move from the present situation, where there are many different standards in use at the same time, to a situation where there are just a few standards for general use – the data content of which could vary as needed – and strict instructions for their application. Electronic invoices will also need to be incorporated as a standard feature of invoicing programs.

There are clearly only a few obstacles still to be overcome on the path to electronic invoicing in the business-to-business field. The strategic resources for development and cooperation already exist. The question remains: who should take responsibility for achieving the breakthrough in practice?

The Finnish Information Society Development Centre, TIEKE has been taking a leading role in developing solutions that are compatible both technically and in terms of data content. The 'Ubiquitous information society' project included in the Government Programme of the present Finnish government has its own working group for promoting electronic invoicing, which is seeking a breakthrough in the use of electronic invoices in the public sector. Success in developing common standards would benefit all ongoing projects and considerably ease the progress of electronic invoicing as a whole.

Even so, all available assistance is essential if Finnish small and medium-sized enterprises are going to reach their target of being able to send and receive most of their invoices in electronic format within the next 2–3 years. It is therefore important to get systems suppliers, who provide support to the companies they supply, and outside contractors, who handle payments traffic and provide accounting services to corporate clients, involved in electronic invoicing projects. Such involvement enhances their knowledge base and potential influence, while also lowering the threshold for adoption of electronic invoicing.

Data security is fundamental to electronic invoicing

Advanced data security solutions are an obvious component of payment services and electronic invoicing. However, it is possible to take electronic invoicing forward in ways other than via the security and data security solutions essential to payment services, if this is necessary for the useability of the service. Customer identification is one component of data security arrangements. A service is felt to be trustworthy only if sufficient attention is paid in the electronic transmission of invoices and in all support services to establishing the authenticity of origin and integrity of data content. Data security issues must be taken into account in designing the operating models for electronic invoicing both within Finland and as part of SEPA.

In the TIEKE project there has also been discussion of arrangements for the certification of electronic invoicing software and intermediaries. The use of certified service providers will allow companies to be certain the electronic invoicing they use has sufficiently high-quality data security.

The European Central Bank has required banks to commit themselves to creating and observing sound principles of data security in SEPA. This makes data security a part of the European electronic invoicing project. In addition to this, there is also a need to raise end users' – above all consumers' – awareness of data security and increase the available related support services.

Electronic invoicing boosts efficiency

All the prerequisites for an electronic invoicing breakthrough in Finland are now in place. What is now required is the desire on all sides to actually send and receive invoices electronically. Successful progress will require the various different projects to come closer together.

The introduction of electronic invoicing provides an opportunity to re-design the processes of both invoicers and invoicees. By looking at invoicing in a new light, it will be possible to achieve significant benefits. But even small changes can allow participants to share some benefits. The final outcome will be that electonic invoicing will facilitate a higher standard of service at a lower cost.

A unified national view on developments will make it easier to also contribute to international forums such as the European electronic invoicing project.

Keywords: e-invoice, payments, electronic invoice, Internet invoice

Organisation of the Bank of Finland

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