BANK OF FINLAND

BULLETIN

1 • 2006

Economic outlook

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Bank of Finland Bulletin 1 • 2006
Vol. 80
The Bank of Finland Bulletin is a quarterly publication.

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Edited

Bank of Finland Publication and
Language Services

Authors
Bank of Finland Economics Department

Subscriptions
Phone: National 010 8311,
International +358 10 8311
Email: publications@bof.fi

Printed
by Edita Prima Oy, Helsinki 2006

ISSN 0784-6509 (print)
ISSN 1456-5870 (online)

Bank of Finland
PO Box 160
FI-00101 HELSINKI
Phone: National 010 8311,
International +358 10 8311
Fax: +358 9 174 872
www.bof.fi

Preface

The effects of higher oil prices on world economic growth and inflation have been less pronounced than was feared. Nor have imbalances in the global economy led to disturbances in financial markets. Abundant savings and paucity of investment outside the United States have eased the financing of the large US current account deficit. This situation seems set to continue for at least the next few years. According to the Bank of Finland's latest forecast, the world economy should continue to post robust growth. The most recent data on euro area economic developments have been mainly positive, and the area's economic growth is expected to pick up in the course of the year.

The European Central Bank has raised its policy rate twice since last autumn, by a total of half a percentage point. Market interest rates have risen by slightly more than that. Both long and short-term euro area rates are still very low in nominal and real terms, and the monetary policy stance of the Governing Council of the ECB remains accommodative. The Governing Council's interest rate decisions have been driven by upside risks to price stability. The decisions made will help to ensure that medium to long-term inflation expectations in the euro area remain anchored at levels consistent with price stability, which is necessary if monetary policy is to support sustainable economic growth.

Low interest rates, narrow interest rate margins and longer loan periods have maintained buoyancy in the housing and mortgage loan markets in most euro area countries. The rise in housing prices in Finland has roughly matched that for the euro area on average. The risk of local excesses in housing price movements has increased.

With the growing stock of housing loans, household indebtedness has reached a record high in Finland. However, the share of debt-servicing in disposable income has barely risen. The number of households with mortgage debt amounts to about a third of all households. The largest debt ratios are those of households where the principal provider is 35–44 years of age.

One reason for the rapid increase in indebtedness and the rise in housing prices is the low level of interest rates, which has also supported consumer demand and economic growth. The extension of loan periods and increasing of available options also enable many households to improve their housing conditions. This is a positive development provided that households take on debt with a realistic view of their income prospects.

The Finnish economy has grown at an average annual rate of 3% in recent years, which is more than twice the rate for the other euro area countries. Last year, growth remained lower, owing to the paper industry labour dispute, but will climb to 3½% in 2006. Excluding the impact of the paper industry dispute, annual growth would be about 3%. In respect of 2007–2008, our forecast calls for continued broadly similar growth of about 3%.

Accordingly, the outlook for growth is fairly good, and economic developments mainly balanced. Investment activity is projected to gain momentum in

the next few years. Fixed investment is expected to grow on average by almost 5% per annum in the forecast period. The investment ratio for the economy as a whole should also increase during the forecast period. Nevertheless, the economy's capital stock will continue to decline relative to GDP.

Recent employment developments in Finland have been better than expected. The labour participation rate has risen notably for older age groups. However, despite the strong employment performance, unemployment has not declined.

The levels of both prices and labour costs in Finland are among the highest in the euro area. In the context of Economic and Monetary Union, it is natural that the corresponding rates of increase would be lower in Finland than elsewhere in the euro area. And, in fact, Finland has in recent years enjoyed the lowest rate of inflation among the euro area countries, which has in turn contributed to price convergence with the other euro area countries. However, there has not been any narrowing of labour costs. Hourly labour costs have risen slightly faster in Finland than in the other euro area countries in recent years.

It is assumed that labour costs will continue to rise at a moderate pace in the next few years, and there are no other significant inflationary pressures in view. While accelerating slightly, the overall rise in the price level should remain clearly below 2% in 2007 and 2008.

The predicted growth rate of some 3% that has been prevailing in recent years is probably somewhat higher than Finland's potential output growth. Potential growth reflects the economy's long-term growth prospects. Indications of actual growth exceeding potential growth are the gradual eroding of the current account surplus, the worsening of the mismatch problem in the labour market, and the very low savings rate of households.

Although labour shortages are mainly problems specific to sectors or regions, these will already start to have a dampening impact on growth of both the number of employed and the economy as a whole during the forecast period. The protracted high level of unemployment has in fact permanently dislodged a part of the labour force. Ongoing labour supply problems will tighten the labour market further still, as the labour force grows more slowly due to population ageing and later begins to shrink. Therefore, we probably need to be prepared very soon for a marked decline in average economic growth.

As potential output growth slackens due to population ageing, the prospects for financing the ageing-induced expenditures will weaken. The critical factors will be those that can augment productivity. Statistics point to a decline in productivity growth in Finland in recent years. The electronics industry, previously a driver of productivity growth, is already in part a mature industry. Productivity growth has long been very slow in a number of traditional industries and service sectors. This means that there is room for improvement. Productivity can also be enhanced in the public sector by

introducing new methods of organising work and by applying new technologies.

Besides employment, the public sector has also been a source of positive news. Last year central government finances were considerably stronger than foreseen as late as last autumn. As the agreed spending limits were adhered to and tax revenue increased faster than forecast, central government finances recorded a clear surplus last year. Besides the surplus, income from asset sales has also helped to reduce the central government debt. Meanwhile, the value of investments by employment pension institutions has risen along with the rise in stock prices in particular. The net position in public finances has thus been fundamentally strengthened.

As regards long-term pressures, the improvement in public finances constitutes a significant structural change. The central government surplus and increased pension assets will reinforce the fiscal cushion for meeting the growth in ageing-related expenditures. The pressures for raising pension contributions will ease if higher investment income also enables preparation for the expected increases in pension expenditures.

Provided the budgetary discipline continues, as assumed in the forecast, the pressure for tightening taxation will also diminish over the long term. Pressures from international tax competition also limit the scope for tax rate increases. It is therefore of vital importance that spending limits continue to have a high priority in budgetary policy in the coming years. Successful conduct of such a tight spending policy would also be significant internationally. Once government finances are in surplus, pressures for more spending could easily start to mount.

While the budgetary position under this forecast scenario appears better than expected, the savings rate of households will remain very low. With ongoing build-up of debt, households' net financial assets will not increase at all. For the economy as a whole, preparation for population ageing will thus even more clearly depend on public finances. As regards the diversification of financial markets, private saving should play a bigger role, in both absolute and relative terms.

21 March 2006

Executive summary

The Finnish economy is expected to post robust growth over the next few years.[1] Output should develop strongly relative to the economy's production capacity. Domestic demand growth, firmly supported by private consumption and construction investment, is expected to spur an increase in imports and reduce the current account surplus. A number of sectors will be confronted with production constraints on a wider scale in densely populated areas, because of shortages of labour with suitable skills.

Finnish GDP is predicted to increase at an annual rate of about 3% in 2006–2008. According to preliminary data, GDP growth slowed to 2.1% in 2005, due in part to the paper industry labour dispute. The labour dispute will also be reflected in growth figures for 2006, when GDP growth is projected to accelerate temporarily to 3.4%.

Consumption demand by households and housing investment have played a prominent role in recent economic developments. Households' real disposable income has increased rapidly in recent years, along with improved employment, lower taxation and modest consumer price increases. Consumption and particularly housing investment have also been boosted by the low level of interest rates, and household indebtedness has continued to expand rapidly.

In the forecast period up to 2008, private consumption growth is predicted to continue at a fairly strong pace. Household consumption is expected to increase broadly in line with household real income, which is set to grow thanks to higher earned and capital income as well as low inflation. According to the forecast assumption, there will be only a moderate rise in interest rates, which should contribute to sustained strong demand for housing. However, growth in housing investment is estimated to decelerate to an extent during the forecast period, as shortages of building land and skilled labour begin to constrain housing construction. Housing prices are expected to rise further in the forecast period, albeit at a gradually receding pace.

Investment in productive capacity (private fixed investment excl. housing) has been sluggish in recent years, as particularly investment in equipment and machinery has remained at a low level. The conditions for an increase in investment seem to be in place, as demand prospects and corporate financial results have remained good and the price of financing advantageous. Investment is forecast to pick up in the next few years, even if the rate of increase remains slower than the fairly fast pace observed in the latter part of the 1990s.

Finnish foreign trade growth accelerated in 2005. Imports were particularly sizable, but exports also increased sharply despite the paper industry labour dispute. The pick-up in foreign trade growth was largely due to an increase in re-exports of mobile phones and cars to Russia and other countries and a consequent boost to export and import figures. Besides re-exports, imports were also spurred by domestic demand, while the rise in the world market price of oil also elevated the value of imports.

[1] The forecast's key variables are presented in Table 10, page 72. The cut-off date for data used in this publication is 6 March 2006.

A fairly sharp increase in imports is predicted for the next few years.

Finnish exports should also continue to post fairly strong growth over the next few years. Contributing to this will be the global economic environment, as imports are assumed to increase not only for Russia and other oil-producing countries but also for Sweden and the euro area countries. Growth in paper exports is likely to remain sluggish. In contrast, output and exports of the electronics industry and other industrial sectors are predicted to increase at a moderate pace.

The current account surplus is expected to continue shrinking in the next few years, especially because of a declining surplus on the goods account. This is due to weak developments in export prices relative to import prices in the context of a continuing subdued trend in export prices of paper and the high world market price of oil. In addition, export prices of electronics products are expected to continue to decline. However, the value of these products should still increase.

The world economy is predicted to post fairly strong growth over the next few years. The situation in Japan has improved substantially, the euro area economy is recovering, and developments in China appear to rest on a more solid basis than previously assumed. Robust growth in the United States is projected to abate moderately from the fast pace observed in the last few years. The effects of a higher oil price and gradual tightening of US monetary policy on world economic growth have remained rather modest. From the perspective of Finnish exports, oil price developments will determine whether in the near future exports are increasingly aimed at Russia and other oil-producing countries.

Employment in Finland improved considerably in 2005 following a few years of weaker performance. The number of employed increased rapidly in construction and a number of service sectors. The contraction in industrial employment came to a halt. The number of employed is predicted to increase in the next few years, albeit at a decelerating pace. Fast growth in services is set to continue, and increasing housing repairs should contribute to higher employment in construction. The number of persons employed in industry and the public sector is scarcely expected to increase.

Any increases in employment will be constrained by the fact that, despite the ongoing difficult unemployment situation, companies cannot easily find labour suitable for their needs in terms of professional skills. This is manifest in the country as a whole, although not all sectors and all parts of the country are confronting labour shortage problems. The protracted high level of unemployment has in fact permanently dislodged a part of the labour force.

Despite the already moderate tightening of the labour market, wage increases have remained modest. Even so, the real purchasing power of wages has increased sharply in recent years because of low inflation. Nor should problems related to the availability of labour be reflected in overall wage developments in the next few years.

Labour costs are estimated to increase moderately – also after termination of the current incomes policy agreement in 2007. Such wage developments should provide scope for improving employment conditions.

One factor behind the projected wage moderation is that, due to heightened global competition, companies cannot pass on their rising costs into prices of the products they sell, to the same extent as before. However, there is a risk that the tightening labour market will raise wages more than forecast in sheltered sectors.

The general government surplus increased in 2005, contrary to estimates by the Ministry of Finance and Bank of Finland as late as the autumn of 2005. Tax revenue grew more than projected thanks to favourable employment developments and strong private consumption. Underlying these surpluses is also the adherence to agreed spending limits in 2004 and 2005. According to the forecast, expenditures are assumed to remain within the agreed spending limits also in the future, and the ratio of general government surplus to GDP is predicted to stay close to 3% throughout the forecast period. The general government debt-to-GDP ratio (Maastricht criteria) should decline in the forecast period to just 37% in 2008. Meanwhile, pension funds are expected to expand so that their assets would reach 74% of GDP in 2008.

The forecast takes account of an average 0.6% reduction in the 2006 and 2007 income tax scales, as a consequence of tax cuts agreed in connection with the comprehensive incomes policy settlement. It is further assumed that the 2008 scales will be adjusted only for inflation. Despite these measures, direct taxes paid by households are estimated to increase slightly relative to GDP in the forecast period. Nor is the overall tax ratio, which takes account of taxes on wages as well as social insurance contributions and taxes paid by employers, expected to decline in the forecast period. Therefore, the overall tax ratio remains much higher than in the pre-recession years.

Inflation in Finland has remained very subdued. In 2005 consumer prices increased by less than 1%. Higher energy prices due to the rise in the world market price of oil have not led to a broad increase in consumer prices for other commodities. Strong output growth in emerging economies, notably in China, and their wider participation in world trade have led to greater demand for oil and hence to a rise in oil prices. At the same time, however, these changes have resulted in particularly subdued international price developments in a number of industrial products, such as home electronics and clothing. Inflation in Finland was also dampened by cuts in car and alcohol taxes in 2004 and 2005.

Consumer price increases are predicted to remain moderate over the next few years, at less than 2%. Besides the subdued price developments in industrial products, increases in service and foodstuff prices should remain benign. This is due to continued tightening of competition in a number of sectors in Finland and the projected wage moderation.

Financial markets

Recent months have seen stable financial market developments, as the outlook for the world economy remains favourable. Despite moderate increases, interest rates remain at a low level. Short-term real interest rates are still right around zero in the euro area, Japan and the United States, reflecting a broadly accommodative stance of monetary policy. Meanwhile, share prices have continued to rise also outside the euro area, Japan and the United States, as investors' willingness to take on risk remains unabated. Housing prices, too, have maintained their fairly strong upward trend in a number of countries. The foreign exchange markets saw a strengthening of the US dollar in 2005, and a weakening of both the euro and the Japanese yen, largely in response to financial market expectations with respect to economic growth and interest rates. Movements in external values of major currencies have been muted in the early months of 2006.

Interest rates

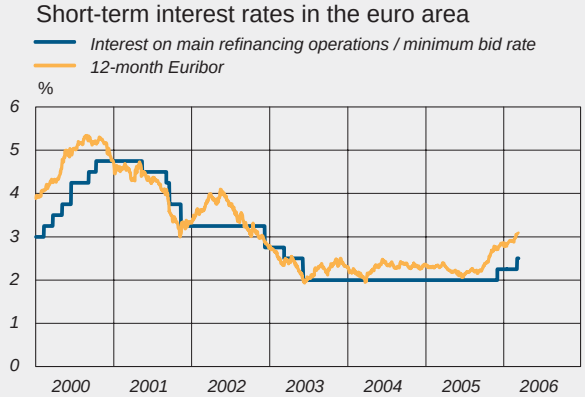
The Governing Council of the European Central Bank raised its policy rate by 0.25 percentage point in December 2005 and by the same amount in March 2006. Prior to these increases, the policy rate had remained unchanged for more than two years (Chart 1). Euro area money market rates have also risen in recent months.

The policy rate hike was driven by increased threats to euro area price stability, one of the concerns being the higher price of oil. Through its interest rate measures, the ECB Governing Council sought to ward off a strengthening of long-term inflation expectations. Despite the increases, the policy rate is still low, and euro area monetary conditions are clearly supportive of growth.

Financial market expectations of a rise in the euro area policy rate increased noticeably in autumn 2005 in the context of accelerating inflation and renewed economic growth. Expectations strengthened further after the December increase in the policy rate. The markets are anticipating continued moderate tightening of ECB monetary policy in 2006.

The US Federal Reserve has continued its series of hikes in the federal funds target rate, which commenced in mid-2004. In January 2006 the policy rate was 3.5 percentage points higher than in mid-2004. Meanwhile, the US economy has continued to grow at a robust pace. The financial markets are looking for the Federal Reserve to raise its policy rate somewhat further, even as they anticipate an end to the increases.

Chart 1.



Sources: European Central Bank and Reuters.

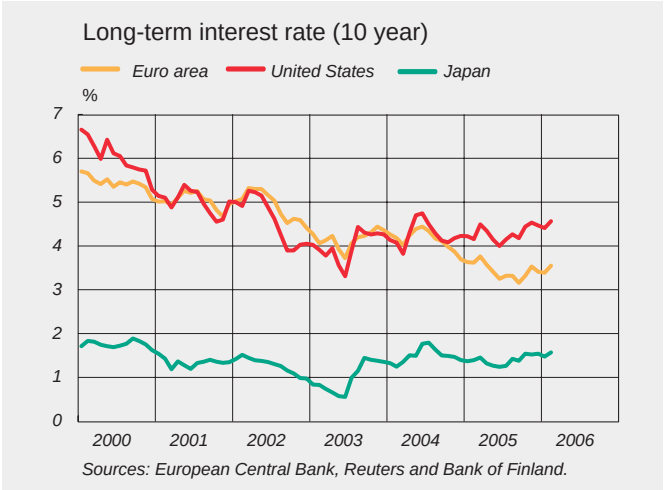
On 9 March 2006 the Japanese central bank announced a modification to its monetary policy framework, indicating that there will be a changeover from the previous quantitative easing towards a policy rate-based regime. However, the target level for the policy rate was still kept at zero. In the future, the Bank of Japan will also publish its outlook for longer-term inflationary pressures. The decline in Japanese consumer prices has recently shown signs of ending amid a pronounced firming of economic growth, which has been aided by exports and domestic demand. Financial market expectations of a rise in Japanese short-term interest rates gained momentum even prior to the central bank's announcement.

The Swedish central bank raised its policy rate twice in the early part of 2006, to the current 2%. The rate increase was intended to dampen longer-term inflation expectations in the face of recent data pointing to a recovery in economic growth. The Bank of England, in turn, has kept its policy rate unchanged at 4½%. Lower inflation and sluggish economic growth have held in place financial market expectations of a rate cut by the Bank of England.

Long-term interest rates have risen slightly in recent months in the euro area, United States and Japan (Chart 2). On the basis of index-linked bonds,[1] the rise in euro area long-term rates mainly stems from reinforced financial market confidence in strong economic growth over the next few years. In contrast, the rise in US long-term interest rates partly reflects an increase in inflation expectations. Even so, long-term interest rates, particularly in the euro area but also in the United States, are still very low compared to long-term trends. The rates also remain low in real terms.

Contrary to developments in the euro area and Japan, six-month and twelve-month US money market rates have climbed above the ten-year government bond yield, so that the yield curve has become inverted. Previously, such a situation typically anticipated a downturn in the US economy, as interest rates also reflect financial market expectations of economic growth. However, it is just now difficult to interpret the message of the yield curve slope, as the propensity to save is greater than the willingness to invest, and this is exerting downward pressure on long-term rates across the globe. The rates are also constrained by certain exceptional factors, such as a

Chart 2.



Sources: European Central Bank, Reuters and Bank of Finland.

[1] The real yield on bonds linked to the consumer price index does not depend on inflation and is thus widely used as a rough measure of the real long-term interest rate and financial market expectations of economic growth. Subtracting an index-linked bond yield from a standard government bond yield provides a measure of the market's long-term inflation expectations.

change in US accounting rules that has boosted the demand for long-term bonds. Widespread confidence in the central bank's ability to keep inflation contained in the coming years has also been cited as an explanatory factor for the low level of long-term rates.

The policy rate of the Chinese central bank did not change in 2005, even though monetary growth was slightly higher than targeted. Inflation has remained subdued. To boost household consumption, the central bank has encouraged commercial banks to increase their lending to households.

A number of Asian countries outside China and Japan have continued their monetary tightening in order to dampen inflationary pressures. Nonetheless, monetary policy rates in these countries are still generally relatively low. This has helped to sustain strong economic growth in many of the countries in the region.

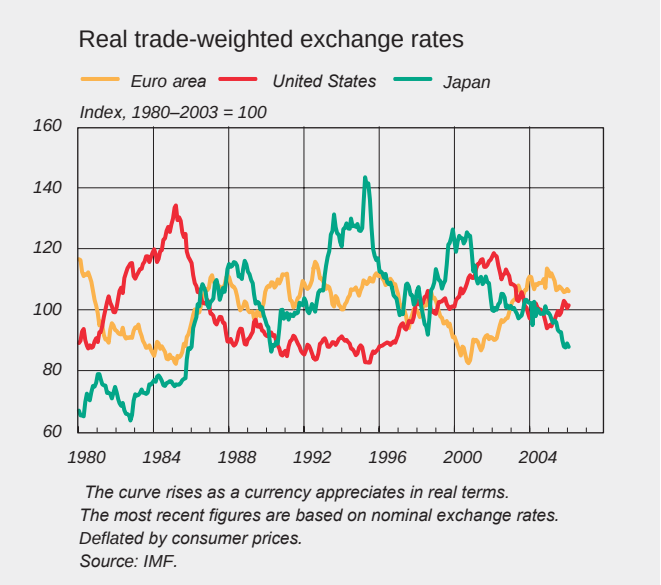
Spreads between corporate and government bond yields have increased slightly since mid-2005, in both the euro area and the United States. Yet, the spreads remain small compared with those observed in the early years of the 2000s. Narrow yield spreads continue to reflect favourable corporate profit performance and abundant financial market liquidity. As the terms applied to corporate bank loans have also remained fairly easy,[2] the overall debt financing conditions have been conducive to growth in corporate investment as well as to mergers and acquisitions.

Exchange rates

The euro continued to depreciate in the latter part of 2005 in terms of both real and nominal trade-weighted exchange rates (Chart 3). Euro depreciation however came to a halt at the start of 2006. The turnaround is apparently due to increased expectations of a rise in the euro area interest rate level. Financial markets have also interpreted brighter news for the area's economic activity as a positive development for the euro. The external value of the euro, measured by the real effective exchange rate, has remained close to the average of the 1990s.

The US dollar appreciated in the course of 2005, thanks to favourable economic developments and monetary policy tightening, which prompted a discernible rise in short-term market rates. Dollar appreciation however

Chart 3.



[2] The lending policies of both US and euro area banks are monitored via bank lending surveys conducted at regular intervals. See European Central Bank (January 2006), Euro Area Bank Lending Survey (ECB Monthly Bulletin 02/2006), and The January 2006 Senior Loan Officer Opinion Survey on Bank Lending Practices (www.federalreserve.gov/boarddocs/surveys).

decelerated at the start of 2006. This was influenced by strengthened expectations of a wind-down of monetary policy rate hikes in the United States, as the most buoyant phase of economic growth appeared to be over. The temporary heightening of geopolitical tensions may also have reduced the attractiveness of the riskiest dollar investments.

The US current account deficit remained above 6% of GDP in 2005. The importance of Asian central banks in financing the current account deficit has diminished since mid-2004, as foreign portfolio investments in US corporate debt instruments and shares have come to play a prominent role. Investors have gained confidence in returns from riskier portfolio assets.

With regard to the currencies of EU Member States outside the euro area, the Swedish krona, which had started to weaken in early 2005, recovered towards the end of the year and has since generally strengthened in effective terms. The krona has benefited from stronger financial market expectations of interest rate increases. The effective exchange rate of the pound sterling has undergone no major changes, and it remains very close to its average level of recent years.

The number of countries in ERM II increased by one in November 2005, with Slovakia's entry into the system. There are currently eight countries in the system.[3] During the period in which the Slovak koruna has participated in ERM II, it has strengthened vis-à-vis the euro by about 3%, but its value is still far from the upper limit of the system-based fluctuation band. Of the other ERM II currencies, the Estonian kroon, Lithuanian litas and Maltese lira have remained precisely at their system-based central rates and the others close to theirs. As regards the currencies of the other new EU Member States, the Czech koruna and Polish zloty have appreciated slightly since autumn 2005, as positive economic prospects have attracted foreign investment flows into these countries.

The Russian rouble has tended to strengthen further, with abundant oil income boosting the current account surplus. The central bank has sought to contain the appreciation of the rouble's nominal exchange rate through sizable interventions in the foreign exchange market, but in terms of the real effective exchange rate, the rouble has strengthened markedly. Inflation in Russia is also set to remain above 10% per annum.

The practical implications of the reform of the Chinese exchange rate regime implemented in July 2005 have been fairly limited. The Chinese yuan appreciated against the US dollar only marginally. The central bank's foreign exchange reserves have subsequently continued to expand as a consequence of interventions in the foreign exchange market that have dampened the yuan's appreciation. The yuan has nevertheless appreciated gradually in recent months, and futures market expectations of a further revaluation of the yuan have increased moderately (Chart 4). The

[3] ERM II is described in more detail in the Finnish-language article 'Uudet ERM II -maat ja talous- ja rahaliitto' by Harri Lahdenperä and Ilmo Pyyhtiä in the Finnish edition of the Bank of Finland Bulletin, Euro & talous 4/2005.

Chinese authorities have continued their gradual deregulation of the foreign exchange market, for example, by allowing commercial banks to engage in direct interbank foreign currency trading.

Of the other Asian currencies, the Japanese yen weakened notably in the latter part of 2005. The depreciation was probably related to the country's prevailing low level of interest rates, which induces foreign and domestic financial market participants to take on yen-denominated debt and reinvest it in higher-yielding assets of other countries. Yen depreciation ended in the first months of 2006, along with heightened expectations of a gradual tightening of the country's monetary policy. Even so, on the basis of the real trade-weighted exchange rate, the yen is still close to its lowest levels for the last 20 years. Meanwhile, the country's current account has shown a clear surplus.

The depreciation in summer 2005 of Asian currencies, excluding those of China and Japan, relative to the US dollar has ended, and these currencies have generally appreciated in recent months. They have benefited from foreign investment flows seeking high returns. At the same time, a number of Asian economies have posted ongoing robust growth, and market concerns about the sustainability of Indonesian fiscal policy, for instance, appear to have diminished.

Stock markets

The stock markets have continued to develop favourably in the second half of 2005 and in early 2006. Share prices have risen particularly rapidly in the euro area. By contrast, the strong rise observed in the Japanese stock market in 2005 has moderated somewhat in the early part of 2006. In the United States, share prices have continued to increase at a slower rate than in the euro area and Japan (Chart 5).

The strong stock market performance is largely based on the ongoing favourable development of corporate earnings, and particularly on

Chart 4.

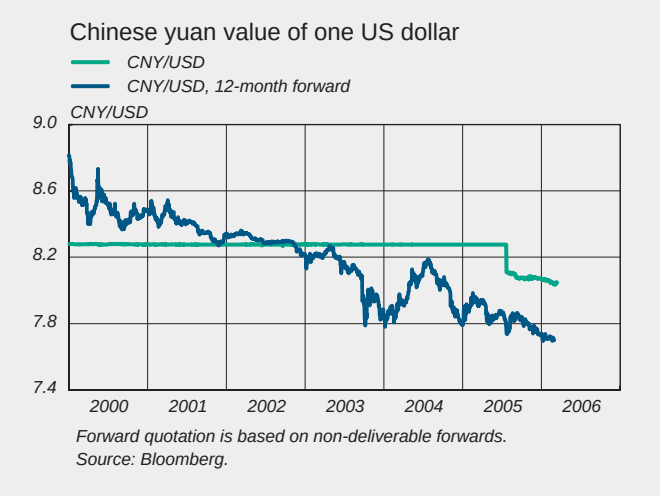
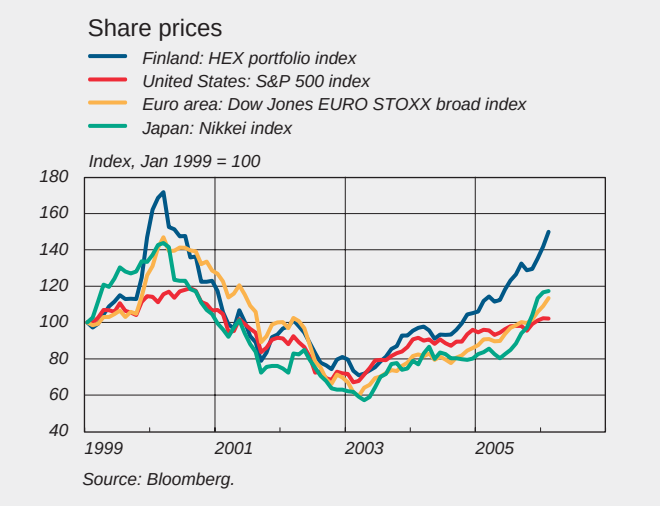


Chart 5.



investors' expectations of continued good corporate results. National accounts data show that corporate profit growth has been robust especially in the United States, where profit growth picked up again in the latter half of 2005. Profit growth has been more moderate in the euro area, although euro depreciation has apparently given an extra boost to exporting companies' share prices. In Japan, on the other hand, the recovery of economic growth and particularly of domestic demand has led to a clear improvement in corporate earnings expectations. Financial markets expect corporate earnings performance to be fairly strong in the euro area, United States and Japan also over the next few years, which reflects market confidence in the sustainability of world economic growth.

Share prices in these regions have also been boosted by the continued low level of interest rates. Low interest rates are positive for share prices, since they reduce the yields from alternative investments and hence increase the attractiveness of equity investments. The increase in corporate acquisitions has probably also contributed to recent share price increases.

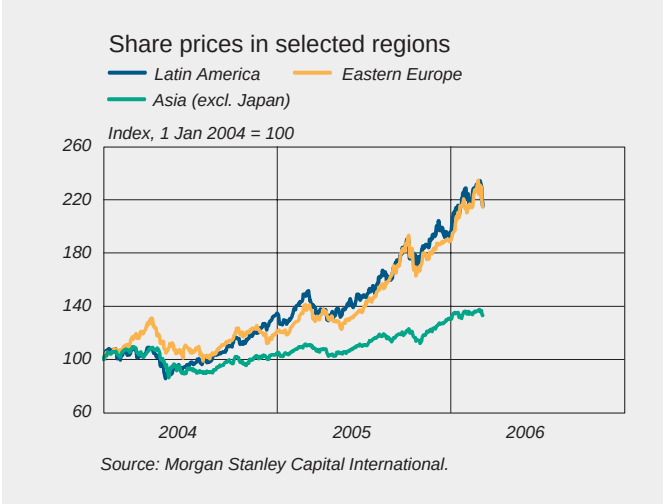
Share prices may also be buoyed by reduced uncertainty among investors, which is reflected in small risk premia. Risk premia can be estimated by the expected volatility of stock prices extracted from stock options. This indicator has recently remained clearly below the 10-year average level in the US and euro area. In Japan, risk premia measured in this way increased at the end of 2005 in the wake of alleged market manipulation by an Internet company.

Share prices have also continued to increase rapidly in other countries and regions. Investors' risk appetite has remained strong, which has particularly been reflected in share prices of the new EU countries and Latin America (Chart 6). Chinese share prices have turned slightly upwards after an extended decline. This is probably mainly related to increased opportunities for foreign investors to buy quoted Chinese shares.

In recent months, Finnish share prices have also continued to rise strongly, as measured by both the OMX Helsinki index and OMX Helsinki Cap index. In the latter index, the weight of one share is limited to 10%. Share prices have been buoyed by continued favourable corporate earnings growth. This is also evident from national accounts data on gross operating surplus in 2005, which continued the upward trend that began in 2004.

As regards share price performance of sectors in the OMX index, the

Chart 6.



Source: Morgan Stanley Capital International.

industrial goods and service sectors performed particularly well, whereas the ICT sector performed more moderately. Relative to corporate results, share prices in the ICT sector continue to be fairly high, particularly in the telecommunications sector. By contrast, the overall level of the OMX index is quite appropriate in light of actual corporate results.

Housing prices

Prices of old flats in Finland were almost 10% higher in December 2005 than a year earlier. Housing prices rose on average about 6% in 2005. At the same time, rent increased by just 2%.

Price developments varied fairly extensively across different housing market sectors. Prices of old flats in the Helsinki metropolitan area rose the most in the course of 2005, by over 10%.[4] Data on prices of detached houses is only available up to the third quarter of 2005: in that quarter detached house prices increased by about 5½% on the previous year (Chart 7).

The gradual interest rate rise does not appear to have affected housing demand significantly. According to a Statistics Finland survey, the number of households that have decided to purchase housing or to move rose somewhat in the course of 2005, whereas the number of households that were considering moving remained fairly unchanged.

The volume of housing construction turned up clearly in 2005 (Chart 8). The production of detached houses increased particularly strongly, whereas the production of blocks of flats was in November 2005 at the same level as in the previous year.[5]

According to barometer data from the Confederation of Finnish Industries, both construction order books and expectations of future order-book levels

[4] Regional differences in housing prices are discussed in more detail in Box 7 on page 59.

[5] Housing investments are discussed in more detail in section 'Demand' on pages 35–37.

Chart 7.

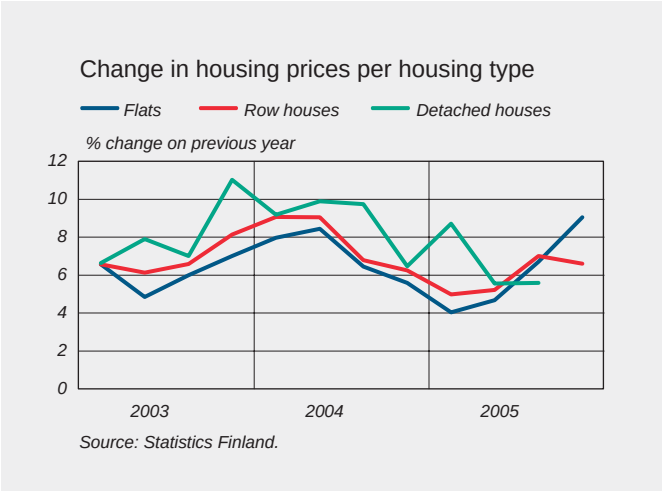
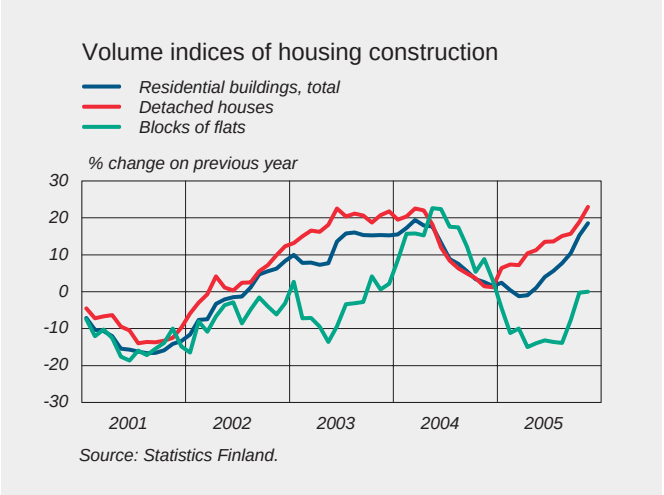


Chart 8.

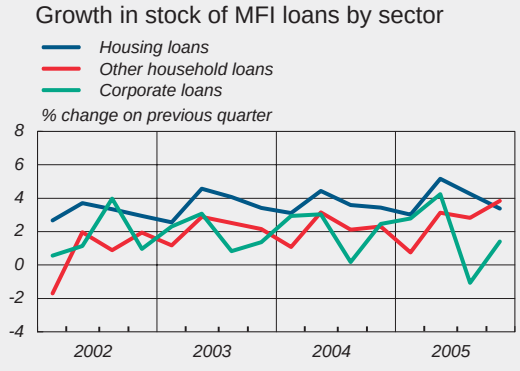


are high. The profitability of construction companies is also good. An increasing number of builders expect production bottlenecks to have an effect on construction in future. The Ministry of Finance group on economic prospects for the construction sector expects housing construction to continue to grow at a steady pace.[6]

On the basis of the information presented above, housing demand is forecast to remain strong. Housing supply, including new housing, is also likely to develop favourably. The rise in housing prices is expected to slow down slightly in 2006 from the 6% rate of 2005. Higher interest rates and increased supply are forecast to slow the rise in housing prices to about 3% in 2007 and 2008.

[6] The Ministry of Finance group on economic prospects for the construction sector: '*Construction 2006, Boom continues*', 1 February 2006. The report is available in Finnish on the Ministry of Finance's website at http://www.vm.fi/vm.

Chart 9.



Sources: European Central Bank, MFI statistics.

MFI loans and deposits

Growth in the stock of loans to households and non-financial corporations slowed in the latter half of 2005 (Chart 9). In 2005 as a whole, loan stock growth averaged about 13%. Compared with the first half of 2004, growth was 10% (annualised) in the latter half of the year. Deposits of households and non-financial corporations increased in 2005 by about 7% from the previous year.

Interest rates on deposits and new loans increased in autumn 2005 along with rising market rates. As before, changes in interest rates on deposits and loans have occurred with a time lag: deposit rates rose just over 0.1 percentage point and new loan rates by about 0.4 percentage point. The most commonly used reference rate, the 12-month Euribor, increased at the time by 0.6 percentage point. Increases were recorded in all loan types for which statistical data is collected. However, lending rates are still (March 2006) at a historically low level.

Loan stock growth fluctuated widely across sectors in 2005. The stock of loans to non-financial corporations increased only slightly, whereas loans to the household sector posted rapid growth.

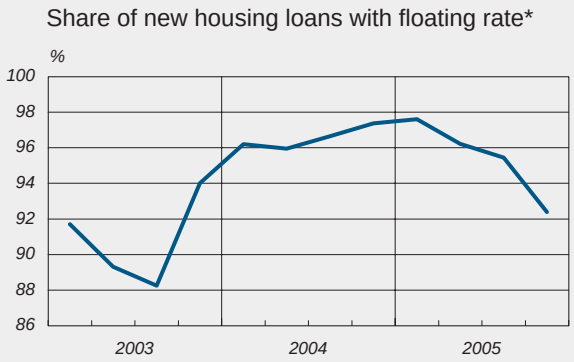
The slow growth of corporate loans is somewhat surprising in the light of available barometer data. For instance, the bank barometer of the Finnish Bankers' Association gave no signs of decreasing demand for corporate loans in the second half of 2005. Nor did the barometers of companies' business situation and

expectations published by the Confederation of Finnish Industries deteriorate during the autumn of 2005. The deceleration of corporate lending could turn out to be just a temporary phenomenon following rapid growth.

The stock of housing loans posted a rapid growth in 2005 – in December 17% higher than a year earlier. The quarter-on-quarter growth in housing loan stock decelerated clearly in the second half of the year. This was partly related to seasonal fluctuations. Loan stock growth is typically fastest in the second quarter of a year, after which it decelerates towards the end of the year.

One of the features of housing loan trends in 2005 was an increase in the share of loans tied to long-term reference rates. This market trend is probably related to the lively public debate on possible interest rate rises, which also induced banks to market various vehicles for hedging against interest rate rises. However, loans linked to short-term reference rates still account for a major share of new lending (Chart 10).

Chart 10.



** A loan with a floating rate is a loan whose interest rate is fixed for a period of up to one year at a time.*
Source: European Central Bank, MFI interest rate statistics.

On the whole, loan stock growth can be expected to remain fairly rapid over the forecast period. The modest rise in interest rates is likely to moderate household demand for loans. On the other hand, the lengthening of household loan maturities in recent years reduces the size of repayments and hence further accelerates growth of the loan stock. Corporate lending is forecast to accelerate slightly.

Box 1.

Forecast assumptions

World trade

The world economy continued to grow at a robust pace in 2005, driven mainly by Asia and the United States. Growth acceleration in a number of oil-exporting countries also supported growth of the global economy. World GDP is estimated to have grown by about 4.5% in 2005 and is expected to continue to post healthy growth of close to 4% in 2006–2008.

World trade is estimated to grow at a relatively brisk pace, around 7% per annum, in the forecast period. Finnish export markets are predicted to expand slightly faster than world trade, at an annual rate of about 8% – mainly due to increasing Russian import demand (Table 1).

Commodity prices

The price of crude oil continued its strong rebound in 2005, even though oil consumption growth slowed slightly from 2004. With continuing robust world economic growth and a resultant further increase in oil consumption, the price of crude oil should also remain relatively high in the coming years. Protracted geopolitical tensions in a number of important oil-producing regions are expected to exert upward pressure on oil prices. The price of Brent crude oil is estimated to remain around USD 60 per barrel until mid-2006 and, as supply constraints gradually ease, to fall to USD 55 per barrel by the end of 2008.

The prices of other industrial raw materials (excl. energy) have also risen recently, reaching higher levels than observed earlier. Buoyant economic growth, notably in China and other Asian countries, has boosted metal consumption. Consumption of raw materials is expected to remain strong, and their world market prices are anticipated to stay at a high level during the forecast period, above their long-term trend.

Foreign trade prices

International export prices resumed a clear upward trend in 2005, after several years of moderate performance. The rise in euro-denominated export prices picked up to 1.7% in 2005. The indirect effects of the sharp upsurge in commodity prices should be gradually reflected in international export prices. The increase in export prices is forecast to accelerate to a good 2.5% in 2006 and to ease to about 1% in 2007–2008. The indirect effects of elevated commodity prices should then recede gradually.

Developments in Finnish import prices for goods and services follow closely the ups and downs in international export prices and world market prices of commodities. The

Table 1.

Forecast assumptions

	2004	*2005*	*2006f*	*2007f*	*2008f*
Import volume in Finnish export markets, % change	*9.5*	*7.8*	*8.6*	*8.0*	*7.8*
Finnish import prices, % change	*3.6*	*2.1*	*2.8*	*1.5*	*0.8*
Oil price, USD per barrel	*38.3*	*54.4*	*63.1*	*60.5*	*56.7*
Euro export prices of Finland's trading partners, % change	*–0.8*	*1.6*	*2.8*	*1.4*	*1.1*
3-month Euribor, %	*2.1*	*2.2*	*3.0*	*3.4*	*3.6*
Yield on Finnish 10-year government bonds, %	*4.1*	*3.4*	*3.4*	*3.4*	*3.4*
Finland's nominal competitiveness indicator[1]	*101.6*	*101.6*	*101.4*	*101.7*	*102.0*
US dollar value of one euro	*1.24*	*1.24*	*1.21*	*1.23*	*1.25*

[1] Narrow plus euro area, January–March 1999 = 100.
f = forecast
Sources: Statistics Finland, Bloomberg and Bank of Finland.

prices of goods and services imported into Finland have already moved up fairly rapidly, at a pace of over 2% for a couple of years, due mainly to higher commodity prices. The rise in import prices is expected to accelerate slightly further in 2006, to 2.8%, and then to slow substantially in 2007–2008. With commodity prices levelling off, the rise in import prices should also decelerate substantially.

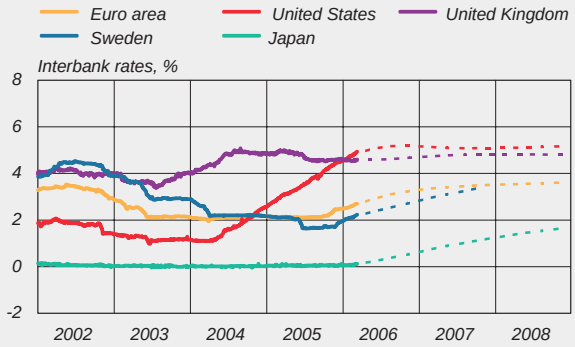
Interest rates and exchange rates

The interest and exchange rate assumptions in the forecast are derived from market expectations as at 6 March 2006. The underlying assumption is purely technical and does not anticipate the interest rate policy of the ECB Governing Council nor entail an estimate of equilibrium exchange rates. The assumption is for a broadly-based rise in short-term interest rates, except in the United States (Chart 11). Generally speaking, the upward movement in interest rates should remain modest throughout the forecast period.

The euro is estimated to appreciate to an extent vis-à-vis the US dollar, in line with interest rate differentials (Chart 12). Finland's nominal competitiveness indicator should also strengthen slightly, by just over 1%.

Chart 11.

Short-term interest rates and interest rate expectations*

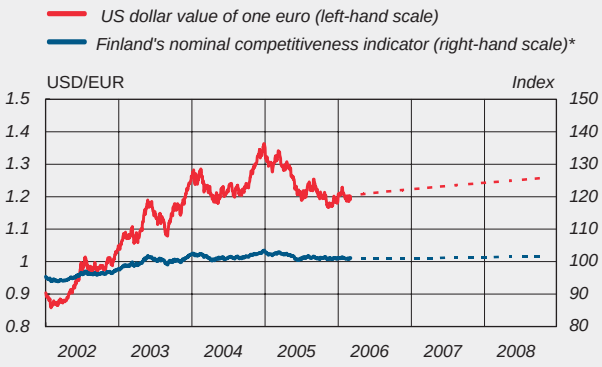


* 3-month market rates and interest rate expectations based on interest rate futures.

Sources: Bloomberg and Bank of Finland.

Chart 12.

Exchange rate assumptions



* Narrow indicator plus euro area, January–March 1999 = 100.

Sources: European Central Bank and Bank of Finland.

Box 2.

Non-financial corporations' financial situation

Finnish corporate sector's profitability and financial situation have remained good. Owing to high profitability and few investments, non-financial corporations have had little need for external financing. The stock of corporate credit grew less than 4% in September 2005. Of domestic financing sources, bank lending is the only item that is currently growing (Chart 13). The annual growth rate for lending by banks to non-financial corporations rose to over 8% in the autumn.[1] The growth of corporate credit obtained from other domestic sources has either halted or turned slightly negative. Insurance corporations and employee pension insurers currently play a very minor role in providing new corporate credit. The minimum rate on credit provision by employee pension insurers has been 4%, which has weakened their competitive position in corporate finance. The average rate on new corporate lending by banks has remained under 4% for some years now. For example, in 2005 it was 3.6%.

The stock of corporate credit obtained from abroad has remained quite steady for several years. However, it did increase slightly in the latter half of 2005.

Non-financial corporations' share issues have been rare. In addition, most of the share issues have been private offerings related to corporate acquisitions. The value of repurchases of own shares by listed companies has, since 2003, exceeded the value of new risk capital raised via share issues. So far, share repurchases have been conducted mainly by a few major companies. However, the number of companies repurchasing their own shares is increasing (Chart 14).

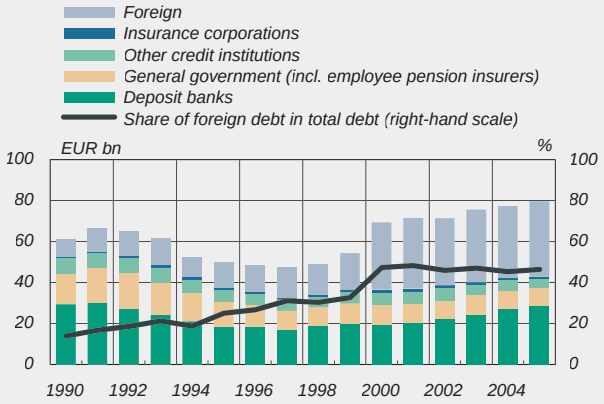
Business surveys provide supplementary information on financial conditions of non-financial corporations. The annual Survey of Business Finances[2] examines the

[1] Statistics Finland, outstanding credit.

[2] The survey is conducted jointly by the Bank of Finland, Confederation of Finnish Industries, and Ministry of Trade and Industry (http://www.bof.fi/fin/3_rahoitusmarkkinat/3.6_Raportit/index.stm).

Chart 13.

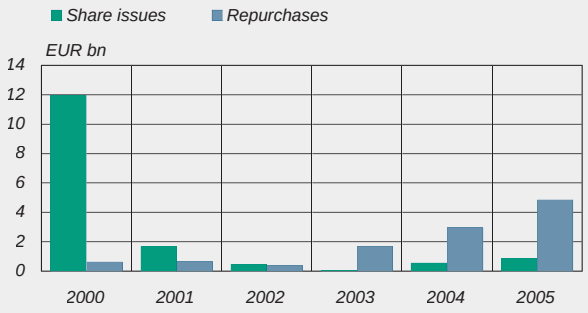
Breakdown of corporate debt



Year 2005 = Q3.
Sources: Statistics Finland, outstanding credit statisics.

Chart 14.

Share issues and repurchases by listed companies



Sources: Helsinki Stock Exchange and Bloomberg.

acquisition, availability and conditions regarding external financing for non-financial corporations. The results of this Survey over the last years also point to a strengthening in the role of banks as a source of external financing for non-financial corporations. In recent years, about 60–80% of industrial and service companies responding to the Survey have cited banks as their primary source of external financing.

In addition to the general interest rate level, corporate sector demand for bank lending is affected by interest rate margins (difference between credit rate and reference rate) and other terms of credit. According to the Survey of Business Finances, banks' favourable terms of corporate loans have underpinned loan demand. The majority of companies that have obtained new credit have, in recent Surveys, revealed that interest margins on new credit have either remained unchanged or narrowed. Similarly, only a small percentage of companies have said that the auxiliary costs of new credit have increased or collateral requirements have tightened.

Supply

Output

In 2005 gross domestic product increased by 2.1%, according to preliminary data from Statistics Finland. Growth was fastest in the domestic market sector, notably in construction and trade (Table 2). In contrast, industrial production contracted from the previous year due partly to the production stoppage caused by the paper industry labour dispute and subdued developments in the electronics industry. Without the paper industry labour dispute, GDP growth would have been a good 2½%.

Owing to the paper industry labour dispute, the capacity utilisation rate for the manufacturing industry as a whole dropped in May–June 2005. As soon as the situation eased, utilisation rates returned to cyclically normal levels, and in early 2006 the utilisation rate was 84% in manufacturing and almost 90% in the forest industry. In contrast, metal industry capacity utilisation has been flat, at about 84%, during the last 12 months. In other manufacturing sectors, the utilisation rate has risen slightly, to about 80%. Overall, the recent rather high capacity utilisation rates of various industrial sectors reflect benign economic conditions.

Recent indicators, such as the Business Tendency Survey by the Confederation of Finnish Industries, which focuses on companies' current and near-term prospects,[1] suggests continued favourable developments in 2006. Of the main sectors, paper industry production is anticipated to remain in the early part of the year at levels observed in 2005, whereas the chemical industry and the technology sector expect to see a pick-up in output growth. Confidence surveys by the Confederation of Finnish Industries point to better-than-normal cyclical conditions in the service sector. Good performance of construction in the early part of the year is abating, but only slightly. Order books provide a broadly favourable outlook for near-term industrial output, despite a slight weakening of order books in the electronics industry (Chart 15).

Annual GDP growth is predicted to accelerate to 3.4% in 2006, partly due to

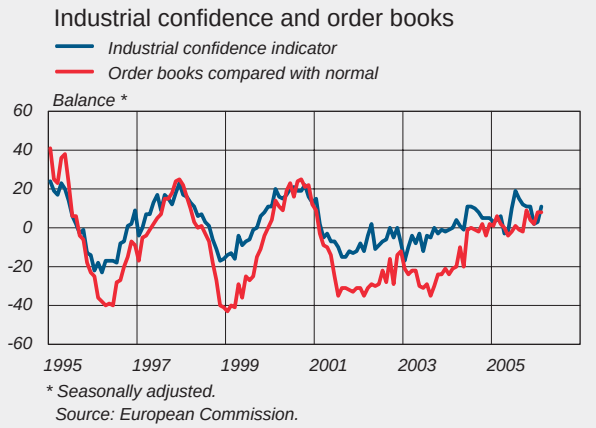
Table 2.

Real output growth

	Share of total output, %	*2004 %*	*2005 %*
Primary production	*3.8*	*–1.7*	*1.6*
Manufacturing	*28.2*	*5.3*	*–1.9*
Construction	*5.6*	*2.7*	*5.2*
Trade	*10.0*	*6.9*	*5.1*
Transport and communications	*10.6*	*5.4*	*2.1*
Other services	*42.0*	*1.7*	*2.8*
Total output	***100.0***	***3.6***	***1.7***
GDP		*3.6*	*2.1*

The difference between total output and GDP stems from the calculation of GDP at market prices and total output at producer prices.
Source: Statistics Finland.

Chart 15.



[1] EK Business Tendency Survey, February 2006.

the output decline in 2005 in connection with the paper industry labour dispute. In 2007 and 2008 growth should level off at about 3%. Growth in Finland is projected to be close to its long-term trend or even higher in the forecast period. Capacity constraints are already weakening the economy's growth potential. Such constraints derive from the fairly sluggish growth of the capital stock as well as labour supply, as mismatch problems are not about to ease and the population is ageing. As domestic demand is set to remain strong during the forecast period, capacity constraints will lead to increased use of imported inputs in production, continued import growth, and a contraction in the current account surplus.

Employment and labour supply

Employment improved in 2005 after a number of years of weak performance. In annual average terms, the number of employed increased by 36,000, mainly due to a rise in full-time employment. The share of part-time employees in the total employed, which had been increasing rapidly in recent years, no longer did so.

The increase in employment resulted more clearly from a higher

Table 3.

Balance sheet of labour resources, employment by sector

Balance sheet of labour resources, 1,000 persons	*2002*	*2003*	*2004*	*2005*	*Change 2005/2004 1,000 persons*	*Change 2005/2004 %*
Population, persons aged 15–74	*3,917.6*	*3,926.3*	*3,935.5*	*3,947.8*	*12.3*	*0.3*
Employed	*2,372.3*	*2,364.8*	*2,364.8*	*2,400.8*	*36.1*	*1.5*
Students	*323.6*	*332.3*	*334.2*	*332.2*	*–2.0*	*–0.6*
Persons in domestic work and military service	*104.8*	*108.4*	*117.8*	*110.6*	*–7.1*	*–6.1*
Persons on disability pensions	*221.6*	*221.2*	*226.3*	*221.5*	*–4.8*	*–2.1*
Retired due to age	*558.2*	*558.0*	*558.2*	*556.3*	*–1.9*	*–0.3*
Unemployed and others	*337.1*	*341.6*	*334.3*	*326.3*	*–8.0*	*–2.4*
of which unemployed	*237.3*	*234.8*	*228.9*	*219.8*	*–9.2*	*-4.0*
Employment						
Full-time	*2,070.0*	*2,057.4*	*2,045.0*	*2,071.2*	*26.2*	*1.3*
Part-time	*302.3*	*307.4*	*319.8*	*329.7*	*9.9*	*3.1*

Balance sheet of labour resources, 1,000 persons	*2002*	*2003*	*2004*	*2005*	*Change 2005/2004 1,000 persons*	*Change 2005/2004 %*
Employed by sector	*2,372.3*	*2,364.8*	*2,364.8*	*2,400.8*	*36.1*	*1.5*
Agriculture, hunting, forestry und fishery	*126.7*	*120.4*	*116.2*	*115.5*	*–0.7*	*–0.6*
Manufacturing	*491.4*	*469.7*	*458.4*	*460.3*	*1.8*	*0.4*
Construction	*147.8*	*150.8*	*148.1*	*157.9*	*9.8*	*6.6*
Trade, hotels and restaurants	*363.3*	*362.5*	*367.3*	*377.7*	*10.4*	*2.8*
Transport and communications	*169.3*	*173.0*	*171.5*	*171.7*	*0.2*	*0.1*
Finance, insurance and business	*308.0*	*313.0*	*315.2*	*322.1*	*6.9*	*2.2*
Social services	*179.0*	*173.0*	*175.0*	*190.0*	*15.0*	*8.6*
Other services	*579.4*	*594.1*	*605.8*	*600.3*	*–5.5*	*–0.9*
Unknown	*7.4*	*8.4*	*7.3*	*5.4*	*–1.9*	*–25.5*
Public sector	*553.4*	*555.4*	*556.0*	*557.3*	*1.2*	*0.2*
Private sector	*1,818.8*	*1,809.4*	*1,808.7*	*1,843.6*	*34.9*	*1.9*

Source: Statistics Finland.

labour force participation rate. Of economically inactive groups, the numbers especially of those in domestic work and those on disability pensions have diminished since 2004. There was also an increase in the working-age population. The number of unemployed decreased by only about 9,000.

In sectoral breakdown, employment grew in service sectors and in construction during 2005. Manufacturing employment also improved slightly from the previous year (Table 3).

Private consumption growth has underpinned employment growth in retail and wholesale trade since 2004. The number of persons employed in construction increased by almost 10% in 2005, taking into account that, in addition to those recorded in employment statistics, construction provided jobs to approximately 5,000 persons of foreign background. Also noteworthy for 2005 was the rapid increase in social services employment. On the other hand, Statistics Finland's labour force survey does not find any increase in public sector employment on the previous year. Employment growth in fact concerned private social services, such as health care and training. This may be due to an increase in services purchased by local governments. According to preliminary national accounts data, increased local governent purchases did not, however, reflect any exceptional developments.

For 2006 employment prospects should remain favourable, although no such strong employment increase as at the end of the previous year is in the offing. Employment growth continues to depend on the service sector. According to survey data, manufacturing employment, which improved in the latter part of 2005, does not appear to be increasing in the early part of 2006.

According to the forecast, manufacturing employment growth will remain subdued throughout the forecast period, 2006–2008. Nor is employment expected to grow in the public sector. Employment in construction will be underpinned especially by repairs, while new housing construction should continue to grow at a moderate pace. Overall, employment should increase by some 30,000 between the end of 2005 and the end of 2008 (Chart 16). The employment rate is expected to increase by a good 1 percentage point, to just over 69%, by the end of the forecast period. The source of the increase will again be the labour force participation rate, as unemployment has stabilised at a level of about 200,000, ie at almost 8% of the labour force. The working-age population should grow at the same time by about 18,000 according to Statistics Finland's population projections.

Chart 16.

Four-quarter moving average.
Sources: Statistics Finland and Bank of Finland.

Productivity and capital

Real output can be augmented either by increasing factors of production (labour and capital) or by improving total factor productivity.[2] An increase in the factors of production and higher total factor productivity may be linked, as the introduction of new technologies and innovations often calls for both additional investment and retraining of labour.

In Chart 17 the ratio of private sector output to working-age population is broken down into total factor productivity, capital per working-age population, and the three components of labour input: labour force participation rate (labour force relative to working-age population), share of employed in the labour force, and hours worked per employed person.[3] The chart shows that, in the post-recession years in the 1990s, total output growth was largely based on total factor productivity growth. In contrast, total factor productivity growth has decelerated slightly in the 2000s.

Developments in labour input components have been fairly stable. The labour force participation rate started to rise moderately after the recession-induced weakening. However, the rate has remained permanently lower than the average of the 1980s, partly because of a reduction in the average retirement age. The share of employed in the labour force decreased significantly in the early part of the 1990s, and so far the pre-recession level has not been achieved. Hours worked per employed person have declined steadily since the beginning of the 1980s, as average working hours have declined and part-time work has become more widespread.

Developments in the capital stock have been more erratic than those of labour input. Capital stock increased in line with total output and total factor productivity as late as in the 1980s, but contracted during the recession for five consecutive years. Owing to subdued investment in the last few years, the level of capital stock did not exceed the pre-recession level until 2004.

[2] Total factor productivity growth is the share of output growth which is not explained by growth of labour or capital inputs.

[3] Total factor productivity is calculated as a Cobb-Douglas production function residual term.

Chart 17.

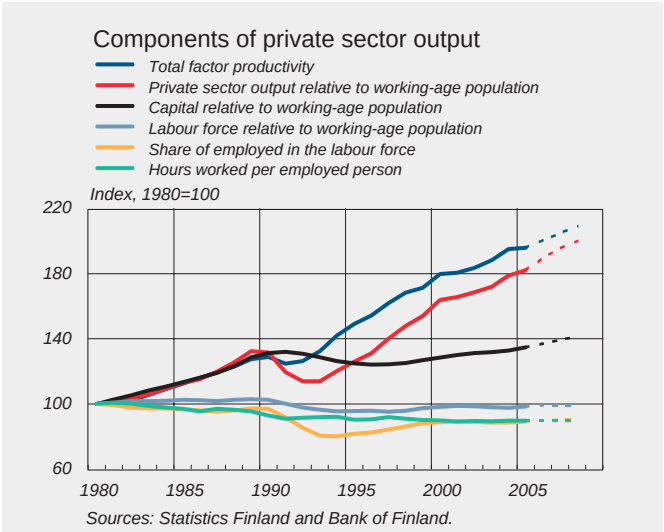


Table 4.

Sources of output growth variance

Contribution, %	*Contribution after 1 year*	*Contribution after 3 years*	*Contribution after 7 years*
Total factor productivity	*43*	*70*	*76*
Capital relative to working-age population	*2*	*0*	*–2*
Labour force relative to working-age population	*12*	*0*	*–5*
Share of employed in the labour force	*38*	*13*	*3*
Hours worked per employed person	*5*	*16*	*27*

Sources: Statistics Finland and Bank of Finland calculations.

Table 4 shows the sources of output growth variance in the private sector for different periods.[4] In both the short and long run, volatility in total factor productivity explains the major part of output growth variance. On the other hand, labour input components make a notably larger combined contribution to total output growth variance than does the capital stock.

About a third of output variance stems from fluctuations in employment and hours worked per employed person. The contribution of employment is larger in the short run and that of hours worked in the long run. The contribution of the labour force participation rate is more than 10% in the first year. The contribution of capital growth to output growth has been very limited, which may have constrained labour productivity growth.

Table 5 gives labour productivity in the private sector by output per employed person, with labour productivity decomposed into two factors: capital intensity (capital per employed person) and total factor productivity. The labour productivity growth rate is estimated to climb to 2.5–3.0% in the forecast period. At the same time, the contribution of capital intensity to labour productivity should increase to 1% in 2008. An improvement in capital stock quality is also expected, which will be partly reflected in 2% growth of total factor productivity in 2007 and 2008. For the economy as a whole, labour productivity is projected to grow on average by almost 2.5% in the forecast period, with public sector productivity growth remaining at its average level of 0.2%.

A tight labour market

With improved employment, signs of a more broadly-based shortage of labour have increased. A number of sectors have recently encountered worsening recruitment problems. Manufacturing and construction have already long experienced shortages of skilled labour. According to the Business Tendency Survey by the Confederation of Finnish Industries, 9% of manufacturing companies and 38% of construction companies viewed labour shortages as a constraint on output growth in January 2006. Service sectors have also encountered increasing difficulties in hiring.

Both supply and demand factors are expected to tighten the labour market in the next few years. For the economy as a whole, labour supply has so far been maintained by rises in the labour force

[4] Each component's contribution to output growth variance is based on its covariance with output growth (see Hall, Robert E., 'Separating the business cycle from other economic fluctuations', 2005).

Table 5.

Labour productivity in the private sector

Percentage change from previous year

	2003	*2004*	*2005*	*2006f*	*2007f*	*2008f*
Labour productivity	*2.7*	*3.6*	*1.1*	*2.4*	*2.6*	*2.9*
Capital intensity	*0.7*	*0.6*	*0.0*	*0.0*	*0.6*	*1.0*
Total factor productivity	*2.0*	*3.0*	*1.2*	*2.5*	*2.0*	*2.0*

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

participation rates of older workers and other previously economically inactive groups. However, the improved employment situation has only marginally reduced the number of unemployed.

Developments are predicted to continue along the same lines throughout the forecast period, 2006–2008. An increase in the labour supply is assumed to come largely from economically inactive groups. No essential reduction in the number of unemployed is expected. Hence unemployment is estimated to be mainly of a structural nature. According to Statistics Finland's population projections, the working-age population should continue to grow in the forecast period at the same pace as in the last few years, ie by a good 6,000 per annum on average.

Regional and occupational equilibrium

Excessive demand for labour is expected in terms of both regions and sectors, for a number of reasons. Industry and related services are likely to increase their demand for skilled labour with a good training record. Finland's competitive advantage in the specialisation associated with internationalisation has been namely its highly skilled labour. The need for staff to provide services related to population ageing is also expected to increase significantly. Because a considerable portion of local government employees will retire in the next few years, the overall situation in the labour market will tighten. This view also incorporates a regional perspective. The need for labour should increase fastest in relative terms in small localities with adverse population structures and thus deficient labour supplies. The third problem is related to the rise in the average age of employees. Often, older workers no longer match the labour needs of sectors where competitiveness is based on innovative capacity and use of new technologies. Development and introduction of new products and production methods that enhance productivity call for new recruitments. Various sectors are likely to need younger and professionally more competent staff.

Although labour shortages are problems specific to sectors or regions, these will already have a dampening impact on overall economic growth in the forecast period. Hence relatively limited growth in the number of employed in the forecast period will be at least partly a consequence of problems related to the availability of labour. The protracted high level of unemployment has in fact permanently dislodged a part of the labour force.

Impact on labour costs

Problems related to the availability of labour are not expected to be reflected in overall wage developments. Owing to keener global competition, companies are not able to pass on costs into prices to the same extent as they did previously. However, there is a risk that tightening labour markets will raise wages more than forecast in sheltered sectors. Besides demographic factors, the objective of improving public sector productivity will add to wage pressures in the domestically oriented private service sectors and in the public sector.[5]

[5] For more information, see page 76.

Box 3.

Elderly labour supply and Finnish pension reform

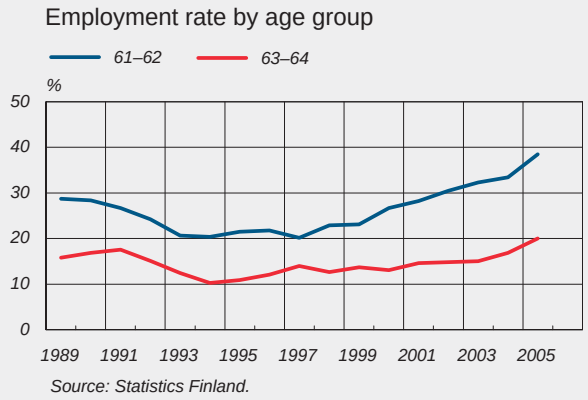
Elderly employees' choices between labour force participation and retirement will have a considerable impact on the potential labour force over the next few years. The importance of these choices is further highlighted by the flexible retirement option made available to people between the ages of 63 and 68 at the start of 2005. People approaching retirement age, ie people aged 61–64, accounted for around 6% of the working-age population (15–64) at the end of 2005. According to the population forecast, this proportion will grow to around 9% in 2010.

The employment rate has been rising for persons of retirement age and for those approaching retirement age. Findings of the Labour Force Survey indicate that the employment rate for those who became eligible for pension at the start of 2005, ie people aged 63–64, remained more or less unchanged from the years of depression until 2003, while that for people aged 61–62 has increased since 2000 (Chart 18). In 2004 and 2005, the employment rate clearly rose for both age groups.

The recent rise in the employment rate has not been caused by a decline in the proportion of old age pensioners in the labour force. In fact, the proportion of people going on old-age pensions has not declined at all for the 63–64 group, while a more marked decline for those aged 61–62 was witnessed only in 2005 (Charts 19 and 20)[1]. Rather, the rise in the employment rate is due to fewer people retiring on disability pension.

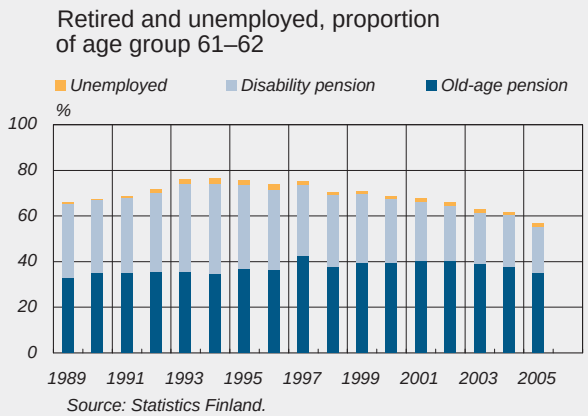
The decline in the prevalence of disability has been

Chart 18.



Source: Statistics Finland.

Chart 19.



Source: Statistics Finland.

[1] In the Labour Force Survey, retired people are classified as 'retired because of old age' or 'retired because of disability'. The classification is not according to retirement benefit but actually the category 'retired because of old age' includes unemployment pensioners and beneficiaries under the farmers' pension scheme as well as old-age pensioners. The category 'retired because of disability' refers to beneficiaries of early individual retirement pension as well as ordinary disability pension. Part-time pensioners are included in the labour force.

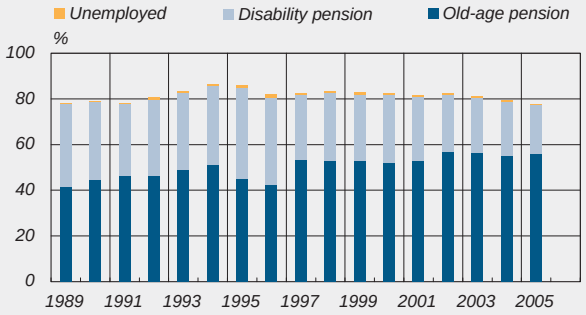
a major contributory factor in the increase in the employment rate for people over 60. The increase in the eligibility age for early individual retirement pension has contributed to the statistical decline in the prevalence of disability, as has the general improvement in the health of the population, the higher level of education and less physical work. This is also reflected in the causes of disability, in that mental disorders have surpassed musculoskeletal diseases as the most common cause of disability[2]. This, in turn, is seen as a lower level of disability, as mental disorders lead to retirement more slowly than other causes.

The introduction of a flexible retirement age in 2005 caused a pick-up in the retirement of people aged 63–64 in 2005. The effect is very small according to the Labour Force Survey of Statistics Finland, whereas the survey of the Finnish Centre for Pensions indicates that as many as one in four have taken advantage of the opportunity to retire at the age of 63–64[3]. This figure, however, also includes those who are not part of the labour force.

The employment rates for those approaching retirement age are expected to increase further over the next few years. In particular, the proportion of people applying for disability pension is likely to continue to decline. In contrast, it is difficult to assess the impact of pension reform on the labour supply on the basis of 2005 data.

Chart 20.

Retired and unemployed, proportion of age group 63–64



Source: Statistics Finland.

[2] Gould, R and Nyman H. *Mielenterveys ja työkyvyttömyyseläkkeet (Mental health and disability pensions)*, Reports of the Finnish Centre for Pensions No. 50, Helsinki 2004.

[3] See the website of the Finnish Centre for Pensions: www.etk.fi.

Demand

Domestic demand made a significant positive contribution to growth in 2005. Both private consumption and investment grew rapidly. Substantial import growth and the export-impact of the paper industry labour dispute rendered the growth impact of net exports negative (Chart 21). Over the forecast period, private consumption growth is expected to slow down somewhat, but its impact on growth of domestic demand will remain large. In 2006, import growth will decelerate and the impact of net exports will become positive again. Growth of export and import volumes will decline towards the end of the forecast period, with the positive growth impact of net exports increasing slightly.

Consumption

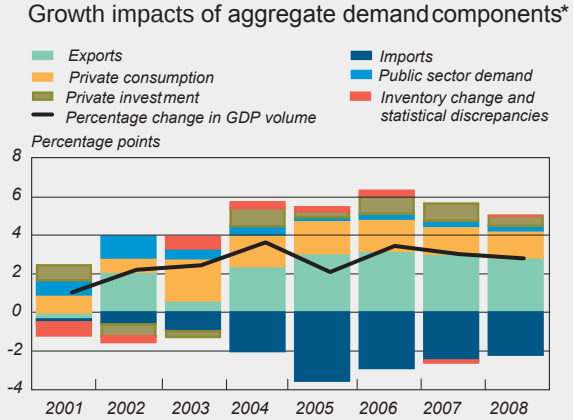
Recent years have seen strong growth in private consumption. In 2005, consumption grew by 3.4% and, as in previous years, highlighted consumer durables. Fastest growth was recorded in computers, IT equipment and home entertainment systems.

In 2005, private households' income growth fell short of the peak performances of the last couple of years. Disposable income increased by just over 1.5%, even as aggregate wages rose sharply by about 4.5%. Wages were buoyed by good earnings performance as well as an increase in labour input. Other household income was much less buoyant. Growth in pension income was modest, owing partly to small index increases, and income on assets declined. The reduction in dividend income was probably a reflection of corporate and capital tax reform, effective at the start of 2005. In 2004, there was a substantial increase in households' dividend income and, despite a decrease in 2005, it was still higher than in 2003.

Tighter income taxation constrained household income in 2005. In contrast, households' purchasing power was supported by low inflation, which contributed to a slight improvement in households' real income despite subdued developments in nominal income.

Household consumption expenditure grew considerably faster than the modest rise in income in 2005, and the sector's savings ratio fell to zero. In a sense, developments in 2004 were a mirror image of those in 2005. Changes in income have not been reflected in consumption in recent years; instead, households have

Chart 21.



** Impact on GDP growth, % of previous year's GDP.*
Sources: Statistics Finland and Bank of Finland.

smoothed out their consumption over time (Chart 22).

Private consumption is expected to continue to develop favourably in the near future. Preliminary data show that robust growth in retail trade extended into January 2006. Data on primary registrations of private cars in the first two months of the year point to an increase of a couple of per cent on the previous year (Chart 23). Favourable developments have also been seen in consumer confidence in recent months.

Chart 22.

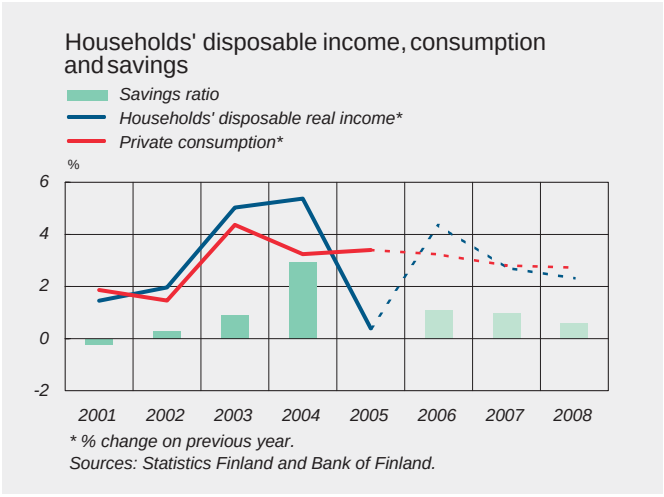
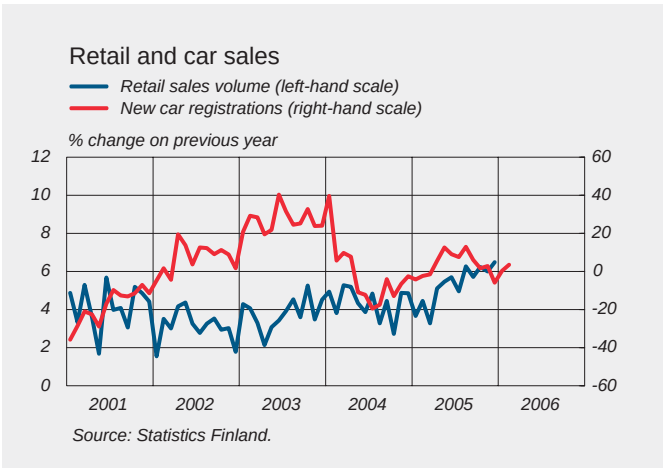


Chart 23.



According to Statistics Finland's consumer confidence indicator, consumers' confidence in their own finances has remained stable and confidence in overall economic performance has strengthened considerably.

Wage earners' earnings should increase by some 3% during the forecast period. In contrast, growth in aggregate wages will decline from 4.5% to slightly more than 3%, owing to modest employment growth in 2007 and 2008. The tax cuts agreed in connection with the general income settlement will support growth of purchasing power in 2006 and 2007. In 2006, pension income will grow faster than in 2005 as a result of a larger index increase. Household asset income is also expected to perform well, with dividend income rebounding from the dip in 2005 due to tax changes.

Inflation is expected to accelerate moderately during the forecast period, which will restrain real purchasing power. Real interest rates are nevertheless expected to remain relatively stable in the near future, which will support household propensity to consume. Growth in household purchasing power will exceed 4% in 2006, subsequently slowing to less than 2.5% in 2008.

Private consumption growth should increase by slightly more than 3% in 2006. In 2007–2008, consumption growth will decline to just under 3%. Thanks to favourable income developments, the savings ratio will return to positive territory in 2006, but it is likely to decline slightly towards the end of the forecast period as household consumption expenditure outruns income.

General government

The general government surplus increased in 2005, with performance clearly exceeding expectations. In autumn 2005, the Bank of Finland estimated that central government finances will slip into deficit, which would have led to a diminution of the surplus for the entire public sector. The forecast error was primarily due to a sharp increase in tax receipts generated by improvements in employment and increased consumption. On the other hand, local government finances were in deficit for the fourth year running. A slight increase was seen in employment pension funds' surplus.

By international standards, Finland's general government financial balance is very good indeed. In recent years, Finland has been the only euro area country repeatedly posting sizable general government surpluses. This stronger balance in comparison to other countries is largely due to the fact that pension funding is administered almost totally within the public sector, in contrast to other countries. This has kept pension funds' surplus relative to GDP around 3% for decades. Public finances, ie the local and central government together, which can be compared more easily with other countries, has been only slightly in surplus since the end of the 1990s.

The general government surplus should expand slightly from the 2005 level and remain around 3% throughout the forecast period. In central government finances, income is expected to clearly exceed expenditure. In contrast, local government finances will remain in a poor state, with indebtedness expected to continue to grow in the forecast period. Employment pension funds' surplus has remained at the previous years' level.

Increase in expenditure

Basic public expenditure has stabilised at around 50% of GDP, compared to the peak of 60% during the recession. Following cuts in government expenditure and a recovery in economic growth at the end of the 1990s, public expenditure declined to around 40% of GDP.

The structure of expenditures has remained virtually unchanged in recent years. At the same time, public consumption and pension expenditure have increased rapidly. In contrast, current transfers have grown only slightly. After several years of increases, unemployment-related expenditures actually decreased in 2005 because of a substantial improvement in the employment situation.

The structure of expenditures is not expected to change in the forecast period. Growth in consumption expenditure is being maintained mainly by increases in public sector wages, as employment in central and local governments is increasing only moderately. Pension expenditures are growing due to an upward adjustment in the pension index and increasing numbers of pensioners. No increases are foreseen in public investment in real terms.

Growth in government expenditure in 2004 and 2005 remained within the agreed spending limits. The expenditures included in the budget framework for 2006 are only slightly below the limit set for the

parliamentary term. Growth in government expenditure will increase somewhat in 2007 and 2008. The forecast projects that government expenditures will nevertheless remain within the agreed limits. Due to the poor state of local government finances, growth in local government expenditure is expected to decelerate somewhat in the forecast period.

Taxation

Wage earners' taxation has been eased almost continually since the years following the recession. Tax cuts have occurred mainly in central government taxation. The deduction from earned income in local government taxation has also been increased. However, the alleviating effect is offset by increases in the average local government income tax rate since the start of the century. Year 2005 was exceptional as regards tax relief in that tax rates on wages increased. In contrast, the tax cuts agreed in connection with the general incomes settlement lower the rates for 2006 and 2007 by an average of 0.6 percentage point per year. The forecast assumes that only inflation adjustments will be made to tax schedules in 2008. No material changes are expected in employment pension contributions. Employer contribution rates to the earnings-related pension scheme will decrease temporarily in 2006, return to previous levels in 2007 and increase again slightly in 2008.

Corporate tax revenue is expected to remain weak in 2006 due timing factors in connection with the tax reform. On the other hand, central government dividend income will post an exceptional increase in 2006.

Based on tax revenue and tax base, households' average tax rate will not decrease notably in the forecast period. The total tax ratio, which accounts for wage taxes, social security contributions and corporate taxes has stabilised around 45%. It peaked in 1994, at nearly 48 %. Despite the recent decline, the total tax ratio is still clearly higher than before the recession.

Table 6.

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

	2002	2003	2004	2005	2006*f*	2007*f*	2008*f*
General government revenue	54.1	53.2	53.0	53.1	53.2	53.2	53.2
General government expenditure	49.8	50.9	51.1	50.7	50.3	50.4	50.4
General government primary expenditure	47.7	49.0	49.3	49.0	48.8	48.9	49.0
General government interest expenditure	2.1	1.9	1.8	1.7	1.5	1.5	1.4
General government net lending	**4.2**	**2.3**	**1.9**	**2.4**	**2.9**	**2.8**	**2.8**
Central government	1.4	0.4	0.2	0.6	0.9	0.8	0.9
Local government	–0.2	–0.6	–0.7	–0.7	–0.6	–0.5	–0.5
Social security funds	3.0	2.5	2.3	2.6	2.6	2.6	2.5
General government primary balance	6.4	4.2	3.7	4.1	4.4	4.3	4.2
General government debt	**42.2**	**45.0**	**44.9**	**41.1**	**39.6**	**38.3**	**37.0**
Central government debt	42.1	44.0	42.6	38.7	36.6	34.9	33.2
Tax ratio	45.5	44.5	44.2	44.4	44.3	44.5	44.6

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

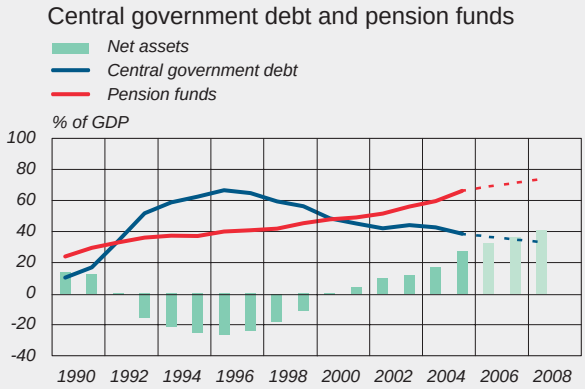
General government debt and pension funds

General government finances were exceptionally strong in 2005 even in terms of the financial account. The general government surplus reduced the central government debt and increased the investment assets of employment pension funds.

Central government debt decreased considerably in 2005, both in euro terms and relative to GDP. Besides the central government surplus, this was due to privatisation revenues of some EUR 1.5 billion. Employment pension assets increased substantially in 2005. The investment portfolio expanded considerably, mainly due to an increase in share prices. At the end of the year, combined asset portfolio of the private sector, local government sector and government pension funds amounted to EUR 103 billion, or 66% from GDP. The reduction in central government debt and growth of pension assets translate into an increase of some EUR 17 billion in general government claims, amounting to about 11% of GDP (Chart 24).

The central government debt ratio was less than 40% in 2005. No privatisation income is assumed for the forecast period, so that the debt ratio should decrease in line with annual surpluses. Even under this assumption, the central government debt ratio would decline nearly to that of the early years of the recession, ie to about 33%, by 2008. The general government debt (Maastricht terms) will decline in line with the central government debt, to 37% of GDP towards the end of 2008. At the same time, employment pension

Chart 24.



Sources: Statistics Finland, Finnish Centre for Pensions and Bank of Finland.

funds' surplus, coupled with the central and local government pension contribution surpluses, will raise the ratio of pension funds-to-GDP to 74% in 2008. Taxes and employment pension contributions, capital gains, and increases in market value have resulted in a substantial increase in general government net assets.

Investment

Concerns have been voiced about Finland's low level of investment. While housing investment has risen rapidly, investment in productive capacity has been modest. There is concern that this will jeopardise productivity growth and the renewal of production capacity. From an international perspective, the investment ratio for the Finnish economy as a whole is not exceptionally low. However, in several sectors investment has remained modest (Box 5, p. 46).

Private fixed investment increased by slightly more than 3% in 2005. After sluggish growth in the early part of the year, investment picked up noticeably in the second half. The

aggregate investment ratio rose to around 19.2% of GDP (Chart 25). In the private sector, housing investment increased by 4.6 % in 2005. Growth of investment in productive capacity (private investment excluding investment in housing) was only 2.5%, as investment in equipment and machinery declined by more than 5%.

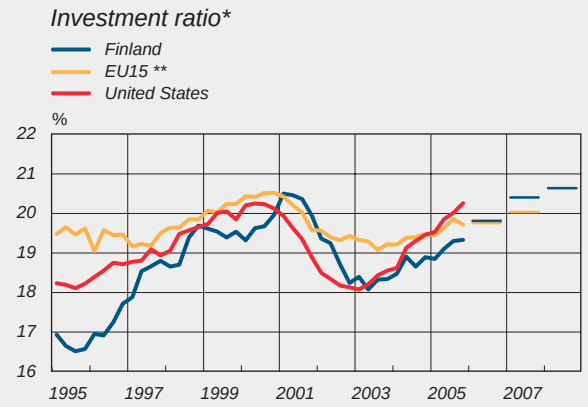
Investment is expected to pick up in the coming years. Fixed investment is projected to grow at an average annual rate of nearly 5% in the forecast period. However, investment in both housing and productive capacity will decelerate towards the end of the forecast period.

Conditions for a revival in investment in productive capacity seem to be in place, because demand prospects and corporate results have remained good and the price of financing low. Real interest rates are expected to remain stable throughout the forecast period, which will also promote corporate investment. According to the forecast, investment in productive capacity will not reach its level of 2001 until 2007 (Chart 26). This is due to a sharp decline in investment in 2001–2003.

According to the January 2006 investment survey by the Confederation of Finnish Industries, growth in fixed investment in the manufacturing industry will continue in 2006, albeit at a slower pace than in 2005. Investment plans in the largest industrial sector, the technology sector, point to a substantial increase of more than 10% on the value of investment in 2005. The planned increases in investment are concentrated in metal and engineering and in the electronics and electricity industry. Less than 30% of investment in the manufacturing industry is related to capacity expansion, with 2/3 comprising replacement and rationalisation investment. Expansion investment represented nearly half of all industrial fixed investment during the years of rapid economic growth in the late 1990s. As regards fixed investment in electricity, gas and water supply and sewerage, construction of the fifth nuclear power plant raises the share of expansion investment to nearly 80% of total investment.

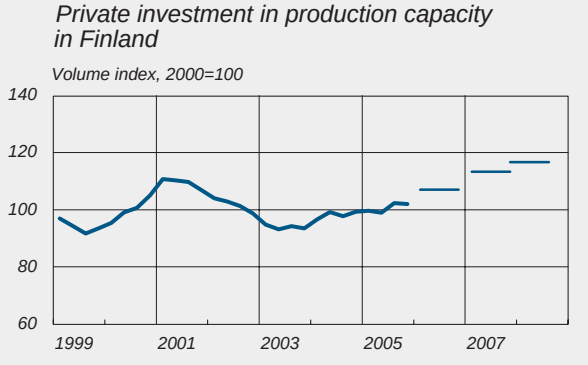
The confidence indicators of the Confederation of Finnish Industries, which

Chart 25.



* Ratios calculated from nominal figures.
** European Commission forecast.
Sources: Statistics Finland, Eurostat, Bank of Finland and European Commission

Chart 26.



Sources: Statistics Finland and Bank of Finland.

reflect cyclical conditions in the corporate sector, also present a fairly positive outlook for the near term. In industry and construction, corporate confidence is currently above its historical average. The service sector confidence indicator has strengthened in recent years and is at its long-term average.

Investment in housing construction is also expected to increase at a fairly brisk pace. Growth will however slow down gradually from 5½% to approximately 3% by the end of the forecast period. A report [1] by an expert group analysing cyclical conditions in the construction industry noted a lack of plots of land and rapid increases in land prices in Finland's growth centres. These factors will increasingly constrain the construction of residential housing. A lack of skilled labour will hinder growth of housing construction as well as other types of construction. Replacement construction continues to increase rapidly, with an emphasis on the housing sector. The money invested in replacement construction already accounts for nearly half of that invested in housing construction as a whole. According to the Technical Research Centre of Finland, replacement construction will grow at an annual rate of approximately 4% in the next few years.

The investment ratio for the whole economy will rise to slightly more than 20% of GDP in the forecast period. The increase in investment ratio notwithstanding, the capital to GDP ratio will continue to decline in the review period.

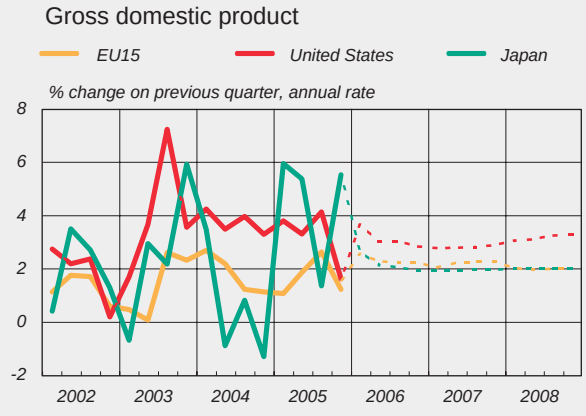
[1] "Rakentaminen 2006, Korkeasuhdanne jatkuu", Rakennusalan suhdanneryhmä, 1 February 2006. ('Construction industry in 2006: the upswing persists'. Expert group on construction.)

The world economy and foreign demand

World economic growth has remained robust and is estimated to decelerate only slightly over the next few years. The favourable development is supported by the concurrent recovery of the euro area and Japan, while US economic growth is expected to slow down only a little (Chart 27). Growth is still strongest in many emerging Asian economies, especially in China.

World economic growth continued robust in 2005, with combined world GDP expected to grow by approximately 4½%. Rapid growth was sustained by persistently low real interest rates and ample liquidity, as well as growth in households' housing assets in the industrial countries. Robust growth in China, India and many oil exporting countries contributed to the solid performance of the world economy. Although world economic growth was spearheaded by the United States and China, increasingly clearer signs were seen in 2005 of improvements in economic growth in

Chart 27.



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

both Japan and, towards the second part of the year, the euro area.

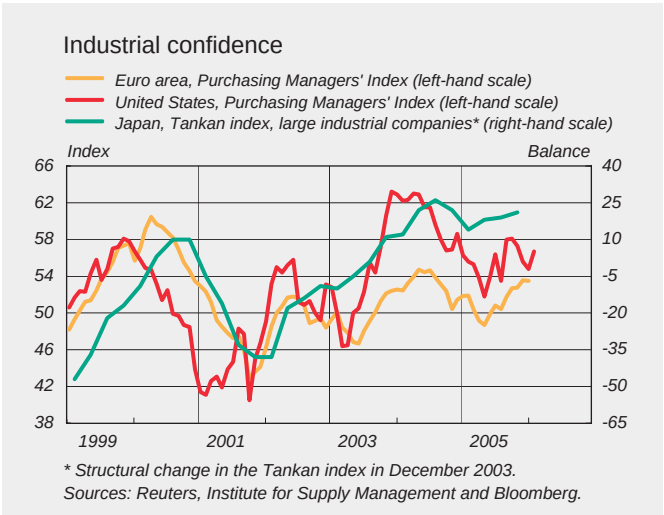
The impact on world economic growth of marked increases in the price of crude oil and petroleum products and of the gradual tightening of US monetary policy has been modest. Rising oil prices have nevertheless resulted in noticeable changes to world current accounts. While the US current account deficit has deepened further, surpluses have increased in the oil exporting countries. In Asian economies, surpluses have mostly declined, apart from China, whose surplus has continued to increase.

World economic growth showed signs of abating in spring 2005 due to a decline in the high rate of US economic growth and lacklustre growth in the euro area. This was partly the result of increases in the world market prices of oil and raw materials, coupled with a stronger euro. Already in the summer, industry confidence began to strengthen in the key economic regions. In summer and autumn 2005, the euro area economy began to show clear signs of recovery. US economic growth also regained momentum in the autumn, as the economic impact of the hurricanes proved to be minor. Revised data indicate that Chinese economic growth continued at a rate of about 10% throughout the year. Russian economic growth also found new strength in the autumn, partly due to an increase in oil income.

World GDP growth will continue robust during the forecast period, 2006–2008, although it is expected to slow down from the current rate of 4½% to 4% in 2007–2008. Growth will be supported by the broadening and deepening integration of emerging economies into the world economy. Overall, economic policy also continues to fuel growth despite the tightening of the US monetary policy and slight rise in euro area interest rates. Market expectations assume a further modest rise in interest rates in certain countries during the forecast period. Overall monetary conditions will remain accommodative in light of cyclical conditions in the world economy.

Both GDP growth and world trade growth are expected to remain robust. World trade will expand at an annual rate of about 7% over the forecast period. Trade growth is driven by Japan and other Asian economies as well as economies in transition. Import demand in Finland's two major export markets, Sweden and Russia, is also growing strongly. On the whole, Finland's export markets will grow at an annual rate of about 8% over the forecast period (Table 7). The export market growth rate is the average of import growth rates in Finland's major export markets, weighted by the countries' respective shares in Finland's total exports.

Chart 28.



* Structural change in the Tankan index in December 2003.
Sources: Reuters, Institute for Supply Management and Bloomberg.

The impact of rising oil prices on world economic growth has so far been fairly modest. This is partly a reflection of the fact that the industrial countries have become less dependent on oil while the oil exporting countries have spent their oil proceeds faster in the industrial countries.

The US economy has continued to grow at a fairly fast rate despite the rise in oil prices. GDP growth was 3½% in 2005. The growth rate is expected to decelerate somewhat, to 3% in 2007 and 2008. The increase of economic imbalances is expected to slow down with the deceleration of domestic demand growth and the associated slowing of import growth.

Private consumption and housing investment have increased rapidly in the US, fuelled by rising household income, persistently low unemployment and rising values of housing assets due to buoyant house prises. Because the savings ratio has turned negative, despite rising income, and investment in housing has surged, household indebtedness has continued to increase. Persistently low long-term interest rates notwithstanding, households' loan servicing costs relative to disposable income, have risen to a historically high level. This, combined with the easing of house price increases, is projected to constrain private consumption growth and reverse the uptrend in housing investment.

Corporate investment is expected to continue to grow fairly rapidly in the next few years, following good performances by companies and healthy post-adjustment balance sheets. Net exports will make a positive contribution to US economic growth in the forecast period, following largely negative impacts in recent years. The turnaround not only reflects the dollar depreciation in 2002–2004 but also a moderation of domestic demand growth.

Economic growth in the EU15 countries in the second half of 2005 was more or less in line with the previous forecast. GDP growth for the entire year was 1½%. Despite a moderate growth slowdown in the last quarter, recovery is expected to continue in 2006.

Economic growth in the EU15 countries has been largely driven by exports and expanding investment. Exports have been fuelled by brisk growth of the world economy and rising oil prices, which in turn have boosted income in oil exporting countries and led to rising imports from the euro area. The recovery of investment has been driven by low interest rates as well as improved financial results and balance sheets by EU15 companies. Despite strong export demand and the recovery of investment, private consumption growth has remained sluggish. Private consumption is expected to pick up in the second quarter of 2006 and to grow considerably faster in the forecast period than the

Table 7.

GDP and import growth rates, % change on previous year

GDP	*2005*	*2006f*	*2007f*	*2008f*
United States	*3.5*	*3.1*	*2.9*	*3.0*
EU15	*1.5*	*2.2*	*2.2*	*2.1*
Japan	*2.8*	*3.0*	*2.0*	*2.0*
World	***4.5***	***4.3***	***4.0***	***4.0***
World trade	*7.0*	*7.3*	*7.0*	*7.0*
Finland's export markets	*7.8*	*8.6*	*8.0*	*7.8*

f = forecast
Source: Bank of Finland.

average of recent years. Forecasts indicate continued relatively brisk growth of investment over the next few years. In contrast, net exports are expected to provide only a modest contribution, partly because of the recovery of domestic demand. Euro area GDP is expected to grow at a rate of 2.2% throughout the forecast period.

Asian economic growth in 2005 seems to have slightly exceeded the forecast rate. Growth accelerated in Japan from the previous year, and elsewhere in Asia it is estimated to have slowed down only slightly. Forecasts for Asian economic growth in the next few years have been revised upwards from the previous forecast.

Recovery of the Japanese economy has continued, driven by stronger domestic demand. Corporate profitability and balance sheets have improved, and investment growth has accelerated considerably. Household consumption has also grown faster than before. Export growth decelerated in 2005 from previous years and the impact of net exports moderated. The recovery of the Japanese economy is expected to continue robust over the coming years, fuelled by strong domestic demand and solid exports.

Chinese economic growth has been brisk and is expected to remain so over the next few years. Investment in the energy and transportation sectors has eliminated the growth constraints. There was a marked increase in the foreign trade surplus in 2005, which is expected to persist over the next few years, although the focus of growth should shift from exports to domestic demand.

Turning to other Asian countries, overall economic growth has remained fairly brisk. Growth is, however, expected to slow down in the next few years, partly due to the high price of oil.

Russia recorded annual economic growth of more than 6% on average in 2000–2005. Rapid economic growth has been sustained by a strong increase in oil production, rising world prices of crude oil, and better price competitiveness of domestic industry fuelled by the rouble devaluation in 1998. While the growth of Russian oil production and crude oil exports came to a halt in 2005, economic growth remained brisk. This is largely due to exceptionally high crude oil prices and the growth of demand-driven sectors of the economy. Economic growth is expected to remain vigorous in 2006 in an environment of persistently high oil prices and strong demand from households. Growth will decelerate slightly towards the end of the forecast period in the wake of falling oil prices.

Export markets and export prices

Finnish export markets have expanded rapidly for two consecutive years, at a rate of some 8–9% a year.[2] The outlook for the next few years is also positive, with the growth of export markets expected to clearly exceed that of world trade. While world trade is expected to grow at an annual rate of about 7%, Finland's export markets are forecast to grow by some 8%. This is primarily a reflection of an extremely

[2] Export market growth refers to the increase in foreign import demand, weighted by Finland's trade weights.

rapid increase in Russian imports, but import growth is also projected to be fairly brisk in both Sweden and euro area countries.

Russian imports have grown in the wake of strong economic growth, reflected in increased exports from Finland to Russia over a number of years. The statistics for 2005 also show a substantial rise in re-exports to Russia. Finland's import and export statistics also reflect the value of products produced elsewhere – mainly mobile phones, household appliances and cars – and exported to Russia via Finland (Box 4, p. 45). Re-exports accounted for slightly less than 2% of total Finnish exports in 2005 and are expected to grow in the next few years in line with other trade.

While production growth and import growth remained strong in China, Finland's exports to China are still on the decline. China's share of Finland's total exports has fallen to 3%. The most important contributor to declining Chinese imports is an increase in domestic supply, which is partly fuelled by Finnish-owned companies.

The strong growth of world trade and shifts in trade flows were also reflected in export prices. In terms of Finnish exports, price developments have been modest compared to the growth of trade volume. Prices have continued to fall in the electronics industry, with no changes foreseen for the next few years. The declining trend is a reflection of improved profitability, but maturation of the ICT sector and intense competition are also squeezing price margins.

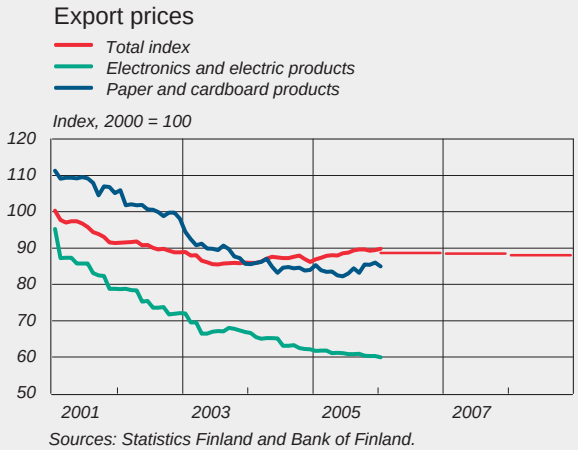
Contrary to previous developments, prices of Finnish forest industry products have not followed raw material prices, which have been elevated by an international economic upswing. Likewise, prices of other raw material-based products, such as refined steel, have failed to meet expectations. Price prospects for the forest industry remain subdued. Paper prices have remained flat and no significant rise is in the offing.[3]

Prices of other industrial products – such as machinery and equipment – have risen somewhat recently, as a result of stronger investment demand. Nonetheless, export prices overall are expected to rise more slowly than prices in the leading industrial countries.

The overall price level of exports, which decreased by almost 1% in 2005 according to the National Accounts, will continue to decline in the forecast period by an annual rate of 0.5% (Chart 29).

[3] See article 'Changing paper markets and prices' in this publication, p. 79.

Chart 29.



Sources: Statistics Finland and Bank of Finland.

Foreign trade

Finland's foreign trade growth exceeded expectations in 2005. Preliminary data show that the values of exports and imports rose by just over 6% and by nearly 13%, respectively. The Bank of Finland forecast of autumn 2005 underestimated the amount of re-exports from Finland to Russia, which then boosted Finland's export and import statistics.

The value of all goods exports grew by 7% last year, despite smaller-than-expected paper deliveries following the labour dispute. According to preliminary data, export volume grew by 8%.[4] The value of electronics exports grew at the exceptionally rapid pace of nearly 21% in 2005. Substantial increases were also seen in exports of machinery and equipment.

[4] The volume index, for which the base year is 2000, probably exaggerates the actual growth in volume. Due to the rapid fall in electronics prices, the index-weight of the electronics industry exceeds its true current weight.

Chart 30.

Three-month moving average.
Source: Customs.

The marked increase in Russian imports is barely reflected in the exports of traditional Finnish consumer goods. In contrast, growth of mobile phone exports to Russia was particularly brisk in 2005. Mobile phones manufactured in Hungary and Korea were re-exported via Finland to Russia.

Finnish exports to Germany only began to recover towards the end of 2005, reflecting a pick-up in German investment demand (Chart 30). Growth of exports to the entire EU area was relatively modest, only 5% on 2004. In contrast, exports to the Middle Eastern oil producing countries grew by more than 40%. Exports to China continued to decline, nor are substantial increases on the horizon. Moreover, Finnish export products do not seem to be attracting much interest among American consumers, as exports to the US declined by 2%. However, major cruise liner deliveries will change the situation in the next few years.

The value of electronics exports is expected to increase at a reasonable pace in the forecast period. This growth is based on increased world demand for high-quality and expensive mobile phones. It is assumed that re-exports to Russia will no longer increase faster than other exports.

The outlook for forest industry exports remains modest. It is dampened by the low level of paper prices as well as the slow recovery of construction investment in Germany which continues to depress the demand for sawn goods. Low paper prices also prevent any substantial increases in paper exports,

as companies try to defend the price level of their products.

The value of other exports is expected to increase at a reasonable rate in the forecast period. According to a survey by the Confederation of Finnish Industries and technology industry data on order backlogs, export deliveries will gain momentum in the first half of 2006. Two major cruise liner deliveries are due for May, and more deliveries are expected towards the end of the year.

All in all, Finnish export growth will fall behind the growth of export markets, so that Finland's export market share will diminish. Finland's output structure does not conform eg to the demand structure of the rapidly growing Russian and Chinese economies. There is, however, more cause to concern over the fact that, in the next few years, Finland's export growth is likely to remain slower than that in the rest of the euro area.

The value of goods imports grew by 14% in 2005. This was fuelled by brisk domestic demand, coupled with rising oil prices and increased re-exports.

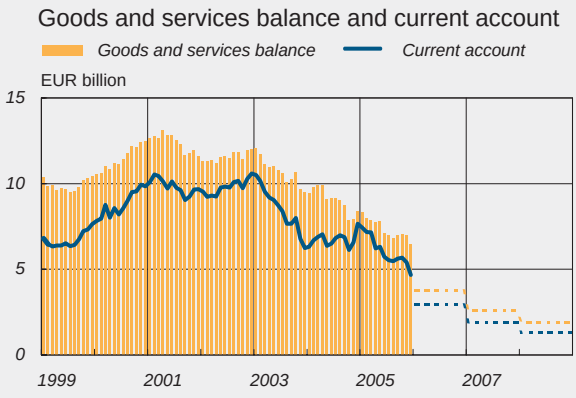
In the forecast period, rapid import growth will be driven by robust domestic demand as well as exports. The booming demand for consumer durables and capital goods will boost imports particularly at the beginning of the forecast period. Export production will also increasingly have to resort to imported inputs, due to domestic supply constraints.

Current account

Finland's current account surplus continued to decline in 2005. Preliminary data show that in 2005 the current account surplus amounted to EUR 4.7 billion, representing 3.0% of GDP. The declining trend is due primarily to the shrinking of the goods surplus. Other items of the current account, ie services account, income account and current transfers, did not change in 2005 compared to 2004. The service and current transfers accounts were in the deficit as opposed to the small surplus on the income account.

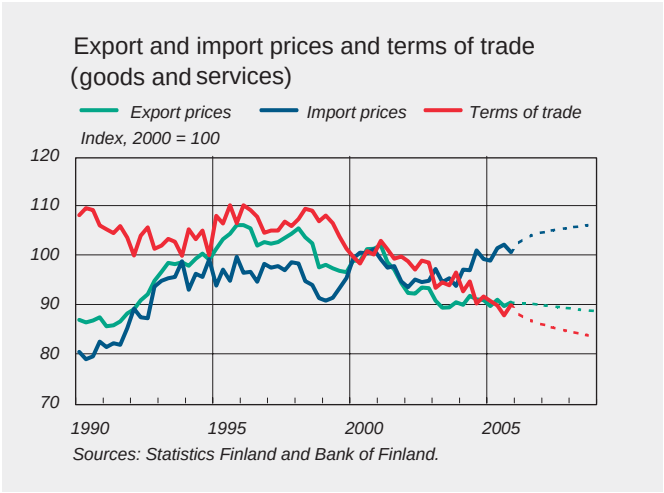
Diminution of the surplus on goods will continue in the forecast years, as the terms of trade continue to weaken and the propensity to import increases. As a result, the current account surplus will sink to slightly below 1% of GDP in 2008. Other items of the current account are forecast to develop at a fairly even pace (Chart 31).

Chart 31.



Twelve-month moving total.
Source: Bank of Finland.

Chart 32.



The terms of trade have weakened since 1999 (Chart 32). In 1999 and 2000, they were weakened by the rising oil price. In 2001, export prices turned downward as growth of the Finnish export markets came to a halt. Even since the recovery of the export markets, Finland's export prices have stagnated. Following the resumed rise of oil prices at the start of 2002, the terms of trade weakened further. Despite an expected gradual fall in oil prices, they will continue to remain high. Weakening of the terms of trade is the most significant factor to reduce the current account surplus in the next few years.

Finnish current account surpluses of recent years are largely due to the surpluses in goods trade with Asian countries. In the next few years, this surplus is likely to shrink. It is, however, impossible to draw any definitive conclusions here as to the level of competitiveness of Finnish exports or that of import-competing domestic output.

The general government financial surplus is expected to remain stable over the next few years and the household sector to remain in deficit. The diminution of Finland's current account surplus is thus more a reflection of a shrinking corporate sector financial surplus. This is due to the weakening of the terms of trade, which are dependent on global trends, as well as on the growth of corporate investment in Finland. Increased returns of retained earnings to shareholders as higher dividends and share buy-backs are also reducing the financial surplus.

Box 4.

Re-exports boost Finland's exports to Russia

In January-November 2005, Russia was Finland's second largest export market, with Finnish exports to Russia increasing by as much as 31% year-on-year. However, these excellent figures are partly attributable to re-exports.

Re-export refers to the import of goods over Finland's customs border and their subsequent export to Russia. These goods show up in the statistics as both Finnish imports and exports, even though not produced or specially processed in Finland. Re-export therefore does not refer to traditional transit export, in which goods passing through Finland are reported neither as exports nor as imports. A common feature of the two types of trade flows is that they have only minor effects on domestic income formation and employment.

Re-export seems to be tied particularly to mobile phones. In January-November 2005, over 18 million mobile phones were imported into Finland. Wholesale statistics show that 1.8 million mobile phones were sold in Finland in 2005, so that the majority of phones imported into Finland are exported elsewhere. In January-November 2005, Finland exported 8 million mobile phones to Russia, which accounted for 21% of Finnish exports to Russia. Re-export also seems to be related to other household appliances and electronics products, such as washing machines, microwave ovens, refrigerators, freezers and televisions.

Cars are also an important re-export item. Passenger cars accounted for almost 7% of Finland's exports to Russia in January-November 2005, increasing by 42% year-on-year. Finland exported 17,000 cars to Russia in the same period. Cars manufactured in Finland are not exported to Russia, as Porches manufactured in Uusikaupunki are exported mainly to western markets.

Re-export via Finland is partly explained by Finland's efficient logistical system and secure warehouses. These give Finland a clear competitive advantage, which many European and Asian companies have also noticed. These countries export electronics and other products to Finland, where the cargo is unloaded, stored and trucked to Russia as needed. Instead of resorting to transit haulage and bonded warehousing, sending goods over the Finnish customs border can also speed up and facilitate the redelivery of goods. The growth in car re-exports could also be attributable to a change in Finnish car taxation, as of the beginning of 2004. When a Finnish importer resells a car to a Russian importer, no car tax is levied on the trade in Finland, even though the car has crossed the customs border.

It is difficult to unravel re-exports from Finland's exports to Russia. A rough estimate puts the share of re-exports at 13–18%, but the figure could be higher. However, it is obvious that the growth in Finland's imports to Russia is fuelled by product groups that dominate re-exports.

Re-exports do not generate large second-round effects on domestic income formation or demand. The real gainer is the logistics sector. However, the impact on employment from Finnish haulage to Russia is generally quite modest. Almost 95% of road haulage from Finland to Russia is already carried out by Russian haulage companies. The abundant heavy traffic does not largely bring fuel or other income to Finland. In addition, those few Finnish haulage companies that do have a hand in this business hire mainly Russian drivers and register their cars in Russia. In Finland, haulage has its biggest employment impact in services, ports-related forwarding and various storage services.

Box 5.

Finnish corporate investment ratios by sector

Over the last ten years, the GDP share of Finnish corporate investment has fallen markedly compared with earlier decades. Notably in industry, the ratio of fixed investment to value added is currently at a substantially lower level than in the 1980s.

The decline in the investment ratio has been offset by a simultaneous increase in expenditure on research and development. Yet the narrow focus of R&D expenditure poses a problem; only the electronics sector allocates resources to research on a significant scale. Excluding electronics, industry's investment ratio has declined, even taking R&D expenditure into account.

Owing to the modest level of investment, the capital stock of the industrial sectors is contracting, ie their gross investment is less than depreciation. The decline in the capital stock may be due to a number of understandable causes, which should be kept in mind when making assessments. First, inefficient use of capital was typical of the pre-recession period, and the process of optimal reallocation of resources was still in progress. Second, part of traditional industry – the basic forest and metal industry – may already be working at full capacity in Finland relative to the supply of raw materials. A third possible explanation for the paucity of investment may be found in Finnish companies' shifting facilities abroad as they strive for optimal size and location vis-à-vis the markets.

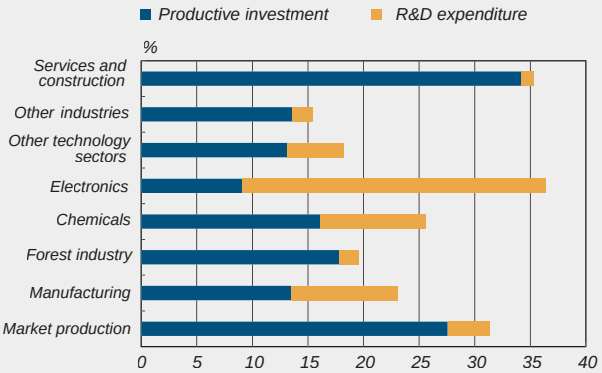
There are, however, a number of reasons why investments made in Finland give cause for concern. Except for electronics, labour productivity growth has remained sluggish in many sectors. One might have expected that companies in other sectors would also have invested more in labour-saving technologies and pumped more resources into research, to offset higher wage costs. But this has not happened. According to research findings, investment in information and communications technology in Finland (as in many euro area countries) is lagging behind that of the leading countries.[1] This mediocre effort is reflected in the terms of trade.

An assessment of the relationship between capital stock and output is hampered by the fact that R&D expenditure is not counted as investment. Contrary to earlier decades, when the capital stock grew roughly in line with GDP, R&D spending – which corresponds closely to an increase in human capital – now compensates in many sectors for structures as well as machinery and equipment. Thus the measured capital stock accounts for only a

[1] See eg Pohjola and Jalava (2005), 'Information and communication technology (ICT) as a source of productivity and economic growth' (Finnish only; abstract available in English). Publications of the Ministry of Transport and Communications 11/2005.

Chart 33.

Average investment ratios by sector, 2000–2004



Relative to value added, at current prices.
Sources: Statistics Finland and Bank of Finland calculations.

part of the economy's total capital stock that produces GDP.

Including R&D expenditure, the investment ratio for Finnish industry as a whole matches its average long-term level. Even so, the problem is that R&D expenditure is largely concentrated on a single sector, the electronics industry (Chart 33). Of particular concern is that the engineering and chemical industries have hardly increased their investment in research in the 2000s. It should be noted, however, that taking R&D expenditure into account raises the chemical industry's investment ratio by 9 percentage points and that of the technology sector (excl. electronics) by 5.

It is possible that the modest corporate investment in fixed capital and R&D is only a temporary phenomenon. Financial market restructuring, combined with the uncertainty associated with globalisation, may have rendered companies overly cautious. It is equally possible that the deceleration in investment is a part of a process by which Finland is migrating towards the service economy. The industrial sector is, in fact, exceptionally large in Finland, as is also the case in Ireland. Under this scenario, the contraction of the capital stock could still continue for a long time. The worst scenario would be that the low level of investment is a more permanent phenomenon and that Finland is drifting into a vicious circle of deteriorating terms of trade and falling income.

Box 6.

Revision of Finland's competitiveness indicators

The Bank of Finland calculates six competitiveness indicators for Finland: a narrow, a narrow plus euro area, and a broad nominal indicator, and the corresponding real indicators. These competitiveness indicators are effective exchange rate indices which measure Finland's price competitiveness in foreign trade by the value of its currency in terms of a basket of other (core) countries' currencies. The methodology for calculating Finland's competitiveness indicators is based on corresponding competitiveness indicators for the euro area calculated by the European Central Bank (ECB). The weights of the currencies in the basket are computed on the basis of the importance of these countries in Finland's foreign trade. Export weights are calculated via the 'double-weighting' method, which also takes into account Finland's core trading countries' shares in third markets (ie competition between Finland and those countries in third markets). Real competitiveness indicators are calculated using Finnish and core-country CPIs as deflators.[1]

[1] The calculation of competitiveness indicators is described in more detail in the article 'The new competitiveness indicators compiled by the Bank of Finland', Bank of Finland Bulletin 1/2000.

Changes

In late 2004, the ECB updated the weights of core countries in the euro area competitiveness indicators. At the same time, the composition of core counties was also changed slightly.[2] The Finnish competitiveness indicators were updated correspondingly at the start of 2006.

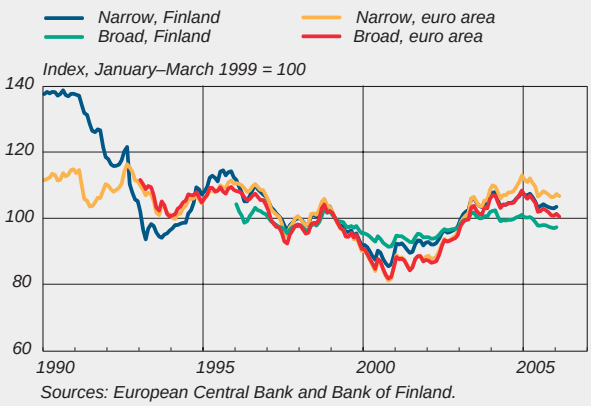
Two changes were made to Finland's competitiveness indicators. First, the values in the foreign trade matrix (Finnish exports to core countries, imports from core countries, and competition with core countries in third markets) were updated. The ECB calculated the new trade matrix on the basis of foreign trade and industrial production data for 1999–2001, whereas the previous weighting was based on 1995–1997 data. The ECB also updated the previous trade matrix according to revised data for 1995–1997. Thus the weighting for Finland's competitiveness indicators has been updated for the period preceding 1999 to correspond with the revised data for 1995–1997. As from the start of 1999, data for 1999–2001 are applied. Due to changes in the trade matrix, the weights of the core countries in Finland's competitiveness indicators changed slightly.

The other change concerns the composition of core countries in the competitiveness indicators. Contrary to previous practice, the ECB's new practice of including Greece in the group of euro area countries since the start of 1999 will be applied to the narrow competitiveness

[2] The new competitiveness indicators for the euro area are described in more detail in Box 10 of the September 2004 issue of the ECB's Monthly Bulletin.

Chart 34.

Real competitiveness indicators



Sources: European Central Bank and Bank of Finland.

indicator. Hence Greece is not included in the core countries of the narrow indicator. The narrow plus euro area indicator was not changed, so that it still comprises the countries of the narrow indicator and the euro area.

Originally, the broad indicator included Finland's major trading partners. For reasons of comparability and simplicity, none of the core countries of the former broad indicator have been dropped from the updated indicator, even though the importance of some of the countries in Finland's foreign trade has decreased. The broad indicator has been extended by five new countries: Hungary, Latvia, Lithuania, Slovenia and Slovakia. Thus, all the new EU Member States, excluding Malta and Cyprus, are included in the 37 core countries of the broad indicator. These countries accounted for about 93% of Finnish foreign trade, as measured by the averages of exports and imports from the trade matrix for 1999–2001.

This revision of competitiveness indicators has had only a minor impact on indicator values. The most important change concerns the broad indicator, where the biggest daily differences compared to the old method were clearly less than 0.5 percentage point. The minor impact of the revision is due to the small changes in core-country weights and the fact that the five new core countries' share of Finnish foreign trade is only about 1.5%.

Finland's competitiveness

The real competitiveness indicators show that Finland's competitiveness has improved slightly over the past year vis-à-vis countries of the narrow and broad indicator (Chart 34). This is due to the depreciation of the euro and the slower rate of inflation in Finland compared to other countries. Compared to the euro area, Finland's level of competitiveness is now slightly higher than at the time of euro introduction in 1999.

Costs and prices

Labour costs

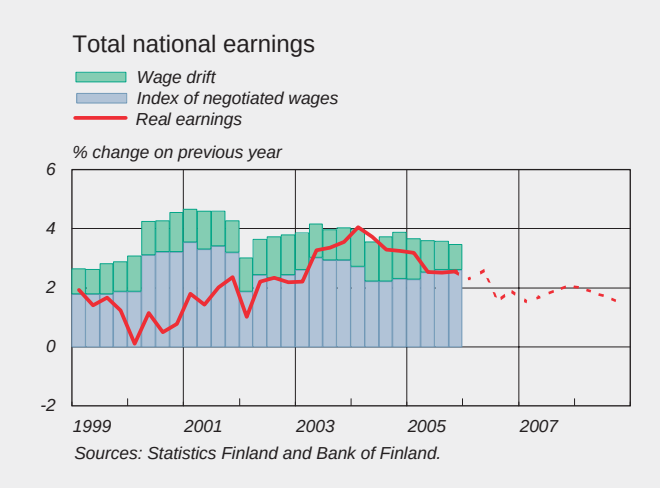
Salary and wage earners' nominal earnings rose on average by 3.6% and real earnings by 2.7% in 2005. Low inflation contributed to the favourable development in real earnings, while a good employment performance was the main factor in growth in the total amount of wages. Labour costs grew faster in Finland than in the other euro area countries in 2005.

According to the estimate of the Incomes Policy Settlement Commission, negotiated wages increased by about 2.6% in 2005. Wage drift has added about 1% to the increase in wages, similar to the last few years on average (Chart 35). The estimate suggests that in 2005 earnings grew faster for central and local government employees than in industry. The current income settlement includes a general wage and salary increase of 1.4% and a sector-specific increase totalling 0.4% in June 2006. According to the Incomes Policy Settlement Commission, the cost effect of these increases as of the beginning of June 2006 is 2.1% on average. Hence the negotiated increases will be slightly smaller and occur later than in 2005. The forecast slight acceleration in inflation will dampen the rise in real earnings. The comprehensive income settlement signed in December 2004 ends in September 2007.

The total amount of wages and salaries grew by about 4.5% in 2005. The figure increased as a consequence of good employment performance in many sectors. In the last quarter of 2005, aggregate wages in the economy were 4.2% higher than in the corresponding period in 2004. The wage total grew in the last quarter of 2005 in all the main industrial sectors: the greatest growth was in private health care and social services and the least in industry.

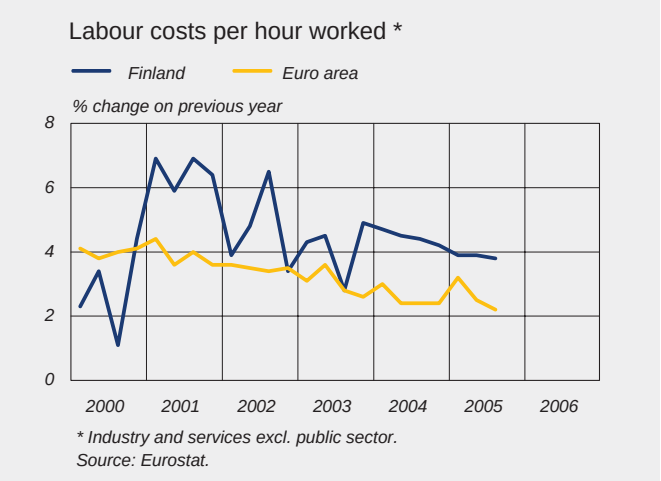
The latest reference data on labour costs in the euro area is available for the third quarter of 2005. According to preliminary Eurostat data, the average annual growth in hourly labour costs in the private sector was 2.2% in the euro area and 3.7% in Finland in the third quarter of 2005 (Chart 36).

Chart 35.



Sources: Statistics Finland and Bank of Finland.

Chart 36.



* Industry and services excl. public sector.
Source: Eurostat.

The Bank of Finland forecasts that nominal earnings growth will moderate somewhat in the years ahead. Accordingly, average earnings growth will remain stable at about 3% in 2006 – 2008. Private sector earnings have generally increased somewhat faster than public sector earnings. However, the forecast suggests that, in the years ahead, earnings will grow slightly faster in the public sector. Employer pension contributions should decline temporarily in 2006, normalise in 2007 and rise slightly in 2008. There will be only small changes in indirect labour costs during the forecast period.

Prices of raw materials

The period of low world market prices of crude oil seems to be over for good. Oil prices are expected to remain relatively high in the years ahead. The Bank of Finland forecast calls for just a slight decline in oil prices in the forecast period (Table 8). Nor is there any significant turnaround expected for the next few years in metal prices, which have risen significantly. The relatively robust pace of world economic growth will keep the demand for crude oil and other raw materials high.

Table 8.

International prices of oil and raw materials

	2004	*2005*	*2006f*	*2007f*	*2008f*
Oil					
USD/barrel	*38.3*	*54.4*	*63.1*	*60.5*	*56.7*
EUR/barrel	*30.8*	*43.9*	*51.9*	*48.9*	*45.2*
Other raw materials					
% change on previous year					
in USD	*24.8*	*14.5*	*12.0*	*–2.0*	*–0.6*
in EUR	*13.6*	*14.5*	*14.5*	*–3.7*	*–2.1*

f = forecast.
Sources: Bloomberg, HWWA and Bank of Finland.

World market prices of crude oil continued to rise rapidly in 2005. Robust world economic growth boosted the demand for crude oil particularly in Eastern Asia. China's rapid industrialisation has also led to a notable increase in the demand for other raw materials during the past few years.

Crude oil prices fluctuated widely in the course of 2005. The hurricanes that raided the Gulf of Mexico in autumn 2005 led to an abrupt surge in the world market prices of crude oil and particularly refined petroleum products. In December 2005, the world market price of crude oil was about 43% higher than a year earlier. This rise has continued at the beginning of 2006, owing to the tightened political situation in the Middle East – after Iran decided to restart its uranium enrichment program – and to unrest in Nigeria. Together, Iran and Nigeria produce over 6 million barrels of the world's daily current output of 83 million barrels.

Supply and demand for crude oil

Crude oil consumption growth slowed in 2005. This was particularly related to the fact that China increasingly resorted to alternative energy sources. Crude oil consumption growth decelerated also in the United States towards the end of 2005.

Investments for significantly increasing crude oil production have been at a virtual standstill since the 1980s. As unused production capacity has also diminished, world market prices of oil have risen sharply in recent years. In addition, ongoing fears of production disruptions have increased

uncertainty as to sufficient supplies of crude oil and other oil products and occasionally induced considerable upward pressure on prices. Speculative demand has also grown in recent years, as risk funds have become increasingly attracted to lofty yield expectations in the raw material markets. This has contributed to short-term fluctuations in world market prices of crude oil.

The global crude oil consumption growth was 3.8% in 2004, but slowed to 1.3% in 2005. The International Energy Agency (IEA) estimates that crude oil consumption will grow smoothly, by over 2% per annum in 2006–2008.

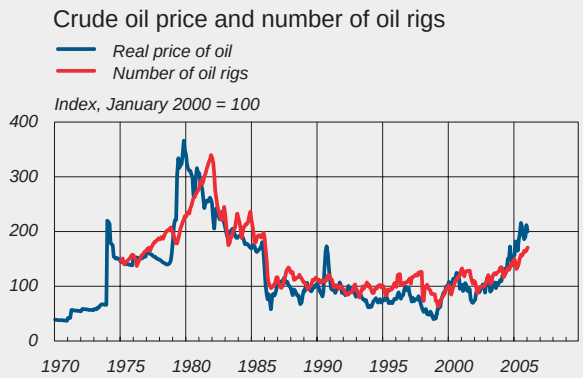
High crude oil prices are expected to boost investment in oil production considerably in future. In 2006, oil production is likely to exceed clearly the demand for oil. The majority of the rise in production stems from non-OPEC countries, mainly from oil-producing countries of the Caspian Sea region, Latin America and Africa. The more extensive utilisation of the vast oil sand reserves in Alberta, Canada will also bolster the crude oil supply in the coming years. On the other hand, the growth of Russian oil production has recently slowed markedly. North Sea oil production is also estimated to decline gradually from the current level.

Future changes in crude oil supply can be estimated roughly by assessing the changes in the number of oil rigs (Chart 37). Their number has recently been increasing rapidly. Despite some growth in the production capacity of crude oil and oil products, the tight conditions will obtain in global oil markets also in the years ahead, and no major changes in the situation are in the offing.

Crude oil prices

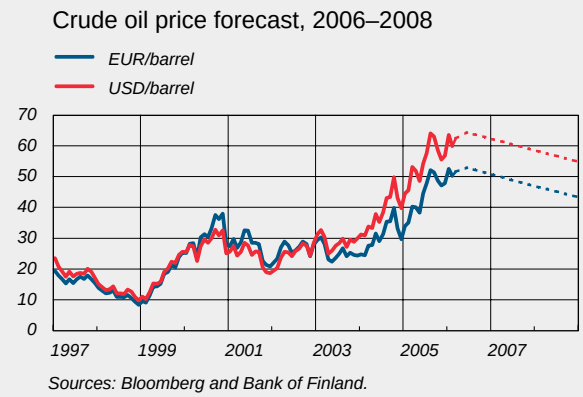
Because of the continued increase in crude oil demand and slowing of production growth in several oil production areas, the estimate of the long-term price of crude oil (Brent blend) has been revised upwards slightly (Chart 38). The projection takes account of price developments in crude oil futures up to mid-2006, after

Chart 37.



The real price of oil has been calculated by deflating USD prices of Brent blend by the US CPI.
Sources: Bloomberg and Baker Hughes.

Chart 38.



Sources: Bloomberg and Bank of Finland.

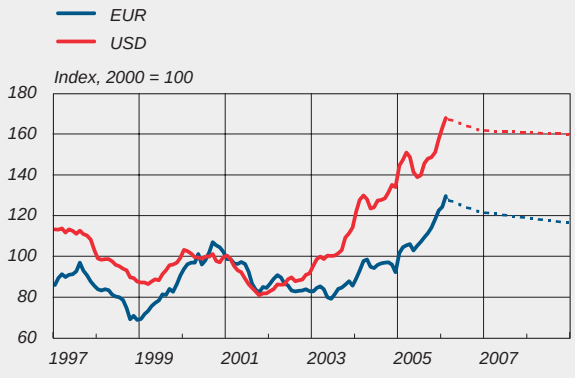
which crude oil prices are estimated to fall smoothly to USD 55 by the end of 2008, in the wake of gradual increases in supply. The estimate of long-term developments in oil prices has remained unchanged compared with the previous Bank of Finland forecast. The expected slight appreciation of the euro against the US dollar in the forecast period will dampen the increase in the euro price of crude oil. It is likely that in future the rise in crude oil prices will also be constrained by increasing use of alternative modes of energy production in many countries.

The future course of crude oil prices continues to be marked by great uncertainties. Any increased turmoil in Iran and Nigeria could boost the price of crude oil considerably from the current level. Weaker-than-expected growth of Russian oil production could also induce increased upward pressure on crude oil prices. On the other hand, weaker-than-expected demand growth and an increase in unused capacity could possibly lead to a rapid fall in world market prices of crude oil. This might be the case if, for instance, OPEC were to raise production capacity significantly. The risk of oil prices dropping more than forecast has also increased as inventories have increased. If inventories were to be run down, the price of oil could drop more than estimated.

Crude oil futures prices rose exceptionally above spot prices in the course of 2005. This probably reflects more active attempts by companies – eg airlines and shipping companies – to hedge against crude oil price fluctuations.

Chart 39.

Prices of industrial raw materials (excl. energy) and forecast assumptions



Sources: Bloomberg and Bank of Finland.

Raw material prices

World market prices of industrial raw materials (excl. energy) have risen sharply in recent times (Chart 39). Strong growth of the world economy and particularly China's rapid industrialisation have lifted nominal prices of raw materials to record-high levels. Prices of metals such as copper and aluminium have surged. By contrast, pulp and paper prices, which are important for Finland, have stagnated. Investment funds' increased interest in raw materials has probably also contributed to the recent rise in world market prices.

Prices of raw materials (excl. energy) in euro terms have also reached historically high levels, although euro appreciation over the past few years has constrained the price increases. Since the start of 2003, dollar-denominated prices have climbed by 76% and euro-denominated prices by 56%.

According to the forecast, dollar prices of raw materials will turn down moderately in the near future, as high

prices gradually begin to induce greater output of raw materials. However, prices will remain at historically high levels, as the robust pace of economic growth, particularly in developing countries such as China and India, continues to underpin strong demand for raw materials in the years ahead. Owing to the expected strengthening of the euro, euro-denominated prices will decline slightly faster than dollar prices in the forecast period.

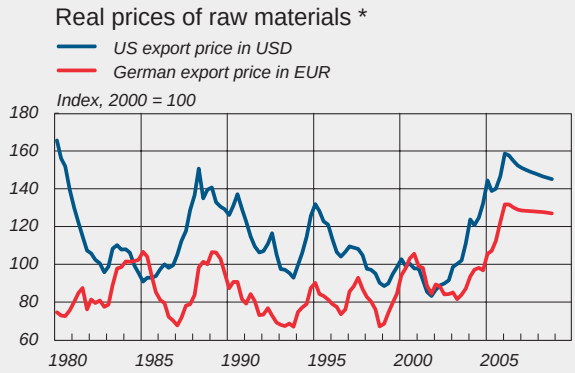
Dollar-denominated real prices of raw materials have risen to a level slightly higher than at the end of the 1980s (Chart 40). Euro-denominated real prices are even higher by historical standards. Real prices are projected to turn down slightly in the near future, as the rise in raw material prices levels off. Productivity growth in raw materials and a decline in raw material-intensity have constrained the rise in real prices in recent years.

Import prices

Import prices of Finnish goods rose notably in 2005, led by marked increases in world prices of crude oil and other raw materials (Chart 41). The Import Price Index calculated by Statistics Finland rose in 2005 by almost 7% on the previous year.[1] The contribution of energy prices – mainly of oil products – to the rise in import prices was roughly estimated to be 4 percentage points. The contribution of increases in prices of raw materials and intermediate products was about 2 percentage points.

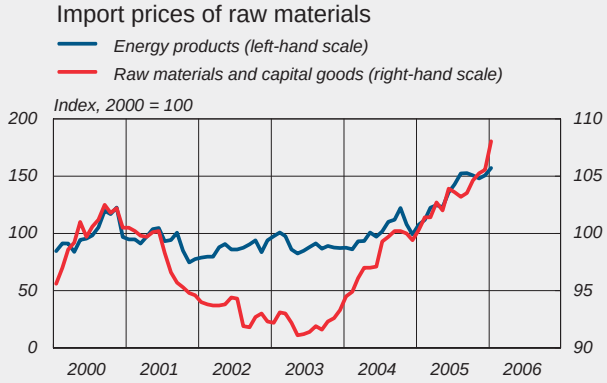
In January 2006, import prices rose sharply – by almost 2% month-on-month – mainly owing to higher raw material prices. Aside from consumer durables, the rise in import prices of other industrial products also accelerated at the start of 2006. This was probably partly attributable to the weakening of the euro against the US dollar in the latter part of 2005.

Chart 40.



** Industrial raw materials excl. energy.*
Real price based on export indices.
Sources: HWWA and Bank of Finland.

Chart 41.



Source: Statistics Finland.

[1] The Import Price Index (2000 = 100) calculated by Statistics Finland comprises import prices of following commodity groups (classified according to main industrial groupings): energy, intermediate goods, capital goods, durable consumer goods and non-durable consumer goods.

At the end of 2005, import prices of energy were over 40% higher than at the start of the year. The sharp increase in world market prices of crude oil and other oil products during 2005 was quickly reflected in prices of energy raw materials imported into Finland. Prices of intermediate products and non-energy raw materials rose by more than 5% in the course of 2005, affected in part by a marked increase in prices of non-ferrous metals.

Chart 42.

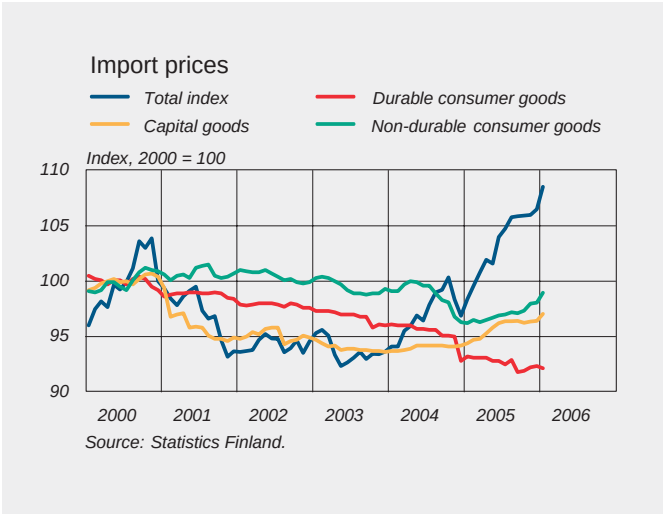
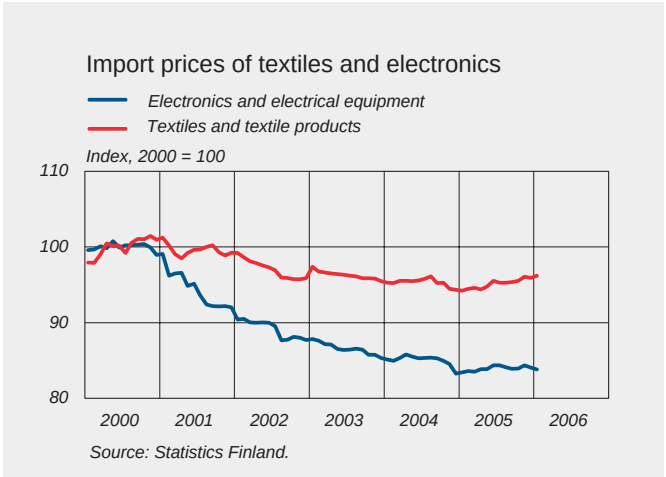


Chart 43.



Import prices of capital goods (ie investment goods) have developed moderately for some years already. However, the notable increases in raw material and intermediate goods prices have gradually begun to be reflected also in import prices of capital goods, which turned up clearly in the early part of 2005 and rose by almost 2% from a year earlier.

The decline in prices of non-durable consumer goods came to a halt and prices turned up clearly in the course of 2005 (Chart 42), due particularly to a rise in import prices of food and textiles. By contrast, import prices of consumer durables declined further, by almost 3% in 2005, although the fall levelled off substantially during the year. This levelling off was mainly attributable to higher import prices of domestic appliances. The share of raw materials, whose prices have risen markedly, is greater in the big domestic appliances than in the smaller electronics products.

Import prices of electronics products and electrical equipment declined in 2005 by more than 1% from a year earlier (Chart 43). The fall was most notable in import prices of consumer-oriented entertainment electronics such as TVs and radios, which decreased by just over 2% in the course of 2005. The fall in import prices of electronics products was constrained by price rises in capital and intermediate goods. The decline in import prices of textiles also levelled off in 2005.

Lower consumer prices of clothes and entertainment electronics have been

an important factor in constraining the inflation in industrial products in recent years. Even as import prices of textiles have increased slightly, their consumer prices have declined. This has probably contributed to the lower profit margins in wholesale and retail trade.

In the Bank of Finland forecast, import prices are valued using the import deflator for goods and services used in the national accounts.[2] The import deflator indicates that import prices increased in 2005 by just over 2% from a year earlier, which is much less than the rise suggested by the Import Price Index published by Statistics Finland. The difference is mainly explained by the heavier weighting of crude oil and other raw materials in the Import Price Index.

The rise in import prices of goods and services is projected to ease in the years ahead, as raw material price increases level off (Chart 44). However, world market prices of raw materials are estimated to remain nearly unchanged from the current relatively high levels, which will lead to a marked increase in import prices already in 2006. Consequently, the rise in import prices of goods and services will accelerate in 2006 to about 2,8%. However, the rise will slow significantly in 2007–2008 as world market prices of raw materials level off. Import prices are projected to increase also in future, as the higher costs of raw materials gradually pass through to international export prices.

Chart 44.

Domestic producer prices

Producer prices increased moderately in 2002–2004. However, the sharp rise in prices of crude oil and other raw materials over the past two years has also begun to be reflected in producer prices. The rise in the producer price deflator for the private sector accelerated to 1.4% in 2005.[3]

In addition to the costs of raw materials and intermediate products, estimates of private sector producer prices should also take account of productivity and unit labour costs (Chart 45). If productivity growth remains favourable and unit labour costs continue to rise slowly, producer prices are also likely to rise moderately.

Private sector producer prices are projected to remain moderate in the years ahead. Since private sector productivity growth is averaging 2–3% per annum, so that the rise in unit labour costs will remain modest (on

[2] In the national accounts, value added is divided into volume and price components. The price component is the deflator.

[3] In the national accounts, value added is divided into volume and price components, the latter being the deflator. The price of output in the private sector includes the production of services and goods.

average less than ½% per annum), the rise in producer prices should remain fairly moderate. Private sector producer prices are projected to rise considerably slower than 1% per annum during 2006–2008.

Productivity in the private sector will however vary significantly across sectors. For instance, productivity growth has long been clearly faster in electronics than in other sectors, whereas in many service subsectors it has traditionally been slow. Consequently, producer prices can also behave very differently across sectors. In the electronics industry, producer prices have declined in recent years.

Chart 45.

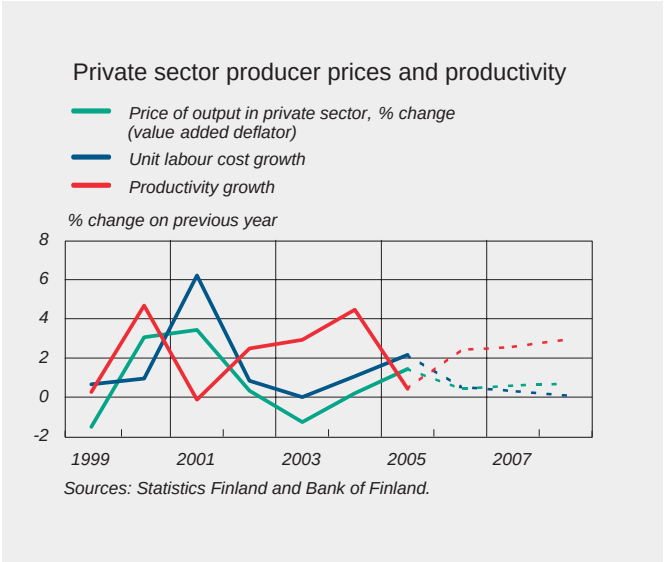
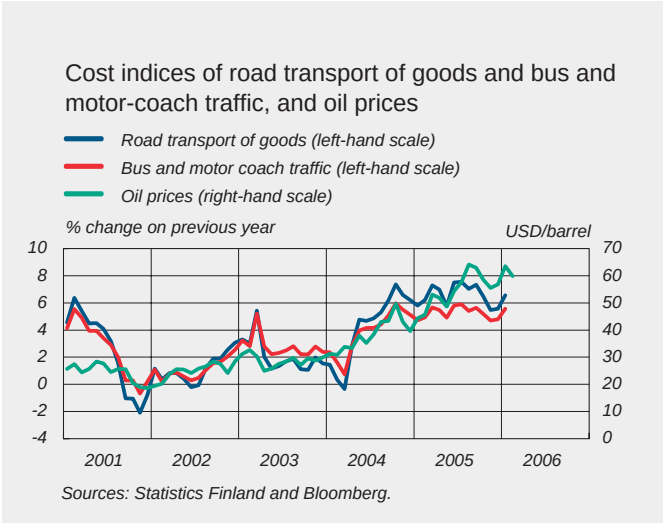


Chart 46.



Transport and traffic costs

Transport and traffic costs have increased considerably over the past year and a half. The most rapid rise was experienced in 2004, when world market prices of crude oil also increased swiftly. In the course of 2005 the rise slowed to around 6%, as the climb in crude oil prices levelled off. The most important factor affecting transport and traffic costs, besides wages, is the price of diesel oil.

So far, the rise in costs of road transport of goods has not been widely reflected in final product prices (Chart 46). As new major international logistics companies enter the Finnish market, competition in the transport sector will tighten further. Increasing competition among transport companies and in daily consumer goods trade will squeeze profit margins as costs increase. However, according to the transport barometer published by the Finnish Transport and Logistics Association (SKAL), over half of the transport companies have managed to pass on the rise in fuel prices either totally or partly along the distribution chain. In this way, part of the rise in transport and traffic costs has also been transferred to producer prices in industry and trade.

Box 7.

Regional development of housing prices in Finland

Demand in the Finnish housing market has increased rapidly in recent years. Demand has been fuelled eg by growth of disposable income, low interest rates, and longer repayment periods on housing loans. Due to supply constraints, demand growth has led to a surge in average housing prices.

Focusing on average prices for the entire country may, however, give an inadequate picture of developments in the housing market. Price movements can differ considerably by locality.

This box examines the impact on the housing market of differences in changes in relative housing prices across regions.[1] These differences enable us to estimate the volume and extent of excess demand in the Finnish housing market in the current decade.

The rise in housing prices has been most pronounced in growth centres, ie in towns that have experienced above average growth in income and employment. In these regions, the impact of supply constraints has also been significant. The contribution of the eight fastest growing towns to the increase in housing prices in the current decade is more than half – some 19 percentage points of the approximately 36% increase in housing prices for the whole country.

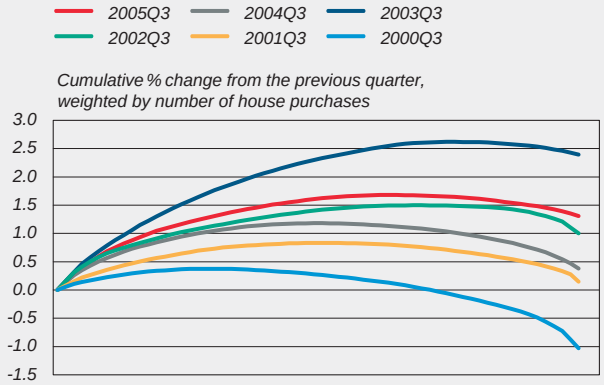
The contribution of housing prices changes in an individual region or town to average housing price developments in Finland is calculated by multiplying the regional price change by the relative amount of house purchases in the region in the given time period. The same calculation is done for all regions and the results are presented in an order of magnitude.

The curves in Chart 47 were formed by ordering regional contributions by magnitude and calculating the cumulative sums. The first regional contribution on the left is the largest positive contribution to average housing price developments in Finland. The next observation is the sum of the first and second largest contributions to average housing prices. As the procedure is repeated, the negative contributions (of regions where average price fell) to average housing prices cause the curve to turn down. The last contribution is the largest negative one, and the final sum corresponds to average housing price change in Finland.

This analysis also gives an overview of the frequency of housing price increases and decreases and of the average rate of change of housing prices in Finland. The shape of the curve reflects the way the contributions to prices are added up. If the number of house purchases and the rate of increase in prices

Chart 47.

Cumulative sum of contributions to quarterly changes in housing prices



Q3 refers to the third quarter of a year.
Sources: Statistics Finland and Bank of Finland calculations.

[1] For the analysis, Finland was divided into 63 regions with data available on housing prices, number of house purchases, number of taxpayers, taxable income and taxes paid. The regions were formed so that the number of house purchases was as similar as possible.

were equal in all the regions the curve would be flat. The greater the regional changes in relative prices and the bigger the variation in number of house purchases, the more convex the curve.

Chart 47 shows six curves calculated by the above method. The price changes are quarterly changes for the third quarter of each year in the current decade, relative to the previous quarter[2]. The same quarter of each year is used so as to avoid the impact of possible seasonal changes in housing prices.

The chart shows that throughout this decade there have been regions with falling housing prices (relative to the previous quarter). In 2000 the number of such regions was exceptionally high, which was due to weaker growth in demand because of a rise in interest rates. By contrast, in the third quarter of 2003, the number of regions with falling housing prices was exceptionally low. In the third quarter of 2005, the number of regions with housing price decreases was higher than in 2002. In these regions, the price decrease and number of house purchases were, however, smaller than in 2002, so that their impact on average housing price developments was relatively small.

Chart 48 differs from Chart 47 in that it shows annual changes in housing prices. The number of regions with falling housing prices is much smaller than with quarterly changes. However, the number of regions with little or no rise in housing prices is still fairly high. Thus changes in relative prices are still large. The lack of or small number of regions with falling housing prices in the analysis of annual changes is due to the fact that the quarterly price decreases shown in Chart 47 occurred mainly in different regions and in different quarters. The data nevertheless include also regions with nearly continuous declining trends in prices.

This analysis shows that in recent years changes in relative prices have played a major role in the housing market. To determine the underlying factors the data on housing price changes and number of house purchases were combined with town-specific data on the number and taxable income of taxpayers. The results are brought together in Table 9.

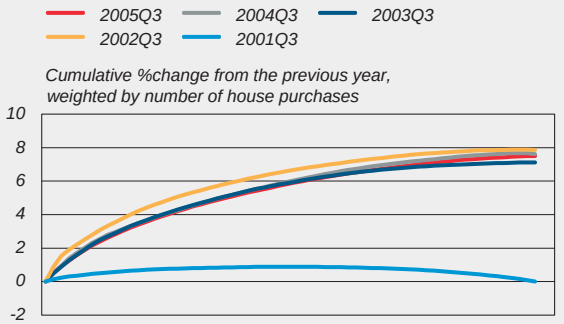
The first row of the table shows aggregated data on the ten regions with the highest rates of increase in income and the number of taxpayers.[3] The contribution of these ten regions to the average rise in housing prices in Finland in the current

[2] The results are not affected by which quarter is examined. The third quarter was chosen because data for the fourth quarter 2005 is preliminary: it currently includes only two-thirds of the house purchases.

[3] These include Espoo–Kauniainen, neighbouring municipalities, Oulu, Itä-Uusimaa, Helsinki, Seinäjoki, Vantaa, Jyväskylä, Tampere and Porvoo.

Chart 48.

Cumulative sum of contributions to annual changes in housing prices



Q3 refers to the third quarter of a year.
Sources: Statistics Finland and Bank of Finland calculations.

Table 9.

Housing prices, number of house purchases and income and number of taxpayers by region

	Increase in housing prices, % 2000–2005	*Change in number of house purchases, % 2000–2005*	*Change in number of taxpayers, % 1997–2005*	*Change in taxable income*, % 1997–2004*	*Contribution to increase in regional housing prices, %*
Regions in the higher income bracket	*39*	*21*	*12*	*52*	*54*
Regions in the medium income bracket	*33*	*14*	*4*	*39*	*34*
Regions in the lower income bracket	*32*	*12*	*–2*	*28*	*12*
Average for Finland	*36*	*21*	*5*	*42*	*100*

** Tax data describing house purchasing power cover a longer period because house purchases are financed with income from a longer period. Tax data for 2005 not available.*
Sources: Statistics Finland and Bank of Finland.

decade is over 50%. The rapid growth in income and employment has boosted demand in the housing market. This has led to a rise in housing prices in these regions, due to a lack of flexibility in the supply of housing and building land. There are, however, two exceptions. Despite robust growth in jobs and income, the rise in housing prices has been modest in Seinäjoki and Jyväskylä in the current decade – only 25% – with other similar growth centres registering an almost 42% increase in 2001–2005. The latter regions account for the majority of this group's contribution to housing price developments in Finland.

On the other hand, in regions where growth in income and employment has been more modest than in the rest of the country, activity in the housing market has also been more subdued than in the rest of the country.[4] In these regions, relative housing prices have fallen and growth in the volume of house purchases has been slower than in other parts of the country.

[4] These include Kymenlaakso (excl. Kotka and Kouvola), Kotka, Satakunta (excl. Pori ja Rauma), North Karelia (excl. Joensuu), South Karelia (excl. Lappeenranta), Lapland (excl. Rovaniemi), Kajaani and Etelä-Savo (excl. Mikkeli). An exception is Kotka, where the rise in housing prices exceeded the average for this group by over 10%.

Box 8.

Finnish and euro area inflation

The rate of inflation, as calculated by the Harmonised Index of Consumer Prices (HICP), has been notably slower in Finland than the average for the euro area already since 2002 (Chart 49)[1]. In Finland, HICP inflation rose to 0.7% in 2005, whereas the average rate for the euro area remained slightly above 2%. Euro area inflation has been elevated mainly by climbing energy prices, and in several countries also by a rapid rise in service prices. In Finland, the price level has been higher than the average price level for the euro area, but the difference is gradually narrowing due to the lower rate of inflation.

Finland's average rate of inflation eased temporarily to 0.1% in 2004, which was mainly due to changes in indirect taxation. When the impact of an alcohol tax reduction in 2004 dropped out of the calculation of annual inflation in March 2005, inflation jumped to close to 1%. Subsequently inflation has remained close to 1%, despite the sharp rise in world market prices of crude oil and other commodities in 2005.

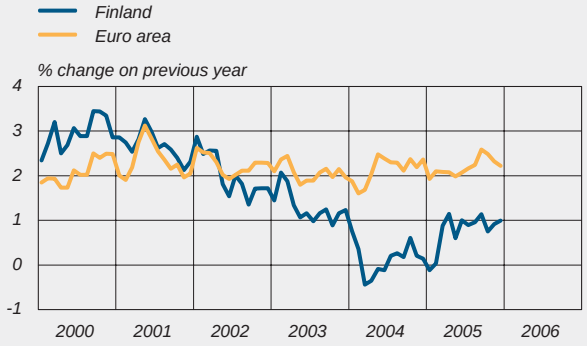
Impact of competition and tax reductions

Finnish inflation in recent years has been influenced by several factors. Falling import prices of consumer goods and increased competition eg in telecommunications and retail trade have slowed inflation considerably. The rise in prices was also constrained notably by reductions in alcohol and car taxes.

The rate of increase in service prices has remained above or close to 1% already since early 2004. Service prices in Finland rose moderately, by 1.2% on average, in 2005 (Chart 50).

Chart 49.

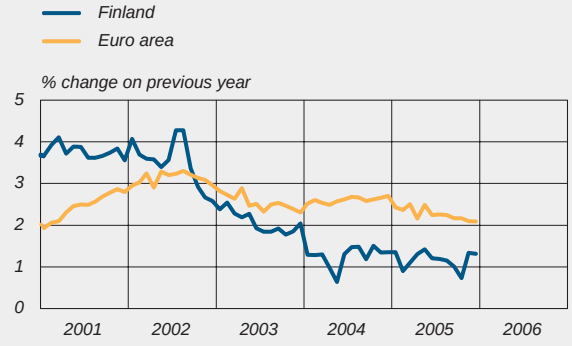
Harmonised index of consumer prices



Sources: Statistics Finland and Eurostat.

Chart 50.

Harmonised index of consumer prices, services



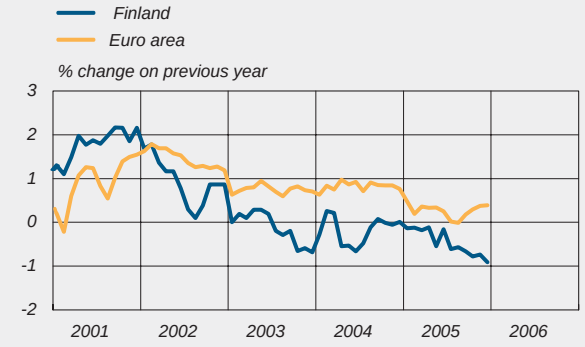
Sources: Statistics Finland and Eurostat.

[1] The harmonised index of consumer prices (HICP) is calculated by comparable methods in each euro area country. The HICP is composed of five components, each of which influences the overall index according to its own weighting. These are (Finnish weights in brackets): services (41%), non-energy industrial goods (30%), processed foods (16%), energy (7%), and unprocessed foods (6%).

Service price inflation in the euro area has remained significantly above 2% for several years already. It, however, subsided slightly in the past year, due to a decline in the rate of increase in services prices in several euro area countries. For example in Germany, it eased from about 2% to slightly above 1% over the course of 2005. Recently the rate of increase in service prices has also declined markedly in Italy, the Netherlands and Austria.

Chart 51.

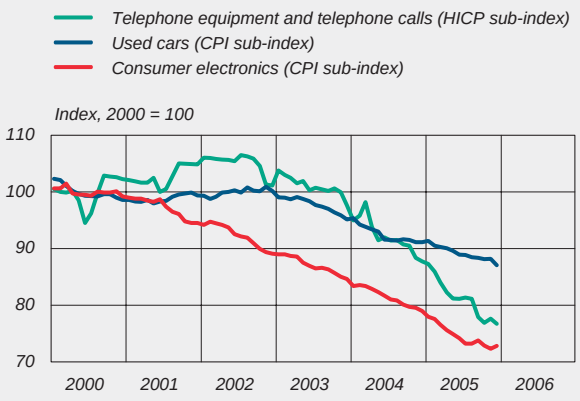
Harmonised index of consumer prices, non-energy industrial goods



Sources: Statistics Finland and Eurostat.

Chart 52.

Price changes in selected commodity groups in Finland



Source: Statistics Finland.

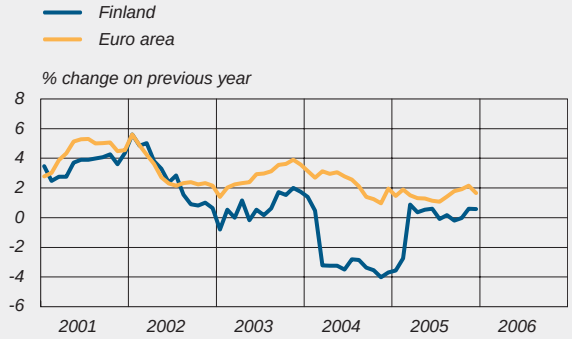
Slower growth in service prices in Finland is mainly due to a fall in telecommunications prices (eg telephone charges) in recent years. The fall in telecommunications prices reduced service price inflation by about 0.9 percentage point in 2005. Excluding the contribution of telecommunications prices, the current rate would be above 2%, ie close to the long-term average. Tight competition between telephone operators has pushed telephone charges down to a level that is low even by international standards. In recent years, telecommunications prices have declined significantly also in the euro area: in 2005 they fell by just under 3%. In Finland, they declined by about 12% in 2005.

The rise in service prices has been spurred particularly by housing rents and restaurant services, and partly by haulage services (transport), both in the euro area and in Finland. Their combined contribution to service price inflation in Finland was about 1 percentage point in 2005.

The prices of non-energy industrial goods in Finland fell by about ½% in 2005. Industrial goods prices rose in the euro area, albeit by only 0.3% (Chart 51). Of the euro area countries, only Ireland and the Netherlands posted slower industrial goods inflation than Finland.

Chart 53.

Harmonised index of consumer prices, food



Sources: Statistics Finland and Eurostat.

In Finland, non-energy industrial goods prices have been depressed particularly by price developments in used cars and consumer electronics (Chart 52). The reduction in car taxes in early 2003 is still having an indirect effect on prices for used cars. In contrast, car prices in the euro area have increased continuously. Prices of clothes also declined slightly in the past year. Prices of clothes and electronics have also declined in the euro area, albeit at a slower rate than in Finland.

The negative contribution of used car, consumer electronics and clothes prices to industrial goods prices in Finland was about 0.8 percentage point in 2005. In December, prices decreased by 0.9% year-on-year, despite a slight upturn in import prices of clothes and electronics over the course of 2005.

Food prices

Several exceptional factors, such as unusual weather conditions and animal diseases, caused considerable fluctuations particularly in unprocessed food prices in the early years of the current decade. In the beginning of 2002, the rate of increase in food prices eased considerably both in Finland and in the euro area. In Finland, the rate of increase in food prices declined from over 5% to close to zero. In the euro area, the rise in prices levelled off at 2%. Subsequently the annual rate of food price increases in the euro area has been about one percentage point higher than in Finland. An exception is the reduction in alcohol tax which slowed the rate of increase in food prices considerably in 2004 (Chart 53).

Food prices in the euro area rose on average by 1.6% in 2005. In Finland, prices fell by about 0.3%, which was still largely due to the reduction in alcohol tax in 2004. The reduction in alcohol tax slowed inflation from March 2004 to February 2005. Increased competition in the food retail industry has caused the rate of increase in prices to remain below the rate for the euro area. In 2005, the rate of increase in food prices was highest in Luxemburg and Spain, where prices rose by 3.5 to 4.5 %, and lowest in Finland and the Netherlands. Also in Germany food prices rose by almost 3%.

Forecast summary and risk assessment

International economy

Global economic growth has continued at a brisk pace, and is expected to ease only slightly in the next few years. The recovery of growth in the euro area and the improved situation in Japan are supporting the development of the world economy, while US growth is expected to ease slightly from the pace of recent years. Growth continues to be rapid in many emerging Asian economies, most significantly in China.

World trade is also expected to continue its fairly brisk growth over the next few years. Finnish export markets are expected to growth slightly faster than world trade overall, as Russian imports in particular grow rapidly due to increased income from oil. Future oil price developments will have a significant influence on how large a proportion of Finnish export growth is directed to Russia and other oil exporting countries.

Although the oil price increase has not so far caused any large-scale disruptions in the world economy, the trend in the oil market continues to pose a risk of weaker than forecast international growth. For example, geopolitical factors could cause a significant fluctuation in oil prices with production capacity at close to peak utilisation rates. In addition, the deepening US current account deficit continues to pose risks. These should be borne in mind regardless of the fact that the threat posed by the potential weakening of US domestic demand to international economic developments seems to have been eased somewhat by the improved growth prospects in eg Japan and the euro area. Similarly, concerns about a sudden halt to the financing of the US current account deficit have been eased by the continued strength of savings in the rest of the world.

Growth in US debt continues to pose risks

Risk concentrations in the financial markets have remained unchanged in recent months. US indebtedness, the inflexibility of many Asian currencies and exceptionally low long interest rates continue to be potentially disruptive factors from the viewpoint of the real economy. The global current account imbalance has also increased, due partly to rising oil prices and partly to the continued strength of US domestic demand. The combined current account surpluses of oil exporting countries have grown at the same time as the US current account deficit has increased.

So far there have been no signs in the financial markets of materialisation in the near term of threats posed by the US current account deficit and household indebtedness. Long interest rates in the US have remained fairly low, and the external value of the dollar has been stable. Share prices have increased slightly and market uncertainty about their future development is very low, as measured by the implicit volatilities derived from share options. Hence the large and liquid US financial markets have continued to attract substantial financial inflows from Asia and oil

exporting countries against a relatively low consideration.

The continuation of fairly low inflation is one of the factors behind the stable US economic outlook. Oil price rises have not so far notably increased the prices of any consumer goods other than energy products. If household consumption were to begin to weaken significantly, for example due to a drop in house prices, the central bank could probably respond in a period of moderate inflation by easing monetary policy.

However, the lack of household savings in the US and the low level of long interest rates create a problem that under exceptional conditions could lead to disruptions in the world economy.

If US domestic demand were to prove lower than forecast, this would be unlikely to dampen world growth quite as much as perhaps estimated a short time ago. The vulnerability of the world's other major economic areas to external disruptions now appears lower than before. Growth prospects have improved in Japan and the euro area. More precise information received on Chinese economic developments also indicates that they are more solidly grounded than previously thought.

Pent-up demand in euro area and Asia

Potential can also be seen for faster than expected growth – particularly as regards domestic demand in the euro area and some Asian countries. The financial position of companies in the euro area is good and financing costs are low. As uncertainty over future product demand has also decreased due to the improved overall economic outlook, investment growth may accelerate more than forecast. There is likely to be pent-up investment and consumption demand particularly in Germany.

Many Asian countries have for years applied economic policies that restrict domestic demand in order to increase export income. The key purpose of such policies has been to prevent any significant appreciation of domestic currencies against the US dollar. This has supported exports and dampened imports. Therefore, many Asian countries have accumulated significant purchasing power and pent-up demand that could be channelled quite rapidly into investments and consumption.

One of the risks of slower than expected international growth continues to be the question mark over domestic demand in the euro area, and particularly in Germany. Weak real wage development and an increase in the VAT rate may lead German households to decrease their consumption further. To a large extent, the question is whether or not the current German government can foster confidence in the country's long-term development. Furthermore, the recent very rapid growth in private consumption in Spain could wane, while the unavoidable correction in Italian price competitiveness could prove painful. Hence, contrary to what has been forecast, euro area growth in consumption demand could remain very sluggish.

Inflation

Inflation as measured by the Harmonised Index of Consumer Prices (HICP) remained moderate in 2005 in Finland – only reaching an average growth rate of 0.7% (Chart 54). Price increases were slowed by sluggish price developments in many industrial products (excl. energy) and services, particularly cars, home entertainment and telecom. In early 2005, inflation was also slowed by the alcohol tax cut implemented in March 2004. In contrast, the increase in the price of crude oil inflated energy costs in particular, leading to a significant appreciation in transport costs, and to some extent also in housing costs, in 2005. So far, at least, it has not been reflected in other consumer prices.

Inflation as measured by the national Consumer Price Index was 0.9% last year, ie slightly above HICP inflation. This was primarily due to rapid growth in housing costs, which are not included in the HICP.

Inflation as measured by the HICP eased in Finland temporarily to an average of 0.1% in 2004, mostly due to changes in indirect taxes. When the impact of the alcohol tax cut was eliminated from the calculation of annual inflation in March 2005, inflation jumped to about 1%. Inflation has since then remained near this level, although world market prices for crude oil and other raw materials increased steeply during 2005.

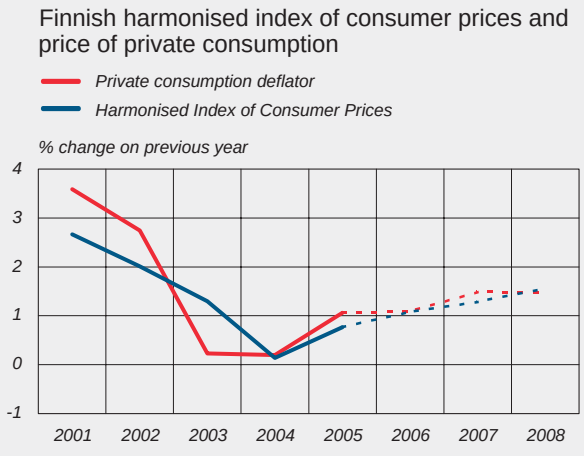
Statistics Finland published updated consumer price indices in February 2006. The update concerned both the national and the harmonised index for consumer prices.[1] The consumption basket used as the basis for the consumer price index was updated to match today's consumption structure, and 2005 became the reference year for both indices. The largest change in the national index concerned owner-occupied housing, which was given a significantly increased weighting. In contrast, the weightings of alcoholic beverages in both indices' consumption baskets were decreased. Transport and restaurant and hotel services also received lower weightings than before in the new indices.

Energy price developments

A significant rise in energy prices caused a marked acceleration in inflation in 2005. Energy prices rose by an average of almost 7%, and their contribution to inflation amounted to

[1] So far Eurostat has not published Finnish HICP for the first months of 2006.

Chart 54.



Sources: Statistics Finland and Bank of Finland.

about half a percentage point. Thus, without the strong rise in energy prices, the inflation rate would have been near zero in 2005. The prices for vehicle fuels and oils used in the heating of houses have risen particularly steeply (Chart 55).

The prices of vehicle fuels increased rapidly in early 2005, peaking in September, by which time there had been an increase of over 23% from the beginning of the year. In contrast, in the last quarter of 2005 the prices of gasoline and diesel oil decreased towards the end of the year, following closely the development of world market prices for crude oil. Fluctuations in the world market prices for crude oil and gasoline are reflected rapidly in the prices of vehicle fuels in Finland. On the other hand, the stringent taxation of vehicle fuels in Finland flattens the impact of world market price fluctuations considerably. The proportion of vehicle fuels in the HICP is high, almost 5%.

Chart 55.

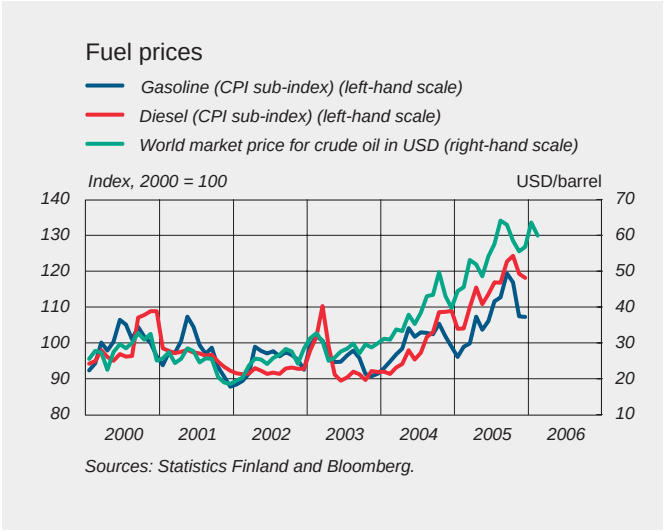
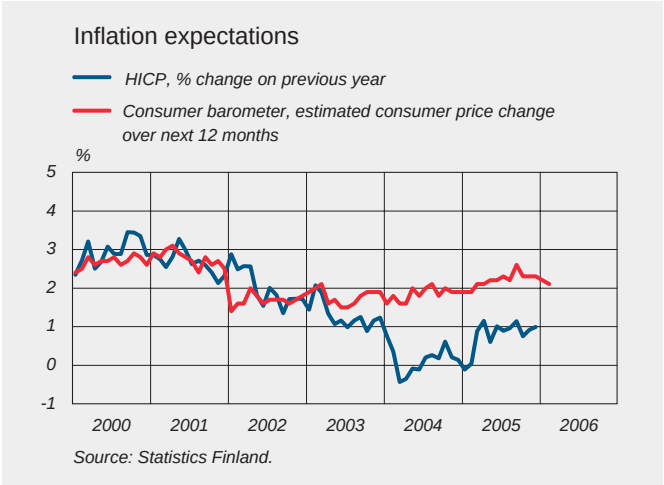


Chart 56.



Inflation expectations and actual inflation

According to Statistics Finland's consumer barometer, inflation expectations have in recent years consistently been much higher than actual inflation. Therefore, real household income has increased faster than expected. In December 2004, consumers expected that inflation would be almost 2% in December 2005. Instead, actual HICP inflation was over one percentage point lower. Consumers' inflation expectations increased considerably during the course of 2005, reflecting the marked rise in vehicle fuels and housing. In January 2006, inflation expectations for the next 12 months as measured by Statistics Finland's consumer barometer were 2.2% (Chart 56). According to the aggregate figures published by the European Commission, euro area consumers on average expect inflation to develop slightly more moderately than Finns.

Short-term inflation outlook

Inflation in Finland is expected to remain sluggish also in 2006, although it will accelerate somewhat during the year. HICP inflation is expected to average about 1.1% in 2006.

The elimination of the alcohol tax altogether from the calculation of annual inflation accelerates average inflation somewhat in 2006. In addition, the levelling out and slow upturn of the import prices of consumer goods in 2005 points to a slight acceleration of inflation for industrial products (excl. energy).

The rise in the prices of services is forecast to accelerate slightly from the present rate of a good 1%. The decline in telecom prices is expected to even out gradually, although the competition is expected to remain stiff. In contrast, competition in the airline sector is expected to stiffen during the spring as the number and activity of low-cost airlines in Finland increase. This is likely to dampen somewhat the increase in services prices in 2006.

Inflation pressures generated by the international environment are expected to increase slightly. With the prices of crude oil and other commodities remaining at their present high levels, companies will face increasing pressures to pass on the increased prices sooner or later to the prices of their final goods. For example, transport costs have recently increased significantly due to the higher price of fuel. The indirect impact of rising commodity prices is expected to strengthen even though the value of raw material inputs relative to the value of final goods has decreased materially in recent decades. On the other hand, the expected stabilisation of the world market price for crude oil will significantly dampen the pace of energy price rises in 2006.

It is difficult to assess the extent to which changes in international competition affect domestic inflation – especially in the short term. The intensifying international competition and productivity growth are however expected to slow the channelling of cost increases into the prices of goods and services. They would thus also dampen future domestic inflation. The forecast moderate increase in international export prices in the years ahead also does not point to any significant acceleration in inflation. The rise in export prices mainly reflects the increased costs of crude oil and other commodities.

Longer-term inflation outlook

There are no significant inflationary pressures in sight for the next few years, either. The increase in the general price level is expected to accelerate slightly from previous levels but to remain clearly below 2% in 2007 and 2008. Inflation is expected to rise to 1.3% in 2007 and 1.6% in 2008.

High commodity prices are reflected more rapidly in the prices of intermediate goods and investment goods than final goods (excl. energy). Companies' production costs increase when they are forced to pay more for both intermediate goods and investment goods as their inventories run down. Due to increased international

competition, many companies are, however, unable to transfer the increased costs forward in the production chain in the short term. In contrast, in the longer term pressures for transferring costs into final goods prices will accumulate, thus increasing the indirect impacts on inflation in the future. On the other hand, the raw material input in many high-tech products has decreased significantly in recent decades as the planning and design input has increased. Hence, prices are expected to rise faster than previously primarily in products where raw materials make a significant contribution to total costs.

Wage costs are expected to develop moderately, while productivity is expected to increase reasonably in the next few years. The ever-increasing international and domestic competition restricts opportunities for many companies to pass their increased costs on to the prices of final goods. However, if the rate of wage growth were to accelerate, companies may be sooner or later forced to pass their higher wage costs on to consumers in the form of higher prices for goods and services. The transfer of wage and other costs into the prices of final goods will accelerate particularly if productivity development is sluggish.

Both prices and labour costs in Finland are among the highest in the euro area. Under monetary union it would thus be natural that the growth rate for both would be slower in Finland than the euro area average. Only in this way can the prices of goods and services and wage costs in Finland converge towards the euro area average. In recent years, inflation in Finland has indeed been the lowest in the euro area, which has fostered price convergence. In contrast, when it comes to wage costs, this has not been the case. Finnish wages have grown during monetary union faster or at least as fast as in other euro area countries regardless of the wage cost measure used.

Uncertainty factors

Risks to the short-term inflation forecast are weighted slightly towards lower than expected inflation. There is increased uncertainty about future inflation due to both external and domestic factors. The most important external factor is the unpredictability of crude oil prices, while the most significant domestic factor is the increased uncertainty caused by intensifying competition, particularly as regards price trends in services and industrial goods (excl. energy). If there is a further significant intensification in competition, inflation could be lower than expected.

There is a great deal of uncertainty surrounding the development of crude oil prices in the world markets. The threat of production disruptions may also cause significant upward pressures in the future, as production capacity is almost fully utilised. On the other hand, slower than expected consumption growth could depress world market prices for crude oil more than assumed in the forecast. The indirect impact of crude oil and other commodity prices on final goods prices may also remain small as international competition continues

to intensify. This would mean a slower than expected increase in the prices for industrial goods.

If competition among telecom operators continues to intensify and prices continue to fall, the increase in service prices may be smaller than expected in the forecast. If competition stiffens in the airline sector, there could be a possibly significant drop in the price of air travel. This could slow the rise in service prices in 2006 more than expected. Also, intensifying domestic competition in retailing increases the probability that inflation will be lower than forecast.

Increased longer-term uncertainty about future price developments is related to domestic wage developments and productivity growth. Higher increases in wage settlements combined with slow productivity growth in many sectors would speed up inflation significantly from current levels. This could be the case in the service sector, for example. The forecast assumes that income levels will rise fairly moderately. However, income developments in 2007 and 2008 are particularly risk prone, as the present income policy agreement expires in September 2007. If the situation in the labour market tightens – depending on the form of agreement and the role of government – wage growth could be very different from the forecast moderate income development.

Finland's growth outlook

According to preliminary data released by Statistics Finland, Finnish GDP growth in 2005 amounted to 2.1%. Without the paper industry labour dispute, the growth figure would have stood at a good 2.5%. The positive growth contribution of domestic demand was significant in 2005. Private consumption and investment both grew rapidly. A strong increase in imports and the impact of the paper industry labour dispute on exports made the contribution of net exports negative. The employment rate rose to 68% in 2005, as expected.

Economic growth is expected to accelerate to 3.4% in 2006. The figure is boosted by the low reference value in 2005 due to the paper industry labour dispute. In 2007 and 2008, growth is expected to continue at around 3%.

Growth in private consumption will slow somewhat during the forecast period, but the contribution of domestic demand will nevertheless remain strong. Import growth will decelerate in 2006 and the contribution of net exports will again become positive. Growth in export and import volumes will slow slightly in 2007 and 2008 and the contribution of net exports to growth will increase somewhat.

Private consumption will continue to develop strongly over the entire forecast period. Consumption growth will dampen only slightly in 2007 and 2008. Real household income will increase strongly in 2006, but income growth will slow thereafter. Private consumption growth will be more even than income growth, so the savings rate will initially rise in 2006 and then drop a little towards the end of the forecast period.

In 2006, both housing construction and investment in productive capacity will increase rapidly. At the

Table 10.

Forecast summary

Supply and demand 2004–2008 (2000 prices)

	2004	*2005*	*2006f*	*2007f*	*2008f*
% change on previous year					
Gross domestic product	*3.6*	*2.1*	*3.4*	*3.0*	*2.8*
Imports	*6.0*	*10.3*	*7.8*	*6.4*	*5.5*
Exports	*5.6*	*7.0*	*7.0*	*6.4*	*5.8*
Private consumption	*3.2*	*3.4*	*3.2*	*2.8*	*2.7*
Public consumption	*1.6*	*1.5*	*1.3*	*1.3*	*1.1*
Private investment	*5.6*	*3.1*	*6.1*	*5.3*	*3.0*
Public investment	*2.1*	*–6.2*	*–1.0*	*0.5*	*0.5*
Inventory change + stat. discrepancy, % of previous year's total demand	*0.2*	*0.2*	*0.2*	*–0.1*	*0.0*
Total demand	*4.2*	*4.2*	*4.6*	*4.0*	*3.6*
Total domestic demand	*3.5*	*2.8*	*3.4*	*2.7*	*2.3*

Key economic indicators

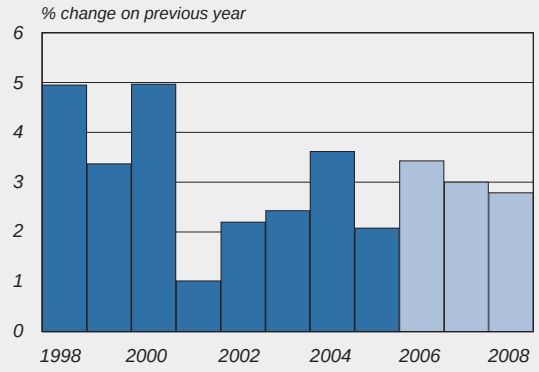
	2004	*2005*	*2006f*	*2007f*	*2008f*
% change on previous year					
Harmonised index of consumer prices	*0.1*	*0.8*	*1.1*	*1.3*	*1.6*
Consumer price index	*0.2*	*0.9*	*1.1*	*1.4*	*1.6*
Wage and salary earnings	*3.8*	*3.6*	*3.2*	*3.2*	*3.3*
Labour productivity[1]	*3.6*	*0.2*	*2.2*	*2.2*	*2.5*
Unit labour costs[1]	*0.9*	*2.9*	*0.8*	*0.7*	*0.6*
Number of employed	*0.0*	*1.5*	*1.6*	*0.6*	*0.0*
Employment rate, 15–64-year-olds, %	*67.2*	*68.0*	*69.0*	*69.3*	*69.2*
Unemployment rate, %	*8.8*	*8.4*	*8.0*	*7.8*	*7.8*
Export prices of goods and services	*1.0*	*–0.8*	*0.0*	*–0.7*	*–0.7*
Terms of trade (goods and services)	*–2.6*	*–2.8*	*–2.7*	*–2.1*	*–1.5*
Current account, % of GDP	*5.1*	*3.0*	*1.8*	*1.1*	*0.7*
% of GDP, national accounts					
Ratio of taxes to GDP	*44.2*	*44.4*	*44.3*	*44.5*	*44.6*
General government net lending	*1.9*	*2.4*	*2.9*	*2.8*	*2.8*
General government debt	*44.9*	*41.1*	*39.6*	*38.3*	*37.0*
Goods and services account	*5.4*	*3.6*	*2.4*	*1.6*	*1.2*
Current account	*5.1*	*3.0*	*1.8*	*1.1*	*0.7*

f = forecast
[1] Labour input is measured in terms of the number of employees.
Sources: Statistics Finland and Bank of Finland.

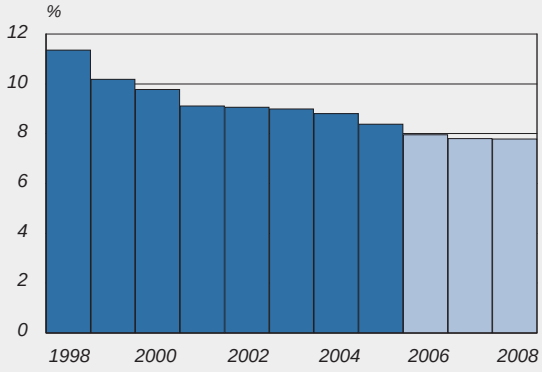
Chart 57.

Key economic indicators

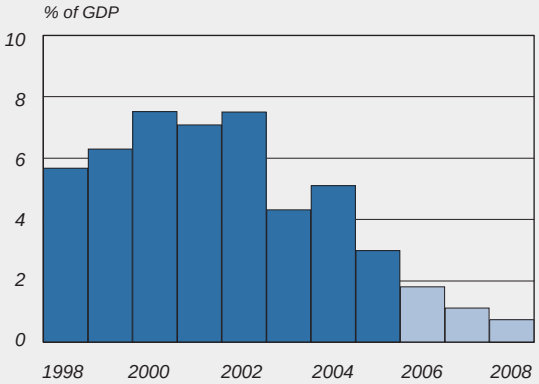
Gross domestic product



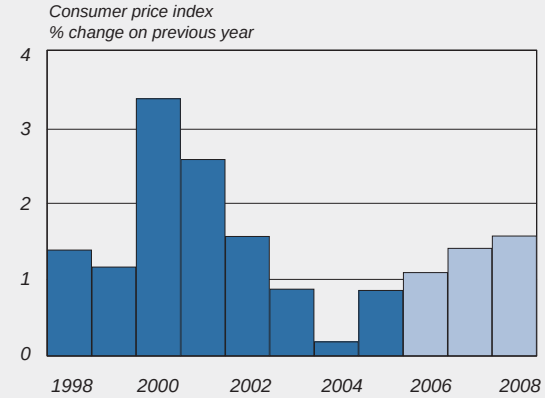
Unemployment rate



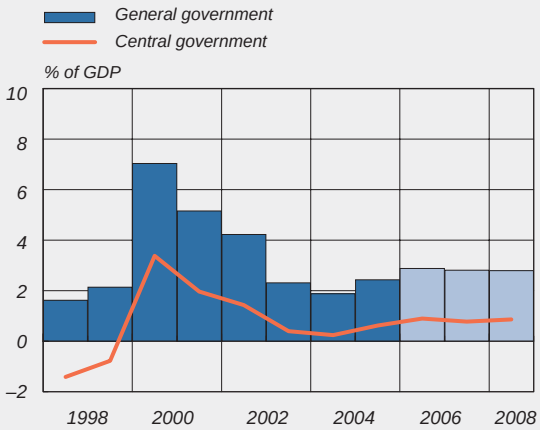
Current account



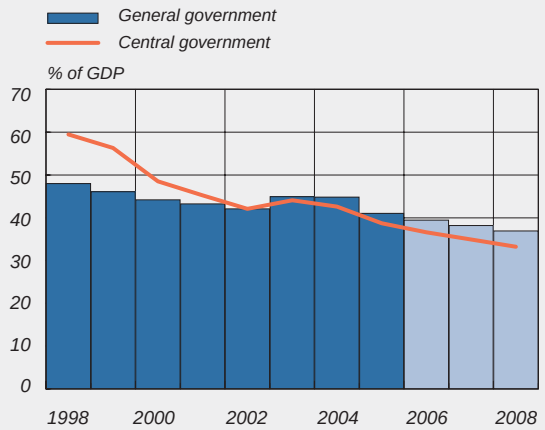
Inflation



General government fiscal position



General government debt



Sources: Statistics Finland and Bank of Finland.

end of the forecast period, investment growth will stabilise, but the investment rate will edge higher, to about 20%.

Investment plans in manufacturing are positive, and sales expectations in retailing are bright. In other respects, too, the prerequisites are in place for an acceleration in investment growth. The conditions in the financial markets will remain bright, and corporate profitability is high.

The forecast assumes a significant increase in investments in machinery and equipment after the dip in 2005. If this does not materialise, total output growth will come in below the forecast. An increase in investments in machinery and equipment is also a prerequisite for the favourable development of production potential in the longer term.

Finnish exports grew at a reasonable rate of about 6–7% in 2004 and 2005. In 2005, exports were on one hand boosted by increased re-exports to Russia, and on the other hand cut by a drop in paper industry production and exports due to the labour dispute in the industry. Exports are forecast to grow 7% in 2006, and thereafter slightly more slowly.

Finland's current account surplus has decreased considerably in recent years due to the combined effect of a rapid growth in import volume and a deterioration in the terms of trade. In 2005, the surplus amounted to 3% of GDP. The surplus will continue to contract in the forecast period, since the weakening trend in the terms of trade is expected to continue. In 2008, the current account surplus is forecast to be only 0.7% of GDP.

A tighter labour market due to both strong demand and supply limitations will weaken the prospects for growth over the next few years. Industry will need to recruit higher-skilled labour. In addition, the ageing of the labour force and the growing need for staff in the public sector will further exacerbate the over-demand for labour. Labour supply is actually expected to increase over the next few years as the participation rate of older workers rises. However, the labour market will become even tighter due to the increasing demand for labour. Regional and sectoral labour shortages will increase in 2006–2008. The number employed is expected to increase in the forecast period, although at a decelerating rate. Nevertheless, the unemployment rate will remain persistently at almost 8%, as a large proportion of unemployment is structural.

Since the start of the present decade the Finnish economy has grown at an average rate of about 3%. The same 3% growth rate is also forecast for 2007 and 2008. This is probably somewhat more than the present potential output growth. This is at least suggested by the fact that the current account surplus is melting away, the household savings rate has turned negative and the labour market mismatch has become more intractable.

After 2008, potential output growth can be expected to slow still further. The reason for this is the sluggish growth in labour supply due to population ageing. Increasing potential output growth would require a higher rate of productivity growth. This could

be achieved through education and a reorganisation of labour as well as more effective utilisation of information and communication technologies. Increased labour market flexibility and improved efficiency in the financial markets would create a favourable environment for productivity increases.

The present view of the state of the public finances over the next few years is much more favourable than it has been. First and foremost, central government finances seem to be in a stronger shape than expected. If economic growth meets expectations and spending limits retain their present position in budget policy, central government should generate a fiscal surplus.

The continued surplus in government finances shows that rule-based fiscal policies have been successful. The framework system has been effective in regulating budget policy. Hence, the system of spending limits in Finland has met the key requirement for fiscal policy that corresponding systems in other countries have not met. The Finnish spending limit system has been seen to be credible.

Tight expenditure policies are essential if the increased costs resulting from population ageing and the narrowing of the fiscal base are to be met without significant pressures for adjustment of taxes and expenditure. During the forecast period, some buffers will be created in government finances against these pressures. However, if these are to be effective, the spending limits at the end of the forecast period must comply with the present expenditure guidelines.

Alternative scenario: Improvement in public sector productivity

Improved efficiency in the production of public services has been raised as one way to meet the challenges of population ageing. The idea is to meet a growing service need by producing services more efficiently, and thus more cheaply. Both local and central government have extensive projects ongoing with the objective of raising productivity. These projects aim to reorganise functions in order to achieve cost savings.

This alternative scenario examines the potential impacts on the economy of productivity growth using the Bank of Finland's macroeconometric model of the Finnish economy.[2] The advantage of a macromodel is that in addition to the direct savings in the public sector, the impacts are spread through the economy through various channels. Hence, the results of the calculation depend on the interaction between all these channels. These interactions have been modelled and quantified in the AINO model used in this calculation.

Here, productivity growth means that a given amount of services can be produced with lower labour inputs. It is assumed in this scenario that public sector output grows at the rate of the baseline forecast even though employment in the public sector decreases compared to the baseline forecast. Public sector productivity is expected to increase annually by about

[2] See Kilponen, Ripatti and Vilmunen (2004): 'Aino: the Bank of Finland's new dynamic general equilibrium model of the Finnish economy'. Bank of Finland Bulletin 3/2004, 71-79.

Table 11.

Wages, employment, productivity and general government surplus in the forecast and in the alternative scenario

	2006		2007		2008	
	Forecast[1]	Scenario[2]	Forecast[1]	Scenario[2]	Forecast[1]	Scenario[2]
Public sector						
Average wage	3.3	–0.4	3.2	–0.9	3.4	–0.6
Employed, 1,000 persons	613.6	–7.0	614.7	–16.2	615.5	–26.0
Productivity	0.2	1.2	0.3	1.6	0.3	1.8
Private sector						
Average wage	2.9	0.0	2.9	–0.4	3.0	–0.6
Employed, 1,000 persons	1,826.9	4.0	1,839.6	10.2	1,840.0	18.8
GDP at basic prices	4.5	0.3	3.3	0.2	3.0	0.2
Productivity	2.4	0.0	2.6	–0.1	2.9	–0.2
Employed, total economy, 1,000 persons	2,440.5	–3.0	2,454.3	–6.0	2,455.5	–7.2
Private consumption, price	1.1	–0.1	1.5	–0.2	1.5	–0.2
GDP, volume	3.4	0.2	3.0	0.2	2.8	0.2
General government surplus, % of GDP	2.9	0.2	2.8	0.4	2.8	0.5

[1] Growth rate according to the forecast, employment according to number of persons and general government surplus as % of GDP.
[2] Deviation in percentage points, for employment number of persons.
Sources: Statistics Finland and Bank of Finland.

Table 12.

Deviations from baseline forecast, %

	2006	2007	2008	2025
Employed, total economy	–0.1	–0.2	–0.3	0.0
GDP, volume	0.2	0.3	0.5	2.5
General government, % of GDP				
Surplus	0.2	0.4	0.5	1.0
Debt	–0.1	–0.2	–0.5	–11.7

Sources: Statistics Finland and Bank of Finland.

2% for 3 years.[3] This means that public sector employment will have decreased by about 26,000 persons after 3 years, ie about 4% in comparison to the baseline forecast.

This kind of productivity improvement in the public sector would improve the government fiscal balance annually by about 0.4% of GDP. Hence, government debt would after three years be around 1.2% of GDP lower than in the absence of the efficiency improvement measures. In addition, GDP growth would accelerate by about 0.2 percentage points. These positive impacts are generated mainly through two channels: public sector savings and the labour market (Tables 11 and 12).

The decreased demand for labour in the public sector would press the growth rate of the equilibrium wage level of the whole economy downwards from the base trajectory. Since wage increases would slow down in the whole economy, consumer price

[3] Thereafter productivity growth will start to wane and after about 10 years will have resumed its base trajectory. On this base trajectory and in the national accounts, productivity does not increase at all in the public sector. This is due to an accounting convention that the value of a public output is determined on the basis of production inputs, ie wage-earner compensations and the use of intermediate goods. The calculation assumes that public sector productivity can be genuinely measured, so that productivity growth can deviate from zero.

increases would also remain slightly lower than the base trajectory. Real wages would increase less than in the baseline forecast in both private and public sectors.

The positive impact from the labour market results from the developments in real wages. They rise slower than in the baseline forecast, which boosts the demand for labour in the private sector. Part of the labour force relieved from the public sector would shift to the private sector. The rest would leave the labour force or become unemployed. Hence, in the forecast horizon the increase in private sector employment would not be enough to compensate for the reduction of employment in the public sector, and total employment would decrease slightly. In this scenario the shift of labour force between the public and private sectors is, however, relatively flexible. If this were not the case and the shift of employed to the private sector were to take place more slowly, total employment would be temporarily decreased by even more. In the long term, however, the increase in public sector productivity does not reduce total employment. In addition, the positive impact on GDP and the public sector surplus is permanent.

Due to the growth in the public sector surplus, the government could also afford to cut taxation.[4] This would result in more positive impacts on the economy. The temporary negative impact on total employment would also be reduced.

On the other hand, it is also possible that public sector employees would demand compensation for the increased productivity, which would lead to accelerated wage growth in the public sector. In this case, the direct savings from productivity growth would be lower. In this situation, the impact on the whole economy would depend on wage developments in the private sector. If real wages in the private sector also rose, private sector employment would not grow as in the previous case. Since employment on the whole is reduced more than in the absence of wage pressures, the positive impact on GDP growth and the public sector surplus would be considerably lower.

[4] Taxation remains the same during the three first years in the calculation. In the long term, taxation becomes slightly lower. After 20 years, taxation has been reduced by about 1.5 percentage points.

Changing paper markets and prices

Lauri Hetemäki, senior researcher, Ph. D., Finnish Forest Research Institute (Metla)

The paper markets in industrial countries are currently undergoing a historical structural change. The traditionally mutually supportive development between information and communications technology (ICT) and the paper markets seems not to operate as before. Depending on the end use of the paper and the geographical location of the markets, paper consumption may decrease or increase. Technological advances also have repercussions on prices of paper products. What is the meaning of these changes?

Consumption of newsprint declining in OECD countries

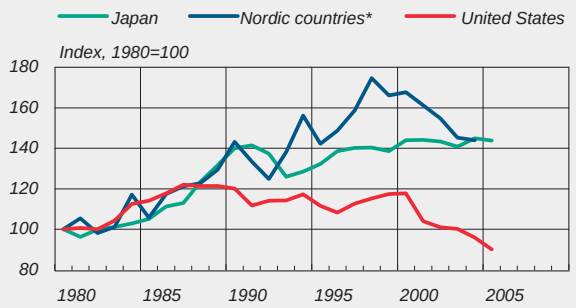
Consumption of newsprint has decreased, for example, in North America and the Nordic countries (Chart 1). It has been falling in the United States since the end of the 1980s but began to decline in the Nordic countries only after 1998. Newsprint consumption in the United States is currently at the same level as at the start of the 1970s and in the Nordic countries at levels seen in the early 1990s. In Japan – the world's second largest newsprint market after the United States – consumption has been stagnating for a long time. While the stagnation in Japan is partly due to economic recession, temporary economic spurts have not induced growth in newsprint consumption.

A number of reasons have been put forward to explain the decline in newsprint consumption, and undoubtedly there are a number of factors involved. Research results and expert assessments however point to ICT developments as the single most important factor. Developments in North America have been driven especially by cable television and the Internet. According to the Newspaper Association of America, for instance, it is precisely the increased use of the Internet that lies behind the diminished ability of newspapers to reach an audience. The situation appears to be the same in a number of other affluent OECD countries, in which the development of electronic media has led to a shrinking proportion of the population reading printed newspapers. In particular, young people do not read printed newspapers and, contrary to what was previously the case, will not start reading them as they advance in age.

This means that the previous relationships between economic expansion, population growth and newsprint consumption have changed in a number of OECD countries. Ever since newsprint has been manufactured, economic progress and population growth have spurred newsprint consumption. This is no longer the case.

Chart 1.

Newsprint consumption in Japan, Nordic countries and United States, 1980–2005



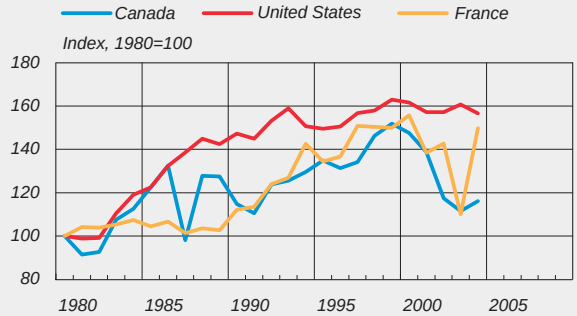
* Nordic countries = Sweden, Finland and Denmark.
Statistics: Amount of apparent consumption (= production+imports–exports), Paperloop.

Research results suggest that the impact of economic growth may diverge depending on the length of the time horizon examined. In models explaining US newsprint consumption on the basis of economic growth, the effects of GDP growth on consumption are positive in the short run but negative in the long run (Hetemäki 2005a). Short-run analysis focuses on cyclical fluctuations, such as changes from downturns to upswings. The long run, on the other hand, is a period in which structural changes may take place in the economy and in newsprint consumption.

Cyclical changes in the economy do affect newsprint consumption, thereby confirming the conventional wisdom: when the economy expands, advertising in newspapers increases, causing newsprint consumption to rise, and vice versa in a cyclical downturn. Accordingly, the OECD countries are also likely to see periods of higher newsprint consumption and higher prices. On the other hand, the picture changes if short-term cyclical fluctuations are removed from the data on newsprint consumption and economic performance and the focus turns to long-run trends. In the long term, economic growth will induce changeover to the information society, which provides access to computers, the Internet, broadband connections, etc for an increasingly larger number of people. The wealthier the country, the better the chances for its citizens to acquire and use electronic communications technology. This, in turn, enables easier replacement of printed newspapers by electronic media, such as online editions of newspapers. In addition, new media and digital facilities (eg video games, Internet surfing, various multimedia devices) may lead to abandonment of newspaper reading altogether – whether printed or online. With the constraint of 24 hours a day, the various communications media and entertainment forms engage in a zero-sum game for the consumer's time.

Chart 2.

Office paper* consumption in Canada, United States and France,1980–2004



* Uncoated woodfree paper.
Statistics: Amount of apparent consumption (= production+imports–exports), Paperloop.

Office paper markets also undergoing change

Besides the newsprint market, the market for office paper (uncoated woodfree paper) appears to have been undergoing a structural change in recent years. Statistics indicate that the rate of growth in consumption of office paper in certain OECD countries has either slowed markedly, come to a halt, or even started to decline (Hetemäki 2005a). While observations on office paper consumption in the United States, Canada and France in recent decades may be somewhat ambiguous for

certain years, the trends observed can be regarded as broadly reliable (Chart 2). The overall consumption of office paper in the United States over the last ten years has remained at the same level as in 1993, with the per capita consumption falling to the mid-1980s level (not shown in the Chart). In Canada, the consumption of office paper grew until the end of the 1990s, after which a clear downward trend has set in. France has also experienced a structural change after the millennium turn. It is noteworthy that, following a deceleration in economic growth in 2001, consumption has not regained momentum in the United States and Canada, despite a discernible pick-up in economic activity in 2002–2004. In France, the economy grew on average at the same pace in 1995–1999 as in 2000–2004. In other words, the economic situation would not appear to explain the fall in office paper consumption since 1999.

One significant feature of developments in office paper markets within the EU has been the dissimilarities across countries. In the UK and Germany, for instance, office paper consumption continues to rise. What would then explain the change in office paper consumption in Canada, the United States and France?

Office paper comprises a number of paper products, such as copying paper (A4), business forms, offset paper and envelopes. US statistics, for instance, provide evidence of continuing growth in A4 paper consumption, unchanged consumption of offset paper and envelopes, and a definite decrease in consumption of business forms and other office papers. With the use of the Internet and microcomputers, access to online services (eg invoicing, statements of account, documents and e-mail messages) has become more frequent, thereby displacing the use of forms and envelopes. On the other hand, increasingly cheaper information technology products and lower printing costs have boosted the consumption of A4 paper.

Accordingly, ICT developments have had both positive and negative implications for office paper consumption. The negative effects have strengthened over time. Commercial banks, for example, have switched from paper to electronic statements of account and forms. This trend is motivated by efforts to improve service provision, economic factors and environmental considerations. The Bank of America introduced in 2005 a programme on paper usage, which aims to minimise the use of paper, for example, via increased electronic communication. Behind this change are pressures from environmental organisations and economic factors. Similar guidelines have been issued by many other US and European companies (eg Citigroup and HVB Group). As the banking and insurance sector ranks among the major consumers of business forms, these changes will inevitably affect office paper consumption.

The public sectors in many countries are also trying to reduce paper consumption. Typical examples are objectives set by central and local government administrations and universities to change over to the use of

electronic documents. One of the most recent examples in Finland is the aim of Tampere City Council to start using electronic documents in its operations.

It is interesting that the structural change experienced in the consumption of newsprint and office paper has not yet spilled over into the consumption of magazine paper. In the OECD countries, including the United States, the consumption of magazine paper has continued to increase, albeit at a slower pace than before. This does underline the difficulty of drawing general conclusions when assessing the impact of ICT on consumption of paper products – the impacts differ according to the paper product involved. The outlook for consumption of paper grades suitable for printing photographs, for example, is bright in the OECD countries, precisely because of advances in information technology.

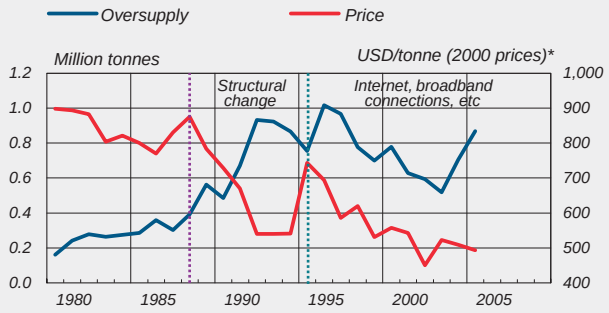
Prices declining

The development of information technology also affects prices of paper products. First, as a result of the increasing application of ICT, productivity in the paper industry has improved and will continue to do so in the future. Traditionally, enhanced productivity has also been reflected in lower end-product prices over time. Meanwhile, competition between printed and electronic media is tightening. As a consequence, publishers of printed matter seek to cut costs and thereby reduce the prices of paper products. ICT and globalisation will also lead to price convergence in global paper markets across the continents. Estimates suggest that the focus of pulp and paper industry production will increasingly shift to non-OECD countries where output costs are lower. This adds to the pressure to reduce end-product prices in the future. There are no such factors in view that would give cause for assuming that the already protracted downward trend in real prices would end or be reversed. Even so, there will still be cyclical upswings in prices.

An examination of real prices and 'oversupply' of newsprint in the United States in 1979–2005 indicates that prices started to fall markedly after 1988, when consumption dropped but capacity was not adjusted accordingly (Chart 3). Newsprint machines were not closed down or switched over to production of other paper grades until after the mid-1990s, which subsequently resulted in the adjusting of supply more in line with consumption. It is interesting to observe that despite this adjustment prices have continued to decline. Admittedly, recent years have seen some cyclical upturns

Chart 3.

US newsprint market, 1979–2005



* Deflated by consumer prices.
Oversupply = production+imports–consumption.
Source: Paperloop.

following the price collapse. One might speculate that the rapid dissemination of the Internet since the mid-1990s and the introduction of broadband connections somewhat later may have contributed to these price developments. In other words, increased reading of online editions of newspapers and 'Internet surfing' have on the whole increased competition and thereby moved prices further down, irrespective of a reduction in the oversupply of newsprint.

In addition to newsprint prices, the prices of printing and writing paper have been showing a clear downward tendency in North America and Western Europe since the beginning of the 1990s. This development is most likely to continue for the reasons already discussed above.

Implications for Finland

World consumption of paper products in general will continue to grow, ICT developments notwithstanding. Rapid consumption growth will be seen, for example, in China, the Far East and Russia. Even if ICT effects are broadly similar for the consumption of paper products the world over, other factors in paper consumption will dominate in these regions. In developing countries, the consumption of newsprint and office paper per capita accounts for only a fraction of that in the OECD countries. With increasing economic prosperity, paper consumption is likely to grow in these regions, at least over the next few decades.

ICT developments reinforce the ongoing structural change in global paper markets. Consumption and output of paper products will grow slowly or not at all in the OECD countries, whereas it is set to grow fast in a number of Asian countries, Russia and Eastern Europe. These developments will have significant implications for Finland. Existing paper products have reached output growth limits in Finland, and the prices of these products are edging downward in real terms. This will pose challenges for employment, use of wood and the current account, for instance. Adaptation to these changes is possible through innovations. While this article did not address the opportunities afforded by information technology to the forest sector, innovative use of information technology is one of the keys to success in responding to the forthcoming structural change in the global paper markets (see Hetemäki – Nilsson 2005).

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ICT's contribution to labour productivity

Pentti Forsman, Economist, Monetary Policy and Research
Jukka Jalava, Economist, Pellervo Economic Research Institute, Senior Research Fellow, Helsinki School of Economics

The Finnish economy has undergone considerable structural change since the recession of the early 1990s. This restructuring is still in progress, as the GDP-shares of primary and secondary production are decreasing in favour of private services. During the 1990s, manufacturing of information and communications technology (ICT) equipment, led by Nokia, took its place alongside the traditionally strong industrial sectors – manufacturing of wood products, pulp and paper products and the traditional metal industry. Finnish labour productivity in manufacturing industry surpassed that in the United States in the 1990s, as Finland closed the technology gap vs the technology frontier. By 2002, the Finnish overall labour productivity was 90% of the US level and 94% of the EU 15 level.[1]

Capital usage has also become markedly more efficient compared with earlier decades. Labour productivity growth rates have varied considerably across sectors. Robust growth was posted in electronics, telecommunications and financial intermediation in the second half of the 1990s, and in the first two of these sectors also in the 2000s. By contrast, productivity growth in the traditional metal industry has been much slower than in previous years. For the whole economy, labour productivity growth (excl. electronics) moderated in 2000–2004 to just 1.8% per annum (Table 1). The weakening of labour productivity growth during this millennium is also clearly reflected in the slower long-term growth of GDP per hour worked (Chart).

In the United States, labour productivity has continued to grow at a robust pace in recent years. For this reason it is useful to compare productivity growth in Finland vs the United States and other EU countries. Of particular interest is the contribution of ICT sectors to total labour productivity growth, since rapid productivity growth

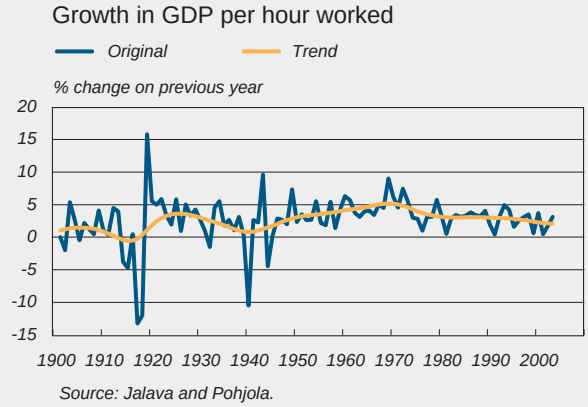
Table 1.

Labour productivity growth by economic sector, 1976–2004, %

	1976–2004	*1995–1999*	*2000–2004*
Whole economy	*3.0*	*2.3*	*2.4*
Whole economy excl. electronics	*2.8*	*1.9*	*1.8*
Industry	*5.2*	*3.5*	*5.2*
Industry excl. electronics	*4.5*	*1.9*	*2.8*
Forest industry	*6.1*	*3.3*	*3.8*
Paper industry	*6.4*	*3.7*	*4.6*
Graphics industry	*3.2*	*3.3*	*2.8*
Machine and metal industry	*3.4*	*1.0*	*2.1*
Manufacture of basic metals	*6.3*	*4.5*	*3.7*
Electronics industry	*8.8*	*12.2*	*13.2*
Construction	*1.0*	*–1.3*	*–0.3*
Trade	*3.3*	*4.5*	*3.7*
Transport and communication	*3.5*	*3.9*	*3.9*
Land transport	*1.9*	*1.5*	*1.9*
Telecommunications	*8.6*	*13.8*	*10.2*
Financial intermediation and insurance	*3.2*	*7.0*	*–2.3*

Source: Statistics Finland.

Chart.



Source: Jalava and Pohjola.

[1] McGuckin and van Ark (2005).

in electronics is acutely important for Finland. In this article, market production is broken down into three groups of industries. The first comprises ICT production; the second primary production, industry (excl. ICT) and construction; and the third comprises services (excl. ICT). The article begins by analysing developments in these industry groups in Finland. The concluding sections assess developmental trends in the Finnish economy in terms of labour productivity up to 2008.

Market production, ICT and productivity

Real value added in market production actually grew on average by 5.6% per annum in 1995–2000 (Table 2). Labour input was reduced considerably during the recession, and hence its contribution to economic growth was considerable – about 2.3 percentage points per annum – immediately after the recession. This is exceptional since long-term historical evidence shows that Finnish economic growth has been associated with labour-saving technical change.[2] Accordingly, capital productivity growth has been close to zero in previous decades, while labour productivity has increased. However, labour productivity – the ratio of value added to labour input – did not post as high growth rates in 1995–2000 as in the pre-recession period. Nonetheless, the 3.3 percentage point contribution meant that labour productivity continued to serve as the engine of economic growth. Output growth in the ICT sectors was a striking 20% per annum. Somewhat surprisingly, the production sectors (primary production, industry and construction) posted slower growth than in the service sector.

Market production growth halved in the first four years of the current decade. Value added in ICT increased by 'only' 6% per annum, as the manufacture of mobile phones and other communication equipment became a mature industry. Production and service sectors also grew slower in 2000–2004 than in 1995–2000, with the

[2] Jalava and Pohjola (2004).

Table 2.

Value added growth in market production, 1995–2004, %

Finland	*1995–2000*	*2000–2004*	*Change, %-pts*
Value added			
Market production	*5.6*	*2.4*	*–3.2*
ICT sector	*20.8*	*6.1*	*–14.7*
Production sectors (excl. ICT)	*3.7*	*0.9*	*–2.8*
Service sectors (excl. ICT)	*4.2*	*2.4*	*–1.8*
Contribution from hours worked			
Market production	*2.3*	*–0.2*	*–2.5*
ICT sectors	*8.2*	*0.0*	*–8.2*
Production sectors (excl. ICT)	*0.9*	*–2.0*	*–2.9*
Service sectors (excl. ICT)	*2.9*	*1.3*	*–1.6*
Contribution from labour productivity			
Market production	*3.3*	*2.6*	*–0.7*
ICT sectors	*12.6*	*6.1*	*–6.5*
Production sectors (excl. ICT)	*2.9*	*2.9*	*0.0*
Service sectors (excl. ICT)	*1.3*	*1.1*	*–0.2*

Source: Own calculations based on GDP data for July 2005.

latter sector achieving the faster growth. The service sector also managed to increase its labour input. Labour productivity growth in market production decreased on average to 2.6% per annum in 2000–2004, which is exceptional also from a long-term perspective. Finland last experienced such low productivity growth before the wars.

ICT and productivity in Finland, EU and the United States

The contributions of different sectors' productivity to labour productivity growth in market production can be estimated by adding sectoral productivity growth rates weighted by respective values added shares plus the labour-input reallocation term[3]:

$$(1) \quad d\ln LP = \sum_i w_i d\ln LP_i + R^H$$

where d denotes annual change, ln natural logarithm, LP labour productivity, i the individual industry, weight $\bar{w}_i$ the average (over two consecutive years) share of nominal value added for industry i. The term R^H, which denotes reallocation of labour input, is positive when employment shifts from low productivity industries to high productivity industries.[4]

Table 3 shows that the declining rate of labour productivity growth between the second half of the 1990s and the past few years can be traced largely to weaker productivity growth in ICT industries. This means that ICT equipment manufacturing has become a mature industry in which components are highly standardised mass market products. The

[3] See van Ark and Inklaar (2005).

[4] Term R^H is residual obtained by subtracting the weighted sum of sectoral labour productivities from labour productivity for the whole economy.

Table 3.

Secoral contributions to labour productivity growth in market production, 1995–2004

Finland	*1995–2000*	*2000–2004*	*Change, %-pts*
Labour productivity in market production, of which contribution from:	*3.3*	*2.6*	*–0.7*
ICT sectors	*1.3*	*0.8*	*–0.5*
Production sectors (excl. ICT)	*1.2*	*1.0*	*–0.2*
Service sectors (excl. ICT)	*0.6*	*0.6*	*0.0*
Reallocation	*0.2*	*0.2*	*0.0*
EU15	*1995–2000*	*2000–2003*	*Change*
Labour productivity in market production, of which contribution from:	*2.2*	*1.1*	*–1.1*
ICT sectors	*0.8*	*0.5*	*–0.3*
Production sectors (excl. ICT)	*0.8*	*0.6*	*–0.2*
Service sectors (excl. ICT)	*0.6*	*0.1*	*–0.5*
Reallocation	*0.0*	*–0.1*	*–0.1*
United States	*1995–2000*	*2000–2003*	*Change*
Labour productivity in market production, of which contribution from:	*3.4*	*3.6*	*0.2*
ICT sectors	*1.2*	*1.1*	*–0.1*
Production sectors (excl. ICT)	*0.5*	*0.9*	*0.4*
Service sectors (excl. ICT)	*1.8*	*2.0*	*0.2*
Reallocation	*–0.1*	*–0.3*	*–0.2*

Sources: Own calculations based on GDP data for July 2005; van Ark and Inklaar (2005) for data on EU15 and United States.

manufacture of ICT equipment is moving to low-wage countries. As a consequence, the shares of these industries in GDP and employment are no longer necessarily increasing. Thus the contribution to labour productivity growth is likely to remain smaller than at present.

The contribution of productivity growth in production industries has also decreased. The contribution of the service sector has remained at 0.6 percentage point. This in itself is positive, especially since the GDP-share of services is continuously increasing.[5]

The contribution of structural change – RH in (1) – to productivity growth is small, only 0.2 percentage point per annum. However, it should be noted that, in contrast to other EU countries and the United States, the contribution of structural change is clearly positive in Finland. If the positive structural change, as measured by this method, continues over the next 10 years, this will help to narrow the productivity gap between Finland and the US.

Productivity growth decelerated even more sharply in EU15 than in Finland – by as much as 1.1 percentage points. Contributions from all sectors decreased in EU15. The most significant decrease, -0.5 percentage point, was observed in the contribution from the service sector. ICT and production sectors also contributed less to productivity growth in 2000–2003 than in 1995–2000. In contrast, productivity growth did not slow down in the United States, where the annual growth rate was a rapid 3.6%. This was 0.2 percentage point higher than in 1995–2000. Productivity growth improved in both the production and service sectors. The contribution of the ICT sector somewhat decreased, and the structural change term also fell slightly, to -0.3 percentage point.

As can be seen from Table 3, the most significant difference between Finland and EU countries vs the United States stems from the productivity contribution of the service sector.

Productivity growth in 2005–2008

In the Bank of Finland forecast, productivity is measured as production per person employed. Production and employment indicators enable a rough projection of prospects.

Production growth in the electronics industry is expected to continue in Finland, albeit imported inputs are likely to increase. There are, at least so far, no clear signs of ICT services becoming a strong engine of growth. Hence it is to be expected that the contribution of ICT to productivity growth will remain smaller in the forecast period, 2006–2008, than the 0.8 percentage point contribution in 2000–2004. In practice, this will mean that, as regards manufacturing of mobile phones and communication equipment, a larger part of the productivity growth will occur abroad. Productivity growth in telecommunications is likely to continue also over the next few years, although tight competition gives little room for value added growth.

[5] Baumol (1967) pointed out that productivity and GDP growth slow down when resources shift from manufacturing to services because the share of resources in the low-productivity sector increases.

On the other hand, there is strong pressure to increase productivity in production sectors such as forest industry, so that increases in contributions from these sectors are likely to compensate for slower productivity growth in ICT sectors during the forecast period. Labour productivity growth in services is estimated to remain unchanged. Taken together, these estimates suggest that labour productivity growth in market production will not accelerate notably from that of the first half of the 2000s.

Concluding remarks

Labour productivity growth in Finland slowed down notably in the 2000s. Compared with the latter half of the 1990s, the deceleration in productivity growth was caused mainly by 'normalisation' of growth in the ICT sector, but productivity growth also slowed in industry excluding electronics. Labour productivity growth was very weak outside the electronics industry. At the same time, productivity continued to grow strongly in the United States, where the service sector (excl. ICT) and industry (excl. ICT) actually boosted overall labour productivity growth. It is evident that the strong emphasis placed on the use of ICT in the US has been of significance. In EU countries, on the other hand, labour productivity growth has on average been weaker than in Finland in all sectors in the 2000s. It is surprising that productivity in the service sector has hardly grown at all in EU countries in this period. The greatest difference vs the United States is due to the slow productivity growth in the service production, although, according to Van Ark and Inklaar (2005), EU countries are falling behind the US also in terms of ICT productivity growth.

According to the Bank of Finland forecast, labour productivity growth will remain at the relatively low level seen in the first few years of the 2000s. Hence the productivity growth gap between the US and Finland will remain. On the other hand, Finland seems to be able to preserve its head start over the other EU15 countries.

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Household indebtedness

Risto Herrala, Economist, Monetary Policy and Research

In Finland, household indebtedness became more widespread after the Second World War, with changes in housing policy increasing the popularity of owner-occupied housing. The current decade has witnessed rapid growth in the indebtedness of Finnish households.

The situation in Finland is, however, not unique by international comparison: in several industrialised countries, household debt has grown faster than household income already for some years. The phenomenon has raised questions not only on the reasons for indebtedness, but also on its consequences for economic policy. The key question is whether household indebtedness will endanger the stable development of the economy as interest rates rise.

In economic theory debt is regarded mainly as a useful phenomenon. By borrowing non-financial corporations can fix temporary cash deficits or finance investments. For households, borrowing is a means of financing large purchases, for example, houses or cars. Moreover, smaller everyday purchases are also often paid for with a credit card. Debt can support economic growth and promote households' welfare.

However, the decision to borrow requires due consideration. Moreover, it is not easy to control the factors that affect the resulting situation. It may even be difficult for households to identify the key factors affecting the situation, such as risks. Some recent academic studies on household indebtedness have questioned households' ability to carry out adequate debt planning (Miles 2005).

Traditionally, central banks have actively monitored the household sector's indebtedness based on credit and interest rate statistics. However, these statistics give an inadequate picture of indebtedness for the economic policy debate. In recent years, a number of central banks have published studies on household indebtedness based on micro-data. Because micro-data include information on individual households, they enable us to determine which types of households take on debt and the magnitudes of risks incurred.

This article examines the indebtedness of Finnish households based on one set of micro-data, ie the service data on income distribution.[1] The mainly-descriptive approach introduces key topics, the objective being to describe the current state and trends of indebtedness and to compare household indebtedness in Finland to that in other countries.

The service data on income distribution currently available to the Bank of Finland covers the years 1989 – 2003. The data provides an interesting perspective on the indebtedness of Finnish households in the period following liberalisation of the financial markets in the 1980s. The picture provided by the data of the current state of indebtedness is somewhat outdated. It is particularly noteworthy that household indebtedness has grown strongly since 2003.

[1] Service data on income distribution are compiled by Statistics Finland. They include annual data on socio-economic status, income and debt of some 25,000–30,000 persons.

Finnish household indebtedness in 2003

In 2003, about a half of Finnish households had debt (Table 1). Of all the households, 28% had housing debt, 11% study debt, and 29% other debt.

Household median debt amounted to EUR 20,000 ie, approximately two-thirds of their disposable income. For the median household, the ratio of debt interest and principle payments to disposable income (debt service ratio)

Table 1.

Household indebtedness, 2003

	Proportion of households with debt, %	*Median debt, EUR*	*Debt ratio, median, %*	*Debt service ratio, median, %*	*Debt payments, median, EUR*	*Proportion of overindebted, %*
All households	*51.2*	*500*	*2.3*			*3.1*
			Indebted households			
Total sample		*20,000*	*65.9*	*7.1*	*2,400*	*5.9*
Head of family's age, years						
Below 35	*69.8*	*16,000*	*69.6*	*5.6*	*1,200*	*5.4*
35–44	*75.6*	*39,100*	*101.4*	*11.8*	*4,440*	*6.2*
45–54	*63.1*	*22,000*	*58.0*	*6.8*	*2,725*	*7.3*
55–64	*38.6*	*12,800*	*40.3*	*3.9*	*1,457*	*3.2*
Over 65	*10.8*	*6,500*	*30.0*	*2.2*	*499*	*8.3*
Income decile						
Less than 20%	*28.0*	*4,000*	*41.8*	*1.2*	*125*	*19.8*
20–39.9	*40.6*	*8,000*	*42.9*	*3.3*	*600*	*9.0*
40–59.9	*51.4*	*18,000*	*66.6*	*6.8*	*1,747*	*6.3*
60–79.9	*65.1*	*33,642*	*88.7*	*10.4*	*4,000*	*2.9*
80–89.9	*73.2*	*38,000*	*78.8*	*10.1*	*4,810*	*1.6*
90–100	*68.2*	*50,000*	*72.4*	*8.4*	*5,760*	*0.9*
Major region						
Helsinki	*51.5*	*14,783*	*45.9*	*5.4*	*1,497*	*8.0*
Helsinki commuter area	*58.2*	*23,525*	*68.3*	*7.3*	*2,520*	*5.7*
Other major municipalities with university	*50.9*	*12,321*	*55.3*	*4.3*	*1,100*	*6.7*
Other major municipalities	*45.4*	*20,000*	*65.8*	*8.2*	*2,422*	*5.0*
Other	*51.2*	*25,700*	*76.9*	*8.4*	*3,000*	*5.5*
Type of household						
Single household	*49.7*	*9,907*	*57.7*	*4.4*	*758*	*10.2*
Couples with no children	*59.0*	*20,000*	*53.4*	*5.3*	*1,996*	*2.6*
Single parents	*68.5*	*11,000*	*52.5*	*6.5*	*1,600*	*16.3*
Couples with children	*80.0*	*45,000*	*100.4*	*11.5*	*5,000*	*3.6*
Seniors	*9.8*	*5,046*	*23.6*	*1.8*	*420*	*7.3*
Not disclosed	*48.9*	*20,000*	*47.3*	*4.2*	*1,800*	*5.6*
Head of family's level of education						
No degree	*57.2*	*19,000*	*64.4*	*6.5*	*1,908*	*6.5*
Upper secondary	*62.3*	*29,000*	*73.7*	*9.5*	*3,500*	*4.0*
Lower degree	*64.8*	*30 417*	*86.6*	*9.0*	*3,600*	*3.3*
Higher degree	*66.2*	*40,000*	*80.7*	*9.9*	*4,500*	*2.8*
Postgraduate degree	*67.0*	*32,000*	*71.7*	*10.8*	*5,531*	*0.0*
Not disclosed	*32.3*	*11,000*	*46.8*	*3.8*	*998*	*9.3*

Source: Statistics Finland, service data in income distribution.

was less than 10%. About 6% of indebted households (ie some 3% of all households) reported that they were overburdened by debt.[2]

A breakdown by age of family head reveals that both the proportion of indebted households and the amount of debt of the median household were highest for the group of early middle-aged (35–44) households. The debt service-to-income ratio was also higher for this age group than for other age groups. The proportion of households overburdened by debt was highest in the oldest age group (over 65).

A breakdown by household type reveals that the median debt and the median debt service-to-income ratio were highest for indebted families with children. Overindebtedness is most common for single-parent families. Of this group, almost one-sixth of households were overburdened by debt.

Indebtedness does not affect only the largest growth centres. The roughest breakdown, ie, by major population centres, shows that the proportion of indebted households was highest in Helsinki and the Greater Helsinki area. In Helsinki, the proportion of indebted households that were overindebted was higher than in the other major population centres. The median debt of indebted households was however highest in the smallest municipalities located outside regional centres. The ten largest and smallest sub-regional units, in terms of debt ratio[3] and overindebtedness, are shown in Table 2. In small rural municipalities, the level of indebtedness was highest in the group of managers and small-scale entrepreneurs.

A country-level examination based on occupational classification of head of family shows that managers, with typically relatively high incomes, have the highest median debt ratio. The proportion of overindebted of the indebted is highest for the low-wage occupational group. An examination based on level of education shows that the highest median debt ratios are found in households whose family head is highly educated.

In summary it can be said that household indebtedness does not affect only families with children in the Helsinki area. The second major geographical category for indebted households is sub-regional units. An examination based on age group shows that early middle-aged families (35–44) are the most indebted.

Another new finding is that the proportion of indebted households that are overindebted is highest in the group of senior households. In this age group, however, only a few households (10%) have incurred debt. The phenomenon may be explained by the fact that Finns traditionally aim at paying off their debt before retirement. Of the indebted senior households, a relatively high proportion has been unable to pay off their debts at an earlier stage of life.

Indebtedness trends

The data enable examination of indebtedness trends between 1989 and 2003.

[2] Overindebtedness is a situation in which the household views its debt as too big to manage.

[3] In this study, debt ratio is the household's total debt divided by its disposable income.

Table 2.

Median debt ratio and proportion of overindebted households of indebted households, by sub-regional unit and occupation*

	Debt ratio, %		*Proportion of over-indebted, %*
Lagest 10 sub-regional units			
Lake district	*152*	*Siikalatva*	*19.3*
Forssa	*139*	*Kehys-Kainuu*	*17.9*
Hämeenlinna	*134*	*Northern Lapland*	*16.4*
Kyrönmaa	*131*	*Fell Lapland*	*14.9*
*Southern neighbouring sub-regional unit***	*130*	*Southern Pirkanmaa*	*14.6*
Jakobstad region	*128*	*Imatra*	*13.5*
Keuruu	*126*	*Kyrönmaa*	*13.1*
Turunmaa	*117*	*Savonlinna*	*12.4*
Åland rural area	*115*	*Suupohja*	*12.3*
South Ostrobothnia, coastal region	*115*	*Åland archipelago*	*11.8*
Smallest 10 sub-regional units			
Viitasaari	*44*	*Äänekoski*	*0.0*
Mariehamn	*42*	*Pieksämäki*	*0.0*
Nivala-Haapajärvi	*41*	*Kaustinen*	*0.0*
Northern Satakunta	*41*	*Northwest Pirkanmaa*	*0.0*
Suupohja	*40*	*Härmänmaa*	*0.0*
Rauma	*40*	*Outokumpu*	*0.0*
Kehys-Kainuu	*40*	*Viitasaari*	*0.0*
Pielisen Karjala	*38*	*Mariehamns stad*	*0.0*
Loviisa	*38*	*Northern Satakunta*	*0.0*
Ålands skärgård	*2*	*Loviisa*	*0.0*
By occupation			
Senior officials and senior officials of special-interest organisations	*208.6*	*Agricultural, fishery and related labourers*	*16.1*
Managers of small enterprises	*128.6*	*Not professionally active*	*16.0*
Traffic instructors and other teaching associate professionals	*91.9*	*Models, salespersons and demonstrators*	*9.6*
Armed forces	*90.6*	*Skilled agricultural and fishery workers*	*8.5*
Other personal services workers	*89.6*	*Managers of small enterprises*	*6.5*
Physical, mathematical and engineering science professionals	*89.2*	*Stationary plant and related operators*	*6.0*
Extraction and building trades workers	*88.7*	*Senior officials and senior officials of special-interest organisations*	*5.7*
Personal and protective services workers	*86.1*	*Precision, handicraft, craft printing and related trades workers*	*5.6*
Corporate managers	*85.6*	*Physical and engineering science associate professionals*	*5.5*
Teaching professionals	*84.0*	*Office clerks*	*4.9*
Metal, machinery and related trades workers	*81.5*	*Extraction and building trades workers*	*4.6*
Stationary plant and related operators	*80.0*	*Labourers in manufacturing and construction*	*3.9*
Machine operators and assemblers	*78.8*	*Other personal services workers*	*3.7*
Other professionals	*78.5*	*Traffic instructors and other teaching associate professionals*	*3.6*
Office clerks	*77.8*	*Customer services clerks*	*3.4*
Physical and engineering science associate professionals	*75.2*	*Drivers and related water traffic operators*	*2.9*
Precision, handicraft, craft printing and related trades workers	*66.3*	*Other professionals*	*2.3*
Customer services clerks	*62.9*	*Metal, machinery and related trades workers*	*2.0*
Models, salespersons and demonstrators	*59.6*	*Life science and health professionals*	*1.8*
Life science and health professionals	*57.0*	*Other craft and related trades workers*	*1.7*
Drivers and related water traffic operators	*53.5*	*Machine operators and assemblers*	*1.5*
Skilled agricultural and fishery workers	*51.9*	*Corporate managers*	*1.5*
Agricultural, fishery and related labourers	*49.4*	*Physical, mathematical and engineering science professionals*	*1.1*
Other craft and related trades workers	*46.6*	*Teaching professionals*	*0.8*
Labourers in manufacturing and construction	*46.0*	*Armed forces*	*0.0*
Not professionally active	*35.2*	*Personal and protective services workers*	*0.0*

** The calculations for sub-regional units may be biased due to the small sample size.*
*** Ilmajoki, Jalasjärvi, Kurikka, Nurmo, Peräseinäjoki, Seinäjoki and Ylistaro.*
Source: Statistics Finland, service data on income distribution.

Attention is drawn to the following four trends:

– growth in indebtedness
– increasing proportion of indebted households middle aged, with children, and with high incomes
– debt service-to-income ratio decreasing
– lessening of overindebtedness (since 1998).

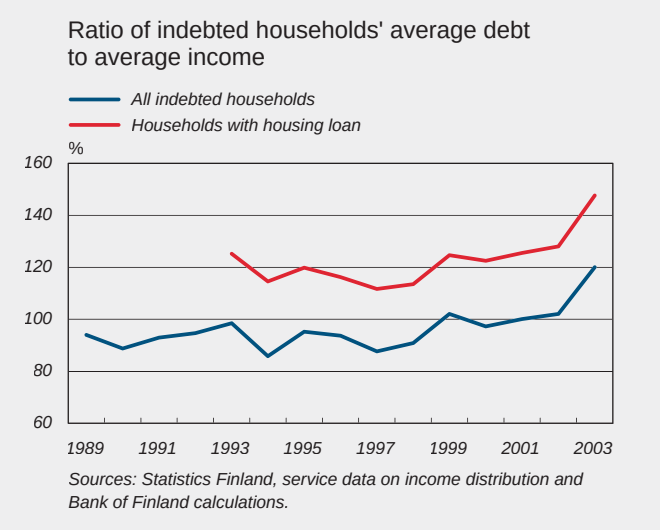
The growth of indebtedness is reflected eg in the growth of indebted households' median debt from approximately EUR 10,000 to EUR 20,000 between 1989 and 2003. In the same period, the median debt ratio of indebted households increased from 50 to 60%. For indebted households, the ratio of average debt to average income increased from approximately 90 to 120% (Chart 1).

An examination of growth in the amounts of debt and debt ratios during the period after the banking crisis of the 1990s shows that in 1998 only 3% of indebted households had loans of over EUR 100,000, whereas in 2003, the proportion had increased to 10% (Table 3). In the same period, the proportion of indebted households whose loans exceeded their annual disposable income had grown from 35 to 38%. The proportion with debts exceeding EUR 300,000 has increased from zero to over 10%.

The fact that debtors are increasingly middle-aged, with children, and with high incomes is clearly evident in the service data on income distribution. Since 1989, the debt ratio has risen for all age groups, excluding the youngest, ie those under 35 (Chart 2). Growth in indebtedness has been most pronounced in the group of early middle-aged (35–44) households, as well as in the higher income brackets and in families with children.

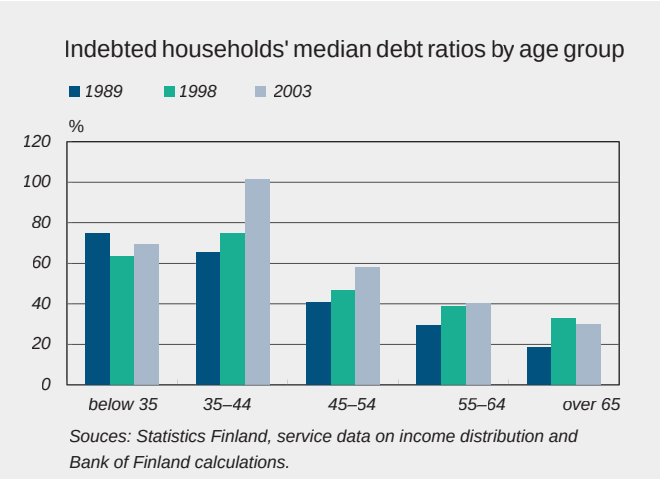
Despite the growth in indebtedness, the debt service-to-income ratios for indebted households have typically decreased. In 1989, (median) debt service relative to income of an indebted household was 11%, whereas

Chart 1.



Sources: Statistics Finland, service data on income distribution and Bank of Finland calculations.

Chart 2.



Souces: Statistics Finland, service data on income distribution and Bank of Finland calculations.

in 2003 it was only 7%. The relative decline in debt service is partly due to falling interest rates and longer loan periods, which reduce the annual amounts of loan payments. In 2003, the debt service-to-disposable income ratio was in all age groups smaller than in 1989 (Chart 3). The decrease in the debt service-to-income ratio has been most pronounced in the group of youngest households. This is partly explained by the reform of the student loan system in the early 1990s, after which the number of new student loans has fallen significantly. The debt service-to-income ratio has decreased especially for the lower income brackets.[4]

There are observations on the development of overindebtedness for the period after the banking crisis. In 1998–2003, the number of households considering themselves overindebted fell in all age groups, particularly in the group of households close to retirement

[4] Since 2003 household indebtedness has increased markedly and the debt service-to-income ratio may have started to rise. In 2005, the debt service-to-income ratio of households with housing loans was higher than in 1998 (Hyytinen, Johansson and Määttänen 2006).

Table 3.

Distribution of indebted households and debt based on debt ratio and amount of debt in 1998 ans 2003, %

	Alle 20,000	*20,000 60,000*	*60,000 100,000*	*100,000 150,000*	*150,000 200,000*	*200,000 300,000*	*300,000 400,000*	*Over 400,000*	*Total*
				Percentage of indebted households					
1998									
Less than 100	*55*	*12*	*0*	*0*	*0*	*0*	*0*	*0*	*67*
100–199	*3*	*14*	*4*	*0*	*0*	*0*	*0*	*0*	*21*
200–299	*0*	*3*	*4*	*1*	*0*	*0*	*0*	*0*	*8*
300–	*0*	*1*	*1*	*1*	*0*	*0*	*0*	*0*	*5*
Total	*58*	*31*	*9*	*2*	*1*	*0*	*0*	*0*	*100*
2003									
Less than 100	*46*	*14*	*1*	*0*	*0*	*0*	*0*	*0*	*61*
100–199	*1*	*11*	*7*	*1*	*0*	*0*	*0*	*0*	*20*
200–299	*0*	*2*	*5*	*3*	*1*	*0*	*0*	*0*	*10*
300–	*0*	*1*	*2*	*3*	*1*	*1*	*0*	*0*	*8*
Total	*48*	*28*	*14*	*7*	*2*	*1*	*0*	*0*	*100*
				Percentage of debt					
1998									
Less than 100	*14*	*14*	*1*	*0*	*0*	*0*	*0*	*0*	*29*
100–199	*1*	*21*	*10*	*1*	*0*	*0*	*0*	*0*	*34*
200–299	*0*	*5*	*10*	*3*	*1*	*0*	*0*	*0*	*20*
300–	*0*	*3*	*4*	*5*	*3*	*2*	*1*	*1*	*17*
Total	*16*	*43*	*25*	*9*	*4*	*2*	*1*	*1*	*100*
2003									
Less than 100	*7*	*10*	*1*	*0*	*0*	*0*	*0*	*0*	*19*
100–199	*0*	*10*	*12*	*3*	*1*	*0*	*0*	*0*	*27*
200–299	*0*	*2*	*9*	*7*	*2*	*1*	*0*	*0*	*22*
300–	*0*	*1*	*4*	*7*	*4*	*5*	*2*	*9*	*32*
Total	*8*	*24*	*26*	*18*	*7*	*6*	*2*	*9*	*100*

Sources: Statistics Finland, service data on income distribution and Bank of Finland calculations.

age (Chart 4). The baby boom generation has managed its finances well. Overindebtedness has decreased for all income brackets, household types and major population areas.

International comparison

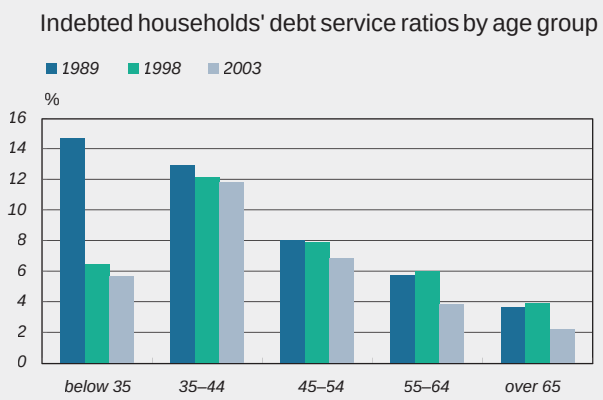
In recent years, several central banks of Mediterranean and Anglo-Saxon countries have published studies on household indebtedness based on micro-data.[5] The quality and concepts of samples for the various countries may differ. Nevertheless, the results of these studies can be used for indicative comparisons with the situation in Finland.

The proportion of households with debts in Finland equalled the average for the sample countries (Chart 5). The proportion of indebted households was highest in Anglo-Saxon countries (United Kingdom, United States, Australia) and smallest in Mediterranean countries (Italy, Portugal, Spain). In the data on Finland, attention is drawn to the fact that the proportion of indebted households decreases sharply for the older age groups. In Finland, indebtedness was rare for senior households compared to the other countries. This confirms the general view that Finnish households traditionally pay up their debts within a short time.

The median debt ratios for indebted households by age group in Finland and four other countries are

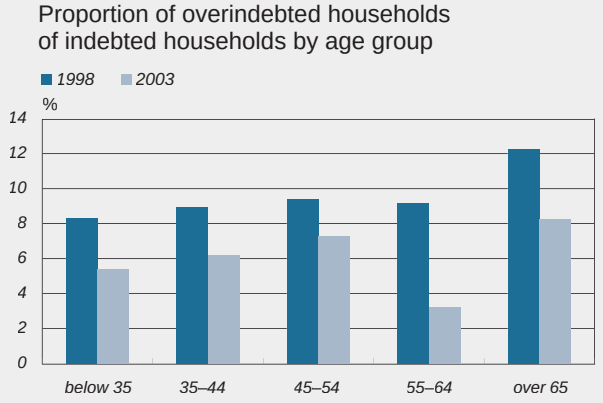
[5] Studies on household indebtedness include: Bower, Martinez, Carrascal and Velilla (2005), Farinha (2004), May, Tudela and Young (2004), Cava and Simon (2003), Aizcorbe, Kennickell Moore (2003), and Magri (2002). The data on Australia and Portugal presented in this study is indicative.

Chart 3.



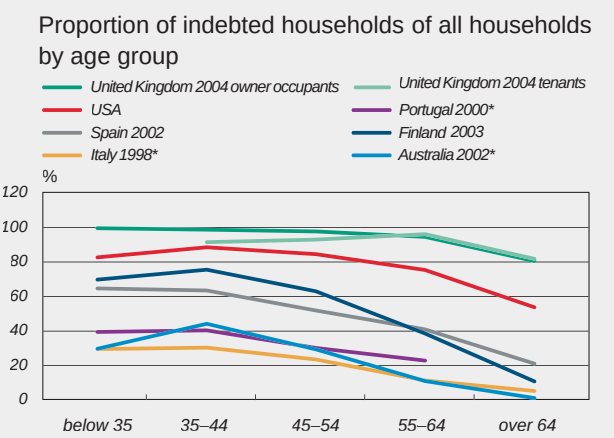
Sources: Service data on income distribution and Bank of Finland calculations.

Chart 4.



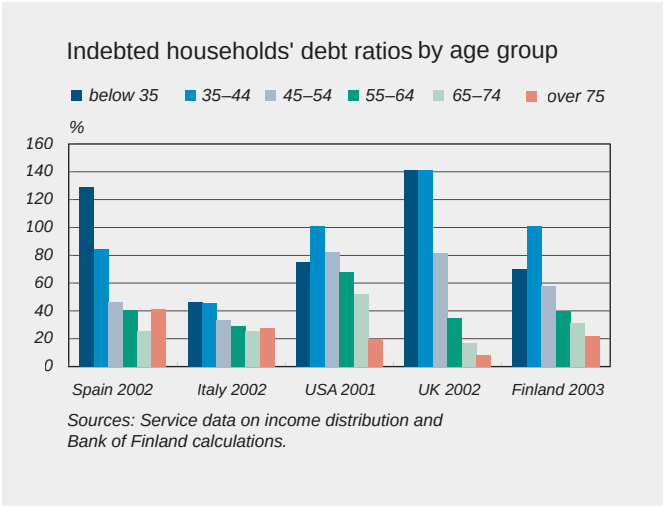
Sources: Service data on income distribution and Bank of Finland calculations.

Chart 5.



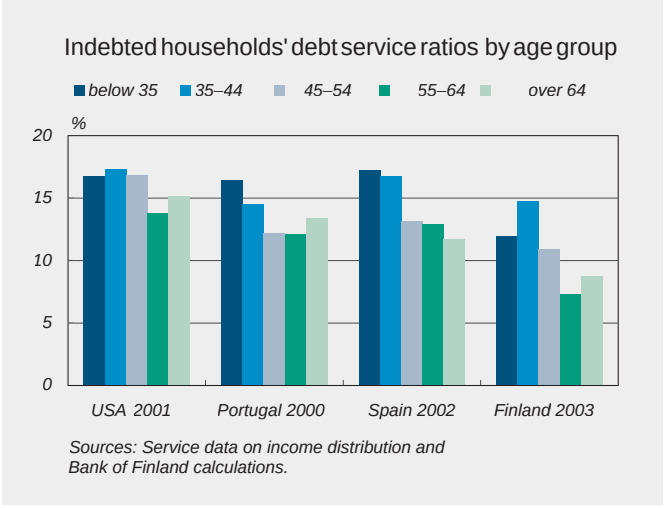
Sources: Service data on income distribution and Bank of Finland calculations.

Chart 6.



Sources: Service data on income distribution and Bank of Finland calculations.

Chart 7.



Sources: Service data on income distribution and Bank of Finland calculations.

shown in Chart 6. The debt ratio for Finnish indebted households was lower than that for households in the United Kingdom, whereas for most age groups it was higher than that for households in Mediterranean countries. The debt profile of indebted Finnish households was similar to that of US households.

In Finland household debt service ratios were lower than in the four other countries (Chart 7). Particularly for the older age groups, the ratios were low in Finland. Only for the group of early middle-aged households (35–44), was the debt service ratio in Finland equal to the average for the sample countries. It should however be noted that the sample period differs across countries. The Finnish data reflects the situation in 2003 when euro area interest rates were lower than in 2001–2002. This may partly explain Finland's relative situation. Comparable data on differences in loan periods, which could also partly explain the results, is not available.

The use of micro-data in the study of indebtedness

The service data on income distribution complements the picture of indebtedness trends presented by financial market statistics and other sources. In this study, the data is used to give an overall picture of indebtedness in 2003, to examine the trends of indebtedness, and for international comparison.

The service data on income distribution also allows for a more in-depth analysis of factors underlying indebtedness. Some international studies have already been done using micro-data. The data can be used to calculate eg the impact of interest rate changes on the position and overindebtedness of households. Thus there is ample scope for further studies.

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Series E

ISSN 1238-1691, print
ISSN 1456-5951, online

Essays on macroeconomic effects of fiscal policy rules
Jukka Railavo
E:33
ISBN 952-462-249-1, print
ISBN 952-462-250-5, online

Key words: inflation, fiscal policy, fiscal policy rules, optimal monetary policy, policy coordination, stabilisation

Economic and Monetary Union (EMU) can be characterised as a complicated set of legislation and institutions governing monetary and fiscal responsibilities. The measures of fiscal responsibility are to be guided by the Stability and Growth Pact (SGP), which sets rules for fiscal policy and makes a discretionary fiscal policy virtually impossible. To analyse the effects of the fiscal and monetary policy mix, we modified the New Keynesian framework to allow for supply effects of fiscal policy. We show that defining a supply-side channel for fiscal policy using an endogenous output gap changes the stabilising properties of monetary policy rules. The stability conditions are affected by fiscal policy, so that the dichotomy between active (passive) monetary policy and passive (active) fiscal policy as stabilising regimes does not hold, and it is possible to have an active monetary — active fiscal policy regime consistent with stability of the economy. We show that, if we take supply-side effects into account, we get more persistent inflation and output reactions. We also show that the dichotomy does not hold for a variety of different fiscal policy rules based on government debt and budget deficit, using the tax smoothing hypothesis and formulating the tax rules as difference equations. The debt rule with active monetary policy results in indeterminacy, while the deficit rule produces a determinate solution with active monetary policy, even with active fiscal policy. The combination of fiscal requirements in a rule results in cyclical responses to shocks. The amplitude of the cycle is larger with more weight on debt than on deficit. Combining optimised monetary policy with fiscal policy rules means that, under a discretionary monetary policy, the fiscal policy regime affects the size of the inflation bias. We also show that commitment to an optimal monetary policy not only corrects the inflation bias but also increases the persistence of output reactions. With fiscal policy rules based on the deficit we can retain the tax smoothing hypothesis also in a sticky price model.

Discussion Papers

ISSN 0785-3572 (print)
ISSN 1456-6184 (online)

What's in it for us? Network effects and bank payment innovation
Alistair Milne
16/2005
ISBN 952-462-223-8, print
ISBN 952-462-224-6, online

Key words: network effects, incentives, payment technology, externalities

The developed world exhibits substantial but poorly understood differences in the efficiency and quality of low-value payment services. This paper compares payments arrangements in the UK, Norway, Sweden, and Finland, and discusses the impact of network effects on incentives to adopt new payments technology. A model is presented, in which private benefits for investment is shared interbank payments infrastructure are weak. In contrast, due to 'account externalities', there are strong incentives for investment in intra-bank

payment systems. These two features, distinguishing bank payments from other network industries, can help explain some of the observed cross country differences in payments arrangements.

Identifying the interdependence between US monetary policy and the stock market

Hilde C. Bjørnland – Kai Leitemo

17/2005

ISBN 952-462-225-4, print
ISBN 952-462-226-2, online

Key words: VAR, monetary policy, asset prices, identification

We estimate the interdependence between US monetary policy and the S&P 500 using structural VAR methodology. A solution is proposed to the simultaneity problem of identifying monetary and stock price shocks by using a combination of short-run and long-run restrictions that maintains the qualitative properties of a monetary policy shock found in the established literature (CEE 1999). We find great interdependence between interest rate setting and stock prices. Stock prices immediately fall by 1.5 per cent due to a monetary policy shock that raises the federal funds rate by ten basis points. A stock price shock increasing stock prices by one per cent leads to an increase in the interest rate of five basis points. Stock price shocks are orthogonal to the information set in the VAR model and can be interpreted as non-fundamental shocks. We attribute a major part of the surge in stock prices at the end of the 1990s to these non-fundamental shocks.

International economic spillovers and the liquidity trap

Juha Tarkka – Mika Kortelainen

18/2005

ISBN 952-462-227-0, print
ISBN 952-462-228-9, online

Key words: zero bound, liquidity trap, international spillovers, edge

We study the effect of the zero bound constraint of interest rates on international transmission of economic policy and supply shocks. After some preliminary analysis with a simple theoretical model, we apply a rich two-country simulation model to the problem. The model framework consists of EDGE, Bank of Finland's dynamic equilibrium model for the euro area, linked to a similar model calibrated to resemble the US economy. The models have new Keynesian properties because of price rigidities and forward-looking pricing, consumption and investment behaviour. We assume freely floating exchange rates. Monetary policies are modelled with Taylor type policy rules, taking into account the zero bound constraint for interest rates. We find that effects of policy and supply side shocks differ significantly from the 'normal' situation if one of the countries is in the 'liquidity trap', ie if the interest rate is constrained by the zero bound. Being in the liquidity trap amplifies the domestic effects of fiscal policy, but mitigates its spillover to abroad. Changing the long run inflation target, which does not have international spillovers in the normal case, does have any effects abroad if the country where the target is changed is in a temporary liquidity trap. The effects of supply shocks are also very different in the liquidity trap case compared to the normal case.

Assessing effects of price regulation in retail payment systems

Kari Kemppainen

19/2005

ISBN 952-462-231-9, print
ISBN 952-462-232-7, online

Key words: payment systems, price regulation, retail payments

This paper considers effects of price regulation in retail payment systems by applying the model of telecommunications competition by Laffont-Rey-Tirole (1998). In our two-country model world there is one retail payment network located in each country and markets are segmented à la Hotelling. We show that the optimal price under price regulation is the weighted average of pre-regulation domestic and cross-border prices where the degree of home-bias in making payments serves as the weight. Furthermore, we find that the general welfare effects of price regulation are ambiguous: gross social welfare is higher under price discrimination than under price regulation in the special case where costs of access to banking services (transportation costs) are high. However, there also exist cases where prohibitively high transaction costs make price discrimination to reduce total welfare. Finally, if transportation costs are reduced sufficiently, segmentation of payment markets is eliminated. Markets then become fully served as in the original Laffont-Rey-Tirole model, suggesting that price discrimination would be beneficial for welfare.

Robust monetary policy in a small open economy

Kai Leitemo – Ulf Söderström

20/2005

ISBN 952-462-233-5, print
ISBN 952-462-234-3, online

Key words: Knightian uncertainty, model uncertainty, robust control, min-max policies

This paper studies how a central bank's preference for robustness against model misspecification affects the design of monetary policy in a New-Keynesian model of a small open economy. Due to the simple model structure, we are able to solve analytically solve the optimal robust policy rule, and separately analyze the effects of robustness against misspecification concerning the determination of inflation, output and the exchange rate. We show that an increased central bank preference for robustness makes monetary policy respond more aggressively or more cautiously to shocks, depending on the type of shock and the source of misspecification.

Forecasting with a forward-looking DGE model – combining long-run views of financial markets with macro forecasting

Hanna-Leena Männistö

21/2005

ISBN 952-462-235-1, print
ISBN 952-462-236-X, online

Key words: forecasting, New Keynesian model, DSGE model, rational expectations, open economy

To develop forecasting procedures with a forward-looking dynamic general equilibrium model, we built a small New-Keynesian model and calibrated it to euro area data. It was essential in this context that we allowed for long-run growth in GDP. We brought additional asset price equations based on the expectations hypothesis and the Gordon

growth model, into the standard open economy model, in order to extract information on private sector long-run expectations on fundamentals, and to combine that information into the macro economic forecast. We propose a method of transforming the model in forecasting use in such a way, as to match, in an economically meaningful way, the short-term forecast levels, especially of the model's jump-variables, to the parameters affecting the long-run trends of the key macroeconomic variables. More specifically, in the model we have used for illustrative purposes, we pinned down the long-run inflation expectations and domestic and foreign potential growth-rates using the model's steady state solution in combination with, by assumption, forward looking information in up-to-date financial market data. Consequently, our proposed solution preserves consistency with market expectations and results, as a favourable by-product, in forecast paths with no initial, first forecast period jumps. Furthermore, no ad hoc re-calibration is called for in the proposed forecasting procedures, which clearly is an advantage from point of view of transparency in communication.

Comparing alternative Phillips curve specifications: European results with survey-based expectations

Maritta Paloviita

22/2005

ISBN 952-462-237-8, print
ISBN 952-462-238-6, online

Key words: Phillips curve, expectations, Europe

This paper examines inflation dynamics in Europe. Econometric specification tests with pooled European data are used to compare the empirical performance of the New Classical, New Keynesian and Hybrid specifications of the Phillips curve. Instead of imposing any specific form of expectations formation, direct measures, ie Consensus Economics survey data are used to proxy economic agents' inflation expectations. According to the results, the New Classical Phillips curve has satisfactory statistical properties. Moreover, the purely forward-looking New Keynesian Phillips curve is clearly outperformed by the New Classical and Hybrid Phillips curves. We interpret our results as indicating that the European inflation process is not purely forward-looking, and inflation cannot instantaneously adjust to changes in expectations. Consequently, even allowing for possible non-rationality in expectations, a lagged inflation term enters the New Keynesian Phillips curve for inflation dynamics in Europe.

Standard setting and competition in securities settlement

Alistair Milne

23/2005

ISBN 952-462-239-4, print
ISBN 952-462-240-8, online

Key words: securities settlement, standards, inter-operability, switching costs

This paper examines the impact of messaging and technical standards on competition in the supply of securities transaction management services. Two simple switching cost models are used to clarify the impact of standards on barriers to entry and on the incentives to adopt harmonised and simplified securities processing standards. Policy implications are discussed briefly.

The transparency of the banking industry and the efficiency of information-based bank runs

Yehning Chen – Iftekhar Hasan

24/2005

ISBN 952-462-241-6, print
ISBN 952-462-242-4, online

Key words: bank run, contagion, transparency, market discipline, deposit insurance

In this paper, we investigate the relationship between the transparency of banks and the fragility of the banking system. We show that information-based bank runs may be inefficient because the deposit contract designed to provide liquidity induces depositors to have excessive incentives to withdraw. An improvement in transparency of a bank may reduce depositor welfare through increasing the chance of an inefficient contagious bank run on other banks. A deposit insurance system in which some depositors are fully insured and the others are partially insured can ameliorate this inefficiency. Under such a system, bank runs can serve as an efficient mechanism for disciplining banks. We also consider bank managers' control over the timing of information disclosure, and find that they may lack the incentive to reveal information about their banks.

Inflation expectations and regime shifts in the euro are

Matti Virén

25/2005

ISBN 952-462-243-2, print
ISBN 952-462-244-0, online

Key words: inflation expectations, Kalman filter, stability

This paper focuses on the determination of inflation expectations. The following two questions are examined: How much do inflation expectations reflect different economic and institutional regime shifts and in which way do inflation expectations adjust to past inflation? The basic idea in the analysis is an assumption that inflation expectations do not mechanically reflect past inflation as may econometric specification de facto assume but rather they depend on the relevant economic regime. Also the adjustment of expectations to past inflation is different in different inflation regimes. The regime analysis is based on panel data from EMU/EU countries for the period 1973–2004, while the inflation adjustment analysis mainly uses the Kalman filter technique for individual countries for the same period. Expectations (forecasts) are derived from OECD data. Empirical results strongly favour the regime-sensitivity hypothesis and provide an explanation for the poor performance of conventional estimation procedures in the context of Phillips curves.

The effects of aging population on the sustainability of fiscal policy

Mikko Puhakka

26/2005

ISBN 952-462-251-3, print
ISBN 952-462-252-1, online

Key words: aging, pensions, overlapping generations, fiscal policy

We study the effects of aging population on the sustainability of fiscal policy in overlapping generations models with government debt and a pay-as-you-go pension system. The smaller the population growth rate, the lower the maximum sustainable level of deficits. When the utility function is of a specific form, an increase in the payroll tax rate and the replacement rate decreases the level of maximum sustainable deficits; except in the case when pension depends on the wage level prevailing during the working period. The ratio of the deficits in two economies with different population growth rates is characterized with numerical examples.

A wavelet analysis of scaling laws and long-memory in stock market volatility
Tommi A. Vuorenmaa
27/2005
ISBN 952-462-253-X, print
ISBN 952-462-254-8, online

Key words: long-memory, scaling, stock market, volatility, wavelets

This paper investigates the dependence of average stock market volatility on the timescale or on the time interval used to measure price changes, which dependence is often referred to as the scaling law. Scaling factor, on the other hand, refers to the elasticity of the volatility measure with respect to the timescale. This paper studies, in particular, whether the scaling factor differs from the one in a simple random walk model and whether it has remained stable over time. It also explores possible underlying reasons for the observed behaviour of volatility in terms of heterogeneity of stock market players and periodicity of intraday volatility. The data consist of volatility series of Nokia Oyj at the Helsinki Stock Exchange at five minute frequency over the period from January 4, 1999 to December 30, 2002. The paper uses wavelet methods to decompose stock market volatility at different timescales. Wavelet methods are particularly well motivated in the present context due to their superior ability to describe local properties of times series. The results are, in general, consistent with multiscaling in Finnish stock markets. Furthermore, the scaling factor and the long-memory parameters of the volatility series are not constant over time, nor consistent with a random walk model. Interestingly, the evidence also suggests that, for a significant part, the behaviour of volatility is accounted for by an intraday volatility cycle referred to as the New York effect. Long-memory features emerge more clearly in the data over the period around the burst of the IT bubble and may, consequently, be an indication of irrational exuberance on the part of investors.

BOFIT Discussion Papers

ISSN 1456-4564 (print)
ISSN 1456-5889 (online)

Cross listing and firm value - corporate governance or market segmentation? An empirical study of the stock market
Gang Ji
14/2005
ISBN 952-462-794-9, print
ISBN 952-462-795-7, online

Key words: corporate governance, listing, China

This study investigates the economic consequences of cross-listing on the Chinese stock market. We argue that by adopting a higher disclosure standard through cross- listing firms voluntarily commit themselves to reducing information asymmetry. As a result, crosslisted firms are able to benefit from growth opportunities with less appropriated cash flow and lower cost of capital. The empirical evidence shows that cross-listed firms indeed command higher valuations than their non-cross-listed counterparts, after controlling for certain firm-specific attributes. This lends support to the corporate governance hypothesis of cross-listing on the Chinese stock market. The study also argues that an overall upgrading of accounting standards cannot substitute for the cross-listing mechanism.

Choice of substitution currency in Russia: How to explain the dollar's dominance

Anna Dorbec

15/2005

ISBN 952-462-796-5, print
ISBN 952-462-797-3, online

Key words: dollarisation, euroisation, transition, Russia, currency substitution, asset substitution, network externalities, hysteresis, conventions

The analysis of external economic relations of Russia reveals a paradox: while Europe is the main trade and direct investment partner of Russia, this is far from being the case concerning its currency's role in Russia's financial activities. The dollar is much preferred by economic agents for financial operations. This paper proposes a disaggregated approach to this issue by separating the 'means of exchange' and 'store of value' components of the use of substitution currencies. The influence of three main factors (inertial component, real trade relations and exchange rate fluctuations) on the relative demand for the euro by Russian economic agents is tested for the period 1999–2004. Finally we suggest a theoretical interpretation of the results based on the conventions theory approach.

Markets and democracy in Russia

Vlad Ivanenko

16/2005

ISBN 952-462-798-1, print
ISBN 952-462-799-X, online

Key words: Free market, democracy, institutions, Russia

The paper looks into convergence of Russian institutions with those of other democratic, free-market-oriented states, and considers definitions of 'normalcy' that incorporate the concepts of free market, democracy, and government efficiency. The author provides an estimate of Russia's institutional convergence to the standards of the G7 and the 'Big Five' group of large, middle-income countries that includes Brazil, China, and India. In some areas Russia outperforms 'Big Five' countries, in others it trails behind. Finally, public mistrust, corruption, and inefficient governance in Russia are discussed in light of the Putin administration's current reform policies.

Exchange and interest rate channels during a deflationary era – Evidence from Japan, Hong Kong and China

Aaron Mehrotra

17/2005

ISBN 952-462-798-1, print
ISBN 952-462-799-X, online

Key words: Deflation, Zero lower bound, SVAR

We examine the role of the exchange and interest rate channels during recent deflation episodes in Japan, Hong Kong and China. We estimate open-economy structural vector autoregressive (SVAR) models for the three economies with different monetary regimes and varying degrees of openness. In both Japan and Hong Kong, shocks to the nominal effective exchange rate have a statistically significant impact on prices, with a notably stronger effect in Hong Kong. Our results provide evidence about the role of external influences in the deflation episodes of these economies, and could also be seen to weakly support suggestions to depreciate the currency in order to escape from a liquidity trap. The importance of the interest rate channel is also found to be high in Japan and Hong Kong. In China, where interest rates have not been an important monetary policy tool, neither exchange nor interest rate shocks significantly influence price developments.

Effects of WTO membership on income distribution and labour movement in China – A CGE analysis

Jiao Wang – David Mayes – Guanghua Wan

18/2005

ISBN 952-462-802-3, print
ISBN 952-462-803-1, online

Key words: Applied CGE modelling, China, WTO, labour movement, inequality

Using a CGE model (PRCGEM) updated to 2002, the paper explores how WTO membership could affect earnings in 40 industries across 31 regions (and 8 regional blocks) of China during the period 2002–2007. Taking into account labour movement between regions within China, the direct contribution of WTO membership to overall economic growth and development is predicted to be small, with a rise in real GDP of only 6.48% short term and 5.6% long term. However, structural economic change and the WTO shock should increase regional output, especially in the established coastal economies. Regional labour movement is found to increase 69.2% at the completion of economic structural reforms. A slight decrease in the Gini coefficient for income inequality is also anticipated.

Collective action and post-communist enterprise: The economic logic of Russia's business associations

William Pyle

19/2005

ISBN 952-462-804-X, print
ISBN 952-462-805-8, online

Key words: Collective action, business associations, transition, Russia

Drawing on a unique set of surveys, this article explores the question of whether Russia's post-communist business associations are generally antithetical to or supportive of the broad objectives of economic restructuring. Contrary to the most widely cited analysis as to the purposes of collective action in the business community, the survey evidence demonstrates that association members have embraced market-adapting behaviours at greater rates than non-members. The responses of both firms and associations, moreover, suggest that the associations themselves are, at least in part, directly responsible. These findings point to the conclusion that in contemporary Russia the net returns to collective action in support of market development are high relative to those for purposes that are less benign.

Ex-ante dynamics of real effects of monetary policy: Theory and evidence for Poland and Russia, 2001–2003

Wojciech W. Charemza – Svetlana Makarova

20/2005

ISBN 952-462-806-6, print
ISBN 952-462-807-4, online

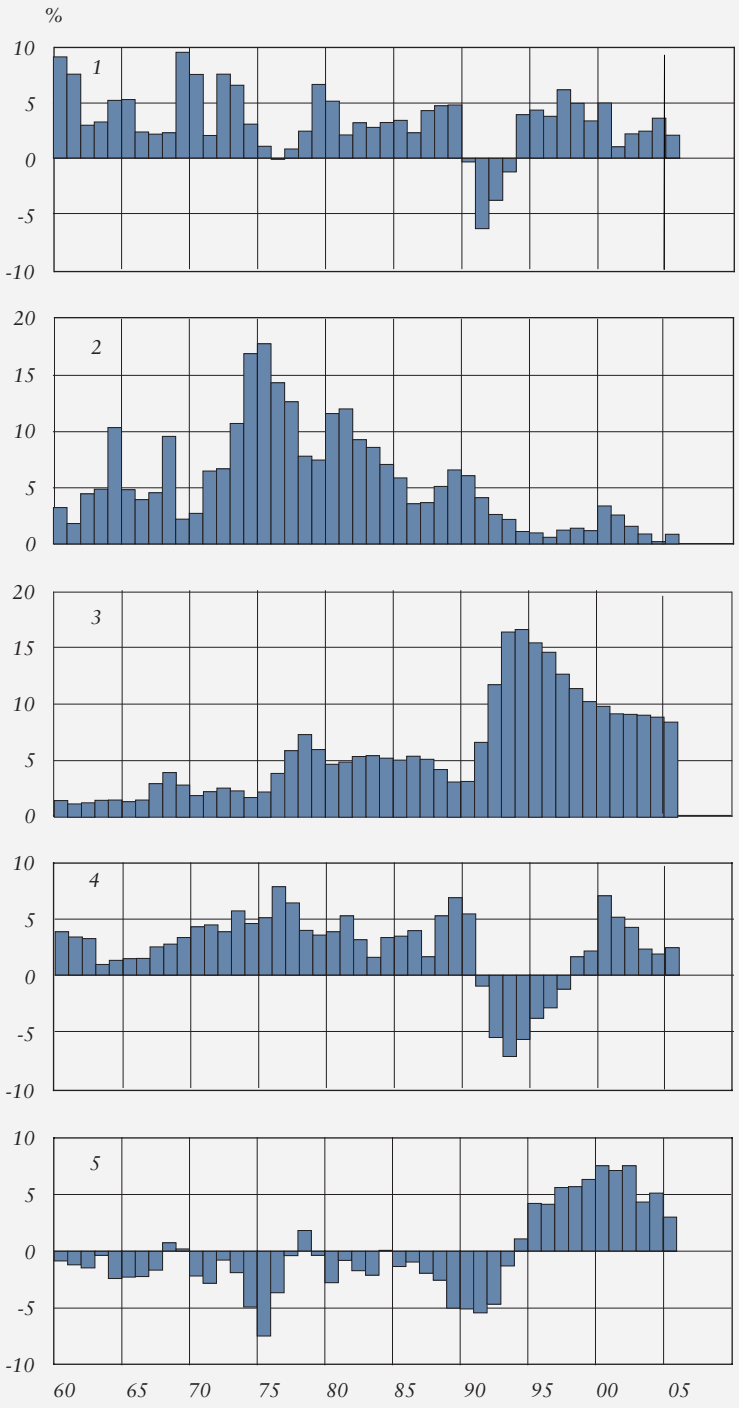
Key words: monetary policy, inflation targeting, Poland, Russia

The paper proposes a new indicator of expected real effects of a policy aimed at controlling inflation. The indicator, called real effect of inflation targeting (REIT), involves the comparison of expected and output-neutral inflation. It is shown that it can be derived from a simple two-dimensional vector autoregressive model of inflation and output gap. The microdynamics of such model are explained in terms of the foundations of Taylor-type staggered wage contracts. It is assumed that the monetary authority has some discretion regarding the timing of monetary actions. Here REIT can be used to set the optimal times for such actions, if the control of output is regarded as a secondary policy target. A simulation experiment illustrates the rationale of such a device for timing monetary measures.

The REIT has been used by the Polish Monetary Policy Council since 2001 in it's inflation targeting and is thought to have contributed to a substantial decline in Polish inflation in 2003 and to an increase in output growth in 2004. A similar indicator computed for Russia as a means of monitoring monetary policy rather than as an active tool confirms that active expansionary policy in 2002 and 2003 might have contributed to Russian economic growth in 2004 and 2005, whereas similar policy measures for 2004 are likely to prove ineffective.

Charts

1. Finland: key economic indicators



GDP, volume change from previous year

Consumer prices, change from previous year

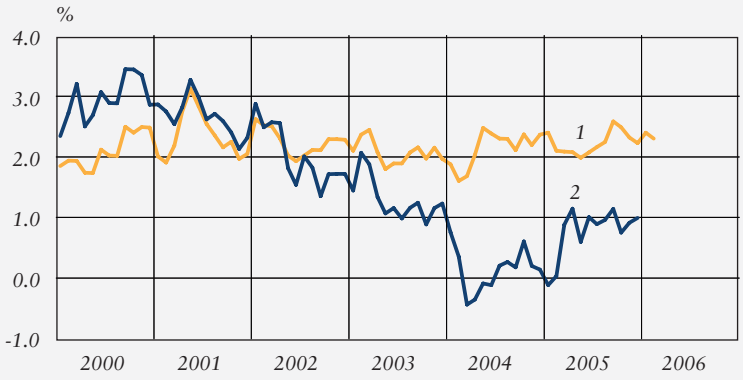
Unemployment rate

General government fiscal position, % of GDP

Current account, % of GDP

Sources: Statistics Finland and Bank of Finland.

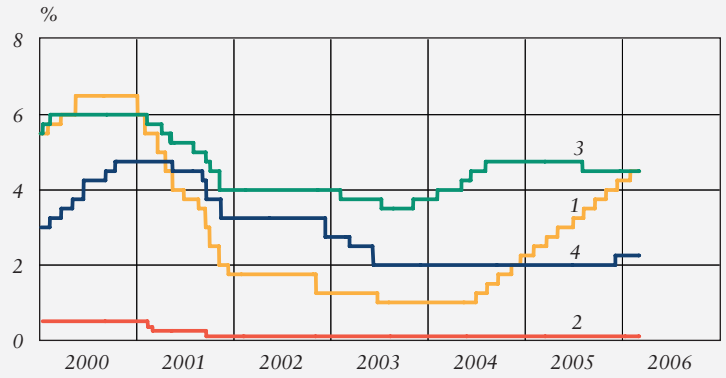
2. Price stability in the euro area and Finland



Harmonised index of consumer prices, 12-month change, %
1. *Euro area*
2. *Finland*

Sources: Eurostat and Statistics Finland.

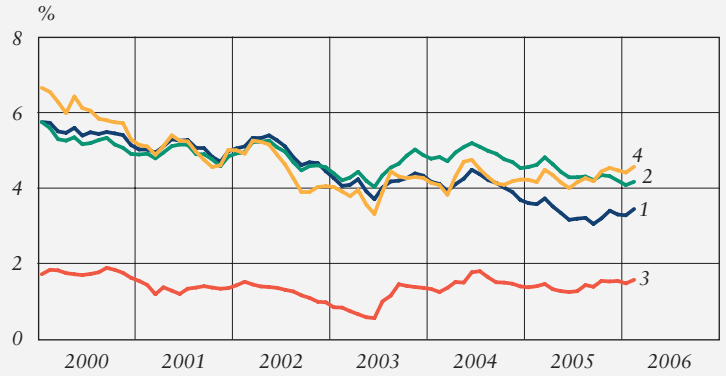
3. Official interest rates



1. *USA: fed funds target rate*
2. *Japan: discount rate*
3. *United Kingdom: repo rate*
4. *Eurosystem: main refinancing rate/minimum bid rate*

Source: Bloomberg.

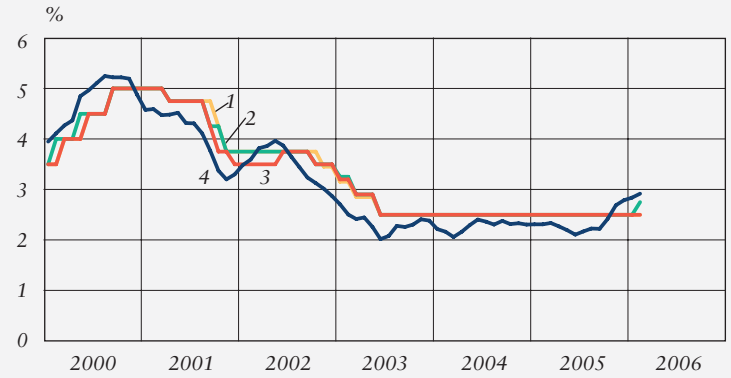
4. International long-term interest rates



Yields on ten-year government bonds
1. *Finland*
2. *United Kingdom*
3. *Japan*
4. *United States*

Source: Reuters.

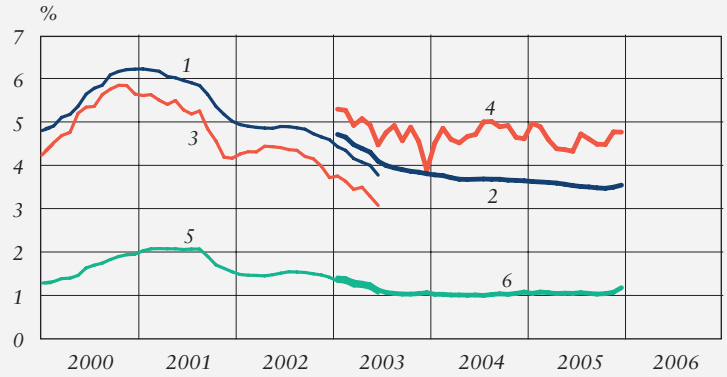
5. Bank reference rates in Finland and 12-month Euribor



1. *Nordea prime at the end of the month*
2. *Sampo prime at the end of the month*
3. *OKOBANK group prime at the end of the month*
4. *12-month Euribor*

Sources: Banks and ECB.

6. Average lending and deposit rates

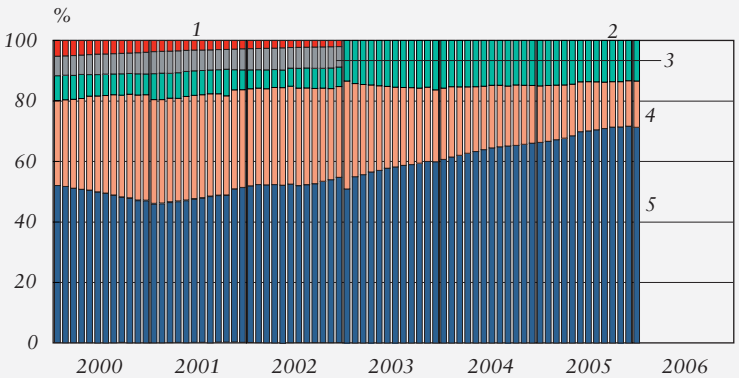


1. *Banks' stock of loans*
2. *MFIs' stock of loans*
3. *Banks' new loans*
4. *MFIs' new loans*
5. *Banks' stock of deposits*
6. *MFIs' stock of deposits*

Source: Bank of Finland.

Data collection changed as of 1 January 2003. Under the new system MFIs include both deposit banks and other credit institutions.

7. Stock of bank lending by interest rate linkage

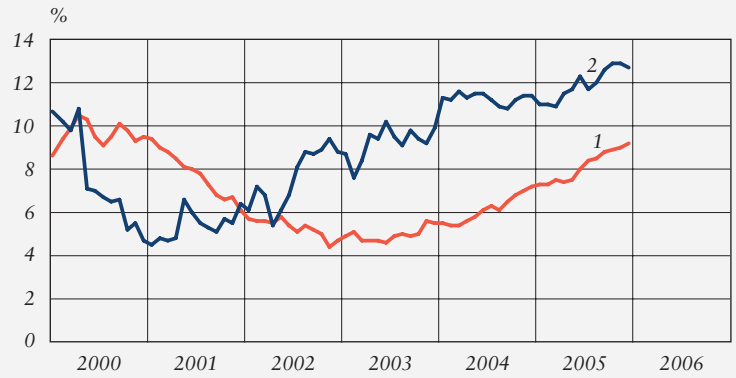


1. *Linked to base rate*
2. *Linked to other rates (as of 2003 includes loans linked to base rate and fixed-rate loans)*
3. *Fixed-rate*
4. *Linked to reference rates of individual banks (prime rates, etc)*
5. *Linked to Euribor*

Source: Bank of Finland.

Data collection changed as of 1 January 2003.

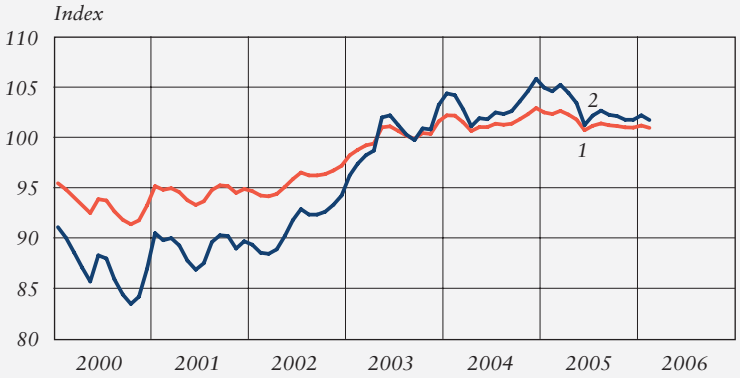
8. MFI loans to private sector



12-month change, %
1. *Loans by euro area MFIs to euro area residents*
2. *Loans by Finnish MFIs to euro area residents*

Sources: European Central Bank and Bank of Finland.

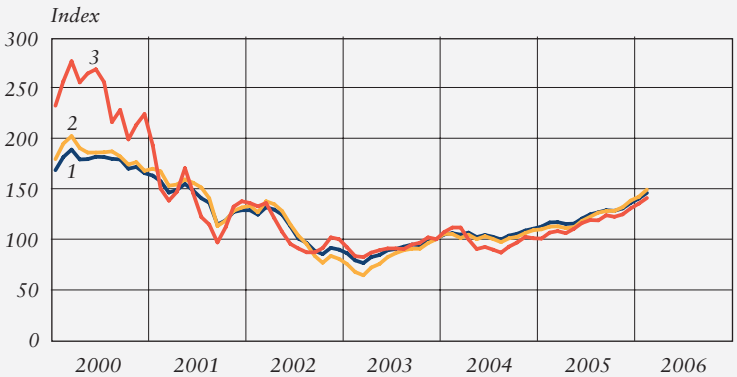
9. Competitiveness indicators for Finland



1999 Q1 = 100
Based on trade-weighted exchange rates.
An upward movement of the index represents a weakening in Finnish competitiveness.
1. *Narrow competitiveness indicator including euro area countries*
2. *Narrow competitiveness indicator*

Source: Bank of Finland.

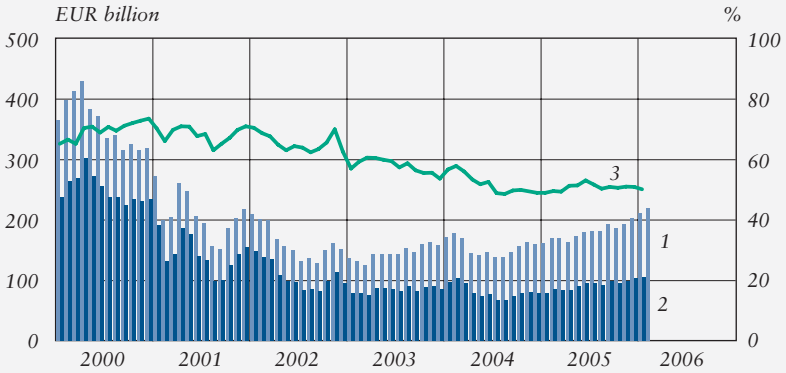
10. Selected stock price indices in the euro area



31 December 2003 = 100
1. *Total euro area: Dow Jones Euro Stoxx index*
2. *Germany: DAX index*
3. *Finland: HEX all-share index*

Sources: Bloomberg and HEX Helsinki Exchanges.

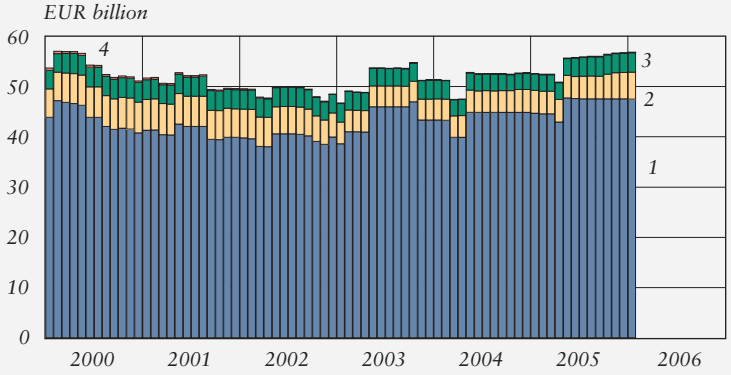
11. Listed shares in Finland: total market capitalisation and non-residents' holdings



1. *Market capitalisation of all listed shares (left-hand scale)*
2. *Market capitalisation of non-residents' holdings (left-hand scale)*
3. *Market capitalisation of non-residents' holdings as a percentage of total market capitalisation (right-hand scale)*

Sources: HEX Helsinki Exchanges and Finnish Central Securities Depository (APK).

12. Bonds issued in Finland

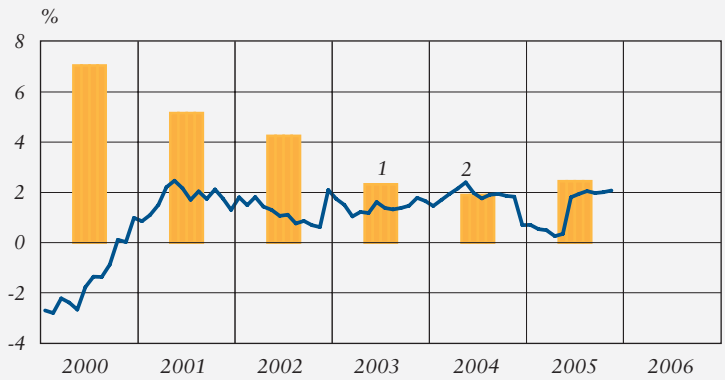


End-month stock

1. *Central government*
2. *Financial institutions*
3. *Companies*
4. *Other*

Source: Statistics Finland.

13. Public sector balances in Finland

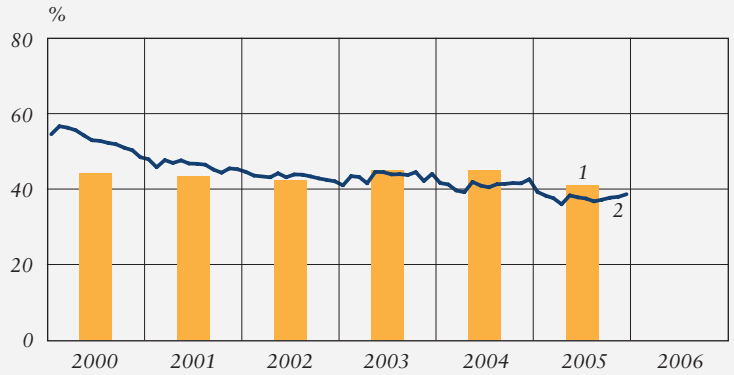


% of GDP

1. *General government fiscal position*
2. *Central government revenue surplus, 12-month moving total*

Sources: State Treasury, Statistics Finland and Bank of Finland.

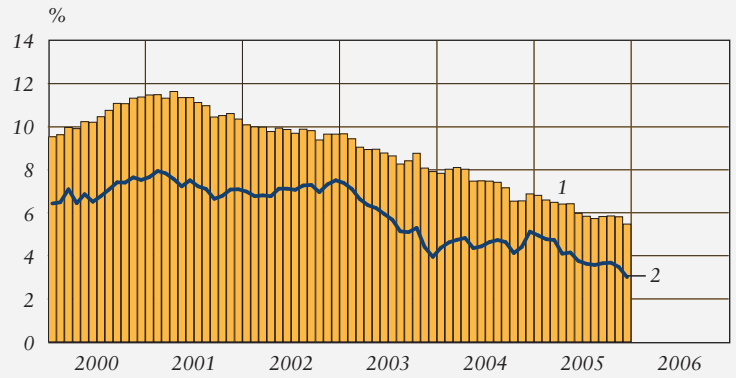
14. Public debt in Finland



% of GDP
1. *General government debt*
2. *Central government debt, 12-month moving total*

Sources: State Treasury, Statistics Finland and Bank of Finland.

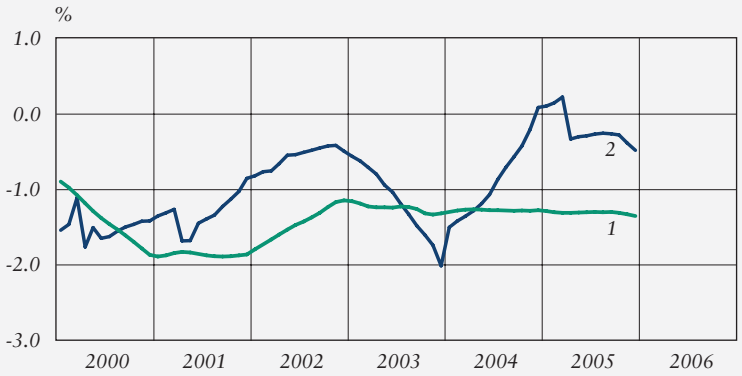
15. Finland: goods account and current account



12-month moving totals, % of GDP
1. *Goods account, fob*
2. *Current account*

Source: Bank of Finland.

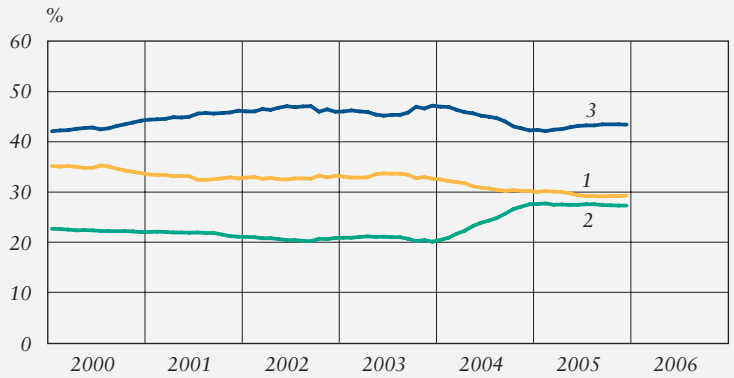
16. Finland: services account and income account



12-month moving totals, % of GDP
1. *Services account (trade in goods, fob)*
2. *Income account*

Source: Bank of Finland.

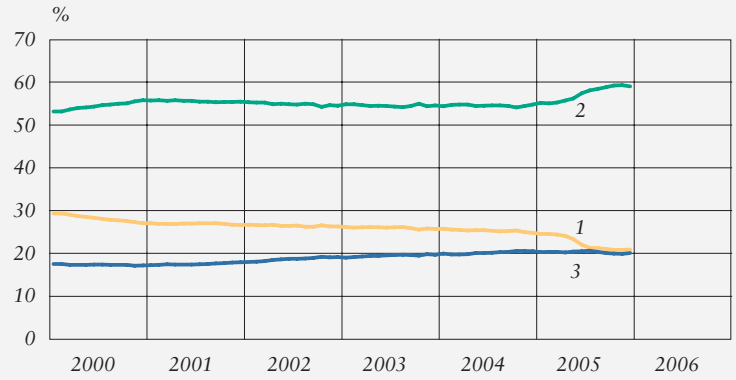
17. Regional distribution of Finnish exports



12-month moving totals, percentage of total exports
1. *Euro area*
2. *Other EU member states*
3. *Rest of world*

Sources: National Board of Customs and Statistics Finland.

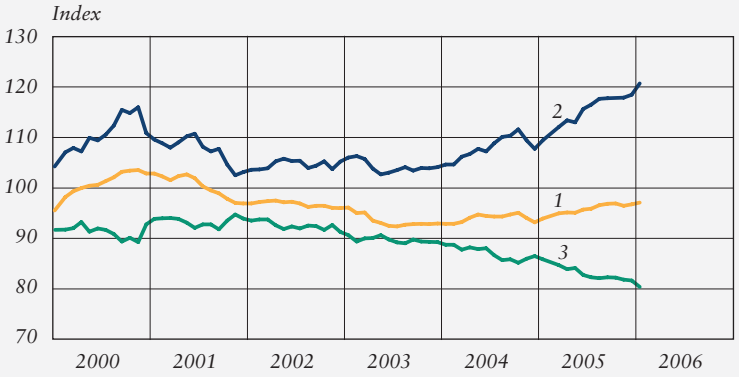
18. Finnish exports by industry



12-month moving totals, percentage of total exports
1. *Forest industries*
2. *Metal and engineering industries (incl. electronics)*
3. *Other industry*

Source: National Board of Customs.

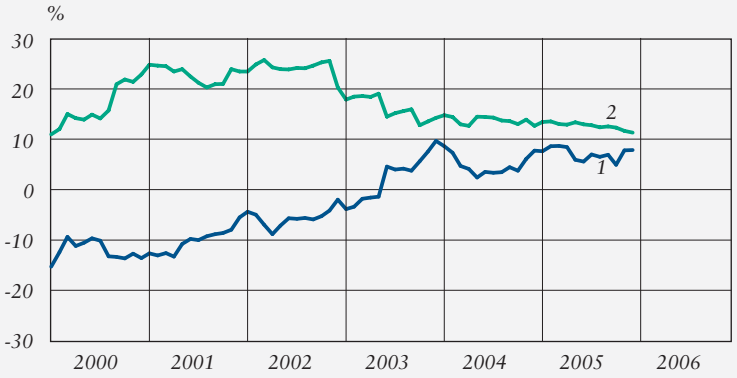
19. Finland's foreign trade: export prices, import prices and terms of trade



2000 = 100
1. *Export prices*
2. *Import prices*
3. *Terms of trade*

Source: Statistics Finland.

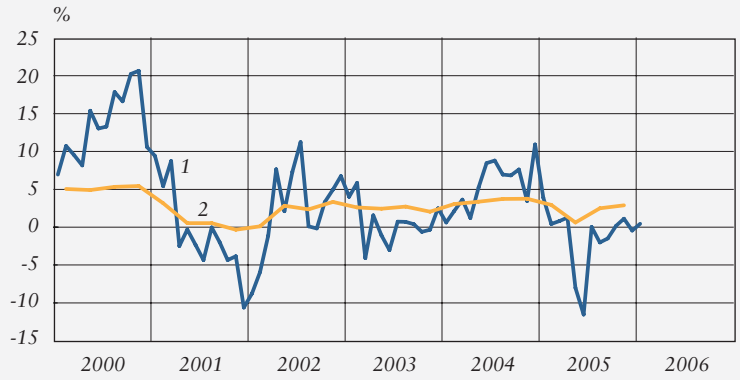
20. Finland's net international investment position



% of GDP
1. *Net international investment position excluding equity items*
2. *Net outward direct investment*

Sources: Bank of Finland and Statistics Finland.

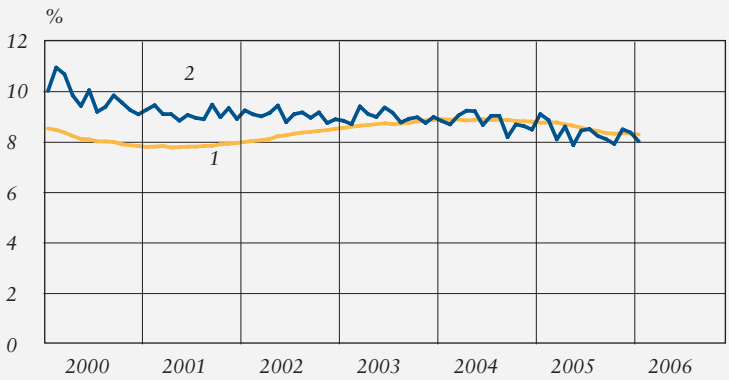
21. Finland: GDP and industrial production



Percentage change from previous year
1. *Industrial production*
2. *Gross domestic product*

Source: Statistics Finland.

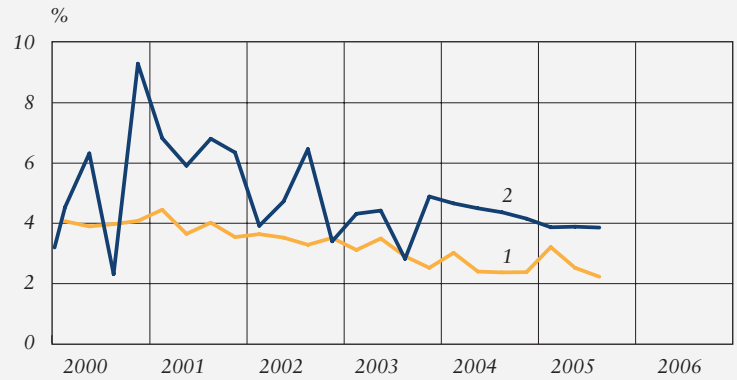
22. Unemployment rate in the euro area and Finland



1. *Euro area*
2. *Finland*

Sources: Eurostat, Statistics Finland and Bank of Finland.
Data seasonally adjusted.

23. Hourly labour costs in the euro area and Finland

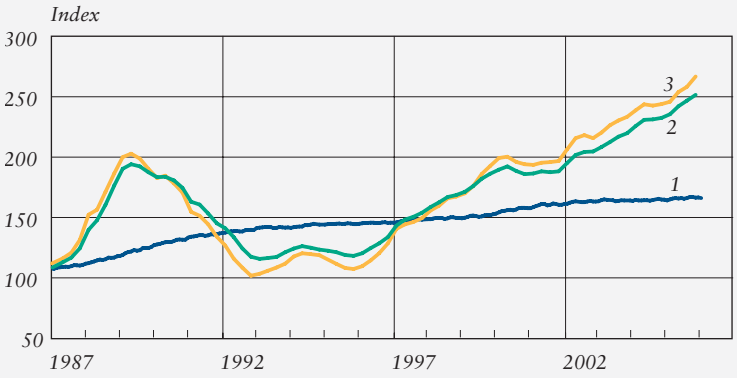


Whole economy excl. agriculture, public administration, education, health and unclassified services.

Percentage change from previous year
1. *Euro area*
2. *Finland*

Sources: Eurostat and Statistics Finland.

24. Selected asset prices in Finland



1987 Q1 = 100
1. *Consumer prices*
2. *Housing prices*
3. *Two-room apartments (secondary market; debt-free price per m²)*

Source: Statistics Finland.

Organisation of the Bank of Finland

24 March 2006

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