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4 • 2007



Monetary policy and economic outlook

From plastic to bits –
payment habits are changing

Euro area balance of payments
and the financial markets



EUROJÄRJESTELMÄ
EUROSYSTEMET

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The cover portrays the work of
Viktor Jansson 'Leikkivä poika' (1935–1945).

Monetary policy and economic outlook

7 December 2007

According to statistical data, the world economy grew strongly during the third quarter of 2007. In the present circumstances, however, figures that describe past developments are less helpful than normal in assessing future trends. Growing risk premia, losses incurred by banks and other financial institutions and the tightening of lending conditions have all increased the downside risks to growth. Rising raw material prices and capacity shortages have nevertheless sustained the upside inflation risks to price stability.

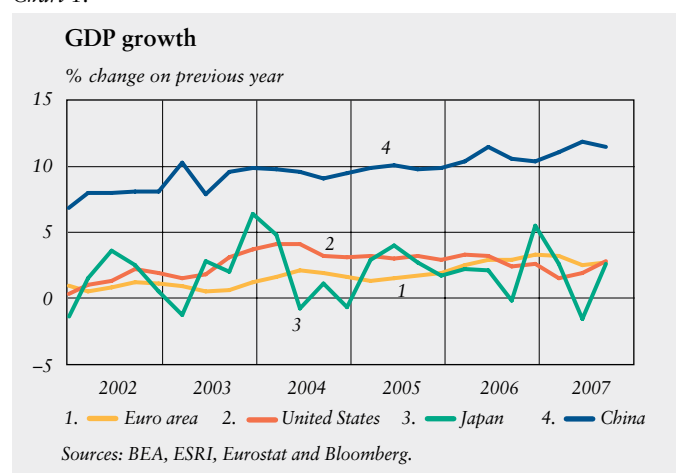
The world economy continued to grow strongly through the third quarter of 2007, with the emerging economies of Asia still serving as the motor of growth. Statistical data indicate that growth was also relatively buoyant in the major industrial economies, with GDP 2.6–2.8% higher than the same period of 2006 in the United States, the euro area and Japan. Demand has been so strong that companies in many sectors have been suffering from capacity and labour shortages. The sustained high level of oil and other commodity prices is another sign that demand growth is outstripping available supply. The growth of US exports and the emergence of new jobs in the United States despite the serious problems in the US housing and housing loan markets are a further indication of the world economy's strong growth dynamic (Chart 1).

In the present situation, however, statistical data on past economic trends are of less than normal help in assessing future trends, as the uncertainty on the financial markets that began in August has not yet had time to significantly affect published economic data. The persistent uncertainty makes it important to stress caution and the significance of future-oriented indicators when assessing the likely future direction of the economy. All in all, the downside risks to economic growth have become much stronger during the second half of 2007.

Globally higher risk premia, the losses incurred by banks and other financial institutions and the tightening of lending conditions will cause friction for the channelling of finance into investment activities.¹ In addition to the negative developments on the

¹ For more detail on the financial market uncertainty see the Bank of Finland publication 'Financial stability', published on 10 December 2007. See also Bank of Finland Bulletin 3/2007, Box 2.

Chart 1.



financial markets, a similar conclusion is suggested by surveys conducted among banks and businesses in general. There is also a risk of changes in the currently high level of asset prices that could have a negative wealth effect on private consumption.

Despite the increased risks to growth, major international forecasters have lowered their expectations for world growth only slightly since their previous forecasts. This optimism is based on the deepening division of

labour caused by globalisation, which has boosted flexibility in the world economy and output potential in many industries. Besides strong growth in the emerging economies, the favourable outlook is also based on the stable income expectations for households in the industrial economies, which have gained from both a lower unemployment rate and an increase in new jobs. This trend has so far obscured the impact of the rise in fuel prices, although the financial market uncertainty has also caused a reduction in consumer confidence during the course of the autumn (Chart 2).

Investment in emerging economies driving growth

Investment activity in the emerging economies has been very brisk, and this has sustained export growth in the industrial economies as well. As an example, Russian import growth has further accelerated this year, and there can be no expectation of any slowdown in the coming months. Import growth will also continue at a rapid pace in other oil-producing countries, on the back of high oil prices. In China, as in Russia, consumption has grown more quickly than expected. Annual rate GDP growth in China during the third quarter was 11.5%, and growth forecasts for the years ahead have had to be adjusted upwards. The financial market turbulence does not so far appear to have hampered growth prospects in the emerging economies.

Chart 2.

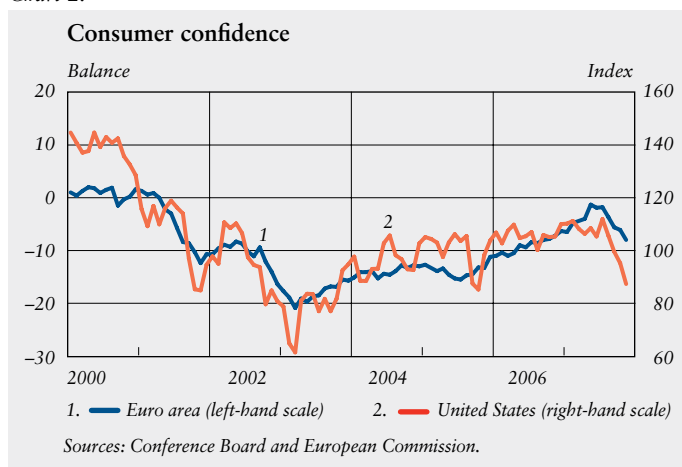


Chart 3.



In the industrial economies, the pace of corporate investment growth during the current year is slower than last year. This suggests that the continued growth of demand in the world economy has outstripped companies' expectations, as also the expectations of many forecasters. Since the first half of the present decade, the corporate sector in the industrial economies has been running a financial surplus, and indicator data would seem to indicate this trend has continued through 2007. This means investment has not been hampered by earnings development. Rather, instead of expanding capacity, companies have been buying each other or their own shares, and there was actually a peak in corporate acquisitions in the spring. The subsequent uncertainty on the financial markets has led to a clear dropping off in corporate acquisitions during the course of the autumn, with associated securitisation of debt having almost completely come to a halt (Chart 3).

World growth has this year increasingly come up against supply-side restrictions, which has been reflected in, for example, high capacity utilisation rates in the industrial economies. On the other hand, labour costs have not so far reacted significantly to labour demand, although in China wages have already begun to rise, and in Europe and Japan companies have reported more serious shortages of labour. In the production of capital goods, there has been a shortage of

components, and these have had to be acquired from very distant sources. This has stimulated growth in transport demand, which has in turn led to a dramatic rise in dry freight prices (Chart 4). Order books for capital goods are still fairly full and deliveries have been postponed until well into next year (Chart 5). The shortage of components has also forced the postponement of some investment projects.

Chart 4.

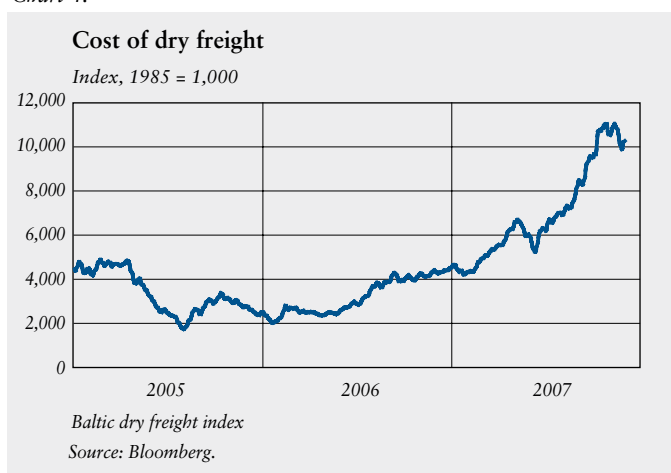


Chart 5.

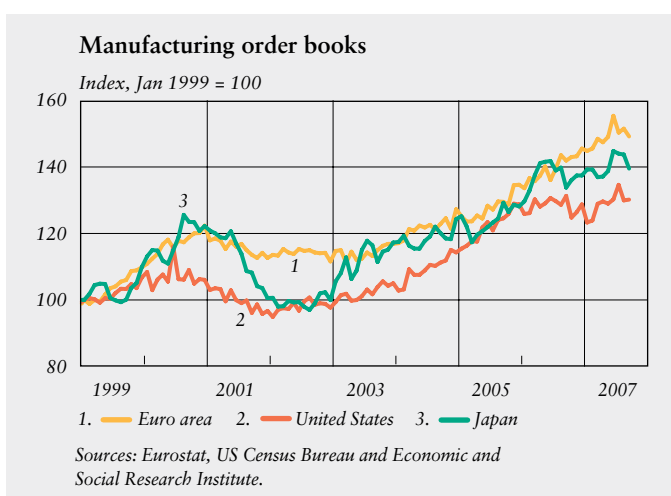
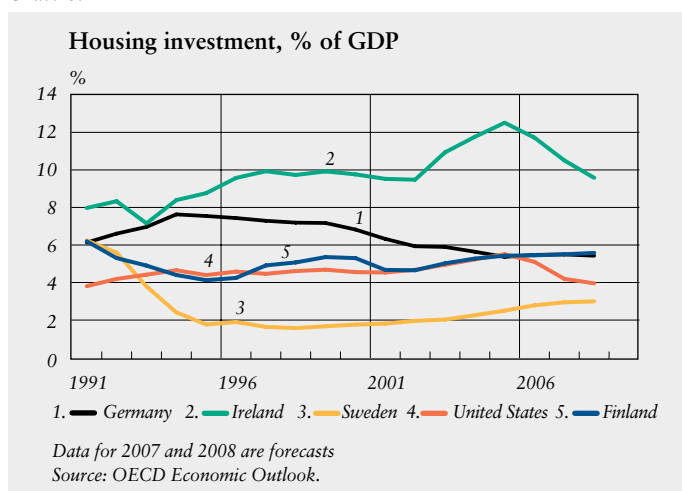


Chart 6.



Housing market trends have been very similar across the industrial economies.

Viewed industry by industry, the economic picture in the industrial economies is no longer as homogeneous as it was in the early part of the year. While there is still a shortage of capacity in some industries, the slump in housing construction is already having a negative impact this year on GDP growth in OECD countries.² Higher interest rates and housing prices have predictably impacted on demand for new housing not just in the United States. In most industrial economies, housing prices are expected to rise more slowly this year than in 2006. The more conservative pricing of credit risk and weaker demand for securitised housing loans will also be reflected in housing output, but to a more significant degree not until next year.

Housing market trends have been very similar across the industrial economies. A few years ago the impact of lower interest rates on housing

loans was reinforced by reduced risk premia in many countries, partly due to financial innovations. This meant a brisk decline in loan-servicing expenses relative to disposable income, which in turn helped to push up housing prices. The current cooling of the housing market is also happening almost simultaneously in all industrial economies, although with clear differences of degree. Rising interest rates and construction costs combined with household income restrictions had already triggered a downturn in the housing market even before the turbulence on the financial markets. The cooling of the housing market is expected to be reflected in reduced housing investment in some European countries as well (Chart 6).

Commodity shortages will increase price pressures

Several years of rapid growth in the world economy has meant a sharp increase in demand for commodities and industrial raw materials. The IT boom at the turn of the millennium encouraged belief in a 'weightless' economy, and this led to a shortfall of investment in mining, oil prospecting and manufacturing of basic metals. In the present economic climate commodity prices could remain high for a sustained period and only begin to decline as demand eases and production capacity expands.

Oil supply has been unable to keep pace with the strong demand from the world economy. Almost all

² OECD Economic Outlook, 6 December 2007.

OPEC countries are producing at the upper limits of their capacity, with only Saudi Arabia having even some scope for increasing output. Due to the scarcity of free capacity, the price of oil has reacted very strongly to even small disturbances in supply. The dollar price of oil has risen close to USD 100 a barrel, or in real terms close to the peak level of the early 1980s. In contrast to previous years, OPEC countries are, however, no longer worried about growth in supply from competing sources, with demand in China and other emerging economies continuing to grow rapidly. On the oil markets, the expectation is that the high prices have come to stay (Chart 7).

The high commodity prices and lack of capacity are increasing inflationary pressures, and the pace of inflation has certainly been accelerating in different economies during the course of the autumn. Prices and wages have begun to rise at an accelerating pace in China too (Chart 8). The price-dampening effect of globalisation has weakened and there are growing upward pressures on the prices of goods imports, for instance in the United States. On the other hand, tighter access to finance in the industrial economies could subdue demand, and hence ease inflationary pressures. Wage development in the industrial economies, in particular, will be crucial. All in all, the upside risks to price stability have increased, and this is reflected in inflation expectations on the financial markets (Chart 9).

Chart 7.

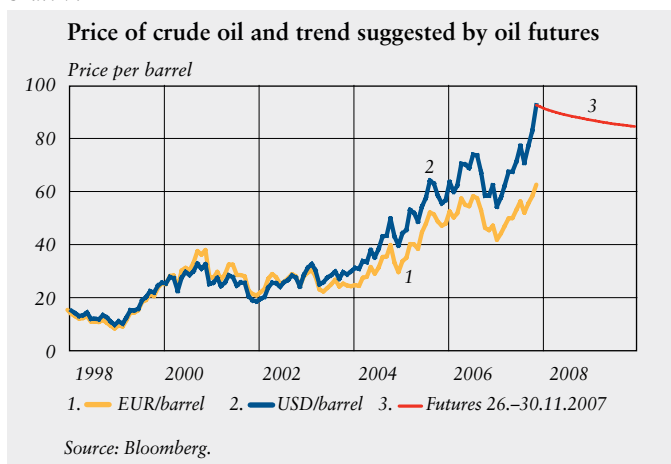
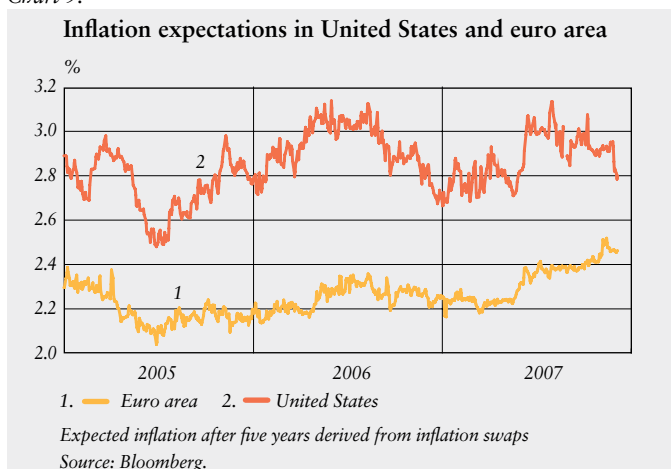


Chart 8.



Chart 9.



Banks' earnings development has been undermined at the same time as their financing costs have risen due to higher risk premia.

Considerable uncertainty on the financial markets

The uncertainty on the financial markets during the course of the autumn has been widespread and to some extent unprecedented. The problems in the US housing loans market have led to significant credit and investment losses, which have been a blow to the banking and financial sector both in the United States and elsewhere. The uncertainty has weakened demand for credit-risk-bearing securities and hence inhibited financial mediation based on securitisation. Banks' earnings development has been undermined at the same time as their financing costs have risen due to higher risk premia. It is still unclear to what extent the deterioration of banks' balance sheets will restrict their ability to extend credit.

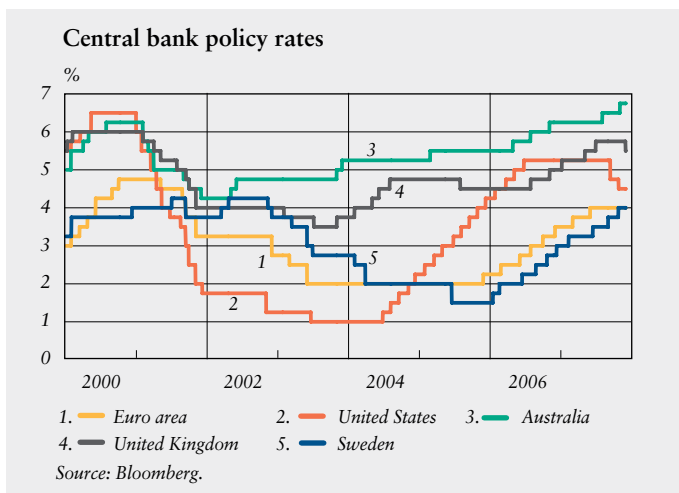
The large losses, write-downs and provisions declared by the banks are matched in their balance sheets by the counteritem of the capital buffers they

have built up over a number of years. The banks have targets for the amount of capital in these buffers relative to their assets held primarily in their loans granted to households and companies. The minimum level for this capital ratio is the minimum capital requirement set by the authorities. As the capital is eroded by losses, the buffers contract relative to the banks' outstanding loan assets, which exerts pressures on their credit ratings. In a situation of major losses, capital ratios can be maintained at their target level only by a considerable reduction in lending. The real impacts of the financial market turbulence outside the banking sector will considerably increase if banks' ability to lend is undermined.

The financial market uncertainty and the downside risks to growth have led to a considerable reduction in risk-free interest rates, particularly in the United States. The rates on government bonds have fallen steeply as assets are moved into investment instruments that are felt to be safe, simple and liquid. Expectations of a rise in policy rates have generally receded or disappeared altogether. The US policy rate has already been significantly reduced, while the Bank of England also reduced its key rate at its meeting in December. In contrast, Australia and Sweden, for example, have continued to raise interest rates in response to the continuing risks to price stability (Chart 10).

Of the major currencies, the US dollar has depreciated 10% during the

Chart 10.



course of 2007, as measured by the nominal effective exchange rate index, as a consequence of the weakened economic outlook and lower interest rates (Chart 11). In contrast, the euro has appreciated 4% against the currencies of the euro area's most important trading partners. The nominal effective exchange rates of the Japanese yen and the Chinese yuan are the same as a year ago.

With the exception of banking shares, the stock markets had begun to recover from the critical phase of financial market uncertainty back in August, but a second wave of turbulence that began in November now appears to have taken a tighter grip on the markets (Chart 12). During the course of 2007, banking shares have lost 28% of their value in the United States, and 9% in the euro area, as a result of negative and uncertain earnings development. All-share indices have been more robust, and are at a slightly higher level than a year ago in both the United States and the euro area. In China, share prices have risen over 88% during the course of the year, although they have fallen back almost 17% from the peak levels of mid-October. Despite the country's relatively weak currency, five Chinese companies are among the world's top 10 in terms of their stock exchange value.

Slower growth in the United States

In the United States, the downside risks to growth have grown considera-

Chart 11.

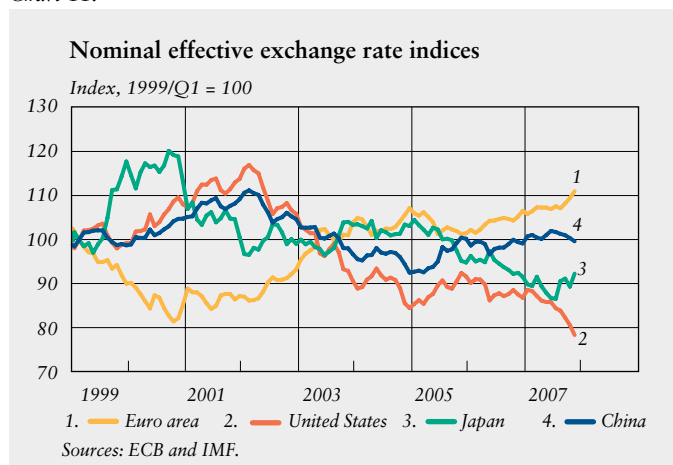
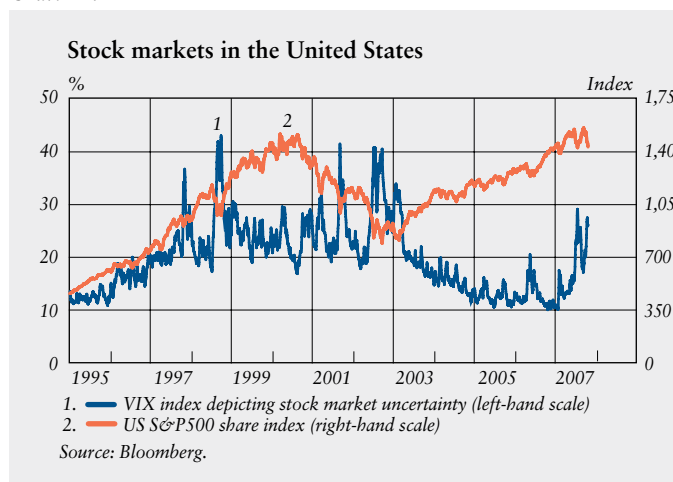


Chart 12.



bly and US growth forecasts have consequently been clearly lowered during the course of the autumn. The weak housing market, the serious problems in the housing loans market, rising fuel prices and stock market uncertainty will all serve to weaken domestic demand in coming quarters.

The Federal Reserve has made a determined response to the downside risks to growth and lowered its policy rate in two stages by a total of 75

basis points in September and October. Interest rates were cut despite risks of higher inflation, as one of the Fed's key objectives is to support growth and employment, the downside risks to which have clearly grown. After the interest rate cut at the end of October, the Federal Reserve took the view that the upside risks to inflation and the downside risks to growth were in balance. The market nevertheless expects further relaxation of US monetary policy in the near future.

From a monetary policy perspective the economic situation in the United States presents a challenge. The high price of oil and rising import prices are fuelling inflation, and the relatively tight labour market could mean that wages will continue their brisk upward trajectory. After all, unit labour costs, to take one example, have been accelerating since 2004. In its most recent forecast, the Federal Reserve nevertheless estimates that inflation as measured by the private consumption deflator will

ease back from around 3% this year to 1.9% in 2008.

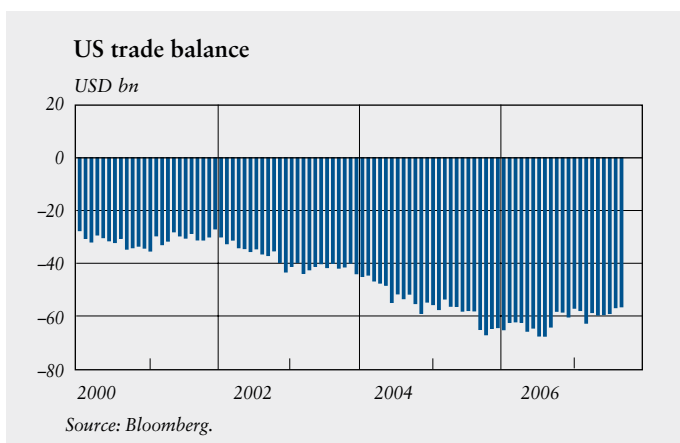
Activity in the US housing market has ebbed further. The declining number of building permits issued and the record low confidence amongst builders suggest housing investment will remain weak for longer than previously expected. The higher number of housing units for sale has led to a fall in housing prices, which could lead to pressures for a reduction in household consumption. The higher level of defaults on subprime loans has begun to be reflected in foreclosures, but the final level of loan losses by the banks is still hard to estimate. It is, however, worth remembering that the collateral on these loans has at least historically held its value well.

The US economy's external imbalance relative to GDP has not grown recently and there is now an improved chance of a controlled reduction in the current account deficit. The trade deficit has stopped growing, and has in fact begun to contract with the weaker dollar boosting exports and weakening imports since the first half of the current year (Chart 13). The fall in housing prices, weaker financing conditions and higher fuel prices are subduing domestic demand, which could lead next year to a rise in the household saving ratio. This could have positive effects, as it would help to correct the accumulated imbalances in the economy.

As elsewhere, US companies, too, are at present highly solvent, which

From a monetary policy perspective the economic situation in the United States presents a challenge.

Chart 13.



gives reason for optimism. Surveys conducted with the banks reveal that credit criteria have been tightened more for housing loans than for business loans. Investment activity could be affected more by companies' weakened expectations over the future direction of the economy than by restrictions on the supply of finance, particularly as the deep financial markets in the United States will presumably find channels for financing corporate investment without the risk premia currently attaching to financial institutions.

Japanese exporters looking ahead with confidence

Economic growth in Japan has varied at around 2% per annum for the past four years. The Tankan survey of business confidence indicates that large corporations continue to be confident over future trends (Chart 14). Japanese companies nowadays are highly solvent, with a total financial surplus of around 5% of GDP for approximately the past 10 years. With a high capacity utilisation rate and strong exports to its near neighbours, there should not be any external obstacles to investment. On the other hand, for companies operating in the domestic market Japan has not yet properly escaped the problems of a deflationary economy, which can contribute to a climate of uncertainty despite the low level of interest rates. Japanese monetary policy is also marked by caution.

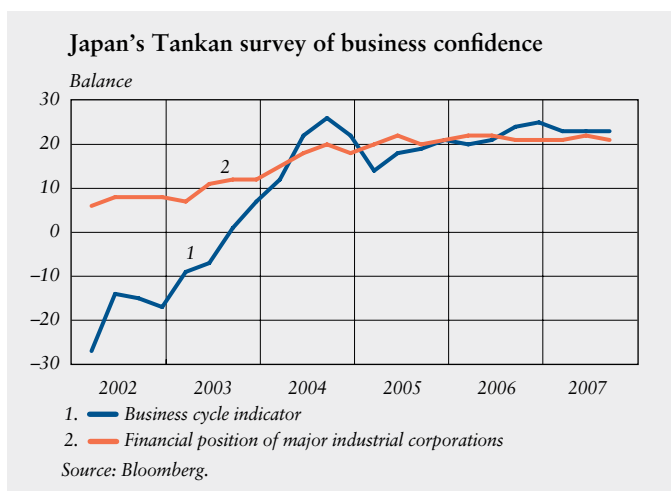
The economic position of Japanese households has remained unchanged throughout 2007. The unemployment rate has remained low, and there are still plenty of jobs on offer. The moderate trend in wages partly due to acceleration in the retirement figures does not, however, encourage expectations of higher incomes, and private consumption has therefore stagnated. There are nevertheless some small signs of an end to deflation. For example, land prices are showing signs of upward movement.

Pace of growth in Asia's emerging economies unchanged

In Asia, growth has continued at a very brisk pace, and the contraction in US imports is not reflected in the growth figures for eg China and Japan. The small countries of East Asia have seen their exports grow on the back of investment and consumption growth in China. Asian

It is hard to assess the potential effects of slower US imports on the economies of Asia.

Chart 14.



China's trade surplus continues to grow.

economies are solvent and their current accounts in balance, which means the effects of the credit crisis are likely to be reflected primarily in more sluggish exports to the United States. It is hard to assess the potential effects of slower US imports on the economies of Asia. Although, for example, half of Japanese exports go to other countries in Asia, and particularly China, a significant proportion of exports eventually end up in the United States. At least so far, however, the internal dynamics within Asia has reduced the region's dependence on US growth, and key forecasts assume this pattern will continue.

In China, the pace of consumption growth appears to have picked up during the course of the autumn, and there is nothing to suggest any slowing of domestic demand. The intense pace of growth has already begun to be reflected in wages, and particularly in the prices of foodstuffs, in addition to the impact of supply-side restrictions. In contrast, elsewhere in Asia the rise in consumer prices has remained moderate. Despite the rapid pace of investment and consumption growth, China's trade surplus continues to grow. The Chinese are expected to further tighten their economic policy in the future by raising interest rates and the capital adequacy requirements for banks. A balanced approach to growth would include the controlled channelling of resources away from exports towards meeting domestic demand, particularly consumption,

but such a change has been made more difficult by the linkage of the yuan to the weakened US dollar.

High commodity prices support growth in many emerging economies

The rise in the price of oil and other commodities is having a considerable impact on global trade flows and division of income. The share of import volumes going to Russia and the OPEC countries will continue to grow next year as well. In Russia, there has also been a pick-up in investment demand, and this has been reflected in exports from the euro area. Russia has admittedly not invested much in oil production, with the result that output is only growing at around 2% per annum. Import volumes have also been growing rapidly in the OPEC countries, although some of the increased oil revenues in the Middle East will continue to augment the region's foreign exchange reserves and find their way back to the industrial economies in the form of capital flows.

The economies in Latin America have so far coped well with rising oil prices and the credit crisis due to their increased flexibility and balanced current accounts. Growth continues in Brazil and Argentina, if more slowly, and the smaller countries in the region are also not experiencing any major problems. Africa, too, has also benefited from the pull of globalisation, as the pace

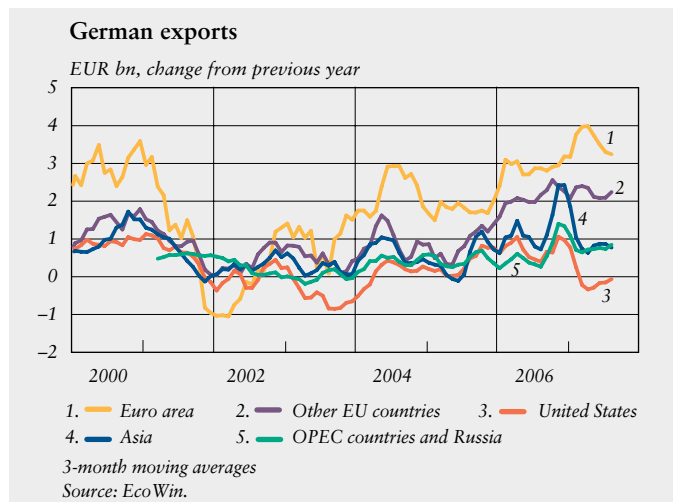
of growth in many African countries has actually picked up this year. Average growth for Sub-Saharan Africa as a whole has been around 5–6% for several years already, and expectations for next year foresee a quickening pace. In most African countries, the current account is either in balance or slightly in deficit.

Euro area growth stable

The euro area economy returned to faster than trend growth in the third quarter, as was expected following weak second quarter growth. The positive trend in the economy has been broadly based over the year as a whole, and this has also meant a continuous drop in the unemployment rate in different countries. Housing construction has, admittedly, been slowing down in many countries, but this is not yet reflected in the figures for GDP. The German economy, which has for quite some time been driven by exports, would appear to be finally benefiting from increased household consumption as well.

The strength of demand within the euro area and among new EU member states has sustained production for export in euro area countries and compensated for weakening demand in the United States. For example, a sizeable portion of German export growth has come from exports to other euro area countries and new EU member states (Chart 15). Export order books are still fairly full, and euro area

Chart 15.

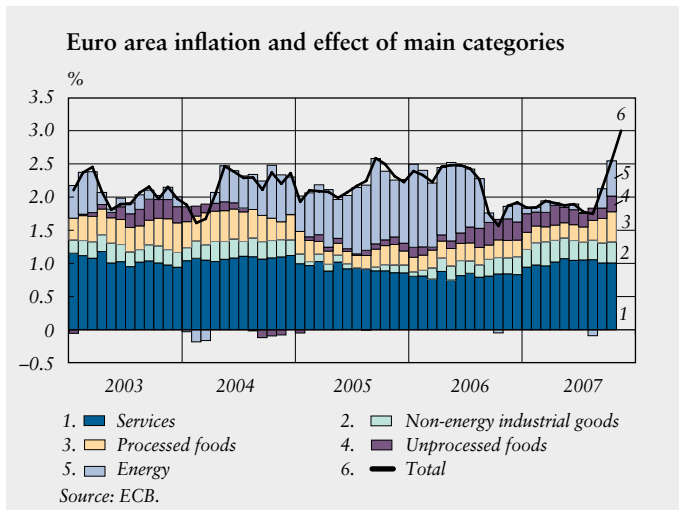


countries' production for export can be expected to continue growing in the immediate months ahead.

Shortages of labour and production capacity have probably been the most significant restraint on output thus far. The financial market uncertainty has weakened confidence among exporters, and it is possible that companies could postpone their own investment projects. Euro area countries are, however, very solid financially as a result of positive earnings development and the present low level of investment activity. Moreover, the rise in unit labour costs has been moderate.

Confidence has, however, clearly taken a knock in the euro area as well. Many euro area countries would welcome a relaxation in the labour market and an easing of labour shortages, as this would reduce the risk of overheating and create a positive climate for continued price

Chart 16.



stability. Rising prices for oil and food are eroding household purchasing power, but the still relatively stable employment situation is sustaining income expectations. We can therefore expect moderate quarterly growth in private consumption in the immediate future.

Inflation in euro area countries has varied greatly in recent years, primarily due to the major fluctuations in energy prices. Both last year and in 2005 the rise in energy prices was moderated by the declining price trends in other product groups, such as industrial goods.

Euro area HICP inflation has, however, gathered pace in recent months. In November, consumer prices in the euro area rose at an annual rate of 3.0%, primarily due to the price of energy (Chart 16). The jump in the annual change in energy prices was because the figures were being compared with autumn 2006, when

Prices of processed foods have been rising at an accelerating pace in recent months.

there had been a steep fall in oil and fuel prices. This base effect should weaken in the coming months. Rising prices for cereals and other agricultural products have also begun to be reflected in consumer prices, and prices of processed foods have been rising at an accelerating pace in recent months (see Box). Even without energy products and unprocessed foods the HICP index rose 2.1% in October.

ECB holds key rate unchanged

Since the interest rate rise in June, the Governing Council of the European Central Bank has held its key policy rate at 4%. During the second half of the year the financial climate has become tighter, with the financial market uncertainty that began in the US housing loan market now also affecting the euro area. Higher risk premia and tighter lending criteria have caused friction in financial intermediation (Chart 17).

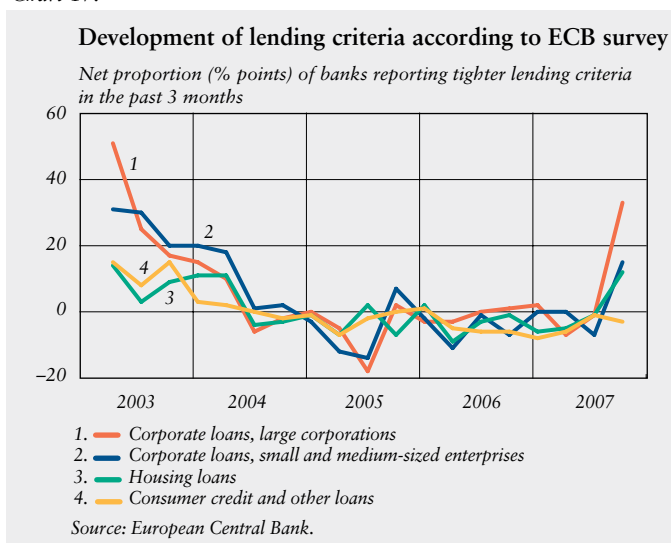
The latest information has confirmed the existence of strong short-term upward pressure on inflation and also upside risks to price stability over the medium term. Against this background, and with money and credit growth remaining very vigorous in the euro area, the Governing Council stands ready to counter upside risks to price stability. The economic fundamentals of the euro area remain sound. However, the reappraisal of risk in financial markets is still evolving and is accompanied by continued uncertainty about the potential impact on the real

economy. The Governing council has indicated that it will monitor very closely all developments and ensure that second-round effects and risks to price stability over the medium term do not materialise.

At its December meeting, the Governing Council published an assessment of future economic trends by Eurosystem experts. GDP growth is expected to be around 2.4–2.8% this year, and 1.5–2.5% in 2008. HICP inflation is estimated at 2.0–2.2% this year, and 2.0–3.0% in 2008, thereafter slowing in 2009 to 1.2–2.4%. The Governing Council considers the growth estimate to be subject to downside risks relating primarily to the possibility of a greater-than-expected negative impact of the prevailing financial market uncertainty on confidence and financial conditions. In relation to the inflation forecast, the Governing Council considers the risks to be on the upside.

The European Commission's autumn 2007 economic forecast generally confirms the picture of improving budget balances in the euro area this year. However, progress with structural fiscal consolidation in countries with remaining budget imbalances is generally disappointing. This lack of ambition will unnecessarily prolong the correction of remaining fiscal deficits and could lead to negative surprises should the macroeconomic environment turn less favourable. In this context, the Governing Council considers member states should meet

Chart 17.



the commitment they made in the Eurogroup's Berlin agreement of April 2007, namely that most euro area members would achieve their medium-term objectives in 2008 or 2009, and all should aim for 2010 at the latest.

Finland's short-term outlook remains favourable

The Finnish economy has continued to grow relatively strongly.³ Third-quarter GDP was 3.8% up on the same period in 2006. Output growth was based particularly on consumption demand and exports. Household incomes have grown as a result of the improved employment situation and wage rises have boosted income expectations. The impact of higher oil prices on household incomes is softened by the fact that oil is priced in dollars and the dollar has

Consumer confidence in the general direction of the economy has weakened recently.

³ The Bank of Finland's autumn forecast was published in October (see Bank of Finland Bulletin 3/2007).

weakened against the euro. Householders' confidence in their own finances has remained strong, which has sustained private consumption and retail trade. Consumer confidence in the general direction of the economy has, however, weakened recently.

The labour market is still suffering from a shortage of skilled labour, and in many industries capacity is at full stretch. The trend unemployment rate's sticking at around 7.0% at the same time as the number of open job vacancies continues to grow indicates the tight conditions prevailing on the labour market are continuing. The construction sector has been experiencing a shortage of materials as well as a shortage of labour, and construction costs have risen considerably despite the slowdown in housing construction that began back in the spring (Chart 18). Commercial construction continues to be very lively, although

the financial market uncertainty means the outlook is deteriorating.

A clear slowdown in the pace of construction over the next few months will up to a certain point be good for the overheated sector. As several new build and renovation projects have had to be postponed due to a lack of tenders, there is no immediate prospect of a genuine slump in the construction industry. As is the case in many other countries, the Finnish housing market has cooled and housing prices have risen more slowly than last year. Higher interest rates have slowed the rate of new debt, while the high price of housing has raised the threshold for buyers to enter the market.

In manufacturing, the cyclical picture is in some respects uneven, as the chemical forest industry (pulp and paper), for example, is still suffering from the low level of export prices, and the situation has not been made any easier by a rise in intermediate goods costs and the current uncertainty over the sourcing of roundwood. The forest industry is in difficulties throughout the Nordic region, and in Finland the difficulties are strongly reflected in the cyclical outlook for the east and southeast of the country, according to the regional business barometer. Manufacture of machinery and equipment has, in contrast, continued to develop favourably. As a whole, volume growth in manufacturing output has clearly slowed during the second half of 2007.

The housing market has cooled and housing prices have risen more slowly than last year.

Chart 18.



The business tendency survey conducted by the Confederation of Finnish Industries in October nevertheless paints a relatively positive picture of the outlook for manufacturing, as it indicates that a growing number of manufacturing companies had insufficient capacity during the third quarter. The technology sector, which among other things manufactures capital goods, has very full order books, and there is no sign of any change in this respect in the immediate months ahead. In practice this means that the positive cyclical phase in manufacturing will continue well into next spring. The survey also indicates a stable cyclical situation for services, reflecting the similarly stable outlook for exporters and households. It is, in fact, clear that economic growth in Finland in the immediate months ahead will be restricted primarily by a lack of capacity, and only to a small degree by export demand.

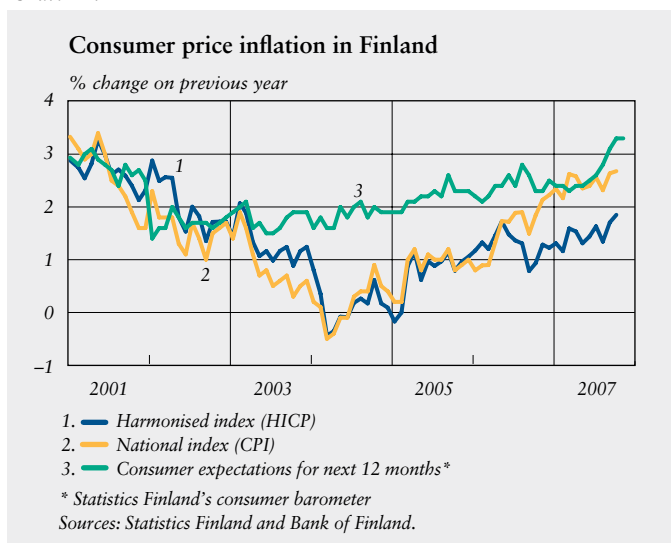
According to a financial survey by the Bank of Finland, the Confederation of Finnish Industries and the Ministry of Trade and Industry, medium-sized and large companies in Finland are having no trouble accessing finance. Finnish companies are, in any case, financially very sound, and the financial market uncertainty is unlikely to affect their decisions to any significant degree. In contrast, small companies have found that their financing problems have got worse, and the margins on

new loans have in some cases become even bigger. This could make them less likely to invest. Households are facing higher interest payments from the raising of Euribor rates due to the crisis of confidence between the banks, although the impact on new loans has been less due to adoption of different reference rates.

Wages growth accelerating

This year has seen pay agreements with increases well above the norm for recent years. This highlights the need for productivity development. There are sound reasons for the inclusion of productivity clauses in these agreements. The agreements in the public sector mean in practice that pay-related expenditure in local government will grow at a brisk pace in the years ahead. There is also a risk that the larger pay deals struck in the

Chart 19.



public sector will begin to increase wage drift in private service companies if the labour market continues to be as tight as it has been to date.

Consumer price inflation has already crept up close to 3% if house price and interest rate rises are taken into account. HICP inflation is under 2%. The reduction in car tax at the beginning of 2008 will have a decelerating effect on inflation. On the

other hand, rising world market prices for fuels and some foodstuffs will tend to push up the pace of inflation. If wage rises are also taken into account, it is no surprise that households' inflation expectations have risen to their highest level since 1995 (Chart 19).

Keywords: inflation, monetary policy, economic situation

Box.

Metal and agricultural raw materials and inflation

Before the turn of the millennium, the real prices of commodities and raw materials other than those used in producing energy tended to decline over time. This trend-like decline in real prices was based on rapid productivity growth in, for example, agriculture and production of metallic raw materials.

However, the decline in real prices came to an end around the turn of the millennium. The nominal prices of metallic raw materials began to rise steeply as demand grew and inventories declined. In recent years the price rises have shifted to foodstuffs. Rising real prices for raw materials has been a feature of cyclical upswings in the past, too, but this time it has been much stronger and in part more

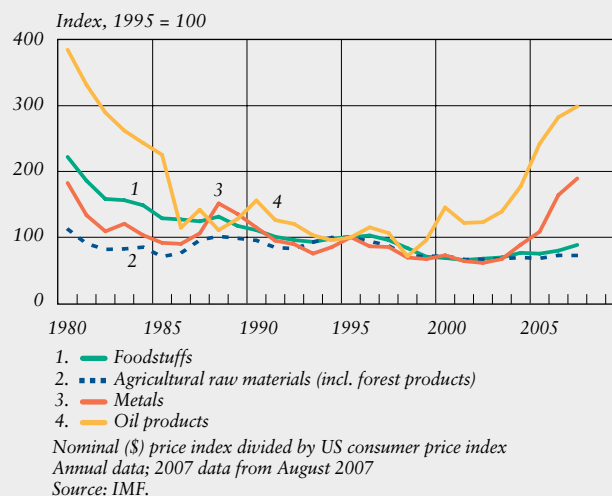
broadly based, and it has also spread into agricultural raw materials (Chart 20).

The prices of many metals began to rise rapidly during

2003–2004. The main reason was the vigorous growth in demand in the emerging economies, particularly China. According to an assessment by

Chart 20.

Commodities and raw materials, trend in real prices



the IMF, growing demand in China explained at least half the growth in consumption of many metals in the years 2002–2005. Besides development of the country's own infrastructure, the strength of Chinese demand for metal raw materials also reflected the ongoing process of industrialisation and the transfer of production to China.

Demand growth alone could not, however, have caused price rises as large as those that have occurred; part of the reason has been the slow response on the supply side. During the second half of the 1990s and the early years post-2000 investment in metal production was lower than before, which left companies in the industry insufficiently equipped to respond to the growth in demand. The slow response by producers has, in turn, led to the depletion of

metal raw material inventories, which has then caused an increase in the risk premia incorporated in prices.

As with metals, the decline in the average real prices of unprocessed foods and other agricultural raw materials (eg cotton) came to a halt around the turn of the millennium. However, these prices began to climb later than metal prices, and mainly just during the past couple of years. Moreover, the increases have affected only a few foodstuffs, such as maize, dairy products, food oils, soya and wheat (Chart 21).

Behind the recent rapid rise in food prices on the world market we can identify three main factors: changing dietary practices in the emerging economies, growing use of biofuels and poor crops. In contrast, cyclical factors do not

appear to have played any major role in the recent price trends. This has also been the case in the past – demand for foodstuffs and other agricultural raw materials follows the cyclical trends in the economy much less in general than does demand for metals, for example.

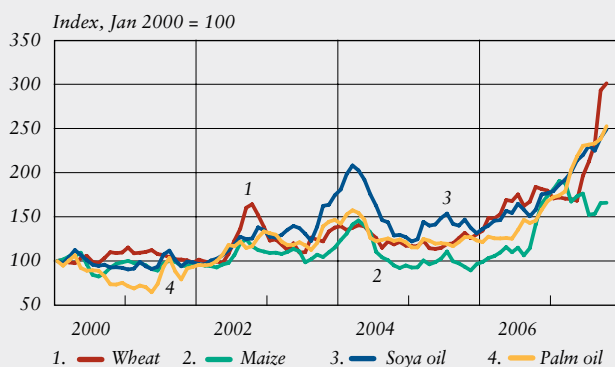
Rising incomes levels in many emerging economies, particularly China and India, have led people in these countries to begin to change their eating habits. The proportion of animal protein in their diet has grown, and this has been reflected in increased demand for a variety of meat and dairy products. This, in turn, has boosted demand for plants used in animal feed.

Another factor pushing up prices in recent years has been the growth in demand and production of biofuels. Apart from the strong upward trend in crude oil prices, this development has also been motivated by the drive to reduce net carbon dioxide emissions in the energy industry, and hence slow down climate change. The EU is seeking to expand the use of biofuels to 10% all fuels by the year 2020, and the United States is also seeking to increase output of ethanol and other biofuels. Increased output of biofuels has pushed up the prices of maize and soya in particular.

As well as demand, supply factors have also played a

Chart 21.

Food raw materials, trend in dollar prices



Source: EcoWin.

significant role in the upward trend in food prices. The exceptionally dry weather in Australia has caused a dramatic fall in the production and export of wheat. It has also reduced exports of dairy products. In addition, animal diseases have cut the supply of pork in China, while simultaneously contributing to the accelerating pace of inflation in the country. World wheat stockpiles have halved since the turn of the millennium and are currently equal to only around 50 days' consumption. At the same time, intervention stockpiles of butter in the EU are now empty for the first time in over 40 years.

Despite continued growth in demand, the real prices of food raw materials are in general not expected to continue to rise. For example, the OECD and the Food and Agriculture Organization of the United Nations (FAO) predict the dollar-denominated prices of the main agricultural products will remain stable or decline slightly over the longer term. This is based on the expectation of continued brisk productivity growth, particularly in low-income countries. Despite their forecast decline, real prices are not, however, expected to return to their earlier levels.

The rising world market prices for crude oil and many

other commodities and raw materials is reflected in consumer price trends in the industrial economies. On the other hand, globalisation has led to lower prices for industrial goods. The overall impact of globalisation on consumer price inflation in the euro area has actually been estimated to be fairly negligible. Different studies suggest it has subdued inflation by at most a few tenths of a percent annually during the past 5–10 years.

As with their world market prices, the producer prices of foodstuffs in the euro area have also risen in recent months. This has been particularly true of dairy products, cereal derivatives and animal feed. It is not entirely clear to what extent the rise in producer prices is a consequence of developments on the world market and what extent it is due to internal factors within the EU, since the Common Agricultural Policy partly obscures the relationship between euro area price trends and the events on the world market. In any case, the price rises appear to be focused largely on the same product groups, which suggests a strong link.

The rise in producer prices in the euro area has, in turn, been reflected in corresponding consumer prices, particularly for breads and dairy products. The

pace of inflation in processed food did, indeed, jump almost 2 percentage points in total in August–October. Unprocessed food inflation also began to clearly gather pace in October. Altogether, food price rises already account for a quarter of overall inflation in the euro area. There have recently been considerable differences in food price trends between different countries in the euro area. This could be due to factors such as the different competitive situation in retailing in the different countries.

Recent inflation trends in the euro area are in line with what different calculations tell us about the impact of rising world market and producer prices for foodstuffs on euro area consumer prices. The spread of potential impacts produced by these calculations is fairly substantial: it is possible to speak of a full ½ percentage point impact on euro area inflation. We have previous experience of a similar sort of effect in 2001, when price rises in meat products caused mainly by animal diseases caused an acceleration in annual euro area inflation of around ½ percentage point.

From plastic to bits – payment habits are changing

26 November 2007

Payment habits are changing rapidly. The creation of a Single Euro Payments Area (SEPA) will improve the efficiency of payments in Europe. But are we also facing a bigger change with the development of electronic payments?

Payments are part of our everyday life. Every time we make an economic decision, it is followed by some form of payment. Statistics show that nearly 300 different types of account-based payment are effected in Finland per capita every year. This includes company-to-company payments, which pushes up the average value of account-based payments as high as EUR 2,200. On a rough estimate, the volume of payments in cash is at least as high, although as a proportion of total payments cash payments are on the decline.

Finnish households consume an average of EUR 84 per withdrawal, and the average number of withdrawals is 37 per annum. Finnish households consume an average of EUR 60 in cash per week, as nearly all the cash consumed is withdrawn from ATMs. Correspondingly, 170 purchases are paid by card annually, and the average value of a purchase is EUR 35. The value of purchases paid by card per week is approximately EUR 115, ie nearly double the value of cash purchases.

Finnish households consume an average of EUR 310 per week per capita, which means cash payments account for

approximately 20% and card payments approximately 37% of total consumption. The remaining 43% is divided mainly between credit transfers and direct debits. The proportion of direct debits is much smaller than that of credit transfers.



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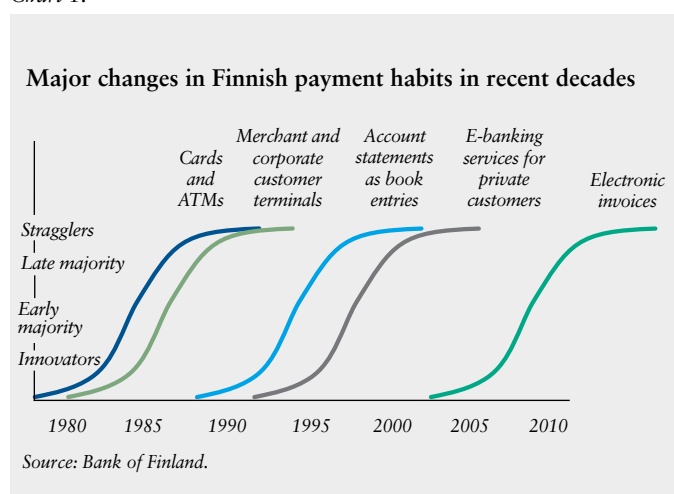
Changing payment habits

Payment is a necessity. It must be simple and practical. Consumers' payment habits are usually quite fixed and rarely change.

This is clearly shown in an examination of previous major changes in payment habits (Chart 1). Payment habits have historically changed¹ in 10-year cycles, and the process has followed the S-shaped curve typical of behavioural change. In the initial period of slow progress,

¹ The Bank of Finland has studied changes in payment habits in a special project, the final report of which is currently being finalised. For more information on the project, see the Bank of Finland website (www.bof.fi/sc/payhabits2010).

Chart 1.



innovators begin using the service. This is followed by a period of strong progress when the majority adopts it. At the end of the changeover period there is another period of slow progress where those slowest to change begin using the new service.

Finnish payment habits underwent major changes as private customers began using cards and ATMs in the 1980s and online banking services around the turn of the millennium. Companies and retailers began using banking terminals in the 1980s and automated their accounting processes by introducing the use of account statements as book entries.

The next major change was the arrival of the electronic invoice. This

will significantly change the way companies and private citizens pay invoices in the years ahead. Similar trends have also been experienced in other European countries, but usually at a later stage than in Finland and the other Nordic countries, which are the clear forerunners.

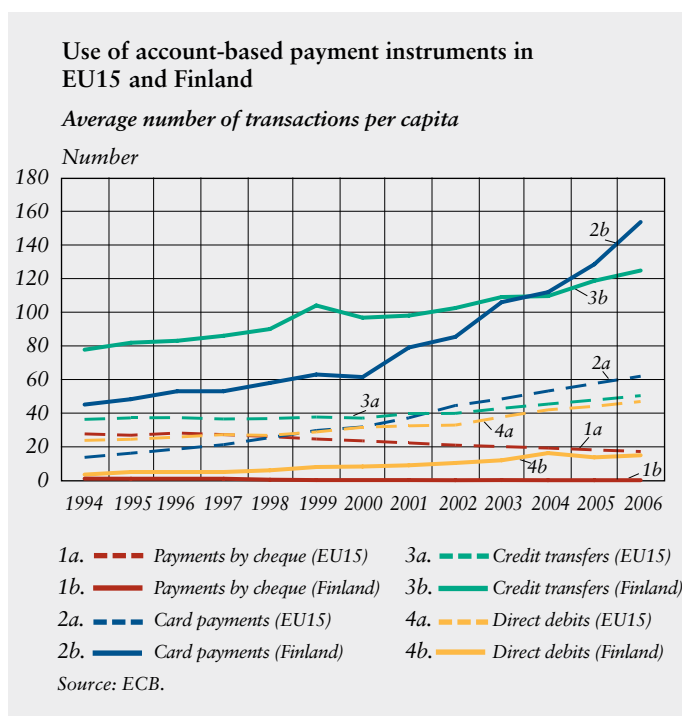
Changing trends in Finland and Europe

Statistics reveal that there are at present six significant payment trends:

- The use of account-based payments is growing robustly, and they are replacing cash.
- Electronic account-based payments are replacing account-based payments in paper form.
- Self-service payments are increasing at the expense of services provided at a bank branch.
- The use of ATMs is decreasing and is being replaced by card payments at point of sale.
- Growth in the use of debit cards exceeds growth in the use of credit cards.
- The market share of direct debits is declining relative to the other account-based payment instruments.

The number of card payments has increased the most (12% per annum) in the EU15 (Chart 2). The increase in card payments has also been strong in Finland (on average 10% per annum) compared with other payment methods. In Finland, the number of card payments is well

Chart 2.



above than the EU15 average (difference: 92 transactions per capita in 2006). The number of credit transfers has grown steadily, by approximately 4% annually, and the number of credit transfers is much higher in Finland than in the other countries (difference: 74 credit transfers per capita in 2006). Direct debits have become somewhat more popular in Europe in the present decade. Finns use direct debits less than EU15 inhabitants on average (difference: 32 transactions per capita in 2006). In Finland, the slow growth in the use of direct debits came to a halt in 2004. The cheque is a rarely used payment instrument in Finland, but in some European countries (eg France, the United Kingdom, Ireland, and Portugal) it is still widely used. Payment by cheque is also clearly declining. Even so, the number of cheques written per EU15 inhabitant was still approximately 17 in 2006.

Finland is the clear leader in the number of electronic payments per capita (Chart 3), with over 250 transactions per annum. Finland and the Netherlands have the highest level of automation, over 96% of all payments being transferred from customer to bank in electronic form. The situation varies from country to country, but the trend is nevertheless clear.

The turning point in consumers' payment habits is around 60–70 payment card transactions per annum, after which the use of ATMs begins to decline (Chart 4). The more

Chart 3.

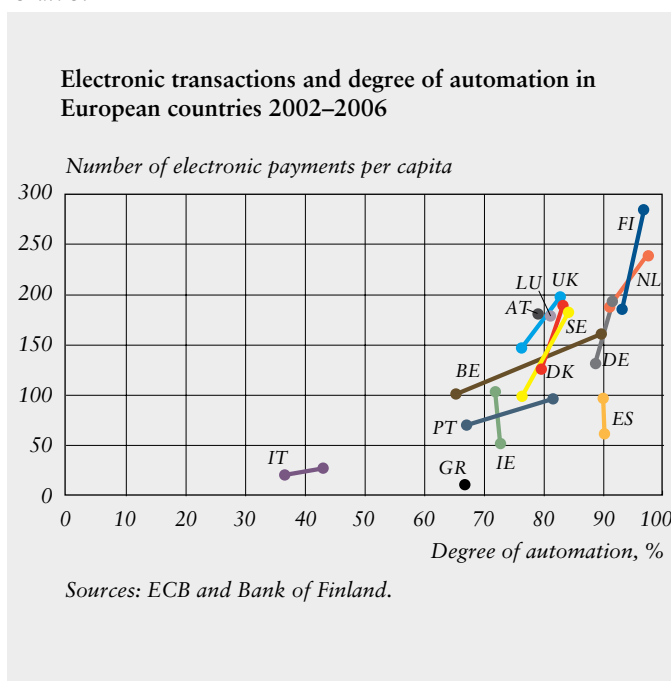


Chart 4.

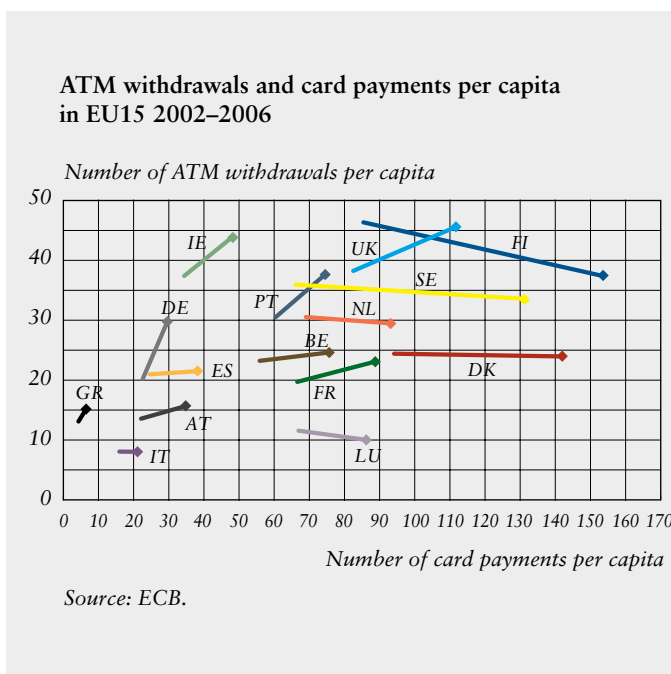
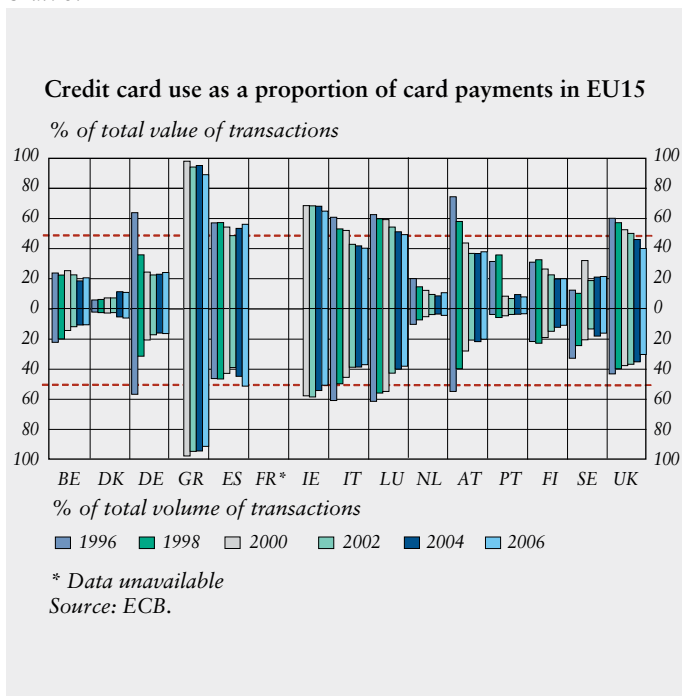


Chart 5.



customers use cards in paying for purchases, the less cash they need to withdraw from ATMs. The majority of EU15 countries are, however, only at the stage where customers are replacing cash withdrawals at bank branches with ATM withdrawals. Finland has been the leading country in the use of cash ATMs, but their use has begun to decline significantly. Finland is also the leading EU country in the use of payment cards, followed by the other Nordic countries.

In almost every EU15 country, credit card payments have declined as a proportion of total card payments (Chart 5), combined with a corresponding increase in debit card payments. This is the case in Finland, too, where the overwhelming majority of card payments are with debit cards. The only exception to the trend is Greece, where the marketing of payment cards focuses almost exclusively on credit cards.

The market share of direct debits varies considerably across countries (Chart 6). In terms of value, the proportion of direct debits is relatively small, but in some countries – particularly Germany and Spain – their proportion of the total volume of transactions is relatively high. The market share of direct debits has decreased in several countries, but there are some countries in which it has increased. Finland is firmly in the camp of those countries with a very low use of direct debits.

Chart 6.

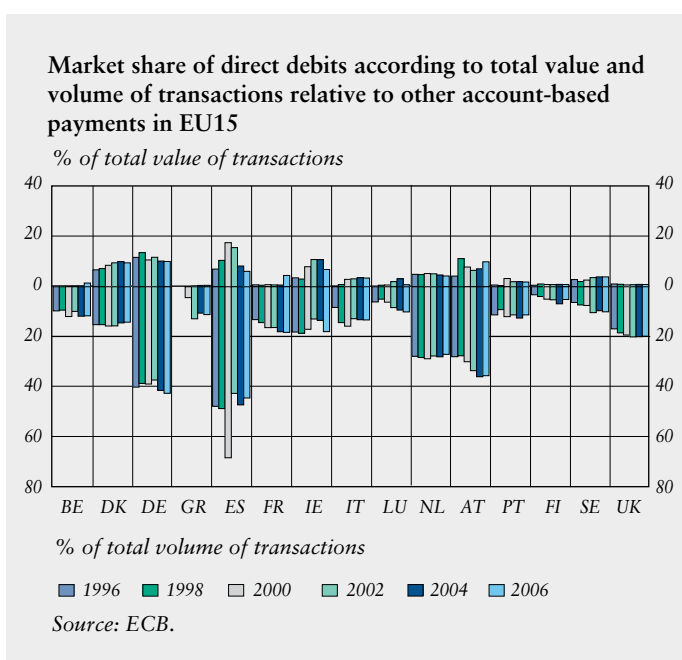
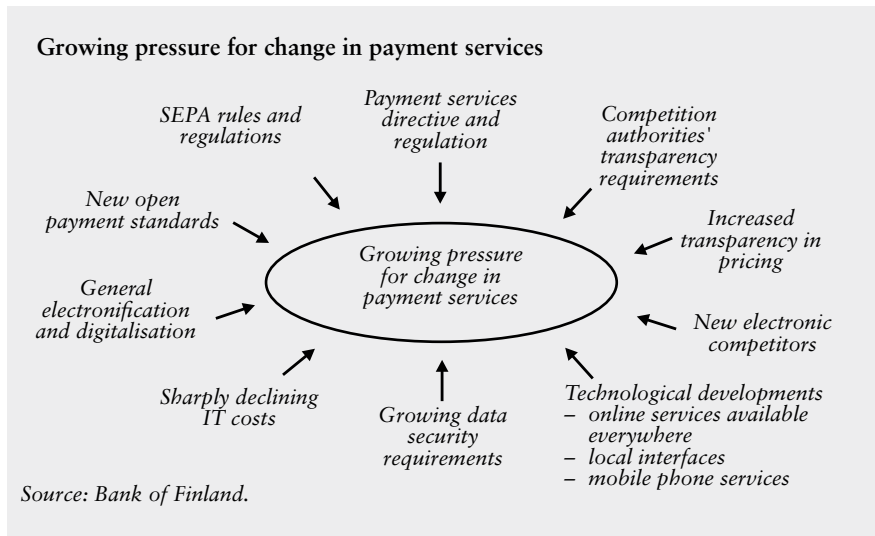


Chart 7.



Increasing pressure for change

Payment systems are currently being affected by several significant external factors (Chart 7). For this reason we can reasonably expect major changes ahead in the development of payment habits.

A Single Euro Payments Area (SEPA) is currently being established in Europe. The aim is to make payments in the euro area as simple and at least as efficient as in the most sophisticated current national systems.

Increased competition will foster more efficient operations, while common standards will generate economies of scale. The payment processing rules of banks will be harmonised and new efficient payment standards will be drafted. With the introduction of the Payment Services Directive, payment legislation will also be harmonised. The directive will enter into force in November

2009 and contains provisions on eg booking payments at full value, the prohibition of value dating, a maximum one-day execution time (apart from a few exceptions), and banks' and customers' general responsibilities for payments. Regulation (EC) No 2560/2001 on cross-border payments in euro already stipulates that the charges levied for cross-border payments in euro must be the same as those for domestic payments in the euro area.

Creating a single payments area will, however, be a longer process. As Finnish payment services are already fairly sophisticated, the benefits of a single payments area will initially be minor in Finland, and they will be fully gained only after some time, compared with countries that have less sophisticated payment systems.

Competition authorities have paid attention to the need to enhance

It is probably only a matter of time before payment cards are digitalised and integrated into mobile phones.

competition in payment services.² New open standards and increased transparency in pricing will contribute to achieving this goal. Customers find it hard to choose efficient payment instruments and advantageous service providers when there is widespread use of hidden pricing based, for example, on value dating or the use of interest income from deposits and loans to subsidise payment costs and the inclusion of payment costs in product prices.

If withdrawing cash from an ATM appears to be cost-free, this boosts the use of cash. By paying for purchases by payment cards we could prevent or cut the costs of maintaining an extensive network of ATMs, the transportation of cash, and cashing up.

Data connections favour new services

New international electronic payment solutions enabling fast and inexpensive online and mobile payments are also being launched on the payments market, which will boost competition significantly.

Electronification and digitalisation are progressing rapidly. Broadband connections and personal computers will soon be found in almost every household. Nearly every Finn already has a mobile phone, and the properties of mobile phones are continuously being developed. It

seems to be only a matter of time before payment cards are digitalised and incorporated into mobile phones, just as calendars, e-mail, cameras, radios and the Internet already have been.

Card payments could then be made by pressing the keys on the mobile phone, and the necessary payment information would be automatically transferred between the phone and the shop's payment terminal via a local connection. As mobile phones develop, it will become even simpler to purchase various types of tickets than it currently is to purchase Helsinki City Transport tram tickets via SMS text messages.

ICT costs continue to decline, by approximately 20–25% per annum. Modern Internet services are a clear proof that data communication, processing and storage capacity no longer hinder the processing of data – particularly in the case of payments, as these contain only a very small amount of data.

Cost trends and increased competition are likely to result in a decline in payment fees in the coming years. The full digitalisation of payments may cut costs to levels close to those of other extensive network services, such as e-mail and SMS text messages.

Network-based payment requires solid data security solutions. The more money is transferred in open networks, the higher the

² See eg the European Commission's 'Report on the retail banking sector inquiry', January 2007.

number of abusers and criminals it will attract. It is vital to invest in improving network security, and customers will have to learn how to identify the various forms of network crime. Network-based payments require solid customer identification methods and the encryption of the connections and transactions. Customers will need safe equipment that ensures the reliable storage and use of identification and encryption keys.

Customers looking for change and integration

Payment always entails the transfer of funds from payer to payee. In a modern economy, this usually takes place in the form of electronic credit transfers. In a bank-centred economy, this is also true when payments are made using cash, as consumers withdraw money from their bank account via ATMs and retailers deposit daily receipts on their bank accounts at the end of the business day. Money takes this physical form only temporarily.

The payment process is being digitalised into electronic account entries made only in the payment system network. Network users will be interested particularly in the development of the following characteristics: service costs and fees, speed of entering payments, payment security, simple interfaces and efficient integration.

The costs of processing and booking payments in service

providers' systems will decline significantly as a result of full digitalisation. The changeover to network-based services together with complete digitalisation will also enable the booking of payments in real time or close to real time. In the network world, cost savings are achieved by immediate processing, less-complicated processes, the immediate resolution of possible error situations, and the simpler management of functions. For example, delaying the processing of e-mail or SMS text messages by one day would only create additional costs and no benefits.

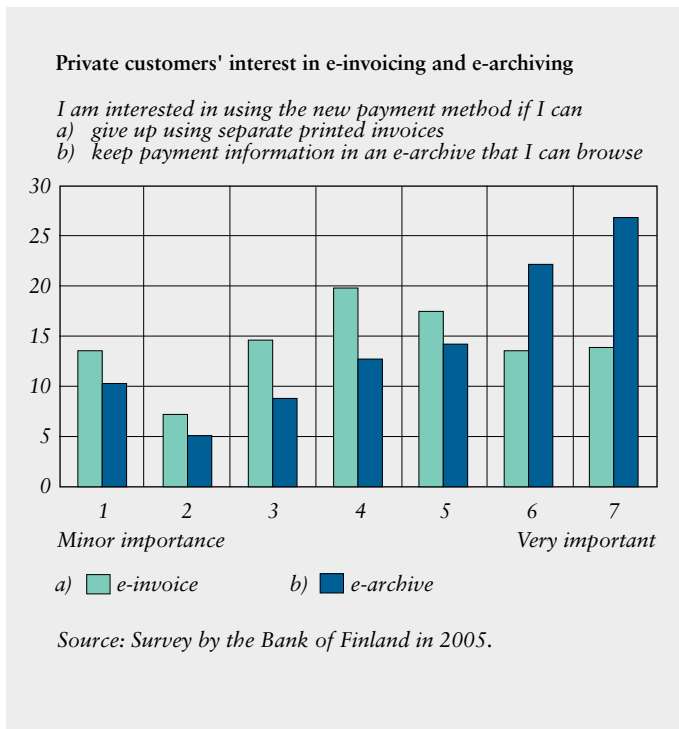
New payment methods must be secure in order to gain popularity. Customers find it important that the required security measures are clear and easy. They need a general and multi-purpose identification solution for online services. The growth of e-commerce and e-business is hampered by the current requirement for service-specific identification.

Banks are offering their own security solutions to the other providers of network services. This is, however, insufficient, as an EU-wide service provider, for example, would have to have a contract with and link to each of the approximately 5,000 European banks. We need a uniform and secure electronic identification service.

Internet and SEPA standards provide basic interfaces and channels for electronic payments. A private customer can make a payment by

Growth of e-commerce and e-business is hampered by the current requirement for service-specific identification.

Chart 8.



clicking on screen menus. The largest gains can be achieved, however, by integrating customers' systems with the banks' payment systems. Both private and corporate customers are most interested in the opportunities provided by electronic invoicing. Currently, invoicing is highly manual and paper-based.

A changeover to electronic invoicing would generate significant benefits. It is already being introduced in the Nordic countries. A number of studies in various countries show that introducing e-invoicing into business-to-business invoicing would reduce processing costs by as much as EUR 10 to 30 per

invoice. The European Commission is therefore very justifiably launching a project to promote e-invoicing throughout the EU.³

Private customers' interest in the e-invoice, and particularly in the e-archiving of payments and invoices, was clearly demonstrated in the results of a recent consumer survey conducted by the Bank of Finland⁴ (Chart 8). Private customers are even more interested in the e-archive than the e-invoice as a form of service.

Customers are used to keeping e-mails, pieces of music, videos and photographs in an electronic archive that can be browsed, and they clearly hope that payments and invoices could also be stored in these types of archives. Compared to an e-archive for photographs and e-mails, an e-archive for invoices would require much less memory. The advantages are obvious when searching for an old invoice or payment. The introduction of e-invoices provides opportunities for creating e-archives for payments.

Other possible areas for integration are various travel tickets as well as tickets for sports and cultural events. These are increasingly purchased on the web and can be stored either directly in the robustly expanding mobile phone memory

³ European Electronic Invoicing (EEI), Final Report of the European Commission Informal Task Force on e-Invoicing.

⁴ Dahlberg and Öörni (2006), Finnish consumers' expectations on developments and changes in payment habits. Bank of Finland Discussion Papers 32/2006.

and/or on the Internet, to be accessed by mobile phone. The management of tickets will become simpler, for both service providers and users. For example, ticket checking can be automated and speeded up. The development and integration of ticket practices is a good example of potential benefits, but also of the need for extensive cooperation in the development of new integration solutions.

Electronification calls for increasingly extensive, coordinated efforts. The efficient transfer of travel tickets to mobile phones requires eg the development of mobile phone software, secure storage and e-identification methods, the construction of links between payment terminals and mobile phones, the development of banks' payment systems, the conversion of service providers' ticket applications to self-service online applications and the improvement of data communications providers' applications. This must be a coordinated effort. The task becomes more difficult as the introduction of new integrated solutions affects a continuously growing number of participants.

Steady development or a quantum leap in payment habits?

Payment services seem to be on the verge of a major change. Traditional payment instruments, such as cash, credit transfers and payment cards will probably still be used for a long

time to come, and their use is likely to develop in line with the trends discussed above. Several factors suggest, however, that the traditional payment instruments could in future be accompanied by a network-based payment instrument that is fully digitalised, real time, most likely international and utilising Internet and mobile phone technology.

Payments and invoices will be confirmed by the click of a mouse, and all the information will be available only on screen. More detailed information will be available in e-archives, when needed, and the current paper receipts will be replaced by electronic receipts. The adoption of new payment habits is spreading gradually, in the shape of an S curve, and traditional payment habits are gradually being replaced. Similar developments have already taken place in the use of e-mail and SMS text messages. How did we manage before the Internet and the mobile phone? In some 10 years we will probably wonder how we could have ever managed without the e-invoice and m-payments.

Keywords: payment habits, payment systems, electronic payments

Alongside traditional payment methods, we could see the emergence of a fully digitalised, real time, international network-based payment instrument.

Euro area balance of payments and the financial markets

28 November 2007

The euro area current account has remained balanced throughout the entire period of European Monetary Union (EMU). Country-specific differences have, however, been extremely large. Spain's current account deficit has in recent times been as much as 10% of the country's GDP. Monetarily, it is the second largest current account deficit in the world after the United States, amounting to substantially more than USD 100 billion in annualised terms. In contrast, Germany has a current account surplus that is slightly higher still, in dollar terms. It is, in fact, nearly as large as Japan's. The euro area balance is thus explained by the steep opposition between the Spanish and German current accounts, combined with other euro area countries' small – if in some small countries relatively large at national level – deficits or surpluses in dollar terms.

The role of balance of payments

This article concentrates on capital flows in the euro area as a whole and their impact on the euro area financial markets. Euro area capital flows, which can, as such, be very different in nature, have not exhibited any major imbalances, while their direct impacts on investment and economic growth have also not been particularly significant. The most

significant feature is perhaps the almost constant capital outflow in direct investment and inflow in portfolio investment. For the financial markets themselves, however, international capital flows have been significant. At times, they have had a major impact on monetary (M3) growth in the euro area, at times even greater than bank lending.

A particularly striking liquidity surge from the balance of payments was first seen in 2001–2003. In this connection, the European Central Bank (ECB) has spoken in terms of portfolio shifts due to exceptional uncertainty, but this can be taken as just a partial explanation. A strong and even faster liquidity surge occurred at the end of 2006 and beginning of 2007. The primary source of liquidity in both cases seems to have been the inflow of capital into euro area securities, in the first case primarily into equities, and in the second, into debt securities.

The balance of payments depicts the external balance of the economy

Balance of payments statistics describe the external balance of the real and monetary economies. The current account is a summary of real economic transactions between an economy and the rest of the world. It describes the impact of foreign economic activities on national income, and the balance between savings and investment in the



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economy. The capital account includes gratuitous capital transfers and purchases and sales of patents, trademarks and other intangible assets. The financial account shows changes in external assets and liabilities. It describes the financing of the current account deficit or the investment abroad of the current account surplus.

By definition, the sum of the component accounts – ie net income and expenses in the balance of payments – is zero. Sometimes, however, reference is made to a balance of payments surplus or deficit. What is actually meant is a surplus or deficit on the current account or one of the other component accounts within the balance of payments. Within the balance of payments we can also distinguish an overall account, which is the sum of all the component accounts excluding the change in foreign reserves. Foreign reserves is the item that is ultimately

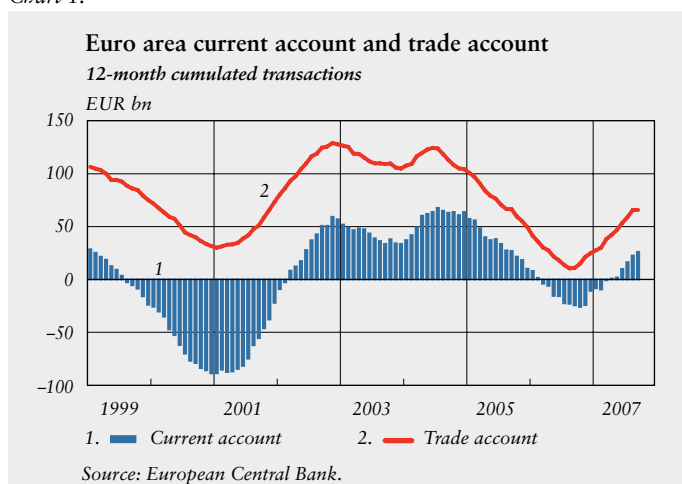
used to finance foreign transactions when the exchange rate needs to be held steady.¹

As the balance of payments is a flow statistics, a related concept is net external assets, which describes the stocks of external assets and liabilities. A current account deficit increases the (net) external liabilities of an economy, while a surplus adds to the (net) assets. In addition, stock statistics take account of changes in exchange rates and other valuation items that may often have a major impact on asset levels even though they are not shown in the flow statistics.

Developments in the euro area current account

The euro area current account has fluctuated monthly from a deficit of around EUR 12 billion at its highest to an equally large surplus. In cumulative 12-month terms, the euro area current account was in deficit in the early stages of the euro era, rising to surplus in 2002 (Chart 1). At the end of 2005, cumulative data shows that the current account went once again into deficit, mainly due to the higher price of oil. Euro area current account deficits and surpluses have, however, been very small, accounting

Chart 1.



¹ The terminology used in the balance of payments varies in the statistics produced by different institutions. The financial account in particular is defined in different ways. It may or may not include change in currency reserves (and an error item). For example, the IMF publication International Financial Statistics (IFS), does not include the change in currency reserves in the financial account, unlike the monthly publications of the European Central Bank (ECB) and the Bank of Finland.

Box.

Compilation of balance of payments statistics

Taken as a whole, the balance of payments account is always in balance. In principle, all transactions are entered in accordance with double-entry bookkeeping. For example, exports of goods are entered as a positive figure in the current account, while the associated financing is entered as a negative figure in the financial account in terms of an increase in external assets. Because data on real flows and monetary flows come from different sources, they do not totally match in the balance of payments statistics, at least not in the short term. This is why the balance of payments contains an item that covers errors and missing transactions.

An error term may result from, for example, entry of the same transaction at different times in different accounts, or from insufficient data. Errors arising from timing differences offset each other in due course. Cumulatively, errors and omissions should be close to zero. The cumulation of an error may be an indication of a systematic fault in the compilation of statistics. In the balance of payments for the euro area, errors and omissions have

been negative cumulatively since 2003, which indicates either a shortfall in the statistics for increase in assets or an excessive increase in liabilities. The error may also originate from the real economy, ie current account statistics. For example, there could be problems with the statistical compilation of trade in services. It is possible that part of the increase in the error term is due to internal euro area asymmetries, ie different statistical treatment of the same economic transactions between euro area countries.

Globally, the balance of payments statistics are also in imbalance, even though the sum of real and financial flows should be zero. The world current account shows an aggregate deficit. While the trade account is in surplus, the income account is especially strongly in deficit. The 'surplus' in the trade account probably stems from the fairly comprehensive entry of exports in source country statistics, while importers may have a reason to avoid official registering of imports. The income account 'deficit', for its part, suggests that payment of income is entered but

recipients may seek to avoid paying tax on their income. In addition, not all offshore financial centres, such as the Cayman Islands or Bermuda, report their balance of payments statistics to the IMF. As regards services, deficiencies in reporting may arise from the flagging out of vessels to countries that do not report the transportation income received.

Responsibility for the compilation of euro area balance of payments is divided between the ECB and Eurostat. The ECB is responsible for preparation of the financial account and of the investment income account within the current account. Computation of euro area balance of payments statistics is based on relevant data submitted by euro area countries on their transactions with non-euro area countries. By aggregating these statistics we obtain the balance of payments for the euro area. For some items, such as the debit side of portfolio investment, the information available is not sufficient. In such cases, data on economic transactions between euro area countries is used to help gain a fuller picture.

at their highest for only about 1% of the area's GDP.

Recent months have seen the deficit shrink close to balance, driven by robust euro area exports. Part of this growth in exports originates from sales to oil-producing countries that have channelled part of their higher income from oil into import growth.

The current account is dominated by the trade account. Goods exports account for an average of 60% of current account income, with the import-to-expenses ratio being somewhat smaller. The trade balance has been systematically in surplus. Euro area exports are dominated by the United Kingdom, the United States and Switzerland, but other non-euro area EU countries together constitute another major export market. Euro area imports originate mainly from the United Kingdom, the United States and China.

The key items in the services account are transportation and travel. The euro area services account has been in surplus for many years.

The income account includes labour compensation costs and investment income, of which the latter – comprising income from direct investment, portfolio investment and other investment – is more important. Net investment income has been in deficit since the introduction of the euro. This is mainly due to interest and dividend expenses related to portfolio investment.

The euro area services account has been in surplus for many years.

In contrast, current transfers have been systematically in deficit. This is because EU institutions (excluding the ECB) are considered non-euro area parties. Thus, all economic transactions between euro area countries and EU institutions are registered in the balance of payments. Current transfers include, for example, member states' EU membership fees.²

Data on euro area balance of payments, broken down by country, is available from 2003 onwards.³ The euro area has had a systematic current account deficit only with Japan and EU institutions.

The euro area as investment target and as investor

Structure of investment

The main items of the financial account are direct investment, portfolio investment, other investment, financial derivatives and reserve assets. Portfolio investment is divided into investment in equities, bonds and notes, and money market instruments. The portfolio investment account differs from the other

² Income transfers with EU institutions show a deficit of EUR 40 billion to the euro area; ie that is the net sum paid by the euro area to EU institutions. In contrast, the capital account is EUR 19 billion in surplus. This sum includes items such as transfers from EU support funds.

³ Country-specific data has been available for the following countries: Sweden, Denmark, the United Kingdom, other EU countries, EU institutions, Canada, Japan, the United States, Sweden, offshore financial centres, international organisations and others. This list has recently been extended to include China, Brazil, India and Russia.

investment account in containing marketable instruments.

The other investment account includes financial claims that are based on bilateral agreements and do not have a secondary market. Such items comprise loans, deposits and trade credits. The predominant item is loans and deposits by financial institutions on both the credit and the debit side. International payments cleared through financial institutions are mainly reflected in this item.

Flow data in respect of derivatives includes premia on derivative contracts, interim and net value disbursements and actual net payments between parties. Although the value of underlying assets in derivatives contracts may be extremely high, derivatives do not play a major role in euro area balance of payments. The derivatives item is only available in net terms.⁴

Reserve assets include assets denominated in foreign currency and owned or managed by the Eurosystem. These include monetary gold, special drawing rights and foreign exchange. The largest items in the Eurosystem reserve assets are gold and foreign-currency-denominated securities assets. Because the euro is a floating currency, the Eurosystem does not normally carry out currency interventions. This is why changes in reserve assets are minor and are primarily based on changes in

the external value of the euro. Reserve assets are, therefore, not discussed separately below.

Direct investment

Direct investment describes international mergers and acquisitions and financial flows between units of multinational conglomerates. It is necessary to underline that statistics only describe the financing of direct investment from and into the euro area and not actual productive international investment. Direct investment is divided into equity financing, reinvested earnings, and other capital. Reinvested earnings are also entered under investment income in the current account, and the financial account has a counteritem as part of direct investment.

In multinational conglomerates, financing is often arranged via special financing centres, many of which are located in Luxembourg, the Netherlands or Ireland for tax reasons. Direct investment statistics only tell the direct target country of the financial flow, which is not necessarily the country where the actual investment will eventually be made. However, if the investment is channelled via a finance company located in the euro area, it does not necessarily skew euro area statistics as much as it might skew the statistics of individual euro area countries, provided that either the investor or the ultimate investment target are also in the euro area.

Statistics only depict the financing of direct investment from and into the euro area, not actual productive international investment.

⁴ This applies to flows, whereas the figures for stocks denote the market value of current contracts. Contracts in the black are claims, while those in the red are liabilities.

From time to time, large acquisitions and related financial arrangements can be seen in the statistics.

The volume of direct investment varies a great deal from month to month. From time to time, large acquisitions and related financial arrangements can be seen in the statistics, such as the ownership arrangements for Shell in July 2005. Often large acquisitions – particularly mergers – are associated with mutual financing arrangements, which means that the transaction is entered as direct investment abroad and in the euro area, or the direct investment is matched by a corresponding portfolio investment.⁵ The merging company may become a partner in the joint venture to be established and pay its share by handing over its business to

⁵ In February 2000, for example, the British company Vodafone bought Mannesmann from Germany for EUR 145 billion. The transaction was paid for with Vodafone shares, so a direct investment in the euro area was entered in the balance of payments along with an increase in portfolio claims and a decrease in portfolio debt (because the majority of Mannesmann shares were already held by foreign investors).

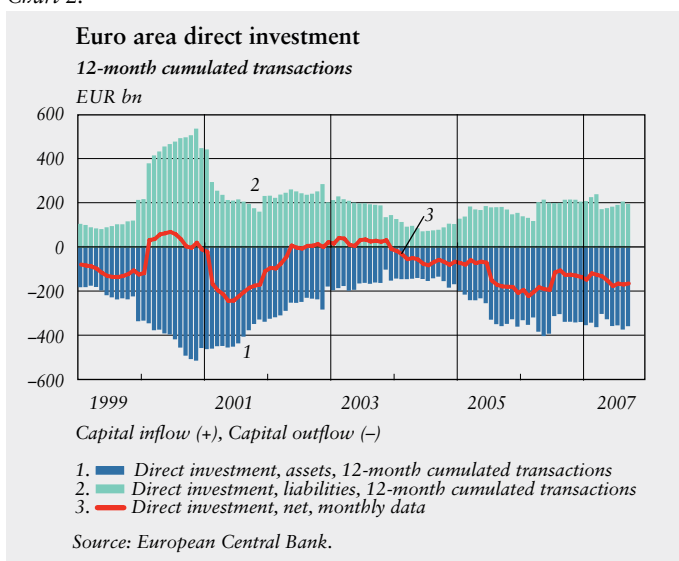
the joint venture. These types of arrangements are reflected in financial flows in different directions, but not in net flows.

Direct investment from the euro area has been higher than inward investment from abroad (Chart 2). Net flows in direct investment have been clearly outward from the euro area, especially since 2004.

Direct investment peaked at the turn of the millennium, when investment in US-based ICT-sector companies in particular was very pronounced.⁶ At the end of 2006, the stocks of euro area direct investment in the United States and US direct investment in the euro area were close to balance. Based on the stock of investment, the most important investment target at the moment is the United Kingdom. At the end of 2006, euro area investment in the United Kingdom stood at EUR 800 billion, compared with approximately EUR 600 billion in the United States. Another major investment target are offshore financial centres, where euro area direct investment totalled slightly less than EUR 330 billion at the end of 2006. All in all, the stock of outward direct investment at this time stood at EUR 3,076 billion.

Inward direct investment in the euro area in 2006 was similarly dominated by the United Kingdom at slightly over EUR 1,020 billion, with direct investment from the United

Chart 2.



⁶ Anderton et al. 2004.

States standing at approximately EUR 630 billion. Altogether, the stock of inward direct investment at the end of 2006 stood at EUR 2,660 billion.

Growth in investment from new EU member states has been particularly rapid since 2004. Investment has grown more than sevenfold compared with the situation at the end of 2003. However, at EUR 23 billion the stock of investment is still rather modest. The stock of euro area investment in new member states shows a smoother development path, although in 2004–2005 this also grew at an annual pace of approximately 30%. Overall, the stock of euro area investment in new member states amounts to EUR 190 billion, with privatisation arrangements initiated in the 1990s, liberalisation of economies and expectations regarding EU membership being the main contributors to the accelerated investment flow into the new members.⁷

At USD 1,300 billion, global direct investment was close to its historical peak in 2006,⁸ with approximately a quarter of this investment being into the euro area. This record figure also includes bilateral investment between euro area countries, which is not included in the euro area balance of payments. With this investment excluded, capital flows into the euro area in the form of direct investment totalled

some EUR 177 billion, ie slightly more than USD 220 billion. Global direct investment has grown at an annual pace of nearly 30% for several years in a row. The majority (USD 857 billion) of this investment was channelled into the industrial economies, but investment in emerging economies has also reached record levels. Investment in Asia increased by 15%. In 2006, China was among the three largest recipients of direct investment, with the investment flow into China an estimated USD 70 billion.⁹

Low interest rates have contributed to an increase in corporate acquisitions by private equity funds.¹⁰ These acquisitions can be largely financed through debt securities or by means of a leveraged buy-out. Corporate acquisitions by funds nearly doubled from 2004 to 2005. In 2006, equity investment in the euro area was 50% higher than in 2005 (at approximately EUR 170 billion).¹¹ In contrast, there has been little increase in comparable outward investment from the euro area.

In economics, the scale of direct investment has traditionally been explained by bilateral trade flows and

Low interest rates have contributed to an increase in corporate acquisitions by private equity funds.

⁷ Lane and Milesi-Ferretti (2006a) provide a more thorough analysis of capital flows in eastern Europe.

⁸ UNCTAD (2007).

⁹ The quality of these statistics is, however, not yet fully reliable: statistical compilation practices are not fully compatible with international standards and statistics are prepared by two different methods at two separate institutions.

¹⁰ UNCTAD (2006).

¹¹ Admittedly, the 2006 first quarter balance of payments for the Netherlands included an exceptionally large acquisition that resulted in euro area direct investment swelling to more than EUR 80 billion in both directions.

by a gravity model adopted from physics whereby the economic size (mass) of a country and the distance between countries affect direct investment flows. On the corporate level, the motive for direct investment may be to gain a competitive edge in the market through cheaper factors of production or improved products, production processes, marketing and distribution networks. In addition, direct investment may be a way to circumvent administrative restrictions such as customs and quotas. Direct investment has been considered an important factor in transferring technology from one country to another. On the other hand, closer links between economies via direct investment also mean cyclical changes are carried over more easily from one area to another.¹²

¹² Jansen and Stokman (2007).

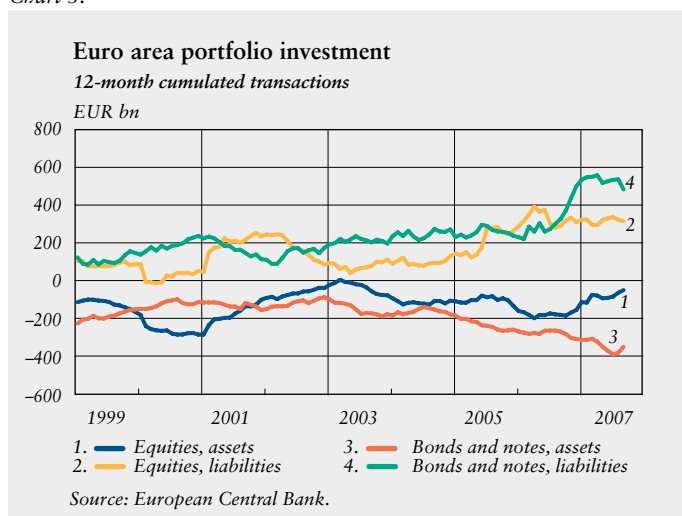
Portfolio investment

Contrary to direct investment, portfolio investment shows a net inflow into the euro area. Throughout almost the entire existence of the euro, portfolio investment into the area has, in fact, exceeded outward portfolio investment. This applies to both equity investment and (particularly) investment in debt instruments.

At the turn of the millennium, outward net investment in equities from the euro area was strong, particularly to the United States. Since 2001, the direction of equity investment has been predominantly into the euro area (Chart 3). The equity investment inflow has been particularly strong since the middle of 2005, indicating that investors have considered euro area growth potential to be higher than that of other key market areas. Indeed, euro area share prices have been rising faster than those of US shares since 2004. The performance of the euro has further supported this investment trend insofar as, on top of the return on capital invested, foreign investors have also benefited from exchange rate gains.

Outward equity investment from the euro area has been predominantly to the United States and the United Kingdom, with the stock of investment at the end of 2006 amounting to approximately EUR 670 billion and EUR 390 billion, respectively. The total stock of outward investment stood at EUR 2,012 billion. Besides flows, this also includes various

Chart 3.



valuation factors such as changes in prices and exchange rates. Hence the stock of equity investment increases as share prices rise.

In 2006, outward equity investment from the euro area rose to slightly more than EUR 150 billion in terms of the 12-month moving total, but this had fallen to EUR 100 billion by the beginning of 2007, the same level as prior to 2006.

Particularly noteworthy in equity investment is the recent rise of bonds. In cumulative 12-month terms, investment in euro area bonds doubled in the second half of 2006 from EUR 250 billion to EUR 500 billion. In 2005, foreign investment in euro area shares grew even more in relative terms. In June 2007, portfolio investment in euro area shares amounted to some EUR 330 billion in cumulative terms.

Investment in bonds is partly a reflection of the securitisation of mortgages, which has been particularly significant in Spain. Indeed, Spain has been a major contributor to the increase in bond debt. Germany has been the biggest issuer of bonds in the euro area over the long term.

Euro area investment in foreign bonds is dominated by the United States and the United Kingdom. A country-specific breakdown of data is not available for portfolio investment liabilities. Some picture of inward investment in the euro area can be derived from the balance of payments data for investor countries, provided country-specific data is available. The

Coordinated Portfolio Investment Survey (CPIS) by the IMF also offers additional information, albeit not the most recent data. Key countries with the highest investment in euro area bonds at the end of 2005 were Japan (25% of all investment), the United Kingdom (18%) and the United States (10%).¹³

Globally, portfolio investment has increased. According to the CPIS survey, between 2001 and 2005 the stock of foreign investment doubled to more than USD 10 trillion. Euro area countries together account for 32% of this investment stock.¹⁴ Comparable developments have been witnessed in the bond markets: the stock of international holdings at the end of 2005 totalled USD 15 trillion, of which euro area investment accounts for 40%. Approximately half of inward investment in the euro area originates from the United States, followed by the United Kingdom (18%) and Switzerland (11%).

In theory, as markets expand, international investment flows increase as a result of the diversification of risk.^{15,16} Investors aim to

Globally, portfolio investment has increased.

¹³ Globally, Japan has favoured portfolio investment in bonds, whereas the United States and the United Kingdom, along with other industrial countries, emphasise investment in equities (Lane and Milesi-Ferretti (2006b)).

¹⁴ The euro area is not included as an aggregate in the CPIS survey, and this figure therefore includes investment within the euro area that is netted off from euro area balance of payments aggregates.

¹⁵ De Santis (2006).

¹⁶ According to the International Capital Asset Pricing Model theory, international investors should build their portfolios in such a way that they contain investments in different countries in proportion to the relative size of each market.

Investment is channelled into areas where the expected growth or real interest rate is higher.

diversify their portfolios geographically, too, in proportion to the size of different markets.¹⁷ On the other hand, financial market globalisation means that, when risks do materialise, impacts will not be restricted to a single area but will be borne by all investors.¹⁸ However, the actual impacts depend on the characteristics of the investment portfolio (shares, bonds, currency, maturity, liquidity).

Movements in portfolio investment can generally be explained by differences in growth prospects for different economic areas and by differences in interest rates. Investment is channelled into areas where the expected growth or real interest rate is higher. The natural and empirically tested explanation for flows in equity investment is the actual earnings per share obtained in the market.¹⁹ In other words, realised profits entice new investment (the feedback explanation). On the other hand, investment flows can themselves boost share prices. This may be due to expected developments in economic fundamentals or to short-term price pressures caused by the flow of capital into the stock markets. Recent research shows this

¹⁷ In practice, investment has not been spread in accordance with the theory, as portfolios contain a home bias, meaning that considerably more investment is made in the home market than would be optimal according to the theory. One explanation put forward for this is asymmetric information (non-resident investors have less information about the status of foreign companies). The home bias has decreased significantly within the euro area since the launch of EMU (De Santis (2006)).

¹⁸ Lane and Milesi-Ferretti (2005a).

¹⁹ Froot (2001).

kind of impact to be even stronger than the impact of yields, especially in developing markets.²⁰ A closer analysis shows the above-mentioned feedback explanation is more applicable to European countries.

As with direct investment, gravity models have also been relatively accurate in explaining investment flows in equities. It has been observed that gross flows in equity investment depend on the size and distance of markets and on the costs and technology of trading. The distance of markets as a variable is probably a very good indicator of informational asymmetries. In international investment, geography has not been observed to have a major impact on government bonds, which is probably due to the availability of adequate information.²¹

Investment yields and influencing factors

Debate about the large current account deficit in the United States has highlighted the contradiction that the US investment income balance has for long been in surplus at the same time as the country has been running a large net external debt. In 2005, US net external debt amounted to as much as USD 2,500 billion. In the investment income balance, yields on direct investment in particular show a surplus. One explanation proposed for this is tax planning by multinational

²⁰ Lin and Swanson (2007).

²¹ Portes and Rey (2005).

corporations. The long-term nature of US investment also seems to be an important contributor. However, a comprehensive and entirely credible explanation for this statistical contradiction has yet to be found.²²

In euro area statistics, direct investment income received and paid out are very similar in size. In contrast, there are differences in the statistics for individual countries. The situation in France is similar to that of the United States, whereas in Ireland outgoing income is much higher than the income received on direct investment abroad by Irish residents. Undeniably, this is a reflection of tax planning by US companies. In France, the corporate tax rate is 33%, while in Ireland it is 12.5%.²³

In 2006, euro area direct investment income received was approximately EUR 170 billion, while direct investment income paid out amounted to nearly EUR 110 billion. Relative to the stock of investment, the euro area received a yield of 5.5% and paid out 4.2%. A longer-term examination shows that the income received and yields paid by the euro area on direct investment have been more or less equal.

In 2006, yields paid by the euro area on portfolio investment amounted to EUR 190 billion, while income from portfolio investment

outside the euro area totalled EUR 140 billion. Relative to the stock of investment, income from euro area investment abroad and yields paid by the euro area on investment made by non-residents totalled some 3.2%.

International investment position

At the end of the second quarter of 2007, the euro area international investment position showed a net debt of EUR 1,174 billion, corresponding to 13.6% of euro area GDP. The negative net investment position is due to portfolio investment showing a negative EUR 1,702 billion. In direct investment, euro area net assets amounted to EUR 495 billion.

The investment position is affected not only by the transactions entered in balance of payments statistics, but also by changes in exchange rates and other valuation items. In 2001, the euro area net international investment position was a negative 5.6% of GDP. The subsequent growth of this debt to more than 13% of GDP is largely due to the appreciation of the euro.²⁴ The positive development of share prices in the euro area has been another contributory factor.

At the end of 2006, the US net international investment position was negative, in the amount of approximately 20% of GDP. At the same time, Japan's international investment position showed net assets of some 40% relative to GDP.

²² A good overview of this issue can be found in Heath (2007).

²³ KPMG (2007).

²⁴ ECB (2007).

Balance of payments and money supply

The view of the ECB regarding the monetary policy significance of the balance of payments is reflected in the fact that since 2003 the statistical section of the ECB's Monthly Bulletin has provided a monetary presentation of the balance of payments. The external transactions of sectors other than the MFI sector are shown in the balance of payments as changes in external assets and liabilities insofar as the transactions are cleared through banks. Items in the current and capital accounts and errors and omissions cannot be divided between MFIs and other sectors. It is, however, reasonable to assume that the resulting distortion is not significant.

The monetary presentation of the balance of payments thus shows the transactions that affect changes in

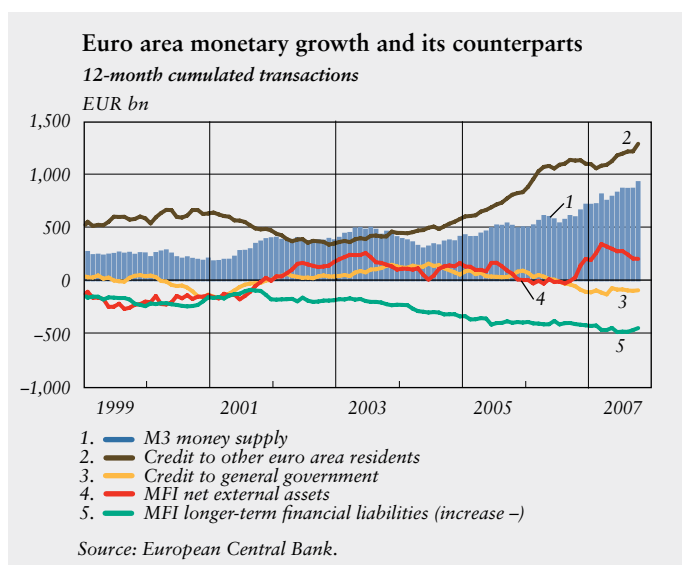
MFI sector net external assets. The net external assets of MFIs are shown in the MFI balance sheet as counterparts to the M3 monetary aggregate, namely

- loans to euro area residents
- euro area MFIs' net external assets
- minus MFIs' long-term liabilities
- plus other MFI counterparts.

The causes of money supply developments can be assessed by examining developments in these counterparts (Chart 4). For example, when an MFI grants a loan, the counterpart is generally a deposit with another MFI, which means that loans and deposits grow in parallel. A balance of payments transaction that reduces the money supply is generally one where a domestic economic unit that purchases goods or monetary assets from abroad pays the purchase with its deposits. This money is then transferred abroad, with the result that the net external assets of the MFI decrease (when the MFI credits the account of the foreign exporter). Correspondingly, exports of goods or imports of capital (increase in the exporter/importer's external liabilities or decrease in its external assets) means an increase in the domestic money supply, and also in the net external assets of the MFI.

In the early phase of the euro era, in 1999–2000, lending by MFIs was very strong, but M3 growth was retarded by the impact of other supply factors, particularly the balance

Chart 4.



of payments, ie capital outflow. First and foremost, capital outflow was due to the scale of euro area equity investment abroad (Chart 3). In 2001, the flow of equity investment turned sharply towards the euro area, through both an increase in investment by non-residents and a decrease in equity investment abroad by euro area residents. When shares were sold to non-residents, the sellers' deposit accounts gained from incoming payments.

The ECB's explanation for the simultaneous growth in monetary aggregates cited the portfolio shifts associated with the exceptional uncertainty prevailing at this time. This referred to investors changing the composition of their portfolios by replacing long-term investments with more liquid and less risky instruments. This was partly reflected in the balance of payments, when shares were sold to non-residents. A similar phenomenon could be seen in the strong growth of investment in money market funds, which are a component of M3.²⁵

It is, however, likely that other, quite normal market factors provide a more plausible explanation for the shift in investment than the 'exceptional uncertainty' referred to above. Although the reversal in the direction of equity investment at the time was strong, it was largely due to the normalisation of the preceding

exceptional investment flows. In fact, part of the change can probably be explained simply by developments in interest rates. The US policy rate fell rapidly in 2001 to well below the ECB's policy rate (Chart 5).

Since the introduction of the euro, changes in the net external assets of MFIs have stemmed partly from the current account. Chart 6 presents developments in the current

Chart 5.

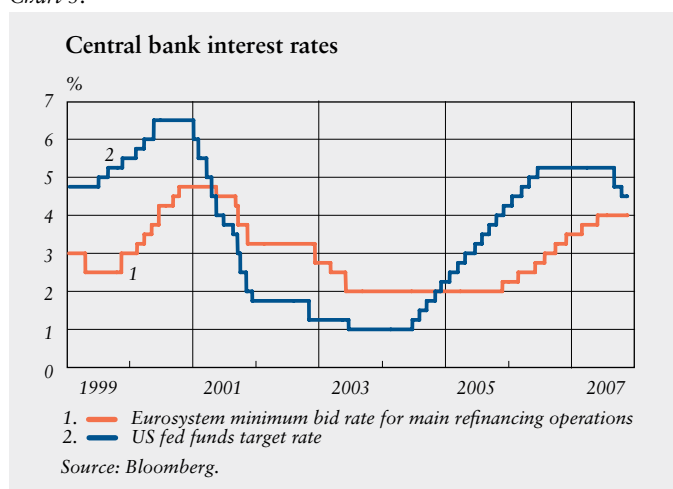
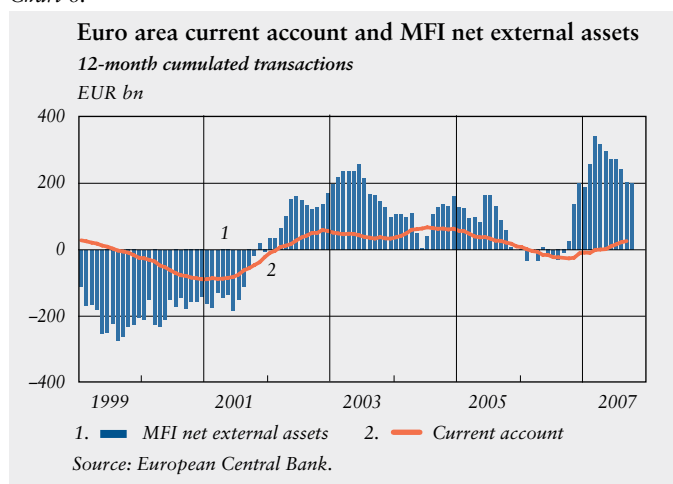


Chart 6.



²⁵ ECB (2004).

account and changes in banks' net external assets in cumulative 12-month terms. The difference between the series describes the volume of other capital flows. The current account and capital flows have generally moved in parallel, and hence they have both contributed to fluctuations in the money supply. However, the growth in the money

supply at the turn of 2006–2007 was entirely due to capital inflow.

In 2007, growth in M3 has been strong, even hitting record levels. Of M3 counterparts, particularly striking was an increase in MFIs' net external assets at the end of 2006 and during the first few months of 2007. For example, in November 2006, growth in foreign counterparts (EUR 69 billion) was particularly due to investment by non-residents in euro area bonds (EUR 80 billion). Investment in bonds has remained strong (Chart 7), although the share contributed by MFI lending has increased. The analysis is partly complicated by large errors and omissions in the balance of payments. Within the euro area, the most noticeable growth in net external assets in the MFI sector has taken place in Germany.

Chart 8 compares non-residents' investment in euro area bonds with MFI net external assets, and both of these with developments in M3. After 2001, developments in MFIs' net external assets have closely followed investment in bonds. This connection is particularly noticeable in recent months' strong growth, and the connection between this and M3 growth. Although still originating in the balance of payments, the explanation for M3 growth this time can be found in different instruments than in 2001–2002.

One key explanation for growth in debt securities may be carry trades,

Chart 7.

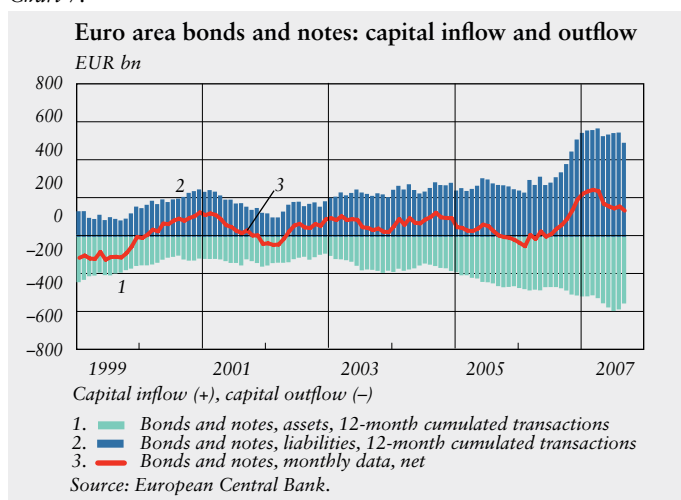
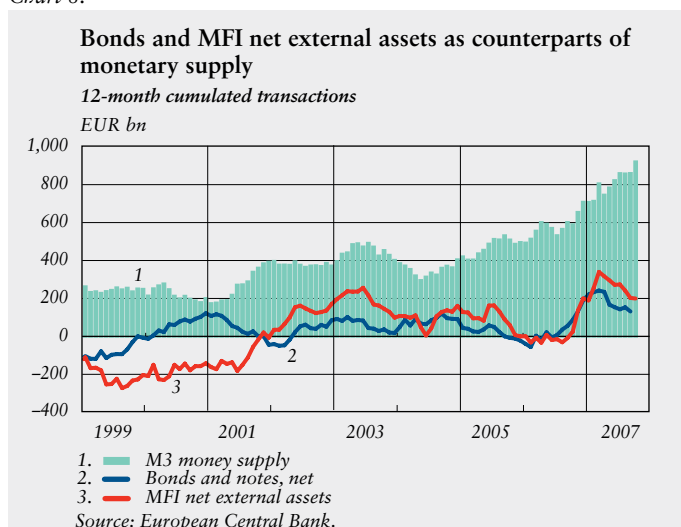


Chart 8.



which have recently been under the spotlight. In carry trading, funds are borrowed in markets with low interest rates and reinvested in markets with a higher yield, at the same time becoming subject to a degree of exchange-rate risk (admittedly, part of the trade can be hedged, for example with options, but in this event part of the interest rate difference will also be lost).²⁶ The appreciation of the euro and developments in euro area short-term interest rates make the euro area attractive for carry trading. At the same time, some of the increase in supply of debt securities based on housing mortgages has probably been channelled abroad. As well as investment in debt securities, non-residents have also invested to some extent in euro area equities.

Nevertheless, the main reason for growth in non-residents' investment in the euro area is probably the relative strengthening of economic performance in the euro area. From the point of view of interest rate policy, these developments have led to a classical conflict situation. Rising market rates have dampened inflationary pressures in

the euro area, but the increased capital inflow has boosted euro area liquidity supply, thereby adding to inflationary pressures. On the other hand, the continued capital inflow feeds the appreciation of the euro, which in turn serves to alleviate inflationary pressures.

Concluding remarks

The euro area current account has remained close to balance, although major differences between individual countries can be identified. The euro area has been characterised by capital outflow in direct investment and inflow in portfolio investment. Capital flows have had a major impact on money supply. Recently, non-resident investment in euro area bonds has particularly contributed to an increase in MFIs' net external assets.

Financial market globalisation increases the interdependency of economies and the spillover of disturbances from one economy to another. Balance of payments statistics and statistics on the international investment position offer one way to examine these impacts. Although the euro area as a whole is a more closed economy than its individual member states, it is nonetheless more open than the United States or Japan.

Keywords: balance of payments, financial markets, capital flows

The euro area has been characterised by capital outflow in direct investment and inflow in portfolio investment.

²⁶ In practice, carry trading is rather hard to separate from other investment activity. For example, the OECD (2007) states: 'The exact extent of the carry trade is difficult to deduce from statistics on cross-border flows, which generally do not point to a recent upturn of outflows from Japan. Most carry trades are probably undertaken through over-the-counter derivatives markets, on which statistical evidence is rather meagre. It seems, nonetheless, that derivatives markets played a role in both the upturn and subsequent unwinding of the yen carry trade at the beginning of the year.'

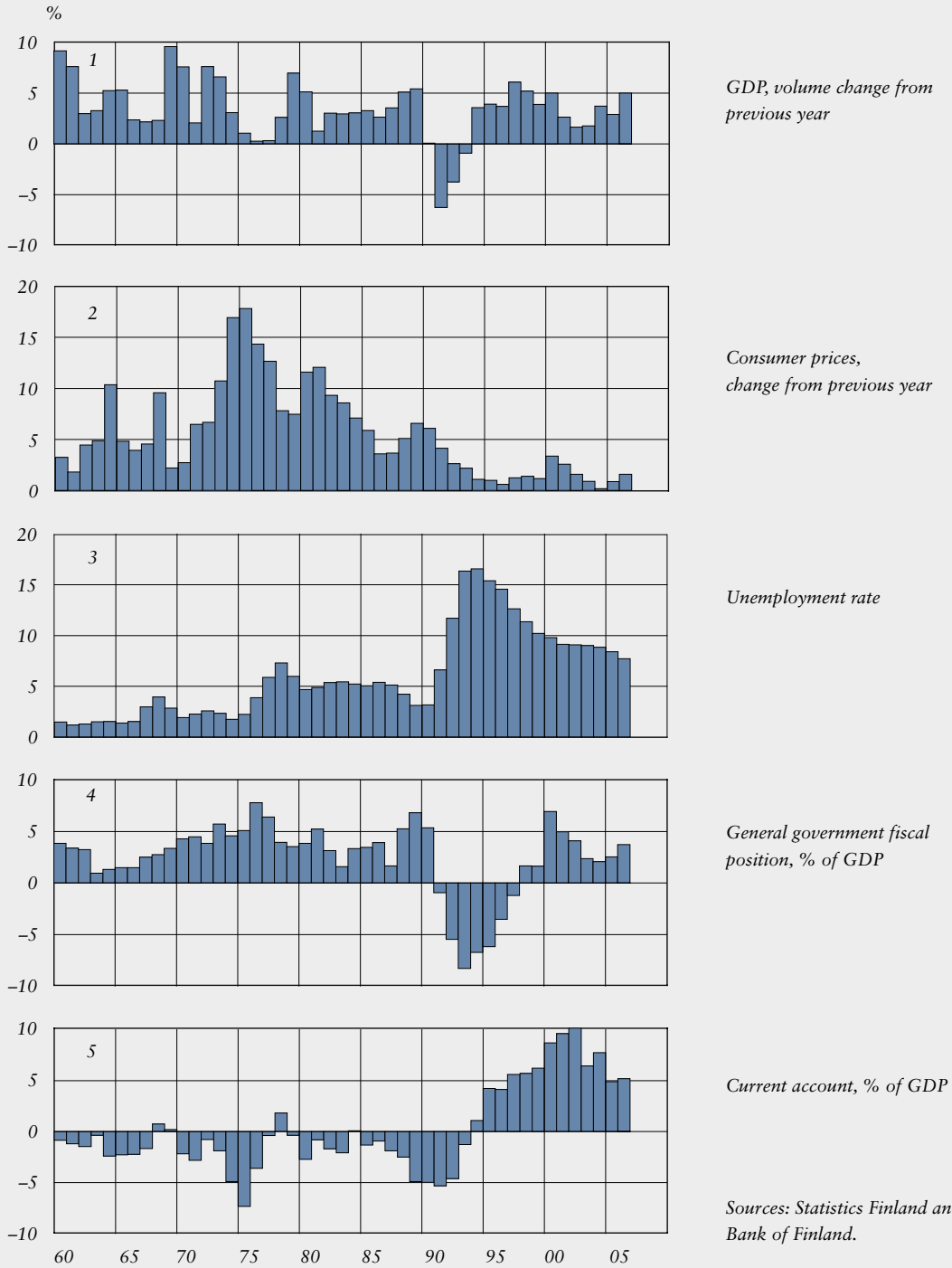
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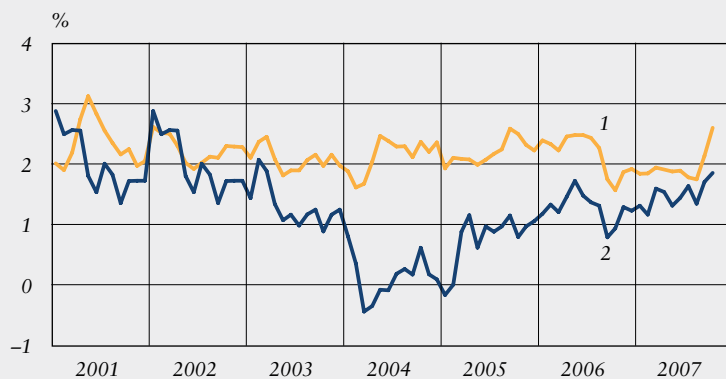
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16. Finland: services account and income account
17. Regional distribution of Finnish exports
18. Finnish exports by industry
19. Finland's foreign trade: export prices, import prices and terms of trade
20. Finland's net international investment position
21. Finland: GDP and industrial production
22. Unemployment rate in the euro area and Finland
23. Hourly labour costs in the euro area and Finland
24. Selected asset prices in Finland

1. Finland: key economic indicators



2. Price stability in the euro area and Finland

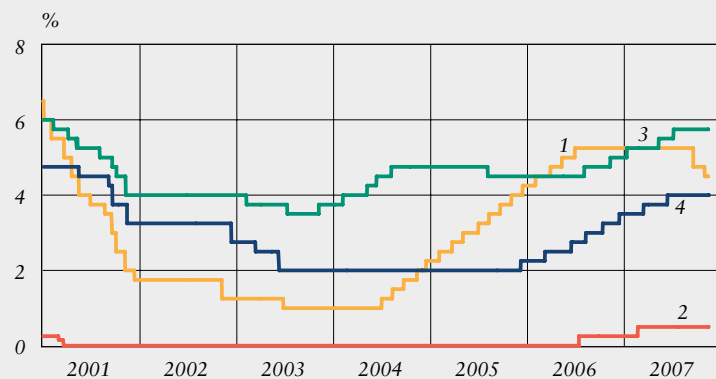


Harmonised index of consumer prices, 12-month change, %

1. Euro area
2. Finland

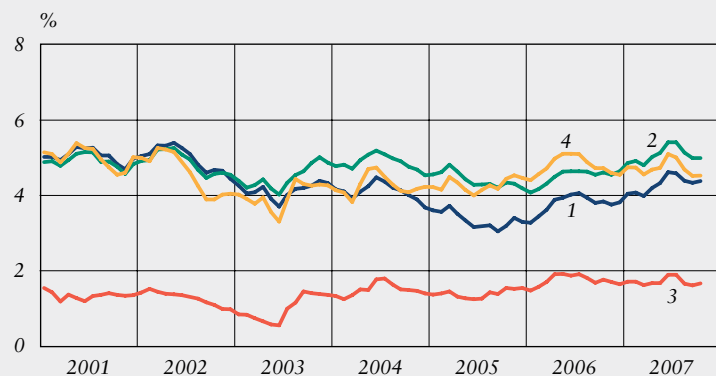
Sources: Eurostat and Statistics Finland.

3. Official interest rates



1. USA: fed funds target rate
 2. Japan: overnight call rate
 3. United Kingdom: repo rate
 4. Eurosystem: minimum bid rate
- Source: Bloomberg.

4. International long-term interest rates

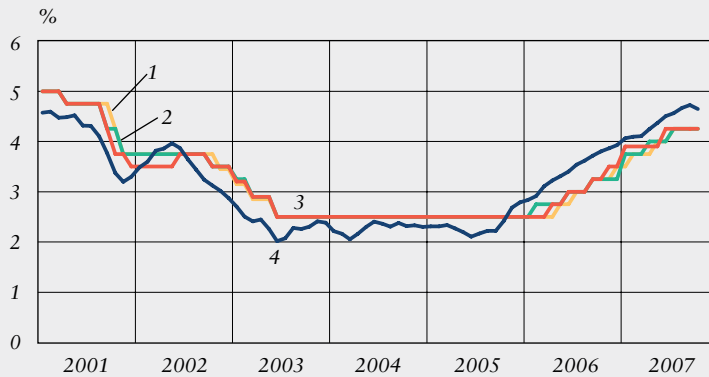


Yields on ten-year government bonds

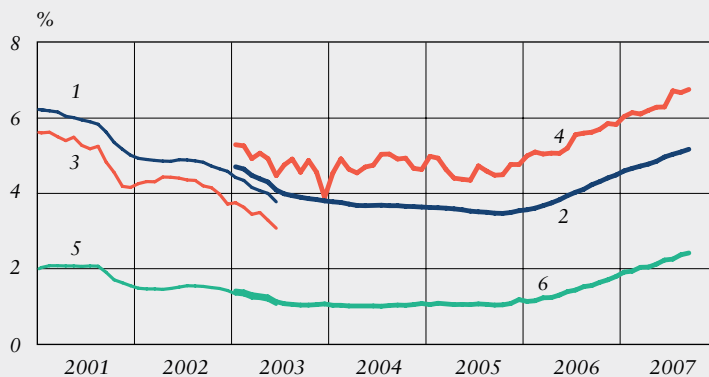
1. Finland
2. United Kingdom
3. Japan
4. United States

Source: Reuters.

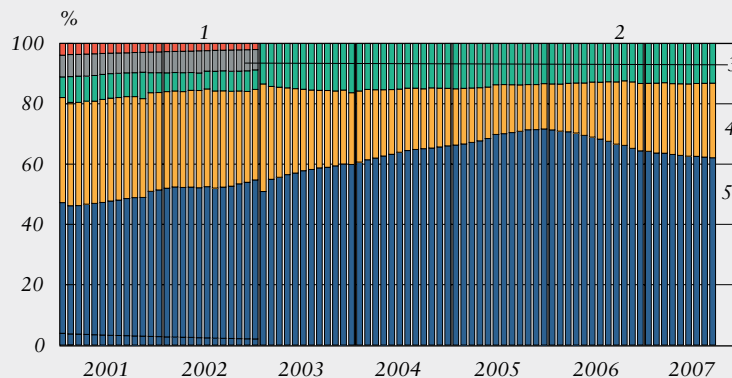
5. Bank reference rates in Finland and 12-month Euribor



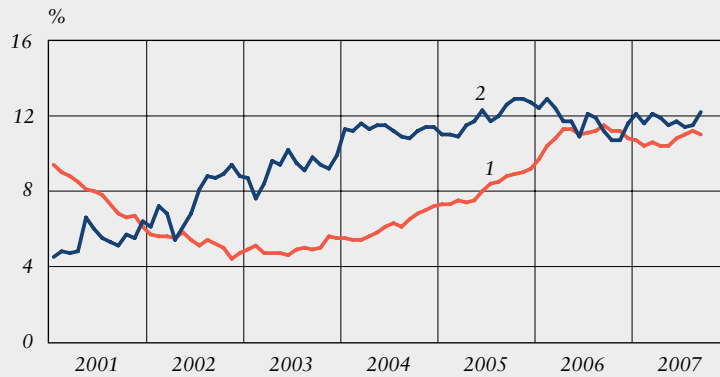
6. Average lending and deposit rates



7. Stock of bank lending by interest rate linkage



8. MFI loans to private sector

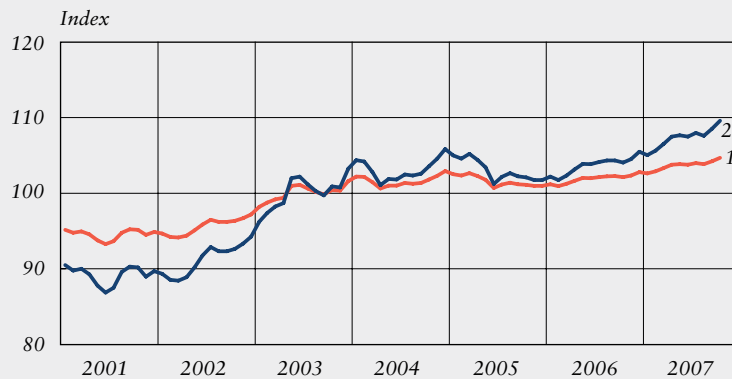


12-month change, %

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

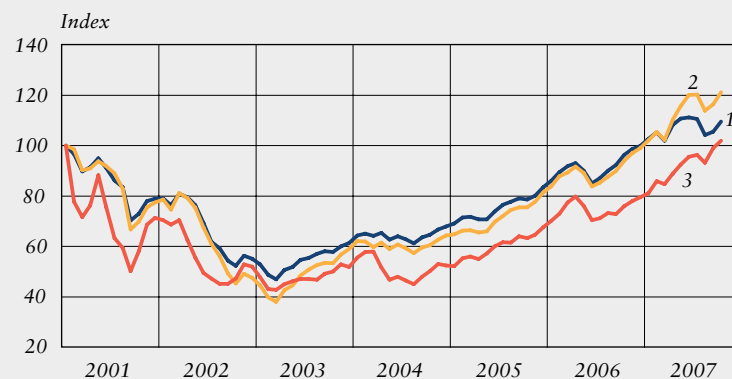
Based on trade-weighted exchange rates.

An upward movement of the index represents a weakening in Finnish competitiveness.

1. Narrow competitiveness indicator including euro area countries
2. Narrow competitiveness indicator excluding euro area countries

Source: Bank of Finland.

10. Selected stock price indices in the euro area

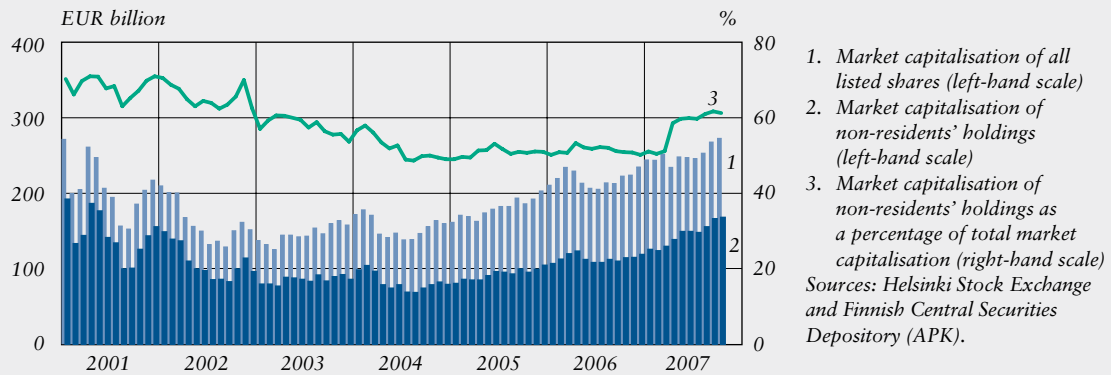


January 2001 = 100

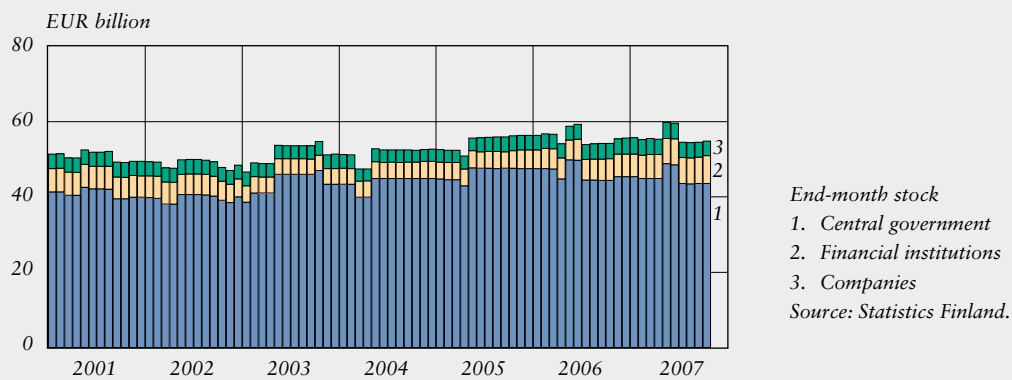
1. Total euro area: Dow Jones Euro Stoxx index
2. Germany: DAX index
3. Finland: OMX Helsinki All-Share Index

Sources: Bloomberg and Helsinki Stock Exchange.

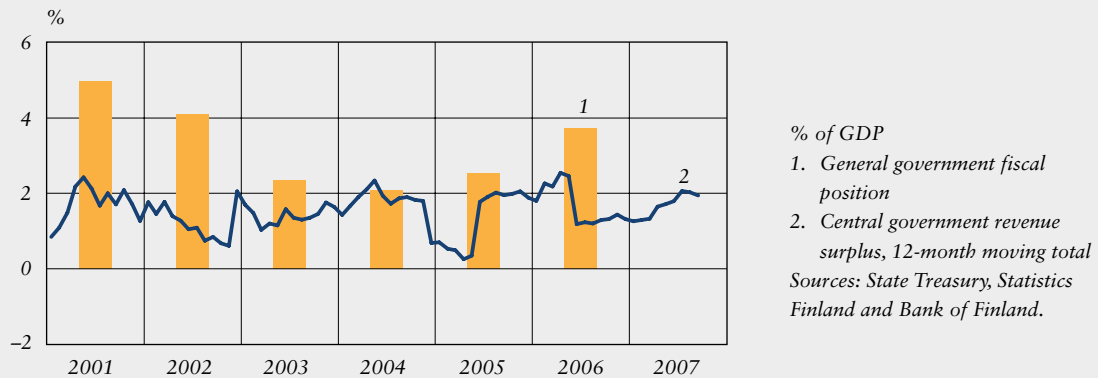
11. Listed shares in Finland: total market capitalisation and non-residents' holdings



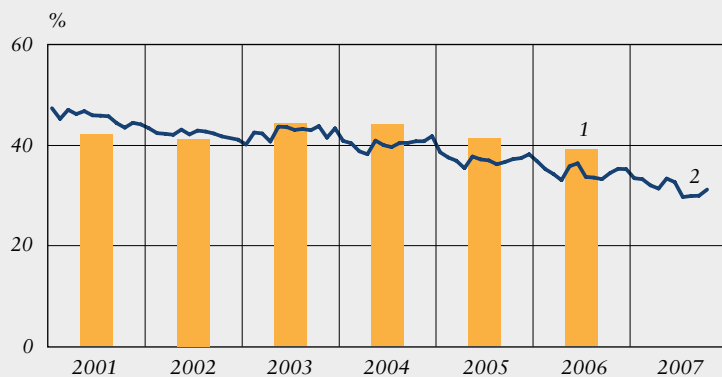
12. Bonds issued in Finland



13. Public sector balances in Finland



14. Central government debt

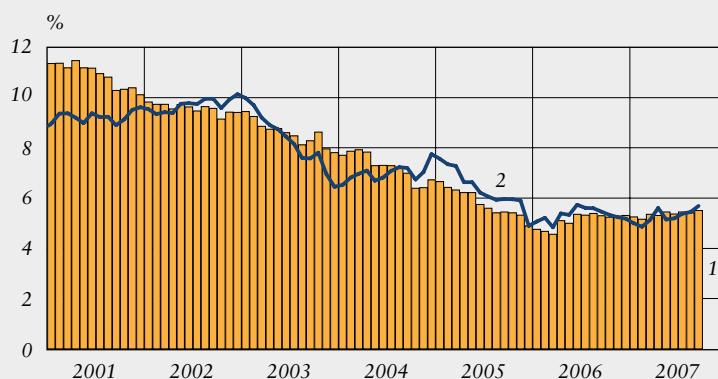


% of GDP

1. General government debt
2. Central government debt

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

15. Finland: goods account and current account

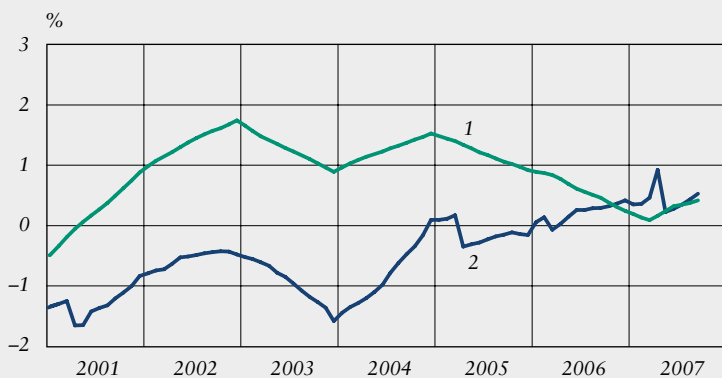


12-month moving totals, % of GDP

1. Goods account, fob
2. Current account

Source: Bank of Finland.

16. Finland: services account and income account

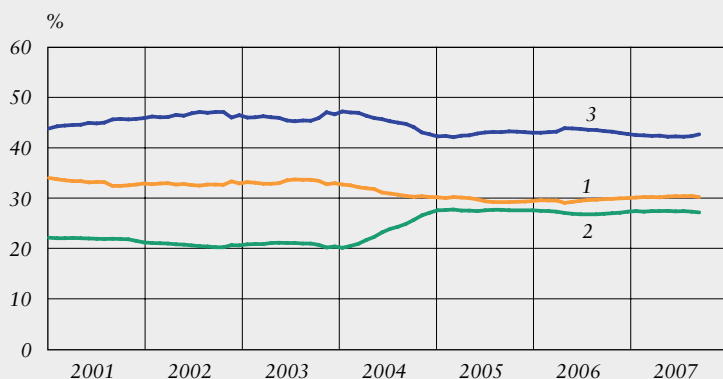


12-month moving totals, % of GDP

1. Services account (trade in goods, fob)
2. Income account

Source: Bank of Finland.

17. Regional distribution of Finnish exports

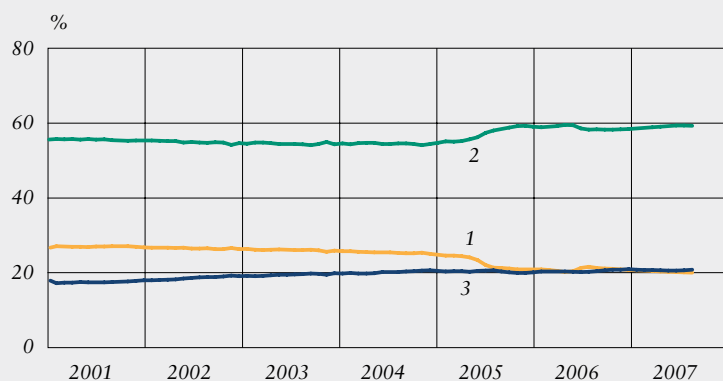


12-month moving totals,
percentage of total exports

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

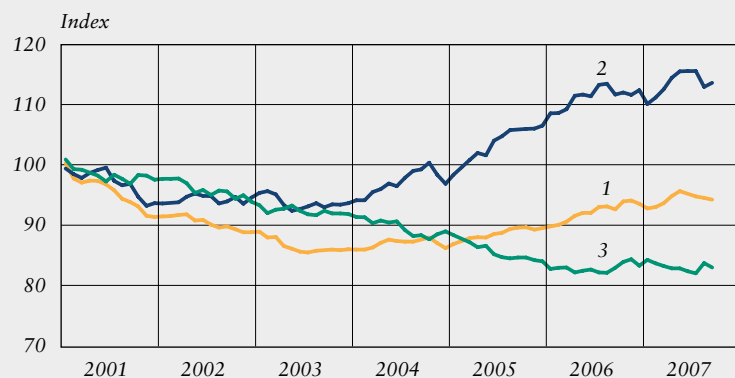


12-month moving totals,
percentage of total exports

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

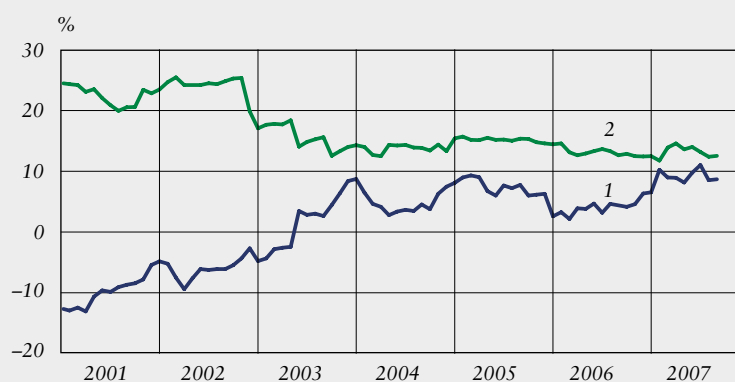


2000 = 100

1. Export prices
2. Import prices
3. Terms of trade

Source: Statistics Finland.

20. Finland's net international investment position



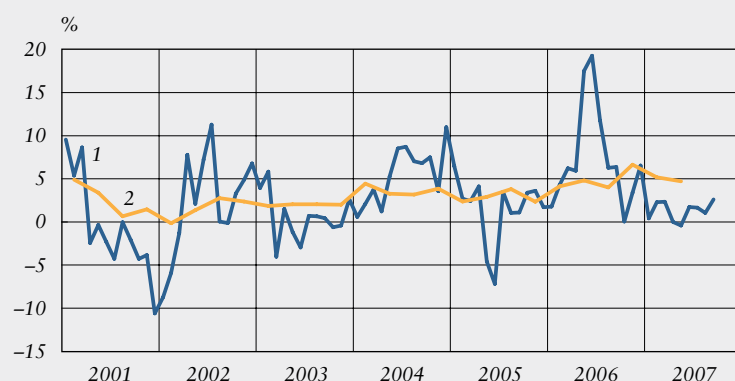
% of GDP

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



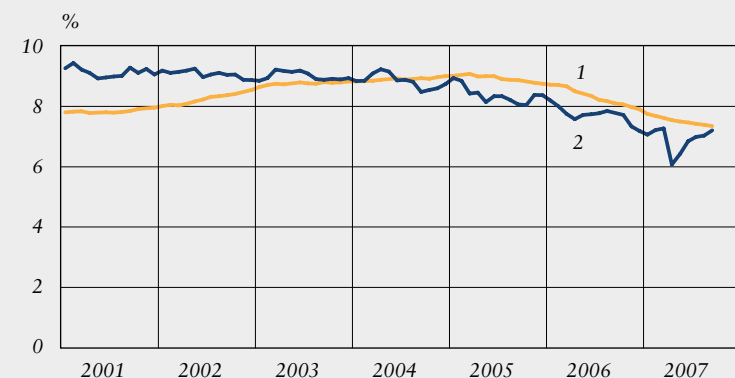
Percentage change from previous year

1. Industrial production

2. Gross domestic product

Source: Statistics Finland.

22. Unemployment rate in the euro area and Finland



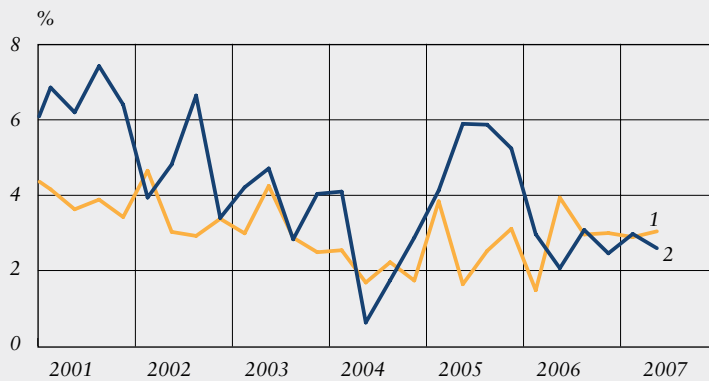
1. Euro area

2. Finland

Sources: Eurostat, Statistics Finland and Bank of Finland.

Data seasonally adjusted.

23. Hourly labour costs in the euro area and Finland



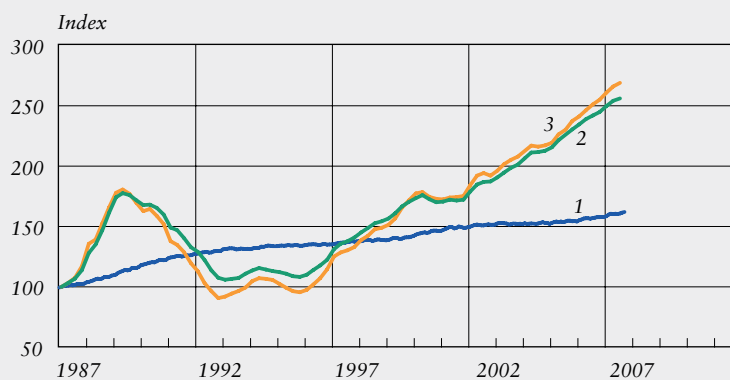
Whole economy excl. agriculture, public administration, education, health and unclassified services.

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

4 May 2007

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