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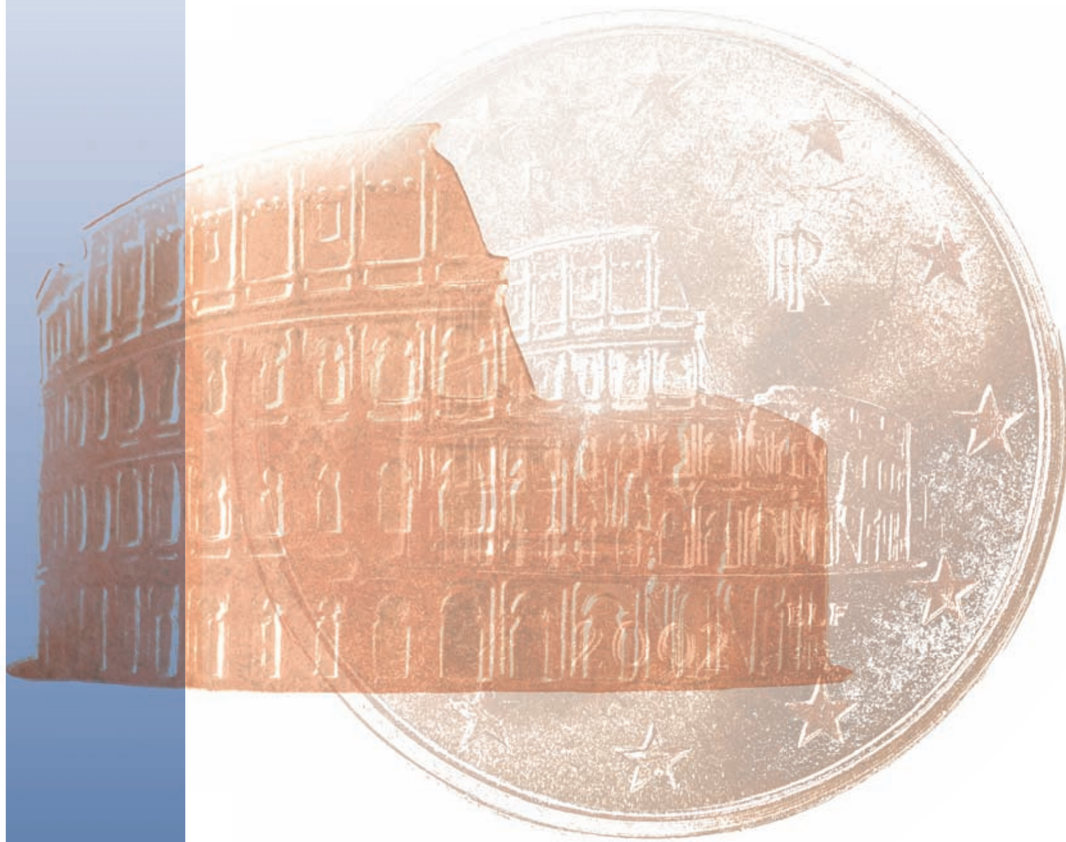

EUROJÄRJESTELMÄ
EUROSYSTEMET

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The cover picture depicts the national motif on the Italian 5 cent coin: The Colosseum, a Flavian amphitheatre in Rome.

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Monetary policy and economic outlook

29 May 2009

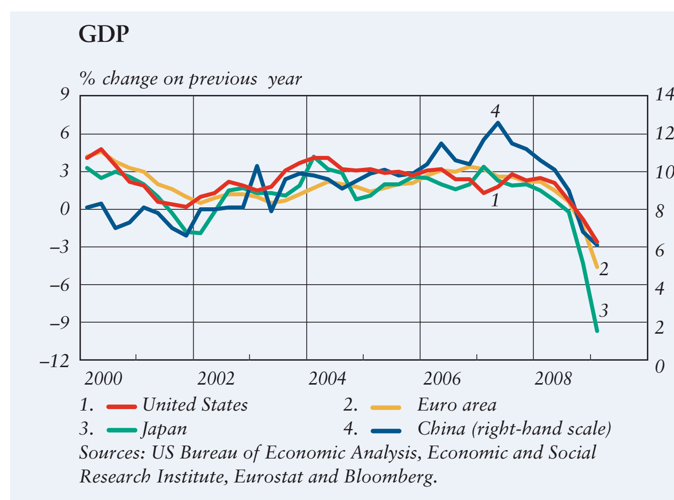
The deep recession in the world economy has continued in the early months of 2009. In developed economies such as Finland there has been a marked drop in the volume of output, while the economic situation has also deteriorated significantly in many emerging economies. The short-term outlook for the world economy is poor, although the steepest phase of decline would appear to be over. Inflationary pressures have receded in many countries, which has provided room for central banks to relax monetary policy.

The world economy began to deteriorate dramatically towards the end of 2008, and the difficult economic situation has continued in the early months of 2009. The decline in GDP accelerated in the first quarter of 2009 in the euro area, the United States and Japan (Chart 1). There was also a clear slowdown in growth in China. The deep recession in the world economy is due to the crisis on the financial markets in autumn 2008, the effects of which have had a rapid and widespread impact on the real economy. The performance of many emerging economies has also been considerably weakened as a result of the crisis, and there has been a particularly sharp contraction in output in some countries of Asia and eastern Europe.

When the financial market turbulence that began in summer 2007 in the US housing loans market developed into a crisis in autumn 2008 this resulted in a considerable decline in asset values, higher risk premia and weaker credit markets in all the main economic regions of the world. The crisis also significantly increased economic agents' uncertainty over future economic trends, triggering an increase in precautionary savings by households and cuts in corporate investment. Particularly striking was the decline in industrial confidence indicators through to the early months of 2009, accompanied by a marked contraction in industrial output as companies reduced their inventories amid an increasingly gloomy outlook for demand (Chart 2).

The weaker growth outlook for the world economy is also reflected in the most recent forecasts by international organisations. For example, the IMF forecasts that world GDP will contract by 1.3% in 2009, signifying the deepest peace-time recession since the 1930s. As recently as 2007 world

Chart 1.



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

GDP was growing at a rate of about 5%, and in 2008 at about 3%. Substantially slower growth is also forecast for emerging economies. The recovery from recession is forecast to be very sticky, with the world economy facing the risk of drifting into a sustained period of low growth.

Authorities all over the world have initiated rapid and extensive measures to guarantee the functioning of the financial system and stimulate recovery in the global economy. Financial institutions have been supported with capital investment and funding guarantees, public consumption and investment have been increased, in some places considerably, and a variety of support measures have been undertaken to assist households and businesses that have got into difficulties. In addition, central banks have reduced their policy interest rates to an exceptionally low level and considerably increased their lending to financial institutions.

In the last few months there have been some signs that the steepest phase of decline in the world economy is now over. This has been reflected in, for instance, the halt in the downward trend of many confidence indicators, an upturn in indicators measuring new orders, rising share prices and narrowing risk premia. As well as the aforementioned substantial measures of support from economic policy, the partial stabilisation has also been helped by companies' progress in adjusting their inventories. Weaker demand has driven many companies to reduce their inventories, which has in turn further fed the decline in industrial output. However, there are no signs of a rapid recovery in the world economy. Growing unemployment, the impaired functioning capacity of the financial system and the need to reduce the sizeable burden of debt accrued in recent years will all

Chart 2.

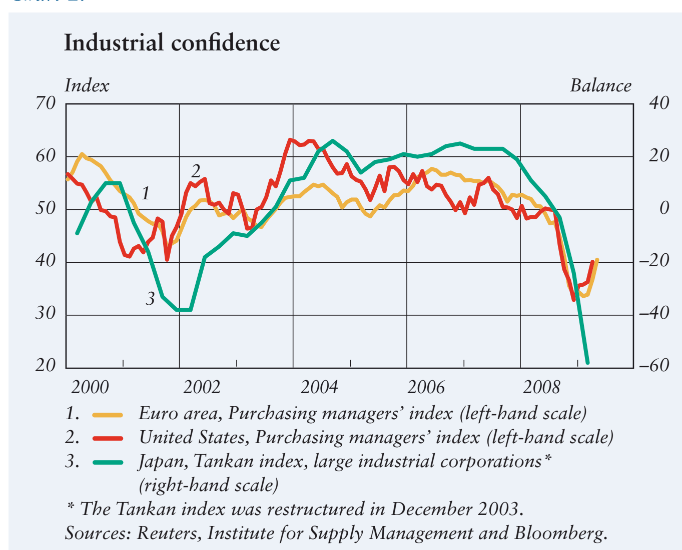
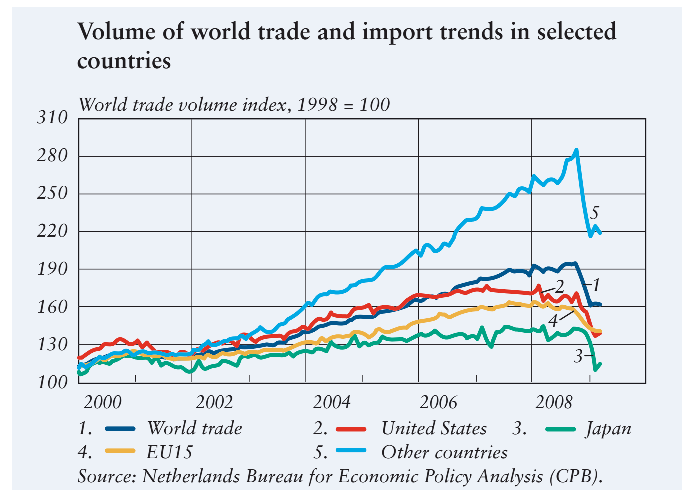


Chart 3.



serve to significantly dampen the recovery. There is also the risk that the rising loan losses caused by higher unemployment and increased bankruptcies will begin once again to undermine the position of financial institutions and their ability to lend.

The weakening economy has also been clearly reflected in world trade, which declined dramatically at the end of 2008 (Chart 3). Data from February–March 2009 nevertheless suggests the worst is now over. This is also suggested by shipping freight prices, which have shown signs of a tentative rise in recent months (Chart 4). A rapid recovery in world trade is, however, not foreseeable at present, and the aforementioned IMF forecast envisages a decline in 2009 of 11% on the previous year.

Finland's economic performance, too, has weakened considerably in the early months of 2009. The decline has been broadly based, but the global recession has hit Finnish exports and industrial output particularly hard. Difficulties in getting access to finance has, meanwhile, combined with subdued demand to cause a gloomy outlook for the construction sector. Although there are some signs of a slowing in the pace of GDP decline, the short-term outlook for the Finnish economy remains bleak.

Inflationary pressures receded

With the world economy in steep decline, there has been an easing of inflationary pressures in the main economic regions (Chart 5). Early 2009 saw the annual pace of inflation turn negative in Japan, China and the United States.

The rapid deceleration in inflation is above all a reflection of the dramatic fall in energy and other commodity prices that began in summer 2008 (Chart 4). In contrast, there has been no broadly based

Chart 4.

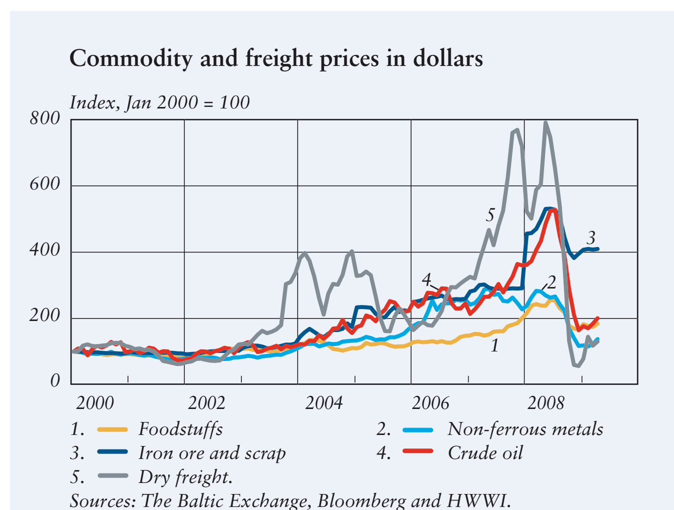
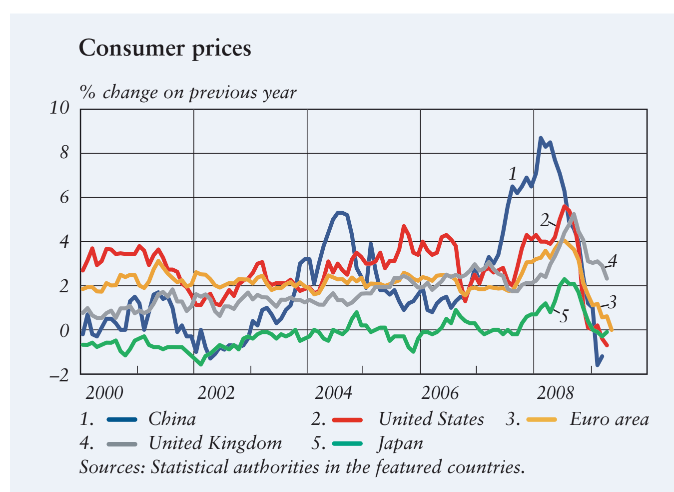


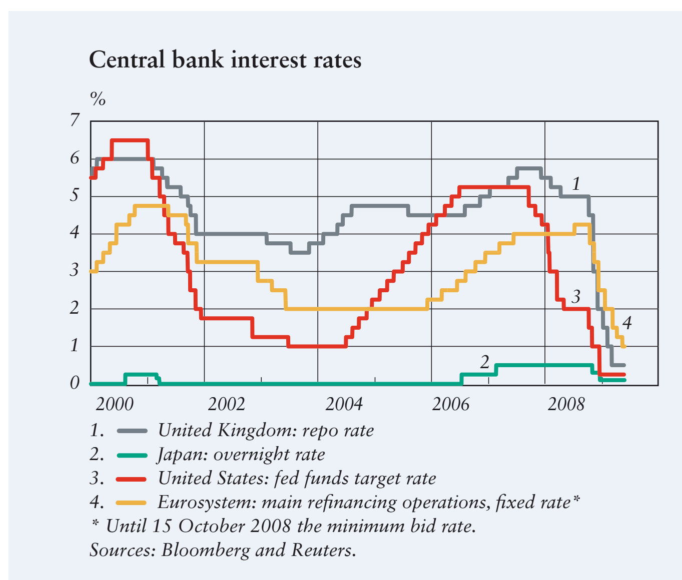
Chart 5.



decline in the prices of other goods and services. The declining trend in commodity prices also came to halt in the early months of 2009 as commodities producers cut output in the face of the weakened outlook for demand. In recent months there has even occasionally been a clear upward trend in the prices of many commodities, such as crude oil and copper. This reflects both the easing of the worst recessionary fears and the reduction in supply.

Consumer prices are likely to rise only slowly in many countries in the immediate months ahead. The deteriorating situation on the labour market and increasing underutilisation of manufacturing capacity will lead to less pressure for cost growth at the same time as demand for final goods remains generally weak.

Chart 6.



Substantial government support for the financial markets

In the early months of 2009, authorities in different countries have continued a range of measures to support the functioning of the financial markets. Capital investment and funding guarantees have been used in an attempt to secure the continuity of financial institutions' operations and lending. In the United States, the Department of the Treasury proposed in March 2009 a programme for the purchase of financial institutions' problem assets with a combination of private and public funds. At the same time, the Treasury announced it was to conduct stress tests on US financial institutions in an attempt to assess their capacity to cope if the economy were to perform even worse than expected (see also the article 'Financial stability in Finland' elsewhere in this journal).

Central banks have also continued measures to support the functioning of the financial markets (see Box). Of particular relevance here is the increase in liquidity extended to financial institutions and a growth in the variety of instruments used for lending. Central banks have also begun to directly support the operation of some segments of the financial markets by purchasing marketable securities. In addition, policy interest rates have been held at an exceptionally low level (Chart 6).

The European Central Bank has also continued its measures to support

the financial markets and foster economic recovery. It has continued to keep a high level of liquidity in the financial system. In May 2009, the ECB announced the introduction of a new long-term refinancing operation with a maturity of 12 months alongside the longer-term refinancing operations of 6-months maturity already in use. At the same time, the Governing Council decided in principle that the Eurosystem will purchase euro-denominated covered bonds issued in the euro area. It also decided to approve the European Investment Bank as a counterparty for Eurosystem monetary policy operations. The motivation behind these measures was to foster a reduction in money-market interest rates, encourage lending, boost the liquidity in key debt instrument markets and ease the financial situation of banks and other businesses.

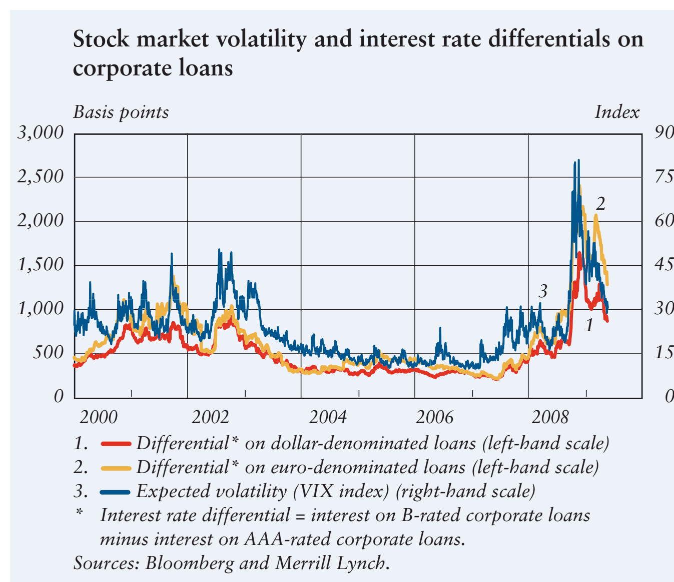
The ECB has also continued to lower its key policy rate. At present this stands at 1%. All in all, the rate has been cut by 3.25 percentage points since October 2008. This has been facilitated by the receding of inflationary pressures coupled with a serious deterioration in the euro area economy.

The substantial support measures implemented by the authorities have in recent months helped improve the situation on the financial markets and eased the worst fears of the crisis deepening further still. This has been reflected in, for instance, a narrowing of the interest-rate differentials between secured and unsecured loans on the interbank market, a general decline in the price of hedging against credit risk and a narrowing of risk premia on corporate debt instruments (Chart 7). In addition, according to central bank surveys of bank lending practices[1], financial institutions' terms of lending have no longer been tightening as rapidly in the euro area and the United States as they were just a short time ago.

The passing of the most difficult phase of the financial crisis has been reflected particularly clearly in share prices, which in recent months have begun to rise again in all the main economic regions (Chart 8). At the same time, measures of equity

[1] For more on the results of these surveys by the ECB and the US Federal Reserve see: www.ecb.int/stats/money/lend/html/index.en.html and www.federalreserve.gov/boarddocs/snloansurvey/200905.

Chart 7.



Stock market volatility and interest rate differentials on corporate loans

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

* *Interest rate differential = interest on B-rated corporate loans minus interest on AAA-rated corporate loans.*

Sources: Bloomberg and Merrill Lynch.

investors' uncertainty, such as the VIX index, which depicts expected future volatility in US share prices, have turned downwards (Chart 7). However, share prices are still low in comparison with before the financial crisis, and there remains a great deal of uncertainty over future trends.

The yields on long government bonds in the main economic regions have begun to climb gently in recent months (Chart 9). This is despite the fact that central bank support measures have meant short-term money market interest rates have remained very low. Long-term rates have apparently been pushed up by a combination of the growth in public sector debt and improved confidence in a gradual recovery in economic growth. Moreover, long-term inflation expectations have risen slightly amid reduced market fears of deflation, which has also contributed to the upward trend in long-term rates.

Chart 8.

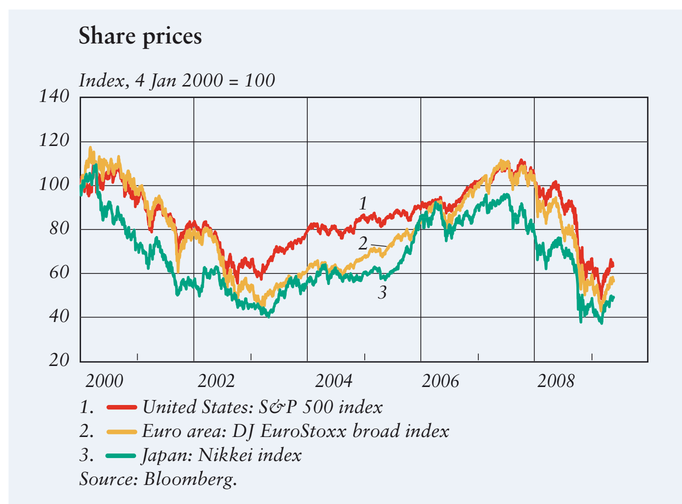
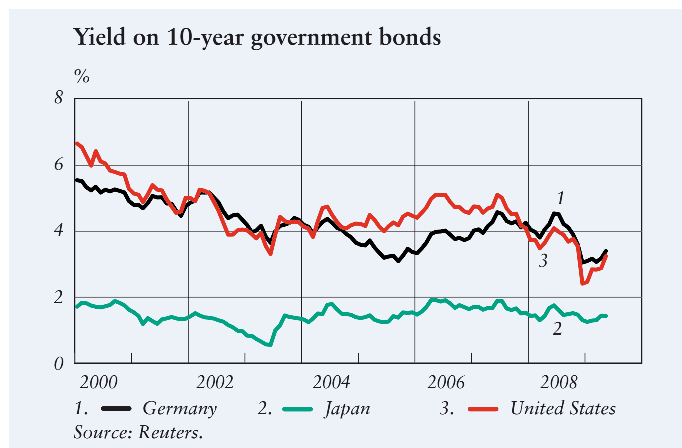


Chart 9.



There have been no major movements in exchange rates in the main economic regions in recent months. Measured by the nominal trade-weighted index, the values of the euro, the US dollar and the Japanese yen have remained close to their levels at the turn of the year. The financial markets' increased risk-taking propensity is reflected in the fact that the upward trajectory of the US dollar, traditionally seen as a safe investment, has come to a halt. As the worst fears of the crisis have eased, there has been a tentative rise in the currencies of many emerging economies that had previously been severely weakened.

US output continues to decline

According to preliminary data, the volume of US GDP in the first quarter of 2009 was 1.5% down on the previous quarter and 2.6% down on one year earlier. The decline in investment was particularly strong, with the weak economic outlook casting a shadow over companies'

production expectations and continued difficulties in accessing finance. Companies also continued to reduce their inventories. Meanwhile, private consumption began to grow slightly in the early months of 2009 following a sizeable decline in the second half of 2008. In the period ahead, however, the earlier drop in asset values, growing unemployment and increased precautionary savings can be expected to clearly dampen consumption demand.

Indicator data suggests the weakening trend in the US economy has recently eased slightly. For example, the steep decline in industrial, services and consumer confidence indicators that began towards the end of last year has bottomed out in recent months. Even so, most indicators remain at a very low level. A quick recovery in US growth can, therefore, not be expected.

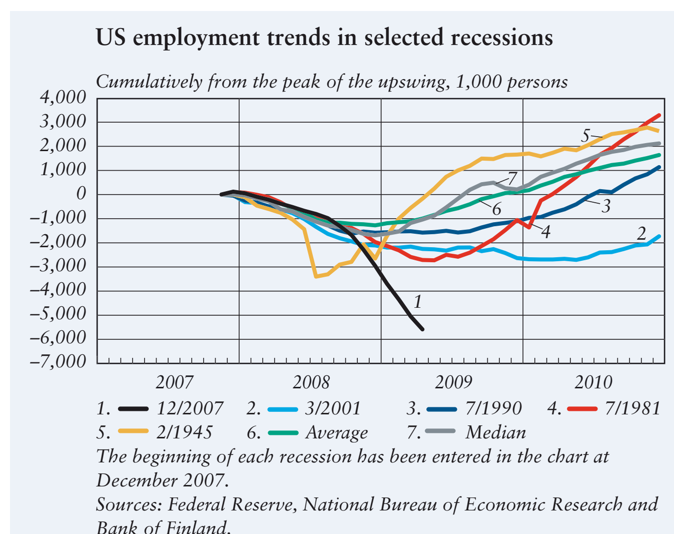
The situation on the US labour market has deteriorated dramatically in the early months of 2009. Since the end of 2007 there has been a loss of approximately 6 million jobs, which is more than in any previous recession since the Second World War (Chart 10). At the same time, there has been a clear rise in the unemployment rate, which stood at around 9 % in April. The US housing market also remains in poor health, although there are some signs of a pick-up in housing sales.

International organisations have recently lowered their short-term growth forecasts for the US economy. Despite substantial support from economic policy, the US economy is expected to contract by 3–4% in 2009 relative to 2008. Private consumption and, particularly, investment are expected to remain very sluggish.

Financial crisis also affecting Asia

Japan's economy has entered a deep recession. In the first quarter of 2009, volume GDP contracted 4% from the previous quarter, or approximately the same amount as at the end of 2008. The contraction in world trade has hit the Japanese economy very hard due to the traditionally strong role of exports in Japan. There has been a strong decline in export volumes in the early months of 2009, and industrial output has collapsed. The deteriorating state of the labour market and weak earnings development have, meanwhile, put a brake on private consumption

Chart 10.



The beginning of each recession has been entered in the chart at December 2007.
Sources: Federal Reserve, National Bureau of Economic Research and Bank of Finland.

growth. The Japanese authorities have therefore launched substantial fiscal policy measures in an attempt to reflate the economy. The latest forecasts by international organisations nevertheless foresee a substantial contraction in the Japanese economy in 2009.

The contraction in world trade has also had a major impact on other countries of Asia that are dependent on exports. For example, Singapore's volume GDP was 11% lower in the first quarter of 2009 than in the same period a year earlier, while in China, growth fell to 6.1% in the first quarter of 2009 from 6.8% in the last quarter of 2008. Despite the weakening outlook for exports, domestic demand has sustained a reasonable level of growth in the Chinese economy. In recent months there has also been a reawakening of growth in both industrial output and lending. This trend has been bolstered by support measures by the Chinese authorities aimed, for example, at boosting infrastructure construction.

The contraction in world trade has had a major impact on many countries in Asia.

Weak short-term outlook for euro area

Volume GDP in the euro area continued to contract strongly in the first quarter of 2009, falling 2.5% from the previous quarter and 4.6% from a year earlier. There was a substantial decline in all the large member countries of the area. The decline was particularly steep in Germany, 3.8% down on the previous quarter on top of contracting exports and investment.

The short-term growth outlook for the euro area remains bleak. Many indicators of business confidence fell to an exceptionally low level in the early months of 2009. An example was the industrial confidence indicator published by the European Commission, with declining order books depressing the industrial outlook. During the course of the spring, most confidence indicators have stopped declining. However, there are still no signs of rapid recovery.

The weak developments in the euro area economy partially reflect the difficulties being experienced by exporters. The value of euro area exports in January–March 2009 was approximately 20% down on the same period a year earlier. Exports are down to all the main export markets, but the decline has been particularly strong in exports to new EU member states. The depressed state of euro area exports has also had a hard impact on industrial output, which has been declining since the second half of 2008 (Chart 11). The need for companies to reduce inventories in response to the weakening demand outlook has further depressed output.

Although the retail trade figures would indicate private consumption in the euro area has not declined as steeply as industrial output (Chart 11), consumer demand has nevertheless been sluggish since the second

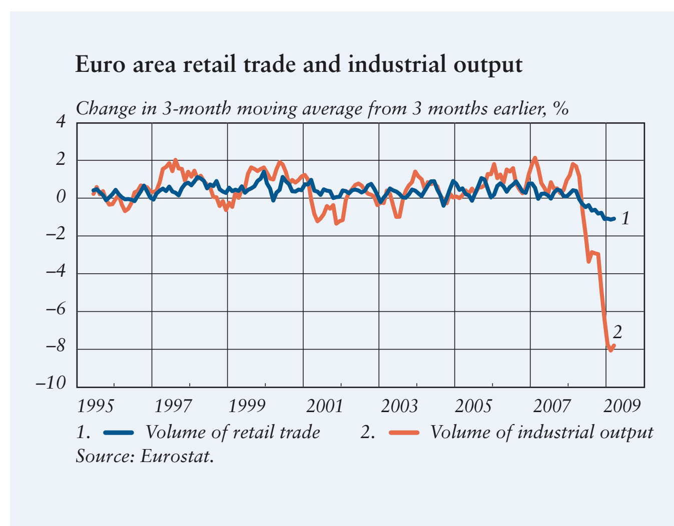
half of 2008. The deteriorating economic outlook and growing fears of unemployment have presumably caused households to increase precautionary savings, and even the boost to purchasing power from lower inflation has not stimulated an increase in consumption. Car sales have, however, received at least a temporary boost from the scrap programmes introduced in a number of countries, under which car owners have received subsidies to scrap their old vehicles and exchange them for new, more environmentally friendly models.

The deterioration in the euro area economy is also reflected on the labour market. The unemployment rate rose to almost 9% in March 2009, compared with around 8% as recently as the end of 2008. The number of employed also began to decline in the second half of 2008 for the first time in almost 5 years. The unemployment rate has risen in all the euro area's large members, although the increase has been less marked in Germany. In contrast, the labour market in Spain has deteriorated dramatically, particularly in the construction and service sectors, and the unemployment rate has risen rapidly to over 17%.

The most recent forecasts by international organisations foresee a marked contraction of the euro area economy in 2009. The European Commission, OECD and IMF expect a 3–4% decline in GDP, reflecting weakness in private consumption, investment and exports.

The rapid deterioration of the economic situation has also been reflected in public finances across the euro area. The general government deficit grew in 2008 to 1.9% of GDP, and for 2009 the Commission forecasts this figure will grow to as much as 5.3%. According to the Commission, the severe deterioration in public finances is mainly due to lower tax revenues, higher expenditure on unemployment benefits and the steps taken to stimulate economic recovery. At the same time, there will be a considerable increase in the level of public debt relative to GDP. Four euro area countries (Spain, Ireland, Greece and France) currently fall within the scope of the excessive deficit procedure.

Chart 11.



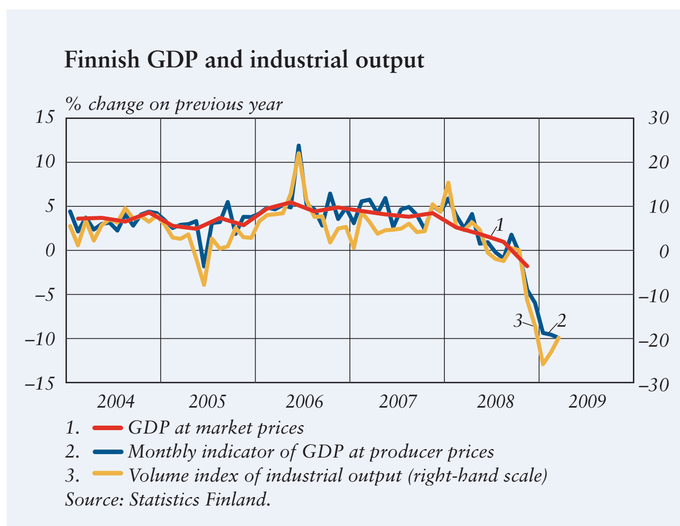
Euro area inflation slows significantly

Euro area inflation as measured by the harmonised index of consumer prices (HICP inflation) slowed in March–April 2009 to 0.6%. According to preliminary data, consumer prices in May were on average at the same level as a year earlier. The ebbing of inflation has been rapid, given that as recently as the end of 2008 it was still around 2%. The change can be attributed to the slower pace of inflation in food prices and the downturn in energy prices. In contrast, there has been no major change in the price trends for services or industrial goods.

The ebbing of inflation is due to the slower rise in food prices and the decline in energy prices.

The lack of demand and cost pressures in the euro area suggests that consumer price inflation will remain sluggish in the immediate months ahead. The annual change in HICP inflation will probably turn negative for a few months around the middle of the year due to the high level of energy prices during the reference period a year earlier. There are, however, no signs of a sustained, broadly based downward trend in prices in the euro area. Similarly, long-term inflation expectations derived from financial market data do not indicate a general decline in the level of prices.

Chart 12.



Finland's economy very weak in early months of 2009

According to indicator data, the Finnish economy contracted strongly in the early part of 2009. According to Statistics Finland's trend indicator of output, output in January–March was almost 10% down on the same period a year earlier (Chart 12). The reduction in economic activity has been broadly based and touched all key sectors of the economy. Recent indicator and statistical data nevertheless suggest the pace of the economic slowdown is easing.

The weakness of global investment demand was reflected in a sharp drop in Finnish exports and industrial output in the early months of the year. The value of exports declined by over a third, and industrial output by over a fifth in January–March compared with a year earlier. The decline has been broadly based. Industrial capacity utilisation rates have been much lower than normal. The flow of new orders has also clearly dried up, and

order books are declining. As well as a lack of demand, the decline in output is also partly due to companies' need to reduce their inventories. This will continue in the immediate future, as survey data indicates inventories are still higher than normal.

Construction has also been weak in the early part of the year, with difficulties in obtaining finance and sluggish demand. The statistics indicate that new construction has declined by a fifth, while the number of building permits issued has declined substantially in all the main segments of construction. Residential building starts are being held back by a plentiful supply of unsold new housing units. Besides the weak economic outlook, other construction is also restricted by the strong growth in the supply of business premises in recent years. Unsurprisingly, construction companies' short-term output expectations are bleak, and employment in the sector is expected to fall.

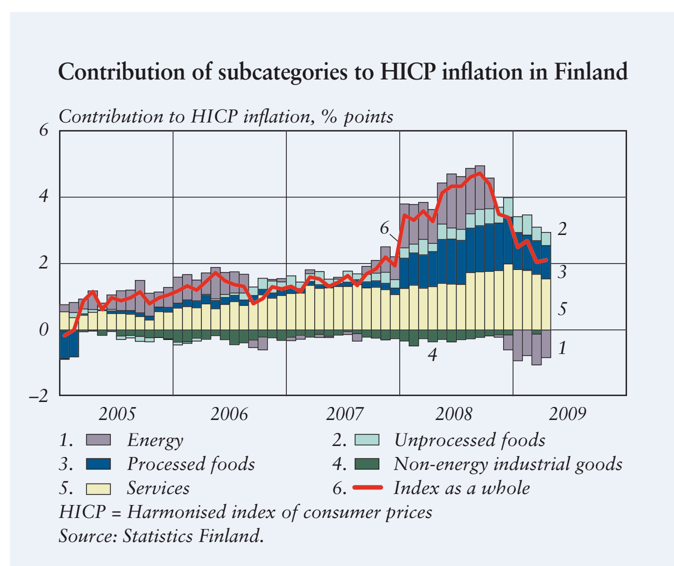
In services, too, the trend has been fairly weak, with growing unemployment and declining household confidence eroding consumption. Retail sales in January–March were over 4% down on a year earlier.

The difficult economic situation is also reflected on the labour market. In April, there were 68,000 more unemployed than a year earlier, and trend unemployment was up to 8.2%. This was accompanied by a continued decline in the number of unfilled job vacancies. In January–April, companies shed the same number of employees as in 2008 as a whole. There has also been an extremely rapid increase in the numbers laid off. Due to statistical practices, the unemployment figures do not include all those laid off.

HICP inflation in Finland slowed in the early months of the year. In April, it stood at 2.1% (Chart 13). Inflation has been subdued by the slower pace of food price inflation and falling fuel prices. Despite the clear deceleration in consumer price inflation, Finland's inflation remains above the euro area average.

Keywords: inflation, monetary policy, economic situation

Chart 13.



Box.

Non-standard monetary policy measures

The serious nature of the recession and the lowering of central bank rates to close to zero have forced central banks to turn to new tools to secure the functioning of financial markets and facilitate access to finance. In the first phase, the focus was on ensuring the liquidity and stability of the financial markets. The measures employed included a strong expansion in central bank credit extended to the banks, an extension of the range of securities accepted as collateral and of the counterparties for monetary policy operations, and a lengthening of maturities on the operations themselves. As the most serious threats to the financial markets have receded new measures have been employed to boost the liquidity of specific market segments or financial instruments, and more generally to increase the flow of finance to meet the needs of the real economy.

The central banks' non-standard measures have been reflected in strong growth in their balance sheets. For example, the European Central Bank's balance sheet grew from EUR 1,440 billion at the beginning of September 2008 to EUR 2044 billion at its height at the end of the year. With the interbank market recovering, the ECB's balance sheet has contracted to around EUR 1,800 billion in May 2009. Over the same period, the balance sheet of the US Federal Reserve has grown from USD 946 billion to around USD 2,200 billion, a rise of more than double.

Non-standard measures by the Fed

The Fed launched its non-standard monetary policy measures in September 2007, when it narrowed the difference between the interest rate on the marginal lending facility and its federal funds rate target and extended the maturity of the operations. At the same time, banks were offered a new credit channel with maturity periods of up to 3 months. The marginal lending facility was also opened to market makers, and they were given the right to borrow government debt instruments from the central bank against illiquid market instruments.

In October 2008, the Fed extended its liquidity support to commercial paper markets and to certain types of financial institution, such as money market funds. At their height in January 2009, purchases of commercial papers totalled approximately USD 350 billion. The stock of outstanding loans has since declined following a narrowing of risk premia. The Fed also began to lend against new asset-backed debt instruments. Collateral can include student loans, car loans, consumer loans and government-guaranteed small business loans. The range of debt instruments usable as collateral is being constantly extended, and loans granted could stretch to hundreds of billions of dollars.

The Fed has also begun to buy long-term securities from the markets, eg housing loans securitised by government-sponsored enterprises (GSE). As its most recent non-standard measure, the Fed announced in March 2009 that it would begin buying long-term (2–10 years) government securities, devoting USD 300 billion to this over the next six months. The objective is to lower interest rates on government bonds and thereby also reduce financing costs on the private credit markets. At this announcement, interest rates on government bonds fell 0.25–0.45 percentage points and corporate bonds of equivalent durations came down by almost the same amount. Also in March, the Fed increased its purchases of mortgage-backed securities from the USD 600 billion announced earlier to a new figure of USD 1,450 billion.

Non-standard measures by the ECB

The European Central Bank has also decided to employ non-standard monetary policy measures, even though its original arsenal of policy tools has been broader and more flexible than that of other central banks. In autumn 2007, the ECB began to extend to banks more liquidity than they required to fulfil their minimum reserve requirements. In April 2008, the policy arsenal was augmented by the addition of 6-month operations, and in autumn 2008 by the introduction of an operation equal to the

minimum reserve maintenance period (4–5 weeks). By the end of 2008, the share of finance distributed through longer-term refinancing operations had risen to 75% and the share of main refinancing operations of one week maturity had fallen to 25%, whereas under normal circumstances the ratio has been the opposite.

In September and October 2008, the financial market situation developed into a crisis and banks found it increasingly difficult to get market funding. At that time, the Governing Council of the ECB decided that as of 15 October the weekly main refinancing operations would be implemented at a fixed rate instead of the earlier floating rate system. Banks' bids were also to be approved in full. The fixed rate tender procedure was extended a little later to apply also to longer-term refinancing operations. The aim was to communicate that the ECB was prepared to distribute as much liquidity as needed to ease the liquidity crisis. This was a big change from the period prior to the financial market turbulence, when the ECB sought to distribute as precisely as possible just the amount of liquidity banks needed to fulfil their minimum reserve requirements. At the same time, the Governing Council decided to narrow the corridor formed by the interest rate on the marginal lending facility and the rate on the deposit facility from 2 percentage points to 1 percentage point. In addition, the list of assets eligible for use as collateral was temporarily extended until the end of 2009 and the minimum credit rating, which had previously been A-, was lowered to BBB-.

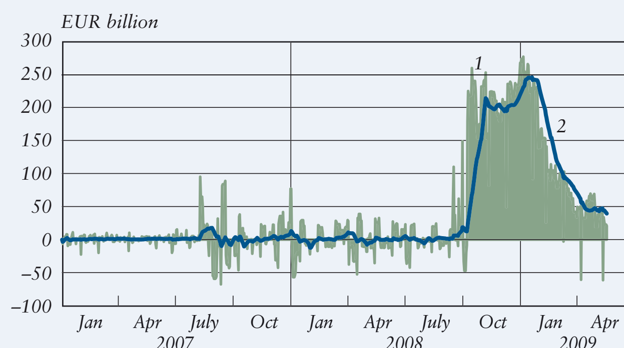
In January 2009, the corridor was restored to 2 percentage points, but already on 7 May, in order to preserve symmetry, the Governing Council narrowed it again, this time to 1.5 percentage points, when the main refinancing rate was cut to 1% (the rate on the marginal lending facility was cut to 1.75%, while the rate on the deposit facility was kept unchanged at 0.25%). At the same time, the Governing Council also decided on a new 12-month refinancing operation, the first of which will be conducted on 23 June 2009. The ECB also announced that the Eurosystem would begin purchasing covered bonds issued in the euro area to the value of approximately EUR 60 billion. More details were to be announced following the Governing Council meeting on 4 June 2009. The ECB also approved the European Investment Bank as a counterparty for monetary policy operations.

Impacts of the non-standard measures

The non-standard measures have dramatically expanded central banks' balance sheets. The assets side of the Fed's balance sheet has been expanded most by its securities purchases, over USD 500 billion since the beginning of February 2009. In the Eurosystem balance sheet, attention has been focused on banks' excess reserves with central banks, which, at their height, have exceeded the required minimum by over EUR 250 billion. The recovery of the interbank market has in recent weeks caused a significant reduction in the level of excess reserves (Chart).

Chart.

Excess liquidity in euro area banking system



1. Excess liquidity in euro area banking system*
2. 30-day moving average

*Deposits with the central bank – minimum reserve requirements + overnight deposits – loans from the marginal lending facility

Source: Bank of Finland.

In the United States, the Fed itself sets the target for expanding its balance sheet and also seeks to influence the composition of the securities in its possession. Measures are focused on stimulating recovery in those parts of the markets suffering from weak liquidity and a lack of confidence. Liquidity expansion and enhanced confidence are expected to lower market interest rates, which it is hoped will in turn have a positive impact on the terms of credit for households and businesses.

In the euro area, expansion of the ECB's balance sheet has primarily depended on decisions by the commercial banks. The different approaches are due in part to differences in the financial markets: in Europe, banks still play a key role in financial intermediation, whereas in the United States their role has declined in the face of the growing importance of other market participants and securitisation. The ECB's decision in May to begin buying covered bonds from the markets extends its monetary policy arsenal in a direction where the central bank seeks to facilitate the activities of certain segments of the financial markets by boosting their liquidity and fostering a narrowing of risk premia.

Financial stability in Finland

28 May 2009

The financial crisis that began as a liquidity crisis has broadened to become a deep worldwide recession. The global financial system is still vulnerable, and the forecast growth in loan losses places a burden on banks' profitability, capital adequacy and ability to lend. Against this backdrop, Finland's financial system has performed fairly well. The financial crisis means slower integration of the financial sector and financial markets. The ability of Finland's relatively small financial sector to provide finance for domestic households and companies will be strained if Finnish companies experience prolonged difficulties in accessing finance they previously got from the financial markets or from abroad.

International operating environment

The outlook for the world economy has become gloomier as the financial crisis has broadened to become a worldwide economic crisis.[1] GDP declined in 2009 in most of the major economic regions. Growth is forecast to remain sluggish for at least 2010.

The focus of the crisis has shifted to the real economy, while the international financial system is continuing to function inadequately. As a result of the crisis, financial markets and financial institutions are less able to provide the finance needed by households, businesses and government.

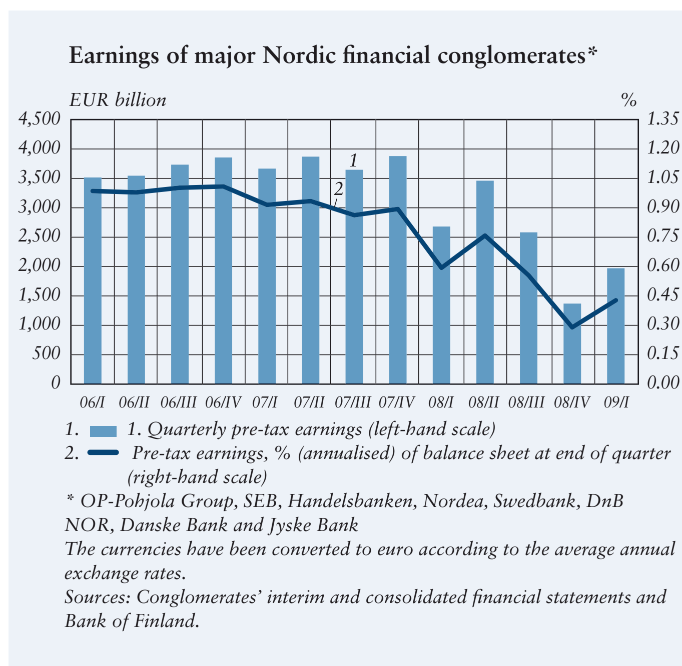
Banks' ability to lend is hampered by their weakening profitability, the expensiveness of long-term funding, expected write-downs and loan losses and the need to improve their capital adequacy and reduce their levels of debt.

The average profitability of large globally operating US and European banks declined dramatically in 2008, particularly in the final quarter. Earnings were hit most by portfolio write-downs and a decline in fee income. However, in the first quarter of 2009 these banks' average earnings showed some improvement, largely due to growth in securities-market-related earnings. It is, however, unclear how permanent this improvement in earnings capacity will be and to what extent it merely reflects temporary factors. The combined earnings of large Nordic financial groups in the first quarter of 2009 were also rather good considering the current conditions (Chart 1).

The strong deceleration in economic growth presages a considerable increase in banks' loan losses in the immediate years ahead. Estimates of the scale of loan and impairment losses due to the financial crisis have been constantly growing. The IMF estimated in April 2009 that the cumulative losses by banks and other financial institutions on loans granted and securities issued in the United States will rise over the period

[1] See the article 'Monetary policy and economic outlook' elsewhere in this publication.

Chart 1.

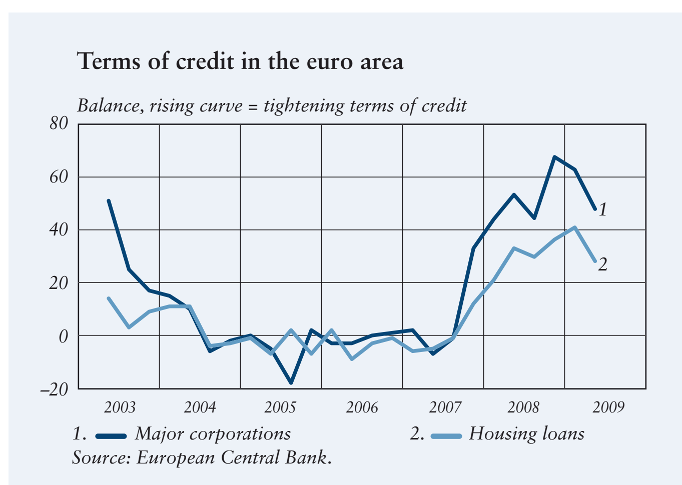


Earnings of major Nordic financial conglomerates*

1. 1. Quarterly pre-tax earnings (left-hand scale)
2. Pre-tax earnings, % (annualised) of balance sheet at end of quarter (right-hand scale)

* OP-Pohjola Group, SEB, Handelsbanken, Nordea, Swedbank, DnB NOR, Danske Bank and Jyske Bank
The currencies have been converted to euro according to the average annual exchange rates.
Sources: Conglomerates' interim and consolidated financial statements and Bank of Finland.

Chart 2.



Terms of credit in the euro area

1. Major corporations 2. Housing loans
Source: European Central Bank.

2007–2010 to USD 2,700 billion.[2] As recently as October 2008 the estimate was just slightly over a half of this figure. The scale of equivalent losses on loans granted and securities issued in Europe the IMF estimated at almost USD 1,200 billion.

The steps already taken by banks and authorities, and those planned for future implementation, to recapitalise the banks and clear their balance sheets of toxic items will perhaps still not be enough. The US Federal Reserve and its banking supervisors recently conducted stress tests to assess the possible losses and capital adequacy of the United States' 19 largest financial groups in the event of the economy developing more weakly than currently forecast in 2008–2010.[3] The results indicate that the groups require a total of USD 75 billion of new capital to meet the supervisors' requirements.

A stress test of the banking sector is also being conducted in the EU, involving a limited number of Europe's largest financial groups. The test is based on a scenario of weaker-than-expected economic developments prepared by the Committee of European Banking Supervisors (CEBS), and its implementation is the responsibility of financial supervisors at national level. The goal of the test is to provide the authorities of EU countries with additional data on the capacity of the EU banking system to withstand losses. Stress tests have long been a regular part of banking supervision at national level.

[2] IMF Global Financial Stability Report (April 2009).

[3] The Supervisory Capital Assessment Program: Overview of Results. Board of Governors of the Federal Reserve System (7 May 2009).

The operating capacity of the financial system is currently facing numerous risks. The worst scenario would be a credit slump in which banks would have to radically limit their lending and tighten the terms on which they lend. Lending criteria in the euro area are already tight (Chart 2). On the other hand, there is as yet no sign of any rationing of bank finance. There is, however, a danger that the current readjustment[4] by banks towards a lower level of debt could cause a serious contraction in their lending, particularly if the measures taken to support their capital adequacy turn out to be insufficient.

As a result of the financial crisis, financial institutions have increasingly focused on serving their domestic customers. International investors have withdrawn from many market areas. In Europe, this has impacted most severely on the countries of central and eastern Europe. In a worst-case scenario, the financial crisis could cause a prolonged slowdown in the integration of the European financial sector and markets, and thereby weaken long-term economic growth in Europe. It is therefore essential that the measures currently being undertaken in European countries to support the financial sector provide an equal incentive for banks to support their customers operating in the single market.

[4] See Box 1 in Bank of Finland Bulletin special issue Financial stability 2008.

Recovery from recessions linked to financial crises similar to the present one has typically been a very slow process.[5] The need to redress the imbalances and reduce the over-indebtedness that have built up in the world economy will weaken the opportunities for growth globally for many years ahead.

Domestic operating environment

The Finnish economy has also run into difficulties as the world economy has waned. Both exports and overall output have declined rapidly, and companies have strongly reduced their inventories and cut their investments. The decline in investments has reduced companies' need for outside finance. The financial crisis has also changed the structure and sources of finance for Finnish companies, with debt finance acquired from domestic financial institutions growing in significance relative to finance acquired directly from the financial markets or from abroad (Chart 3).

The possible prolonged slowdown in the progress of financial integration presents a challenge for the functioning of the Finnish financial system. As a consequence of the financial crisis, access to finance from the financial markets or foreign financial institutions could become difficult for a prolonged period, and

[5] See eg Reinhart, C & Rogoff, K (May 2009) The aftermath of financial crises. American Economic Review.

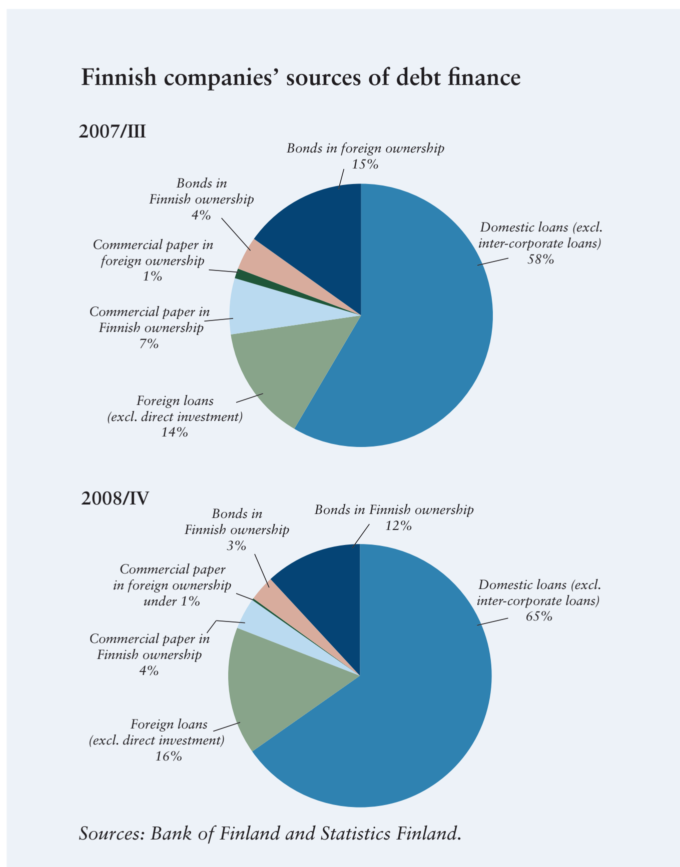
Access to finance from the financial markets or foreign financial institutions could become difficult for a prolonged period.

this could significantly increase demand for domestic financial services. Both the banking sector and the domestic financial market in Finland are relatively small relative to the size of the national economy. The capacity of the Finnish financial system as a financial intermediary could prove to be inadequate when demand for finance from businesses and households eventually begins to recover.

The financial position of major Finnish companies deteriorated suddenly in late autumn 2008 when there was a dramatic fall in demand for their commercial papers[6] issued on the domestic market. Once the financial crisis had come to a head in autumn 2008, investors began to redeem their assets from money market funds, which are among the largest buyers of commercial papers. This resulted in a rapid contraction in the investor base for commercial papers. As companies use commercial papers to fund short-term financing needs, such as the need for working capital , they urgently needed an alternative source of finance. For this they turned to domestic and foreign banks, for instance using credit lines agreed earlier. The increased demand for bank credit from large companies threatened to displace small and medium-sized enterprises from banks' loan counters, particularly in view of the simultaneous difficulties experienced with corporate bond issues and the withdrawal of foreign banks from the Finnish loan market.

The authorities launched several measures to secure the financial needs of Finnish companies. For example, the supply of finance to companies via Finnvera, a state-owned finance company specialising in eg export finance, was increased, and the State Pension Fund was granted limited authorisation to use funds for the purchase of commercial papers issued

Chart 3.



Sources: Bank of Finland and Statistics Finland.

[6] Commercial papers are short-term, unsecured and publicly unlisted debt instruments issued mainly by large companies. Finnish companies have issued commercial papers primarily on the domestic market.

by important financially sound Finnish companies. The bottlenecks in corporate finance would appear to have been eased by a combination of these measures and more subdued demand for finance. Uptake of the new forms of finance has been brisk in the early months of 2009.[7]

The cyclical situation for Finnish companies and the outlook for the future are exceptionally gloomy. By early spring 2009, the number of bankruptcy applications had still not dramatically increased (Chart 4). However, the volume of problem loans and bankruptcies can be expected to increase considerably in the future.

Consumers' confidence in their own financial position and the state of the Finnish economy was almost as weak in the early months of 2009 as in the recession years of the early 1990s. There was admittedly a slight recovery in confidence in March and April, although the figure measuring the perceived threat of personal unemployment was in March 2009 at its lowest level for the period 10/1995–4/2009.[8]

The increased pessimism and uncertainty among consumers and the growing threat of unemployment are reflected in households' financial behaviour, with assets being shifted into what are perceived to be safe investments, particularly bank deposits. In similar vein, there has been a decline in applications for credit. The volumes of new household loans since October 2008 has been below the average for recent years (Chart 5). Moreover, a large proportion of new loans are actually renegotiations of existing loan

Chart 4.

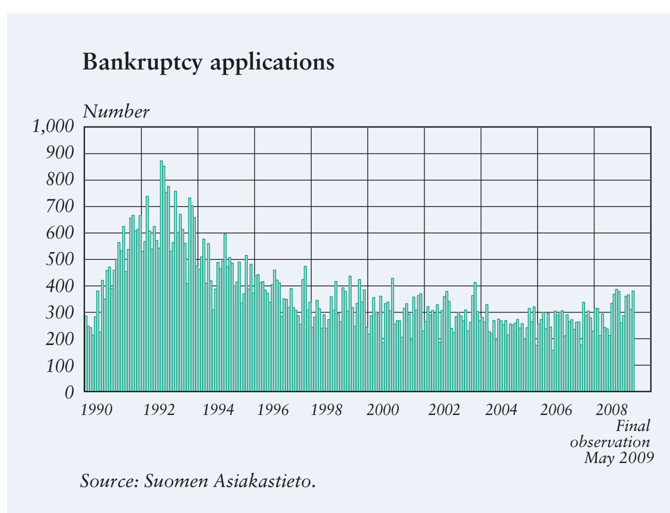
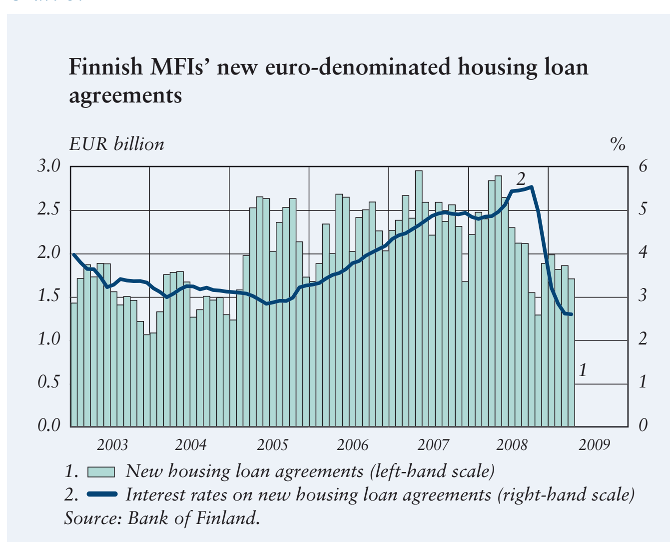


Chart 5.



[7] Finnvera press release, 31 March 2009.

[8] Statistics Finland's consumer confidence indicator.

agreements.[9] Many households changed the reference rates on their loans to short-term market rates after

[9] The figures for new housing loans include new loan agreements taken out during the course of the month plus new loan agreements created by renegotiation of the terms of existing loans.

Chart 6.

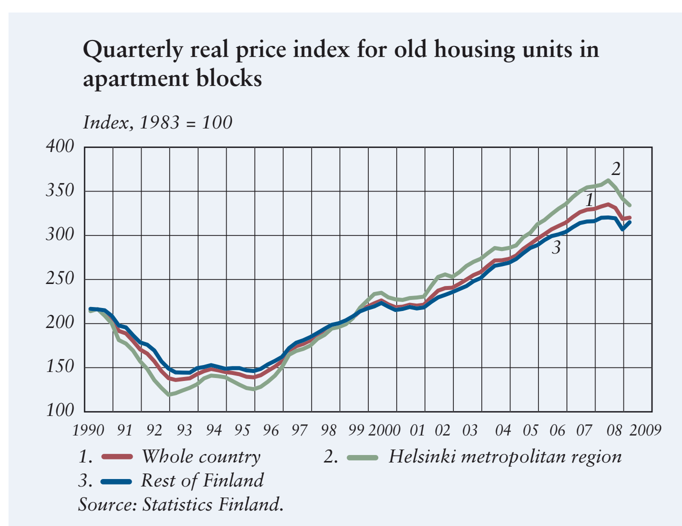
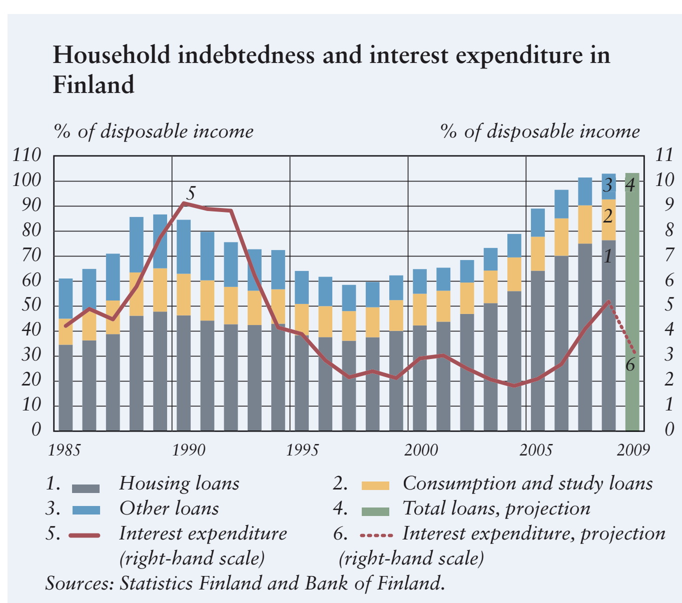


Chart 7.



the steep downturn in market rates in October 2008.

The deteriorating economic situation and the decline in house prices have caused some households to postpone planned sales or purchases of housing (Chart 6). Lower interest rates and the possible release of pent-up housing demand do, however, appear to have boosted housing sales just recently. Consumers also clearly see the present juncture as being more favourable for taking out a loan than the end of 2008.

Declining employment and growing unemployment are weakening households' ability to manage their debts. The amount of non-performing bank loans to households relative to the total stock of loans is still very small, but is rapidly rising. On the other hand, lower lending rates are easing the debt-servicing burden on households (Chart 7). Nevertheless, loan losses for the banks from household credit will inevitably rise from the low levels of recent years.

Banking and insurance sector

The present financial and economic crisis can, on the basis of current knowledge, be interpreted as comprising three partially overlapping phases. The first phase was a liquidity crisis. This came to a head in autumn 2008, when the US invest bank Lehman Brothers sought refuge from its creditors and many global financial groups had to apply

for public support. Central banks and governments adopted coordinated non-standard measures to prevent collapse of the financial system.[10]

We are currently in the second phase of the crisis, in which the most acute phase of the liquidity crisis is over and the situation has broadened out into a worldwide recession. In Finnish banks, as elsewhere, this phase is reflected in lower demand for credit and other financial services, a decline in customers' creditworthiness and a narrowing of interest margins. Central banks have brought their key policy rates down to a record low level, and market rates have, after some delay, followed the decline in policy rates. Changes in market rates are quickly reflected in the interest margins and earnings of Finnish banks (Chart 8), because most bank lending is linked to either market rates or the banks' own prime rates.

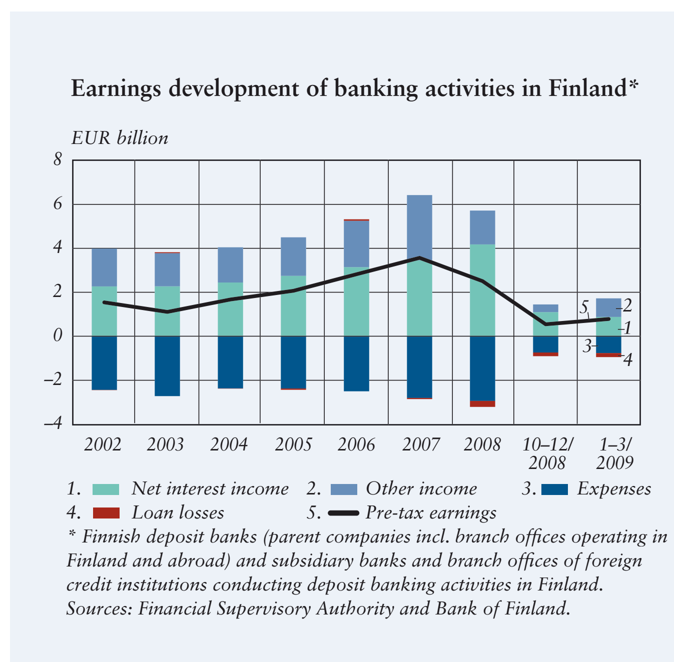
The narrowing of interest margins will continue in the second half of the year. The change in market rates will gradually feed through into the average rate for the banks' loan stock as a whole as the interest rates on individual loans come due for review. Banks have widened the margins on new loans, thus supporting the level of interest margins as a whole. Even so, new loans represent only a very small proportion of banks' total loan stock, so the changes will have only a slight overall impact in the short term on banks' interest income as a whole.

The forecast developments in the economy suggest banking profitability and capital adequacy will remain reasonable. The stress tests conducted in spring 2009 by the Bank of Finland and the Financial Supervisory Authority indicate that the Finnish banking sector would cope satisfactorily in the event of significantly weaker-than-forecast economic developments (see Box).

In the third phase of the financial crisis, banks' loan losses will begin to grow and undermine their capital adequacy. Loan losses typically follow changes in GDP after a relatively long delay.

Chart 8.

Earnings development of banking activities in Finland*



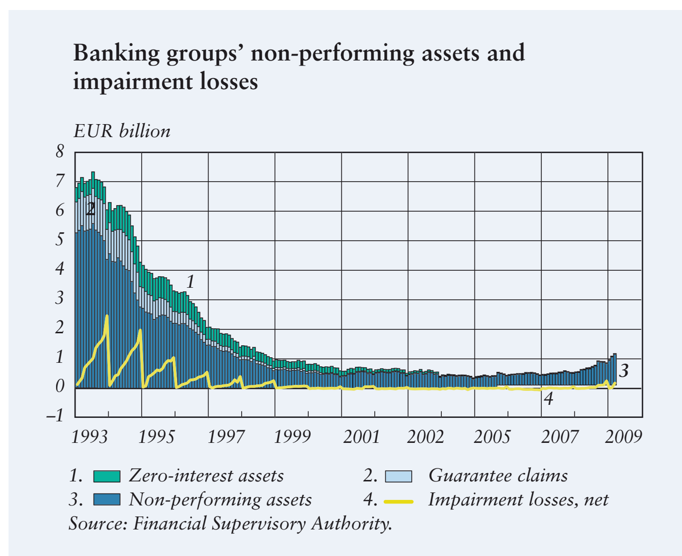
** Finnish deposit banks (parent companies incl. branch offices operating in Finland and abroad) and subsidiary banks and branch offices of foreign credit institutions conducting deposit banking activities in Finland.*
Sources: Financial Supervisory Authority and Bank of Finland.

[10] See Bank of Finland Bulletin special issue Financial stability 2008.

Unsuccessful supervision or inadequate resources on the part of supervisors in the home country could mean taxpayers in the host country having to bear the costs of saving a branch office of a credit institution that is in crisis.

The loan losses of Finnish banks are still fairly negligible, but based on the growth in the amount of non-performing loans they will already be growing considerably before the end of the present year (Chart 9). The forecast trend in the economy nevertheless suggests that loan losses will be much smaller than during the recession of the 1990s. There are a number of reasons for this. Interest rates are at present lower than during the recession years of the 1990s, which will help bolster debtors' ability to manage their loans. Unemployment is expected to grow less than in the 1990s. Finnish companies and households have hardly any foreign currency loans, which caused large loan losses in the 1990s. Moreover, corporate balance sheets were stronger going into the present crisis than before the recession of the 1990s.

Chart 9.



Source: Financial Supervisory Authority.

The long-term impacts of the financial crisis on the business and risk management of financial sector companies, on the financial markets and on regulation and supervision will not become clear until the crisis is over. The financial system will be more stable but less efficient for some time after the crisis as financial regulation is tightened and financial companies and investors' appetite for risk declines.

The crisis could also have long-term implications for the structure of banks' foreign business. The EU's single market in banking is based on the principle that a credit institution licensed to operate in one member state can freely establish branches in other member states (single passport principle). Supervisory responsibility for a bank's foreign branches lie with the authorities in the member state that issued the licence (home country). Meanwhile, the authorities in the country where the branch is located (host country) are responsible for the stability of their national financial system.

From the perspective of the host country, the risk of the branch office structure is that taxpayers in the host country could ultimately be forced to bear the costs of unsuccessful supervision or inadequate resources for crisis management on the part of home country authorities. The present financial crisis has shown that this is a real threat. Even before the present

crisis, the Bank of Finland had demanded the strengthening of the position of host country authorities in EU legislation on access to information on foreign branches and supervisory cooperation.[11] And the position of host country authorities has subsequently been strengthened.

Financial market infrastructure

Payment and settlement systems have continued to perform reliably during the current exceptional conditions on the financial markets. In Finland, as elsewhere, the situation has been more stable during the early months of 2009 than in autumn 2008. Both market participants and authorities have understood the critical importance of the systems and reviewed their actions accordingly. Finland's domestic payment and settlement systems have functioned with only negligible, if any, disturbance. There has been no shortage of the liquidity required of participants for the systems to operate properly, which demonstrates that banks operating in Finland have continued to manage their liquidity risks with appropriate care.

Pan-European efficiency projects include the Single Euro Payments Area (SEPA), the TARGET2 payment system, which has been up and running for over a year already, and the TARGET2-Securities (T2S) project[12]. SEPA projects are both authority-driven and market-driven. The projects are progressing at different speeds, but it is generally understood on all sides that the trouble taken and the related investments are essential now in order to reap the benefits in the future. TARGET2 has already demonstrated its reliability during its first year of operation, contributing thereby to the stability of the markets.

The merger of the Finnish Central Securities Depository (APK) with the Euroclear group was expected to bring substantial liquidity savings over time, with the group's securities depository activities being transferred to a single settlement platform and settlement system activities being based on consolidated management of euro liquidity. Now, however, the achievement of savings looks uncertain, as Euroclear looks set to continue to maintain several separate systems. APK will have to choose one of three platforms located outside Finland. In doing so, it will need to consider which of the solutions would best serve the financing needs of Finnish companies, particularly bearing in mind the threat that the financing capacity of the financial system could be limited as the economy begins to recover. An

[11] See Box in the article 'Financial stability in Finland', Bank of Finland Bulletin 2/2007.

[12] TARGET2-Securities creates a single technical platform that will enable European central securities depositories to settle securities transactions in central bank money. T2S services will begin to come on-stream in 2013.

The competitiveness of the Nordic stock markets will be strengthened by the introduction of central counterparty services.

The present crisis has shown the importance of paying special attention to concentrations of risk in the financial market infrastructure.

operating model based on several settlement platforms located in many different countries cannot be allowed to increase the costs for users. APK will also have to ensure the usability and reliability of the system. On a longer-term perspective, the linking of the Euroclear group and APK to the T2S project is both important and to be welcomed. Finnish market participants and authorities should seek, particularly via pricing and system functionalities, to ensure that the project brings benefits to users.

The explosive growth in OTC derivatives, particularly credit derivatives, has been mentioned as one of the causes of the financial market crisis. Trading in this segment grew so quickly that there was no time to organise reliable settlement. There has been considerable pressure globally to create a sufficiently reliable and transparent settlement infrastructure for credit derivatives trading, and the first central counterparties have already launched their operations. Central counterparty (CCP) clearing is considered to enhance the transparency of OTC derivatives markets.

On the stock markets, central counterparty clearing makes for more efficient operations by enabling the multilateral net settlement of obligations arising from several different marketplaces. This enhances the opportunities for competition between marketplaces. Under current plans, trades conducted on the Helsinki stock exchange are to be settled from autumn 2009 via several European CCPs. This will strengthen the competitiveness of the Nordic stock markets. The willingness of competing CCPs to operate reliably and with uniform arrangements would reduce risks and help bolster competitiveness.

Authorities should indeed pay increasing attention to the fact that the operating environment is increasingly composed of pan-European – and even global – operators. The clarification of a variety of interdependencies is also being attempted in the evaluation of the business continuity of systemically important payment systems currently underway within the Eurosystem. In Finland, the evaluation is focussing on the systems for large-value payments and retail payments. The dispersed nature of Finnish payment systems means that a failure by one participant does not endanger the entire system. Although the Finnish infrastructure will with time be partly displaced by services provided from abroad, Finnish authorities should still be equipped to influence continuity planning and crisis management as necessary. Good governance requires a transparent infrastructure. Authorities need to be aware of infrastructure operators' strategies and governance practices. Good governance also caters to the needs of the end users of the service.

Among its other functions, the Bank of Finland participates in market development. The structure of the domestic capital markets is changing, and it is important to recognise the opportunities for development offered by modern technology, innovative services and business models. As the infrastructure becomes ever more international, however, the demands on participants threaten to become tighter, and the pricing of infrastructure services is one of the key factors the shape the structure of the market. The largest market participants can enjoy economies of scale, whereas small participants are unable to compete equally for volume discounts. This can easily lead to a multi-tiered infrastructure in which the risks become concentrated. The present crisis has shown that concentrations of risk should be given special attention in development projects and macroprudential supervision. Official support and guidance is very important, but in the end it is the markets themselves that will decide – within the boundaries set by legislation – both the direction of integration and the desired structure of the market.

Although authorities often develop the markets through regulation, an alternative solution could be procedural harmonisation, the achievement of common standards or recommendations. In the reform of the Securities Markets Act launched by Finland's Ministry of Finance, the need for change is being reviewed based on the experience of the financial crisis and market changes. The new legislation will seek to achieve cost-effective regulation in a period of market reorganisation.

Official measures to foster stability and efficiency in the financial system

The authorities have used non-standard measures to get a grip on the financial crisis. Central banks have supported banks' liquidity by relaxing the terms of their lending to banks. They have brought key interest rates to a very low level. Some central banks have used more unorthodox methods, such as direct purchases of securities, in order to pump life into the paralysed financial markets.[13] In May 2009, the ECB announced it was prepared to purchase euro-denominated covered bonds issued in the euro area to the value of EUR 60 billion.

In addition to fiscal stimulus measures, governments have also extended capital support and guarantees to banks to facilitate their long-term funding. In Finland, the government has, for instance, offered government guarantees on new debt instruments issued by Finnish banks. These guarantees are subject to a charge. To date, no Finnish bank has taken up this offer. Finnish banks are

[13] See Box 'Non-standard monetary policy measures' in the article 'Monetary policy and economic outlook' elsewhere in this publication.

Financial regulation needs to become more effective in subduing excessive borrowing, indebtedness and risk-taking.

also to be offered the opportunity to augment their original own funds with preferred shares from the government.

The scope for supporting the financial system through fiscal policy and traditional interest rate policy has shrunk, as there is hardly any room left for a further reduction in policy rates and many countries are currently running very large government deficits. On the other hand, banks in many European countries have made little recourse to the public support measures that have been offered to them. The need for capital and other public support in Europe is, however, still an open question.

In the longer term, the authorities will have to enhance the capacity of financial regulation and supervision to prevent financial crises. Several of the reforms already implemented or still planned address gaps revealed by the present crisis, such as the overly light supervision of investment banks, the complexity of new financial instruments or the distorted incentives for credit-rating agencies.

In economic history, overindebtedness in key economic sectors and abnormally high asset prices have preceded most serious financial crises. Regulation and supervision have been unable to prevent the formation of debt and asset price bubbles. Financial regulation needs to become more effective in subduing the excessive borrowing, indebtedness and risk-taking that are often associated with economic upswings. The institutional and market focus of present-day financial supervision, meanwhile, should be supplemented by macroprudential supervision, in which the key objective is to recognise at a sufficiently early stage the emergence of risks to the stability of the financial system as a whole.

A worldwide overhaul of financial supervision and regulation has begun. At EU level, the de Larosière Group, which considered how to take financial supervision and regulation forward, proposes the establishment in connection with the European Central Bank of a new body with responsibility for macro-prudential supervision, the European Systemic Risk Council (ESRC). Its job would be to identify risks to financial stability at an early stage and, where necessary, issue instructions to other EU bodies and national authorities to combat these risks. The European Commission has expressed its support for the de Larosière Group's proposals.

In order to strengthen company-level supervision of the financial sector, the de Larosière Group proposes the establishment of a European System of Financial Supervision (ESFS) based largely on the present supervisory structures. This would involve the EU's present committees of supervisors being replaced by three new EU-level authorities. The present committees

do not have legally binding powers of decision; the powers of the new authorities would be much greater. The goals of the new supervisory and regulatory bodies would include improvements to the cooperation between the supervisory authorities of member states.

Taking broader account of financial stability in regulation and supervision would be a worthwhile development. However, the current plans contain some challenging elements. Macroeconomic cycles typically vary from one country to another. Thus, ideally, the macroprudential perspective should be taken into account differently in different countries. It could be hard to take proper account of national macrostability issues in EU-level macroprudential supervision and financial regulation. Therefore, national authorities should still continue to improve their capacity to identify stability risks to their national financial systems.

The European Commission is also seeking to improve the tools of financial crisis management, which are in many countries inadequate. Both EU and national authorities are to be equipped with greater powers to intervene in the activities of problem banks at a sufficiently early stage. In addition, EU countries' deposit guarantee schemes require harmonisation.

Good cooperation between the authorities in different countries and market participants is essential in crisis situations in order to prevent the easy spread of protectionism, the halting of integration and losses in economic efficiency benefits. Numerous current decisions and plans are integrating Finland's financial markets in a more concrete way than before with EU markets. The financial crisis nevertheless threatens to shape the integration projects, and both the authorities and market participants should therefore strive to ensure that Finland can take full advantage of the benefits of these projects now and avoid having to bear the costs of change all over again.

In regulation, it is important to ensure both that critical market participants can be effectively supervised and that authorities are able to cooperate effectively together. As well as the reform of the Securities Markets Act. regulation should also be used to develop a domestic securities market that can meet the financing needs of Finnish companies, eg by removing obstacles to securitisation. In the present situation, regulation should be examined from the perspective of the financial crisis and market changes.

Keywords: financial system, stability, banking sector, securities markets, payment and settlement systems

The powers of the new supervisory authorities proposed by the de Larosière Group would be much greater than the present powers of existing authorities.

Box.

The spring 2009 stress tests

The Bank of Finland and the Financial Supervisory Authority made calculations in April and May on banks' risk-bearing capacity. One set of calculations was carried out on the basis of forecast economic developments, while others were based on a much weaker recession scenario. The baseline scenario accords with the economic forecast published by the Bank of Finland on 24 March.[1] In the baseline forecast, Finland's GDP contracts 5% in 2009 and a full 1% in 2010. The economy begins to grow again in 2011. The forecast economic trend expects banks to remain profitable, although much less so than before.

A much gloomier stress scenario was also calculated for the Finnish economy in the years 2009–2011. In this, exports are assumed to collapse. In addition, both investment and consumption demand would be much weaker due to an unusual degree of caution on the part of consumers and businesses. The imagined stress scenario is much more severe than the stress tests on individual banks carried out in the United States in the spring. In 2009, Finland's real GDP would contract 8%. Since independence, the Finnish economy has never declined as quickly as this in peace time, not even in the recession of the early 1990s. In 2010, the decline in the economy would slow, and in 2011 there would be zero growth. Market interest rates would already become extremely low at the beginning of the forecast period.

The calculations were based on banks' latest balance sheet and earnings data (as at 31 December 2008). With regard to share prices and interest rates, it was possible to take account of developments until the end of March 2009.

In the hypothetical stress scenario banks' net interest income would decline by about a half in 2009 and further still in 2010, beginning to recover only in 2011. Most of the banks' loan stock is comprised of floating-rate loans, which means falling market rates would be priced into the old loan stock fairly rapidly in accordance with the terms and conditions of the loans. In contrast, deposit rates cannot become negative, and hence cannot completely adjust to the decline in market rates. In this hypothetical situation, demand for credit would decline, as would the stock of deposits, and the contraction in key balance sheet items would accelerate the decline in net interest income. The balance sheet changes would, however, be much less significant than the impact of interest rates.

This scenario contains the assumption that share prices would decline by over 40% in 2009, and a few per cent more in 2010–2011. This would cause the banks impairment losses, but the negative impact on earnings would be fairly marginal. In addition, fee income from securities, funds and investment activities would decline by around a half. The decline in other fee income would be smaller.

Growth in loan losses would weaken banks' financial results. According to the model used in the calculation, the situation would be at its worst in 2010–2011: in both years there would loan losses on around 1½% of the loan stock. This is a smaller proportion than in the early 1990s, as the extremely low interest rates would mean the present situation would be easier for borrowers. Devaluation of the markka in 1991–1992 caused serious difficulties for people who had taken on foreign currency loans. Nowadays, the level of bank lending in currencies other than the euro is negligible, and hence very few borrowers have significant currency risks.

In the hypothetical stress scenario almost all banks would record losses throughout the

[1] *See Bank of Finland Bulletin special issue (1/2009), Economic outlook.*

forecast period. These losses would erode their capital, but the banking sector's capacity to absorb losses is at the outset highly satisfactory. At the end of last year, the combined capital of the banks included in the calculations exceeded the compulsory minimum required under capital adequacy regulations by over EUR 8 billion. The deteriorating economy means the risk weightings on loans in the banks' capital adequacy calculations would become higher, but the decline in the loan stock would work in the opposite direction to reduce the capital requirements.

The banking sector as a whole would be able to use its capital buffers to cope with the hypothetical recession scenario. It is worth noting that the impact calculations included the assumption that banks would not take any extraordinary actions despite their losses. It is clear that, in a real situation, banks would seek in various ways to cut their costs and in this way improve their financial results.

A number of sensitivity calculations were also carried out with slightly different assumptions on interest rates and credit demand. These did not significantly alter the conclusions to be drawn from the stress test.

Banks' income statement data from the first quarter of 2009 is now available. In the light of this new data, the realisation of the stress scenario appears less likely than when the calculations were carried out.

Ten years of common monetary policy

20 May 2009

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The European Central Bank was established on 1 June 1998 and has been pursuing an independent monetary policy for the past ten years, since January 1999. The Governing Council of the ECB set itself the objective of securing price stability in the euro area, defining this as the rate of general increase in prices remaining below 2% in the medium term. It has been successful in this objective in spite of strong shocks that have affected price developments from time to time. Inflation expectations have remained anchored in line with price stability. The monetary policy framework defined by the ECB in order to implement its monetary policy has ensured an effective steering of interest rates and liquidity in the euro area. The framework has also proven very flexible in the challenging context of the present international financial crisis.

ECB monetary policy

The European System of Central Banks (ESCB) consists of the European Central Bank (ECB) and the national central banks of the member states of the European Union (EU). The ESCB operates in accordance with the Treaty establishing the European Community and the Statute of the European System of Central Banks and of the European Central Bank and under the management of the ECB's decision-making bodies. The Governing Council of the ECB defines monetary policy, and the Executive Board implements it in accordance with the decisions and guidelines of the Governing Council. The ECB and the central banks of the EU member states that have adopted the euro comprise the Eurosystem. To the extent possible and appropriate, and if necessary to ensuring efficient operations, the ECB can use national central banks to carry out operations falling within the scope of the Eurosystem. The monetary policy operations of the Eurosystem are undertaken on identical terms in all member states.

The primary objective of the Eurosystem as determined in the Treaty is to maintain price stability. Without prejudice to this primary objective, the Eurosystem is also expected to support the general economic policies of the European Community. In pursuing these objectives, the Eurosystem must act in accordance with the principle of an open market economy with free competition, favouring the efficient allocation of resources.

Definition of monetary policy strategy

When the Governing Council of the ECB began its activities in 1998, it defined price stability in the euro area as an annual increase of less than 2% in the Harmonised Index of Consumer Prices (HICP) in the medium term. A quantitative definition of price stability clarifies monetary policy decision-making, increases its transparency and steers

inflation expectations. The objective has been set for the medium term. This provides for flexibility in monetary policy in connection with disruptions in production, and takes account of the fact that monetary policy cannot even out every shock affecting price developments. In 2003, the Governing Council further specified its strategy by announcing that it would aim to keep the inflation rate below, but close to, 2% in the medium term. According to this definition of price stability, deflation, or a general decline in the level of prices, is inconsistent with price stability. Setting the upper limit of inflation well above zero corrects the impact of the positive measurement error exaggerating inflation that is present in the measurement of inflation.

The monetary policy of the ECB includes an analysis of risks to price stability. The approach used by the ECB to conceptualise, evaluate and compare information relevant to the analysis of the risks to price stability is based on two perspectives of analysis. These are called the two pillars: the key role of the money supply (1st pillar) and a broad analysis of inflation prospects (2nd pillar). The Governing Council confirmed and further clarified this approach in May 2003 by instituting two mutually complementary aspects of analysis to conceptualise the information relating to the determination of price stability. The first, the economic analysis aspect, is used to evaluate developments in the real economy and the financial markets in the short and medium term. The second, the monetary analysis aspect, makes use of information on the long-term relationship between the money supply and prices.

The ECB seeks to meet its price stability objective by extensive analysis of the risks to price stability.

The analysis of the real economy focuses on GDP, demand, labour markets, a range of price and cost indicators as well as fiscal policy and the balance of payments for the euro area. The estimates of experts on the economic prospects for the euro area play a key role. They are based on a scenario derived from technical assumptions. At the outset, one of these technical assumptions was that short-term interest rates would remain constant. This assumption has been replaced since June 2006 by short-term market expectations of future interest rate developments. In this way the assumed monetary policy is consistent with price stability, while monetary policy shocks do not affect the estimates of future economic prospects.

Monetary analysis makes use of data on asset prices and returns on financial instruments. Assessments of future price developments calculated on the basis of financial market performance are one of the indicators of risks to price stability. Inflation expectations are also measured with consumer and business surveys and consensus estimates. Deviations in inflation expectations from a position consistent with the definition of price

stability reflect potential credibility issues relating to the conduct of monetary policy. Inflation expectations and estimates of future price developments by Eurosystem experts are of key importance for economic analysis and determination of the monetary policy stance.

Besides the long-term relationship between the money supply and prices, monetary analysis also concerns the institutional characteristics of the financial and credit institution sector and developments in the counter-items of monetary aggregates, particularly loans. At the same time, the reference value set for development of the money supply has become less important, this being a growth rate of M3 considered consistent with price stability in the medium term.

The ECB's main monetary policy instrument is the weekly main refinancing operations.

In recent years, economic analysis and monetary analysis have converged due to increased utilisation of financial sector balance sheet statistics and statistics describing the development of the credit markets. Any escalation of imbalances in the financial markets or ballooning of asset price bubbles may generate uncertainty in economic developments, financial market stability and, eventually, prices.

Economic and monetary analyses ensure that different views are taken appropriately into account and that an overall assessment of the risks to price stability can be made. When the economic situation is interpreted from two different points of view, it reduces the risk of mistakes in monetary policy decision-making due to excessive reliance on any single indicator, forecast or model.

Monetary policy instruments

In order to achieve its objectives, the Eurosystem has at its disposal a range of monetary policy instruments. It conducts open market operations, provides a standing facilities system for its counterparties and requires that credit institutions keep minimum reserves on accounts with Eurosystem central banks.

Open market operations adjust interest rates, respond to liquidity needs in the markets and communicate the monetary policy stance. The main instrument for expressing and implementing the monetary policy stance is the weekly main refinancing operations. These are collateralised loans (reverse transactions) to increase liquidity, whose manner of implementation has varied from variable-rate to fixed-rate auctions. At present, the maturity of the operations is one week. In addition, the ECB has made longer-term 3-month reverse financing operations on a monthly basis. Besides reverse transactions, the Eurosystem may also conduct direct transactions, issue debt obligations, make currency swaps and collect term deposits (Chart 1).

The lending and deposit rates in the standing facilities system form an interest-rate corridor that determines the range of the overnight market

rate (Chart 2). The marginal lending facility allows counterparties to satisfy temporary liquidity needs by taking out overnight liquidity from the national central banks against eligible collateral. Under normal circumstances, the interest rate on the marginal lending facility constitutes an upper limit for the overnight market rate. The deposit facility, meanwhile, enables counterparties to make overnight deposits at the central banks. Under normal circumstances, the interest rate on the deposit constitutes a lower limit for the overnight market rate. By ensuring the availability of liquidity to credit institutions, the Eurosystem secures the smooth operation of financial markets.

The Eurosystem's minimum reserve system applies to credit institutions in the euro area, and its primary purpose is to even out money market rates and create a need for structural central bank finance. The purpose of the averaging related to the minimum reserve system is to facilitate the stabilisation of money market rates by encouraging institutions to even out the impacts of temporary fluctuations in liquidity.

The monetary policy rate

The ECB implements monetary policy through open market operations and the standing facilities system. The monetary policy stance is expressed by the Governing Council of the ECB primarily through its interest rate

Chart 1.

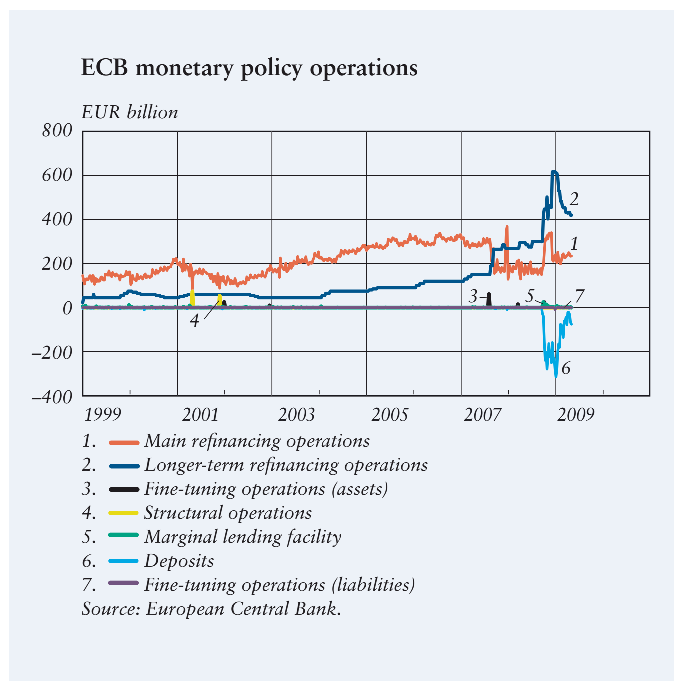


Chart 2.

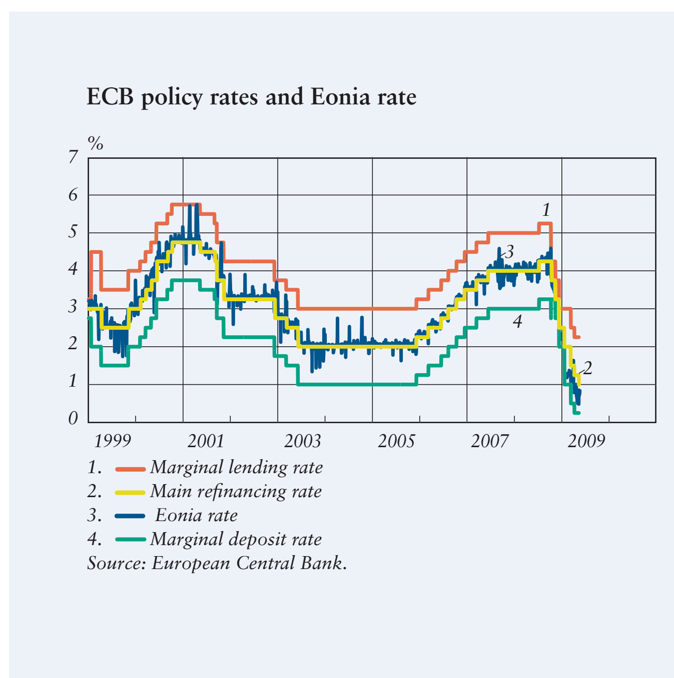


Chart 3.

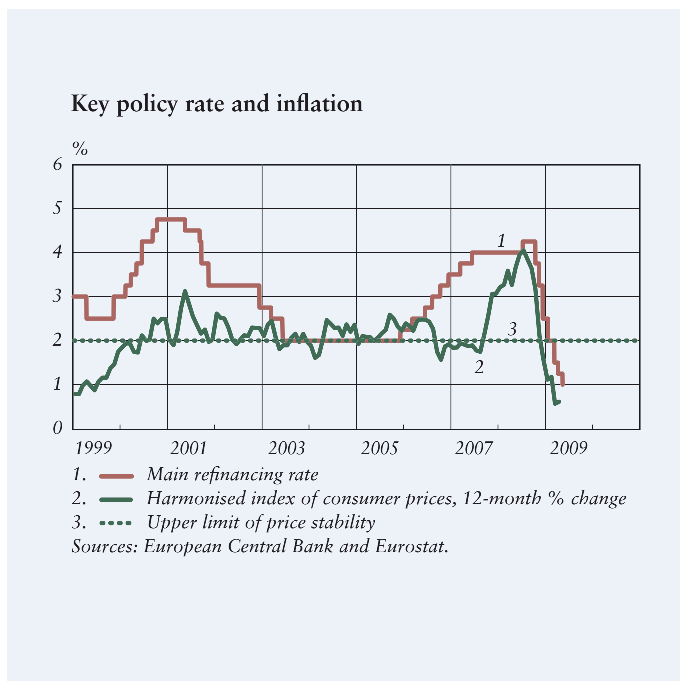
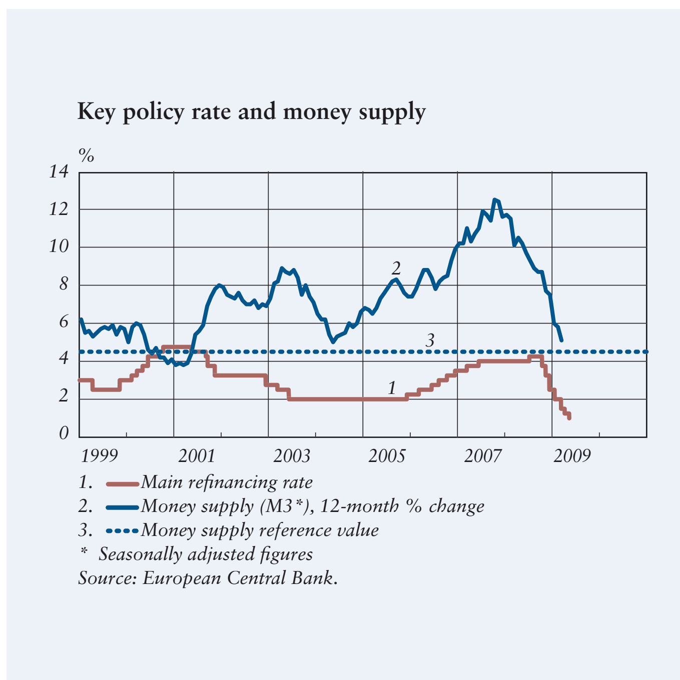


Chart 4.



policy. Since the establishment of the ECB, its key monetary policy rate has been the rate on the main refinancing operations or minimum bid rate.

By adjusting the price of short-term money the central bank can influence the state of the financial markets, tightening or loosening it. The central bank's interest rate decisions are impact on the economy via several channels. The most important is the interest rate channel: the policy rate and expectations of its future development are reflected in both short-term and long-term nominal market rates. The policy rate and inflation expectations together determine, through aggregate demand, the development of long-term real interest rates, which in turn have an impact on the development of the real economy. Another monetary policy channel is the credit channel, which has an impact through the volume of bank lending and the real price of credit. By influencing demand for goods and services, the central bank influences the development of prices in the economy. The effect of monetary policy operations on price development is usually only visible after a long period, since the channelling of monetary policy takes place in several phases including a range of different mechanisms and economic agents. Since the extent and strength of the impact may also vary according to the economic situation, it is difficult to assess precisely. The adjacent charts (Chart 3 and Chart 4) illustrate the

main variables for the implementation of the ECB's monetary policy and the monetary policy strategy, namely interest rates, inflation, the upper limit of the definition of price stability, the money supply and the related reference value.

Since the establishment of the ECB, the monetary policy rate has been at its highest in October 2000, when it stood at 4.75%, and at its lowest in May 2009, at 1%. Annual HICP inflation in the euro area has varied between 0.6 and 4.0%. It was at its highest in June 2008 and at its lowest in April 1999. Average inflation in the euro area in 1999–2008 has been 2.2%. Price fluctuations have been affected most by variations in the price of food and energy. Annual growth in the broad money aggregate (M3) in the euro area has ranged from 4.9% (in 2000) to 11.1% (in 2007) and has averaged 7.4% in 1999–2008.

When the ECB began operating, it faced a situation of diminishing price risks, and in April 1999 it cut the policy rate from 3% by 0.5 percentage points. In the second half of 1999 and the early months of the following year, inflation began to accelerate in line with increasing oil prices, and, in the wake of economic growth, the upward risks to inflation increased. As monetary analysis also pointed in the same direction, the ECB increased its policy rate by 2.25 percentage points between November 1999 and October 2000. The annual increase in prices peaked in May 2001, when inflation reached 3.1%. The acceleration in inflation was due to an unexpected increase in the prices of energy and, particularly, unprocessed foodstuffs as uncertainty relating to the spread of animal diseases pushed up food prices.

In the aftermath of the terrorist attack on 11 September 2001, global economic growth began to slow and monetary policymakers the world over emphasised the importance of ensuring the smooth operation of financial markets. Thereafter, the risks to price stability gradually decreased and the ECB cut its policy rate to 2% by June 2003. In 2000–2005, inflation in the euro area was slightly higher than a rate consistent with the definition of price stability, ranging from 2.1 to 2.3%. Economic growth in the euro area slowed to well below potential growth, touching a low of 0.9% in 2002. In addition, geopolitical tensions in the world economy sustained the downside risks to growth. Exceptionally large variations in the subcomponents of monetary aggregates and alternative investments that occurred during this period made interpretation of the money supply a difficult process.

Economic growth in the euro area began to pick up in mid-2003 in the wake of global economic growth. Growth in the money supply also began to accelerate gradually and MFI lending increased, while interest rates remained low. An increase in the

Inflation in the euro area has ranged from 0.6 to 4.0%. Price fluctuations have been affected most by variations in the price of food and energy.

amount of liquidity together with strengthening economic growth gradually began to increase the upside risks to price stability. In order to secure price stability in the euro area, the Governing Council of the ECB increased the policy rate between November 2005 and June 2007 by 2 percentage points to 4%. In 2006–2007, fluctuating energy prices meant there were also increased variations in the rate of inflation, but HICP inflation remained at an annual level of 2.2% and 2.1%, respectively. Towards the end of 2007, inflation began to rise well above a level consistent with the definition of price stability, due particularly to an increase in oil and food prices. Although inflation expectations did not increase correspondingly, the ECB assessed that the upside risks to price stability had increased. Stability was particularly threatened by risks from second-round effects of a potential spiral of price and wage increases. Economic growth in the euro area accelerated to 2.6% in 2006 and 2.7% in 2007 due to strong domestic demand.

The financial market crisis sparked in August 2007 from the collapse of the US subprime mortgage loan markets significantly increased the uncertainty surrounding economic developments. It was hard to assess the impacts of the financial market crisis on the real economy. At the same time, rapid growth in the money supply and lending indicated the existence of upside risks to prices. In order to prevent second-round effects, the ECB increased the policy rate further, to 4.25%, in July 2008.

In September 2008, after the bankruptcy of the Lehman Brothers investment bank, the economic outlook changed at unprecedented speed. World trade and household confidence collapsed and uncertainty about the state of financial institutions increased despite massive public support measures. Economic growth in the euro area remained at 0.8% in 2008, and the forecasts for growth in 2009 are clearly negative. Inflation in 2008 was 3.3% on average, but has slowed significantly since then, standing at 0.6% in April 2009. The eventual upswing is expected to start slowly, and upside risks to inflation are minor for the time being. Due to these developments, the ECB has reduced its policy rate between October 2008 and May 2009 by 3.25 percentage points, to 1%.

Monetary policy measures during the financial crisis

The impacts of the financial crisis have been extensive. The crisis has undermined banks' balance sheets and capital adequacy. In many countries, there has been a need to recapitalise banks in different ways, or governments have been forced to take full or partial ownership in them. Banks' need to cut their balance sheets to maintain capital adequacy has reduced their ability to

grant loans to households and companies. Due to uncertainty over banking liquidity and capital adequacy, the trust between banks has been reduced to the extent that normal interbank money market trade has almost dried up, which is why banks have had to borrow large sums from central banks as liquidity buffers. Risk premia have grown in all markets. While the cost of market-driven funding has increased, its maturity has shortened, further reducing banks' ability to finance investments and other long-term projects.

As a consequence of the unprecedentedly broad recession, the rise in prices has slowed everywhere. Euro area inflation has slowed rapidly and is expected to sink temporarily into negative territory in the coming months. Decelerating inflation and the replacement of price risks by deflation risks have meant a rapid easing of monetary policy everywhere. The Governing Council of the ECB has lowered its policy rate to 1% since October 2008. In many countries, such as the United States and Great Britain, the lower limit of nominal interest rates, the zero lower bound, has been reached, after which traditional monetary policy easing is no longer possible. As a consequence, the ability of central banks to have an impact on long-term real interest rates is reduced. Particularly detrimental developments would be protracted deflation and the spread of negative inflation expectations, in which case expected real interest rates would begin to rise. The consequence would be a protracted recession due to excessively high real interest rates.

In order to prevent the liquidity trap and deflation spiral, central banks have sought to cut their interest rates rapidly all the way to the zero lower bound. Even thereafter, central banks have access to a range of measures to ease monetary policy. These have begun to be referred to as non-standard measures.

A central bank can have an impact on interest rate expectations by committing to low interest rates for a longer period. It can also operate directly in the market for longer-term loan papers with or without risk so as to affect their price and thereby the yield curve. Reduction of the risk premium in a distressed market is in effect tantamount to a policy rate cut.

As a consequence of the unprecedentedly broad recession, the rise in prices has slowed everywhere.

Monetary policy can also be eased by broadening the monetary base, in which case the balance sheet of the central bank grows on the liabilities side. This is known as quantitative easing, and was pursued by the central bank of Japan at the beginning of the present decade. Lately, the Bank of England has announced measures that can be considered quantitative easing. In contrast, the fact that many central banks – including the Eurosystem – have had to increase the level of

additional reserves on their balance sheets to respond to the increased demand for liquidity in the banking system does not constitute quantitative easing.

When a central bank adjusts the assets side of its balance sheet, it is said to pursue a policy of credit easing. It may purchase securities from counterparty banks or other market participants. The purchased securities may be either public or private. These measures are intended to have an impact on the relative prices of different categories of securities.

The Eurosystem has adopted non-standard measures with careful consideration and selection. The ECB's monetary policy framework has proven to be sufficiently flexible to manage the liquidity crisis in the interbank market. Migration to fixed-interest-rate full-allotment auctions played a key role in this respect. Utilisation of the normal monetary policy instruments also included the widening of longer-term operations and extension of their maturity to up to 12 months (Chart 1).

In May 2009, the Governing Council announced that national central banks belonging to the Eurosystem may begin purchasing covered bonds at a date to be agreed on later. With regard to the ECB's monetary policy instruments, this can be considered a non-standard measure.

Keywords: monetary policy, monetary policy strategy, financial crisis

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Euro cash is as popular as ever

4 May 2009

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More than seven years have passed since the launch of euro banknotes and coins. Following the smooth cash changeover, the number of euro banknotes and coins in circulation has grown faster than foreseen, and demand for euro banknotes has also increased outside the euro area. At the same time, cooperation between euro area central banks in the field of cash management has increased and the efficiency gains of the single currency have been successfully exploited. A number of new challenges have also emerged.

Euro banknotes and coins were issued on 1 January 2002, three years after adoption of the euro as a unit of exchange. For the general public, however, it was the changeover to euro cash that marked the introduction of the euro, as it was only then that the currency came into everyday use. This somewhat shorter time span nevertheless provides a good platform for evaluation of developments in the use of euro cash and euro cash management thinking, especially considering that preparations for the euro cash changeover had begun as early as 1992.

The major challenges for euro cash: production, logistics and communication

The phased introduction of the euro was due partly to the time required for the production and distribution of euro banknotes and coins, but also to a need to build experience of the euro as a unit of account before banknotes and coins were issued for use by all the more than 300 million people living in the euro area.

In 1992, the governors of EU central banks set up a Working Group on Printing and Issuing a European Banknote (Banknote Working Group) to address the technical and logistical issues of the production and issue of the single European banknote series. Each national central bank (NCB) was represented by two members, generally the chief cashier in charge of cash management at the NCB and the director of the printing works. The Bank of Finland joined the Banknote Working Group in July 1994, first as an observer after Finland had signed the EU Accession Treaty, and then as an ordinary member from the beginning of 1995. On the establishment of the European Central Bank (ECB) in June 1998, the Banknote Working Group became the Banknote Committee of the European System of Central Banks (ESCB).

The EU Economic and Finance Ministers entrusted the preparation of the single coin series to a working group composed of the mint directors of member states. Preparations and decisions for the launch of euro banknotes and coins thus followed the same pattern as that traditionally applied to national banknotes and coins in Finland: decisions on banknotes were taken by the Bank of Finland, while decisions on coins were taken by the Ministry of Finance.

From a Eurosystem perspective, there were three major challenges facing the euro cash changeover. Chronologically, the first of these was the industrial challenge, ie the production of more than 15 billion euro banknotes and 51 billion coins. The second was the logistical challenge of planning and implementing the cash changeover together with the banks, cash-in-transit companies, retailers and the vending and ATM industry, while the third was the communication challenge of familiarising each and every euro area resident and professional cash handler with the new payment instruments and the cash changeover process.

15 printing works to handle euro banknote production

Each national central bank was responsible for procurement of the euro banknotes necessary for the cash changeover; in practice this means they decided where the notes were to be printed. As part of its euro launch risk management, the ECB established a Central Reserve Stock of euro banknotes, which represented around 10% of the banknote demand of the NCBs.

The production of banknotes to the same quality standards was a demanding task, given that the process involved 15 printing works, banknote paper from nine paper mills, and inks, security threads, holograms and other raw materials from some twenty different suppliers. It was imperative to ensure identical appearance and consistent performance in both sorting and accepting machines throughout the euro area. Therefore, a common quality system was adopted by all the euro printing works.

Euro coins for the cash changeover were minted by 16 mints, and, to ensure uniform quality, the EU finance ministers, the mints and the ECB in June 1999 agreed on a detailed quality management system, with the ECB as an independent assessor of the quality.

With more than seven years of experience to draw on, we can say that the systems set up have performed excellently. Observations of non-acceptance of banknotes or coins by ATMs or slot machines, or any other disruptions, have been rare.

The production of banknotes to uniform quality standards was a demanding task.

Europe's largest peace-time logistics operation

The euro cash changeover has been characterised as Europe's largest ever logistics operation in peace time, and it required a number of exceptional measures. As early as 1999 it was decided that euro banknotes and coins could be supplied to credit institutions, cash-in-transit companies and retailers well ahead of the turn of 2001/2002. It was also decided that the public could start to exchange national cash for euro coins in the latter half of December 2001.

The transportation, handling and storage of massive amounts of cash, together with the short dual circulation period, required active frontloading. In this way, the cash

could be made available to key target groups before the turn of the year, after which most of the capacity was released for the handling and transportation of the national cash that was withdrawn from circulation. Front-loading was a big success, considering that nearly 80% of the banknotes and more than 90% of the coins were distributed prior to 2002, thus paving the way for a smooth cash changeover.

Euro banknotes were made available to the general public from 1 January 2002, above all via ATMs. Roughly 80% of the ATMs were dispensing euros the very first day, while practically all the euro area ATMs had been converted to euro by 4 January 2002. The swift adaptation of the ATMs, made possible by several years of preparations by banks and ATM manufacturers, was of crucial importance to the smooth cash changeover. The technical specifications of euro banknotes were made available to ATM manufacturers as early as the summer of 1999, and the first opportunity for ATM testing with genuine euro banknotes was organised in spring 2000.

The mass media campaign was launched at the end of August 2001.

In addition to the ATMs, all machines accepting banknotes and coins in payment also had to be converted to euro. The conversion of about 10 million coin-operated vending machines, ticketing machines and other slot machines took longer to accomplish than the adaptation of more than 200,000 ATMs. Even so, by the end of January 2002 more than 90% of slot machines had been converted to euro. With the cash changeover completed in other respects, random problems were still caused by some unconverted slot machines. In addition, the fast withdrawal of national coins gave rise to bottlenecks in cash handling organisations and took months to resolve in some countries.

200 million leaflets on the euro

A broad range of communication channels were needed to disseminate information on the euro to more than 300 million people. The Eurosystem information campaign focused on the visual appearance and authentication features of euro banknotes and coins, and on the cash changeover. The campaign was designed as a complement to those run by national authorities and was organised through four different channels: a Partnership Programme involving more than 3,000 private and public sector organisations that passed the information on to their staff and customers, a press campaign, a mass media campaign and a website.

The mass media campaign was launched at the end of August 2001 with disclosure of the final visual appearance and authentication features of euro banknotes. This event was witnessed by more than 500 journalists and 60 TV crews and was accompanied by newspaper advertisements and TV spots. In addition, close to 200 million information

leaflets on the euro were distributed to households, in 34 languages. Other target groups of the mass media campaign included retail cashiers and bank tellers, the education system and the police. Special communication measures were introduced to reach those population groups who experienced greater difficulties in changing over to the new money. For example, a brochure in Braille was prepared in cooperation with the European Blind Union.

In advance, the introduction of euro banknotes and coins raised a variety of questions and doubts among the public. The cash change-over nevertheless went smoothly in all 12 euro area countries. According to the Eurobarometer survey conducted in January 2002, 88% of the public reported they had been sufficiently well informed of the cash changeover, while 81% responded that their personal experience of the cash changeover was positive.

Euro banknotes in circulation continue to increase

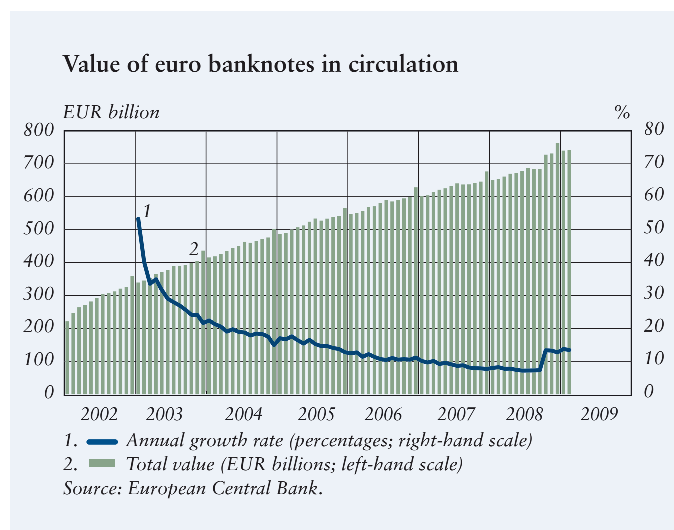
Demand for euro banknotes and coins has also been sustained since the launch, and volume growth has been stronger than could have been anticipated based on past developments in national currencies. The value of euro banknotes in circulation increased by more than 10% annually until the beginning of 2007. Thereafter, the increase gradually moderated to a little over 7%, only to accelerate again in October 2008 to close to 13% in the wake of the financial market turmoil (Chart 1).

The strong expansion in the volume of euro banknotes in circulation has been related above all to the public's adjustment of the amounts of cash held to conditions of low inflation expectations and low interest rates. Demand has also been considerable among non-euro area residents, who are estimated to hold nearly 20% of euro banknotes. The confidence in the euro as a parallel currency is demonstrated by the fact that the strong increase in demand for euro banknotes during the financial market turmoil largely originated outside the euro area.

While the relative share of cash as a means of payment has dropped in favour of new means of payment, at the same time the use of cash as a store of wealth has increased. This

Chart 1.

Value of euro banknotes in circulation



1. Annual growth rate (percentages; right-hand scale)
2. Total value (EUR billions; left-hand scale)

Source: European Central Bank.

trend is clearly discernible when comparing changes in the circulation of low denominations (EUR 5, EUR 10 and EUR 20 notes) with changes in the circulation of high denominations (EUR 50, EUR 100, EUR 200 and EUR 500 notes) (Chart 2). Although demand for low-value banknotes has also grown, the increase in notes of high denomination has been much stronger. Consequently, the average value of a banknote in circulation has increased from EUR 43.7 at the end of 2002 to EUR 58.2 at the end of 2008.

Chart 2.

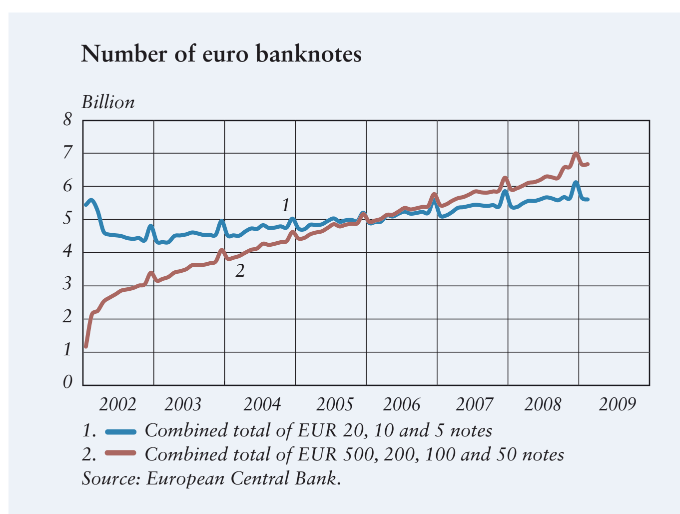
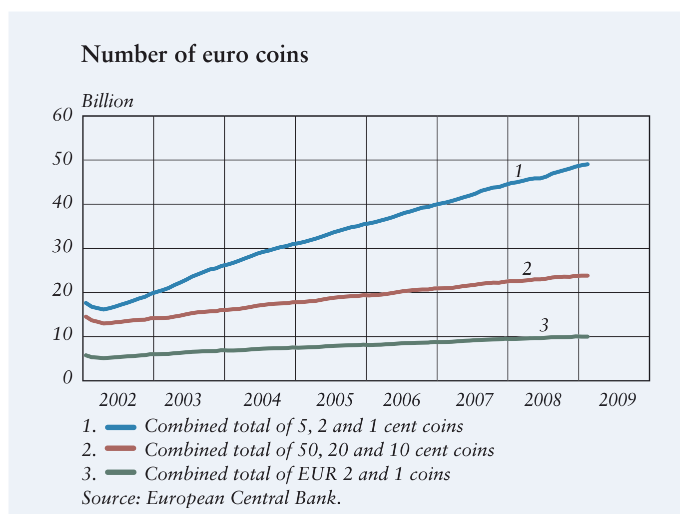


Chart 3.



The trend in the circulation of euro coins has diverged from that of euro banknotes, in that volume growth has exceeded value growth throughout. In other words demand has concentrated on low-value coins (1, 2 and 5 cents) (Chart 3). While banknotes of higher denomination are used as a store of wealth and are therefore taken out of active circulation, the smallest coins get lost in money boxes and jars and go out of active use. This means that euro coins of the smallest denominations must be continuously minted in large amounts by those euro area countries that, unlike Finland, do not apply the rounding rule for payments. The value of the average euro coin in circulation has dropped from 31 cents at the end of 2002 to 25 cents at the end of 2008, when 1, 2 and 5 cent coins accounted for nearly 59% of euro coins in circulation.

Security features against counterfeits

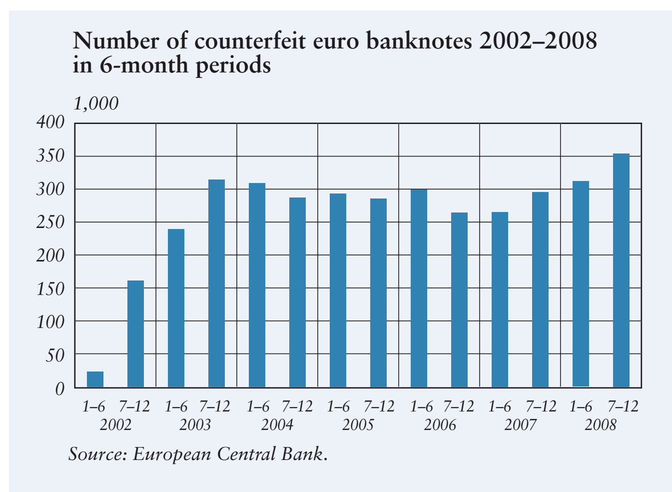
Considering that the euro is the second most important currency in the world, it understandably attracts the interest of counterfeiters. Therefore, determined measures have been taken to prevent counterfeits and support law enforcement. In

addition to the easily discernible security features of euro banknotes, the ECB has made available to EU central banks and the police a database with technical data on all counterfeit euro banknotes and coins and set up a Counterfeit Analysis Centre to analyse and classify all new counterfeit euro banknotes prior to their registration in the database.

In the database, the technical description of each new counterfeit class includes reproduction techniques, the way in which the different security features are imitated and pictures of the counterfeits. In addition to the ECB Counterfeit Analysis Centre, all EU member states have established their own national analysis centres for handling national counterfeits of banknotes and coins.

Public disclosure of the security features of the banknotes more than four months before issuance gave rise to horror scenarios arguing that euro counterfeits would emerge immediately upon the changeover. The amount of euro counterfeits nevertheless remained low during the first six months. After summer 2002 the situation began to change gradually, and in the course of 2003 more than 550,000 counterfeits were detected in circulation. After this, however, the number of counterfeits evened out and at times even declined, until it began to increase again in 2008 (Chart 4).

Chart 4.



Source: European Central Bank.

The number of counterfeits is still roughly the same as the number of national counterfeits reported in 2000 and 2001 by the countries having adopted the euro. To put these developments into perspective, they must be viewed against the considerable advances in reproduction technology facilitating the reproduction of banknotes and the increase in the number of euro banknotes in circulation by more than 50% over the same period.

Cooperation boosts efficiency in cash management

Cash management thinking has shown an interesting development since 1992 when discussions on the production and launch of the single currency first began. In the initial phase, preparations naturally focused on the design of new banknotes and coins and on the creation of conditions for as smooth a cash changeover as possible. At that time, the general understanding was that a

number of countries would introduce common banknotes and coins but national cash management practices would not be affected, as there were no changes envisioned in the operating environment and the role of the national central banks in the cash cycle.

Closer to the new millennium, when the production of euro banknotes and coins had already got off to a good start and many important decisions had been taken, for example on ATM testing and frontloading rules, the focus of preparations was increasingly shifting towards potential changes in the operating environment following the issue of the single currency. Such environmental changes were related on one hand to the central banks' own objectives, such as concentration on their core tasks, and, on the other hand, to the efficiency gains resulting from the single currency and the creation of a level playing field across the euro area.

A single Eurosystem tender procedure for the procurement of banknotes will be introduced by the beginning of 2012.

Examples of these developments include the decision on the free-of-charge services and fee-based services of central banks and the guidelines on opening hours and debiting/crediting rules for cash services at NCB counters taken by the Governing Council of the ECB in 2001. In the same year, the Governing Council also decided that production of euro banknotes would be decentralised, in that each euro area NCB would, as a rule, be responsible for procurement of only one or two denominations. This arrangement helps to ensure a supply of consistent quality banknotes by reducing the number of production sites, and it also enables the Eurosystem to benefit from economies of scale in banknote production. Furthermore, owing to the influence of banknote migration from country to country due to tourism and other activities, responsibility for banknote production was no longer assigned to the NCBs on the basis of their own needs but on the basis of each NCB's paid-up share in the capital of the ECB; this share is derived from the total GDP and population size of each euro area country.

Correspondingly, and following extensive preparations, in September 2004 the Governing Council decided to introduce a single Eurosystem tender procedure for the production of euro banknotes. This will be adopted at the beginning of 2012, at the latest, or earlier if at least half the central banks use the tender process for procurement of their banknotes and at least half the annual demand for euro banknotes is satisfied through tendering. The aim is to ensure transparency and the equal treatment of all the printing works participating in the public tender for euro banknotes.

National central banks with their own printing works or access to public-sector printing works have the right to opt out of the tender

procedure. They will continue to produce their share of euro banknotes in their own printing works.

A common stock management system for euro banknotes has also been created, with the aim of coordinating the logistical stocks of the NCBs at the Eurosystem level and using a Eurosystem strategic stock (ESS). The strategic stock will be used in such exceptional circumstances when there are insufficient logistical stocks in the Eurosystem to cover an unexpected increase in demand for euro banknotes or when there is a sudden interruption in the supply of euro banknotes. The importance of the strategic stock was pointedly illustrated by the sudden strong demand for euro banknotes of high denominations, particularly from non-euro area residents, during the financial market turmoil last autumn. This demand was successfully satisfied by flexibly resorting to the strategic stock.

Further improvements in the provision of equal and competitive conditions for cash management will of course be made in the future. However, the consideration of efficiency gains for all the stakeholders in the cash cycle has emerged as a new feature during the past few years. Accordingly, since July 2007 the euro area national central banks have provided cash supply services also to such credit institutions of other euro area countries for which it is logistically more advantageous to use the services of a central bank across the border. Within the next few years, the central banks will no longer require that banknotes be faced and oriented in the withdrawal and lodgement of bundles. This will increase the efficiency of the various stages of the banknote handling process.

Efficiency gains have also been sought by improving the division of labour within the Eurosystem so that all NCBs do not necessarily have to provide the whole range of services, allowing efficiency to be increased through specialisation or pooling. Examples of this include the Cash Single Shared Platform contract signed by four central banks – including the Bank of Finland – and the joint tender process initiated by five central banks for the procurement of euro banknotes. In addition, some central banks have specialised in the testing of cash handling machines for the Eurosystem, as well as quality testing of euro banknotes based on samples from across the euro area. Likewise, one or other NCB has been entrusted with the development and maintenance of certain information systems for the cash management process.

The efficiency of the cash management services of the NCBs has been improved through specialisation or pooling.

New banknote series under preparation

For 12 countries, the issue of euro banknotes and coins in 2002 marked the completion of the stage of European integration agreed on at Maastricht in 1991. The simultaneous exchange of banknotes and coins

in 12 countries was, as such, an enormous challenge, but, as evidenced by the examples discussed above, a number of new challenges have emerged along the way. Furthermore, the accession of 12 new countries to the European Union in the course of the present decade has already resulted in adoption of the euro by four new countries. Although the cash changeover of the new EU member states differs from the cash changeover in 2002, above all because euro banknotes and coins are already in existence, it nevertheless requires detailed planning and commitment by the banks, retailers, cash-in-transit companies, the ATM and vending industry and other interested parties from the very start.

The design, production and issuance of the current series of euro banknotes took ten years at the time. The Eurosystem therefore launched the planning of a new series of banknotes in good time a few years ago. The project will take many more years to complete, although some of the design stages will not need to be repeated, as the Governing Council has decided that the new banknote series will be based on the same theme of ages and styles and the same denomination structure as the present series. Over the years, the Eurosystem has devoted considerable resources to research and development, kept track of advances in reproduction technology and analysed potential counterfeit threats. The new series of euro banknotes will seek to meet these challenges. The series will be issued in a few years time, one denomination at a time, so it will take several years to replace the whole series.

Keywords: cash, euro, cash changeover, cash supply and management

The financial crises of the 1990s in Finland and other Nordic countries[1]

2 February 2009

Seppo Honkapohja
Member of the Board

The current financial turmoil has now lasted almost two years. In the post-war period, the current crisis is the 19th in advanced economies and the first in the 21st century. In a recent paper, Carmen Reinhart and Kenneth Rogoff (2008) divide the 18 crises before the current US subprime crisis into the 'big five' and a number of smaller crises. The big five include the crises in Norway, Finland and Sweden that occurred mostly in the early 1990s. The Norwegian crisis began already in the late 1980s, but continued into the 1990s.

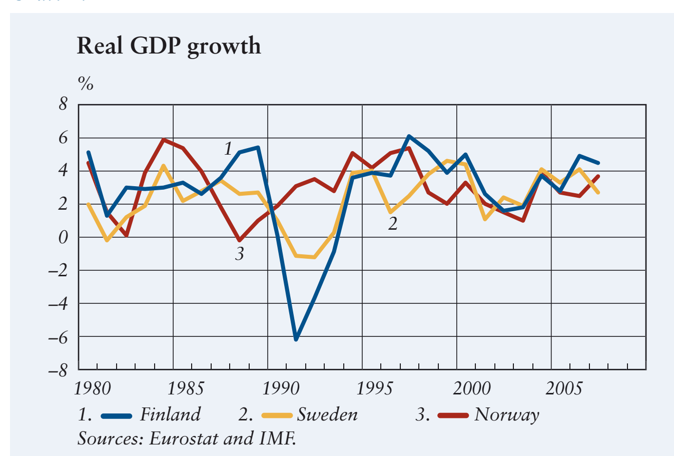
Nearly all major banks in the Nordic countries got into difficulties and made huge losses, with average loss provisions (expressed as a percentage of lending) in the period 1982–93 ranging from 2.1% (in Denmark) to 1.5% (in Finland and Norway) of bank lending. In the sub-period 1990–93, loss provisions were 2.9% for Denmark, 3.4% for Finland, 2.7% for Norway and 4.8% for Sweden.[2] All of the Nordic countries had to provide public support to their banking systems. In Denmark this support was small, whereas in Norway, Sweden and Finland the level of public support was quite significant, with increasing importance in the indicated order of countries. The financial crises in Finland, Norway and Sweden became systemic, whereas Denmark avoided a systemic crisis.

Even though each financial crisis has its own particular features, experiences and lessons from earlier crises can provide useful insights for understanding later crises. The main emphasis here is on the Finnish case, because it was the deepest crisis of the three.

Overview of the volatile economies[3]

Starting with economic growth, shown in Chart 1, we can see that the Finnish experience was quite dramatic. Finland experienced relatively fast growth in the second half of the 1980s, and the economy

Chart 1.



[1] This article is based on a speech delivered in the Global Interdependence Center, Philadelphia, USA on 30 September 2008. The views expressed are those of the author and do not necessarily represent the views of the Bank of Finland. I am grateful to Antti Kuusterä, Jorma Hilpinen, Jarmo Pesola and Juha Tarkka for comments and to Hanna Putkuri for assistance.

[2] These figures are from Møller and Nielsen (1995).

[3] See Honkapohja and Koskela (1999), Englund (1999) and Steigum (2004) for overviews of the three countries.

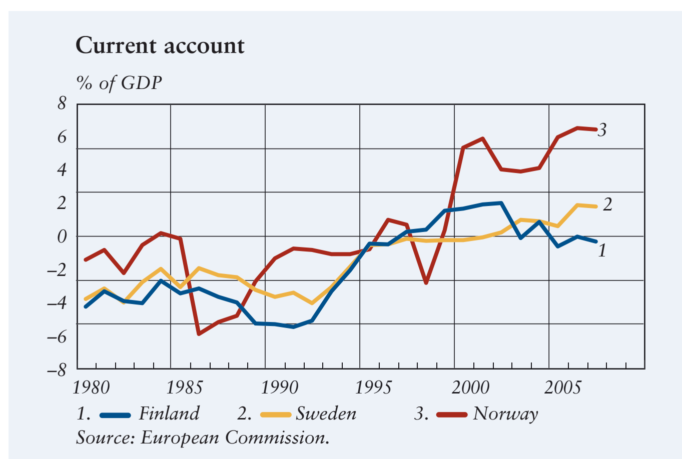
became overheated at the end of the decade. The country then plunged into a deep recession in the early 1990s, with negative growth for about three years. The total cumulative fall in GDP was well over 10% from peak to trough. After that, Finland experienced a fast recovery and growth remained strong until late 2008, with some normal cyclical fluctuations.

The Swedish experience is qualitatively similar but less extreme. Growth was relatively rapid in the second half of the 1980s, though more sluggish than in Finland. Sweden, too, plunged into recession with negative growth in the early 1990s, but the recession was not as deep as in Finland. Here, too, the recovery was fast, and since the crisis the Swedish growth performance has been good and, indeed, somewhat better than before the recession.

The Norwegian case is different from the other two. Norway was already experiencing difficulties in the second half of the 1980s, with a growth rate around zero in 1987. This was due to a major decline in oil prices in 1986, which, in view of the big role of oil, led to a slowdown in the Norwegian economy. This lasted well into the early 1990s. Overall, the Norwegian crisis was less severe than the Swedish case (and a fortiori the Finnish one) as it did not experience any significant period of negative growth. The sluggish period in Norway lasted longer than in Finland and Sweden, but the country recovered well.

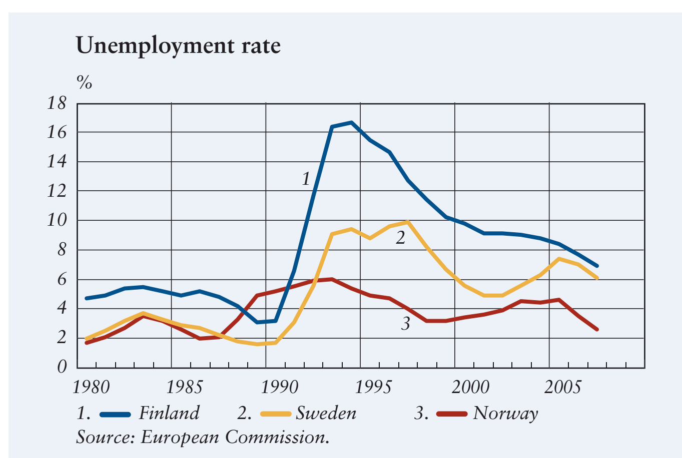
Looking at the current accounts in Chart 2, we can see that Finland and, to a somewhat lesser extent, Sweden faced major external deficits in the second half of the 1980s. These deficits turned into surpluses after the crises, and the current accounts have remained in surplus ever since. The Norwegian experience was different: the decline in oil prices resulted in current accounts deficits from 1986 to 1988, but the external balance has

Chart 2.



Source: European Commission.

Chart 3.



Source: European Commission.

otherwise been positive. We should note that all three countries experienced speculative attacks during the crisis, and these attacks were quite strong in the case of Finland and Sweden. All three countries eventually abandoned the fixed exchange rate regime.

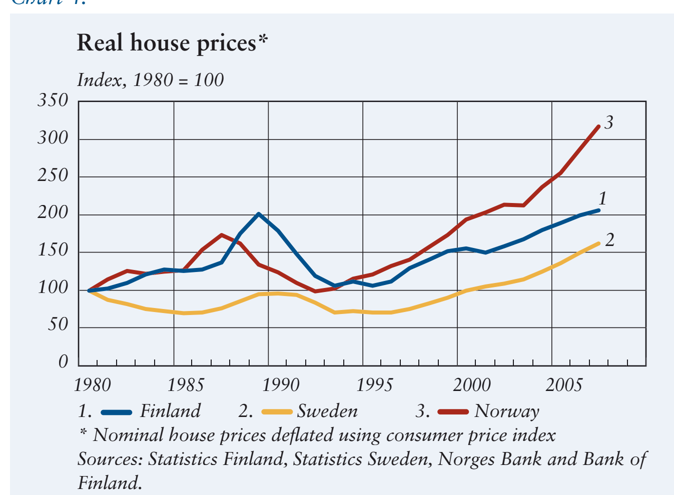
The unemployment trend in the three countries, shown in Chart 3, is broadly a mirror image of GDP developments. All three countries initially had low unemployment, which began to rise as part of the financial crises. Norway experienced the rise earlier than Finland and Sweden. As the Finnish crisis was the deepest, the increase in the unemployment rate was by far the biggest. In all three countries, unemployment fell gradually once the crisis receded.[4]

Financial developments

The developments in residential property prices are qualitatively similar in the three countries, with movements in Norway taking place earlier (Chart 4). Property prices rose rapidly during the booms and declined sharply during the financial crises. Finland had the most extreme movements. Property price movements were also strong in Norway, and we can note that the decline from 1986 lasted quite long, ending only in 1993. The Swedish case is less extreme than the Norwegian one, and Swedish prices also turned around relatively slowly. In contrast, the upswings and downswings in Finnish property prices were faster than in the other two countries.

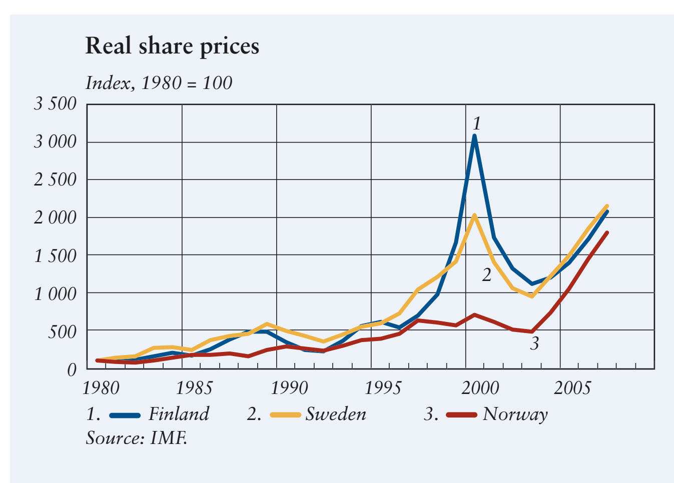
Dynamics of share prices, shown in Chart 5, in Finland and Sweden tell roughly the same story as residential property prices. Share prices rose rapidly from the mid-1980s to the end of the decade, after which they experienced a major decline for about three years. In contrast, Norwegian

Chart 4.



* Nominal house prices deflated using consumer price index
Sources: Statistics Finland, Statistics Sweden, Norges Bank and Bank of Finland.

Chart 5.



Source: IMF.

[4] We should note that unemployment in Finland is systematically higher than in Norway or Sweden.

share prices moved much less during the 1980s and early 1990s.[5]

Next, we turn to bank lending. Chart 6 shows the annual growth rates in bank lending for the three countries. We can see that each country experienced rapid growth in lending during the boom years of the 1980s. The Norwegian boom is seen to happen earlier than those of Finland and Sweden. The boom and bust in lending were most extreme in Finland. Quite remarkably, both Finland and Sweden had negative lending growth for several years. The loans to GDP ratio rose rapidly during boom years and declined by almost the same amount in the recessions in Finland and Sweden. In Norway, the decline was much smaller.

To conclude the overview, we look at realized loan loss provisions of banks in the three countries (Charts 7–9). The charts show loss provisions as a percentage of balance sheet for the major parts of the banking system. We can see that in each country these loss provisions rose rapidly at the beginning of the crisis. In Finland, the crisis was deepest for the savings banks, whereas in Norway commercial banks had the highest loss provisions. In Sweden, the different banking groups had similar loss provision developments. The heavy losses led to a significant restructuring of the banking systems, to which we shall return later.

The macroeconomic and financial developments just described suggest that the nexus of financial deregulation, macroeconomic policies and external economic environment has major consequences for the occurrence of financial crises. These connections are examined further below.

[5] Chart 5 shows huge increases and subsequent falls in share prices in Finland and Sweden (but not in Norway) around the turn of the century. These developments are the result of the IT revolution, as Nokia dominates the Finnish stock market and Eriksson is similarly a very large player in the Swedish stock market.

Chart 6.

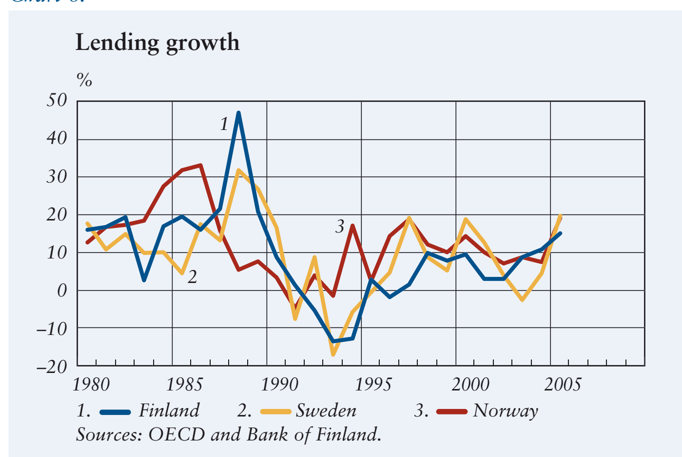
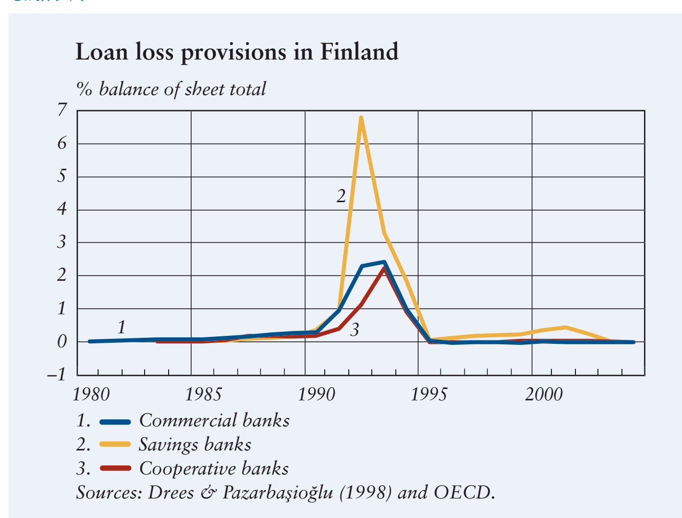


Chart 7.



Causes of the crises: boom and bust

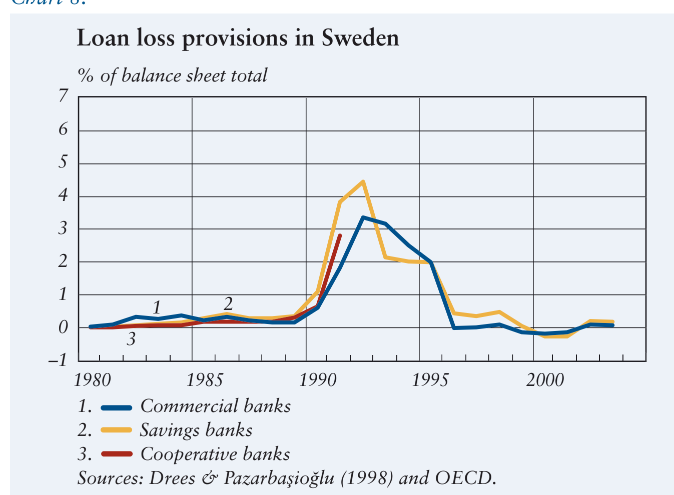
The Finnish economy performed relatively smoothly in the first half of the 1980s. Despite gradual disinflation, the Finnish inflation rate remained higher than the rates of its main competitors and there was a deterioration in the country's international competitiveness. The smooth ride began to get bumpy around 1986–87. Economic growth accelerated significantly and the economy gradually entered a period of overheating. Several factors lay behind this change.

Firstly, financial market deregulation led to an explosion in domestic bank credit, as we saw in the chart above. As will be discussed further below, the process of deregulation was not carried out in the most logical way. Following financial deregulation, banks had to adjust to a new regime of price-competition instead of competition with service provision, as in the regulated era. The new opportunities for competition between banks led to increased risk-taking as a result of moral hazard and myopic behaviour.

Secondly, the freeing of international capital movements led to a huge increase in capital inflows, a significant fraction of which was denominated in foreign currencies and not hedged. Restrictive monetary policy accentuated the capital inflows as a result of the interest rate differential between domestic and foreign interest rates, and partly because investors perceived only a small likelihood of loss from exchange rate movements.

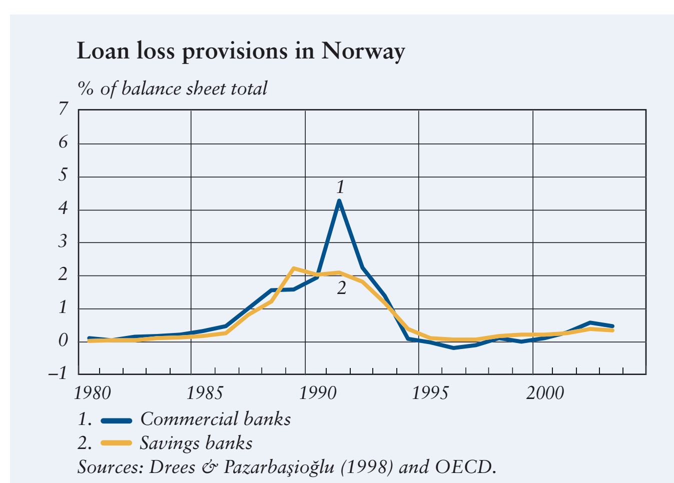
Thirdly, a sharp improvement in the terms of trade resulting from falling energy prices and a rise in world market prices of forest products contributed to the overheating of the economy that was

Chart 8.



Sources: Drees & Pazarbaşioğlu (1998) and OECD.

Chart 9.



Sources: Drees & Pazarbaşioğlu (1998) and OECD.

The general economic trends in Norway and Sweden during the boom years before the crises were similar to in Finland.

already being fuelled by the financial deregulation. The business cycle was in an upswing in many countries, partly as a result of loose monetary policy after the 1987 stock market crisis. This added to the bad luck of overheating in Finland and Sweden. Domestic economic policies were not sufficiently restrictive to counteract the boom.

In the process of overheating, the rate of inflation rose from about 2–3% in 1986 to about 7% in 1989–90. The rate of unemployment declined from about 4% in the first half of the decade to 2.5–3% at the end of 1989. The external balance for Finland deteriorated and serious current account problems emerged. We may note in passing that Sweden experienced less overheating in the second half of the decade. For 1985–90, the average current account deficit-to-GDP ratio was 2.9% for Finland, while the corresponding figure for Sweden was only 1.1%.

The overall developments in the upswing before the Norwegian and Swedish crises in were similar to those for Finland. Financial market deregulation and positive international business-cycle developments were the main factors behind the domestic booms and rapidly rising real asset and share prices. However, for Norway the major fall in oil prices in 1986 was a major negative shock that prevented a longer-lasting boom and a correspondingly bigger bust.

The end of the boom in Finland came in 1990, and a rapid descent ensued. Economic activity, as measured by the growth rate of real GDP, declined swiftly from positive growth of 5.4% in 1989 to negative growth of -6.5% in 1991. Domestic private investment and private consumption fell sharply, while net exports of goods and services started to pick up towards the end of 1991. The decline continued, though at a slower pace through 1992 and most of 1993. A turnaround took place in the autumn of 1993. Price inflation slowed significantly and nearly vanished. The Finnish markka was devalued in November 1991 and then floated in September 1992. After these developments, the current account deficit gradually disappeared, to be replaced by a surplus.

Both international and domestic factors contributed to the onset of the Finnish crisis. Firstly, Finnish exports to market economies declined as a result of slow international growth, the loss of price competitiveness in Finnish industry and a decline in the terms of trade. With the collapse of the former Soviet Union, Finnish exports and imports to Russia quickly dropped by 70% in March 1991. This contributed significantly to the decline in Finnish GDP in the crisis years.

Secondly, after German unification, interest rates rose in Europe and also in Finland as a result of a more expansive fiscal policy combined with tighter monetary policy in Germany.

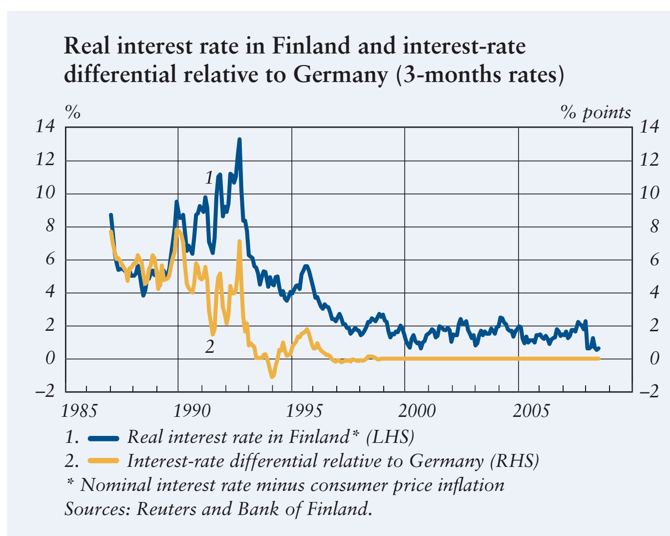
Thirdly, monetary conditions became very restrictive due to an increase in real interest rates and appreciation of the Finnish markka. Real interest rates rose dramatically from the start of 1990 until the end of 1992 as a result of the defence of the Finnish markka against speculative attacks with high nominal interest rates, and because of the fall in the inflation rate at the onset of recession. Chart 10 shows the interest rate differential between Finland and Germany and the Finnish real interest rate. Chart 11 shows the exchange rate for the Finnish markka.

In Sweden, the causes of the onset of the crisis were similar to Finland, namely high German interest rates and speculative attacks against the Swedish krona.[6] There was, however, one major difference to Finland. Sweden had little trade with the Soviet Union, so the disintegration of the Soviet Union had no economic impact on Sweden. Moreover, the lack of trade with the Soviet Union meant that Swedish industry had already been forced to modernize before the 1980s. In contrast, the large Soviet trade had led to a lack of competitiveness in Western markets for parts of Finnish industry. These factors meant that the Swedish crisis was not as deep as the Finnish one. Both economies began to recover in 1993–94.

[6] You may recall that Swedish interest rates briefly reached as high as 500% during the defence of the currency.

In Norway, the boom years came to an end as early as 1986 with the decline in oil prices. The Norwegian krona was devalued by 6% in response to this decline and restrictive policies were introduced. Inflation gradually declined from 1987, and by 1990 the rate of inflation went below the average rate of Norway's trading

Chart 10.



** Nominal interest rate minus consumer price inflation*
Sources: Reuters and Bank of Finland.

Chart 11.

** Trade-weighted currency index. A rising curve indicates FIM appreciation.*
Source: Bank of Finland.

partners. The crisis in Norway lasted a fairly long time, with the turnaround in the business cycle occurring in 1993.

Causes of the crises

The emergence of major banking crises was a notable feature of the bust process in all three Nordic crises. A deep financial crisis also emerged in Norway, even though the fluctuations in the real economy were much smaller than those in Finland and Sweden. The latter countries had severe declines in GDP, which in turn contributed to their financial crises.

The roots of the Finnish boom-bust cycle and the financial crisis can be traced back to the deregulation of the financial system in the 1980s. The process of financial deregulation began in the early 1980s, but the greater part of it was carried out in the second half of the decade. Domestic financial markets and international capital flows were liberalized at a time when interest rates in Finland were much higher than elsewhere. This caused a massive capital inflow that led to uncontrolled credit expansion. This effect was also strong in Sweden and, to a lesser extent, in Norway; see Sandal (2004).

Financial market deregulation in Finland at a time when interest rates were high led to uncontrolled growth in lending.

The deregulation process was problematic in several respects. Firstly, its timing in the second half of the 1980s coincided with the upswings of business cycles in Western market economies. As already noted, the big boom led to soaring indebtedness in the private sector, higher relative unit labour costs and a current account deficit. Later on, it led to speculative attacks on the Finnish markka.

Secondly, the prevailing banking law from 1969 was outdated and bank supervision focused on solely legalistic monitoring of banks. The rules and practices in prudential regulation and bank supervision were left unchanged in the deregulation process. These were tightened only later, in 1991, when the depression had already begun.

Thirdly, the tax system favoured debt financing of business and housing investment and was reformed only later. Some reforms were attempted during the boom years, but there was little political support for the reform proposals.

Fourthly, in the context of deregulation, lending rates were liberated before deposit rates, which also helped to ease the banks' position. Finally, monetary policy under a fixed exchange rate with a narrow band sought to maintain some tightness in the wake of the boom. This provided further impetus to the large (in foreign currency terms) inflow of foreign capital. The capital inflows to the private sector were mediated largely by Finnish banks and led to foreign-currency-denominated borrowing also by firms operating in the non-tradable sector.

The financial crisis also had an international dimension for Finland and Sweden. (Norway suffered less in

this respect.) For both countries, problems of international indebtedness and illiquidity emerged and, as argued above, these features result from the earlier real appreciation and lending boom after financial deregulation. Next, we shall briefly compare Finland's and Sweden's international indebtedness with those of Mexico, Chile and East Asian countries.

A country may be able to withstand a relatively high level of international indebtedness, provided its economic growth remains solid, the debt is largely long-term and the confidence of international investors remains intact. Nevertheless, a high international debt position means increasing risks should a country run into economic difficulties. Table 1 shows the external debt-to-GDP ratio for Finland and Sweden for the period 1982–2001. For comparison, the table also shows the data for Chile (1984–2001), Mexico (1984–93), Korea (1990–2001) and Thailand (1995–2001).

The build-up of international debt for Finland is seen to be quite significant, because the Finnish current account deficits were large before the crisis. In contrast, Sweden shows a similar but more gradual build-up of foreign debt. This suggests that the external situation for Finland, and to an extent for Sweden, was relatively risky, so that the pressures mounted rapidly once the general outlook became gloomy in 1990–91.

In comparison, international indebtedness for Mexico was very high in the 1980s, and was even higher for Chile in the mid-1980s. Thailand experienced a fairly rapid increase in its foreign indebtedness in 1997–98. These indebtedness problems were a central element in financial crises in these countries.

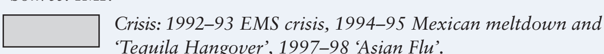
Table 1.

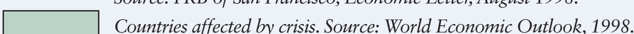
International indebtedness*

Net foreign debt, % of GDP

	Finland	*Sweden*	*Mexico*	*Chile*	*Korea*	*Thailand*
1982	*17*	*19*				
1983	*20*	*22*				
1984	*19*	*20*	*48*	*73*		
1985	*19*	*21*	*46*	*88*		
1986	*17*	*19*	*58*	*85*		
1987	*20*	*17*	*53*	*74*		
1988	*19*	*19*	*41*	*50*		
1989	*23*	*21*	*31*	*33*		
1990	*45*	*26*	*30*	*17*	*–32*	..
1991	*50*	*28*	*26*	*17*	*10*	..
1992	*53*	*23*	*22*	*14*	*11*	..
1993	*54*	*41*	*20*	*16*	*20*	..
1994	*63*	*45*		..	*23*	..
1995	*56*	*39*		..	..	*32*
1996	*54*	*39*		..	..	*35*
1997	*46*	*39*		*33,7*	..	*49*
1998	*87*	*38*		*37,7*	..	*57*
1999	*180*	*31*		*35,4*	..	*38*
2000	*140*	*25*		*37,1*	..	*48*
2001	*74*	..		*41,7*	*152*	*43*

Source: IMF.


Crisis: 1992–93 EMS crisis, 1994–95 Mexican meltdown and 'Tequila Hangover', 1997–98 'Asian Flu'.
Source: FRB of San Francisco, Economic Letter, August 1998.


Countries affected by crisis. Source: World Economic Outlook, 1998.

* *The table is from Honkapohja et al (2009). Note that the figures include foreign ownership of equity capital, which in the Finnish case distorts the figures at the end of the 1990s because of the high share prices and large foreign ownership of Nokia corporation.*

Table 1 suggests that the financial crisis in Finland and Sweden had features similar to those in Chile, Mexico, Indonesia, Korea, Malaysia and Thailand. Finland and Sweden went through a 'twin crisis', ie a combined currency and banking crisis.

Management of the crises

The Nordic financial crises required major policy interventions by the governments and parliaments of the countries involved. There follows a description of the main features of crisis management in the three countries, with the focus on the deepest crisis, ie Finland. This is followed by a general discussion of crisis management in Norway and Sweden. Experiences of all three countries are taken into account, as each case can give specific lessons.

Before proceeding these cases, it is worth commenting on the reasons why Denmark avoided a systemic banking crisis even though the loan losses of Danish banks were significant and a few Danish banks had to be rescued by the public sector.[7] One reason for the better Danish performance was good luck with the timing of reforms. Denmark started to deregulate the financial system earlier than the other three Nordic countries, before the boom years in the second half of the 1980s. For example, interest deductibility provisions were reduced in a tax reform that reduced the attractiveness of debt finance. Prudential supervision and disclosure rules and capital adequacy requirements for Danish banks were made stricter than for other Nordic banks. The better condition of Danish banks explains why, in difficult times in the early 1990s, most Danish banks were able to raise new private equity in conjunction with cost-cutting and restructuring operations and little public intervention was needed.

Management of the Finnish banking crisis[8]

Policy actions to overcome the Finnish banking crisis began in September 1991 when the Bank of Finland had to take control of Skopbank, the 'central bank' of the savings bank system, as other banks refused to accept certificates from Skopbank. This was an unusual but necessary step, as no other public institutional arrangement existed for rescuing a bank in major difficulties.[9]

Further policy measures were initiated in early 1992. The

[7] See Koskenkylä (2000) and Moeller & Nielsen (1995) for more details. See Edey and Hviding (1995) for comparisons of financial reform in OECD countries.

[8] Largely based on Honkapohja et al (2009) and Honkapohja & Koskela (1999). See also Nyberg & Vihriälä (1994), Vihriälä (1997) and Koskenkylä (2000) for discussions of the Finnish crisis.

[9] The Bank of Finland sold Skopbank in June 1992 to the newly established Government Guarantee Fund. The operation was quite costly to the Bank of Finland, with a net cost of around FIM 11 billion plus foregone interest income (around USD 2.65 billion using the exchange rate of 4.15 prevailing at the end of 1991.)

government injected public funds, in the form of preferred capital certificates, into the banking system and set up a Government Guarantee Fund (GGF) to manage the banking crisis. Tight conditions were imposed on the public support to the banks, as the capital certificates could be converted into voting stock if certain conditions about repayment and bank solvency were not fulfilled. Moreover, the interest rate on the certificates was set slightly above the market rate. In similar manner, further GGF actions included strict requirements on the banks, including transparency of support, monitoring of banks receiving support, terms to support efficiency and structural adjustment of the banking system, and (in varying degrees) financial responsibility of owners of banks receiving support.

As the crisis continued, the government (in August 1992) and parliament (in the beginning of 1993) made public promises that the obligations of the Finnish banking system would be guaranteed under all circumstances. In early 1993 the GGF was strengthened and given additional capital. Public support of the banking industry continued through 1994. A modest improvement in the banking sector took place in 1993, and further improvements came in 1994 and 1995. Loss making by banks stopped only in 1996; since 1997 the banks have made significant profits. In the end, most of the public support for banks went to the savings banks.

Finnish banks improved efficiency by reducing the number of branches and staff, with staff numbers approximately halved in the eight years from 1990 to 1998. The banking sector underwent a major restructuring during the crisis. Most of the 250 savings banks were combined into the Savings Bank of Finland (SBF) in June 1992. The new bank was, however, not viable and was subsequently broken up, the pieces being merged with the commercial and cooperative banks as well as the government-owned Post Bank. The non-performing assets of SBF were transferred to an asset management company, Arsenal, which was owned by GGF. The small commercial bank STS Bank was merged with a big commercial bank (KOP). In 1995 KOP, one of the two big commercial banks, was in turn merged with the other big commercial bank (SYP) to form Merita Bank.

After the crisis, structural changes continued in 1997 with the merger of Merita Bank, the remaining Finnish commercial bank, with Nordbanken of Sweden. Another restructuring occurred in 1998 between the government-owned Post Bank and Vientiluotto (the Export Credit Institution), which led to the creation of Leonia Bank. More recently, Merita-Nordbanken merged with a Danish bank and a Norwegian bank to form Nordea, a pan-Nordic

As a result of all the restructurings following the banking crisis of the 1990s, about 60% of the Finnish banking system is nowadays owned by foreigners.

Bank. Another merger occurred between Leonia Bank and Sampo Insurance Corporation, which created the Finnish bank-insurance conglomerate Sampo. In 2007, the banking business of Sampo was sold to Danske Bank. As a result of all the restructurings, about 60% of the Finnish banking system is nowadays owned by foreigners.

Lessons

Stability-oriented macro policies that avoid inflation and overheating are crucial in crisis prevention.

Prevention of a systemic financial crisis should be the first priority, even if improved efficiency and faster economic growth can eventually occur after a crisis.[10] Stability-oriented macro policies that avoid inflation and overheating are crucial in crisis prevention. The difficulty is how to diagnose an emerging overheating situation and asset price bubble, as not all business-cycle upswings with major asset price rises lead to a systemic financial crisis. We do not currently have a good set of indicators to diagnose problematic situations, but a rapid expansion of credit and strongly increased leverage are likely signals of future problems. Big external deficits are another probable warning signal, at least for small open economies. Further research into the interconnections between the macro economy, financial system and crises would be most welcome.

Macroeconomic management to prevent the financial crises in the Nordic countries did not work well and thus does not provide lessons for crisis prevention.[11] The weak performance points to an important lesson about the political economy aspects of financial crises. Financial liberalization was a big regime change in the Nordic economies and preventive measures were politically unpopular and could not be pushed through during boom times. It is likely that both the resistance of special interest groups and lack of understanding of the changing economic environment contributed to opposition to the preventive reforms. Naturally, this resistance disappeared during the crises and, more generally, there seemed to be an improved willingness for reform after the economies had become more open internationally.

The Nordic crises have, however, provided good cases to test the importance of the different channels

[10] Tornell and Westermann (2005) suggest that this can be the case especially in emerging economies. The subject is obviously controversial.

[11] See eg Honkapohja et al (2009), Englund (1999) and Steigum (2004) for assessments, respectively, for Finland, Sweden and Norway.

Table 2.

Fiscal costs of bank support*

	Gross cost	*Net cost (% of 1997 GDP)*
Finland	*9.0 (% of 1997 GDP)*	*5.3 (% of 1997 GDP)*
Norway	*2.0 (% of 1997 GDP), 3.4 (present value, % of 2001 GDP)*	*–0.4 (present value, % of 2001 GDP)*
Sweden	*3.6 (% of 1997 GDP)*	*0.2 (% of 1997 GDP)*

** See Sandal (2004), Table 3 for details.*

for the impact of a financial crisis on the real economy. There is clear evidence for the role of some of the financial channels such as wealth effects, but evidence about the credit crunch, ie lack of bank capital and quantitative financial constraints, in the Nordic crises seems to be weak. See Englund & Vihriälä (2003) and Honkapohja et al (2009) for discussions of the evidence with further references.

Crisis management by the Nordic countries has been viewed in a much more positive light. Several lessons can be drawn from the Nordic crises in this respect.[12]

A key starting point is that it is crucial to maintain confidence in the banking system. Finding broad bi-partisan political support for government action[13] in a crisis is important for maintaining confidence and avoiding phenomena such as large-scale bank runs. Political guarantees for the obligations of the banks were a major step in maintaining confidence, though the Nordic countries used different approaches here. Finland and Sweden introduced formal legal guarantees, which were lifted only in 1998 and 1996, respectively. In Norway the political guarantee was less formal. A blanket guarantee can be risky, as it may increase moral hazard: creditors have no reason to monitor or discipline banks. On the other hand, it must be said that the Finnish and Swedish crises were far more severe than the Norwegian one and these two crises also involved a foreign dimension.

Looking at the role of central banks, Norges Bank explicitly provided emergency liquidity support to individual banks as part of the overall support system. In effect, Sweden's Riksbank also provided liquidity support, though it was not formally of lender-of-last-resort type. In Finland, the role of the central bank was different, as the Bank of Finland had to handle the initial burst of the banking crisis by taking over Skopbank as an ad hoc move.

The governments in all three countries introduced crisis resolution agencies to manage the public support and the restructuring of the banking system. Establishing an agency for crisis management that is administratively separate from the central bank and financial supervision authority is important to avoid conflicts of interest. This also relieves the finance ministry of some 'front-line' duties, even if it must necessarily carry the main responsibility for crisis management. Finland and Sweden also introduced separate asset management companies to deal with the non-performing assets from the banks in trouble. Norway did not introduce such a company, but some of the

Establishing an agency for crisis management that is administratively separate from the central bank and financial supervision authority is important to avoid conflicts of interest.

[12] See Bäckström (1997) and Ingves & Lind (1996) for a discussion of Swedish experiences, and Koskenkylä (2000) and Sandal (2004) for comparisons of Nordic practices.

[13] Or multi-partisan support if there several major political parties in a country.

banks had their own 'bad banks' to manage non-performing assets.

The crisis resolution agencies had several duties to perform. They provided capital injections to the banking system and guided its restructuring. Liquidations were not much used (only two small banks in Norway were liquidated). Mergers and take-overs of banks were a common way to achieve restructuring. A general principle was that private solutions were always tried first before a public take-over. In Finland, capital injections were made to private banks and public take-overs were short-lived. Government ownership was highest in Norway, where the state took over the three largest commercial banks.

The treatment of 'old' private shareholders was mixed. In Norway, the existing share capital was written down to zero before a public take-over. In Finland, shareholders of Skopbank took a hit but were not completely wiped out. Subsequently, support from Finnish authorities took the form of open bank assistance and existing shareholders did not lose their capital, but the terms of support included the risk of future partial state ownership. In Sweden, the shareholders of Gota Bank lost everything, but private owners of other banks did not. In all countries, creditors were protected, except for one case in Norway.

Institutional arrangements in the public provision of bank support are naturally subject to attempts for gain by existing owners and potential future owners. These arrangements can also provide adverse incentives for different counterparties. Prompt action, openness and common yardsticks in the assessment of losses, fair asset valuations by experts, clear guidelines in restructuring, and optimal use of government funds are important to minimize moral hazard and possibilities for manipulation. It is naturally impossible to make any precise assessment of the success of policies by the Finnish, Norwegian and Swedish authorities in these respects. Nevertheless, it can be argued that the crisis resolution pursued in these countries was not far from best practice (see eg Sandal 2004).[14] As emphasized by, for example, Allen and Gale (1999, 2007), the impacts of banking collapses in the three Nordic countries were short-lived, the economies recovered fairly quickly from the crisis and economic growth resumed.

Keywords: central banks, crisis management, banking crisis, Nordic countries, financial crisis, financial supervision

[14] Table 2 gives estimates of the gross and net fiscal costs of the crises.

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The euro era has internationalised the Finnish economy – the recession is weakening its external stability[1]

28 April 2009

Finland's foreign trade, capital flows and positions in foreign assets and liabilities have undergone dramatic change since the turn of the millennium, reflecting the globalisation of the Finnish economy. The sustained current account surplus, lasting more than ten years but gradually declining in the past few years (Chart 1), has seen net foreign debt giving way to net foreign assets (Chart 2). This development diverges sharply from the past. The net international investment position (NIIP) is affected considerably by the value of Finnish shares in foreign ownership.

The subprime crisis in the United States escalated in 2008 into international financial turmoil, leading to worldwide recession with obvious, unavoidable consequences for Finland as well. In this new situation, both traditional industrial economies and emerging economies are plagued by recession. More than ever before, global financial markets are the vehicle of contagion in an integrated world economy.

The crisis has already led to major structural changes in financial markets around the world. Stock market prices, along with other asset prices, nosedived, and there was a subsequent slowdown in world trade and economic activity.

In Finland, there has been a loss of foreign agents operating in the MFI sector. The stock market price crash is reflected in foreign portfolio asset values and the value of foreign ownership of Finnish securities, with implications for Finland's IIP

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Chart 1.

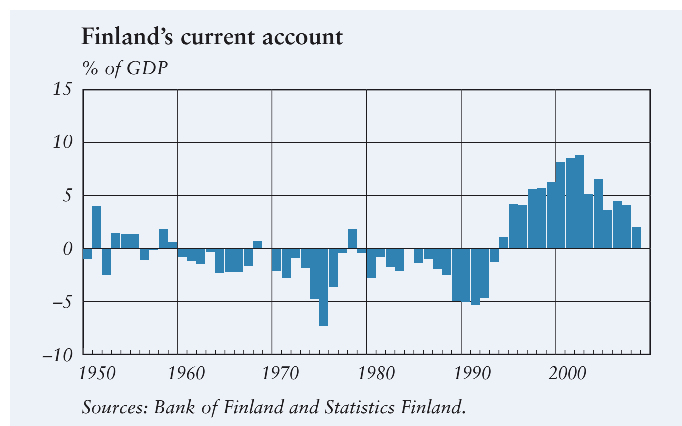
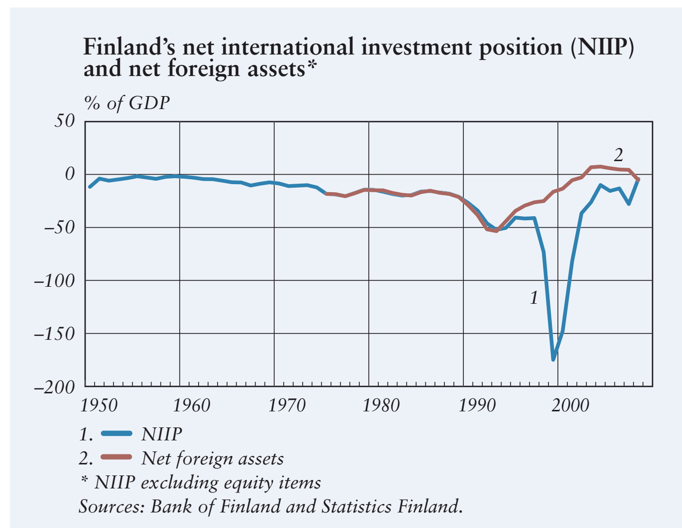


Chart 2.



[1] This article is based on Jorma Hilpinen (ed.), Suomen talouden kansainvälistyminen 2000-luvulla rahoitus- ja maksutasetilastojen valossa ('Internationalisation of the Finnish economy since the turn of the millennium as seen through financial and balance of payments statistics'), Bank of Finland A:112, Helsinki 2008 (in Finnish, with abstract, summary and conclusions in English), a compendium of articles on the subject published in December 2008 (see http://www.suomenpankki.fi/fi/julkaisut/selvitykset_ja_raportit/yleistajuiset_selvitykset/2008a_112.htm).

structures. The current account surplus shrank substantially during the last months of 2008, and this weakening has continued into 2009.

Changes in foreign trade

Besides Russia, China, too, has grown in importance as a trading partner of Finland.

Export-led growth and favourable export performance require competitive production conditions. The ICT-driven Finnish export growth following the severe recession of the early 1990s and during the 2000s cannot be explained by the traditional comparative advantage offered by factors of production. Several studies have yielded evidence that knowledge and research factors have contributed most to this success. A competitive economic environment and functional and equitable social structure also emerge as success factors. The recession of the 1990s redirected the financial sector to be more market-oriented so that the risks are better reflected in credit pricing.

Price competitiveness encompasses the movements of the euro exchange rate vis-à-vis other currencies. The euro exchange rate movements are exogenous to the Finnish economy so that flexibility is needed to adjust to these movements. It is often argued that the 1990 recession rendered the Finnish economy more flexible. However, in a fully integrated global economy, Finland cannot compete with the new and emerging economies in price competitiveness.

Finland is an open economy in which foreign trade in goods and services comprised more than 40% of GDP in the boom years of 2006 and 2007. This openness nearly equals that of the other Nordic countries, but falls well below that of the small and medium-sized countries of continental Europe. The GDP share of foreign trade always declines during a recession.

On average, Finnish export growth has stayed in line with market growth, due in part to the strong demand from Russia. In addition to the Russian trade, the most rapid export growth has occurred elsewhere than in traditional markets. Foreign trade with Far East countries has developed vigorously during the present decade. China has grown in importance in both Finnish imports and exports. Trade with India, Korea and Taiwan has also expanded (Table 1). However, Germany, Sweden and Russia remain Finland's most important trading partners.

Real changes in foreign trade commodity and partner structures take time. Turns in world market prices may, however, cause sudden shifts in trade values. Raw material and energy prices fell steeply during the final quarter of 2008, when the price of crude oil more than halved. The Russian share of Finnish exports fell accordingly, and Finland's export prospects will most likely deteriorate further over the long term if the

decline in Russian oil revenues is sustained.

The recession has hit all export industries in Finland and will speed up structural change. The significance of the forest industry as a major exporter is declining. The industrial life cycle of this traditional industry is considerably longer than that of information and electronics product manufacturing. Emerging in the 1990s, major parts of this latter industry have since relocated to the Far East to be nearer a rapidly growing market. Correspondingly, imports from the Far East are expanding as more investment and consumer goods are being acquired from that area. These developments will no doubt lead to shrinking surpluses or deficits in Finnish foreign trade. The deepening recession has reduced both exports and imports. The decline in exports has been radical, resulting in a deficit in the current account as early as January 2009.

Growth in foreign trade in services is an essential aspect of globalisation. The growth apparent in Finland consists mainly of intra-group services in a few multinational enterprises. The statistical evidence available so far does not support the anticipated large-scale offshoring across enterprises.

Table 1.

Finnish goods exports and imports, value indices, 1999=100

	Exports 2008 Country of destination	*Imports 2008 Country of origin*
Netherlands	*198*	*215*
Sweden	*169*	*185*
Germany	*128*	*192*
EU15	*134*	*170*
Euro area (12)	*135*	*176*
South Korea and Taiwan	*142*	*383*
India	*335*	*332*
China	*210*	*634*
Russia	*474*	*473*

Source: National Board of Customs.

Foreign direct investment as a globalisation indicator

Foreign direct investment (FDI) statistics measure equity and other capital relationships and their changes between a parent company and its subsidiaries and associates located in different economies. Nowadays, FDI flows from a country more weakly reflect international fixed investment by resident enterprises than in the past, since the direct investment enterprises abroad increasingly acquire finance directly from international markets. Equity inputs by parent companies may remain minor if investment is targeted to emerging, low-cost economies.

Towards the end of the 1990s and around the turn of the millennium, Finnish FDI was dominated by a few large mergers and acquisitions, raising FDI stocks to new levels and bringing the stock of outward FDI up to 40% of GDP, a large figure by international

A search for larger markets and high costs at home are often the reasons why companies invest abroad.

comparison, at which it then levelled off.

The stock of inward FDI in Finland approached 30% of GDP in 2005 and continued to rise until 2007. Non-financial corporations account for almost all FDI abroad (Chart 3), while there has been substantial inward direct investment in financial sector companies.

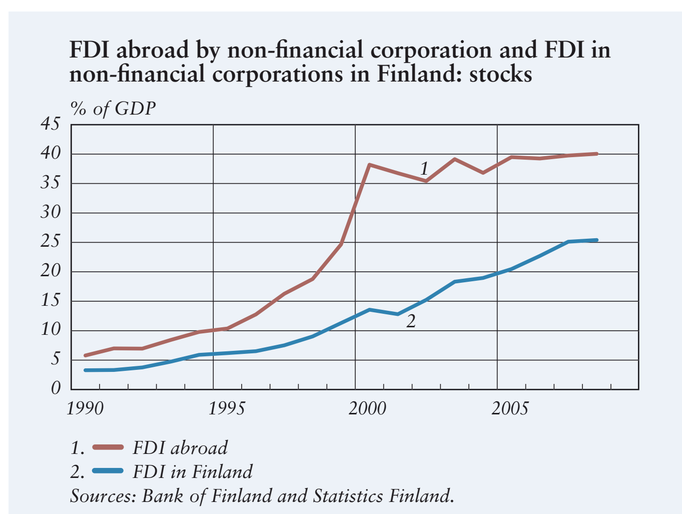
Direct investment may be based on either intrinsic factors at enterprise level or on the macroeconomic conditions in the country of residence of the investor and/or the country in which the potential direct investment enterprise is located. As enterprises grow in relation to local markets, the threshold to expand abroad is lowered. Competition factors often lie behind FDI decisions. There is also evidence that research intensity leads to internationalisation. According to recent studies, microeconomic enterprise motives and benefits serve as the primary explanatory factors for FDI, but high domestic costs also remain an important reason to move abroad.

Since the turn of the millennium, FDI has increasingly consisted of international capital flows and subsequent stocks between the financial centres of multinational enterprises and their parent companies, subsidiaries or associates, and of the sophisticated financial arrangements for mergers and acquisitions. Traditional equity investment makes up only a part of these arrangements. Some back and forth flows cancel each other out when investments are classified as outward or inward according to controlling ownership. Multinational enterprise structures are complicated and diverse, so that bookings in statistics become a multitude of individual cases. Intra-group finance as well as bond issues gained ground in international corporate finance before the advent of the financial turmoil, while foreign bank loans faded in significance.

Net income from foreign direct investment has become a growing receipt item in the current account, amounting to slightly over 1.5% of GDP. Dividends paid to the holders of Finnish shares (Nokia shares held by foreigners) have overrun this figure, however.

Foreign affiliates trade statistics (FATS) describe the activities of foreign subsidiaries in their host

Chart 3.



Sources: Bank of Finland and Statistics Finland.

countries using a few real economic variables. According to this data, the number of employees of affiliates and branches in Finnish ownership abroad has grown 50% during the present decade, and most rapidly in China, by nearly 600%. This growth has moved China to fourth position after Sweden, the United States and Germany.

A majority of banks are now in foreign ownership

Nordic banking integration has spurred the profound structural change in Finnish credit institutions that has been underway since the banking crisis of the 1990s. The limited domestic growth potential of each country helped trigger this integration, which has seen the Finnish MFI sector come largely under foreign ownership (Chart 4). In 2008, foreign bank subsidiaries and branches' share of the balance sheet total of banks resident in Finland rose to 70%. However, the impact of the financial market crisis was also reflected in the foreign-owned component of the Finnish MFI sector. After the collapse of Icelandic banking, the MFIs in Icelandic ownership returned to Finnish ownership or terminated their operations in Finland.

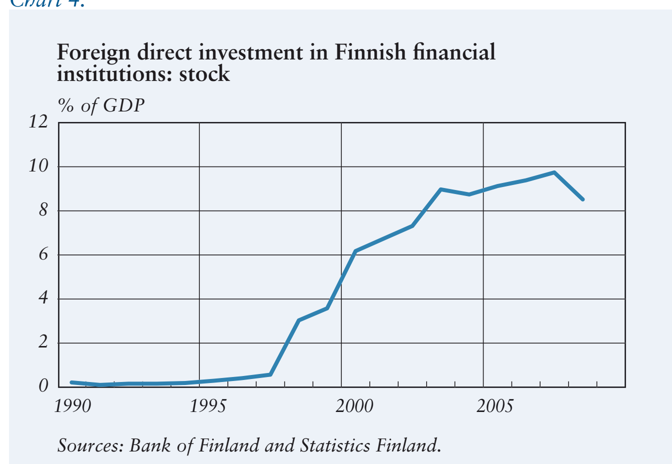
The large foreign ownership in banking in Finland resembles the situation in the new EU member states rather than the other Nordic countries. However, untypically for Europe, the parent banks of foreign-owned bank subsidiaries and branches in Finland are close by, as they are resident in another Nordic country. Nordic banks also play a significant role in the Baltic states, denoting a deep integration of the Nordic and Baltic markets.

The major foreign-owned banks in Finland are in the form of subsidiaries. The numerous foreign bank branches operating in Finland specialise in specific lines of business and do not aim at full-service banking. The number of credit institutions in Finland has held steady over the last decade, and the entry of foreign subsidiaries and branches has been offset by mergers of small local banks.

The Nordic and Baltic banking markets are highly integrated.

Retail banking by MFIs resident in Finland remains nearly 100% domestic. This mirrors European developments. No pan-European retail bank exists. In contrast, European interbank markets have become thoroughly integrated since

Chart 4.



Sources: Bank of Finland and Statistics Finland.

the introduction of the euro. In Finland, some 70% of loans and deposits between MFIs were of foreign origin in 2007, and this figure fell only slightly in 2008. The ownership structure of banks suggests that foreign intra-group flows have expanded to replace genuine foreign wholesale banking flows. During most of the present decade, the interbank loan receivables of Finnish banks have exceeded the respective liabilities. These foreign assets have declined sharply since last autumn, while the liabilities have continued to mount.

The gap between bank loans and deposits has widened during the new millennium boom years, and Finnish MFIs have increasingly resorted to the capital markets in foreign funding. This has been facilitated by the disappearance of exchange-rate risks with the adoption of the euro and low interest rates. The recent financial market turbulence and subsequent crisis have affected bond and money market paper issues, and the outstanding stock held by foreign residents has remained practically unchanged at 15% of GDP in 2007 and 2008.

Table 2.

Finnish portfolio investment abroad, stocks, EUR billion

	31 Dec 1994	*31 Dec 1999*	*31 Dec 2007*	*31 Dec 2008*
Shares	*0.3*	*4.5*	*83.1*	*45.5*
Bonds	*0.9*	*9.4*	*88.3*	*80.9*
Money market instruments	*1.5*	*0.5*	*5.5*	*4.4*
Total	***2.7***	***14.4***	***173.9***	***130.8***

Source: Bank of Finland.

The balance sheets of the subsidiaries of Nordic banking groups may contain large intra-group items where the group figures have been booked in the subsidiary. In addition, a few branches serve as a bank representative and their loans granted might appear only in the foreign headquarters' books. Moreover, European company status and related booking practices, if they become popular among multinational MFIs present both inside and outside the euro area, will certainly detract from the information value of euro area and national banking statistics.

Rapid growth in foreign portfolio investment is halted by the financial crisis

Foreign portfolio assets and liabilities became the largest items in Finland's international investment position during the bullish years since the turn of the millennium, indicating the significant internationalisation of finance and investments in the form of securities (Table 2). Foreign portfolio asset and liability stocks peaked in autumn 2007, assets approaching the value of annual GDP, and liabilities, ie mainly Nokia shares in foreign ownership, actually exceeding this. Due to the financial crisis and particularly the crash in share prices, the foreign portfolio asset stock fell 25% during 2008, while the value of Finnish securities held by foreign residents fell even more, by 33%.

The recovery from the recession of the 1990s only gradually improved the positions of financial institutions. The cross-border portfolio investment potential made possible by EU integration was scarcely exploited until the introduction of the euro in 1999. This facilitated investment in the majority of European securities without exchange-rate risk and has been the largest single factor boosting cross-border portfolio investment.

Large institutional investors are regulated by the authorities, and employment pension funds cannot exceed prescribed risk levels. The portfolio risks of the Finnish employment pension funds are regulated by legally defined solvency rules. The social partners are involved in the process of assessing and amending this legislation. The solvency rules for employment pension funds were altered in 1997 to ease foreign portfolio investment, which led to the growth in foreign bonds in fund portfolios. A similar decision was taken in 2006, allowing a greater proportion of shares in portfolios to provide the better yields necessary to cover growing pension outlays for an ageing population. As a result, Finnish institutional investors surrendered Finnish government bonds in the early 2000s.

The shift in investor policies led to a turnaround in central government foreign funding. In contrast to total debt, foreign funding grew rapidly. Practically all central government debt outstanding has been held by foreign investors since 2005. The highly internationalised primary dealer system has brought government benchmark bond markets closer to the foreign investor. Today, nearly all primary dealers of Finnish government bonds are foreign banks.

Marketplace interaction and mergers between the enterprises running stock exchanges have worked to promote efficiency. The autonomy of national markets has faded during the present decade with the development of the international financial system. The integration of marketplaces led to the merger of the Helsinki Stock Exchange with other Nordic and international trading grounds. The advance in technology and electronic trading systems brought about economies of scale and reduced dependence on the physical location of systems.

The current recession has led to paralysis in fund investments.

The number and size of investment funds have grown continuously since the mid-1990s, and most rapidly since the turn of the millennium. Funds initially attracted resources from households and later increasingly from institutions. Fund portfolio structure has evolved in step with that of institutional investors. Following Finland's membership of the European Union and EMU, the bulk of investment in securities has shifted abroad. Supply has grown fastest amongst funds investing globally and in emerging markets, while the number of funds investing

domestically and in the Nordic domain has risen only modestly. The financial turmoil and crisis have since paralysed investment in mutual funds. The crisis may generate sizeable wealth effects and the trends could be reversed, with large structural changes in household savings behaviour possible.

Investment income from cross-border portfolio operations plays a notable role in Finland's current account prospects. The dividends and interest of institutional investors and mutual funds have constituted the single largest investment income item. During the present decade, this has grown steadily, but investment restructuring poses the risk of failure. The market turmoil of 2007 and the subsequent recession have fed volatility, as seen in the drop in market values and income. Income uncertainty will no doubt continue, raising the challenge of maintaining current account stability.

The recession caused exceptionally rapid erosion of the current account surplus.

Summary and conclusions

Finland's current account surplus has effectively financed other economies throughout the euro era until the present year. Pension funds, insurance companies and investment funds have been the major exporters of finance, while the capital movements of other sectors have remained modest or have actually imported foreign finance.

Banks have resorted to forms of foreign finance such as foreign direct investment and bond issues. The stock of FDI in the Finnish banking sector, some 10% of GDP, has been accumulated as a result of Nordic bank integration. Interbank finance, mainly intra-group loans and deposits, has generated large, volatile flows. For most of the present decade, resident banks have had more interbank assets than liabilities, but the situation has been reversed in recent months.

Intra-group funding has gained ground in international corporate finance, as did bond issues before the financial crisis. The flow of foreign direct investment abroad has slowed, but Finnish companies are still entering into foreign ownership, and this may accelerate in the coming years. Central government will be forced to increase its foreign borrowing in the recession, leading to a growth in net foreign debt.

The current account surplus evaporated within a few short months of recession at the end of 2008. The structural changes stemming from globalisation will further worsen trade prospects and jeopardize external stability. The drop in asset values and global recession will weaken the net income from portfolio investment and foreign direct investment, while the interest on central government debt will increase.

Keywords: globalisation, foreign trade, foreign direct investment, monetary financial institutions, portfolio investment, current account, external stability

Organisation of the Bank of Finland

1 May 2009

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